TECHNICAL REPORT ON THE DARWIN MINE

INYO COUNTY

CALIFORNIA

Prepared for

PROJECT DARWIN LLC

By

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3. SUMMARY

This Technical Report concerns the historic Darwin lead-silver-zinc mine located between Lone Pine and Death Valley in Inyo County, California. The mines that now comprise the Darwin mine workings have been worked since about 1870, and have a total recorded production of about 10.5 million ounces of silver, 840,300 tons of lead, 57,900 tons of zinc, 745 tons of copper and 5,900 ounces of gold. Anaconda Copper Company operated the mine and associate mill (since removed) continuously from 1945 to 1957, the period of greatest production. The property consists of 58 patented mining claims, about 1,050 acres, intact mine camp, and many miles of underground workings.

Base metal – silver deposits at Darwin occur in Upper Paleozoic carbonate rocks adjacent to a complex granodiorite stock. They are partially oxidized, and comprise fissure veins, skarn breccia pipes centered by later quartz-porphyry intrusives, and complex, structurally controlled skarns.

Several geologic exploration targets for deep zinc-copper (+ lead-silver) skarn deposits are well documented, and ore grade material is in sight in numerous areas in the mine. A large body of engineering, geological and production data and maps is preserved in the mine office. Excellent access is available through the +8,000 ft. long Radiore Tunnel (400 Level) but there is no current usable access to deeper levels. Hoists in the Defiance (to 1,300 Level) and Thompson (to 900 Level) are present but not currently powered or licensed.

It is recommended to cull, organize, preserve and digitize the useful geological data and maps, reactivate the two main shafts, and continue development of visible ore in the mine. More claims should be staked for protection and to cover potential exploration targets. Longer term goals are to explore several geologically favorable areas near the workings, and ultimately the deep skarn targets.

4. INTRODUCTION

This report is prepared at the request of Mr. Jack E. Stone, President of Project

Darwin LLC, for the purpose of bringing together data on the history, geology, historic production, metal resources, potential for future production and geologic exploration potential of the Darwin Mine. Information has been gathered by the author during several phases of investigation of the Darwin properties:

1. Extensive on-site investigations as Consulting Geologist for Western Zinc JV (Cyprus Exploration Company/Mitsui Metals) from August through December, 1991, during which the accessible portions of the mine were examined, surface skarn breccia exposures were mapped and sampled, some core was relogged, very extensive files left by Anaconda and subsequent operators were organized and reviewed, new concepts of genesis of the deposits were explored and confirmed, and recommendations made for exploration of deep zinc skarn targets;
2. Review of the files, which had been moved to Tonopah, Nevada, and field examination and sampling of areas on the 400 level of the mine and several other areas both on and near the Darwin property for tungsten potential, from June to October, 2007 as Chief Geologist for Galway Resources, Inc.; and
3. Review at Darwin of the relocated file and map archive and examination of several previously unseen mineral occurrences on the 400 level in July, 2010 as Consultant to Project Darwin LLC.

All in all, the author has spent approximately 35 days on-site at Darwin directly involved with Darwin mine investigations, and nearly as much time in office review and reporting, since mid-1991. Much of the basic data compilation maps and ledgers for zinc potential done in 1991 has been lost, but monthly and progress reports, plus schematic long- and cross-sections which illustrate the deep geologic exploration targets are preserved.

This report is presented as closely as possible in the format prescribed for Technical Reports by the Canadian Securities Administrators under National Instrument 43-101, although there are certain portions which cannot be certified as compliant by the author as a Qualified Person. These portions particularly include statements regarding mineral resources, which are entirely historical, probably incomplete because of missing documents and erratic reporting by operators subsequent to Anaconda, ore mined and

resources not replaced by leasers, and reserve blocks poorly described as to location with respect to known locations underground (i.e. certain drill hole and stope locations, etc.)

5. RELIANCE ON OTHER EXPERTS

Except for the author's personal observations on the surface and underground, sampling, mapping, and description of potential geologic exploration targets, all the information presented herein is based on examination of published and unpublished sources, and review of and projection from historical data, together with interviews of several persons with long-time experience and familiarity with the Darwin mine. These persons include Jack Stone; Paul Skinner, who managed the mill for West Hills Exploration Company and is currently setting up an analytical facility at the mine; Dudley Davis, long-time Chief Geologist for Anaconda at Darwin; Rainer Newberry, consultant to Anaconda and currently Professor at University of Alaska; Rob Wetzel, geologic consultant to Blue Range Mining Company; Jerry Carr, Landman, who prepared a Preliminary Title History for Galway Resources Inc. in 2007; and Adena Fansler, Planner with the Inyo County Planning Department.

The author believes that these sources and persons have presented information factually, truthfully and without bias, and has no reason to doubt the applicability of information, ideas and recommendations presented. The Anaconda Copper Mining Company, operator of the mine during the period of greatest production from 1945 to 1957, is recognized within the industry for having maintained very high standards of geologic mapping and analysis, and great reliance has been placed on the excellent surface and underground maps, drill logs, assays, and other data which were left at the Darwin mine office. Anaconda kept the property until 1985, although the mine or portions of it were leased to other operators from 1967 to 1972. It is believed that subsequent operators maintained the underground mapping, although authorship of later mapping is not indicated on the maps.

Two anonymous reports in the Darwin mine office have also been drawn upon, as the contents agree with and are largely compiled from other sources. They are dated January, 1990, and July 23, 2002, and were probably prepared by Blue Range Mining Co.

and by H. G. Brown, consultant to Project Darwin, respectively.

6. PROPERTY DESCRIPTION AND LOCATION

The Project Darwin LLC holdings consist of 58 patented mining claims, total about 1,050 acres; one patented mill site claim, about 5.2 acres; a lease (PRC 4627.2) from the California State Lands Commission for water/power line right-of-way, 12.97 acres; and a Right-of-Way lease CA-8872) from the Bureau of Land Management, for water/power line across about 13,200 feet of BLM land. Also included are Water Right Permits 1086 (1957) and 19497 (1985) for 0.32 cubic feet per second (144 gallons per minute) to be diverted from a well in Darwin Wash, three miles east of the mine office. The patented claims are located in Secs. 1, 2, 11, 12, 13, 14, T. 19 S., R. 40 E. (the principal Darwin mine group of 41 claims); Secs. 18 (Lane Mill group, 5 claims), 30 (Promontory/April Fool group, 11 claims), and 32 (Columbia, 1 claim), T. 19 S., R. 41 E. The water well is in the center of Sec. 16, T. 19 S., R. 41 E. (a California State School Section), all on Mount Diablo Meridian.

Improvements on the property include access roads, very extensive underground mine workings, and several serviceable structures which remain from the Anaconda and other operations and are currently in use by Project Darwin LLC, many semi-derelict structures some of which could be made useful, water tanks and water system, and active telephone and power distribution systems. Buildings in use include a large residence, mine office with three fire-resistant walk-in vaults, warehouses, shop building with machinery and three large IR Imperial air compressors (no motors), and dry and shop buildings at the 400 Level portal. Also on site in the mine office is a very large collection of engineering, geological and production files and maps compiled by Anaconda and subsequent operators.

There is no mill or ore processing facility on site, the 500 TPD flotation mill having been torn down and the site reclaimed several years ago. The tailings pond and reclaimed heap leach pad west of the Darwin road are not on the property.

Annual property tax payable to Inyo County for FY 2009-10 is $2,639.50.

The mine carries a 5% Net Smelter Return royalty on newly mined ore; the

royalty interest is currently owned by Franco Nevada Corporation. Mr. Stone has entered into negotiations with Franco Nevada for reduction of the royalty and possible purchase of part of the royalty interest.

7. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTUCTURE AND PHYSIOGRAPHY

The community of Darwin and the Darwin mine are located in Inyo County, California, about 36 miles southeast of Lone Pine. Access is via California State Highway 136/190 (the Death Valley Highway), which joins US 395 a mile south of Lone Pine. The paved Darwin road turns south from 190 about 32 miles from the Highway 395 junction, and runs south 5.6 miles to the mine site. The last half mile to the mine facilities is graded.

Elevation on the properties ranges from 3,600 feet at the well site in Darwin Wash to 6,000 feet at Ophir Mountain, a peak on the ridge in which the Darwin deposits are located. Elevation at the portal of the Radiore Tunnel / 400Level, the main haulage access to the mine, is about 4,890 feet. Climate is typical of the high desert of southeastern California; daytime summer temperatures can exceed 100F, and in the winter it commonly falls below freezing at night. Average annual rainfall is about four inches.

Power is supplied to the mine site by Los Angeles Department of Water and Power on a 3-phase power line from Olancha at 12,500 volts, capacity 2,500 kw. The transformers for 3-phase are on site but not hooked up. The power rate for industrial use is 6.5 cents per kwh. Water is currently trucked from the well in Darwin Wash, as both the pipeline and power line between mine site and well are derelict. Poles and equipment are on hand at the mine to rebuild the power line. Water must be pumped from the well against a head of about 1,800 feet (approx. 780 psi static head) to surmount Darwin Ridge above the water tanks. Two tanks above the mine office are in use with a capacity of 38,000 gallons, and water is distributed by gravity to the plant area. Elsewhere on site, there is water storage capacity of 195,000 gallons in several tanks and a swimming pool.

A small labor pool is available from Lone Pine and elsewhere in the Owens

Valley, and there may be a limited number of experienced miners available from the Bishop area, where the large underground Pine Creek mine, formerly operated by Union Carbide, closed a few years ago. Bishop is 59 miles north of Lone Pine on Highway 395.

8. HISTORY

Mining in the Darwin area (New Coso Mining District) began before 1870 when Mexican miners began producing high grade silver ore. In 1870, the Mexicans were driven out and lead-silver ore was produced from the Lucky Jim, Promontory, Columbia, Lane, Defiance, Thompson and Essex mines; all these mines are included in the Project Darwin LLC patented claims and the latter three are incorporated in the present Darwin mine workings. These mines, and up to five small smelters, operated until 1893. The district then was dormant until 1916.

The Darwin Development Company began consolidating properties in the district in 1916; operations in succeeding years were marked by poor management, litigation, and financial difficulties. The Darwin Silver Company and later the Darwin Lead Company were formed to operate the mines.

Anaconda reviewed the operations of the Darwin Lead Company in 1939 and estimated that approximately 200,000 tons of lead-silver ore had been produced to that time by mines controlled by Darwin Development. Early on, the mines had produced high-grade lead-silver ore at a profit, but in later years dependence on lower grades and oxidized ore, together with recoveries at times as low as 35% and over-expenditure on surface plant made the operation less profitable. Anaconda concluded that as much as 100,000 tons of oxidized silver-lead ore might be developed, but that the properties could not be worked profitably at 1939 prices unless zinc, then avoided or going to tailings, could be recovered. Metallurgical changes just prior to 1939 had increased overall recovery to about 70%

Anaconda considered the Darwin Lead Company a second time in 1942-44. Production was intermittent until 1944, when the mill ran all year, treating 90 TPD of mixed oxide-sulfide ore, and shipping 35 tons of crude ore per day to the U.S. Smelting plant in Midvale, Utah. The direct-ship ore ran about 8 opt silver and 13% lead, while

mill ore ran 3.26 opt silver, 3.74% lead and 4.86% zinc. It was estimated that total district production 1870 through 1944 was about $6 million in silver, lead and zinc. It was estimated (by Blue Range Mining Company, a later owner) that the total pre-Anaconda ore production was about 250,000 tons.

Two new high grade bodies, along the Essex vein and on the downward extension of the Defiance zone to the Radiore/400L area – recognition of the near-vertical plunge of the rich skarn breccia "pipes" – made the district attractive to Anaconda. The Essex ore was running 60 opt silver and 31% lead, with very low zinc, and Radiore sulfide ore ran 10.5 opt silver, 16.2% lead and 12.2% zinc.

Anaconda completed purchase of the Darwin mine on August 1, 1945. They completed driving the Radiore Tunnel on the 400 Level, which connects all the workings in the mine and through which ore could be delivered directly to the enlarged 500 TPD flotation mill (350 tons sulfide, 150 tons oxide) at the portal. This tunnel is at least 8,000 feet long and services the Defiance workings, with an internal shaft which now extends to the 1300 Level, and the Thompson-Essex-Independence workings, including a winze sunk to the 900 Level. At some time during the Anaconda mining years, long core holes were drilled from the 400 Level to penetrate the Darwin stock in a test for porphyry copper potential, but this effort was unsuccessful.

Anaconda operated the mine and mill continuously until falling lead and zinc prices forced shutdown on June 1, 1957. Total Anaconda production is estimated at about 962,000 tons, combined oxide-sulfide ore. The sulfide ore mined since 1942 is reported to have averaged 6% lead, 6% zinc, and 6 opt silver (Hall & Mackevett, 1962.) "Reasonably Assured Ore" reserve at shutdown was estimated at about 155,000 tons, 4.9 opt silver, 6.1% lead, 8.5% zinc (Skiles, 1957)..

The mine was idle until 1967 when West Hills Exploration Co. leased the mine, deepened both the Defiance and Thompson shafts, and produced about 271,000 tons of ore from several deeper levels in the mine, but gave up the lease due to "poor operating results" (Cormie, 1970). The mine was leased to Mexicanus Colorado, Inc., in April, 1971. This company invested several hundred thousand dollars in mine and mill

improvements, but operated less than a year, reportedly producing about 74,000 tons or lead, silver and tungsten ore. During this period they subleased portions of the mine to Montecito Mining Company, who produced tungsten ore from the 433-435 stope, and lead silver ore from the deeper Thompson workings. Secundo Guasti leased the tailings and part of the Thompson workings from Mexicanus Colorado in 1972 for tungsten, but his operation was unsuccessful. Other leasers, principally mining tungsten ore from the 433-435 stope, included Pacific Tungsten, West End Consolidated and Brownstone Mining Company. All the leases were terminated in 1976.

Anaconda correspondence (G. A. Barber to R. L. Knight, 6/28/1977, in the Darwin office archive) states "*Anaconda has not profited from any of the associations* [with leasers] *to date . . .* "

Anaconda continued to hold the property, and began studies toward heap leach recovery of silver values in the tailings. They estimated that 2.3 million ounces of silver remaining in the tailings (1.69 million tons at 1.38 opt) by cyaniding and Merrill-Crowe recovery. A test heap was initiated in 1981-82, which was successful metallurgically, but low silver prices ended the operation. The heap has been reclaimed and covered.

In 1980, Anaconda began a detailed geological and geochemical re-evaluation of the mine and the district, employing Rainer Newberry, at that time a PhD candidate and Marco Einaudi's student at Stanford University, and new Anaconda geologists, principally Geoffrey Wilson. The progress and conclusions of this program are summarized in several internal reports and in two publications, Newberry (1987) and Newberry et al (1991) and are summarized in Section 11, "Mineralization." This intensive restudy of the geology and metal zoning culminated in the drilling of two deep angle core holes, DA-1, 2,201 ft. TD and DA-2, 2,302 ft. TD, in 1982. Both holes were designed to test for deep bedding replacement and porphyry-skarn mineralization, particularly previously unrecognized tungsten zones. Both holes cut significant ore and near-ore grade silver and zinc mineralization at depth.

In 1983, Anaconda reviewed gold potential on the nearby Darwin Antimony mine and in the Lucky Jim mine area, without encouragement.

By 1984, Anaconda's acquisition by Atlantic Richfield Corporation was completed, and the Darwin property was sold to Quintana Minerals Corp. Anaconda retained a 5% net smelter return royalty on newly mined ore, and a sliding scale royalty on silver which might be produced from the tailings. Although Quintana drilled eight shallow percussion holes around the Essex shaft, investigated silver and gold possibilities (DeRuyter, 1986, 1987, 1988) and invited Cyprus Minerals Company (Seklemian, 1987) and perhaps others to consider bulk minable precious metal potential, no significant physical work was done. Quintana sold the property to Blue Range Mining Company in 1989.

Work done by Blue Range included surface and underground mapping and sampling, long hole drilling, and upgrading of the underground utilities and mill facilities. By October, 1989 Blue Range estimated that they had added about 30,000 tons of possible ore, resulting in perhaps 90,000 tons reserve at that time.

Early in 1991, Blue Range leased the property to Western Zinc Joint Venture (Cyprus-Mitsui) based on Cyprus geologist Chris Torrey's recognition of good potential for high-grade bedded replacement and skarn zinc mineralization which had been missed or avoided by Anaconda. Target for the JV was discovery of 10 million tons of 8-10% zinc (Torrey, 1991). The author of this report, as consultant to Cyprus, spent portions of four months working in the Anaconda mine office at Darwin, organizing and reviewing underground mapping, several hundred drill logs, and metal production reports; the data was plotted on Anaconda's100-scale level maps, with particular attention to the zinc/lead ratio and incorporating metal zoning data from Newberry et al (1991). It was confirmed that Anaconda and others systematically avoided areas of high zinc drill intercepts, but without substantial lead and silver. Other work on site included surface mapping and sampling of several skarn pipe outcrops, and relogs of portions of the deep Anaconda holes. This project culminated in recommendations to the JV for several more deep drill holes to test further the roots of the Defiance and Essex breccias, which control the highest grade replacement deposits. Early in 1992, Mitsui pulled out of the JV, and the property was returned to Blue Range.

In May, 1995, Blue Range sold the Darwin property to Project Darwin, Inc., which changed to Project Darwin LLC in 2006. Jack and Linda Stone, as Project Darwin LLC, acquired full ownership in June, 2007.

During Project Darwin LLC's ownership, several groups, not all known to this author, have investigated the potential of the Darwin mine complex. In 2006, this author, then Chief Geologist for Galway Resources Inc., was contacted by Mr. Stone regarding the tungsten potential. Galway management became interested both for the tungsten and because of the deep zinc skarn targets proposed for the Cyprus group. Negotiations for participation in the property by Galway were unsuccessful.

Most recently, underground sampling in 2009 and 2010 on the 400 Level in the Defiance Pipe and a nearby zinc oxide stope by Donald Strachan as consultant for World Industrial Minerals Inc. suggest potential for tellurium as a byproduct of zinc production.

At the time of writing this report, Mr. Stone has refurbished several buildings in the mine plant complex, acquired equipment and supplies to rebuild the power line to the well in Darwin Wash, brought permits up to date, begun equipping an assay lab, purchased locomotives and cars, and is cleaning and repairing track in the Radiore Tunnel. Planning is proceeding to resume production of mixed sulfide-oxide lead-silver-zinc-copper ore exposed on the 400 Level in the Defiance and Thompson mine areas.

Cumulative historic ore production from the district (of which most is from workings now incorporated into the Darwin mine) from 1875 to 1976 (102 years of intermittent mining activity) is about 1.5 million tons, and metal production is about 10,500,000 ounces silver, 840,300 tons lead, 57,900 tons of zinc, 745 tons of copper, and 5,900 ounces gold (Brown? 2002). Tungsten production is unknown.

9. GEOLOGICAL SETTING

The Darwin mine, and geology of the surrounding Darwin Quadrangle, has perhaps been studied as intensively as any mining district in California with the exception of the Mother Lode. The principal published sources for regional geology and that of the mine are Hall & Mackevett (1958) and Hall et al (1962), although some structural

interpretations therein have been revised by later investigators. Other published works include Rye et al (1974), Czamanske and Hall (1975), Dunne et al (1978), Newberry (1987), Stone et al (1989), and Newberry et al (1991). In addition, excellent work done by Anaconda geologists, particularly Dudley Davis, Geoffrey Wilson and Robert Seklemian is preserved in the Darwin data archive.

The Darwin deposits are localized in several structurally controlled crosscutting and bedded skarn zones within Paleozoic turbidite carbonate and siliceous clastic units, metamorphosed to marble or calc-silicate hornfels, near the west contact of the Darwin stock. The sedimentary beds have been correlated with the Pennsylvanian-Permian Keeler Canyon or Permian Owens Valley Formations. The Darwin stock is about ½ by 2 miles in size and is alkaline, quartz-poor, and composed of monzonite and monzodiorite. It is dated by U/Pb methods at 174 MA (Chen, 1977).

The upper Paleozoic carbonate rocks are folded into an anticline whose axis, which trends about N 20 W, parallels the west contact of the Darwin stock. Much of the east limb of this fold is cut out by the pluton. A number of sill-like intrusions occur within the sedimentary rocks, and follow bedding into the west limb of the anticline. Several west-dipping low angle faults, termed the Davis thrust zone, cut the Paleozoic section near the crest of the anticline and in part cover the intrusive contact. The thrust is premineral, about 20 million years younger than the Darwin stock (Dunne et al, 1978).

A number of N 60-70 E trending steep faults cut both the sediments and the intrusive contact; strands of these faults both cut and are cut by the Davis thrust faults. Minor mineralization, and carbonates locally altered to the same metamorphic facies, occurs in the upper plate. These structures control skarn development along the Darwin stock contact and also act as primary ore controls for fissure/vein, bedding replacements, and crosscutting “skarn pipe” mineralization. The most important northeast structures are, from north to south, the Mickey Thompson, Water Tank, Defiance, 434, Bernon, Copper and A472 fissures. In addition, the Essex fissure, which apparently is hidden on the surface by the upper plate of the Davis thrust, trends about N 60 W and controls important high grade mineralization in the Thompson-Essex mine area.

The intersections of the high-angle mineralizing structures with the crest of the Darwin anticline and with second order, doubly plunging north-trending folds on the flanks of the anticline localize important bedded mineralization in favorable reactive units.

Orebodies at Darwin consist of bedding replacement deposits, skarns and quartz-carbonate-sulfide +/- scheelite veins. The most important Pb-Ag-Zn deposits, localized along the Defiance fissure in the Defiance mine and along the Essex fissure in the Thompson mine, consist of steeply west-plunging chimneys or "skarn pipes" at or near the crest of the Darwin anticline. High grade galena-sphalerite replaces skarn-matrix breccia within the pipes, and mineralization also occurs in pyroxene and garnet skarns which replace favorable beds adjacent to these feeder structures. The Defiance deposit has been exposed and partially mined to the 1,300 Level, about 1,500 feet below the surface, and the Thompson area has been mined to the 900 Level, about 1,100 feet below the surface.

A substantial portion of the ore at Darwin is oxidized, and it is interesting to note that partially oxidized ore has been encountered in the deepest levels of the mine, and stopes of oxidized ore have been mined in all levels.

Early investigators attributed the mineralization at Darwin to contact metasomatism related to intrusion of the Darwin stock. However, the principal Darwin orebodies occur not at the stock contact but generally a few to several hundred feet to the west. The stock is essentially unaltered, weakly pyritic and exhibits only minor endoskarn development at the contact. Skarns do not occur in equivalent sedimentary rocks on the eastern or southern contacts of the stock.

The most recent publications on Darwin geology (Newberry, 1987; Newberry et al, 1991) attribute the lead-silver-zinc (but not the scheelite) bedded replacement, skarn and fissure ore in the district to a younger intrusive event, characterized by granite porphyry and aplite. That this felsic intrusive event is measurably younger than the Darwin stock is proven by the fact that quartz porphyry cuts the Davis thrust. Rocks of this suite are present as dikes and pods both within and outside the stock; as the matrix of

igneous breccias containing stock and scheelite-bearing skarn clasts; and as the core facies of igneous- and skarn-matrix breccia pipes. Newberry's isotopic and mineral zoning studies rule out a genetic tie between the Pb-Ag-Zn skarns and the Darwin stock; structural evidence indicates the skarns postdate the pluton by at least 20 Ma. Recognition of this younger intrusive phase as the principal mineralizing event was one of the main premises for the 1991 exploration effort by Western Zinc JV.

Scheelite may have originally developed in garnet skarns at the main contact and have been remobilized with the later deposition of the base metal ores; the scheelite, particularly in the 433-435 stope, is intimately mixed with oxidized argentiferous lead and silver mineralization.

The surface geologic map included as Fig. 2 in Newberry et al (1991) indicates several localities where rocks of the granite porphyry suite crop out on the ridge above the Darwin mine workings, including a prominent zoned breccia pipe, about 500 by 700 feet in size, above the first bend in the Radiore Tunnel at N16,800 E6,000 (references are to the Anaconda mine grid). Other occurrences include several smaller outcrops on the crest of the ridge between the Bernon and Copper fissures at N18,000 E5,500, and a well developed pipe of porphyry and skarn matrix breccia which cuts the stock east of the Independence mine at about N19,400 E5,800. In the Anaconda progress report (Newberry, 1980) six "skarn pipes" are mentioned.

10/11. <u>DEPOSIT TYPES AND MINERALIZATION</u>

Mineral deposits in the Darwin mine consist of lead-silver-zinc bearing, steeply dipping fissure veins, bedding replacements, and steeply plunging breccia pipes with a matrix composed of garnet-pyroxene skarn and igneous clasts. The pipes are locally cored by irregular quartz porphyry bodies. Tungsten (scheelite) occurs in veins and thin skarns on the contact of the Darwin stock in the Darwin mine and elsewhere in the district, and locally is intimately mixed with bedded replacement ore in the mine, particularly in the 433-435 stope area.

Lead-silver ore mined in the district in the early days was near the surface and secondarily enriched, but only remnants of these bodies remains. A large, but unknown,

portion of the ore mined by Anaconda and other later operators was oxidized, and mixed oxide-sulfide ore persists in the lowest levels of the mine.

Geological structure and ore controls within the several deposits which comprise the Darwin mine is very complex, and some of the relationships between the deposit types to lithology, first- and second-order folds, crosscutting fault structures which appear to be major ore controls, and the late aplite/quartz porphyry intrusive event which appears to be the source of the lead-silver-zinc mineralization are still not well understood. Individual orebodies of all types which have been mined by Anaconda and other operators are generally small but high grade, may be bounded by faults, intrusive rock and lithologic boundaries – or may have assay walls. Orebodies were usually discovered by following a drill intercept. Review of many reports in the Darwin mine office suggests that Anaconda was able to project at best a year's reserve; the projected tonnage was based on past experience within the system and knowledge of the geology in the area of one or two drill intercepts. It is apparent in comparison of recommendations for stope development and later production records that the operator rarely knew how much was there until the stope was mined out.

Other deposit types related to the Darwin mine orebodies have been suggested by several investigators (Wilson, 1983; Newberry, 1991; Hahn, 1991-92; Brown?, 2002, and others.) As mentioned above in "History" Quintana and others reviewed the district for bulk-mineable gold, without much encouragement. The existence of a porphyry copper deposit, gradation into copper-zinc skarns, or higher zinc developed at the roots of the quartz porphyry cored breccia bodies have been postulated. The research by Newberry and Wilson for Anaconda and later published, proved that the lead-silver-zinc mineralization is younger than the Darwin stock and is related to the later felsic event. They also documented the mineral and metal zoning, both concentrically around the quartz porphyry breccia pipes and vertically. The skarn/breccia bodies in most cases expand with depth, but the total sulfide content decreases. This work, and the research by Western Zinc JV (Hahn, 1992) proves that the zinc/lead increases downward in and around the Defiance and Essex pipes, and that zinc and copper also increase with depth.

Both copper and tungsten are higher in the Thompson mine than in the Defiance.

Detailed surface mapping by Anaconda geologists shows that the geologic section is not overturned as had been previously mapped by the USGS (Hall & Mackevett, 1962), suggesting that the more carbonate-rich portion of the Paleozoic section may be found in deeper levels of the mines, providing additional targets for skarn deposits. The deep holes drilled by Anaconda in 1982, steeply inclined toward the east, were designed to test for deep skarn zones, and particularly for tungsten. Hole DA-1 cut the Defiance (south) pipe at depth; skarn intensity increases but sulfides decrease, and there is no evidence of late-stage sulfide mineralization. Hole DA-2, 1,350 feet north of DA-1 cut the Essex pipe about 400 feet below the deepest Thompson mine workings. The Essex pipe at that depth is largely replaced by large veins in skarn and irregular pyrite zones. The 500-foot mineralized interval includes 177 feet of 2.6% zinc, partly oxidized. The Darwin stock was cut at 1,800 feet in DA-2, with strong skarn development and 44 feet of 5.5% zinc, including 20 feet of 10%. Tungsten was present but not notable.

Comparison of metal values in DA-2 vs. DA-1 confirms the trend observed in the Thompson vs. Defiance workings. Assays in DA-2 and twice those in DA-1, with tungsten, zinc and silver significantly higher, and more intense alteration quartz veining (Brown? 2002). Recent discovery by Jack Stone of high grade, copper-rich (covellite/chalcocite/chalcopyrite) zones on the 400 Level north of the Thompson workings support the northward trend.

The Western Zinc JV work in 1991 was directed toward delineation of drill targets for a large bedded or skarn zinc deposit. Metal zoning already documented by Newberry's paper was confirmed by plotting Zn/Pb ratios and zinc grades from many drill holes, car samples and stope production records, on Anaconda's level maps.

> *. . . more than 300 locations were identified with ore-grade zinc and the zinc: lead ratio over two. Many high-zinc headings and stopes, particularly on the Defiance 900-1200 levels, were producing +15% zinc and very low lead at the time of Anaconda's shutdown.* (Hahn, 1992)

Four drill targets with good potential for discovery of bedded replacement/skarn

zinc mineralization (and quite possible Pb-Ag-Cu, although these were not the metals sought in the study) were identified for the Western Zinc JV, detailed in Hahn (1992):

1. Northern Breccia Pipe; crops out within the Darwin stock, but the pipe contains skarn and skarn matrix breccia fragments. The roots of this pipe could be explored by a vertical hole at about N19,400 E5,500 directly west of the pipe outcrop, to a depth of 1,800 feet

2. Thompson/Essex Zone; to cut a potential sill complex in a large unexplored area above the contact zone cut in DA-2. A 1,800 foot hole from the DA-2 site but at a shallower (-55 degree) angle was suggested.

3. Deep Defiance Target; all observers agree that bedded replacement zinc sulfide is increasingly well developed and thicker below the Defiance 900 Level. The Zn/Pb >2 envelope increases in size downward, and at least 27 samples of +8% Zn were plotted on a composite section. The target is centered at N17,250 E4,250 at El. 3,700 ft., or about 300 feet below the Defiance 1,300 Level. An 1,800 ft. steep or vertical hole 600-800 feet east of the DA-1 site was recommended.

4. Radiore Breccia Pipe; this porphyry/skarn pipe crops out on the ridge centered on the Water Tank fissure, covers about six acres and is strongly anomalous in zinc, lead and copper. Insufficient field work was accomplished to adequately document this target before the project was cancelled.

12-16. EXPLORATION, DRILLING, SAMPLING, DATA VERIFICATION ETC.

No drilling has been done since Blue Range's tenure, and the exploratory work done since Anaconda relinquished the property is detailed above. Exploration by the current owner of the property is limited to observation of exposed mineralization on the 400 Level, and short visits to a few deeper levels. Intermittent sampling (grab samples and channels) for tellurium in several high-zinc areas on the 400 Level continues, with multi-element ICP analyses performed by Inspectorate America Corp. and Florin Analytical Services in Reno, Nevada. Both laboratories are believed to follow standard QA-QC practice using blanks and certified standards.

17. ADJACENT PROPERTIES

Besides the several sets of workings in the Darwin mine itself, the only other mines on the patented claims with significant production are the Lucky Jim, Promontory and Lane mines (Mackevett et al, 1958)..

The Lucky Jim mine is located in Sec. 1, T. 19 S. R. 40 E., about 2¼ miles due north of the Darwin mine camp. Silver-lead-zinc ore occurs as fissure fillings in the steep NE-trending lucky Jim fault zone and other smaller veins, which cut granitic rocks and calc-hornfels. The mine is developed by a 320-foot shaft and internal winzes to 820 feet depth. Partial production figures 1915-1925 from mainly oxidized ore include over 40,000 tons of ore which yielded about 10.2 million pounds of lead, 744,000 ounces of silver, and 457 ounces of gold. Anaconda renovated and evaluated the mine in 1948 but did not produce. Quintana re-examined the mine area in 1987 (DeRuyter, 1987).

The Promontory mine is in Sec. 30, T. 19 S. R.41 E., about 1¾ miles southeast of the mine camp. Oxidized lead-silver ore occurs as a bedding replacement in limestone; the mine is developed by an incline shaft with a vertical depth of 283 feet. Production is unknown, as most has been reported with that of the Darwin Silver Co.

The Lane mine, in Sec. 18, T. 19 S. R. 41 E., about 1¼ east of the mine camp, was developed about 1890. Largely oxidized lead-silver-copper minerals occur in fissure veins, developed to a depth of 800 feet, in limestone and calc-silicate hornfels. It was operated intermittently until 1948, and produced about 12,000 tons of ore, yielding 1.8 million pounds of lead, 76,000 ounces of silver, 39,000 pounds of copper, and 1,547 ounces of gold. Project Darwin LLC has no current plans for any of these properties.

18. MINERAL PROCESSING AND METALLURGICAL TESTING

There is currently no processing facility on the property, and Project Darwin LLC plans to mill future ore production off site.

Historically, the mixed sulfide/oxide mineralogy of the complex lead-silver-zinc ores of Darwin has presented problems for operators. Anaconda operated separate sulfide and oxide flotation circuits in their mill after the oxide section was built in 1951. It is assumed that before that time much or all of the oxide was shipped direct to the

smelter. During Anaconda's ore production period, about 29.5% was processed in the oxide circuit and 70.5% in the sulfide circuit. Zinc oxide minerals were not recovered. Recovery for sulfide ore, 1948-1957, was 79.5% of the lead, 75.8% of the silver and 77.4% of the zinc. For the years 1945-1957, oxide recovery was 83.4% of the lead and 77.3% of the silver (Brown? 2002). When West Hills Exploration operated the mine, the separation of sulfide and oxide mill feed was made by visual inspection of the cars (Paul Skinner, pers. comm.).

There have been many improvements made recently in methods for processing oxidized zinc ores, and several large mines (i.e. Skorpion Zinc/Anglo American in Namibia) have achieved good recovery from oxide deposits. Kappes Cassiday and Associates in Reno have considerable expertise in this area, and have consulted for Project Darwin LLC. Both caustic and acid leach methods, together with modern resin extraction or precipitation reagents are used with success.

19. MINERAL RESOURCE/MINERAL RESERVE ESTIMATES

There are currently no NI 43-101 compliant reserves or resources in the Darwin mine; numbers quoted in this section are historical in nature and should not be relied upon to represent mineable material present in the mine. These historical reserves have not been classified according to CIM resource/reserve categories. Project Darwin LLC is not treating any historical reserves as current mineral resources/mineral reserves, but considers the data to have been substantial and relevant at the time the calculations were done. An unknown, but probably substantial, tonnage quoted from each source has probably been removed by subsequent operators. The nature of the deposits as currently exposed in the mine and known from underground drilling and two deep core holes, with comparatively small but high grade orebodies controlled by very complex faulting, folds and breccia pipes does not lend itself to "blocking out" ore tonnage. As explained above under "Deposit Types" Anaconda and other operators "followed the ore" and while Anaconda operated the mine, a great deal of underground core drilling was done, together with meticulous, detailed 40-scale and larger geologic mapping. Many sources have stated that the Anaconda operation never had more than a year's mining reserve ahead,

but always managed to "keep ahead of the mill." Fortunately, these data are largely preserved in the Darwin mine office. Most, but possibly not all, of the subsequent operators kept up the mapping and drill logging standards. As an example of missing data, however, the zinc oxide stope on the 400 Level recently sampled to tellurium by D. G. Strachan was not mapped on the geology compilation linens. Most of the field compilation ledger sheets and level maps compiled for Western Zinc JV by this author in 1991 have been lost, and many maps and sections which accompanied other reports are missing.

Anaconda calculated the reserves at Darwin each year as of January 1. A few of these reports in the Darwin files, but there are no maps with these copies. Most of these year-end reports are available in the Anaconda Collection in the American Heritage Center at the University of Wyoming in Laramie. A request for a search of files keyed to Darwin in 2009 produced a list of 135 records (among 796 files keyed to Inyo County, California). It is possible that review of the Darwin, and perhaps other Inyo county files, at the Laramie archive could produce other clues to future work at Darwin, but it appears that the records there are limited to the Anaconda days. Any specific recommendations for exploration/exploitation of areas in the mine itself would be obsolete in view of the later work done by leasers. A single-person license to use this archive cost $1,750 in 2009-2010.

A detailed report (Skiles, 1957) on estimated ore reserves at the time of Anaconda's shutdown is in the Darwin office files, but the 14 sections and section line index referenced in the report have not so far been found. A total of 150 separate ore blocks are listed, from 32 to 12,000 tons. Skiles classified reserves into "Positive, Probable and Possible" tons and gave a total of "Reasonably Assured" tons by subtracting one-half the Possible tons. No explanation of his classification criteria was given. He further broke the numbers down into "Shipping Grade, Sulfide Milling and Oxide Milling." The total "Reasonably Assured" ore reserve at that time was 154,968 tons, 4.9 opt silver, 6.1% lead and 8.5% zinc. 30% of this tonnage was in stope and sill pillars. Sulfide milling ore accounted for 72% of the total, oxide milling for 27%, and

direct ship less than 1%. It is notable that 56% of the total ore was in the Defiance mine in the 800 Level and lower. To repeat more detail of this calculation seems useless, as it is very likely that most of these reserves have been mined by subsequent operators.

Another detailed calculation was made by Cormie (1970) for Mexicanus Explorations Ltd. Cormie was assisted by Dudley Davis, long-time geologist at Darwin for Anaconda. He lists "Total Probable and Possible" ore at 129,375 tons, 5.7 opt silver, 4.1% lead and 10.0% zinc, in 39 blocks. General maps are in the report, but no detailed maps or sections by block have been found, and it is likely that part of this ore was removed by Mexicanus Colorado.

What is believed to be the last detailed reserve calculation found in the Darwin files (Musolf, 1971) was made in August, 1971 for Mexicanus Colorado.

"Developed" ore, Defiance mine: 32,050 tons, 3.9 opt silver, 3.3% lead, 8.8% zinc

"Possible" ore, Defiance mine: 19,400 tons, 7.1 opt silver, 2.7% lead, 1.7% zinc

"Developed" ore, Thompson mine: 13,300 tons, 6.2 opt silver, 2.4% lead, 7.7% zinc

"Possible" ore, Thompson mine: 6,800 tons, 12.0 opt silver, 6.0% lead, 5.0% zinc

Total weighted average: 71,550 tons, 6.0 opt silver, 3.2% lead. 6.3 % zinc.

The Defiance reserves were distributed in stopes from the 570 to 1300 Level; the Thompson ore was in the 3B to 900 Levels. Zinc grade clearly increases downward in the Thompson mine. Again, part of this ore was no doubt mined subsequently.

It is believed that no more recent reserve calculations have been made.

20. OTHER RELEVANT DATA AND INFORMATION

Jack Stone and Adena Fansler, Associate Planner for the Inyo County Planning Commission, were interviewed at Darwin on July 13, 2010. This author is not a Qualified Person in the field of environmental assessment or mine permitting, but was provided copies or relevant details of the permits and licenses currently in place, and assurance that all the necessary documents are in force.

In California, the lead agency in mine permitting is the county. The area of the mine is zoned Open Space, 40-Acre Minimum (OS-40) and mining is a permitted use. Inyo County Planning Department issued a Draft Negative Declaration of Environmental

Impact for the project on September 28, 2007, and the key document, Conditional Use Permit CUP #2007-04 was granted to Project Darwin LLC on December 12, 2007. The CUP provides that activities will be limited to one shift during daylight hours with ore haulage, weekdays only; ore will be trucked off site (to Nevada) for processing; and that Project Darwin LLC will pay to Inyo County its "applicable share" of the maintenance of the Darwin County Road from the mine site to the intersection of Highway 190. The CUP limits production/shipping to 500 tons per day, which is also the practical haulage limit imposed by the capacity of the Radiore Tunnel.

All operations will occur on patented land, and BLM permitting is not required. The operation will not fall under the California Surface Mining and Reclamation Act of 1975 (SMARA); no new areas of disturbance will exceed one acre nor require the removal of more than 1,000 cubic yards of material. All waste rock will be backfilled underground.

Project Darwin LLC has received a General Stormwater Permit from the Lahontan Region, California Regional Water Quality Control Board. No effect on groundwater is contemplated, as the static water table is at least 1,000 feet below the mine workings. The Project has an "Authority to Construct" issued by the Great Basin Unified Air Pollution Control District, and permits from Inyo County Health Department for use of water storage tanks and operation of small water and septic systems.

A license 9-NV-023-33-2M-00264 to purchase, transport, store and use explosives has been issued to Stone Bros. Construction and Demolition, Inc. by the U. S. Bureau of Alcohol, Tobacco, Firearms and Explosives, pursuant to 18 USC Ch. 40.

Any underground and surface work related to production will fall under the purview of the Federal Mine Safety and Health Administration (MSHA) and the equivalent California state agencies.

A seismic monitoring station operated by the U. S. Department of Energy is located in the Radiore Tunnel near the portal. Rental of $12,000 per year is due to Project Darwin LLC.

It is believed that Project Darwin LLC has no responsibility or potential liability

concerning the reclaimed heap leach pad and tailings pond which are located entirely on BLM land. It is believed that Arco Petroleum, successor to Anaconda and now part of British Petroleum, may have some residual liability.

21. INTERPRETATION AND CONCLUSIONS

Throughout the history of mining in the Darwin lead-silver-zinc deposits, new ore reserves continued to be discovered as long as systematic exploration and development programs were followed. There has been no consistent exploration program in the district since Anaconda ceased operations in 1957, and the remaining reserves left by Anaconda (Skiles, 1957) were depleted by lessees 1967-1976. Silver, lead and zinc grades were consistently high throughout the history of the district, including all lessee operations. The history of past mining at Darwin suggests that continuations of known ore can be proven, and that good potential exists for discovery of new deposits. The metal content, metal ratios, and mineralogical gradients suggest good potential for zinc-rich or copper-zinc skarns at depth, and there remain unexplored portions of the system between and adjacent to the Thompson-Essex and Defiance skarn breccia pipes in levels already partially developed. These gradients are discussed in detail in Rainer Newberry's papers (1987, 1991) where Darwin is compared with other highly productive skarn and disseminated ore systems such as Cananea and Conception del Oro in Mexico.

The recent recognition of potential for byproduct elements not previously considered, such as germanium, tellurium and indium may contribute to the economics. These elements are well known to accompany zinc sulfides, particularly in skarn environments. Tungsten is another possible byproduct; high grade (+1%) scheelite ore has been produced from the Darwin mine, but the tungsten association with base metal-silver ore is unusual and not well understood.

There are exposures underground of high grade zinc-copper-lead-silver mineralization which not been followed; the "covellite area" at the north edge of the Thompson mine in the 400 Level discovered by Jack Stone, and the unmapped zinc oxide stope in the Thompson east of the 433-435 Stope are examples.

There are lead-silver-zinc skarn and fissure vein deposits known from the

Promontory mine on the south to Lucky Jim on the north, near but probably not directly genetically related to the contact of the Darwin stock, a span of 4½ miles. Little of this area has been explored systematically.

There are two major detriments to near-term reduction of production from this mine. One is the lack of practical access to any deeper levels in the mine than the Radiore Tunnel (400 Level). Developed levels, which have been major producers in the past, are present for 900 feet deeper in the Defiance Mine and 500 feet in the Thompson/ Essex workings. It is believed that the hoists and internal shafts in both areas are serviceable and could be brought up to safe working standards. Access to the deeper workings would increase the potential working faces by an order of magnitude; these are portions of the system which were producing high grade ore when the mine was closed by Anaconda and subsequent leasers due to low metal prices. The deep workings will also provide drill platforms for further exploration and expansion without the great cost of drilling from the surface. It may also be possible to connect the two mine areas, say on the 900 Level (bottom of the Thompson mine) to open up a large area for geologic mapping (as opposed to interpretation of drill results), additional drilling and discovery of new orebodies.

The other obstacle is the disarray of the very large body of engineering, geological, drilling, and production records, drill logs and maps. The Anaconda (plus whatever was added by leasers) data archive has been moved twice and much of the usable information is totally disorganized. Much may be duplicative and should be discarded or at least cataloged and stored separate, so as to make the remaining information suitable as working data to be used in a new operation.

22. RECOMMENDATIONS

The primary recommendations of this author are detailed above, to reactivate the hoists and make the shafts safe for use in the Defiance and Thompson shafts, and cull the duplicative and totally obsolete data from the files and maps. These tasks must take priority in order to reopen large areas of the mine to inspection, and to come up with a working body of engineering and geology data which can be used on a day-to-day

operating basis. When all areas of the mine which can be safely accessed are available, the deeper levels in particular should be carefully examined and compared with the master geologic maps, as some headings and stopes made by leasers may not be mapped.

To conform to modern methods of file/map preservation and deposit evaluation, the maps and reports which are deemed useful in a practical sense should be scanned into digital form. Digital data, engineering/survey work and particularly working copies of field geology sheets and geology compilations (such as the big Anaconda 40-scale linens) should be routinely stored when not in use in the fireproof vault.

This author is not a Qualified Person with respect to GIS technology, computer mine and drill data manipulation, and related ore reserve determination currently in use by the industry. It is possible that the complex structure and variability of high-grade mineralization at Darwin may not lend itself to use of commonly employed deposit modeling programs such as Vulcan or Micromine. However, it is realistic to recommend that all data, including drill records, stope production, car and rib samples in a well explored portion of the mine be integrated into an applicable modeling program as a test. This should be done by a geologist with expertise in computer modeling.

Before the general public in Inyo County becomes aware of active operations at Darwin, more mining claims should be staked for protection. On the west side of the patented property, many or all of the unpatented claims formerly held by Anaconda and other predecessors to Project Darwin LLC should be relocated, i.e. the Colorado and Imperial Colorado groups, Grandview, Anaconda, Vivian group, Aztec, Toltec, Montezuna etc. To the east, at least 1,000 feet east-west adjoining the eastern boundary of the patents should be located, as there is discovery potential for additional breccia pipe zones in and near the Darwin stock. A portion of the claims recommended might correspond for convenience with Mineral Surveys which were never taken to patent.

Specific recommendations as to discrete areas in the Darwin mine which may yield near-term production cannot be made until the entire mine, or as much as safely possible, is available for examination. A complete chronological compilation of specific exploration recommendations made over the years by Kildale, Davis, Wilson and other

Anaconda geologists has not been made and compared with what has been explored for, developed and mined. This will be a practical task once the files are reorganized. One of the last examples of specific exploration recommendations is offered by Wetzel (1989); targets include the Darwin anticline under the lower sill in the Thompson mine; deeper zones along the B458 fissure, and the Essex and Thompson fissure zones below the deepest workings. Wetzel (optimistically!) felt that together, these zones had potential to develop nearly four million tons of ore.

Long term geologic targets and exploration recommendations have been made by Kildale (1955), Wilson (1982, 1983), DeRuyter (1987), Wetzel (1989), Newberry et al (1991), Hahn (1992), Brown? (2002), Saunders (2007), and others including Dudley Davis, long-time Anaconda geologist at Darwin. The geologic targets include the crest and west limb of the Darwin anticline between the Defiance and Thompson mines, particularly immediately below sill-like intrusive bodies which extend westward from the Darwin stock and which may have served as dams to the upward migration of ore-forming fluids. Areas where these geologic environments are cut by the 434, Bernon, and Copper fissures may be particularly favorable and have never been seen below the Radiore Tunnel level.

The deepest levels of both mine areas, where high grade (particularly zinc) ore was being mined at shutdown should be re-examined. See Wetzel (1989). Sampling of high-zinc exposures for tellurium and indium should be continued.

As revealed in Newberry's work, the section is not overturned as it had been mapped by USGS geologists. It is likely that deeper limestone beds are present (Keeler Canyon Formation) and could be productive hosts for skarn.

Dependent on goals and funds available (and metal prices) follow up of the four deep zinc skarn drill targets recommended for Western Zinc JV (Hahn, 1992) and detailed in Section 10/11 above should be considered. If deeper sections of the mine can be accessed, exploration of these and other targets from underground drill locations may be more practical than drilling from the surface.

It seems likely that additional tungsten resources, such as the ore mined in the

433-435 stope, at least at the levels currently developed, may be discovered only by accident. Anaconda's deep exploration for tungsten in the DA-1 and 2 holes was unsuccessful. No "typical" tungsten skarns are seen in the current mine. Nevertheless, tungsten should be considered in any future exploration, and development work, drill core/samples, and any other samples should be routinely lamped and possibly assayed for tungsten, particularly in deeper skarn intercepts. The multi-element ICP analyses listed by ALS-Chemex and other analytical labs can be used (or a Darwin-specific suite designed) for possible byproduct metals.

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24. <u>Certificate of Author</u>

Peter Hamilton Hahn

I, Peter H. Hahn, Certified Professional Geologist, to hereby certify that:

1. I am currently employed as a Consulting Geologist as a sole proprietor with an office at 1536 Brigadoon Park Drive, West Jordan, Utah 84088.

2. I graduated with a Bachelor of Science degree in Geology in 1957 and a Master of Science degree in Mining Geology from Stanford University in 1959.

3. I am a member of the American Institute of Professional Geologists and a Certified Professional Geologist #10923 of that organization and have been since 2006.

4. I have been employed in the mineral exploration industry for 51 years since graduation from university, and have worked as a Geologist for Bear Creek Mining Co., District Geologist for Union Carbide Corp., Chief Geologist and Vice President for Nevada

Resources Inc., and Chief Geologist for Galway Resources US Inc. I have worked as Consulting Geologist for Utah International Inc., A. F. Budge Mining US Inc., Coeur Explorations, Cyprus Amax Metals, Tonogold Resources Inc. and others.

5. I have read the definition of "qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional organization (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-10-1.

6. I am responsible for all sections of the Technical Report titled Technical Report on the Darwin Mine, Inyo County, California and dated July 26, 2010. I have personally visited the Darwin Mine in the field on July 12-14, 2010 and other times in 1991 and 2007, for a total of approximately 35 days.

7. I have had prior involvement with the property that is the subject of the Technical Report by virtue of prior employment by Western Zinc JV / Cyprus-Amax and Galway Resources US Inc.

8. I am not aware of any material fact or change with respect to the subject matter of the Technical Report that is not reflected therein, and as of the date of this Certificate, to the best of my knowledge, information and belief, the Technical Report contains all of the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

9. I am independent of the Issuer applying all the tests in Item 1.5 of NI 43-101.

10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible to the public, of the Technical Report.

Dated this July 26, 2010 in West Jordan, Utah
Signature of Qualified Person

/s/

Peter H. Hahn, CPG-10923
Printed name of Qualified Person