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Mr. Jack E. Stone  
Project Darwin LLC  
Darwin, California

DARWIN RESOURCES REVIEW

Dear Jack:

You have requested that I review and comment on work you are currently doing to confirm and delineate resources in the Darwin mine, including the old Anaconda tailings pond and the larger waste dumps on the property. To perform this task, I have carefully reviewed the Technical Report text which I prepared for you, dated July 26, 2010; a large amount of data in my files from acquaintance with and work at the Darwin site beginning in 1991, and numerous notes, maps and resource calculations which you have made since 2010. In this letter report, the list of references appended contains only sources which were not cited in my Technical Report, and that Report should be consulted for many specific items and concepts. I explain below several changes and corrections to portions of the Technical Report.

It is notable that significant information on resources, engineering, metallurgy, and other data pertaining to the Darwin mine, to which I did not have access during my evaluation of the mine for Western Zinc JV (Cyprus-Mitsui) in 1991 is now in your files at Darwin. I believe that most of these items were in Blue Range Mining Company's possession at that time.

No new resources have been developed which would be compliant with the standards for "measured" or "proven" defined in Canadian National Instrument ("NI") 43-101 since my Technical Report was prepared. That said, I feel that the extensive work with the very large body of historic data which you have done, together with your intimate familiarity with the underground ore exposures have placed us in a position where many of the mineralized blocks delineated in earlier reports, together with mineralization which you have discovered, sampled and measured, puts us in a position where we can call some of the resources at least "indicated."

Unfortunately, the set of 100-scale level maps on which I plotted numerous drill holes, stope and car samples and production data in 1991 have not been located. These maps were the database from which my observations regarding the consistent increase with depth in the zinc to lead ratio, particularly in the Defiance breccia pipe system. This near vertical pipe, and the "skarn breccia" ore which surrounds it, leads upwards directly into high grade stratabound ("bedded") silver-lead-zinc +/- tungsten +/- copper skarn ore in the higher levels of the mine. The 1991 Cyprus program was directed toward discovery of high grade skarn zinc ore, and my recommendations regarding the geologic

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exploration targets at depth have not changed. The favorable factors are explained in my progress report (Hahn, 1992) which includes data derived from Rainer Newberry's work (Newberry et al, 1991). The deposit model is illustrated in the "cartoon sections" which I drew for Cyprus and which are in your possession.

Anyone evaluating the Darwin property for reactivation should realize that in complex deposits of this type, measured resources which would be compliant with NI 43-101 standards are difficult to establish. Anaconda, who kept a geologist (and often more than one) busy full time, with continuous underground core drilling and longhole drill exploration, rarely kept more than a year's reserves on the books. Nevertheless, with good mine management and meticulous mapping and data plotting, they always stayed ahead of the mill. At least 1,700 underground drill holes (upwards of 160,000 feet) by Anaconda and subsequent operators are shown on maps in the Darwin office.

### **Underground ore resources**

The ore reserve calculations done regularly by Anaconda, and compilations by leasers after Anaconda's shutdown, are reviewed in my Technical Report (Hahn, 2010, p. 19-21). The historic ore reserve calculation methodology (Skiles, 1957; Cormie, 1970; Musolf, 1971) varies among the different geologists/engineers and does not correspond with CIM resource/reserve categories nor the standards applied in NI 42-101.

Since I prepared my report last year, you have done a considerable amount of work in the Darwin files, directed toward cataloging the data, defining reserve blocks, correlating mineralized drill intercepts and visible or sampled mineralization between mine exposures and levels, and determining which reserve blocks were mined after the estimates were made. The detailed sections in Cormie (1970) have been found.

Significantly, your review of production records has allowed you to determine a number of ore blocks listed in Cormie's (1970) report which were not mined by his client, Mexicanus-Colorado.

You have compiled a spreadsheet which includes proposed underground development by drilling, drifting and sinking; geologic exploration targets, principally those described in my reports (Hahn, 1992, 2010); and about 52 individual ore blocks which have been documented in work by Anaconda, Robert Wetzels/Blue Range Mining, Donald Strachan/Western Industrial Minerals, and Montecito Minerals.

The six "geologic exploration targets" on the spreadsheet are exploration concepts to discover new ore along unexplored extensions of known ore-controlling structures, such as along the B-458 fissure in the northern part of the Thompson mine (same as the spreadsheet first item, drifting on the 600L to follow the B-458 fissure which was mined on the 400L and not drilled on the 700L and below.) Other geologic targets, particularly in the Defiance mine area, are thought to represent high grade skarn zinc mineralization. Evidence for these targets includes the striking increase in Zn:Pb with depth, and the thick carbonate section below the "lower sill" in the deepest Defiance workings and in a

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similar environment and anticlinal structure in the deep Thompson workings. The potential for high grade zinc (+/- other base metals and tungsten) in these favorable carbonate beds is at least several million tons.

The 52 resource blocks mentioned above are located on all mine levels, in the Defiance and Thompson/Essex mine areas. By examination of numerous drill hole intercepts, rib and chip samples and correlation of mineralization between levels and adjacent workings, you have calculated tonnage of these blocks, and assigned representative silver, lead and zinc grades to them. The ounces per ton ("opt") silver and percent lead and zinc each vary from one to ten and above. However, when making a global estimate of metal potential, it seems reasonable to use the figures which represent Anaconda's long term production 1945 – 1957, 6 opt silver, 6% lead, 6% zinc, unless local sampling indicates otherwise. Anaconda's cutoff has been reported as 1.3 opt silver, and as 10 units – adding opt silver, percent lead and percent zinc.

You have used about a 2+2+2 figure for cutoff grade in your calculations, and tonnage factors of 2.8 tons per cubic yard (9.6 cu ft/ton) for oxide and 3.2 tons per cubic yard (8.4 cu ft/ton) for sulfide ore. Much of the ore from deeper levels is mixed oxide and sulfide.. These factors conform to those used by Anaconda and other operators, although there is no specific data in the files regarding specific gravity determinations.

It is difficult to assign any of these blocks to the "Measured Resource" category. However, you have reported to me the density of drilling, large number of channel and chip samples, and geological logic of connecting mineralization between exposures and levels. Most of the analyses were done routinely in Anaconda's onsite assay lab, and there is no evidence to doubt their figures. However, a missing factor is data on modern QA/QC practice, and original assay certificates. Were it not for the QA/QC factor, the larger and more easily accessible blocks, on and above the 400L, could be called Measured Resources.

We have discussed several of the larger ore blocks on your spreadsheet in detail, below:

**1. Mineralization visible in the A433/435 Stope** has been sampled in detail by Anaconda and confirmed by Blue Range. It is visible on three sides and is cut by numerous drill holes. This is a bedded skarn body of largely oxidized silver and zinc, with locally strong scheelite, on the crest of an anticline. Most of the tungsten production from the Darwin mine has been come from this stope on the east limb of the anticline, which is connected to the 400L main tunnel. Drilling and rib exposures show that similar mineralization extends northwest at least to the 458 fissure. This block contains:

**Indicated: A433/435 Stope (oxide): 180,000 tons, 10 opt Ag, 1% Pb, 10% Zn, 1% WO<sub>3</sub>**

**2. Another large block** which is well documented is the downdip extension of ore stoped on the 400L along the **B-458 fissure**. For practical purposes, this mineralization is continuous with the bedded zone in the A433/435 stope, but much more strongly

structurally controlled. The anticline mentioned above plunges to the northeast, and is cut by the B-458 fissure and the A-472 fault, both strong structures. It is thought that the B-458 fissure is the feeder for the bedded ore. The dip steepens to 60 degrees, locally flattens on the 500L, and is steep below. When the plan maps of the 400, 500, 600 and 700 levels are stacked, it can be seen that there has been a substantial tonnage developed by drilling from those levels. Holes drilled on the 700L are thought to have missed hitting it by 17 feet. The zone is partially oxidized to depth, and the many drill intercepts average 10 opt Ag, 1% Pb and 10% Zn. Robert Wetzel (1989, p.4) had access to these deeper levels in 1989, and sampled areas around the 560 drift which were extremely high in silver (also shown in several Anaconda drill holes, in a zone at least ten feet thick.) There are numerous samples and intercepts here which run +40 opt Ag.

Anaconda is known to have avoided high zinc areas with low lead, particularly deeper in the mine, which may explain why this zone has not been more extensively mined. The zone can be followed down dip for 400+ feet, probably averages 300 feet wide and 10 feet thick including areas where it flattens. Using a tonnage factor of 9 cubic feet/ton for mixed oxide-sulfide ore, the resource comes to 133,000 tons; since physical examination there is not currently possible, I have split the resource between indicated and inferred:

**Indicated: B-458 fissure ore, mixed, 66,500 tons, 10 opt Ag, 1% Pb, 10% Zn**

**Inferred: “ “ “ “ 66,500 tons, “ “ “**

**3.** There is a well explored and developed, steeply dipping **oxide ore shoot** exposed on the 400L, in the Defiance mine between the 418 and 450D cross cuts. This body can be seen as well as on the 3-B, 3-A, 100 levels and on the surface. By stacking level maps, the shoot can be identified as deep as the 1000L. The surface exposure was drilled by Quintana in about 50 short holes, with 6 opt Ag, 6% Zn, low Pb and 0.074 opt Au. It is limited on the north on surface by a strong shear, and lies on the SW contact of an intrusive dike where exposed on the 400L. Metal values increase toward the north contact. The shoot has numerous drill holes and exposures above the 400L.

Seven drill holes on the 400L run 12.5 opt Ag, low Pb, 12.5% Zn. Small zones of sulfide ore in this body have been stoped on several levels, but the bulk of the zone has not been mined. The size is about 50 X 100 feet in cross section; with 1,000 feet vertical extent, it can contain as much as 520,800 tons at 9.6 cu ft/ton. With credit for the resource of about 30,000 tons in the well explored and developed portion above the 400L (a portion of which may be minable on the surface where drilled by Quintana) the remainder can be 490,800 tons. This resource is then:

**Indicated: 418D Oxide, 30,000 tons, 12.5 opt Ag, ? Pb, 12.5% Zn ,with gold credit**

**Inferred: “ “ 490,800 “ “ “ “ “ “ “**

**4.** The **A-439 Stope** mineralization at the southern margin of the Thompson workings is exposed on the 400L about 350 feet south of the A433/435 stope, in the fork between the 401 (main Radiore tunnel) and the 438 crosscut to the east. This ore body was probably

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not opened because it is directly above the Radiore tunnel and would have required that main haulageway to be bypassed.

The 439 Stope area is penetrated by as many as 45 drill holes by Anaconda and Blue Range, on the 400, 3-B and 3-A levels and the 110 sublevel. It is 50 X 50 feet in cross section, and the resource has been calculated from the 400 to the 200 level. You have calculated the metal content from the drill holes and numerous rib samples collected by Blue Range:

**Indicated: 439 Stope area, 30,000 tons, 13.2 opt Ag, 4.2% Pb, 4.0 % Zn**

5. A sizeable unmined body is suggested deeper in the Independence/Essex area in several drill holes on the Thompson 800L and hole 712 on the Thompson 700L. On your spreadsheet, it is identified by drill holes which cut it as the **833/712 area**. The grade is known from at least five drill holes.

Anaconda's deep angle core hole DA-2 contains a thick mineralized zone, 162 feet of 2.47% zinc and 0.40% lead (containing intercepts up to 5.4% Zn, 2.3% Pb, 2.6 opt Ag) at about 1,100 feet depth, apparently where the near-vertical "Essex skarn pipe" is cut about 250 feet below the Thompson 900L. In the 800L drill holes, the body is about 50X50 feet and it appears not to have been drilled for on the 900L. The depth extent is unknown. Since not much more is known, the resource could be large:

**Inferred: 833/712 zone, 30,000 tons, 3.0 opt Ag, 9% Pb, 12% Zn**

6. Development of the **1200 and 1300 levels** in the Defiance mine was done by leasers late in the operation of the mine, and is quite limited. On both levels, the principal development is a drift extending from the Defiance shaft station in a N 50-60 W direction for about 400 feet, apparently within the mineralized margin of the Defiance breccia pipe. One rib of each drift (S rib on 1200L, N rib on 1300L) is in ore for nearly the entire length, and it is clear when the level maps are stacked that a substantial body of high-zinc ore exists on these levels. The grade is defined by about 25 drill holes from these levels, which run 4.9 opt Ag, 3.2% Pb and 11.9% Zn in sulfides. This region demonstrates the increase in the Zn:Pb ratio with depth. Taking into account the very steep southerly dip of the zone, it is still at least 15 feet thick and 150 feet long, with depth extent unknown. If a vertical length of 150 feet is assumed, and allowance is made for the inclusion of some oxides, this body can contain 33,750 tons of ore; it is classified as inferred because it is not currently accessible and has not been fully developed:

**Inferred: 1302 drift, 33,750 tons, 4.9 opt Ag, 3.2% Pb, 11.9% Zn**

The remainder of the ore blocks listed on your spreadsheet are smaller than those listed above. They range in size from 200 to 7,500 tons. Most are determined from historic Anaconda and Blue Range drilling and rib sampling. It seems reasonable to lump these as a single Inferred resource. Since the metal content of the remaining blocks varies widely, and many are deeper in the mine than the predominantly oxidized ore on the

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400L, the historic Anaconda average of 6 opt Ag, 6% lead and 6% has been used. They actually are located on all levels from the 100L (where at least 1,000 tons of 33 opt Ag remains in the old 177 stope and can be easily dropped and reclaimed on the 400L) to the 900L in the Thompson mine and the 1300L in the Defiance.

**Inferred: remaining blocks, 114,850 tons, 6 opt Ag, 6% Pb, 6% Zn**

### Other Metal Resources

**Tungsten:** The Darwin Mining District has long been recognized as a tungsten producer, principally from small skarn deposits south and east of the Darwin mine itself. You have some of these properties under lease, but there are no resources currently developed. Recorded tungsten production from these properties to 1951 was about 35,000 short ton units (stu) (Hall & MacKevett, 1962).

Late in Anaconda's tenure at Darwin, the scheelite which accompanies zinc oxide mineralization in the Thompson mine was recognized as an economic resource, and Anaconda and several leasers produced tungsten from the 433/435 stope as well as from deeper levels in the Thompson workings. Anaconda's scheelite production is not recorded separately. You have reported to me that Montecito's production 1973-74 from the 433/435 stope and other stopes from the 600L to the 900L in the Thompson mine is about 24,000 tons, at 0.75% WO<sub>3</sub> or about 18,000 stu.

Examination of the back and face of the 433/435 stope under ultraviolet lamp reveals some spectacular scheelite mineralization, and I have personally collected samples up to 3.54% WO<sub>3</sub> on the face. The scheelite appears to be on steeply dipping fractures which cut the typical base metal "bedded ore" and may represent a separate mineralizing event. Many of the drill hole assays deeper in the Thompson mine also report scheelite associated with the Ag-Pb-Zn mineralization and it seems reasonable to postulate an inferred tungsten resource:

**Inferred tungsten resource, Thompson mine: 50,000 tons, 0.50% WO<sub>3</sub>**

**Copper:** You have identified an area of copper mineralization on the 400L about 300 feet north of the 433/435 stope. The copper occurs as **covellite**, partially oxidized, which appears to be associated with the intersection of the NW-trending B-458 fissure and another NW fault, and the A-472 fault. Both are strong mineralizers. It lies near the hanging wall of the "bedded ore" resource extending north from the 433/435 stope where that zone dips down to follow the B-458 fissure.

The copper-rich zone appears to be about 45 feet thick on the 400L and may be offset further to the north on the 500L. There are no drifts that far north on deeper levels, but high copper is reported in a few drill holes. The average of about 100 grab and drill samples in this zone is 41 opt Ag, 4% Pb, 14% Zn, 6% Cu and about 0.9% WO<sub>3</sub>. Using

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the exposed dimensions on the 400L, 45X175 feet in cross section, and projecting 200 feet in length, this body could contain 175,000 tons.

**Inferred base metal body with copper: 175,000 tons, 41 opt Ag, 4% Pb, 14% Zn, 6% Cu, 0.9% WO<sub>3</sub>**

### **Tellurium:**

In 2009-10, in a reconnaissance program for tellurium resources, consultant Don Strachan sampled high zinc exposures in the Defiance mine. The zinc-tellurium association is well known from other regions. He collected grab samples from high-grade base metal zones and some vertical channel samples, from the Defiance breccia pipe and a small zinc oxide stope about 400 feet to the east (the latter stope not shown on historic maps, apparently very late work by leasers.)

The tellurium results are highly anomalous, ranging up to 377 ppm Te. Tellurium potential at Darwin is unknown, no other samples having been analyzed for that element. However, Strachan (2010) speculates that oxidation may have removed some of the tellurium at the 400L, and that the deeper unoxidized portions of the Defiance breccia pipe complex may contain significant byproduct tellurium.

### **Tailings**

Disclaimer: The author is not a Qualified Person with respect to metallurgy and metallurgical processes, and the information presented under Tailings and Waste Dumps is historical in nature.

Neither the tailings pond resource nor any waste dump tonnage were considered in my Technical Report.

Both Anaconda and Quintana Minerals Corporation, to whom the property was sold in 1984, seriously studied a cyanide heap leach system to recover the values (mainly silver) which remain in two tailings confinements adjacent to the Darwin mine. Anaconda's work is detailed in two reports (Milligan & Englehardt, n.d; Van Zyl and Strachan for Steffen Robertson & Kirsten, 1981.) which detail site design, laboratory-scale process development, operation of a test heap at their Yerington, Nevada mine, recovery plant construction, and leaching in 1981-82 of a production heap at Darwin. About 31,000 tons (and perhaps more; the records are unclear) of agglomerated tailings were stacked on a compacted clay pad, and the pad was leached in 6,000 ton units (cells.) Cyanide consumption was about 2 lbs. per ton; the metal was recovered in a portable Merrill-Crowe plant, and silver recovery approached 70%. The operation was suspended due to low silver prices.

Quintana's studies are covered in reports prepared by Cimetta Engineering and Construction Co., Inc. (McDonald, 1983; Nelson, 1983), but Quintana did not go to

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production. Cimetta reported 64% recovery of silver in a column leach, and felt that yield might exceed 70% with optimization of agglomeration and aeration.

The tailings cover 41.93 acres, average 10 feet depth. Anaconda drilled the tailings piles with 59 holes and estimated the tonnage by cross-section methods. Quintana offset 12 of Anaconda's holes. Locations of the sampling holes are unknown. The tonnage factor used was 150 lbs. per cubic foot, or 13.3 cubic feet per ton. McDonald (1983) reports:

Tailings south of road	1,292,600 tons, 1.42 opt Ag
Tailings north of road	144,600 tons, 1.71 opt Ag
Total tailings available	1,437,200 tons, 1.47 opt Ag wt. avg.

Elsewhere in Cimetta's reports, the total tonnage is given as 1,453,328 tons.

Overall grade of the tailings deposits varies between sources; the 12 holes offset by Quintana averaged 1.45 opt Ag by Cimetta's (in-house?) assays, and 1.35 opt Ag by Anaconda's (7% lower.) Nine random pulps from Cimetta's holes were run by Skyline Labs Inc. in Tucson; of these samples, Cimetta's average was 1.32 opt Ag, Skyline's 1.18 opt Ag (11% lower.) In view of the lower numbers determined by both Anaconda and Skyline, and unknown QA/QC protocols for Cimetta's lab, I conclude that it is reasonable to reduce Cimetta's silver assay numbers by about 9%, or 1.34 opt Ag. Cimetta also did a column leach test on the tailings (sample ran 1.37 opt Ag) and achieved 62% silver recovery with a cyanide consumption of 3 lbs. per ton. Zinc content of that sample was 1.55%.

Several assays reported also average 0.005 opt gold. Anaconda did not report gold recovery in their work. Cimetta's column leach test extracted 24% of the gold. Cimetta (Nelson, 1983) reported the recovery as 1.3% of the zinc in the sample, and suggested that additional testing would be required to increase zinc recovery without consuming an unacceptable amount of cyanide. I believe that much more work on oxide zinc recovery has become available since 1983.

Taking all these numbers into consideration, and the apparent adequacy of sampling and analysis (but unknown drill hole locations), it is reasonable to put the resource, although historical in nature, contained in Darwin tailings in the Indicated Mineral Resource category:

**Indicated: Darwin Main Dump, 1,437,200 tons, 1.34 opt Ag, 0.005 opt Au, 1.55% zinc**

For the main Darwin Mill tailings, at 70% recovery for silver, 24% for gold,

**Indicated recoverable silver 1,348,100 ounces; gold 1,724 ounces, ? zinc**



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A smaller tailings pond, at the Lane Mill east of Darwin Ridge, was measured by Anaconda and sampled by Don Strachan, World Industrial Minerals, in reconnaissance for tellurium occurrences. Strachan collected five samples from hand dug pits. This resource is:

**Inferred: 12,800 tons, 2.74 opt Ag, 1.69% Pb, 2.84% Zn.**

No metallurgical work has been done on this material.

### Waste Dumps

There are three significant waste dumps on the Darwin property which have been measured and sampled. Several other dumps are present, and the tonnage and grade of these should be determined.

The largest dump is the “main” dump at the portal of the Radiore Tunnel (400 Level); the 9,000+ ft. Radiore Tunnel is the main entrance to the mine, through which ore was delivered to the mill from stopes in the Bernon, Defiance, Thompson, Essex and other working areas in the Darwin mine. With the widespread Ag-Pb-Zn and other metals in the Darwin ore system, much development rock, from areas separate from the known orebodies and below cutoff grade but containing significant metal values, is contained in this large dump.

Whether Anaconda considered recovery of remaining values in this large dump is unknown. Quintana Minerals, however, included study of the Radiore dump in Cimetta’s review of the tailings potential (McDonald, 10/25/83). The dump was surveyed and the volume determined by cross-section methods. The volume of this dump is 398,256 cubic yards; using a density of 100 lbs. per cubic foot, this is 537,645 tons.

Cimetta collected ten samples from the main dump. Unfortunately, the sampling method is not described, and the map showing their approximate locations is lost. The ten samples ranged between 0.29 and 1.86 opt Ag, and nil to 0.014 opt Au. Average value was 1.06 opt Ag, 0.005 opt Au. Only two sample pulps were rerun by Skyline; their numbers are about 15% lower than Cimetta’s.

Don Strachan, geologist with World Industrial Minerals collected 11 samples from the main dump during reconnaissance for tellurium resources. Values from hand dug pits five feet deep averaged 1.66 opt Ag, 1.41% Pb, 2.2% Zn and 0.014 opt Au.

Cimetta performed a bucket cyanide leach test on the main dump samples “. . . to determine if values in the rock would be extracted if used as a base for the leach heaps.” (McDonald, 10/25/83, Appendix Sheet 3) The best extraction, on a sample which ran 1.62 opt Ag, 0.007 opt Au, was 0.125 opt Ag, 0.001 opt Au. Lacking any further information, it is concluded that cyanidation of raw dump material might be uneconomic without further crushing or other treatment.

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Considering the difficulty inherent in surface dump sampling, uncertainty as to some of the sampling methods, and the fact that the main dump is as much as 75 feet high (a surface “skin” only 5/75 or 7% of the main dump height was sampled), it and the other dumps probably must be classified an inferred resource.

The other two dumps which have been reviewed are at the Thompson adit and the Lane mine, both located on the east or “back side” of Darwin Ridge. The Lane dump was also sampled by Don Strachan in four, 4-foot hand-dug pits; his samples averaged 4.07 opt Ag, 1.4% Pb, 2.2% Zn. You have supplied me with other sample results for the Lane dump: 12,500 tons, about 2.2 opt Ag, 0.048 opt Au.

The Thompson mine dump is larger, and you have told me it measures to 207,500 tons, about 1.00 opt Ag, 0.005 opt Au.

In summary, the weighted average for gross silver and gold resource in the three dumps described is about:

**Inferred: dumps, 757,645 tons, 1.50 opt Ag, 1.4% Pb, 2.2% Zn, 0.006 opt Au**

There is no other information in the Darwin archive regarding base metal content of other dumps, nor whether it could be feasible to recover such values. However, corresponding to the +1 opt silver content, it is reasonable to assume that the dumps contain substantial base metals.

### **Summary, Conclusions and Recommendations**

This letter reviews the mineral resources in the Darwin mine which you have outlined, and should be read as a supplement to my 2010 Technical Report (which is NI 43-101 compliant as to text, but contains no illustrations.) I have referred to your spreadsheet which includes several geologic exploration targets (including my proposals from work done at Darwin in 1991) and about 50 specific mineral resource areas where you and I have calculated Inferred and Indicated Mineral Resources. These resource areas are listed on the following page:

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Area	Indicated Tons	Inferred Tons	Ag opt	Pb%	Zn%	WO <sub>3</sub>	Cu%	Au opt
A433/435 Stope	180,000		10	1	10	1		
B458 Fissure	66,500	66,500	10	1	10			
418D Oxide	30,000	490,800	12.5	?	12.5			?
A439 Stope	30,000		13.2	4.2	4.0			
833-712		30,000	3.0	9	12			
1302		33,750	4.9	3.2	11.9			
Remaining blocks		114,850	6	6	6			
Tungsten		50,000				0.50		
“Covellite zone”		175,000	41	4	14	0.90	6	
Tailings	1,437,200		1.34	?	1.5			0.005
		12,800	2.7	1.7	2.8			
Dumps		757,645	1.5	1.4	2.2			
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Total tons	1,743,710	1,731,345						

The total silver contained in this tonnage at the stated grades, is:

**Indicated silver resource, 4,805,448 Troy ounces**

**Inferred silver resource, 16,090,502 Troy ounces**

Of these resources, the tailings, where there is well documented metallurgical research available and low capital cost stand out. The tailings ponds contain probably over a million ounces of heap leach recoverable silver.

The dumps are not well sampled, but also present an interesting silver resource. However, the dump material will require haulage and crushing to present a resource amenable to inexpensive leaching.

Underground, the resources available on and above the 400L are easily accessible for near-term mining, particularly the continuation of the zinc-tungsten “bedded zone” in the A433/435 stope. You have already begun early-stage engineering, including underground milling and waste disposal, to recover these values.

Concurrent with developing additional ore adjacent to the A433-435 area, detailed mapping and drill exploration of the copper (“Covellite zone”) body, and adjacent B-458 resource, is recommended. Detailed sections and perhaps 3-D modeling are needed to understand better the relation between the copper mineralization, the bedded zinc-tungsten ore, and the B-458 and A-472 structures. This is very complex geology and structure, and a better understanding of this area, and the adjacent Essex pipe mineralization will enable much more efficient ore-finding. It should be easy at that point to

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move the resources in this area into the “Measured Mineral Resource” category, per CIM definitions (CIM, 11/22/05).

As we discussed by telephone on 8/25/2011, further refinement of resource numbers will best be done by computer modeling, in a modern system such as Vulcan or Micromine. We discussed identification of specific areas to test such modeling and resource estimation – a specific reserve block with the best historic geologic mapping, sampling, and best drill records be used as a test area, and the inaccessible ore block on the Defiance 1200 – 1300 levels was mentioned. Much depends on the skill and experience of the person doing the modeling. When you are prepared to proceed with such a test, I can recommend some people who would be able to help. Raising the confidence level to go from Indicated to Measured depends on statistical analysis of the model data, which I am not qualified to do.

Aside from specific area recommendations, it is suggested that future assaying of all channel, drill and other samples include routine ICP analyses to include (at least) tellurium, indium, and gallium, all rare elements known to be associated with skarn zinc deposits. It is interesting to note that the significant indium content of the well-explored Crypto zinc skarn deposit in western Utah was not recognized until it was drilled by the third operator.

The recommendations made in my Technical Report (Hahn, 2010, Part 22) have not changed. These cover land acquisition, access, and preservation and digitization of records. Access to the deep levels of the mine, below the 400L, is not now possible, and rehabilitation of the facilities and hoists in the Defiance and Thompson-Essex mine areas should be done. I believe that connection of these two workings at depth will bring a very significant unexplored area within more practical reach of drilling, not to mention creation of a secondary escape route. Drilling for the potential deep zinc skarn geologic targets sought by Cyprus (Torrey, 1991; Hahn, 1991) will be much more efficient from these extended workings. Careful geologic mapping, sampling and drill logging will build on the excellent base established by Anaconda, their leasers, and Blue Range.

### **References** (See also the references listed in Hahn (2010))

CIM, 2005, CIM Definition Standards – For Mineral Resources and Mineral Reserves: Canadian Institute of Mining, Metallurgy and Petroleum, 11/22/2005

Hahn, P.H., 2010, Technical Report on the Darwin Mine, Inyo County, California, Prepared for Project Darwin LLC

McDonald, J.B., 1983, Darwin Mines Project Ore Reserves, Existing Tailings and Waste Dump, 10/25/1983, Prepared for Quintana Minerals Corp.: Cimetta Engineering and Construction Co., Inc.

Milligan, D.A., and Englehardt, P.R., n.d., Agglomerated Heap Leaching, Anaconda’s Darwin Silver Recovery Project: Anaconda Minerals Co.

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Nelson, R.R., 1983, Metallurgical Testing of Darwin Tailings, Prepared for Quintana Minerals Corp.: Cimetta Engineering and Construction Co. Inc.

Van Zyl, Dirk, and Strachan, Clint, 1981, Report on the Site Investigation and Design of a Heap Leach Impoundment at Darwin, California: Steffen, Robertson & Kirsten (Colorado), Inc.

I trust that this review will meet your requirements and those of interested investors. Please don't hesitate to contact me if you have any concerns.

/s/ Peter H. Hahn, C.P.G.

Signed at West Jordan, Utah,  
August 26, 2011