

## **23.3 DEVELOPED PROSPECTS**

### **23.3.1 Mets (094E 093)**

The Mets deposit, situated on Metsantan Mountain, is located about 16 km northwest of the Lawyers Project. It was discovered by Golden Rule Resources Ltd. in 1980 and hosts several quartz-barite breccia zones which were assessed by trenching and surface diamond drilling. Cheni Gold Mines optioned the property in July 1992, and by September of the same year had developed the property (using trackless equipment) with a 60 m decline to cross-cut the A Zone and a 160 m-long exploration drift along the zone, mining about 2,300 tonnes of mineralization and 3,700 tonnes of waste (Minfile, 2015c).

After the underground program, Cheni estimated diluted reserves of 53,342 tonnes grading 12.0 g/t Au from an initial 'geological probable reserve' of 68,000 tonnes grading 13.17 g/t Au (Cheni, 1993). These historical diluted reserves would likely be comparable to the current CIMM classification for probable reserves, however a qualified person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves, and as such the QPs of this report and Crystal are not treating this historical estimate as current mineral resources or mineral reserves. The historical estimate is relevant to other mineral deposits of the area, including those on the Lawyers Project, as they illustrate the application and impact of underground development, detailed underground sampling, dilution and mining recovery on preliminary resource/reserve estimates, as work progresses on developing a deposit.

Cheni's program also determined there were acid rock drainage issues with the mineralization; during site reclamation, Cheni put all of the mineralization and most of the waste rock back underground. The property was subsequently returned to Golden Rule because of low gold prices.

The Mets developed prospect consists of a tabular core of silicified rock in three separate but genetically linked zones: the A Zone (and its extension), the Footwall Zone and the 400 South Zone. The A zone has a strike length of 140 m, a true thickness of 6 to 10 m and a vertical extent of up to 75 m; it strikes 340° and dips 70°-85° to the west. A mineralized shoot within the A Zone has a gentle northwest plunge (Minfile, 2015c).

The A Zone is hosted by a quartz-barite breccia zone which occurs near the vertical contact between a footwall andesite and a hangingwall dacite unit. Steeply-dipping, thin breccias generally are higher in grade; when the breccia orientation flattens, as it does at depth, grades drop off rapidly. Native gold is the primary mineral of interest present with rare occurrences of electrum, argentite, tetrahedrite, pyrite and galena. Gold occurs as free grains and flakes 0.005-2 mm in diameter, adjacent to fragments of quartz and barite within the breccia system. Sulphide mineralization is practically nonexistent in the A Zone. At its northern end, the A Zone is truncated by the N75 fault, a vertical graben structure striking 050° and dipping 80° south. The block of rock north of the fault is down-dropped, with up to 110 m of vertical displacement. In 1987, deep drilling north of the fault intersected a 4 m wide quartz breccia body (the N75 or A Extension Zone) from which intercepts yielded values ranging from 0.85 g/t Au across 4 m to 22.83 g/t Au across 7.1 m (Minfile, 2015c).

The Footwall Zone is a quartz-carbonate breccia body situated within the footwall andesite unit. It has been exposed over a 260 m strike length and is interpreted to strike 340°, with an indeterminate dip. It

pinches and swells with a maximum width on surface of 4 m. Its Ag:Au ratio is 2:1 or greater contrasting with a Au:Ag ratio of 10:1 or greater for the A Zone. A one-metre channel sample across it assayed 19.81 g/t Au and 127.86 g/t Ag; a drill intersection in it assayed 19.29 g/t Au over 0.7 m. Drilling in 1987 also intersected the 400 South Zone, a narrow auriferous quartz breccia body at the same andesite-dacite contact along which the A Zone occurs. Drill intercepts through this zone include 4.11 g/t Au over 1.6 m and 8.03 g/t Au over 1.0 m (Minfile, 2015c).

Alteration at the Mets deposit consists of an extensive outer propylitic zone (epidote, chlorite, rare pyrite) and a proximal advanced argillic zone (sericite, kaolinite, dickite) enveloping inner silicic (quartz +/- barite) zones, in both the hangingwall and footwall rocks to the silicic zones. Argillic alteration is primarily developed within the footwall side of the deposit where the alteration envelope can range up to 40 m in thickness.

### **23.3.2 Golden Stranger (094E 076)**

The Golden Stranger developed prospect is located about 11 km west-northwest of the Lawyers Project on claims now owned by Steven Lawes of Princeton, B.C. The original gold-silver showings on the property were discovered by Western Horizons Resources Ltd. in 1983.

The prospect hosts low sulphidation, adularia-sericite type epithermal mineralization hosted by Metsantan Member trachyandesite flows of the Lower Volcanic Cycle of the Toodoggone Formation. The volcanic wall rocks are cut by a series of north to northwesterly-trending fracture/fault systems, along which aplitic dyke-like bodies are present. Multistage quartz veining and silicified breccias crosscut both the altered volcanics and the aplitic rocks (Diakow, et al., 1993).

Two divergent breccia zones comprise the Main and West Zones. The Main Zone consists of a quartz vein/breccia system striking northerly with a near-vertical dip. The zone is 50 m wide and extends for 450 m in length. Pyrite, galena, sphalerite, chalcopryrite, chalcocite and covellite are hosted in a quartz-amethyst breccia zone developed at the contact of a trachyandesite unit and an aplite dyke. A 1986 trench in the northern part of the Main Zone yielded an interval of 3.9 m grading 14.4 g/t Au; the most southerly trench on the zone, located 390 m along strike, yielded 1.37 g/t Au over 4.0 m. In 1988, drilling on the Main Zone returned several significant intercepts, including 11.55 g/t Au and 6.20 g/t Ag over 3.05 m and 5.99 g/t Au and 12.35 g/t Ag over 3.05 m (Minfile, 2015d). True widths of these intercepts are not known.

The West Zone vein-breccia system is not as well-developed as the Main Zone. Drill-testing of it in 1988 returned some low-grade values, including 0.03 g/t Au and 3.1 g/t Ag over 3.1 m and 2.07 g/t Au over 15.0 m (Minfile, 2015d). True widths of these intercepts are not known.

### **23.3.3 JD (094E 171)**

The JD developed prospect is located about 11 km north-northeast of the Lawyers Project on claims now owned by Cameron Scott of Alberni, B.C. Attention first focused on the area in 1931 when a prospector was reported to have taken several thousand dollars' worth of gold from placer workings. Much later, in 1971, Sumac Mines Ltd. staked claims in the area to cover lead and zinc showings hosted in quartz veins.

Subsequent soil geochemical surveys nearby outlined a 1,500 m-long zone with anomalous silver, lead, zinc and copper values. Claims covering the JD prospect were optioned by AGC Americas Gold Corp. in 1994. From 1994-98, AGC carried out a substantial amount of diamond drilling and ancillary geochemical and geophysical surveys and discovered two main zones of interest, named Finn and Creek. The Finn Zone is a high sulphidation epithermal-type gold deposit with important values in silver, copper, lead and zinc. It is a structurally-controlled, 600 m long by 400 m wide, east-west trending zone consisting of a tabular, shallowly-dipping, 15 m thick body of gold-bearing brecciated and silicified rock, enveloped by a large quartz-carbonate vein stockwork with disseminated and massive base metal sulphides. AGC concluded that the mineralized setting of the Finn Zone should perhaps be viewed as a large high-sulphidation epithermal system overlapping with porphyry-style mineralization at depth (Minfile 2015e).

The high-grade polymetallic Creek Zone was discovered by drilling in 1997 and became the focus of exploration in 1998. Hole 97-08 intersected 103.3 g/t Au, 92.2 g/t Ag, 1.34% Cu, 0.46% Pb and 11.7% Zn over 4 m. The true width of this intercept is not known. In 1998, eleven holes were drilled to follow-up the high-grade intersection; results confirmed the presence of stockwork mineralization but overall grades were lower.

In September 2011, the JD property was optioned by Tower Energy (now Tower Resources Ltd.). Tower believes there is potential on the JD property to discover a lower grade, bulk-tonnage gold and silver deposit. In August, 2012, Tower reported results of its first three confirmation drill holes in the Finn Zone, including a near-surface intersection of 12.6 m grading 10.82 g/t Au and 65.70 g/t Ag. In a later news release (September, 2012) Tower reported the discovery of gold mineralization in the footwall of the Finn Zone. Hole JD-12-009, collared in the footwall, intersected 18.0 m grading 1.74 g/t Au and 4.23 g/t Ag from 3.1-21.0 m, followed by 11.0 m grading 2.48 g/t Au and 5.49 g/t Ag from 29.0-40.0 m (McBride, 2013).

Tower's 2013 exploration drilling in the eastern part of the JD project area discovered porphyry-style alteration and associated anomalous copper mineralization coincident with a Cu-Au-Ag-Te soil geochemical anomaly, an 800 m by 800 m aeromagnetic high anomaly and a large IP chargeability anomaly (Tower news release dated October 4, 2013). The chargeability anomaly, which measures about 1.400 m north-south by 400-600 m east-west and remains open to the east, was tested by three diamond drill holes.

Hole JD13-025 tested the northern part of the chargeability anomaly. It transitioned from propylitically-altered volcanic rocks near surface, through strong phyllic alteration and bottomed in altered rocks exhibiting early potassic alteration assemblages. Copper-silver mineralization of note in the hole includes 3 m grading 0.94% Cu and 14 g/t Ag at a depth of 66 m, and 1.4 m grading 4665 ppm Cu and 3.4 g/t Ag at the bottom of the hole at 230.1 m (McBride and Leslie, 2014). Hole JD13-028 tested the central part of the anomaly. It intersected variably phyllically-altered rock with local zones exhibiting earlier potassic alteration. The hole contained a wide interval of anomalous copper mineralization averaging 333 ppm Cu over 321 m from surface. Hole JD13-026 tested the southern part of the anomaly. It encountered nearly continuous, intensely phyllically-altered volcanic rocks throughout its entire length but no copper mineralization of note is reported. A 2.0 m interval of higher grade gold mineralization grading 6.03 g/t Au was cut at a depth of 310 m (McBride and Leslie, 2014).

Tower concluded that a program including deep penetrating IP surveys followed by diamond drilling are warranted to fully test the porphyry potential in the eastern part of the JD project area. To date, no further work, past that reported above, has been carried out by Tower Resources on the JD property.

## **24 OTHER RELEVANT DATA AND INFORMATION**

The Toodoggone District has a long history of successful exploration and development. However, until recently, the principal focus of past workers has been to explore for nearer-surface, low and high-sulphidation epithermal gold-silver deposits and, to a lesser extent, for open-pit able, porphyry-style copper-gold deposits.

In Section 7.1.1 of the Report, AuRico's recent success at its Kemess Underground and Kemess East deposits is described in some detail. Both deposits are potentially mineable by underground block caving methods; their discovery by deep drilling was guided in part by deep-penetrating induced polarization surveys. This information demonstrates the potential for the mining of porphyry-type deposits, by bulk underground methods, in the Toodoggone District. It has prompted recent explorers elsewhere in the district, including PPM, to re-evaluate historic results in order to better assess the potential of discovering a buried, porphyry-type deposit on their properties.

Other information relevant to ongoing exploration and any possible future development on the Lawyers Project includes:

- the fact that Lawyers is a 'brown-fields' project which offers certain advantages relating to future exploration, development and reclamation costs;
- the fact that the price of gold has seen an approximate US\$600 correction since July 2011. Any price rebound for it (and for silver too), although by no means certain, would help to reduce the cut-off grade at Lawyers, thus capturing more contained ounces of gold and silver in any mineral resource estimation carried out; and
- the current US\$-CDN\$ exchange rate, with 1.0 US\$ = 1.29 CDN\$ as of the Effective Date of the Report, which could have a positive impact on project economics, assuming that similar, favourable exchange rates persist into the future.

## **25 INTERPRETATION, CONCLUSIONS, RISKS AND UNCERTAINTIES**

### **25.1 INTERPRETATION AND CONCLUSIONS**

The interpretation and conclusions of the qualified persons are as follows:

(1) The current rendition of the Lawyers Project brings together the past-producing Lawyers gold-silver mine area and the extensive Silver Pond trend of precious metals occurrences. This large prospective land holding, under one company's ownership, presents a unique opportunity for PPM to carry out further exploration on a 'camp' scale. There remains excellent potential for the discovery of additional low and high-sulphidation epithermal deposits like those that have been discovered and explored to date. In addition, there exists the possibility for the discovery of a near-surface or buried 'bulk tonnage' deposit which may offer the advantage of economies of scale should future mine development occur.

(2) There remains in place the historic underground development infrastructure at the Cliff Creek North Zone. Should ongoing exploration in this zone warrant further underground development leading to possible future mining, this in-place infrastructure would decrease considerably the pre-production development costs that would be incurred.

Other existing surface infrastructure which would facilitate any future development on the Project includes its road access, its proximity to the nearby Baker mill and its relative proximity to electrical power, connected to the BC Hydro grid, which is available at the past-producing Kemess South mine site.

(3) The Lawyers Project is not directly encumbered by any provincial or national parks, or other protected areas. Additionally, PPM and its affiliated company Guardsmen have had recent positive experiences with regional regulators, local First Nations and other stakeholders; these positive relationships will help facilitate moving the Project forward should continued exploration on it justify future development.

(4) The AGB Zone may persist along strike, based on encouraging 2001 and 2003 chip sampling results at its southern end. Ground geophysical surveys in the overburden-covered valley to the south appear to indicate that the structure hosting the AGB mineralization may continue towards the valley bottom.

(5) The mineralized, low sulphidation, gold and silver-bearing M-Grid structures are similar in character to mineralized zones on the Project which have seen past production. They extend for a great enough distance (~400 m) along strike to host potential zones of economic interest, either at shallow, intermediate or greater depths. No drilling has been carried out on this zone.

Gold soil geochemical anomalies to the northwest and southeast of the M-Grid trenches outline an additional 600 m of potential strike length that remains unexplored. There is potential here to add to the strike length of M-Grid mineralization by initial surface trenching followed by relatively shallow drill testing, if warranted.

(6) The Silver Pond Group of prospects is more characteristic of a high-sulphidation epithermal environment. It extends for a distance of about 4.5 km along a regional northwest-trending structure which has been identified in reconnaissance airborne surveys as a prominent magnetic low. There remains considerable exploration potential to explore for both vein-type and bulk tonnage targets along this trend.

(7) Based on the reported results of Cheni's 19-hole underground diamond drilling program completed in 1992, the Phoenix Zone remains open to depth and to the east. There may remain potential here to outline additional high-grade resources.

(8) Regarding other minfile occurrences within the Lawyers Project area, there may remain untested targets that warrant further exploration work.

(9) Additional target areas within the Cliff Creek North Zone warrant further drill testing in an effort to increase the contained gold-silver resource of this zone.

(10) Overall, adequate care and proper procedures were used to obtain reliable gold and silver results in the 2015 diamond drilling program at the Lawyers Project. Onsite core sample security was not a concern because of the remote location of the Project.

(11) The 2015 diamond drilling program completed on the Cliff Creek North and Duke's Ridge Zones successfully validated and verified the earlier work that had been completed. The 'nugget effect' commonly observed in epithermal vein deposits, where high-grade mineralization is inconsistently or randomly distributed, can make it challenging to reproduce high gold-silver grades. Consequently, even drill holes designed to 'twin' high-grade intersections in historical holes produce varying results. This was in part the case at both Cliff Creek North and Duke's Ridge, but importantly it does not diminish the significance of consistent success in intersecting mineralization where expected.

The Cliff Creek North Zone was tested with a total of 19 drill holes, 17 of which successfully penetrated the north-northwest trending, moderately to steeply southwest-dipping vein system. The drilling showed that the zone has a minimum strike length of 225 m and remains open along strike to the northwest (beyond Holes CC15-18 and 19) and to the southeast (beyond Holes CC15-06 and 12), and at depth below the deepest levels of drilling and mine workings. The intersection of underground workings by a number of the drill holes confirmed that parts of the deposit have been subjected to mining. Analysis of core recovered from the immediate hangingwall and footwall of some of the voids showed that good grades of gold-silver mineralization remain and suggests that past development was likely limited to narrow stoping.

The narrow precious metals-enriched massive sulphide vein and associated stockwork zone (the 'P2' vein) intersected in Hole CC15-15 occurs approximately 70m into the hangingwall of the main Cliff Creek North Zone and is an important new exploration target. Mineralization of note in the hangingwall of the main Cliff Creek North Zone was also encountered in several other drill holes.

The wide intersection of low-grade mineralization in Hole CC15-13 is a potentially bulk-mineable target that warrants follow-up. This central and deeper part of the Cliff Creek North deposit may be structurally thickened and therefore offers significant exploration potential.

The Duke's Ridge Zone was tested with a total of 7 drill holes, all of which intersected the sinuous northwest-trending sub-vertical vein and stockwork system. The majority of holes targeted the central, higher grade part of the deposit. Although this drilling did not reproduce some of the highest assay values encountered in historic drill holes, it did confirm a near-surface deposit with low to moderate gold-silver grades. Holes DR15-04 and DR15-05 returned some of the better gold and silver grades encountered at Duke's Ridge in 2015; the system in this area remains open at depth.

Holes DR15-06 and DR15-07 evaluated the southern and northern parts of the deposit, respectively, encountering narrow low-grade intercepts within broader weakly anomalous zones. These two holes determined that the Duke's Ridge Zone has a minimum strike length of 380m.

The 2015 diamond drilling program employed twinning of selected historic drill holes and drilling of targeted infill, step-down and step-out holes. The program produced a modern data set that can be compared with, and used to verify, the historic results.

(12) In order to provide mineral resource estimates for two zones on the Lawyers Project, it was necessary to verify and integrate as much of the historic data as possible. The authors of this Report conclude that the historic drill hole data for which complete assay and location information is known is suitable for use in the calculation of a mineral resource estimate for the Cliff Creek North and Duke's Ridge Zones.

(13) The historic metallurgical recoveries of the gold-silver mineralization mined at the Lawyers property during the period 1989-92, which averaged 93% for Au and 78% for Ag, are considered good and indicate that any future mining within the Project area, at least mineralization that may be sourced from low-sulphidation deposits similar to those mined in the past, should present no significant problems in terms of acceptable rates of metals recovery.

(14) At a 4.0 g/t AuEQ cut-off, the current mineral resource estimated for the Cliff Creek North Zone is 550,000 tonnes grading 4.51 g/t Au and 209.15 g/t Ag, which equates to a contained metal resource of 80,000 oz. Au and 3,700,000 oz. Ag. This known resource is of sufficient tenor and size to justify follow-up drilling as detailed in Section 26 of the Report.

(15) At a 4.0 g/t AuEQ cut-off, the current mineral resource estimated for the Duke's Ridge Zone is 58,000 tonnes grading 4.30 g/t Au and 139.13 g/t Ag, which equates to a contained metal resource of 8,000 oz. Au and 260,000 oz. Ag. This known resource is considered too small to warrant infill drilling of the zone at this time. However, most of the resource is contained in the central portion of the deposit which remains open to depth. Deeper drill testing beneath the deposit's central portion is warranted in an attempt to significantly increase its size.

(16) For both the Cliff Creek North and Duke's Ridge Zones, the authors found that the average gold and silver grades corresponding to cut-off grades of 4.00, 4.50 and 5.00 g/t AuEQ, after being adjusted for comparison purposes, compare favourably with historic mined grades at Lawyers. Additionally, their review of publically-reported mineral resource or reserve data and certain infrastructure-related factors for a proposed underground gold mine, Red Mountain near Stewart, B.C., provides relevant comparative information for the selection of a cut-off grade at the Lawyers Project. The authors conclude that it is reasonable to select a 4.0 g/t AuEQ cut-off for the purposes of reporting mineral resources on the Project.

Recommendations for future work on the Project are summarized below in Section 26 of the Report.

## **25.2 SIGNIFICANT RISKS, UNCERTAINTIES AND OPPORTUNITIES**

This report is based on the best information and data available at the time of writing. Certain risks, opportunities and uncertainties are inherent for all early-stage mineral exploration projects.

### **25.2.1 Risks and Uncertainties**

Risks and uncertainties associated with mineral exploration that could cause actual events or results to differ from those expressed or implied in this report include:

- potential delays in obtaining, or failure to obtain or maintain exploration and development permits;
- challenges related to obtaining adequate financing for exploration and development;
- interpretation of, and statistical conclusions drawn from, diamond drilling, sampling, geologic interpretation, and grade and continuity of mineralization;
- future geological modelling and estimated mineral resources;

- prospects for economic viability including factors such as metallurgical recoveries, fluctuating metal prices, lower than expected grades and quantities of resources, increases to capital costs and operating costs;
- unexpected changes related to governmental regulations, including environmental regulations.

### **25.2.2 Opportunities**

Opportunities identified on the Lawyers Project that may have a positive impact include:

- compilation and upgrading of historic diamond drillhole data into a comprehensive database that can be used for geological modelling
- integration of geological data with Titan24, magnetic and radiometric, and DEM data to further the understanding of structural controls on the mineralization;
- applying new geological models to guide future exploration on the Project and to enhance the likelihood of expanding the continuity of the mineralization of existing zones as well as identifying new targets.

## **26 RECOMMENDATIONS**

It is recommended that:

### *(1) Drilling:*

Cliff Creek Zone: 5500 m of NQ diamond drilling, including:

- shallow step-out drilling to the SSE of Hole 83CC14 and its twin CC15-06 on Section 2200NW; to test for additional near-surface high-grade mineralization similar to that intersected in these two holes;
- fill-in and step-out drilling up and down-dip and to the SSE of the 4.10 m intercept grading 5.98 g/t Au and 246.3 g/t Ag in Hole CC15-12 on Section 2225NW;
- close-spaced (< 25 m) step-out drilling down-dip and along strike to the SSE to follow-up on the very high grade P2 vein intercept in Hole CC15-15 on Section 2275NW;
- fill-in and step-down drilling to further delineate the broad low-grade gold-silver intercept encountered in Hole CC15-13 on Section 2300NW; to determine the potential for bulk mineable mineralization in this part of the Cliff Creek North Zone;
- step-down drilling below Holes CC15-18 and 19 on Section 2425NW; and
- allocate some Phase 1 drill meters in this zone to carry out selected step-out drilling from the 'plums' identified in the Cliff Creek North long section (see Figure 10.6).

Duke's Ridge Zone: 360 m of NQ diamond drilling:

- drill two deeper holes (~180 m TD each) below the central portion of the zone in an attempt to increase the current, relatively small mineral resource at Duke's Ridge.



M-Grid Zone: 240 m of NQ diamond drilling:

- drill two shallow holes (~120 m TD each) to test for the presence of potentially high-grade gold-silver mineralization in the M-Grid area; the holes would target areas containing the highest gold and/or silver grades identified in the 2004 surface trenching program.

Phoenix Zone: 400 m of NQ diamond drilling:

- subject to successfully completing a compilation of past data (see below), carry out close-spaced ( $\leq$  25 m) step-out drilling below and along strike to the east of historic mine workings to test for additional high grade mineralization which may remain in-situ within and proximal to this zone.

*(2) Trenching:*Cliff Creek Zone: 1000 m of excavator trenching:

- carry out trenching to the SSE of Holes 83CC14 and its twin CC15-06 to test for the surface (at bedrock) continuation of the main Cliff Creek North Zone between it and the Central subzone; and
- carry out trenching to the NNW of Holes CC15-18 and 19 to test for the surface (at bedrock) continuation of the main Cliff Creek North Zone in this direction.

M-Grid Zone: 1000 m of excavator trenching:

- carry out surface trenching to test for bedrock mineralization in the areas of the gold soil anomalies which extend to the NW and SE of the 2004 trench area.

*(3) Data Research & Compilation:*Phoenix Zone:

- complete a compilation of past surface and underground drilling data (if available) and of past underground workings (again, if available) in order to design a Phase 1 diamond drilling program which would test for additional high grade mineralization to depth and to the east of historic mine workings.

AGB Zone:

- further historical data research and compilation should be carried out to follow-up on the possibility that the mineralized structure hosting the historically-mined AGB Zone may persist to the south, towards the valley bottom.

Silver Pond Group of Prospects:

- The large St. Joe historical data base on the Silver Pond Group of prospects should be thoroughly reviewed and an initial manual compilation of geological, geochemical, geophysical, trenching and diamond drilling should be carried out with three primary objectives: (i) to identify the overall limits of the large Silver Pond North alteration/mineralization system in order to design a Phase 1, deep-penetrating induced polarization survey, the purpose of which would be to identify a possible buried porphyry-style, precious+/-base metals deposit at depth; (ii) to identify areas of economic potential within the Silver Pond trend which can be tested with Phase 2 surface trenching or diamond drilling;

and (iii) to lay the groundwork for a digital compilation which will allow for more efficient data extraction, manipulation and review.

Other prospects within the Lawyers Project area:

- as per the prospects within the Silver Pond trend, complete a more thorough data review in an attempt to identify priority exploration targets which warrant follow-up work.

*(4) Geophysical Surveys:*

Silver Pond North Zone:

- carry out a minimum of 25 line-km of deep-penetrating induced polarization surveys as per the purpose stated above

Cost of the Phase 1 program is estimated to total \$2.0 million, including: \$1.50 million for Phase 1 diamond drilling; \$0.15 million for Phase 1 trenching; \$0.1 million for Phase 1 data research and compilation; and \$0.25 million for Phase 1 geophysical surveys.

A comprehensive, success-contingent Phase 2 program will follow completion of Phase 1 work. The detailed work plan and budget for it will be formulated after a thorough review of all Phase 1 results.

## 27 REFERENCES

- AuRico Gold Inc. (2011): News Release dated October 26, 2011; filed on SEDAR.
- AuRico Gold Inc. (2012): News Release dated March 28, 2012; filed on SEDAR.
- AuRico Gold Inc. (2013): News Release dated April 15, 2013; filed on SEDAR.
- AuRico Gold Inc. (2015): Annual Report for 2014.
- B.C. Geological Survey (1984): British Columbia Mineral Exploration Review 1983, Staff, British Columbia Ministry of Energy and Mines, Information Circular 1984-1.
- B.C. Geological Survey (1985): British Columbia Mineral Exploration Review 1984, Staff, British Columbia Ministry of Energy and Mines, Information Circular 1985-1.
- B.C. Geological Survey (1986): British Columbia Mineral Exploration Review 1985, Staff, British Columbia Ministry of Energy and Mines, Information Circular 1986-1.
- B.C. Ministry of Energy and Mines' website 'The Map Place' (2016): claims data, regional geology, aeromagnetic data and minfile descriptions for portions of map sheet 94E. The website address is: <http://www.em.gov.bc.ca/mining/geolsurv/MapPlace/default.htm>
- Blann, D. (2005): Geochemical and Trenching Report on the Lawyers Property; *BC Ministry of Energy and Mines*, Assessment Report 27663, 132 pages.
- Bowen, B.K. (2007): Diamond Drilling on the Cliff Creek Zone Lawyers Property; *BC Ministry of Energy and Mines*, Assessment Report 29050, 115 pages.
- Bowen, B.K. (2014): Updated Technical Report on the Ranch Project, Liard Mining Division, British Columbia, Canada; private report for Guardsmen Resources Inc., 161 pages.
- Caira, N.M. (1982): Geological and Geochemical Report, Silver Pond Group; *BC Ministry of Energy and Mines*, Assessment Report 10047, 36 pages.
- Carter, N.C. (1993): JD Property Report (October 1993) for Ocean Marine Technologies Inc., filed with the VSE.
- Cheni Gold Mines Inc. (1990): Annual Report for 1989.
- Cheni Gold Mines Inc. (1991): Annual Report for 1990.
- Cheni Gold Mines Inc. (1992): Annual Report for 1991.
- Cheni Gold Mines Inc. (1993): Annual Report for 1992.
- Clark, J.R. and Williams-Jones, A.E. (1991):  $^{40}\text{Ar}/^{39}\text{Ar}$  ages of epithermal alteration and volcanic rocks in the Toodoggone Au-Ag district, north-central British Columbia (94E); B.C. Ministry of Energy and Mines, Geological Fieldwork 1990, Paper 1991-1, pages 207-216.
- Colombo, F. (2016): Petrographic Report on P2 Vein Sample; private report for PPM Phoenix Precious Metals Corp.

Diakow, L.J., Panteleyev, A, and Schroeter, T.G. (1991): Jurassic Epithermal Prospects in the Toodoggone River area, northern British Columbia: Examples of Well Preserved, Volcanic Hosted, Precious Metal Mineralization; *Economic Geology* 86, pages 529-554

Diakow, L.J., Panteleyev, A, and Schroeter, T.G. (1993): Geology of the Early Jurassic Toodoggone Formation and Gold-Silver Deposits in the Toodoggone River Map Area, Northern British Columbia; BC Ministry of Energy and Mines, Bulletin 86, 66 pages.

Duuring, P., Rowins, S.M., McKinley, B.S.M, Dickinson, J.M., Diakow, L.J., Kim, Y. and Creaser, R.A. (2009): Examining potential genetic links between Jurassic porphyry  $\text{Cu}\pm\text{Au}\pm\text{Mo}$  and epithermal  $\text{Au}\pm\text{Ag}$  mineralization in the Toodoggone district of North-Central British Columbia, Canada; *Miner Deposita* (2009) 44, pages 463-496.

Eccles, L. (1982): Geological Report on the ASAP Claim; BC Ministry of Energy and Mines, Assessment Report 11216, 17 pages.

Evans, B.T. (1988): FAME Report on the Mets 1-2, Toodoggone Camp, B.C.; *BC Ministry of Energy and Mines*, Assessment Report 16692, 23 pages.

Forster, D. G. (1984): Geology, Petrology and Precious Metal Mineralization, Toodoggone River Area, North-Central British Columbia; unpublished M.Sc. thesis, University of British Columbia, 313 pages.

George Cross News Letter (1988): International Shasta Resources Ltd., Toodoggone Exploration Underway, No. 129, July 6, 1988.

George Cross News Letter (1988): Multinational Resources Inc., Baker Mine, November 4, 1988.

George Cross News Letter (1989): Cheni Gold Mines Inc., Summary and Update, No. 63, April 3, 1989.

George Cross News Letter (1989): Sable Resources Ltd., No. 125, June 29, 1989.

George Cross News Letter (1989): Cheni Gold Mines Inc., Gold Production Reported, No. 172, September 7, 1989.

George Cross News Letter (1990): Cheni Gold Mines Inc., Lawyers Mine Results, No. 11, January 16, 1990.

George Cross News Letter (1992): Cheni Gold Mines Inc., Drilling Confirms Zone Extension; No. 240, December 14, 1992.

George Cross News Letter (1993): Cheni Gold Mines Inc., Lawyers Mine Interim Report; No. 142 July 26, 1993.

Hawkins, P.A. (1987): Review of Preliminary Prospectus, Cheni Gold Mines Inc.; for Midland Doherty Limited, Calgary, Alberta.

Hawkins, P.A. (1997): A Summary Report Covering the 1996 Drill Program on AGC Americas Gold Corp's JD Property, Toodoggone River Area, B.C., Report No. 97-065-1

Hawkins, P.A. (1999): 1999 Reclamation Plan for the Metsantan Extension, Toodoggone River Area, B.C., Report No. 99-76-02; prepared for ORAR Working Group.

- Hawkins, P.A. (2003): A Technical Report Covering the Lawyers and AI (Ranch) Properties for Bishop Resources Inc., 136 pages.
- Hedenquist, J.W. and Lowenstern, J.B. (1994): The Role of Magmas in the Formation of Hydrothermal Ore Deposits; *Nature*; Volume 370 (August 18, 1994), pages 519-527.
- Hitchins, A. (1990): Lawyers – Information for B.C. Mineral Exploration Review 1990; unpublished summary report, October 26, 1990, 1 page.
- Holbek, P. (1989): 1988 Exploration Report on the Shasta Property; private report for Esso Minerals Canada Limited.
- Jacob, G. and Nordin, G.D. (2006): Diamond Drilling Report on the Lawyers Property; *BC Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 28322, 176 pages.
- Kaip, A.W. and Childe, F. (2001): Summary Report on the Lawyers Property; *BC Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 26728, 58 pages.
- Kennedy, D.R., Weston, A., Warwick, M. and Vogt, A.H. (1984): Geological, Geochemical and Geophysical Report on the Silver Pond Claim Group; *BC Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 12911, 337 pages.
- Kennedy, D.R. and Weston, A. (1986): Geological, Geochemical, Geophysical and Diamond Drilling Report on the Silver Pond Claim Group; *BC Ministry of Energy and Mines*, Assessment Report 14700, 428 pages.
- Kennedy, D.R. and Vogt, A.H. (1987): Silver Pond Property, Report on 1987 Exploration Program; *BC Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 16952, 389 pages.
- Kennedy, D.R. (1988): Silver Pond Property, Report on 1988 Exploration Program; private report for Bond Gold Canada Inc., and Nexus Resource Corporation, 25 pages.
- Kowall, C.F. (1980): A Prospecting Report Covering the Silver Pond, Silver Creek and Silver Sun Mineral Claims; *BC Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 8300, 21 pages.
- Krause, R.G. (1994): 1994 Geological & Geochemical Report on the JD Gold-Silver Property, Toodoggone Area, Omineca Mining Division, B.C.; *BC Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 23663, 39 pages.
- Krause, R.G. (1996): 1995 Geological Report on the JD Gold Property, Toodoggone Area, Omineca Mining Division, B.C.; *BC Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 24284, 57 pages.
- Lane, R.A. (2011): Geochemical and Geological Report on the Lawyers Property; *BC Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 32055, 69 pages.
- Lane, R.A. (2016): 2015 Diamond Drilling Report on the Lawyers Property; *BC Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 35808, 341 pages.
- Lane, R.A., Bowen, B.K. and Giroux, G. (2016): Technical Report and Resource Estimate on the Lawyers Gold-Silver Project, Toodoggone Region, British Columbia, Canada; private report for PPM Phoenix Precious Metals Corp., 178 pages.

- Lennan, W.B. (1990): Diamond Drilling Assessment Report on the Lawyers West – 1990 Claim Group and the Lawyers East – 1990 Claim Group; *BC Ministry of Energy and Mines*, Assessment Report 20405, 496 pages.
- Lennan, W.B. and Frostad, S. (1990): 1990 Diamond Drilling Report on the Lawyers West – 1990 Claim Group; Private Report for Cheni Gold Mines Inc., 68 pages.
- McBride, S. (2013): 2012 Geological, Geochemical, and Diamond Drilling Report on the JD Property, Northern British Columbia; *BC Ministry of Energy and Mines*, Assessment Report 33556, 1094 pages.
- McBride, S. and Leslie, C. (2014): 2013 Geological, Geophysical, and Diamond Drilling Report on the JD Property, Northern British Columbia; *BC Ministry of Energy and Mines*, Assessment Report 34762, 579 pages.
- Minfile (2015a): Baker, 094E 026; *BC Ministry of Energy and Mines*, MINFILE digital data, posted February 2015, URL <<http://minfile.gov.bc.ca/Summary.aspx?minfileno=094E++026>> Payie, G.J. (2015).
- Minfile (2015b): Shasta, 094E 050; *BC Ministry of Energy and Mines*, MINFILE digital data, posted February 2015, URL <<http://minfile.gov.bc.ca/Summary.aspx?minfileno=094E++050>> Payie, G.J. (2015).
- Minfile (2015c): Mets, 094E 093; *BC Ministry of Energy and Mines*, MINFILE digital data, posted April 2015, URL <<http://minfile.gov.bc.ca/Summary.aspx?minfileno=094E++093>> Payie, G.J. (2015).
- Minfile (2015d): Golden Stranger, 094E 076; *BC Ministry of Energy and Mines*, MINFILE digital data, posted April 2015, URL <<http://minfile.gov.bc.ca/Summary.aspx?minfileno=094E++076>> Payie, G.J. (2015).
- Minfile (2015e): JD, 094E 171; *BC Ministry of Energy and Mines*, MINFILE digital data, posted February 2015, URL <<http://minfile.gov.bc.ca/Summary.aspx?minfileno=094E++171>> Payie, G.J. (2015).
- Norecol Environmental Consultants Ltd. (1986): Lawyers Project Stage I Report prepared for SEREM Inc.,
- Northgate Exploration Ltd. (2001): Annual Report for 2000.
- Northgate Exploration Ltd. (2002): Annual Report for 2001.
- Northgate Minerals Corporation (2005): Annual Report for 2004.
- Northgate Minerals Corporation (2006): Annual Report for 2005.
- Northgate Minerals Corporation (2011): News Release dated August 2, 2011; filed on SEDAR.
- Panteleyev, A. (1986): A Canadian Model for Epithermal Gold-Silver Deposits; *Geoscience Canada*, Volume 13, No. 2, pages 101-111.
- Pegg, R.S. (2003): Geochemical, Geophysical and Geological Report on the Lawyers Property; *BC Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 27291, 93 pages.
- PetraScience Consultants Inc. (2005): Petrographic Report, Lawyers Project, B.C.; private report for Guardsmen Resources Inc.
- Prospectus (1987): Cheni Gold Mines Inc., Initial Public Offering, May 12, 1987, 30 pages.

- Renning, M. (2007): 2007 Geochemical and Prospecting Report on the Lawyers South Property; *BC Ministry of Energy and Mines*, Assessment Report 29529, 53 pages.
- Robertson, D.S. and Associates (1986): Review of the Lawyers Project of SEREM Inc.; May 12, 1986, 27 pages.
- Royal Oak Mines Ltd. (1997): Annual Report for 1996.
- Royal Oak Mines Ltd. (1998): Annual Report for 1997.
- Royal Oak Mines Ltd. (1999): Annual Report for 1998.
- Ryback-Hardy, V. (1974): Diamond Drilling Report on the Lawyers No. 9, No. 10 and No. 11 Claim Groups; *BC Ministry of Energy and Mines*, Assessment Report 5106, 47 pages.
- Ryback-Hardy, V. (1975a): Report on Soil Geochemical and Supporting Ground Support Survey on the Lawyers No. 12 and No. 13 Claim Groups; *BC Ministry of Energy and Mines*, Assessment Report 5825 Part 1 of 2, 9 pages.
- Ryback-Hardy, V. (1975a): Report on Diamond Drilling on the Lawyers No. 12 and No. 13 Claim Groups; *BC Ministry of Energy and Mines*, Assessment Report 5825 Part 2 of 2, 85 pages.
- Sable Resources Ltd. (1998): News Release dated July 17, 1998.
- Sable Resources Ltd. (2002): Annual Information Form for the year ended December 31, 2001.
- Schroeter, T.G. (1983): Tooodoggone River Area (94E); in Geological Fieldwork 1982, B.C Ministry of Energy and Mines and Petroleum Resources, Paper 1983-1, pages 125-126.
- Sillitoe, R. H. (1999): Styles of High-Sulphidation Gold, Silver and Copper Mineralization in Porphyry and Epithermal Environments, Keynote Address at PACRIM 99, Bali, Indonesia, October 10-13, 1999, pp. 29-41
- Smith, F.M. (1993): Report on the Silver Pond Mining Property, Tooodoggone Mining Camp; private report for Even Resources Ltd., 19 pages.
- Symonds, D. (1997): Summary Report on the Silver Pond Property, Tooodoggone Area, B.C.; private report for Ocean Crystal Resources Ltd., 23 pages.
- Tegart, P. (1988): Diamond Drilling Report on the Lawyers No 3 Claim (6 Units) as part of Lawyers West Group; *BC Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 17414, 37 pages.
- Tower Energy (2011): News Release dated September 14, 2011; filed on SEDAR.
- Tower Resources Ltd. (2012): News Release dated August 29, 2012; filed on SEDAR.
- Tower Resources Ltd. (2012): News Release dated September 19, 2012; filed on SEDAR.
- Tower Resources Ltd. (2013): News Release dated October 4, 2013; filed on SEDAR.
- Vancouver Petrographics Ltd. (2010): Petrographic Report for Seven Polished Thin Sections from the Lawyers Property, B.C.; private report for Guardsmen Resources Inc.

Vulimiri, M., Tegart, P. and Stammers, M. (1986): Lawyers Gold-Silver Deposits, British Columbia; Mineral Deposits of the Northern Cordillera, CIM Special Volume 37, Morin, J.A. Editor, Canadian Institute of Mining and Metallurgy, pages 191-201.

Weston, A. (1984): Geochemical and Geophysical Report of the Silver Pond Group; *BC Ministry of Energy, and Mines*, Assessment Report 12877, 109 pages.

Wright Engineers Limited (1985): Feasibility Study for the Lawyers Project, Toodoggone Area, British Columbia, Volume 1: Report (February 1985); private report prepared for SEREM Inc.

Wright Engineers Limited (1986): Technical / Economic Study for the Lawyers Project, Toodoggone Area, British Columbia, Volume 1: Report (January 1986); private report prepared for SEREM Inc.

Wright Engineers Limited (1986): Technical / Economic Study for the Lawyers Project, Toodoggone Area, British Columbia, Volume 5: Drill Logs (January 1986); private report prepared for SEREM Inc.

Wright Engineers Limited (1987): Mine Plan for the Lawyers Project, Toodoggone Area, British Columbia (June 1987); private report prepared for Cheni Gold Mines Inc.



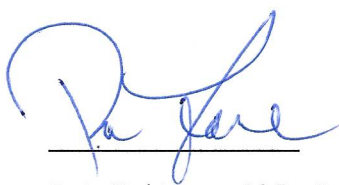

## 28 CERTIFICATE OF QUALIFICATIONS

### Certificate of Qualifications – R.A. (Bob) Lane

I, R. A. (Bob) Lane do hereby certify that:

1. I am the President of Plateau Minerals Corp., a mineral exploration consulting company with an office located at 3000 18<sup>th</sup> Street, Vernon, British Columbia.
2. I am a graduate of the University of British Columbia (1990) with a M.Sc. in Geology.
3. I am a Professional Geoscientist (P.Geo.) registered with the Association of Professional Engineers and Geoscientists of British Columbia (Registration #18993) and have been a member in good standing since 1992.
4. I have practiced my profession continuously since 1990 and have more than 25 years of experience investigating a number of mineral deposit types, including epithermal gold-silver and related deposits, primarily in British Columbia.
5. I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence and affiliation with a professional organization, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101.
6. I managed the 2015 diamond drilling program on the Lawyers Project and was on site continuously from August 24, 2015, to October 1, 2015. I verify that was the most recent exploration program on the Lawyers Project and that all of the data collected from it was compiled by me and is considered to be current. This data was provided to Giroux Consultants Ltd.
7. I am a co-author of the report entitled "NI 43-101 Technical Report and Resource Estimate on the Lawyers Gold-Silver Project, Toodoggone Region, British Columbia, Canada" (the "Report") to which this Certificate applies. The Effective Date of the Report is April 30, 2018.
8. I am responsible for all items of the Report, subject to reliance on other experts as described in Section 3.0 of the Report, and excluding the 2015 mineral resource estimates on the Cliff Creek North and Duke's Ridge Zones (Section 14 of the Report) which were completed by Giroux Consultants Ltd. of Vancouver, B.C.
9. I am independent of Crystal Exploration Inc. and PPM Phoenix Precious Metals Corp., as described in Section 1.5 of *National Instrument 43-101*, and hold no direct or indirect interest in the Lawyers Project.
10. I am not aware of any material fact or material change with respect to the subject matter of the report that is not disclosed in the report which, by its omission, would make the report misleading.
11. I have read National Instrument 43-101 and Form 43-101F1, and the Report has been prepared in compliance with the instrument and form.

Signed and Sealed in Vernon, B.C., this 30 day of April, 2018.

  
  
 R. A. (Bob) Lane, M.Sc., P.Geo.

## Certificate of Qualifications – B. K. (Barney) Bowen

I, B. K. (Barney) Bowen, hereby certify that:

1. I am a Consulting Geological Engineer and my business address is 404-5725 Teredo Street, Sechelt, B.C., Canada, V0N 3A3.
2. I am a co-author of the report entitled "NI 43-101 Technical Report and Resource Estimate on the Lawyers Gold-Silver Project, Toodoggone Region, British Columbia, Canada" (the "Report") to which this Certificate applies. The Effective Date of the Report is April 30, 2018.
3. Through my education, experience and professional standing, I meet the requirements to be a Qualified Person as defined under *National Instrument 43-101*. I am a graduate of the University of British Columbia with a degree of Bachelor of Applied Science in Geological Engineering, obtained in 1970. I have been practicing my profession continuously, for over 45 years, in Canada and elsewhere since graduation. I have been registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1978, registration number 11374.

I have work experience in Canada, the United States, Australia, Europe, Mexico and Brazil, including work on low and high-sulphidation epithermal gold-silver or gold deposits. My experience includes the overall responsibility for a number of resource definition drill programs on several advanced-stage projects, two of which subsequently became operating open pit or underground metal mines. I am familiar with the general geological setting of the Toodoggone District, having been involved in a number of grass-roots and drilling programs in the area during the period 1968 to 2007 for various companies.

I personally visited the Lawyers Project in 2006 during my participation in diamond drilling and ancillary surveys, but did not visit the Project in 2015.

4. I am responsible for all items of the Report, along with co-author Bob Lane, P. Geo., subject to our reliance on other experts as described in Section 3.0 of the Report, and excluding the 2015 mineral resource estimates on the Cliff Creek North and Duke's Ridge Zones (in Section 14 of the Report) which were completed by Giroux Consultants Ltd. of Vancouver, B.C.
5. I am independent of Crystal Exploration Inc. and PPM Phoenix Precious Metals Corp., as described in Section 1.5 of *National Instrument 43-101*.
6. I have read *National Instrument 43-101*; the Report has been prepared in compliance with it.
7. As of the date of this Certificate and to the best of my knowledge, information and belief, the Report contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Signed and Sealed at Vancouver, British Columbia, the 30th day of April, 2018.

B. K. (Barney) Bowen, P. Eng.

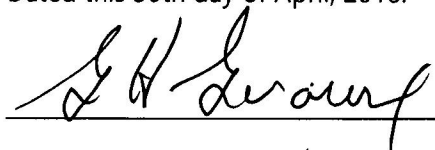


## Certificate of Qualifications – Gary H. Giroux

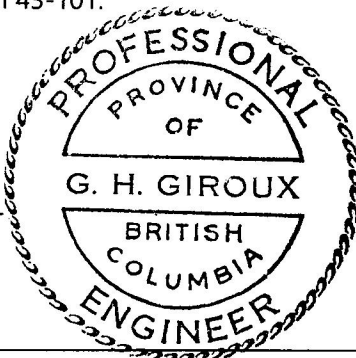
I, Gary H. Giroux, of 982 Broadview Drive, North Vancouver, British Columbia, Canada do hereby certify that:

- 1) I am a consulting geological engineer with an office at 982 Broadview Drive, North Vancouver, British Columbia.
- 2) I am a graduate of the University of British Columbia in 1970 with a B.A. Sc. and in 1984 with a M.A. Sc., both in Geological Engineering.
- 3) I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia (Reg. # 8814).
- 4) I have practiced my profession continuously since 1970. I have had over 40 years' experience estimating mineral resources. I have previously completed resource estimations on a number of narrow vein deposits, similar to those on the Lawyers Property that are the subject of the Technical Report (as defined below).
- 5) I have read the definition of "qualified person" set out in National Instrument 43-101 – Standards of Disclosure for Mineral Projects, ("NI 43-101") and certify that by reason of my education, past relevant work experience and affiliation with a professional association (as defined in NI 43-101), I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 6) I am responsible for Section 14 of the technical report titled "NI 43-101 Technical Report and Resource Estimate on the Lawyers Gold-Silver Project" (the "Technical Report"), dated and made effective as of April 30, 2018.
- 7) Prior to being retained by the Issuer to prepare the Technical Report, I have had no prior involvement with the property which is the subject of the Technical Report, and I have not visited the Lawyers Project.
- 8) As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.
- 9) I am independent of Crystal Exploration Inc. and PPM Phoenix Precious Metals Corp., applying all of the tests in section 1.5 of NI 43-101.
- 10) I have read NI 43-101, and the portions of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.

Dated this 30th day of April, 2018.



Gary H. Giroux, P. Eng., M.A. Sc.



## APPENDIX 1

### LIST OF DRILLHOLES USED IN RESOURCE ESTIMATE

Those used in the Cliff Creek North estimate are highlighted in green, and those used in Dukes Ridge estimate are highlighted in orange.

HOLE	EASTING	NORTHING	ELEVATION	HLENGTH	ZONE
05CC01	607852.53	6354753.22	1934.15	331.40	CCSouth
05CC02	608133.18	6354720.73	1895.58	133.23	CCSouth
05CC03	608058.74	6354812.90	1896.12	221.65	CCSouth
05CC04	608272.79	6354878.62	1865.31	121.04	CCSouth
05CC05	608005.77	6354900.59	1892.59	53.03	CCSouth
06CC06	608004.74	6354902.08	1892.68	126.75	CCSouth
06CC07	607945.31	6354988.89	1889.18	142.32	CCMiddle
06CC08	607887.56	6355063.67	83.67	124.45	CCMiddle
06CC09	607828.18	6355149.64	1870.89	127.10	CCMiddle
06CC10	607765.20	6355237.45	1858.80	127.10	CCMiddle
82CT24	607639.43	6355642.54	1821.64	59.00	CCNorth
82CT25	607669.87	6355562.67	1831.64	38.00	CCNorth
82CT27	607641.04	6355466.14	1825.64	80.00	CCMiddle
82CT28	607669.04	6355428.25	1825.64	64.00	CCMiddle
82DT43	608211.62	6355356.27	1824.54	46.00	DR
82DT44	608226.18	6355340.96	1823.54	45.00	DR
82DT45	608261.50	6355337.64	1818.54	77.00	DR
82DT46	608286.22	6355324.58	1819.54	89.00	DR
82DT47	608307.64	6355286.37	1829.54	36.00	DR
82DT48	608338.57	6355242.27	1832.54	28.00	DR
82DT49	608385.88	6355271.70	1827.54	83.00	DR
82DT50	608415.75	6355265.29	1827.54	97.00	DR
82DT51	608417.78	6355193.67	1843.54	31.00	DR
82DT52	608438.97	6355161.14	1847.54	36.00	DR
82DT53	608466.27	6355152.68	1848.54	42.00	DR
82DT54	608508.27	6355155.45	1847.54	74.00	DR
82DT58	608569.16	6355179.86	1853.54	63.00	DR
82DT61	608634.16	6355149.86	1858.54	39.00	DR
82DT77	608200.06	6355377.46	1826.54	88.00	DR
82DT78	608174.15	6355374.25	1833.54	68.00	DR
83CC01	607678.27	6355660.18	1817.84	44.50	CCNorth
83CC02	607674.14	6355686.97	1813.64	60.96	CCNorth
83CC03	607670.84	6355717.73	1809.64	69.19	CCNorth
83CC04	607671.55	6355739.89	1806.79	75.59	CCNorth
83CC08	607618.07	6355725.97	1809.43	82.90	CCNorth



HOLE	EASTING	NORTHING	ELEVATION	HLENGTH	ZONE
83CC09	607574.81	6355714.24	1807.86	135.03	CCNorth
83CC10	607698.08	6355694.24	1813.64	129.20	CCNorth
83CC11	607701.50	6355597.48	1827.32	69.18	CCNorth
83CC12	607706.15	6355727.61	1809.34	164.90	CCNorth
83CC14	607701.76	6355571.68	1830.52	48.20	CCNorth
83CT02	607645.55	6355625.22	1825.64	56.00	CCNorth
83CT06	607653.09	6355572.11	1835.00	58.00	CCNorth
83CT09	607639.59	6355501.19	1838.64	39.00	CCMiddle
83CT10	607619.24	6355517.04	1836.64	32.00	CCMiddle
83CT11	607600.88	6355530.01	1834.64	33.00	CCMiddle
83DR01	608323.16	6355249.86	1848.93	59.13	DR
83DR02	608291.16	6355249.86	1849.40	64.32	DR
83DR03	608306.16	6355209.86	1857.75	41.80	DR
83DR04	608159.16	6355339.86	1835.20	62.20	DR
83DR06	608260.16	6355259.86	1847.29	96.34	DR
83DS01	608539.25	6355148.64	1849.04	59.13	DR
83DS02	608474.83	6355145.29	1849.39	64.32	DR
83DS03	608492.54	6355105.68	1857.94	41.80	DR
83DS04	608350.77	6355236.06	1835.24	62.20	DR
83DS05	608322.51	6355249.34	1835.24	57.00	DR
83DS06	608446.36	6355156.10	1847.39	96.34	DR
83DS07	608295.22	6355280.69	1831.89	56.70	DR
83DS08	608437.69	6355132.55	1851.64	64.94	DR
83DS09	608303.99	6355302.54	1825.19	81.38	DR
83DS10	608285.84	6355316.81	1823.41	49.37	DR
83DS11	608293.75	6355337.94	1816.95	82.90	DR
83DS12	608375.61	6355218.50	1837.34	62.78	DR
83DT01	608151.03	6355373.71	1837.54	25.00	DR
83DT02	608127.69	6355397.05	1839.54	31.00	DR
83DT03	608101.37	6355429.16	1790.54	34.00	DR
83DT05	608097.32	6355547.13	1800.54	82.00	DR
83DT06	608072.84	6355569.38	1800.54	82.00	DR
83DT07	608049.16	6355596.72	1802.54	100.00	DR
84CC16	607657.36	6355560.28	1832.17	71.02	CCNorth
84CC17	607612.17	6355609.80	1824.19	108.81	CCNorth
84CC18	607581.99	6355602.52	1822.89	130.15	CCNorth
84CC19	607541.55	6355626.25	1814.57	188.10	CCNorth
84CC20	607530.22	6355650.38	1810.71	182.00	CCNorth
84CC21	607500.60	6355672.65	1805.94	233.80	CCNorth
84CC22	607725.90	6355324.70	1849.38	136.25	CCMiddle
84CC23	607749.96	6355273.24	1850.23	117.35	CCMiddle
84CC24	607815.67	6355287.16	1851.93	139.30	CCMiddle

HOLE	EASTING	NORTHING	ELEVATION	HLENGTH	ZONE
84CC25	607571.01	6355691.18	1809.16	141.43	CCNorth
84CC26	607501.00	6355553.00	1816.00	224.63	CCNorth
84CC27	607702.55	6355318.71	1848.87	87.48	CCMiddle
84CC28	607680.69	6355311.70	1849.88	142.34	CCMiddle
84CC29	607507.39	6355617.36	1812.03	218.55	CCNorth
84CC30	607463.43	6355632.87	1807.06	260.55	CCNorth
84CC31	607534.60	6355703.49	1804.48	175.87	CCNorth
84CC32	607449.38	6355658.88	1803.91	279.20	CCNorth
84CC33	607494.73	6355694.23	1803.38	215.50	CCNorth
84CC34	607605.31	6355749.88	1805.03	87.48	CCNorth
84CC35	607452.63	6355683.20	1801.68	258.17	CCNorth
84CC36	607404.41	6355646.57	1799.45	310.00	CCNorth
84CC37	607404.00	6355667.00	1798.31	303.89	CCNorth
84CC38	607557.77	6355739.13	1802.45	124.08	CCNorth
84DS13	608331.50	6355270.84	1830.24	100.28	DR
84DS14	608358.48	6355208.45	1829.64	105.77	DR
84DS15	608341.57	6355297.50	1826.04	133.20	DR
84DS16	608311.59	6355322.01	1821.19	105.77	DR
84DS17	608370.30	6355287.32	1826.11	157.58	DR
84DS18	608347.21	6355313.13	1823.29	154.53	DR
84DS19	608137.01	6355344.49	1840.34	75.89	DR
84DS20	608162.06	6355328.11	1834.39	60.05	DR
84DS21	608111.53	6355361.30	1843.14	72.26	DR
84DS22	608193.21	6355319.76	1827.19	87.48	DR
84DS23	608219.54	6355315.38	1826.39	66.14	DR
84DS24	608251.56	6355306.70	1825.96	69.20	DR
84DS25	608126.42	6355316.13	1843.39	114.90	DR
87CC56	607443.73	6355565.74	1810.28	276.45	CCNorth
87CC68	607536.60	6355392.96	1849.19	240.49	CCMiddle
90CC84	607486.07	6355276.59	1847.90	365.00	CCMiddle
90CC85	607585.87	6355298.45	1851.06	261.21	CCMiddle
90CC86	607413.95	6355254.17	1842.56	425.00	CCMiddle
90CC87	607536.36	6355182.49	1853.40	367.90	CCMiddle
90CC88	607643.43	6355208.49	1857.08	273.00	CCMiddle
90CC89	607556.23	6355239.88	1852.88	308.40	CCMiddle
90CC90	607672.71	6355114.88	1871.27	273.00	CCMiddle
90CC91	607586.47	6355093.50	1855.58	377.04	CCMiddle
90CC92	607593.01	6354993.17	1874.01	398.37	CCMiddle
90CC93	607697.13	6355017.96	1882.39	300.48	CCMiddle
90CC94	607720.73	6354945.67	1893.37	294.74	CCSouth
90CC95	607657.51	6354905.03	1882.37	386.18	CCSouth
90CC96	607659.65	6354802.32	1885.40	401.42	CCSouth

HOLE	EASTING	NORTHING	ELEVATION	HLENGTH	ZONE
90CC97	607827.70	6354791.79	1901.21	291.69	CCSouth
90CC98	607717.41	6354613.06	1893.28	465.43	CCSouth
90CC99	607830.56	6354740.67	1903.08	316.08	CCMiddle
CC15-01	607765.00	6355597.00	1831.00	61.87	CCNorth
CC15-02	607749.00	6355652.00	1823.00	78.64	CCNorth
CC15-03	607526.00	6355668.00	1808.00	164.94	CCNorth
CC15-04	607406.00	6355669.00	1798.00	395.73	CCNorth
CC15-05	607430.00	6355597.00	1802.00	279.88	CCNorth
CC15-06	607702.00	6355571.00	1831.00	60.37	CCNorth
CC15-07	607671.00	6355739.00	1806.00	60.20	CCNorth
CC15-08	607558.00	6355739.00	1802.00	124.36	CCNorth
CC15-09	607558.00	6355739.00	1802.00	126.81	CCNorth
CC15-10	607597.00	6355653.00	1817.00	118.26	CCNorth
CC15-11	607479.00	6355576.00	1811.00	224.33	CCNorth
CC15-12	607492.00	6355539.00	1816.00	225.61	CCNorth
CC15-13	607430.00	6355597.00	1802.00	322.56	CCNorth
CC15-14	607407.00	6355637.00	1797.00	316.38	CCNorth
CC15-15	607444.00	6355563.00	1809.00	327.05	CCNorth
CC15-16	607537.00	6355604.00	1817.00	152.70	CCNorth
CC15-17	607587.00	6355576.00	1819.00	118.26	CCNorth
CC15-18	607614.00	6355775.00	1792.00	60.35	CCNorth
CC15-19	607614.00	6355774.00	1792.00	69.49	CCNorth
DR15-01	608343.00	6355298.00	1821.00	134.72	DR
DR15-02	608360.00	6355259.00	1822.00	112.17	DR
DR15-03	608303.00	6355275.00	1829.00	127.41	DR
DR15-04	608303.00	6355276.00	1829.00	63.40	DR
DR15-05	608329.00	6355261.00	1835.00	69.49	DR
DR15-06	608482.00	6355237.00	1825.00	158.19	DR
DR15-07	608121.00	6355348.00	1842.00	54.25	DR

## **APPENDIX 2**

### **SEMIVARIOGRAMS FOR GOLD AND SILVER**



C0 = .500

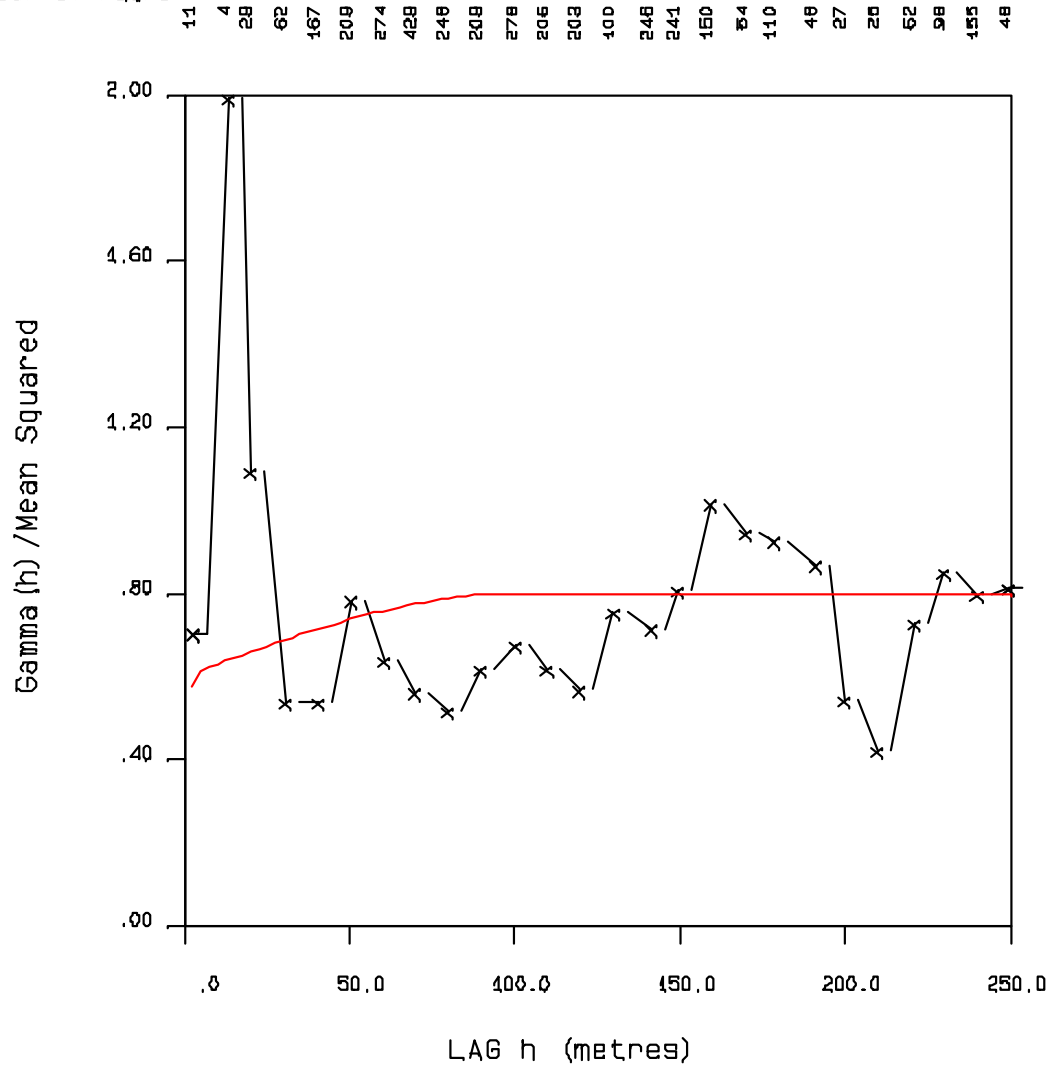
C1 = .100

C2 = .200

A1 = 5.0

A2 = 100.0

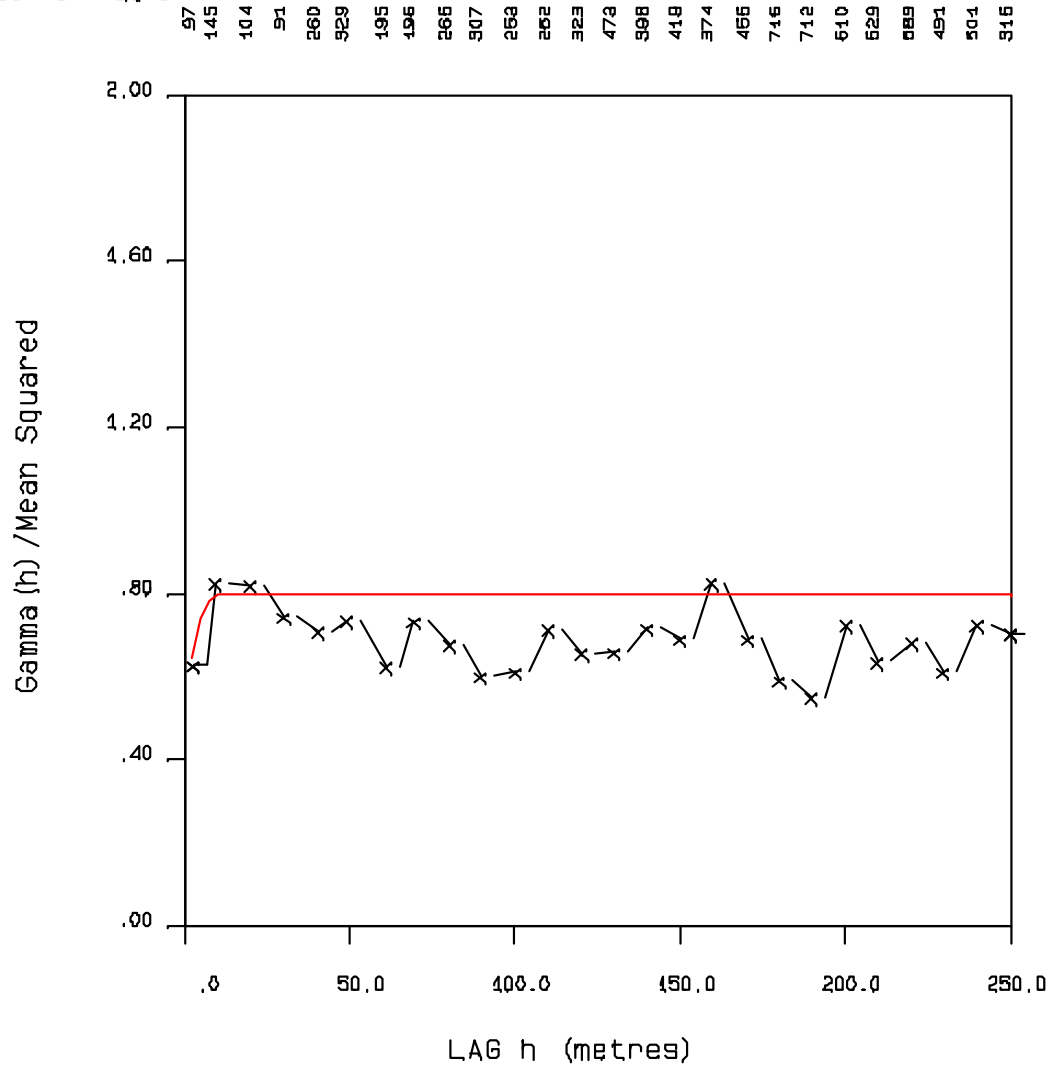
Number of Pairs



CLIFF CR N MIN ZONE - AU - AZ 347 DIP -60

C0 = .500  
 C1 = .100  
 C2 = .200  
 A1 = 5.0  
 A2 = 10.0

Number of Pairs



CLIFF CR N MIN ZONE – AU – AZ 257 DIP -65

C0 = .500

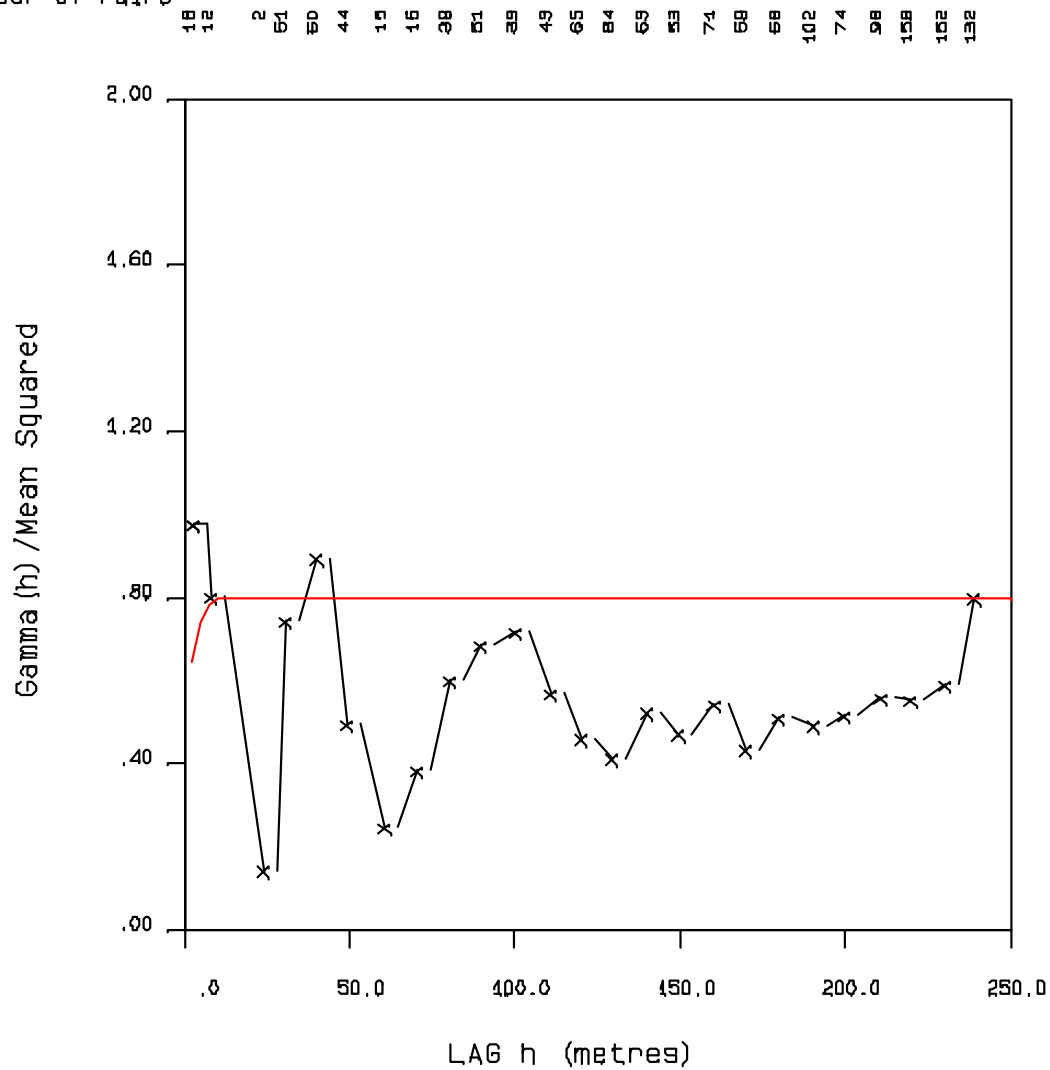
C1 = .100

C2 = .200

A1 = 5.0

A2 = 10.0

Number of Pairs



CLIFF CR N MIN ZONE - AU - AZ 77 DIP -25

C0 = .450

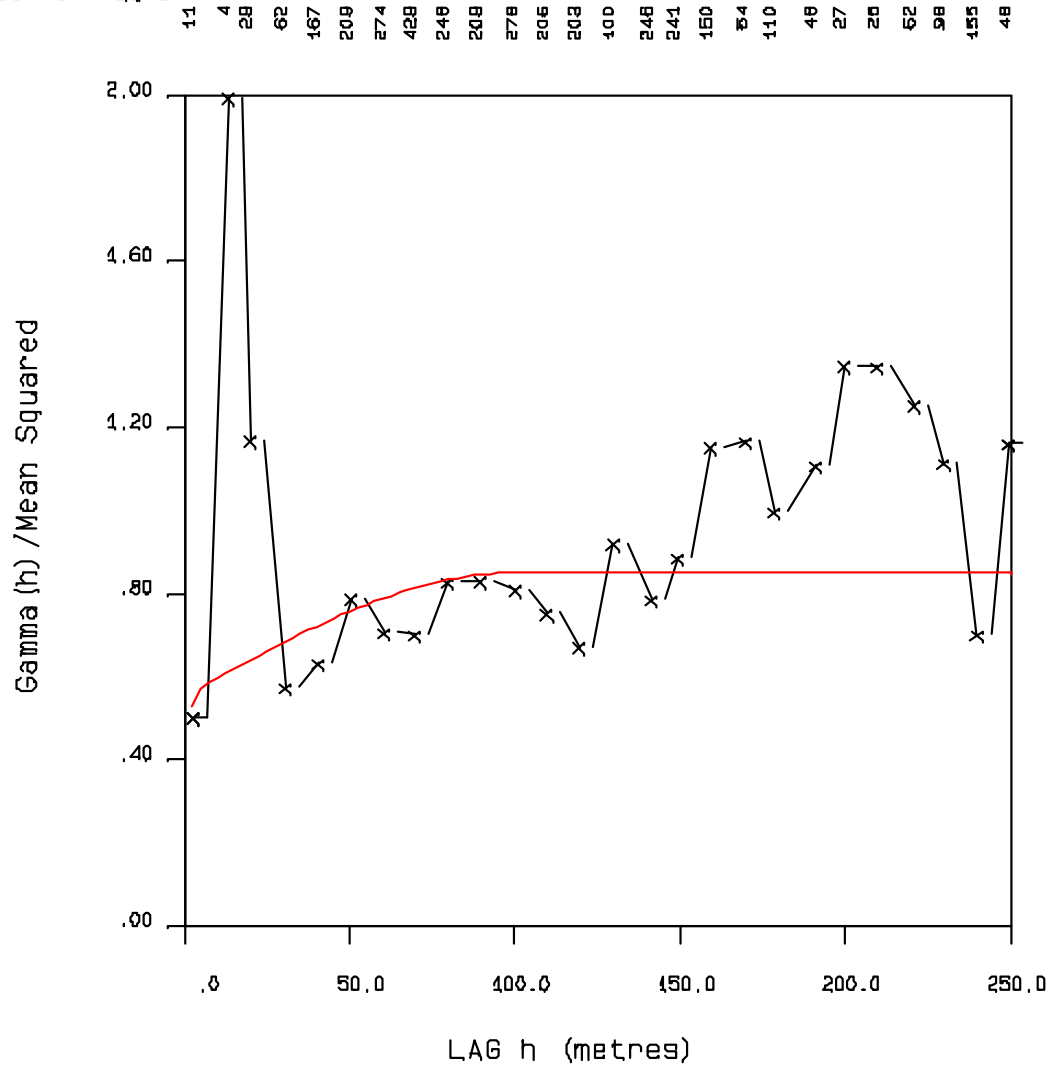
C1 = .100

C2 = .300

A1 = 5.0

A2 = 100.0

Number of Pairs



CLIFF CR N MIN ZONE - AG - AZ 347 DIP -60

C0 = .450

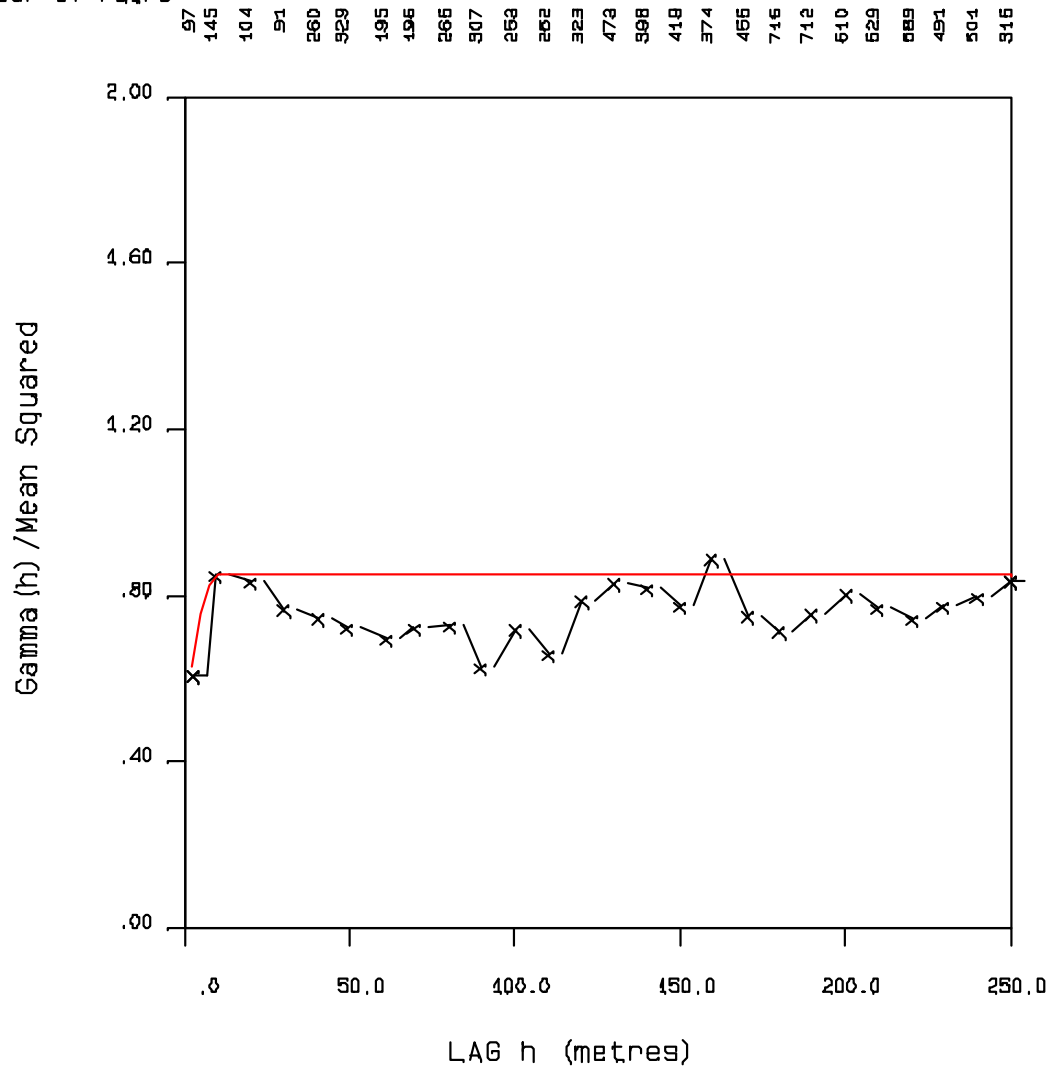
C1 = .100

C2 = .300

A1 = 5.0

A2 = 10.0

Number of Pairs



CLIFF CR N MIN ZONE - AG - AZ 257 DIP -65

C0 = .450

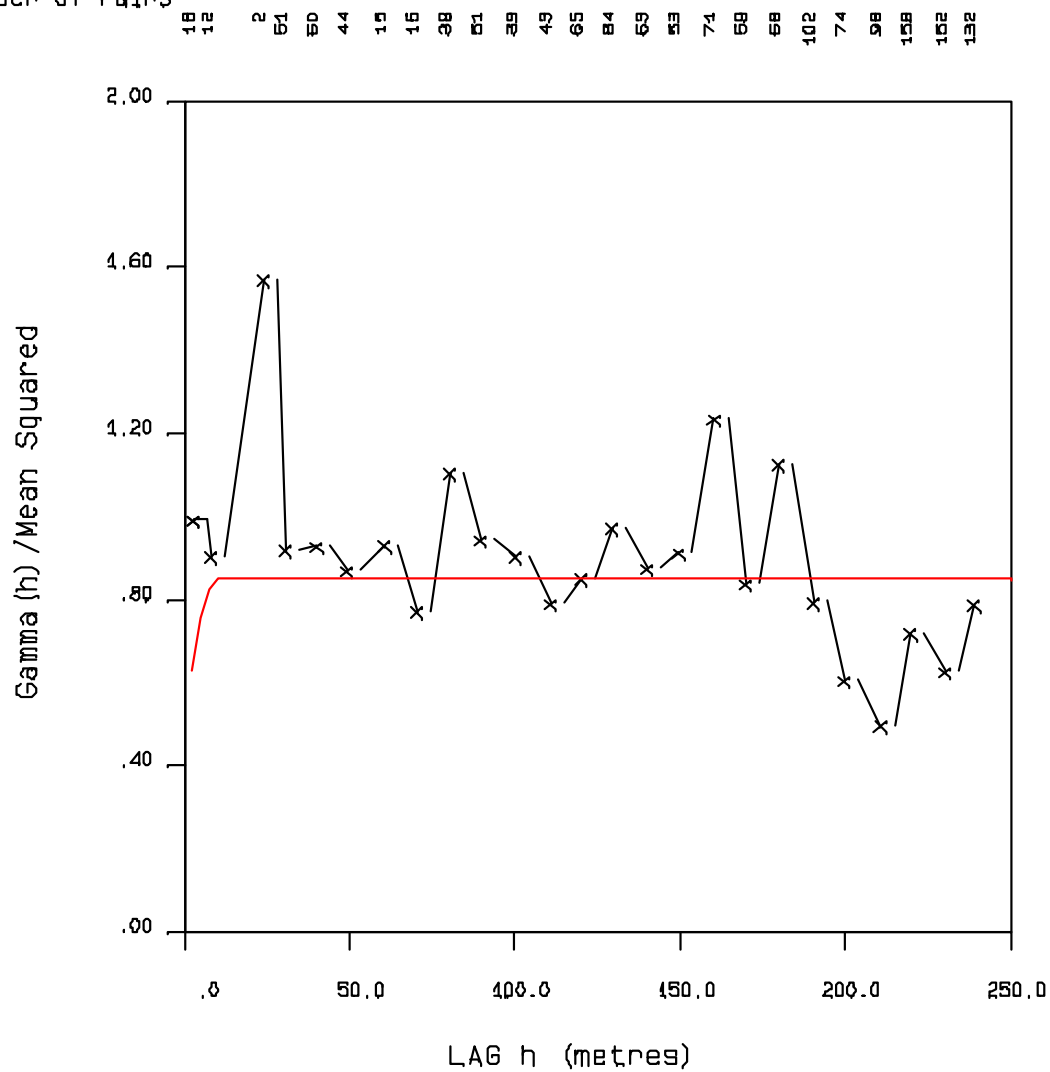
C1 = .100

C2 = .300

A1 = 5.0

A2 = 10.0

Number of Pairs



CLIFF CR N MIN ZONE - AG - AZ 77 DIP -25

C0 = .300

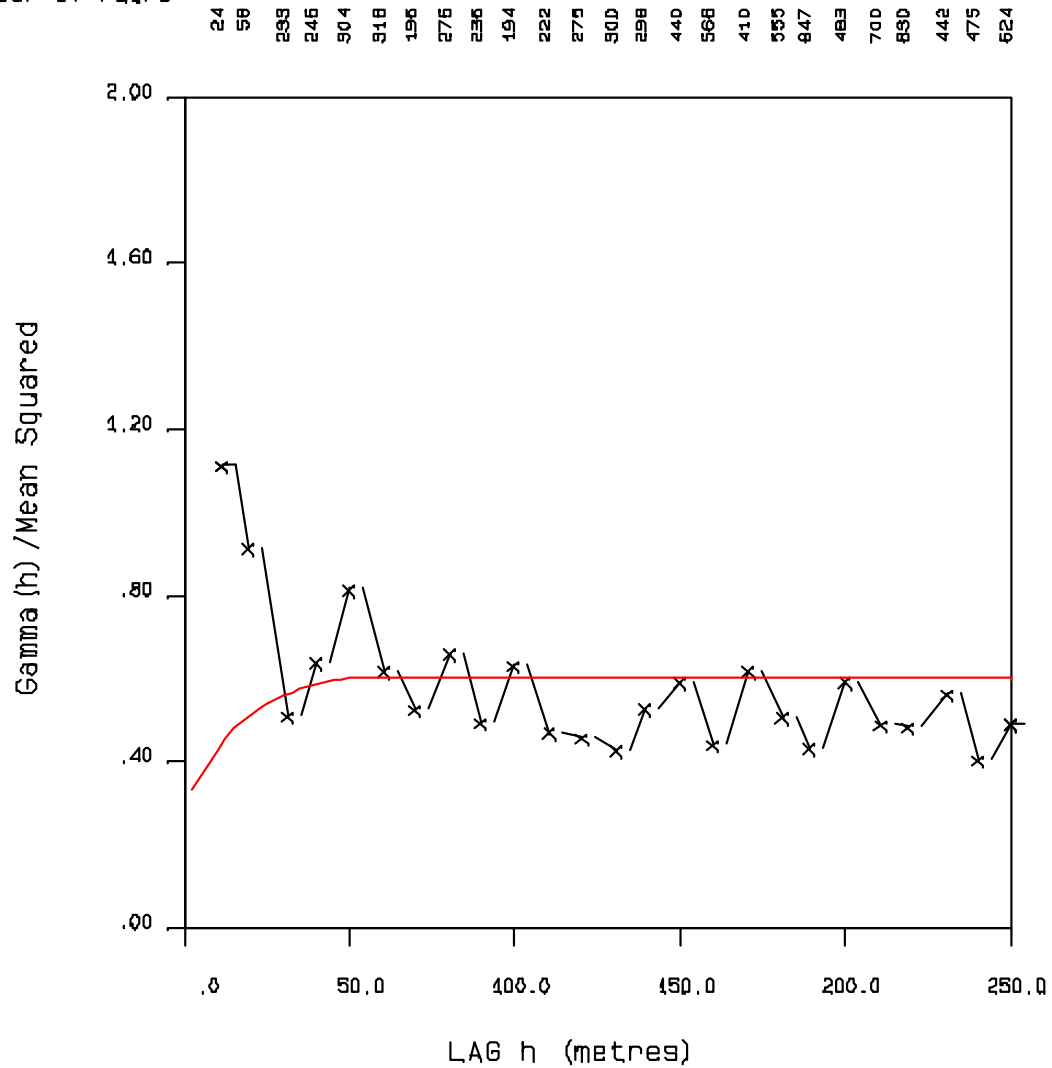
C1 = .100

C2 = .200

A1 = 20.0

A2 = 50.0

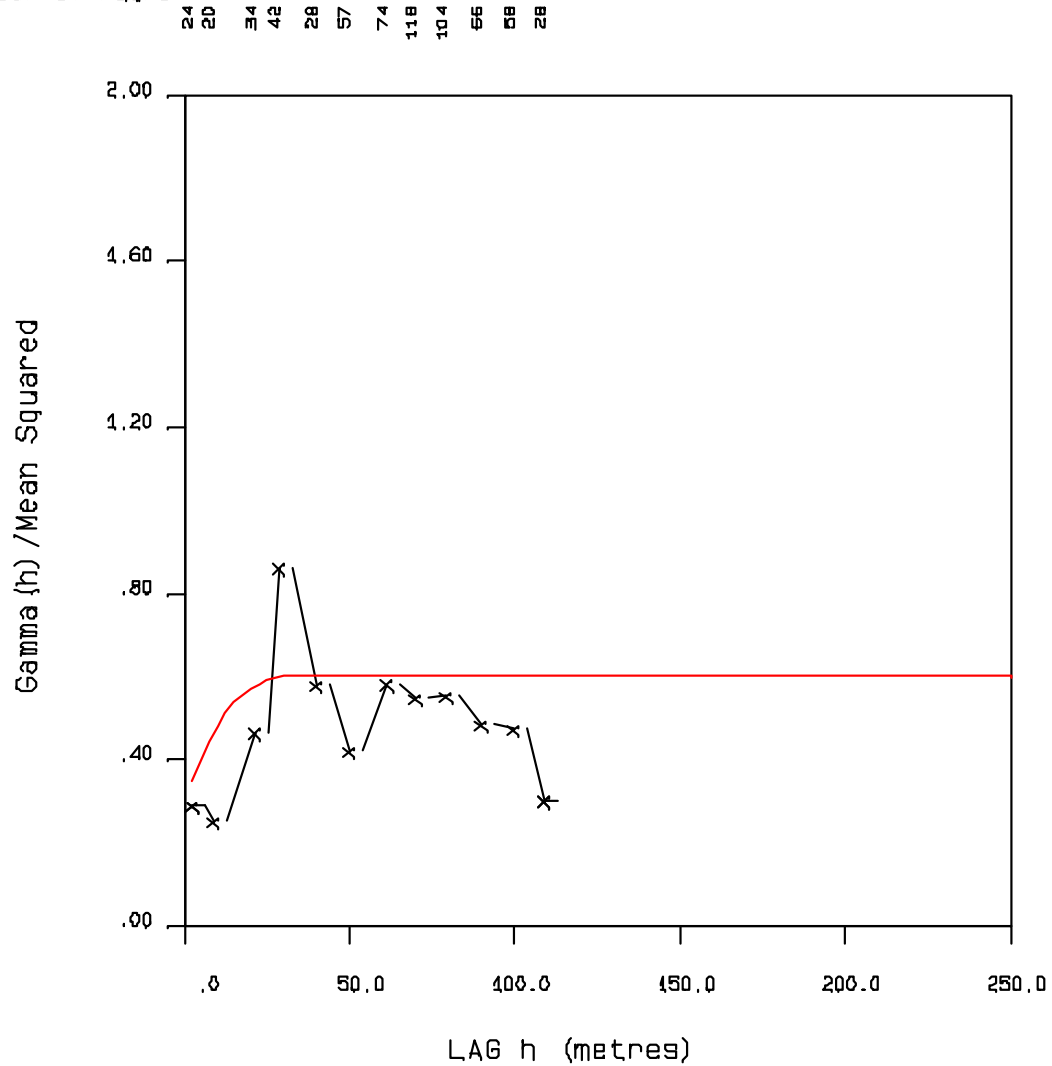
Number of Pairs



DUKES RIDGE MIN ZONE – AU – AZ 308 DIP 0

$C0 = .300$   
 $C1 = .100$   
 $C2 = .200$   
 $A1 = 15.0$   
 $A2 = 30.0$

Number of Pairs



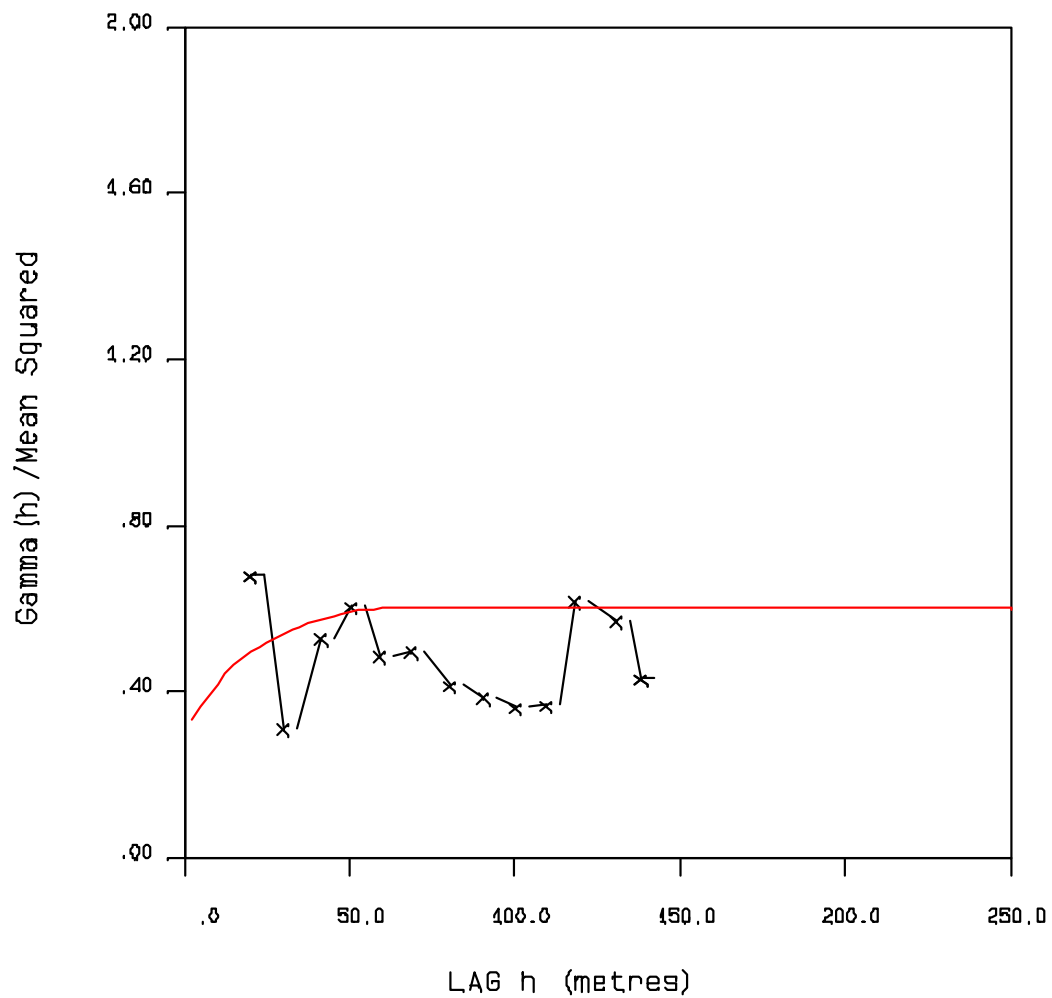
DUKES RIDGE MIN ZONE – AU – AZ 218 DIP 0



$C0 = .300$   
 $C1 = .100$   
 $C2 = .200$   
 $A1 = 20.0$   
 $A2 = 60.0$

Number of Pairs

45 34 27 30 34 27 18 35 48 33 15 11 12



DUKES RIDGE MIN ZONE – AU – AZ 0 DIP -90

C0 = .300

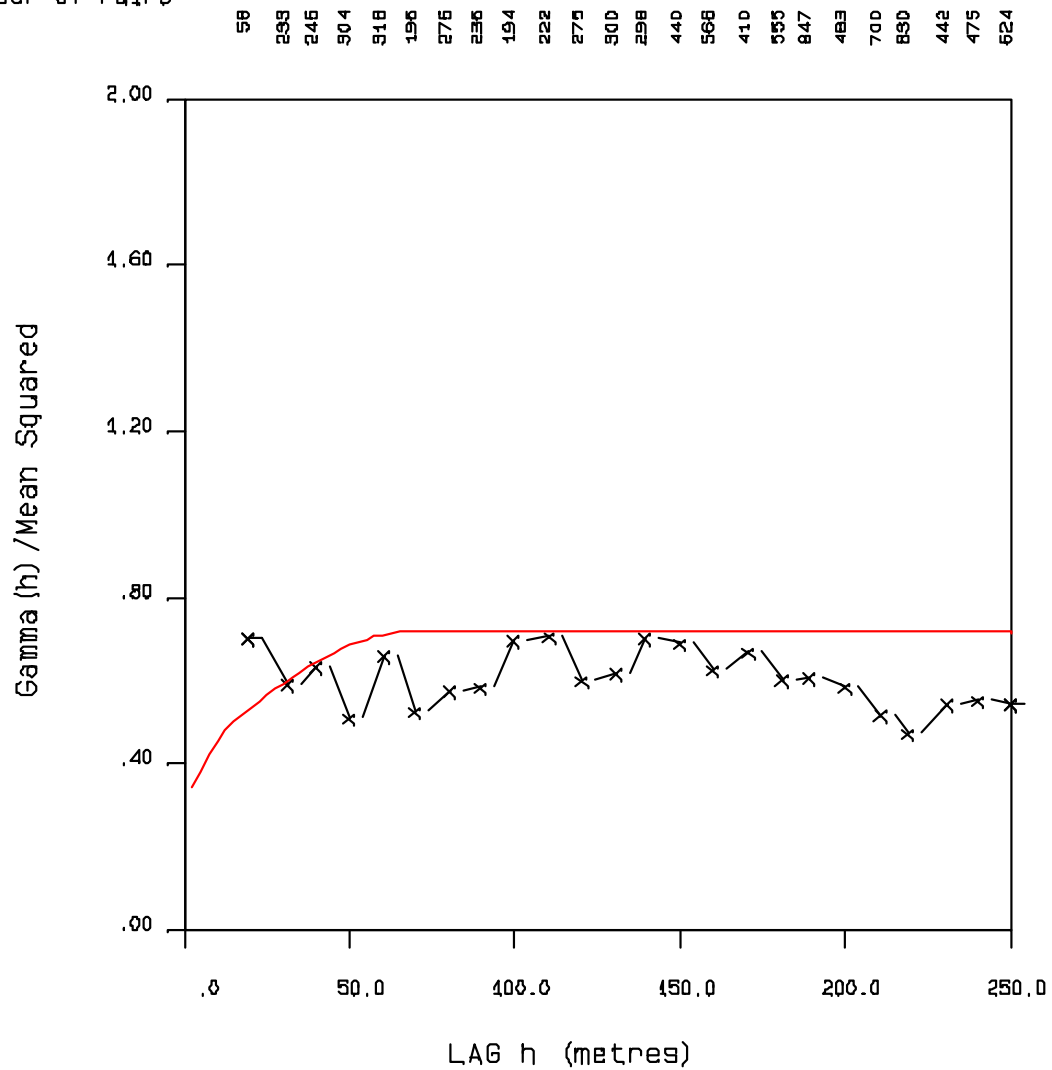
C1 = .100

C2 = .320

A1 = 15.0

A2 = 70.0

Number of Pairs



DUKES RIDGE MIN ZONE – AG – AZ 308 DIP 0

C0 = .300

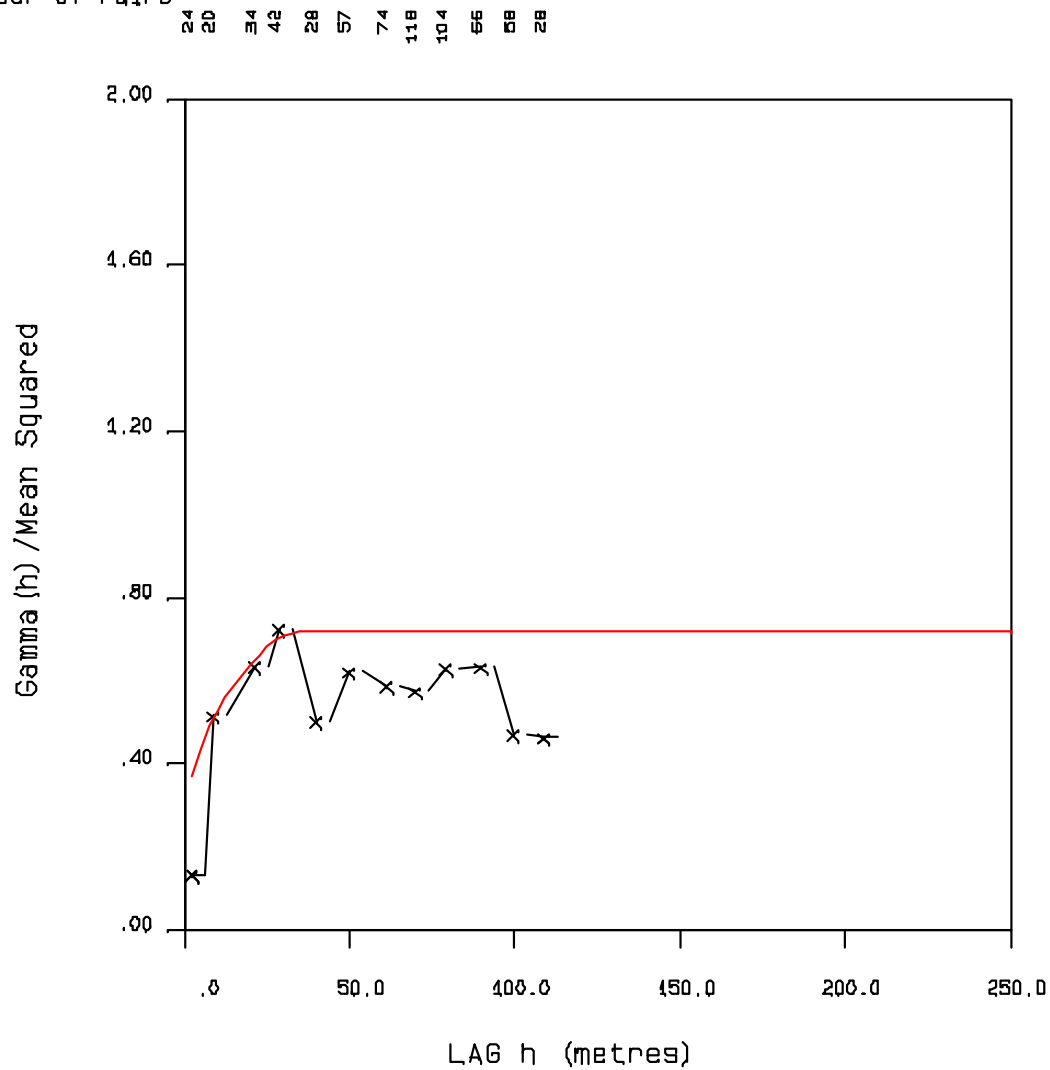
C1 = .100

C2 = .320

A1 = 10.0

A2 = 36.0

Number of Pairs

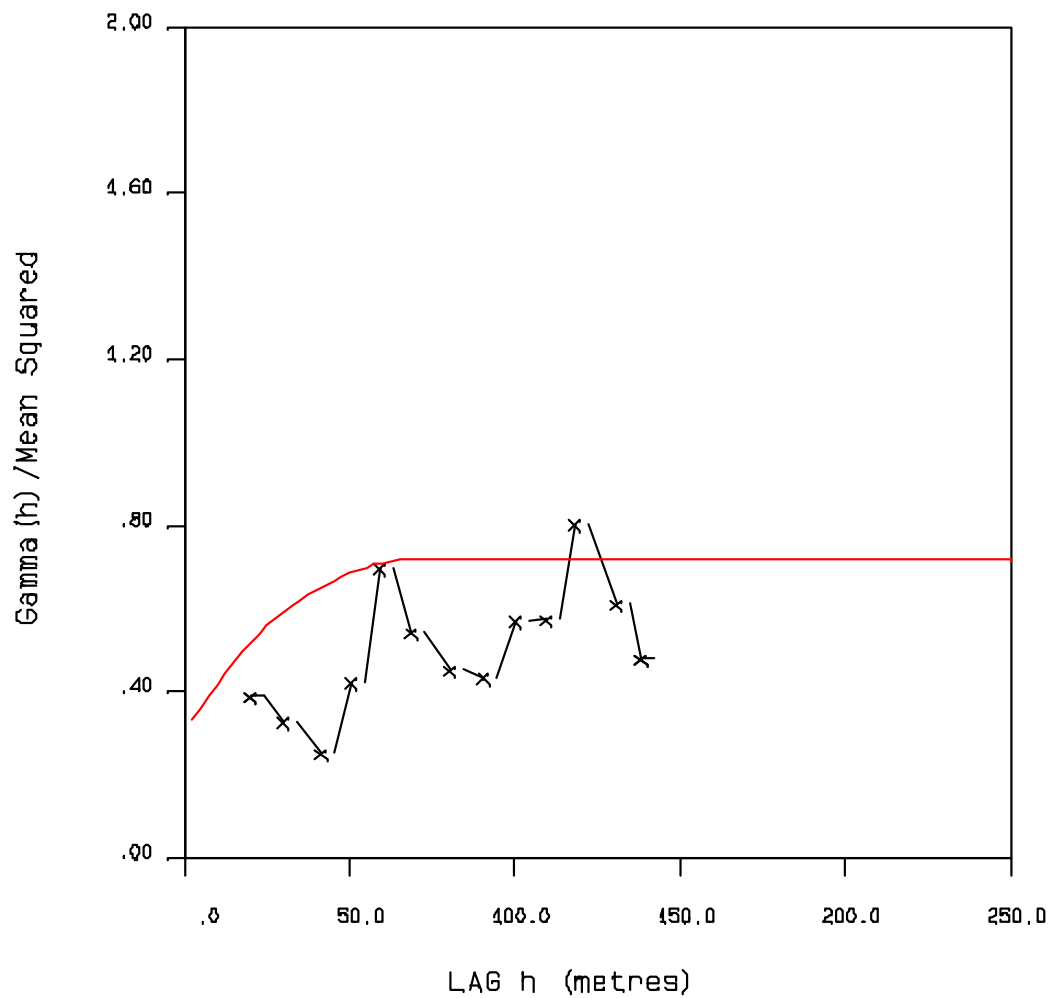


DUKES RIDGE MIN ZONE - AG - AZ 218 DIP 0

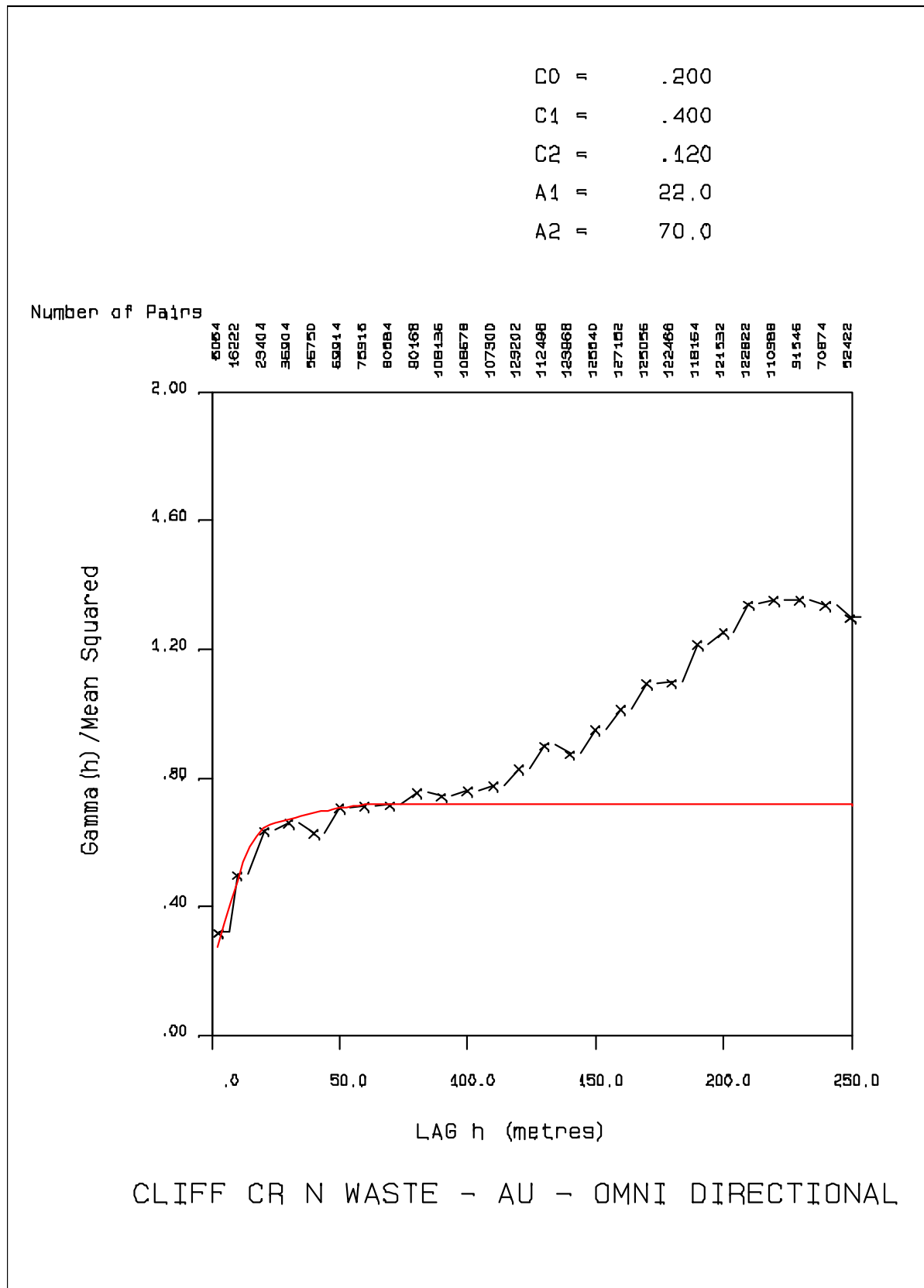
$C0 = .300$   
 $C1 = .100$   
 $C2 = .320$   
 $A1 = 30.0$   
 $A2 = 70.0$

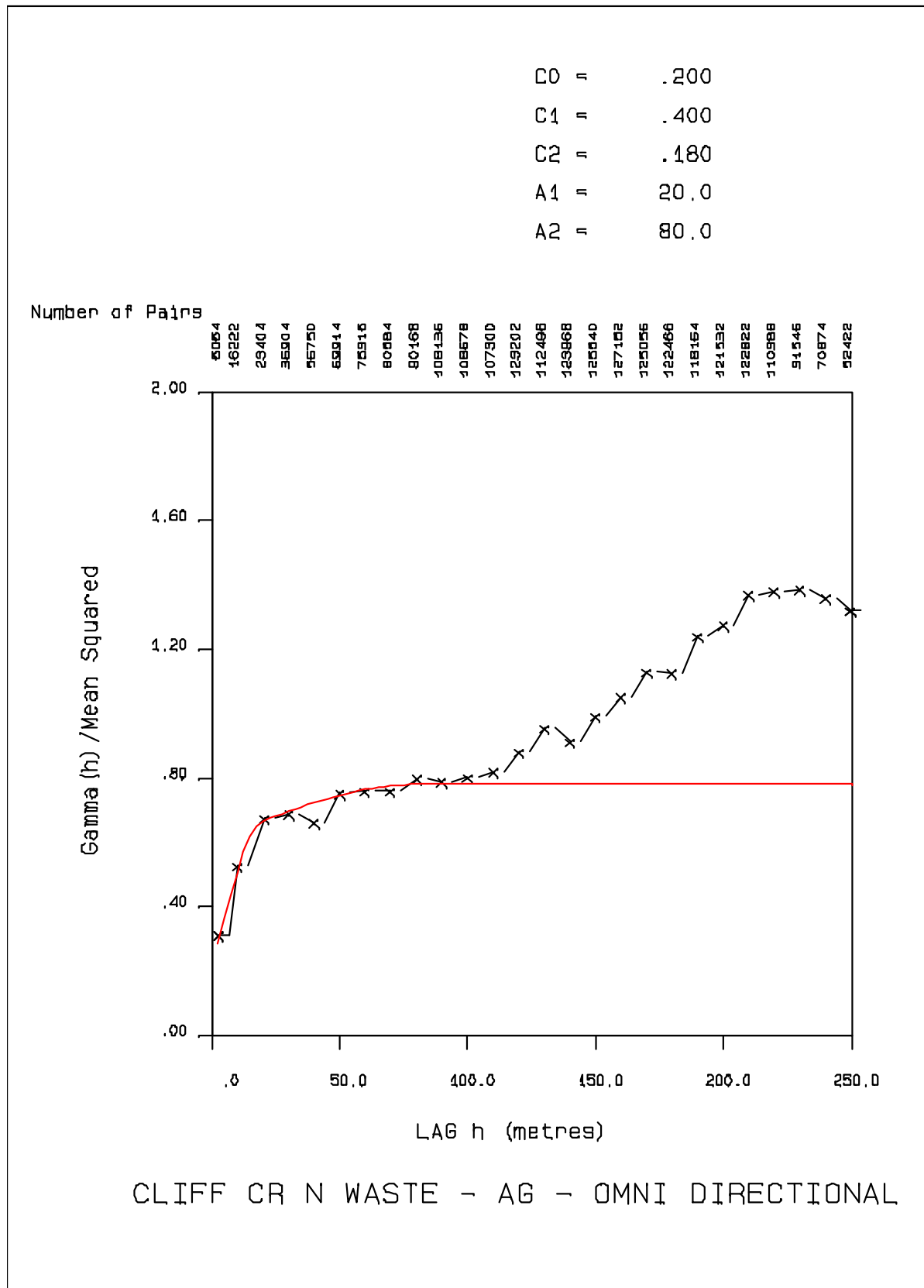
Number of Pairs

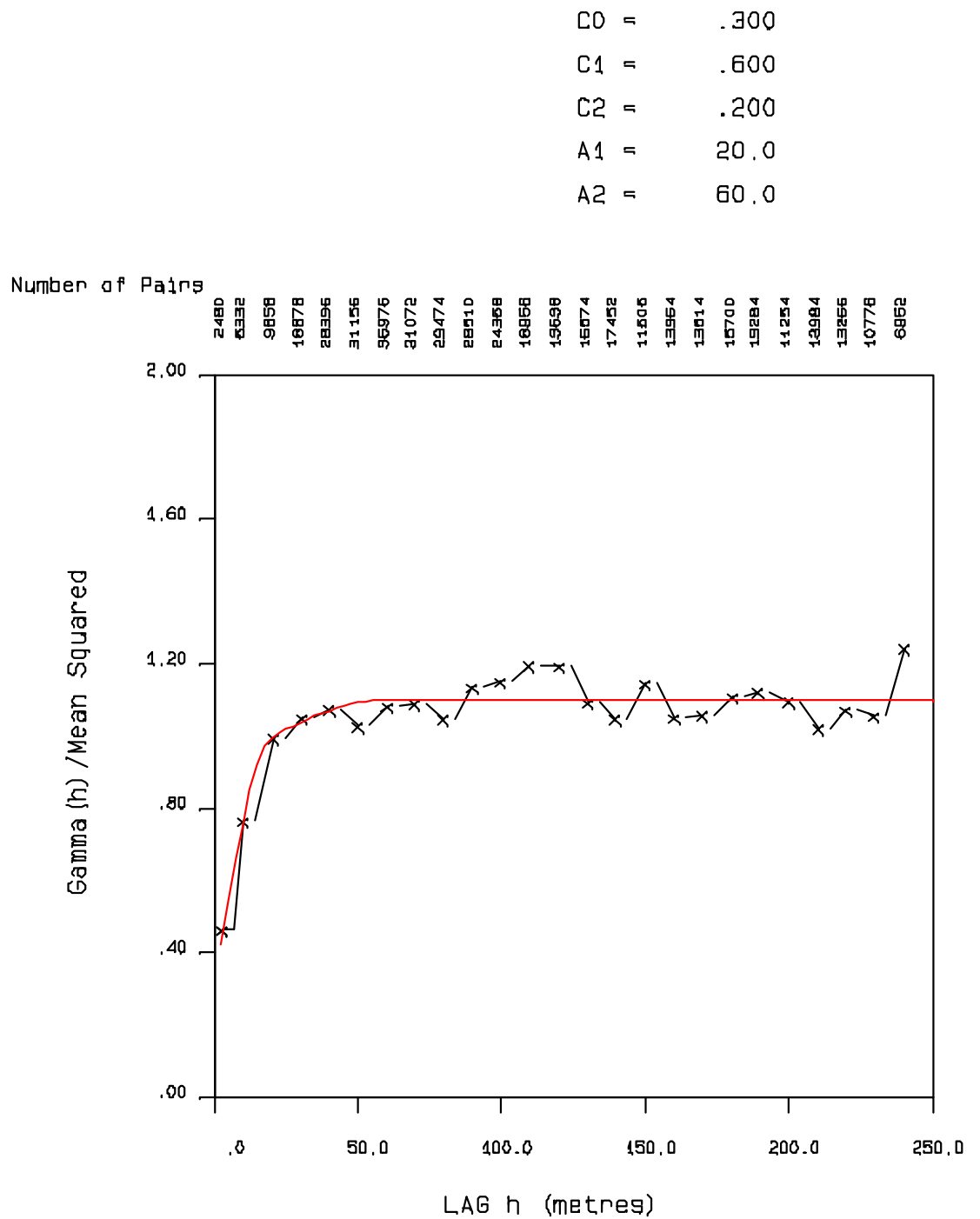
45 34 27 30 34 27 18 35 48 33 15 11 12



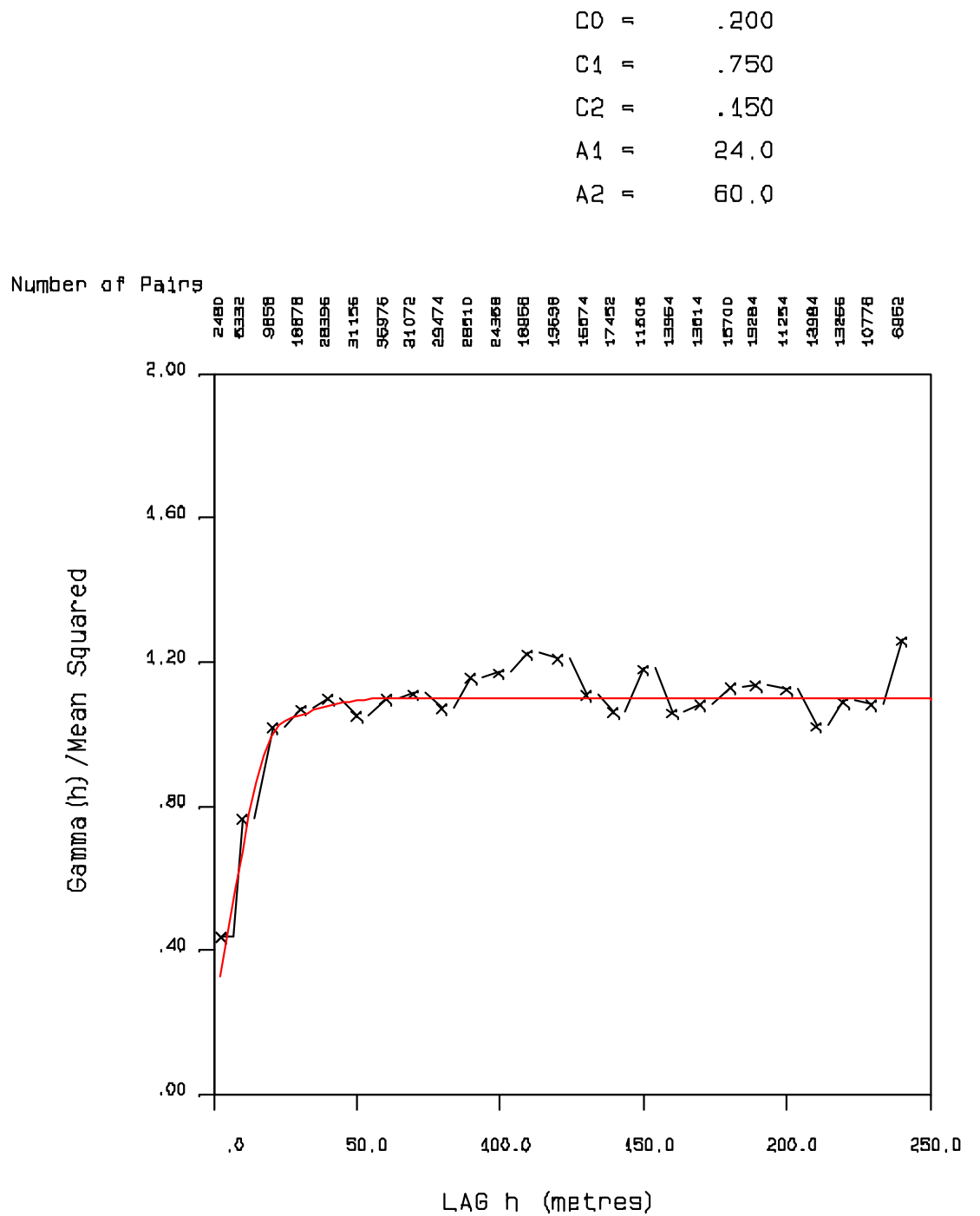
DUKES RIDGE MIN ZONE – AG – AZ 0 DIP -90







DUKES RIDGE WASTE - AU - OMNI DIRECTIONAL



DUKES RIDGE WASTE - AG - OMNI DIRECTIONAL