TECHNICAL REPORT

using

BRITISH COLUMBIA SECURITIES COMMISSION
NATIONAL INSTRUMENT 43-101 GUIDELINES

describing

GEOLOGY, MINERALIZATION, GEOCHEMICAL SURVEYS, DIAMOND DRILLING, METALLURGICAL TESTING AND MINERAL RESOURCES

at the

KEG PROPERTY

South-Central Yukon, Canada
NTS Map Sheet 105K/11
Latitude 62°35′N; Longitude 133°19′W

prepared for

SILVER RANGE RESOURCES LTD.
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by

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Effective date: December 19, 2012
Amended date: May 27, 2013

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APPENDICES

1.0 SUMMARY

Silver Range Resources Ltd. (Silver Range) retained Giroux Consultants Ltd. and Melis Engineering Ltd. to complete a National Instrument 43-101 (NI 43-101) Technical Report for the purpose of supplying updated information to its shareholders. This report was written in compliance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101 (NI 43-101), Companion Policy 43-101CP and Form 43-101F1.

This Technical Report provides the first resource estimate for Keg Main Zone, which is the most advanced exploration target within the Keg Property, south-central Yukon. The Keg Property consists of 4,744 mineral claims that are 100% owned by Silver Range. This report focusses only on the 89 mineral claims that cover Keg Main Zone and adjacent Keg East Zone. These claims are referred to as the "Property" throughout this report. The Property encompasses a 2,002 ha area located approximately 40 km north of the town of Faro.

1.1 Geology and Mineralization

The Property lies within an area underlain by various Paleozoic-age strata, which have been juxtaposed by a complex series of Jurassic to Cretaceous high angle and thrust faults. Regionally, the stratified rocks have been intruded and altered by Mid-Cretaceous igneous bodies that range up to batholith in size and from granodiorite to syenite in composition. No intrusive rocks are known within the Property.

Keg Main Zone is a bulk-tonnage silver-lead-zinc-copper±tin±indium prospect situated about 25 km north of formerly producing zinc-lead-silver mines of the Anvil District. Mineralization within Keg Main Zone has been traced by drilling for a length of 1100 m, across approximate true widths of 50 to 250 m through a vertical depth of 350 m starting from surface. The zone remains open to extension. Mineralization is hydrothermal in origin and occurs as fracture-filling and in skarn/replacement horizons, with an observed mineral assemblage that consists of pyrrhotite with lesser sphalerite, chalcopyrite, pyrite, arsenopyrite, galena and stannite.

1.2 History and Exploration

The first significant discovery in the area was made in 1953, when the Vangorda sedimentary exhalative (sedex) deposit was identified. No further discoveries were made until 1965, when the Faro Deposit was found. This major deposit stimulated a large staking rush and extensive exploration throughout the area. Over the next 20 years, exploration resulted in identification of additional sedex deposits, which define a narrow, northwesterly trending belt (Anvil Belt). Three deposits in this belt have been mined (Vangorda, Faro and Grum), while two others (Grizzly and Swim) are partially developed. In the 1960s and 1970s, several exploration programs were conducted northeast of the Anvil Belt in the vicinity of the Property, but they were deemed to be unsuccessful because sedex style mineralization was not found.

Between 1965 and 1978, several operators worked within the boundaries of the current Property. Although strong geochemical and geophysical anomalies were detected, follow up drilling intersected only fracture-filling and skarn/carbonate replacement style mineralization, which was dismissed because the focus of exploration was on massive sulphide deposits. After 1978, work in the area tapered off.

In 2010, Strategic Metals Ltd. (Strategic Metals) staked claims over Keg Main and Keg East Zones and, in 2012, it sold the claims to Silver Range. Strategic Metals and Silver Range contracted Archer Cathro to conduct the 2010 to 2012 exploration programs on the Property. Exploration to date has included regional and detailed scale, soil geochemical and geophysical surveys; prospecting; geological mapping; environmental, heritage and access studies; and diamond drilling (23,014.51 m in 69 holes).

1.3 Mineral Processing and Metallurgical Testing

Metallurgical testwork on Keg Main Zone was completed on six variability composites representing distinct zones of the known mineralization and one overall composite prepared as a blend of the six variability composites. The work encompassed preparation and analyses of test composites, comminution testing, open cycle and lock cycle flotation tests, gravity recovery tests, concentrate analyses and tailings physical and chemical characterization. Metallurgical testwork was carried out at SGS Canada Inc. – Lakefield Research under the direction of Lawrence A. Melis, P.Eng. of Melis Engineering Ltd. Mr. Melis is a qualified person and independent of the issuer, based on the guidelines provided by NI 43-101.

Key head analyses of the composites used in the testwork are summarized in Table 1-1 below.

Table 1-1: Test Composites – Assay Head Grades for Key Elements

Composite	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	In (g/t)	Sn (g/t)
Overall	41.6	0.27	0.31	1.36	11.4	400
A	89.1	0.18	0.62	0.69	1.7	770
B	56.2	0.60	0.30	2.30	15.6	760
C	44.1	0.31	0.34	1.67	13.1	230
D	32.3	0.10	0.27	0.89	8.8	100
E	21.1	0.14	0.15	1.28	19.5	210
F	32.7	0.19	0.28	1.14	9.1	360

The results of the lock cycle tests on all test composites show that Keg Main Zone mineralization responds very well to typical copper/lead/zinc flotation circuits with excellent recoveries of payable metals and acceptable copper, lead and zinc concentrate grades in copper, lead and zinc concentrates. Results of the lock cycle tests are summarized in Table 1-2.

Table 1-2: Summary of Lock Cycle Test Results

Composite	A	B	C	D	E	F	Avg.	Overall	Overall
Test No.	**LCT2**	**LCT3**	**LCT4**	**LCT5**	**LCT6**	**LCT7**	**-**	**LCT1**	**LCT8**
Zinc Concentrate									
% Zn	**39.8**	**49.6**	**46.1**	**28.4**	**48.3**	**45.9**	**43.0**	**47.5**	**49.8**
% Pb	1.65	0.28	0.33	0.45	0.29	0.79	0.63	0.53	0.45
% Cu	1.08	1.11	0.75	0.56	0.71	1.17	0.90	0.91	0.79
g Ag/t	314	95	81	105	92	129	136	117	105
g In/t	90	291	325	249	658	305	320	358	384
% Sn	0.24	0.011	0.002	0.002	0.002	0.002	0.043	<0.002	0.063
% Zinc Recovery	**81.5**	**92.4**	**92.0**	**85.7**	**92.3**	**87.5**	**88.6**	**85.2**	**87.7**
% Silver Recovery	5.9	7.7	6.8	8.6	11.6	8.6	8.2	6.6	5.9
% Indium Recovery	68.8	82.1	63.3	73.6	87.7	70.4	74.3	72.2	77.5
Lead Concentrate									
% Pb	**67.3**	**59.7**	**68.2**	**65.8**	**64.4**	**65.1**	**65.1**	**65.5**	**59.4**
% Cu	3.87	5.85	3.89	3.73	3.86	3.95	4.19	4.90	7.02
% Zn	1.45	1.19	1.00	0.89	1.00	1.43	1.16	1.12	1.21
g Ag/t	7,761	4,521	5,507	6,647	4,895	5,567	5,816	5,924	5,559
g In/t	<50	<50	21	<50	<50	<50	<50	<50	<50
% Sn	1.28	0.51	0.18	0.25	0.15	0.28	0.44	0.44	0.49
% Lead Recovery	**82.9**	**82.9**	**84.9**	**82.4**	**77.5**	**83.9**	**82.4**	**84.8**	**86.0**
% Silver recovery	75.9	38.4	55.3	65.7	43.1	65.0	57.2	60.5	62.9
% Indium Recovery	n/a	n/a	0.5	n/a	n/a	n/a	n/a	n/a	n/a
Copper Concentrate									
% Cu	**23.5**	**29.8**	**29.0**	**25.2**	**28.2**	**27.6**	**27.2**	**28.8**	**28.1**
% Pb	5.93	0.89	2.62	6.79	3.96	4.37	4.09	2.65	2.43
% Zn	8.53	1.19	3.61	3.32	3.25	4.57	4.08	3.85	5.04
g Ag/t	1,454	1,351	1,326	2,062	1,468	1,089	1,458	1,442	1,328
g In/t	61	129	132	169	274	137	150	150	152
% Sn	5.73	1.84	0.76	1.09	0.78	1.72	1.99	2.04	1.88
% Copper Recovery	**62.3**	**80.2**	**75.3**	**59.0**	**72.2**	**67.6**	**69.4**	**71.4**	**69.2**
% Silver Recovery	8.8	42.3	26.2	14.6	28.9	15.6	22.7	22.0	20.5
% Indium Recovery	14.4	14.0	6.1	3.8	5.6	7.5	8.6	7.9	8.0

1.4 Mineral Resource Estimate

The inferred mineral resource for the Keg Main Zone comprises 39,760,000 t grading 30.25 g/t silver, 0.26% lead, 0.77% zinc, 0.15% copper, 265.7 ppm tin, 5.77 ppm indium and 138.06 ppm cadmium. This resource is stated above a 16.0 g/t silver cut-off grade. A summary of inferred mineral resources at various cut-off grades is provided in Table 1-3.

Table 1-3: Inferred Mineral Resource

Cut-off (Ag g/t)	Tonnes > Cut-off (tonnes)	Grade > Cut-off						
		Ag (g/t)	Pb (%)	Zn (%)	Cu (%)	Sn (ppm)	In (ppm)	Cd (ppm)
10.0	63,970,000	23.63	0.21	0.64	0.12	224.5	5.07	116.09
12.0	54,640,000	25.80	0.22	0.68	0.13	238.5	5.29	123.40
14.0	46,730,000	27.97	0.24	0.72	0.14	252.0	5.50	130.52
16.0	**39,760,000**	**30.25**	**0.26**	**0.77**	**0.15**	**265.7**	**5.77**	**138.06**
18.0	33,900,000	32.55	0.27	0.81	0.16	278.8	6.02	145.24
20.0	29,210,000	34.74	0.29	0.85	0.16	292.5	6.24	151.64
22.0	25,390,000	36.79	0.31	0.89	0.17	303.4	6.44	157.31
24.0	21,990,000	38.94	0.32	0.92	0.18	315.7	6.63	162.66
26.0	18,970,000	41.16	0.34	0.96	0.19	328.8	6.85	168.21
28.0	16,470,000	43.31	0.36	0.99	0.19	341.8	7.10	173.61
30.0	14,340,000	45.44	0.37	1.02	0.20	355.3	7.24	177.73
32.0	12,520,000	47.54	0.39	1.05	0.20	366.9	7.33	180.84
34.0	10,940,000	49.65	0.41	1.07	0.21	379.9	7.41	183.59
36.0	9,570,000	51.75	0.44	1.09	0.21	390.1	7.41	185.39
38.0	8,430,000	53.75	0.46	1.11	0.21	399.8	7.48	187.91
40.0	7,480,000	55.63	0.48	1.12	0.21	409.4	7.47	188.79

The Keg Main Zone mineral resource estimation was completed by Gary Giroux, P.Eng., MASc. of Giroux Consulting Ltd. Mr. Giroux is a qualified person and independent of the issuer, based on the guidelines provided by NI 43-101.

Data generated during the various drill programs conducted at Keg Main Zone were independently reviewed by Giroux Consultants Ltd. The resource estimate for Keg Main Zone was initiated using a wire-frame 3D solid model in “GEMS.” Three-dimensional solids were manually digitized from the available drill data and were used to constrain the interpolation of mineralization. The model was constructed based upon lithological boundaries and structural controls. A total of three different lithological units were used in the modelling process.

Drill holes were “passed through” this geologic solid with the entry and exit points recorded. Using this information the assays were “back tagged” with different codes if inside or outside the solid. Of the 69 supplied drill holes, 53 holes totalling 18,376.81 m intersected the mineralized solid.

A block model with blocks 20 x 20 x 5 m in dimension was superimposed over the mineralized solid. For each block, the percentage below surface topography and within each mineralized solid was recorded.

The bulk density for rock within Keg Main Zone was established from 907 specific gravity determinations using the weight in air – weight in water procedure. There is a wide range of specific gravities in most of the rock types and the specific gravity of any given sample is more a function of sulphide content than host rock type. As a result, a specific gravity value was interpolated into each block in the model using the inverse distance squared procedure.

Uniform, five metre long, down-hole composites were produced to honour the mineralized solid. Grades for the elements of interest were interpolated into blocks within the mineralized solid using Ordinary Kriging. The kriging exercise was completed in a series of four passes. Appropriate block model validation techniques for resource estimation at this stage of project development were applied.

A cut-off silver grade of 16.0 g/t will be used for the reported resource estimate until a Preliminary Economic Assessment (PEA) is conducted for the project and a cut-off grade can be chosen to match economic criteria.

1.5 Interpretation and Conclusions

Keg Main Zone is a relatively shallow, bulk-tonnage silver-lead-zinc-copper±tin±indium deposit situated north of the formerly producing mines of the Anvil District. The deposit is distinguished from Anvil District deposits and other large base metal showings and deposits elsewhere in Yukon by its uncommonly high silver contents relative to contained base metals and by its enrichments of tin, indium and other relatively rare metals.

Keg Main Zone is favourably situated in an area where several regional structural elements occur close together. This cluster of large-scale structures likely played an important role in ground preparation for the deposit. The deposit is hosted in strongly altered and folded siliceous siltstone and chert, which may have been deformed by a buried thrust fault that failed to break through these units. During folding of siliceous siltstone and chert, small scale fracturing produced permeability in the otherwise relatively impermeable rocks.

In addition to the ground preparation described above other elements likely play roles in the development of mineralization within Keg Main Zone. The folded and fractured siliceous siltstone and chert are interbedded with silty limestone and calcareous siltstone, which are the most reactive rocks in the area. Fluids channeling through the fractured siliceous siltstone and chert likely flowed upwards or laterally into the reactive stratigraphy. A small intrusive plug located approximately two kilometres south of the deposit may have provided a local heat source that powered at the mineralizing hydrothermal cell. Late normal and dip-slip faults crosscut the folded siliceous siltstone and chert and may have acted as deep-seated fluid conduits that localized hydrothermal flow.

Exploration conducted to date at Keg Main Zone has defined a sizeable mineral resource, and metallurgical testwork has produced encouraging results. Keg Main Zone is very well situated in regards to infrastructure. Further work is warranted.

1.6 Recommendations

Silver Range should conduct: a scoping level economic evaluation; additional diamond drilling targeted at better defining and expanding the Keg Main Zone mineral resource; further metallurgical test work; and additional geotechnical, climatic, heritage and environmental studies.

Infill diamond drilling should be completed to upgrade the mineral resource from inferred to indicated or measured. Drilling should also be conducted to determine whether the deposit can be extended further to depth and/or along strike. Larger diameter drill core should be used in some holes to aid in additional metallurgical testwork, and oriented drill core should be obtained to provide data to support preliminary pit slope design for conceptual pit walls.

A Preliminary Economic Assessment has been initiated and evaluation of road access routes is being done. Current environmental and heritage base line studies should be continued, and piezometers should be installed for ground water monitoring.

The ongoing and proposed work programs that encompass the work above are budgeted at a total cost of $3,946,800.

2.0 INTRODUCTION

This Technical Report has been prepared at the request of the Board of Directors of Silver Range Resources Ltd. in order to summarize results of metallurgical testwork and provide a formal mineral resource estimate for Keg Main Zone. The mineral resource estimate was prepared using drill data generated between June 2010 and September 2012. This report was written in compliance with disclosure and reporting requirements set forth in the Canadian Securities Administrations' current "Standards of Disclosure for Mineral Projects" under the provisions of National Instrument 43-101 (NI 43-101), Companion Policy 43-101 CP and Form 43-101F1.

The core of the Property was staked in winter 2009-2010 by Strategic Metals Ltd., which completed the 2010 and initiated the 2011 exploration programs before selling the Property to Silver Range on August 9, 2011 through a plan of arrangement.

Silver Range is listed on the TSX Venture Exchange (TSX-V) and holds a 100% interest in the Property, without underlying royalty interests.

Gary Giroux, P.Eng., visited the Property on August 31 and September 1, 2011 and was retained to prepare the mineral resource estimate and accompanying technical report. Lawrence A. Melis, P.Eng. has not visited the Property.

3.0 RELIANCE ON OTHER EXPERTS

This report includes a study of information obtained from: public documents, assessment reports and literature sources cited in Section 20.0; geological work performed by Strategic Metals and Silver Range; metallurgical testwork; and, a mineral resource estimate. The Author used his experience to determine if the information provided was suitable for inclusion in this technical report and adjusted information that required amending.

Mineral Claim Information was provided by the office of the Yukon Mining Recorder. Although Global Positioning Satellite (GPS) surveys were carried out to verify the approximate claim locations as shown on government claim maps and as referred to on maps that accompany this report, these surveys have no legal standing and do not guarantee land tenure.

4.0 PROPERTY DESCRIPTION AND LOCATION

The Property is located in the Whitehorse Mining District within south-central Yukon and is centred at latitude 62°35′ north and longitude 133°19′ west on NTS map sheet 105K/11 (Figure 1).

The Property comprises 89 mineral claims that cover an area of 2,002 hectares. The claims are registered in the name of Archer, Cathro & Associates (1981) Limited (Archer Cathro), which holds them in trust for Silver Range. Silver Range owns the Property and there are no underlying royalty interests. Specifics concerning claim registration are tabulated below, while the locations of individual claims are shown on Figure 2.

Tenure Name	Tenure Number	Expiry Date*
Keg 1-15	YD11773-YD11787	March 13, 2019
Keg 16-53	YD33666-YD33703	March 13, 2020
Keg 94-115	YD62994-YD63015	March 13, 2020
Keg 122-123	YD63022-YD63023	March 13, 2020
Keg 130-131	YD63030-YD63031	March 13, 2020
Keg 138-145	YD63038-YD63045	March 13, 2020
Keg 373	YD27423	March 13, 2020
Keg 375	YD27425	March 13, 2020

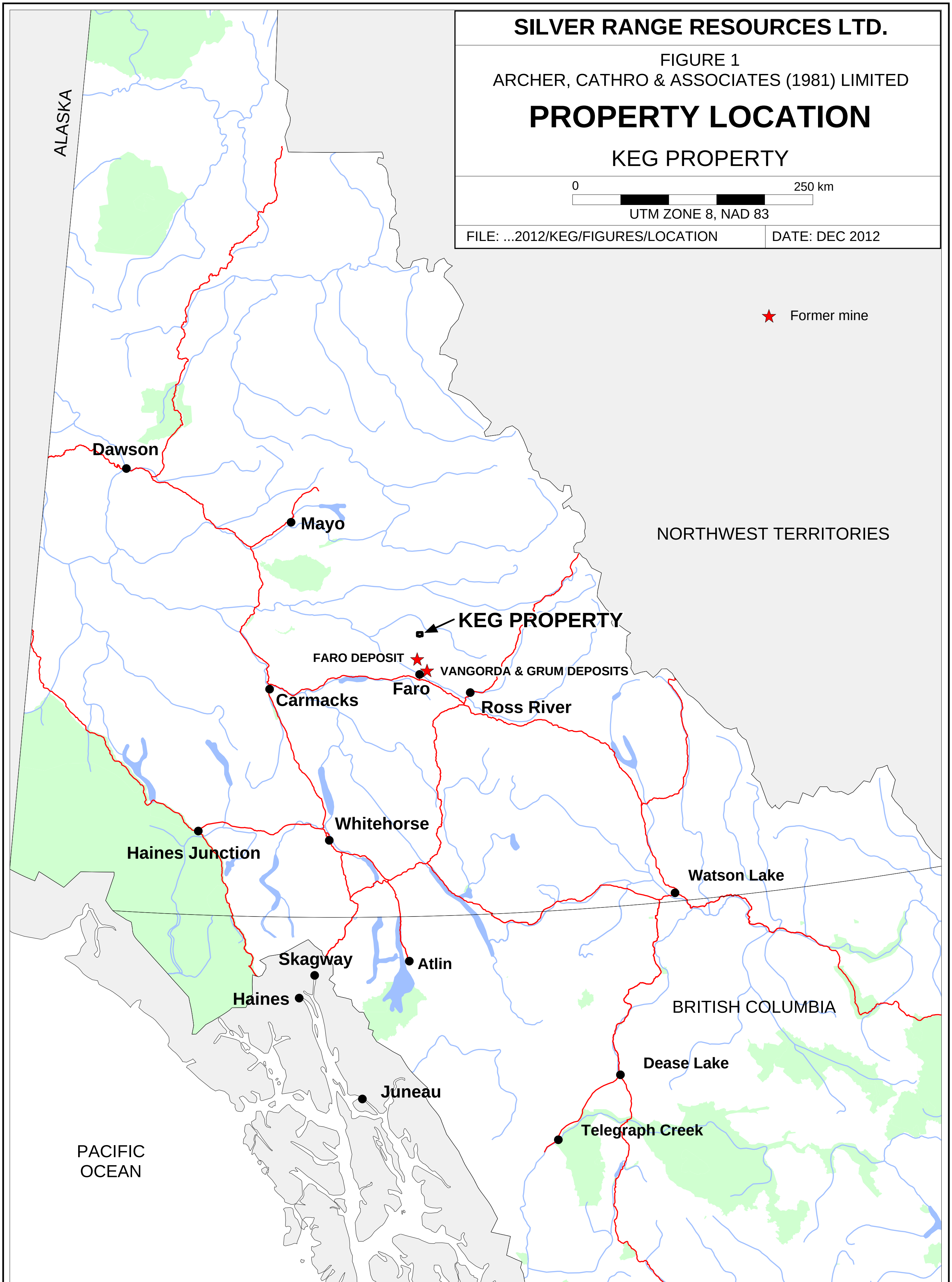
*Expiry dates include 2012 work expenditures that have been filed for assessment credit but approval is pending until the Mining Recorder officially accepts the assessment report describing work to which those expenditures apply.

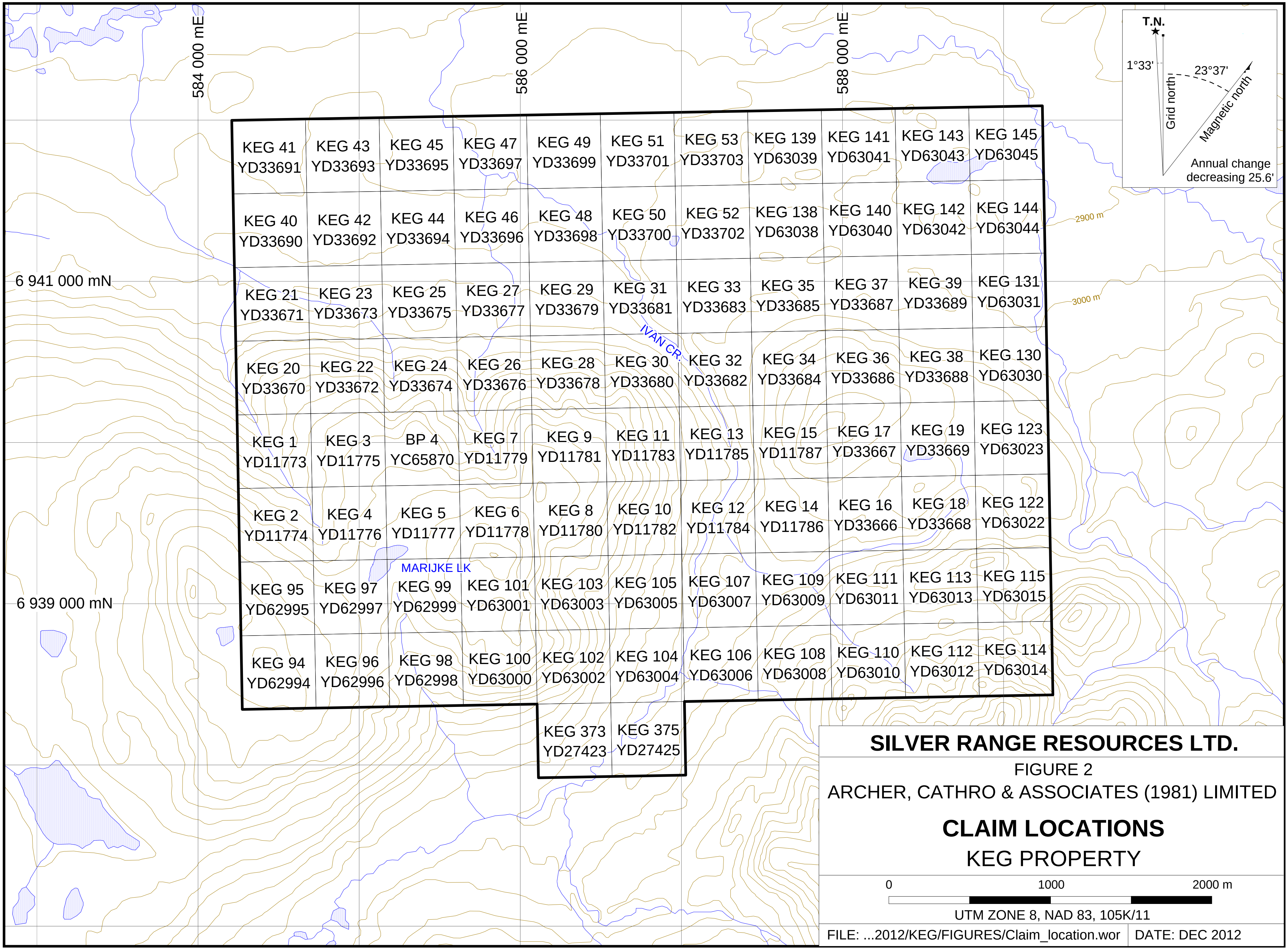
The claims were located using handheld GPS units and are plotted on Figure 2 in the UTM NAD83 coordinate system.

In Yukon, mineral claims can be maintained in good standing by performing approved exploration work to a dollar value of one hundred dollars ($100) per claim per year. Exploration and development expenditures in the current anniversary year may be applied to a maximum of five future anniversary years, and those anniversary years may be added to any previous surplus of anniversary years.

Exploration work in Yukon is subject to the Mining Land Use Regulations of the Yukon Quartz Mining Act and to the Yukon Environmental and Socio-Economic Assessment Act. A Land Use approval must be obtained and Yukon Environmental and Socio-Economic Assessment Board recommendations issued before advanced exploration may be conducted. The Property is currently subject to a Class III Mining Land Use Approval (LQ00318), which authorizes Silver Range to upgrade or establish camps, build and maintain certain trails and access roads and carry out geological mapping, prospecting, soil sampling, line cutting and surface diamond drilling with settling ponds and sumps. This approval is valid until June 14, 2016.

The Property is subject to regular inspections by Land Use officials. The only outstanding environmental liability known to the Author is Silver Range's obligation to reclaim the camp,


SILVER RANGE RESOURCES LTD.
FIGURE 1
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
PROPERTY LOCATION
KEG PROPERTY
0
250 km
UTM ZONE 8, NAD 83
FILE: ...2012/KEG/FIGURES/LOCATION
DATE: DEC 2012
Former mine
ALASKA
Dawson
Mayo
NORTHWEST TERRITORIES
KEG PROPERTY
FARO DEPOSIT
VANGORDA & GRUM DEPOSITS
Faro
Carmacks
Ross River
Whitehorse
Haines Junction
Watson Lake
Skagway
Atlin
Haines
BRITISH COLUMBIA
Dease Lake
Juneau
Telegraph Creek
PACIFIC
OCEAN



SILVER RANGE RESOURCES LTD.

FIGURE 2

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CLAIM LOCATIONS

KEG PROPERTY

UTM ZONE 8, NAD 83, 105K/11

FILE: ...2012/KEG/FIGURES/Claim_location.wor | DATE: DEC 2012 roads and drill pads prior to the expiration of its current Land Use approval. The Author does not know of any impediments to Silver Range's surface rights of the Property.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Property lies 40 km north of the town of Faro, which is the nearest supply centre. Faro can be reached in all seasons by two wheel drive vehicles using the Yukon highway system from Whitehorse, the territorial capital and main transportation hub. Faro is located 356 km by road from Whitehorse.

Faro formerly serviced the mines and mill of the Anvil District. A heavy duty haulage road and a high voltage power line extend from the town site to the Faro mine and mill site, which are located 25 km south of the Property through low hilly terrain. Electricity for the power line comes from a hydroelectric dam and diesel generators, located in Whitehorse. At present, there is no excess capacity on the Yukon electrical grid, but the Government of Yukon is currently studying the viability of liquefied natural gas fired, electrical generation plants.

Portable electrical generators provide sufficient power for exploration stage programs on the Property. Creeks on the Property provide sufficient water for camp and diamond drilling requirements. The Property has sufficient sites for mining, administrative and camp buildings, potential tailings storage, potential waste disposal and potential processing plants, with no conflicting surface rights.

The majority of supplies and services required for mineral exploration are available in Whitehorse. Many services are also available in Faro including a hotel, a restaurant, limited fuel sales, a first aid station, an all-weather airport, various types of aircraft and an RCMP detachment. There are a number of vacant houses, apartment complexes and commercial buildings in Faro, and many undeveloped lots.

In 2012, access to the property and daily logistical support were provided by an Eurocopter A-Star B3 helicopter, a Bell 206B helicopter and a Hughes 500D helicopter, all based on the Property or at the Faro airport. All three helicopters were operated by Trans North Helicopters of Whitehorse, Yukon. Rented lots at the Faro airport served as a logistical staging area.

The Property is situated in the Anvil Range of the Pelly Mountains and is drained by creeks that flow into the Tay River, which ultimately connects to the Pacific Ocean via the Pelly and Yukon Rivers. One creek and one small lake on the Property have been assigned informal names (Ivan Creek and Marijke Lake) for the sake of this report (Figure 2).

The Property covers an east-west trending, relatively flat-topped ridge that is truncated to the east by Ivan Creek. Elevations on the Property range between 820 m and 1400 m above sea level. The main areas of interest lie along the northern edge of the ridge, which crests at or just below treeline. Slopes near treeline are vegetated primarily with staghorn moss, thick brush and stunted spruce and poplar trees. The density and size of vegetation gradually increases on lower slopes. Mature spruce forests are only found on south facing slopes and along Ivan Creek.

Understory comprises dwarf birch and mountain alder, with a thick layer of sphagnum moss. Due to a combination of shade, locally poor drainage and a thick insulating blanket of sphagnum moss, permafrost is prevalent on north facing slopes. Outcrop is rare within the Property.

Much of the overburden in the region is associated with the most recent Cordilleran ice sheet, the McConnell glaciation, which is believed to have covered south and central Yukon between 26,500 and 10,000 years ago (Yukon Geological Survey, 2010a). Tay River map area was covered by the Selwyn Lobe of the Cordilleran ice sheet. A complex system of ice-caps and cirque glaciers was active at high elevations in the Pelly Mountains and contributed to the ice bodies surrounding them.

The climate at the Property is typical of northern continental regions with long, cold winters, truncated fall and spring seasons and short, mild summers. Although summers are relatively warm, snowfall can occur in any month at higher elevations. The Property is mostly snow free from late May to late September. According to Environment Canada, summer temperatures in the town of Faro average 18 to 21ºC during the day and 6 to 9ºC at night (Environment Canada, 2010). Winter temperatures average -17 to -10ºC during the daytime. Total annual precipitation over the 1971 to 2000 period averaged 316 mm, with little over two-thirds falling as rain and about 110 cm as snow.

6.0 HISTORY

Historical exploration was largely compiled from assessment reports submitted to the Yukon Mining Recorder. These reports were not prepared in accordance with the standards prescribed in NI 43-101. Nonetheless, they were accepted by the Yukon Mining Recorder and were consistent with professional standards at the time they were written.

Apart from prospecting for placer gold early in the 20th century and reconnaissance-scale mapping done by the Geological Survey of Canada in the 1930s (Johnston, 1936), there was no reported exploration activity in the Faro area until the Canol Road was built during World War II, thus providing better access to the district (Wober, 1967). The first significant discovery in the area was made in 1953, when Prospector Airways identified sedimentary exhalative (sedex) style, zinc-lead-silver mineralization at the Vangorda Deposit (Figure 1). No further discoveries were made until 1965, when Dynasty Explorations and Cypress Mining Corp. Ltd. found similar mineralization at the nearby Faro Deposit. This larger deposit stimulated a staking rush and extensive exploration throughout the area by various operators (Cathro, 1967).

Over the next 20 years, exploration resulted in identification of additional sedex deposits, which define a narrow, northwesterly trending belt (Anvil Belt). Three deposits in this belt have been mined (Vangorda, Faro and Grum), while two others (Grizzly and Swim) are partially developed. Several exploration programs were conducted northeast of the Anvil Belt in the vicinity of the Property, but they were deemed to be unsuccessful because sedex style mineralization was not found.

Between 1965 and 1978, numerous operators worked within the boundaries of the current Property. Although strong geochemical and geophysical anomalies were detected, follow up drilling intersected only fracture-filling and skarn/carbonate replacement style mineralization, which was dismissed because the focus of exploration was on massive sulphide, sedex deposits. After 1978, work in the area tapered off. Table 6-1 lists the year of work, owner/operator, claim group name, work performed and highlight results for each program, while Figure 3 illustrates the relative locations of many of the old claim blocks.

Table 6-1 Exploration History (*after Deklerk and Traynor, 2005*)

Year of Work (Report #)	Owner/ Operator	Claim Group	Work Performed	Results
1965 (Minfile)	Anvil Mining Corporation Ltd.	Ivan	Staked claims following an airborne magnetic (mag) and electromagnetic (EM) survey	n/a
1966 (091262) (Adamson, 1966)	Anvil Mining	Ivan	Diamond drilling (464.5 m in 4 holes)	Intersected disseminated Pb-Zn mineralization, but no sulphides of economic significance observed, no assaying done.
1966 (019008) (Cathro, 1966)	Yukon Copper Ltd.	Caribou Lake Property (Tara, Dane & Hal claims)	Staked claims Airborne mag and EM Geological mapping Soil sampling	Outlined 3 zones of favourable geophysical and geochemical (Cu-Pb-Zn) response.
1966 (Minfile)	Yukon Copper. -- Northern Empire Mines Ltd.	n/a	Yukon Copper Ltd. reorganized as Northern Empire Mines Ltd.	n/a
1967 (019007) (Cathro, 1967)	Northern Empire	Caribou Lake Property (Tara, Dane & Hal)	Line cutting Soil and rock geochemical sampling Geological mapping	Outlined new soil anomalies and better defined known soil anomalies. 4 grab samples yielded between 2.8-4.5% Zn, 0.04-0.18% Cu and 6.2-11 g/t Ag.
1968 (019007) (Cathro, 1968)	Northern Empire	Caribou Lake Property (Tara, Dane & Hal)	Bulldozer trenching	Exposed disseminated to massive pyrrhotite-pyrite-sphalerite±chalcopyrite±galena ±scheelite in bedrock. A 15 x 3 m sulphide lens averaged 1.25% Zn, 0.05% Cu and 3.4 g/t Ag; and a partially exposed pyrrhotite band returned 2.84% Zn and 0.37% Cu over 2.4 m.
1969 (Minfile)	Inter-Tech Development and Resources Ltd.	Ter	Restaked old Ivan claims as Ter	n/a
1971 (Minfile)	Northern Empire -- Northern Homestake Mines Ltd.	Caribou Lake Property (Hal)	Northern Homestake acquired property from Northern Empire	n/a

1972 (Minfile)	Northern Homestake	Caribou Lake Property (Hal)	Bulldozer trenching	No record of work.
1972 (Minfile)	Ridgemont Mining Corporation (Cyprus Anvil Mining Corporation)	Dana & Irma	Restaked old Ivan & Ter claims as Dana, staked Irma to NW	n/a
1973 (Minfile)	Northern Homestake -- Ridgemont (Cyprus Anvil)	Hal	Ridgemont optioned property from Northern Homestake	n/a
1973 (060933 - Jilson & Simpson, 1973)	Ridgemont (Cyprus Anvil)	Dana	Soil sampling	2750 x 300 m soil anomaly with coincident highly anomalous Zn-Pb-Cu values.
1974 (Minfile)	Ridgemont (Cyprus Anvil)	Hal, added Halo claims	Staked additional claims (Halo) Geological mapping Geochemical surveys Mag, EM and IP surveys	No record of work.
1974 (Minfile)	Ridgemont -- Cyprus Anvil	Dana, Irma, Hal & Halo	Property transferred to Cyrpus Anvil	n/a
1974 (091263) (Jilson, 1974)	Cyprus Anvil	Dana, Hal & Halo	Diamond drilling (494 m in 3 holes)	Best intercept yielded 1.24% Zn, 0.46% Pb, 0.14% Cu and 34 g/t Ag over 49 m.
1975 (091264) (Jilson, 1975)	Cyprus Anvil	Dana & Halo	Diamond drilling (627 m in 3 holes)	Intersected less extensive but locally higher grade mineralization than 1974 holes. Best intercept yielded 3.52% Zn and 0.13% Cu over 8.0 m.
1975 (090083) (Walcott, 1975)	Cyprus Anvil	Irma	Mag & gravity survey	Separate, distinct magnetic and gravity anomalies defined.
1977 (090205) (Wober, 1977)	Cyprus Anvil	Irma	IP survey	Showed presence of large anomalous zone that correlates to 1975 gravity anomaly.
1978 (091265)	Cyprus Anvil	Irma	Diamond drilling (159 m in one hole)	No assays reported.
1990 (092964) (Carne, 1990)	YGC Resources Ltd.	Keg	Staked claims Prospecting Geochemical survey	Subdued Au values obtained.
2010 (Eaton, 2011)	Strategic Metals Ltd.	Keg	Staked claims Prospecting Geochemical survey IP survey VTEM & mag survey Diamond drilling (958.27 m in 4 holes)	Best drill intercept returned 50.09 g/t Ag, 1.20% Zn, 0.65% Pb, 0.14% Cu, 217 ppm Sn over 125.70 m. Identified several additional soil anomalies and mineralized zones.
2011 (Eaton, 2012)	Strategic Metals -- Silver Range Resources Ltd.	Keg	Property sold by Strategic Metals to Silver Range	n/a
2011	Strategic	Keg	Claim staking	Best drill intercepts returned

	Metals/Silver Range		Prospecting Geological mapping Line cutting Road building Diamond drilling (16808.37 m in 51 holes) Petrographic studies Geochemical survey IP survey Water quality surveys Wildlife surveys	37.02 g/t Ag, 0.22% Pb, 1.41% Zn, 0.35% Cu, 580 ppm Sn over 155.45 m; and 70.55 g/t Ag, 0.54% Pb, 0.60% Zn, 0.17% Cu, 778 ppm Sn over 104.70 m. Numerous additional soil anomalies and mineralized zones identified.

The exploration programs and results from trenching and diamond drilling are described in more detail in the following paragraphs. Results from historical soil geochemical sampling are compiled and discussed along with more recent work by Strategic Metals and Silver Range in Section 10.0.

Much of the Property was initially staked in 1965 as the Ivan claims by Anvil Mining Corporation Ltd., following regional airborne magnetic and electromagnetic (EM) surveys.

In 1966, Anvil Mining completed 464.5 m of diamond drilling in four holes at the centre of the Ivan claim block to follow up 1965 geophysical targets (these holes were drilled in vicinity of Keg East Zone). No thick sections of massive sulphides were intersected and, therefore, none of the core was analyzed. The presence of minor disseminated, blebby and banded pyrite and pyrrhotite with rare galena, sphalerite and chalcopyrite was noted in many intervals in all holes. Several narrower bands (up to 12 cm thick) of semi-massive to massive sulphides were intersected. The Ivan claims were allowed to lapse.

Also in 1966, Yukon Copper Ltd. staked the Caribou Lake property (Tara, Dane and Hal claims) around the Ivan claim block. Yukon Copper conducted soil sampling, geological mapping and airborne magnetic and EM surveys. Later that year, Yukon Copper reorganized as Northern Empire Mines Ltd.

In 1967, Northern Empire carried out soil and rock geochemical sampling, geological mapping and line cutting. Near the end of the 1967 exploration season, Northern Empire began bulldozer trenching on the Hal claims. The trenching program was terminated early due to frozen ground. The following year, the bulldozer trenching was completed. A total of about 15,300 cubic metres of bedrock and frozen overburden was removed from nine trenches. Widespread, weakly disseminated pyrrhotite, chalcopyrite and sphalerite and rare galena were reportedly encountered, but this material was not systematically sampled. Heavily disseminated to massive sulphide mineralization was found in two places. It consists of a pyrrhotite-pyrite-sphalerite assemblage, with lesser amounts of chalcopyrite, galena and scheelite. Four grab samples collected from one location in 1967 yielded between 6.2 and 11 g/t silver, 2.8 and 4.5% zinc, 0.04 and 0.18% copper and 0.34 and 0.68 g/t gold. When better exposed by further bulldozing in 1968, this showing proved to consist of a sulphide lens less than 15 m long and 3 m wide that averaged 3.4 g/t silver, 1.25% zinc and 0.05% copper. At the second location, the upper 2.4 m of a massive, pyrrhotite-rich band was exposed. A chip sample of this mineralization assayed 2.84% zinc, 0.01% lead, 0.37% copper with trace gold and silver across the exposed 2.4 m width.

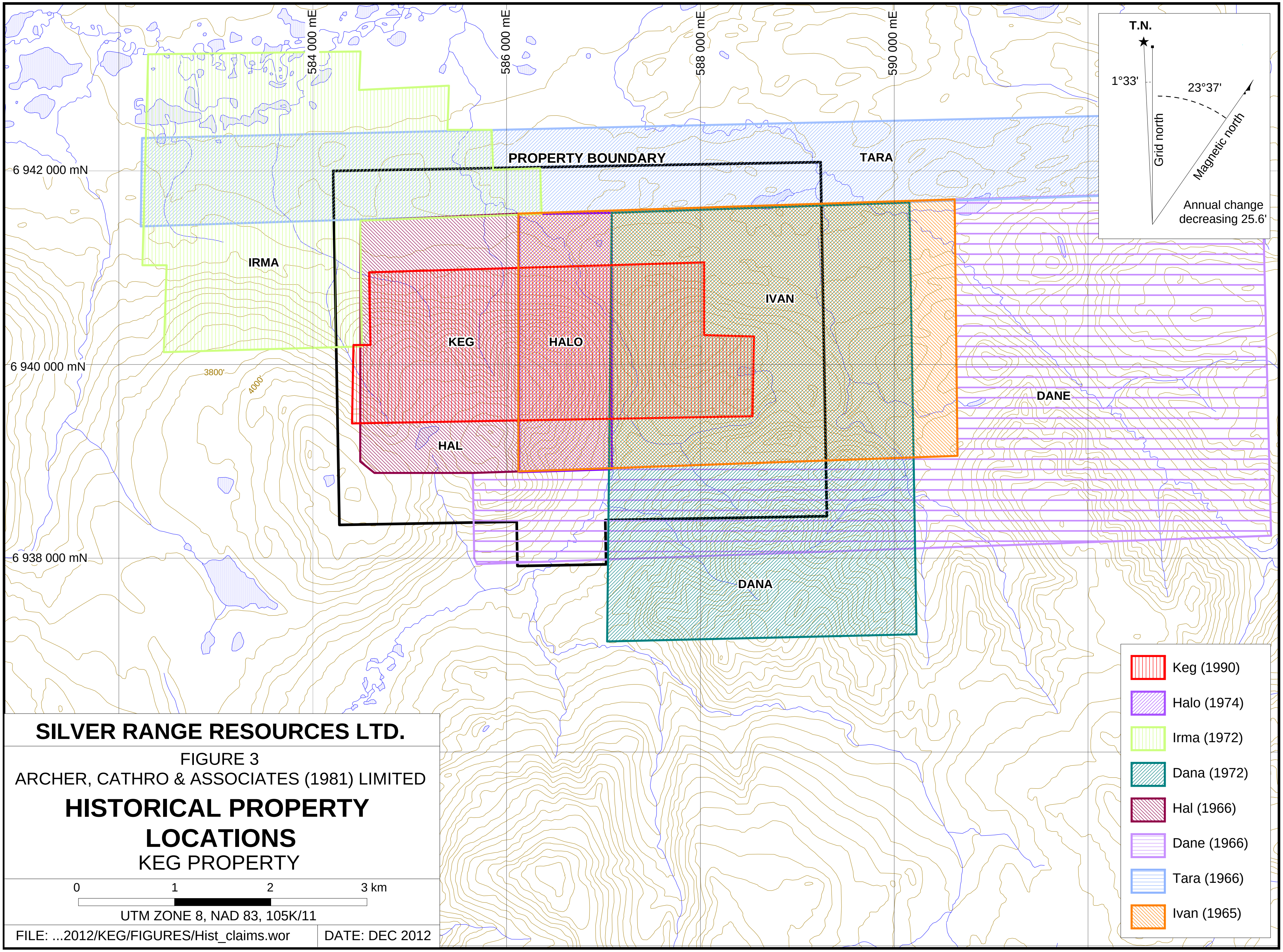


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FIGURE 3

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

HISTORICAL PROPERTY LOCATIONS

KEG PROPERTY

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In 1969, Inter-Tech Development and Resources Ltd. restaked the old Ivan claims as the Ter claims. No work was reported for these claims and they subsequently expired.

In 1971, Northern Homestake Mines Ltd. acquired the Caribou Lake property from Northern Empire.

In 1972, Northern Homestake completed additional bulldozer trenching on the Hal claims, but there is no record of the amount of work performed or results obtained from it. That same year, Ridgemont Mining Corporation, a subsidiary of Cyprus Anvil Mining Corporation, restaked the old Ivan/Ter claims as the Dana claims. It also staked the Irma claims to the northwest.

In 1973, Ridgemont Mining optioned the Hal claims from Northern Homestake. Ridgemont Mining performed soil sampling on its Dana claims.

In 1974, Ridgemont Mining added the Halo claims to fill a gap between the Hal and Dana claim blocks. It also conducted geochemical surveys, geological mapping and magnetic, EM and induced polarization (IP) surveys on both the Hal and Halo claims. No description of this work nor results obtained from it is available. Later that year, Ridgemont Mining transferred the Dana, Irma, Hal and Halo claims to Cyprus Anvil, which completed 494 m of diamond drilling in three holes on the Hal and Halo claim blocks (within Keg Main Zone). These holes intersected variably fractured, mineralized and altered siliceous rocks with narrower, interbedded skarn horizons. Sulphide minerals comprise pyrrhotite with lesser pyrite, sphalerite, chalcopyrite, galena and arsenopyrite. These minerals occur as disseminations, fine to coarse blebs, fracture coatings, matrix in crackle breccias and rarely as bands in the skarn horizons. The core was only sampled intermittently. The best interval of contiguous samples yielded weighted averages of 34.3 g/t silver, 1.25% zinc, 0.47% lead and 0.14% copper over 49.1 m.

In 1975, Cyprus Anvil drilled 627 m in three holes to test along strike and down-dip of the mineralization discovered in its 1974 holes (within Keg Main Zone). Less extensive, but locally higher grade mineralization was intersected in the 1975 holes, which were also sampled intermittently. The most significant intersections graded 1.24% zinc over 11.6 m and 0.82% zinc over 24.1 m. Copper and lead values were low in both holes and no silver results were reported. That year, Cyprus Anvil also conducted magnetic and gravity surveys on the Irma claims.

In 1977, Cyprus Anvil followed up the 1975 Irma geophysical work with an IP survey. In 1978, one hole totalling 159 m was drilled to test the geophysical targets. No assays were reported for this hole.

All claims in the area subsequently expired. In 1990, YGC Resources Ltd. staked the Keg claims to cover the most significant historical geochemical and geophysical anomalies, bulldozer trenches and diamond drill holes (Keg Main Zone area). It completed minor prospecting and geochemical sampling. These claims were also allowed to expire without receiving significant work.

Prospector R. Berdahl staked the BP4 claim (west of Keg Main Zone) in 2007. No work was filed on this claim by Berdahl.
In 2010, Strategic Metals staked claims, optioned the BP4 claim and subsequently completed prospecting, road building, line cutting, diamond drilling (958.27 m in four holes in the vicinity of the 1974 and 1975 holes) and geochemical, IP, VTEM and magnetic surveys. Results from this work are discussed in Sections 9.0 and 10.0.

In 2011, Strategic Metals initiated a comprehensive exploration program on the Keg claims, which was completed by Silver Range after sale of the claims was completed on August 11, 2011 through a plan of arrangement. The combined 2011 program included additional claim staking, prospecting, geological mapping, line cutting, road building, diamond drilling (16,808.37 m in 51 holes), petrographic studies and geochemical, IP, water quality and wildlife surveys. Results from this work are discussed in Section 9.0 and 10.0.

The BP4 claim, which is located about 500 m west of Keg Main Zone, was not sold to Silver Range along with Strategic Metals' wholly owned Keg claims, because earn-in on the option had not been completed. In fall 2012, Strategic Metals acquired a 100% interest in the BP4 claims, subject to a net smelter return royalty interest.

There have been no historical mineral resource estimates for the Property and it has never been put into production.

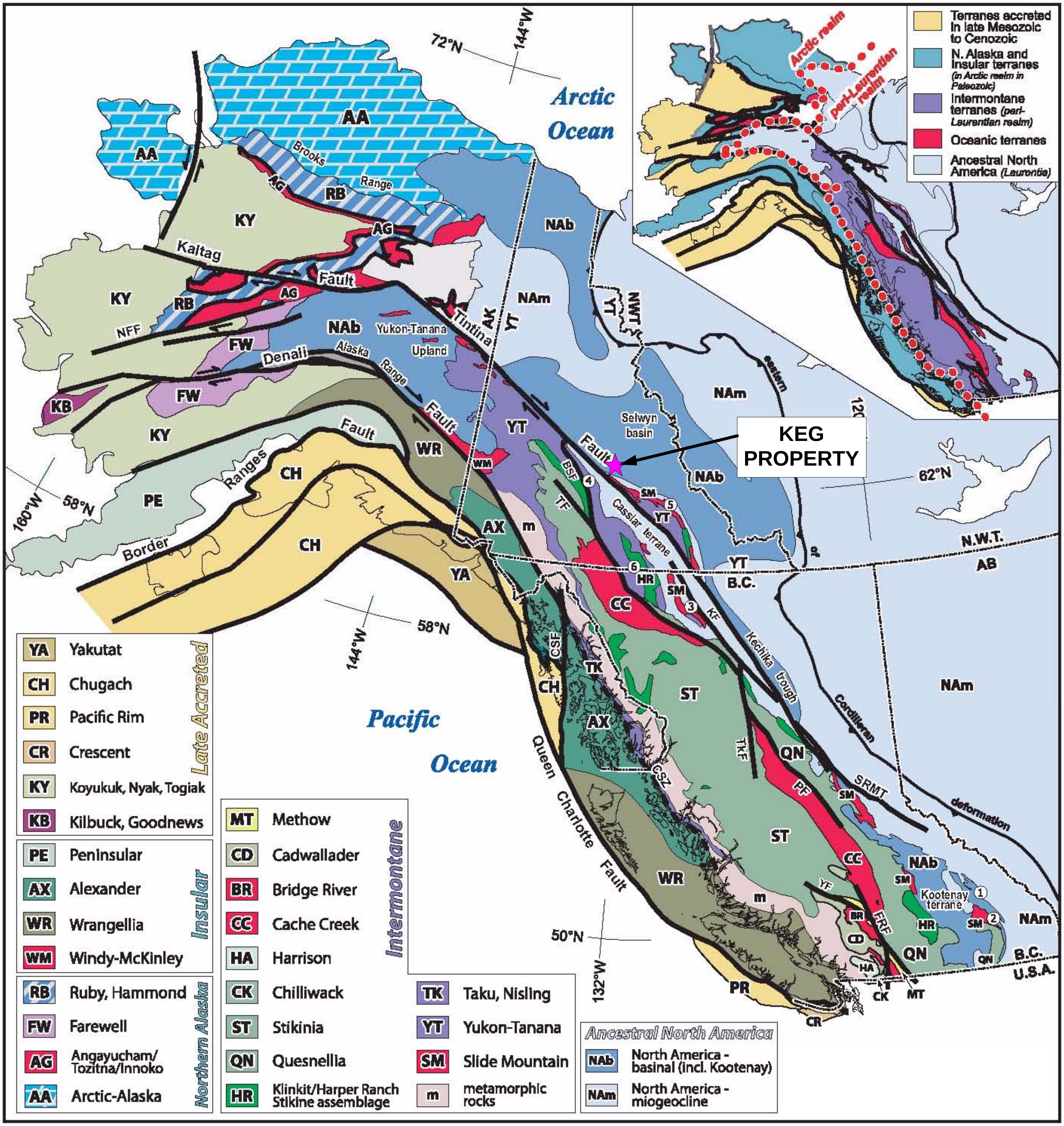
7.0 GEOLOGICAL SETTING

7.1 Regional Geology

The Property lies about 25 km north of the Anvil District, which has been the focus of numerous government and industry sponsored studies since the discovery of the Vangorda Deposit in 1953. Regional bedrock geology for Tay River map area (105K) was published at 1:253440 scale by Roddick and Green 1961) and at 1:250000 scale by Gordey and Irwin (1987). More detailed studies by Tempelman-Kluit (1972) at 1:125000 scale and Gordey (1990a and b) at 1:50000 scale were completed following the discovery of more massive sulphide, sedex deposits in the area (Pigage, 2004). These discoveries also led to extensive detailed mapping by mining and exploration companies. The Yukon Geological Survey (YGS) integrated the results of past government studies and company exploration, along with its own more recent mapping in the Anvil District, and published a compilation in 2004 (Pigage, 2004). The following geological descriptions are largely summarized from the published data.

The Property is located within Selwyn Basin (Figure 4), a tectonic element comprising deep water clastic rocks, chert and minor carbonate that accumulated along the North American continental margin during Paleozoic time. The basin is bound to the northeast by a carbonate platform (Mackenzie Platform), which formed the near-shore facies of ancient North America (Abbott et al, 1986).

In the Property area, Selwyn Basin lies immediately northeast of units belonging to Slide Mountain and Yukon-Tanana Terranes, the most easterly of the allochthonous terranes (Coney et



SILVER RANGE RESOURCES LTD.

FIGURE 4

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

TECTONIC SETTING

KEG PROPERTY

0 300 km

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DATE: DECEMBER 2012

After Nelson and Colpron, 2007

al, 1980). Deformation and metamorphism associated with accretion of the allochthonous terranes was initiated in Jurassic and culminated in Cretaceous (Tempelman-Kluit, 1979). More recently, strike-slip faulting along the Tintina Fault resulted in about 450 km of dextral offset during Early Tertiary time (Roddick, 1967; Murphy and Mortensen, 2003). The Property lies about 40 km northeast of the Tintina Fault.

The rocks in the vicinity of the Property comprise various Paleozoic-age strata that have been juxtaposed by a complex series of Jurassic to Cretaceous high angle and thrust faults (Figure 5). Structure in the area is dominated by moderately southwest-dipping or flat-lying strata that are imbricated by several large northwest-trending, northeast directed thrust faults (Yukon Geological Survey, 2010b).

The Paleozoic strata are sandwiched between two major Mid-Cretaceous igneous bodies – the Anvil Batholith to the southwest and the Teddy Caldera to the northeast. The Anvil Batholith belongs to Selwyn Plutonic Suite, which consists of intermediate (biotite quartz monzonite, granodiorite and minor diorite) to more felsic (biotite±hornblende±muscovite granite, quartz monzonite, granodiorite) compositions. The Teddy Caldera is part of South Fork Volcanics, which comprise biotite-quartz-hornblende-feldspar crystal tuff. Both igneous bodies are elongated parallel to the regional northwest to southeast structural trend.

The youngest igneous event in the area comprises bimodal volcanics and feeder plugs of Early Tertiary age. These bodies are often too small to map at regional-scale. They are assigned to the Ross Volcanics. All units in the area are described in detail in Table 7-1.

Table 7-1: Lithological Units (*after Gordey, 1990a,b*)

Unit Name	Age	Map Name	Description
Ross Volcanics	Lower Tertiary	lTR2	Rhyolite flows, tuffs, ash-flow tuffs and breccias, locally laminated; small stocks and necks of white weathering, flow-banded, quartz-sanidine porphyry to granite porphyry, locally obsidian bearing; local shale, sandstone and conglomerate.
South Fork Volcanics	Mid-Cretaceous	KSF	Dark brown weathering, locally columnar jointed, massive, densely welded, biotite-quartz-hornblende-feldspar crystal tuff.
Selwyn Suite	Mid-Cretaceous	mK(g,q)S	Plutonic suite of intermediate (g) to more felsic composition (q): g. resistant, blocky, fine to coarse grained equigranular to porphyritic (K-feldspar) biotite quartz monzonite and granodiorite and minor quartz diorite; minor leuco-quartz monzonite and syenite. q. equigranular to porphyritic (K-feldspar) biotite +/- hornblende +/- muscovite granite, quartz monzonite and granodiorite; porphyritic biotite hornblende granite with large smoky grey quartz phenocrysts and locally K-feldspar phenocrysts.
Jones Lake	Middle to	TrJ	Brown to buff weathering, calcareous fine grained

Formation	Upper Triassic		sandstone, argillite and shale; extensive ripple cross-lamination and bioturbation; massive, light grey weathering, fine crystalline, dark grey limestone; minor orange weathering platy limestone.
Mount Christie Formation	Carboniferous to Permian	CPMC	Burrowed, interbedded greenish grey cherty shale and green shale; thin to medium bedded, light grey-green to black chert; black siliceous slate and siltstone; minor quartzite, limestone and dolostone; locally abundant, large grey barite nodules.
Tay Formation	Mississippian	MT1	Recessive, dark brown weathering, thin to medium bedded, calcareous, dark grey to brown siltstone and shale, commonly burrowed; thin to thick interbeds of fine crystalline, dark grey limestone; minor quartz arenite.
Earn Group	Devonian and Mississippian	DME(1,2)	Complex assemblage of submarine fan and channel deposits (1) within black siliceous shale and chert (2): 1. thin bedded, laminated slate with thin to thickly interbedded fine to medium grained chert-quartz arenite and wacke; thick members of chert pebble conglomerate; black siliceous siltstone; nodular and bedded barite; rare limestone. 2. silvery blue weathering black shale, argillite, cherty argillite and thin bedded chert; nodular and bedded barite; rare limestone.
Road River Group	Ordovician to Lower Devonian	ODR	Black shale and chert overlain by orange siltstone or buff platy limestone; locally contains beds as old as Middle Cambrian.
Marmot Formation	Cambrian to Silurian	CSM2	Amygdaloidal basaltic flows and breccias; mostly subaqueous; thick, flow-banded rhyolite and felsite, includes breccia and tuff.
Rabbitkettle Formation	Upper Cambrian and Ordovician	COR1	Thin bedded, wavy banded, silty limestone and grey lustrous calcareous phyllite; limestone intraclast breccia and conglomerate; massive to laminated, grey quartzose siltstone and chert and rare black slate; local mafic flows, breccia, and tuff.
Gull Lake Formation	Lower Cambrian	lCG1	Shale, siltstone and mudstone, locally bioturbated, with minor quartz sandstone; rare green-grey chert; local basal limestone and limestone conglomerate; phyllite to quartz-muscovite-biotite schist (+/-garnet +/-sillimanite +/-staurolite +/-andalusite).

A large area between the southeast corner of the Property and the Teddy Caldera is blanketed by unconsolidated Quaternary glacial, glaciofluvial and glaciolacustrine deposits.


Geological Mapping carried out by
Silver Range Resouces Ltd in 2010, 2011
bedding
cleavage, foliation
late foliation, less than cm-spaced fracture set
fold axis
fracture
fault plane
thrust fault plane
fold axis; synform
fold axis; antiform
defined contact
approximate contact
inferred contact
thrust fault; teeth on hanging wall side
normal fault; teeth on hanging wall side
fault; movement unknown
mapping limit
cross section line
Modified from Yukon Regional Geology
Gordey and Makepeace (2001)
QUATERNARY
Q
unconsolidated glacial, glaciofluvial and glaciolacustrine deposits; fluviatile silt, sand, and gravel, and local volcanic ash, in part with cover of soil and organic deposits
LOWER TERTIARY
Ross
lTr
locally amygdaloidal, dark grey-green olivine basalt necks and flows; farther removed, scattered occurrences of rhyolitic lave and dikes
MID-CRETACEOUS
South Fork
KSf
dark brown weathering, locally columnar jointed, massive, densely welded, biotite-quartz-hornblende-feldspar tuff
Selwyn Suite
mKS
plutonic suite of intermediate to felsic composition and rarely syenitic; equivalent felsic dykes
MIDDLE TO UPPER TRIASSIC
Jones Lake
TrJ
brown to buff weathering, calcareous fine-grained sandstone, argillite and shale; extensive ripple cross-lamination and bioturbation; massive, light grey weathering, fine-crystalline, dark grey limestone; minor orange weathering platey limestone
CARBONIFEROUS TO PERMIAN
Mount Christie
CPmc
burrowed, interbedded greenish grey cherty shale and green shale; thin to medium bedded, light grey-green to black chert; black siliceous slate and siltstone; minor quartzite, limestone and dolostone; locally abundant, large grey barite nodules
MISSISSIPPIAN
Tay
Mt
mixed, generally fine clastic and carbonate assemblage with locally thich regionally mappable carbonate horizons
DEVONIAN AND MISSISSIPPIAN
Earn Group
DMe
complex assemblage of submarine fan and channel deposits within siliceous shale and chert and including separated small occurrences of felsic volcanic rocks
Prevost
DMp
thin bedded, laminated slate with thin to thickly interbedded fine to medium-grained chert-quartz arenite and wacke; thick members of chert pebble conglomerate; black siliceous siltstone; nodular and bedded barite; rare limestone
Portrait Lake
Dp
silvery blue weathering black shale, argillite, cherty argillite and thin bedded chert; nodular and bedded barite; rare limestone
SILURIAN TO MIDDLE DEVONIAN
McEvoy
SDm
buff, platy siltstone overlain by carbonate and quartzite
ORDOVICIAN TO SILURIAN
Road River Group
OSr
black shale and chert overlain by orange siltstone or buff platy limestone; locally contains beds as old as Middle Cambrian
CAMBRIAN TO ORDOVICIAN
Marmot
CSm
lower Paleozoic mostly mafic volcanics, in locally thick accumulations but also of common occurence as undifferentiated thin scattered members within other units
CAMBRIAN TO SILURIAN
Rabbitkettle Formation
COr
basinal limestone that may locally include older and younger basinal pelitic strata undivided
LOWER CAMBRIAN
Gull Lake
lCg
dominantly fine clastic assemblage with local volcanic units
UPPER PROTEROZOIC TO LOWER CAMBRIAN
Hyland Group
PCh
consists upwards of coarse tubiditic clastics, limestone and fine clastics typified by maroon and green shale
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FIGURE 5
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
REGIONAL GEOLOGY
KEG MAIN PROPERTY
0
5 km
UTM ZONE 8, NAD 83, 105K
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DATE: DEC 2012

Regional metamorphism within Selwyn Basin is typically lower greenschist facies. Contact metamorphism is developed around Cretaceous plutons (Yukon Geological Survey, 2010b). Contact aureoles are up to several kilometres in diameter and produce calc-silicate, pelitic and siliceous hornfels.

7.2 Property Geology

Detailed mapping carried out in the summers of 2011 and 2012 by Silver Range centered on the Keg Main Zone. This mapping was hampered by the paucity of bedrock exposures in the area.

The Property is underlain by Upper Cambrian through Permian aged sedimentary rocks that are classified regionally as Rabbitkettle Formation, Earn Group, Tay Formation and Mount Christie Formation. Figure 6 shows detailed plan view geology of the Property, while Figure 7 (stratigraphic column) and Figure 8 (cross-section) illustrate the relationships between the units.

The oldest exposed rocks in this area have been grouped as Upper Cambrian to Lower Ordovician Rabbitkettle Formation (CORT). Where exposed they comprise dark grey to grey-brown and sometimes white, laminated to thinly bedded, quartzose siltstone and fine-grained sandstone with minor shale horizons. Buff weathering, fine-grained sandstone is locally interbedded with siltstone. The most northwesterly exposure of this unit comprises grey, quartz-rich siltstone with laminations defined by stringers of pyrrhotite.

Devonian to Mississippian Earn Group (DME) in this area consists of grey shales and black, thin bedded chert.

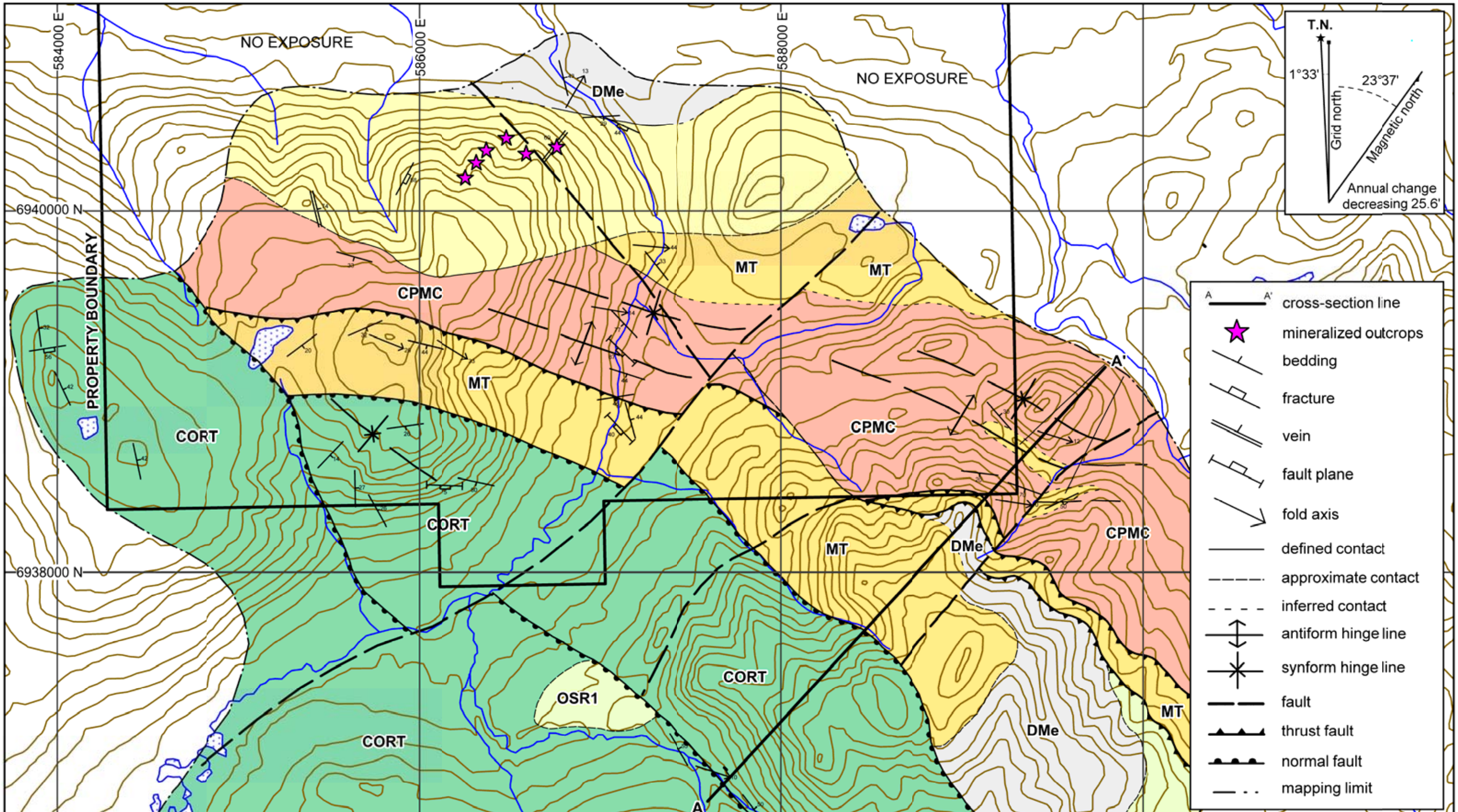
Mississippian Tay Formation (MT) conformably overlies Earn Group and comprises thin to medium beds of grey, silty limestone to calcareous siltstone between dark grey to black, variably quartz-rich siltstone to shale.

The youngest stratified rocks on the Property belong to Carboniferous to Permian Mount Christie Formation (CPMC), and consist of thin and medium bedded, maroon, black and grey-brown cherts.

A small Mid-Cretaceous Selwyn Suite pluton composed of light grey, medium grained, biotite-hornblende granodiorite with megacrysts of feldspar up to 10 cm long cuts the sedimentary package two kilometres southwest of Keg Main Zone. No intrusive rocks have been observed on the Property.

A zone of pervasive hydrothermal alteration overprints sections of both Mount Christie Formation and Tay Formation on the Property. Within this alteration zone, rocks are commonly light grey to light pinkish-grey, massive and very fine-grained and host minor veinlets and disseminations of sulphide minerals. The alteration zone is approximately 3000 by 5000 m and is open along strike to the east and the west.

The fine grained nature of the rocks within and around the alteration zone makes mineral identification in hand sample difficult. As a result, Silver Range collected a suite a samples for



Unit	Description
CMal	Light grey, very fine-grained, completely altered rock with veinlets of sulphide comprising dominantly pyrrhotite, pyrite and arsenopyrite.
CPMC	Thin bedded, light grey-brown, black and maroon chert with minor dark grey siltstone and shale.
MT	Medium bedded, light grey weathered, grey fresh silty limestone to calcareous siltstone interbedded with dark grey to black siltstone that can be quartz rich.
DMe	Black chert and siltstone with rare, medium grained arkosic sandstone.
OSR1	Massive, light grey, medium to coarse grained crystal tuff.
CORT	Dark grey and grey-brown, laminated to thin bedded, quartzose siltstone with minor shale horizons; buff weathered, dark grey, laminated, fine-grained sandstone and siltstone; laminations may be defined by stringers of pyrrhotite.

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FIGURE 6

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

PROPERTY GEOLOGY

KEG PROPERTY

0 500 1000 2000 m

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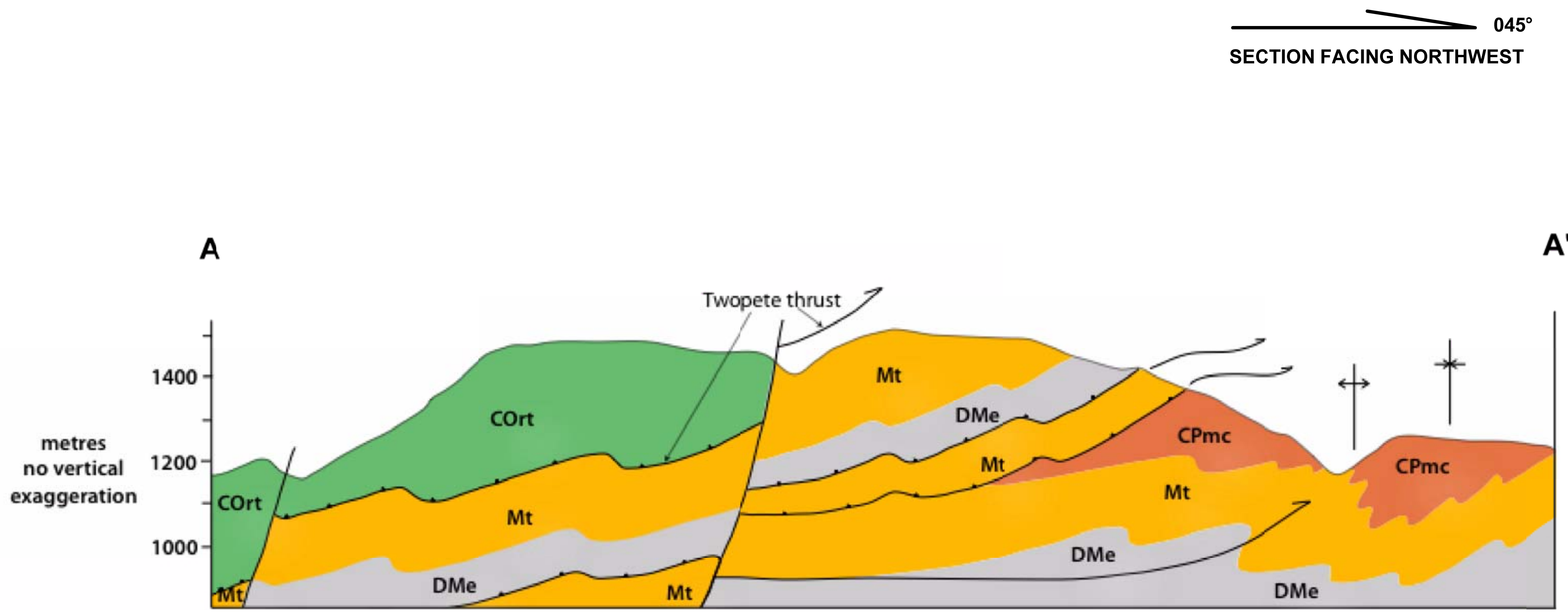
DATE: DECEMBER 2012



thrust fault

antiform hinge line

synform hinge line

CPMC	Thin bedded, light grey-brown, black and maroon chert with minor dark grey siltstone and shale.
MT	Medium bedded, light grey weathered, grey fresh silty limestone to calcareous siltstone interbedded with dark grey to black siltstone that can be quartz rich.
DMe	Black chert and siltstone with rare, medium grained arkosic sandstone.
CORT	Dark grey and grey-brown, laminated to thin bedded, quartzose siltstone with minor shale horizons; buff weathered, dark grey, laminated, fine-grained sandstone and siltstone; laminations may be defined by stringers of pyrrhotite.

SILVER RANGE RESOURCES LTD.

FIGURE 7

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

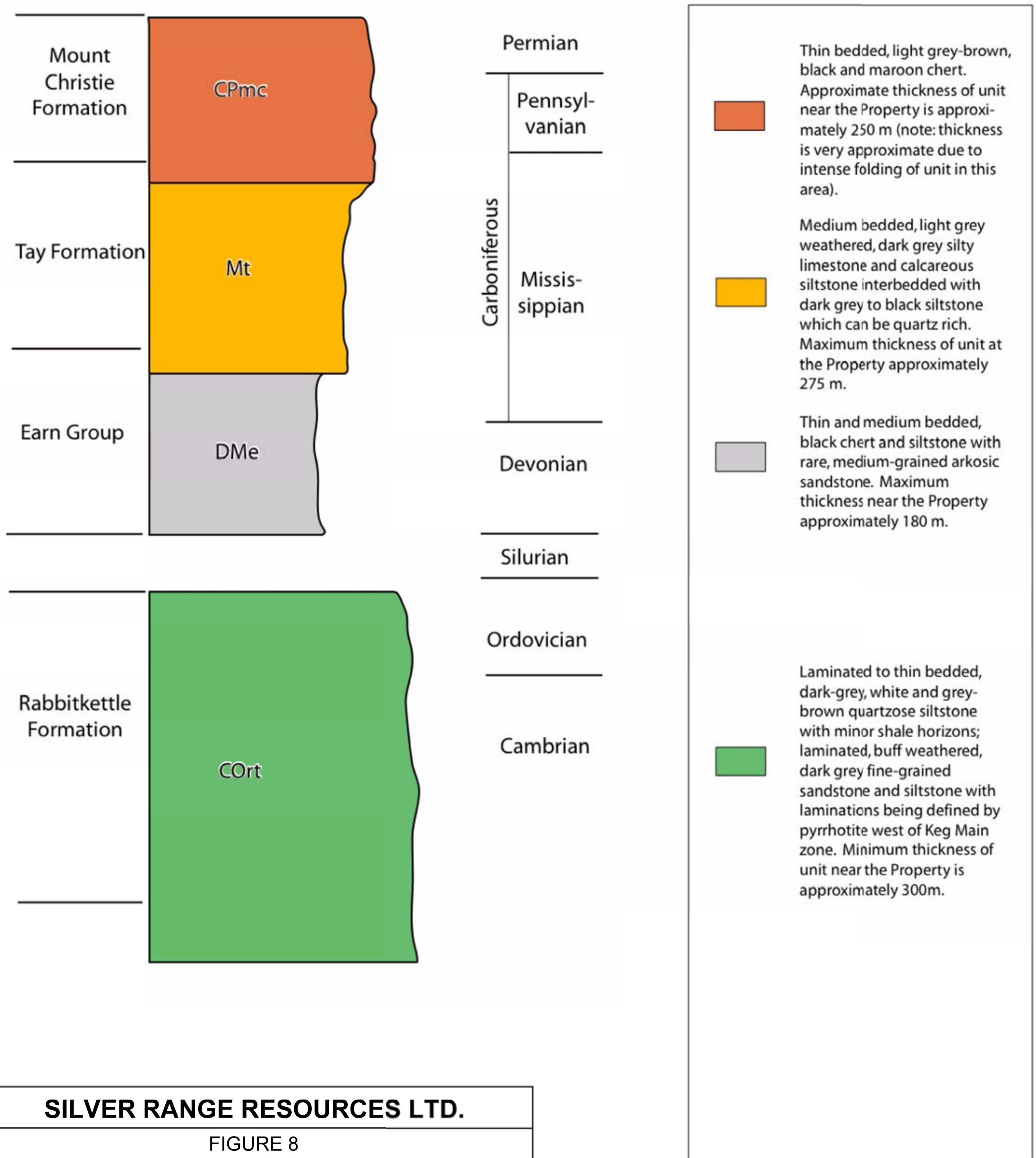
CROSS-SECTION

KEG PROPERTY

0 250 500 1000 m

FILE: ...2012/Keg/Figures/Keg_section

DATE: DECEMBER 2012



SILVER RANGE RESOURCES LTD.

FIGURE 8

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

STRATIGRAPHIC COLUMN

KEG PROPERTY

FILE: ...2012/Keg/Figures/Keg_strat	DATE: DECEMBER 2012

petrographic analyses in an attempt to better identify primary lithologies and alteration of rocks at Keg Main Zone and in surrounding areas. The following descriptions are based on observations made from petrographic examination of 56 samples from both drill core and outcrop using a microscope with both reflected light and refractive light capabilities. All minerals were identified using solely optical properties.

Three main lithologies were recognized in thin section – a chert that grades into very fine-grained quartz dominated siltstone (Mount Christie Formation); a mildly siliceous mudstone (Tay Formation); and a calcareous siltstone made up of sub-angular quartz clasts cemented with calcite (Tay Formation).

Most samples show an early alteration assemblage comprising sericite±carbonate±silica that affects siliceous and calcareous sedimentary rocks in varying degrees, depending on host rock composition and proximity to structures.

Locally, a hydrothermal alteration assemblage overprints the sericite-carbonate-silica assemblage and can completely obliterate earlier rock textures. This alteration pattern is visible in hand sample and drill core as widespread bleaching and locally as vein-fill, fracture-fill and skarnification. In thin section, this assemblage comprises varying amounts of diaspora, andalusite, quartz, calcite, chloritoid, chalcedony, cordierite, staurolite, pyrophyllite, dumorierite and clays with rare corundum, plus sulphide minerals, including pyrrhotite, pyrite, sphalerite, chalcopyrite, galena and arsenopyrite. Pyrite-sphalerite-chalcopyrite-calcite± staurolite± andalusite± corundum veins commonly have diaspore selvages. Andalusite veins clearly cross-cut these multi-mineral veins. Chloritoid occurs in vein selvages and as pervasive disseminations throughout altered sections of rock within Keg Main Zone but is most abundant in distal parts of the alteration zone.

A later alteration event (possibly retrograde skarnification) comprising large bladed calcite crystals with pyrite and chalcopyrite occurs as clots or small lenses in a few drill core samples from Keg Main Zone. These clots overprint hydrothermal alteration described above.

Structural analysis of folded and thrusted areas of the Selwyn Basin depends on a sound understanding of stratigraphy. Fossil ages provided by Gordey (2008) were instrumental in the interpretation presented below. Nearly all of the dated fossil locations provided by Gordey (2008) were visited and have allowed for confident identification of most of the units described on the Property.

Several east-southeast trending thrust faults dip to the south and imbricate the stratigraphy in this area. An early thrust fault (Two Pete Thrust) places Rabbitkettle Formation on top of Ordovician to Mississippian stratigraphy (Gordey, 2008). This thrust fault does not appear to daylight within the Property due to several southeast trending normal faults that drop the stratigraphy down to the south (Figure 8). A more northerly situated thrust fault places Tay Formation over Mount Christie Formation. Locally this fault diverges into two parallel thrust faults: one placing Tay Formation over Mount Christie Formation and the other placing Earn and Road River Groups over Tay Formation.

North of the most northerly thrust fault Mount Christie Formation chert is tightly folded into cylindrical, metre-scale folds that commonly show moderately southwest-dipping limbs and steep to overturned, southwest- and northeast- dipping limbs (Figure 8). These folds are observed on metre and smaller scale throughout a canyon along Ivan Creek and in hill-top outcrops. The folds consistently plunge shallowly to moderately to the east-southeast and are interpreted to be parasitic to a regional antiform-synform pair trending northwest-southeast.

The regional faults and folds described in the previous paragraph are cut by many late, brittle faults that complicate map patterns and drill sections. Some of these features are shown on Figure 6, while others are too small or too poorly understood to include.

The canyon that runs along Ivan Creek provides excellent exposure of several late, brittle fault zones, which are up to five metres in width and comprise shattered chert fragments, milled rock and clay. Similar faults, characterized by clasts of quartz cemented by calcite, were observed in outcrop on a south facing slope east of the canyon. These faults dominantly strike east to southeast and dip moderately to steeply to the south. They are interpreted to be linked to normal faulting in the area.

Fracture and vein orientations in and around the Keg Main Area are broadly grouped into two sets. One set dips very steeply to the west and strikes south-southeast and the other dips sub-vertically north and strikes west. Both sets commonly contain sulphide minerals in veins and fractures, but the west striking set is more abundant but has finer fractures.

8.0 MINERALIZATION

Keg Main Zone comes to surface along the north side of an east-west trending ridge west of Ivan Creek. Keg East Zone is on a lower, parallel ridge east of the creek. Outcrop is rare within the zones – three relatively large, steep, gossanous talus slopes, containing scattered outcrops, are exposed near the centre of the Keg Main Zone, but other exposures are very small and isolated.

Mineralization has been found in talus and outcrop described above, within bedrock exposed in historical bulldozer trenches about 500 m west of Keg Main Zone and in drill core at both zones. Few rock samples have been collected at surface due to the relative lack of bedrock exposures and difficulty taking representative samples across the broad weathered talus slopes (Figure 6 shows the location of surface mineralization and Section 6.0 discusses assay results). Drill core provides more reliable data concerning the types and relative abundances of mineralization and more accurate dimensions and grades of the mineralized zones (see Section 10.0 for drill results).

Mineralization within Keg Main Zone is controlled by a combination of structure and stratigraphy within strongly hydrothermally altered and locally skarnified limestone and siltstone of Tay and/or Mount Christie Formations (Figure 6). Intense silicification of these formations makes it difficult to determine which unit is the primary host. The structural control is typified by fracture-fillings, while the stratigraphic control is characterized by disseminations to semi-massive mineralization within calc-silicate altered, limey horizons. Sphalerite, chalcopyrite and galena occur in varying amounts with pyrrhotite, pyrite and arsenopyrite and rare stannite. The sulphide minerals are generally coarse grained. They typically comprise 1 to 10% of the rock, often increasing to between 20 and 50% over metre-scale intervals within skarnified horizons. A general zonation has been observed with pyrrhotite and chalcopyrite dominating the sulphide assemblage in the deeper and western parts of the zone and galena contents higher in the upper and eastern parts. The western and central parts of the mineralized zone are notably depleted of calcium relative to the adjacent wall rocks, but calcite gangue is common in veins within the eastern part of the zone. The variations in relative sulphide abundance and gangue minerals are interpreted to indicate the deeper and western parts of the zone are more proximal to the core of the hydrothermal cell and the upper and eastern parts are more distal.

Mineralization at Keg East Zone is generally similar to that observed within the eastern part of the Keg Main Zone and is likely part of the same mineralizing system. Several features, including the presence of calcite gangue, lower pyrrhotite and chalcopyrite contents, and high silver to lead ratios, suggest that Keg East Zone is in a more distal setting than Keg Main Zone.

9.0 EXPLORATION

9.1 Geological Mapping

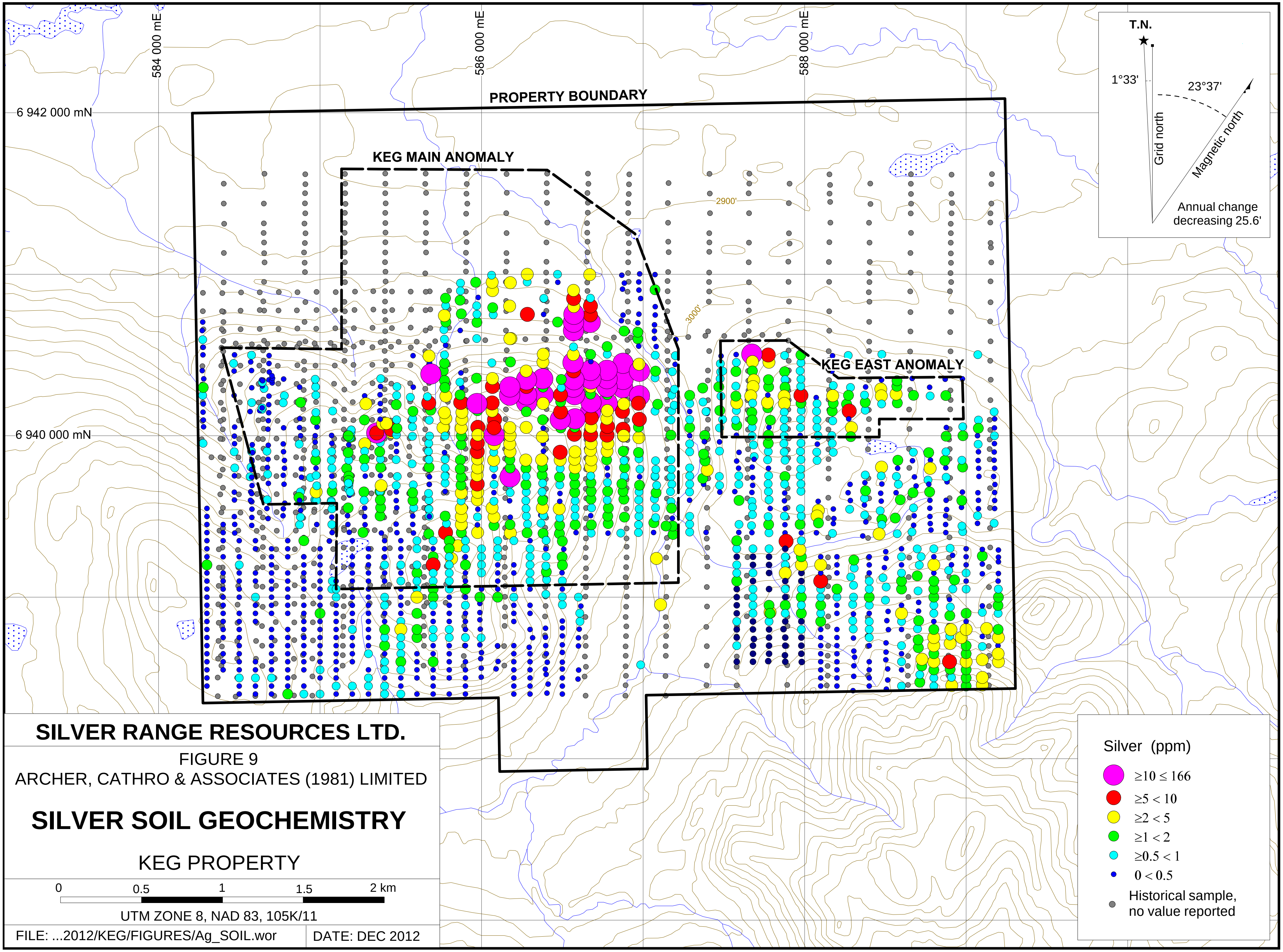
A description of geological mapping performed by Silver Range in 2011 and 2012 is provided in Section 7.0. Little or no geological mapping was reported by previous claim owners in the area. Mapping was limited in many areas by the absence of bedrock exposure.

9.2 Soil Geochemical Sampling

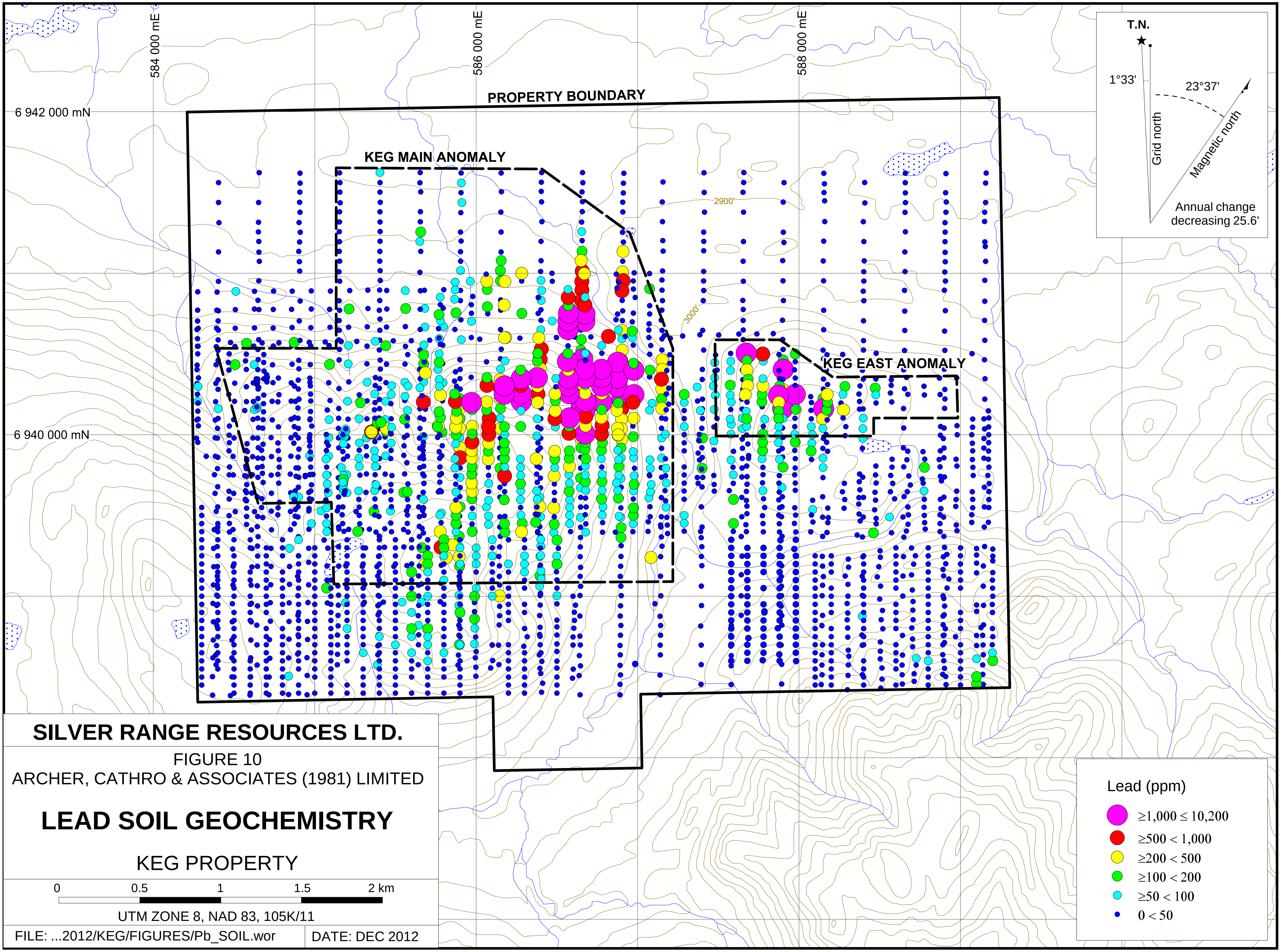
In 1973, Yukon Copper Ltd. completed grid soil sampling within some areas covered by the current Property. This work identified a strong, largely coincident copper±lead±zinc anomaly that extends east to west over the length of the Property. The anomaly reaches a maximum width of 1000 m. From 2010 to 2012, Strategic Metals and Silver Range re-sampled much of this area to confirm the tenor and extent of the historical anomaly and to obtain multi-element data.

From 2010 to 2012, a total of 1700 grid soil samples were collected at 50 m spacings along north-south oriented lines located 100 m apart within a 5000 by 2000 m grid. Soil sampling methods and analytical techniques are described in Sections 11.1 and 11.3, respectively. Effectiveness of soil sampling was limited in many areas by thick overburden, poor soil development and/or pervasive permafrost. Vegetated, north-facing slopes are typically blanketed by thick layers of organic material and are the most affected by permafrost. Despite these limitations, soil sampling appears to be the most effective surface exploration technique for identifying drill targets on the Property due to the paucity of bedrock exposures.

Keg Main Anomaly is defined by a high concentration of moderately to very strongly elevated values for silver, lead, zinc, copper, tin and indium, while Keg East Anomaly is a smaller, slightly weaker extension of it. Collectively, these anomalies comprise the five kilometre long by one kilometre wide Keg Anomaly, which is surrounded by a halo of weak values for all elements of interest except indium. Results for silver, lead, zinc, copper, tin and indium are illustrated thematically on Figures 9 to 14, while Table 9-1 lists the anomalous thresholds and peak values for these elements.



584 000 mE
586 000 mE
588 000 mE
6 942 000 mN
6 940 000 mN
PROPERTY BOUNDARY
KEG MAIN ANOMALY
KEG EAST ANOMALY
2900'
3000'
T.N.
1°33'
23°37'
Grid north
Magnetic north
Annual change
decreasing 25.6'
SILVER RANGE RESOURCES LTD.
FIGURE 9
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
SILVER SOIL GEOCHEMISTRY
KEG PROPERTY
0
0.5
1
1.5
2 km
UTM ZONE 8, NAD 83, 105K/11
FILE: ...2012/KEG/FIGURES/Ag_SOIL.wor
DATE: DEC 2012
Silver (ppm)
≥10 ≤ 166
≥5 < 10
≥2 < 5
≥1 < 2
≥0.5 < 1
0 < 0.5
Historical sample,
no value reported



SILVER RANGE RESOURCES LTD.

FIGURE 10

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

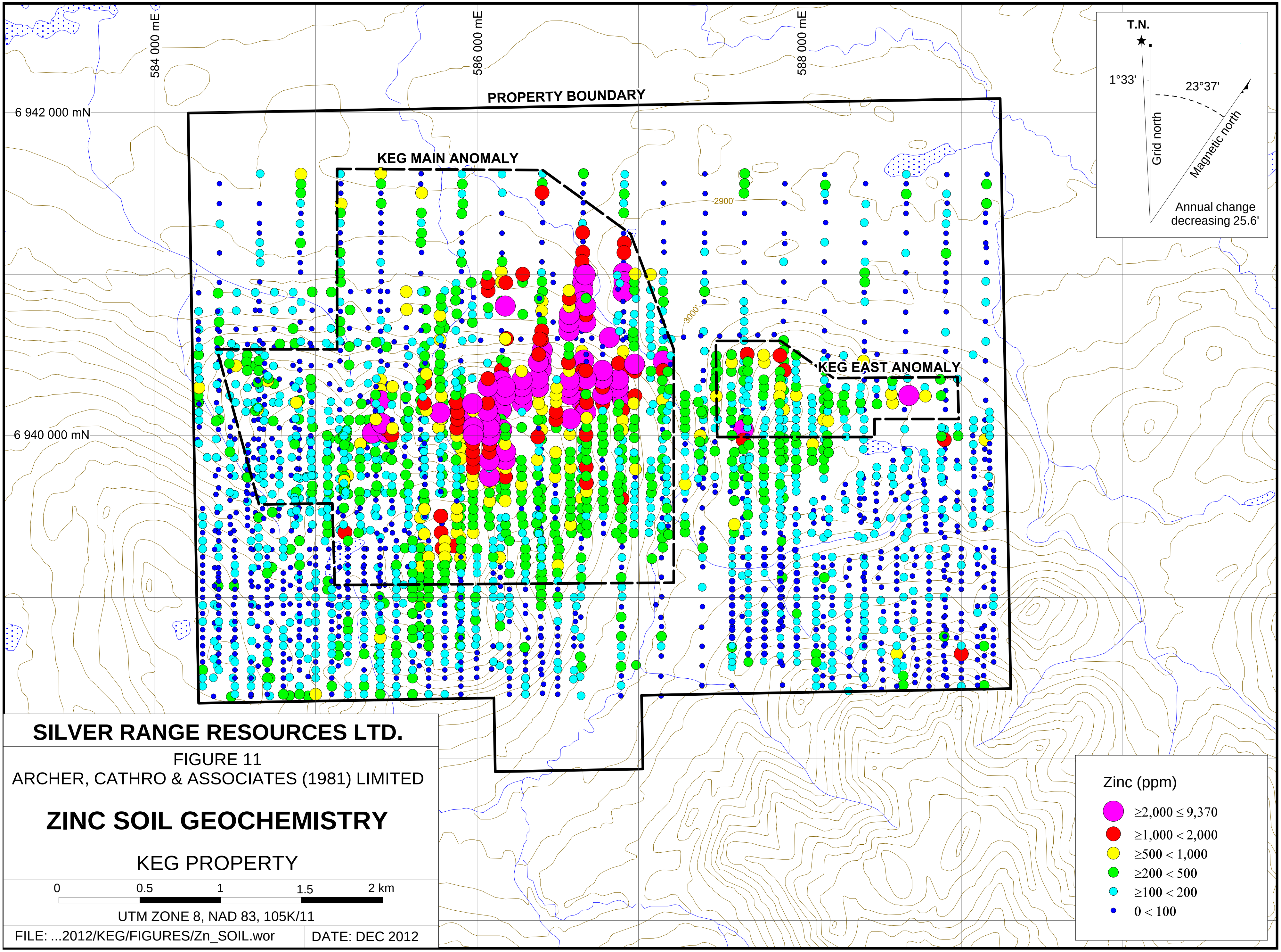
LEAD SOIL GEOCHEMISTRY

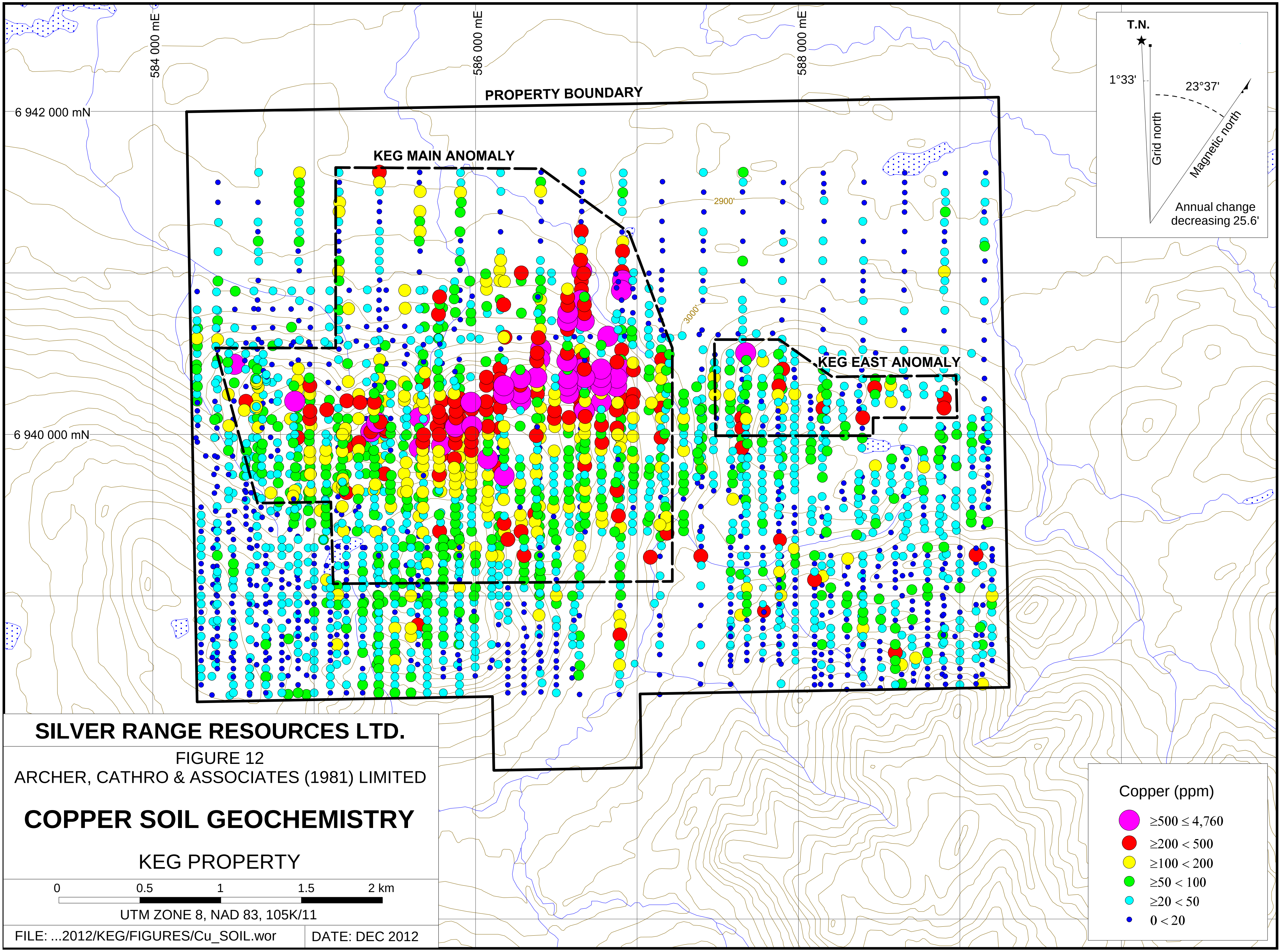
KEG PROPERTY

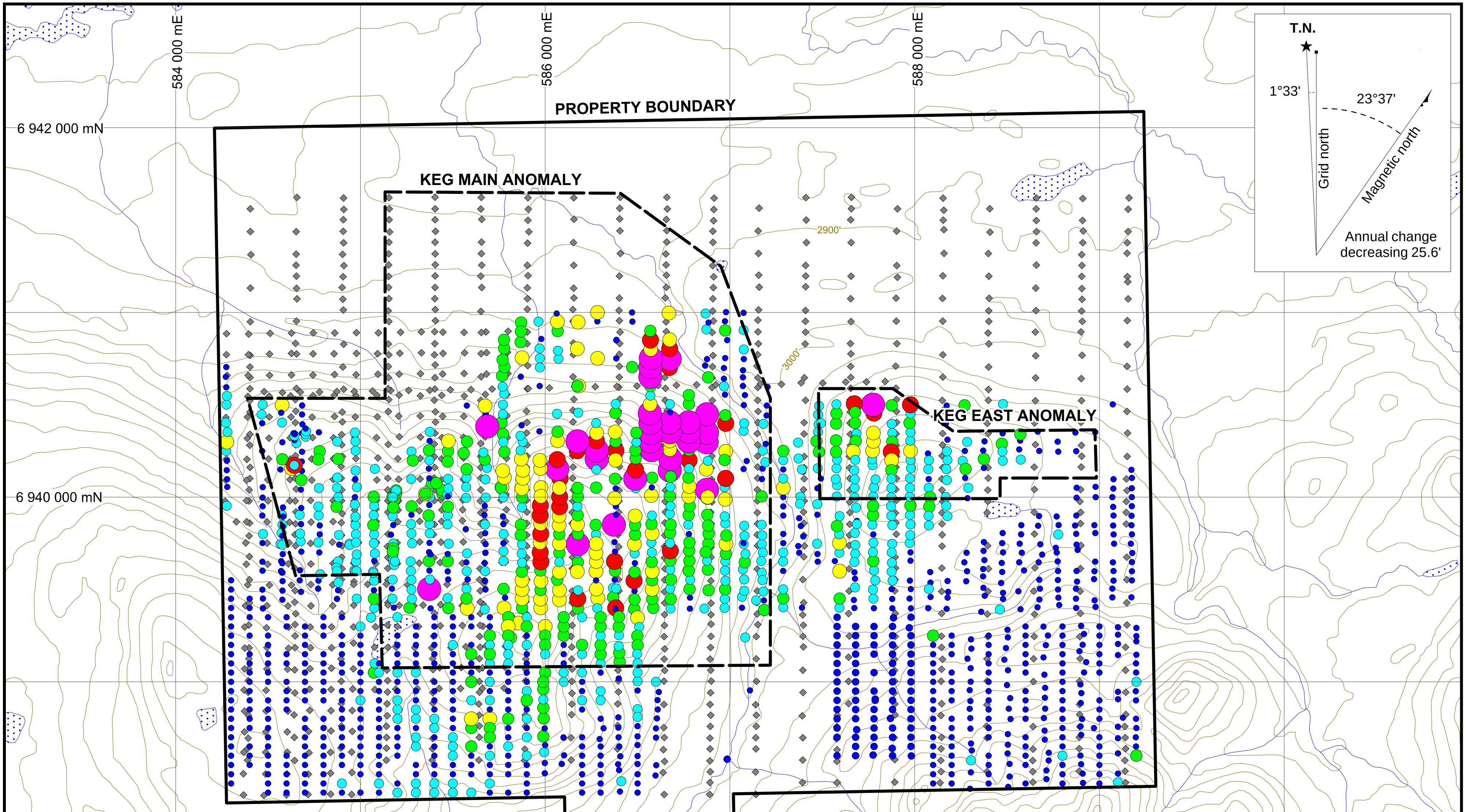
0 0.5 1 1.5 2 km

UTM ZONE 8, NAD 83, 105K/11

FILE: ...2012/KEG/FIGURES/Pb_SOIL.wor | DATE: DEC 2012


584 000 mE
586 000 mE
588 000 mE
6 942 000 mN
6 940 000 mN
PROPERTY BOUNDARY
KEG MAIN ANOMALY
KEG EAST ANOMALY
2900'
3000'
T.N.
1°33'
23°37'
Grid north
Magnetic north
Annual change decreasing 25.6'
Zinc (ppm)
≥2,000 ≤ 9,370
≥1,000 < 2,000
≥500 < 1,000
≥200 < 500
≥100 < 200
0 < 100
SILVER RANGE RESOURCES LTD.
FIGURE 11
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
ZINC SOIL GEOCHEMISTRY
KEG PROPERTY
0
0.5
1
1.5
2 km
UTM ZONE 8, NAD 83, 105K/11
FILE: ...2012/KEG/FIGURES/Zn_SOIL.wor
DATE: DEC 2012


584 000 mE
586 000 mE
588 000 mE
6 942 000 mN
6 940 000 mN
PROPERTY BOUNDARY
KEG MAIN ANOMALY
KEG EAST ANOMALY
2900'
3000'
T.N.
1°33'
23°37'
Grid north
Magnetic north
Annual change decreasing 25.6'
Copper (ppm)
≥500 ≤ 4,760
≥200 < 500
≥100 < 200
≥50 < 100
≥20 < 50
0 < 20
SILVER RANGE RESOURCES LTD.
FIGURE 12
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
COPPER SOIL GEOCHEMISTRY
KEG PROPERTY
0
0.5
1
1.5
2 km
UTM ZONE 8, NAD 83, 105K/11
FILE: ...2012/KEG/FIGURES/Cu_SOIL.wor
DATE: DEC 2012



SILVER RANGE RESOURCES LTD.

FIGURE 13

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

TIN SOIL GEOCHEMISTRY

KEG PROPERTY

0 0.5 1 1.5 2 km

UTM ZONE 8, NAD 83, 105K/11

FILE: ...2012/KEG/FIGURES/Sn_SOIL.wor | DATE: DEC 2012

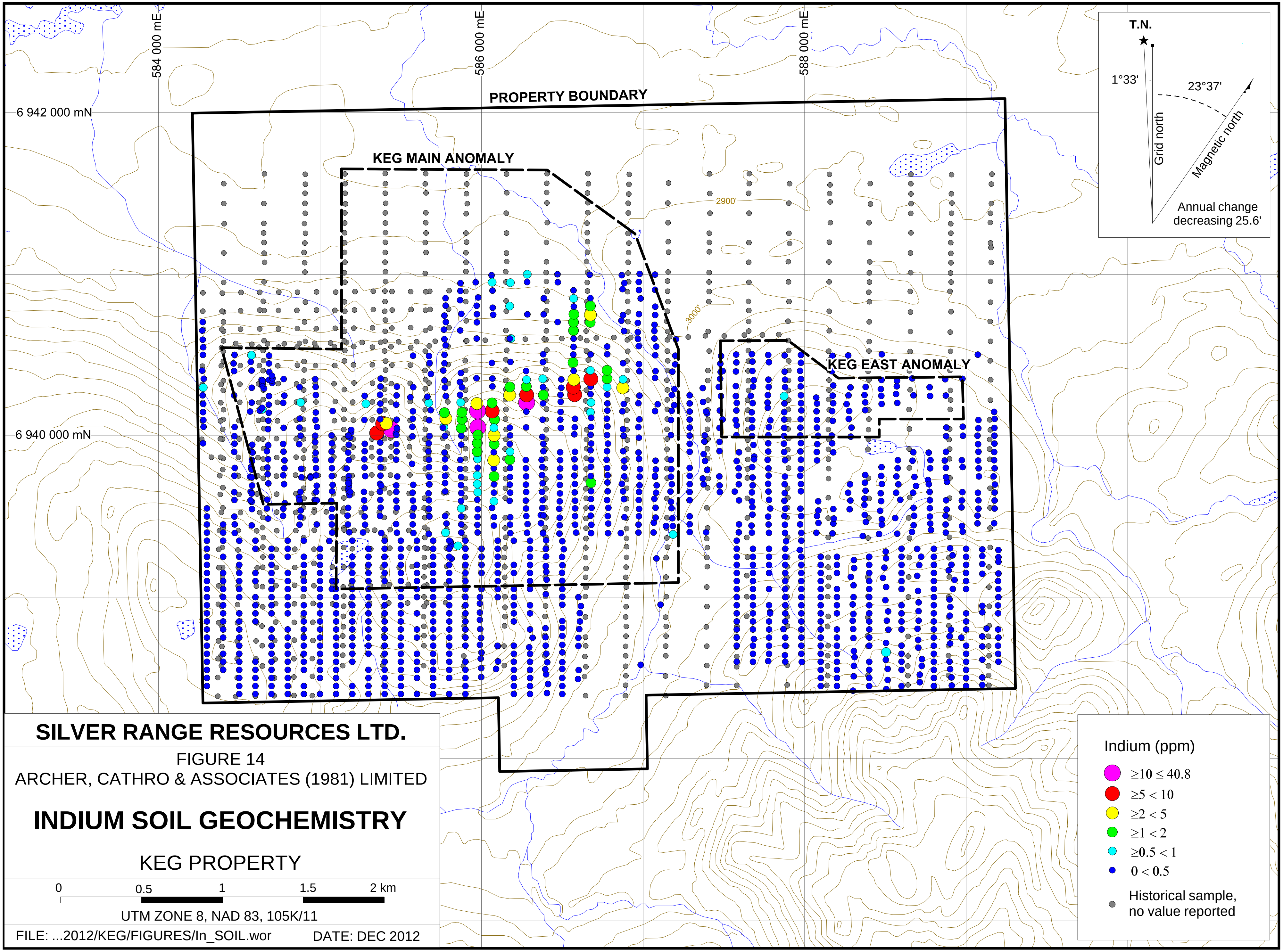

584 000 mE
586 000 mE
588 000 mE
6 942 000 mN
6 940 000 mN
PROPERTY BOUNDARY
KEG MAIN ANOMALY
KEG EAST ANOMALY
2900'
3000'
T.N.
1°33'
23°37'
Grid north
Magnetic north
Annual change
decreasing 25.6'
Indium (ppm)
≥10 ≤ 40.8
≥5 < 10
≥2 < 5
≥1 < 2
≥0.5 < 1
0 < 0.5
Historical sample,
no value reported
SILVER RANGE RESOURCES LTD.
FIGURE 14
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
INDIUM SOIL GEOCHEMISTRY
KEG PROPERTY
0
0.5
1
1.5
2 km
UTM ZONE 8, NAD 83, 105K/11
FILE: ...2012/KEG/FIGURES/In_SOIL.wor
DATE: DEC 2012

Table 9-1: Geochemical Data for Soil Samples

Element	Anomalous Thresholds				
	Weak	**Moderate**	**Strong**	**Very Strong**	**Peak**
Silver (ppm)	≥ 1 < 2	≥ 2 < 5	≥ 5 < 10	≥ 10	166
Lead (ppm)	≥ 100 < 200	≥ 200 < 500	≥ 500 < 1000	≥ 1000	10200
Zinc (ppm)	≥ 200 < 500	≥ 500 < 1000	≥ 1000 < 2000	≥ 2000	9370
Copper (ppm)	≥ 50 < 100	≥ 100 < 200	≥ 200 < 500	≥ 500	4760
Tin (ppm)	≥ 5 < 10	≥ 10 < 20	≥ 20 < 50	≥ 50	> 500*
Indium (ppm)	≥ 1 < 2	≥ 2 < 5	≥ 5 < 10	≥ 10	40.8

* Not analyzed for over detection limit value.

Keg Anomaly exhibits a slight metal zonation from west to east. Copper is concentrated within the western and central parts of the anomaly, while indium is clustered in the centre and silver, lead, zinc and tin are most abundant in the east and central parts.

9.3 Geophysical Surveys

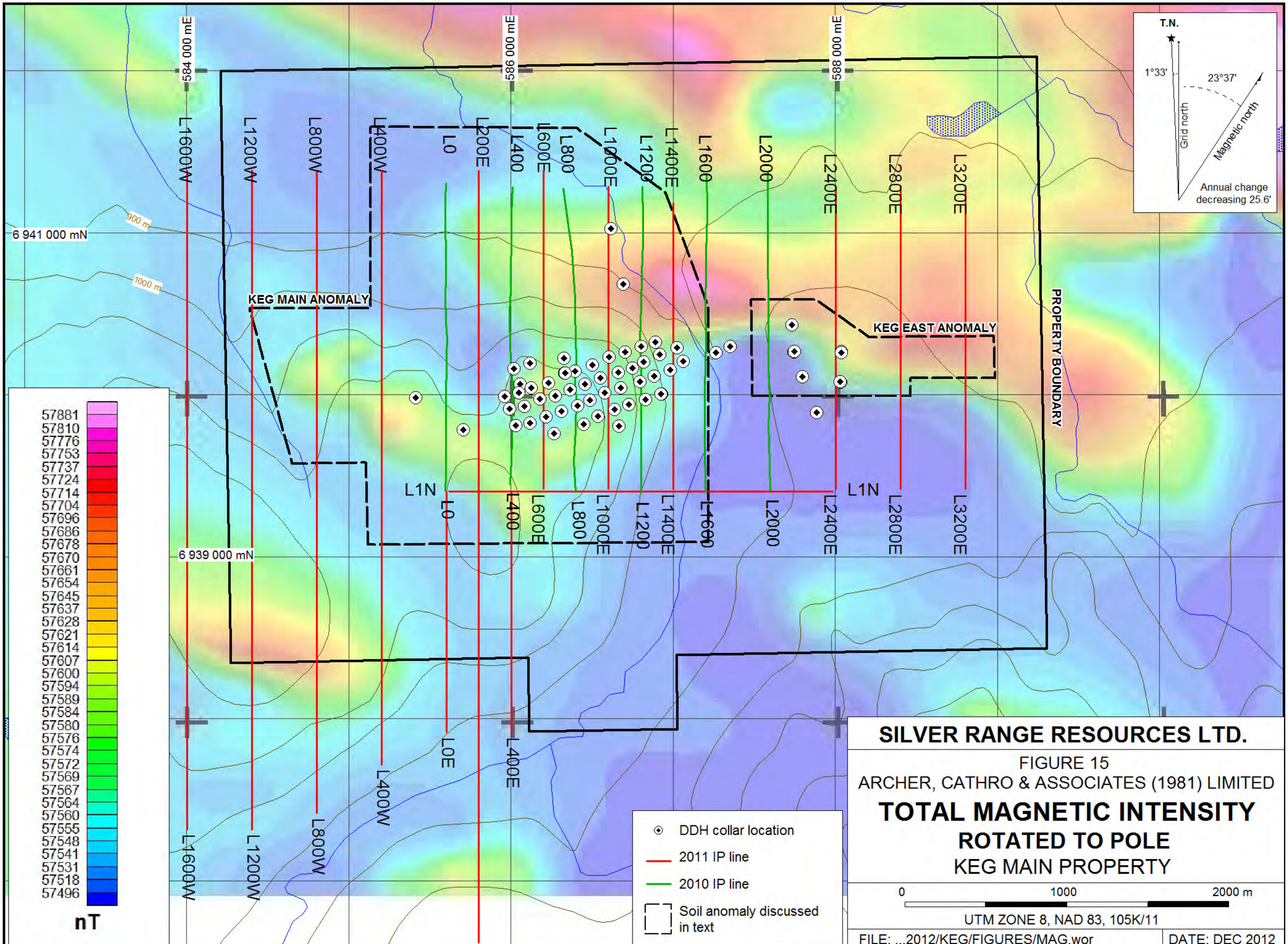
Between 1966 and 1977, several airborne and ground geophysical surveys (electromagnetic (EM), magnetic, induced polarization (IP) and gravity) were completed within the bounds of the current Property. Data from pre-2010 surveys was not available in digital format and therefore could not be reprocessed. Where data is available, historical magnetic and electromagnetic results generally support more recent data.

In 2010, Strategic Metals' commissioned Geotech Ltd. of Aurora, Ontario to fly a helicopter-borne Z-axis Tipper Electromagnetic (ZTEM) and magnetic survey over the entire Property and Aurora Geosciences of Whitehorse, Yukon to perform ground IP surveying across parts of Keg Main Zone. In 2011, Aurora Geosciences completed additional ground IP surveying at the Keg Main and Keg East Zones on behalf of Silver Range. Only the 2010 and 2011 geophysical data is discussed in this report.

Condor Consulting, Inc. of Lakewood, Colorado was commissioned to process and analysis of the 2010 and 2011 geophysical data. Figures 15 and 16 show the magnetic and ZTEM results, along with locations of the IP survey lines, soil anomalies and diamond drill holes. Figure 17 illustrates a cross-section of modelled resistivity and conductivity from the IP survey. Geophysical results from both years are briefly summarized in the following paragraphs.

The magnetic response is diverse but generally reflects the regional, northwest-oriented geological and structural trends. A discrete magnetic high is locally coincident with an electromagnetic feature in the vicinity of Keg Main Zone. Condor does not consider the magnetic data to be a useful tool for direct targeting of mineralization; however, because it highlights structural and lithological features, it can be used to identify favourable mineralization traps.

The ZTEM data also shows a variety of responses, which also typically conform to the northwest regional fabric. Northwest-trending axial highs and areas of low response are both present on the Property. The highs likely represent parts of the stratigraphy that are more conductive. A



SILVER RANGE RESOURCES LTD.

FIGURE 15

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

TOTAL MAGNETIC INTENSITY

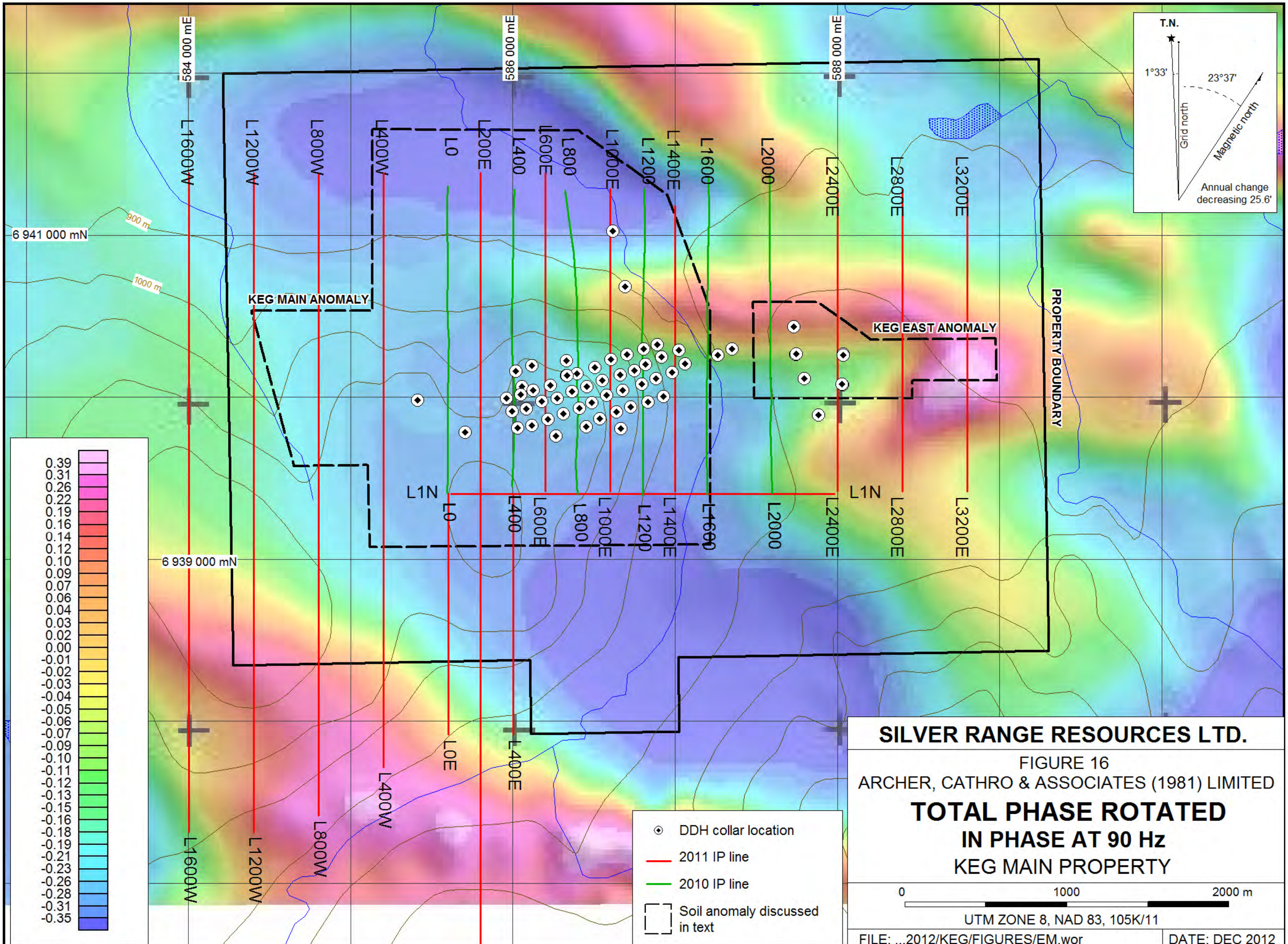
ROTATED TO POLE

KEG MAIN PROPERTY

0 1000 2000 m

UTM ZONE 8, NAD 83, 105K/11

FILE: ...2012/KEG/FIGURES/MAG.wor | DATE: DEC 2012



SILVER RANGE RESOURCES LTD.

FIGURE 16

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

TOTAL PHASE ROTATED

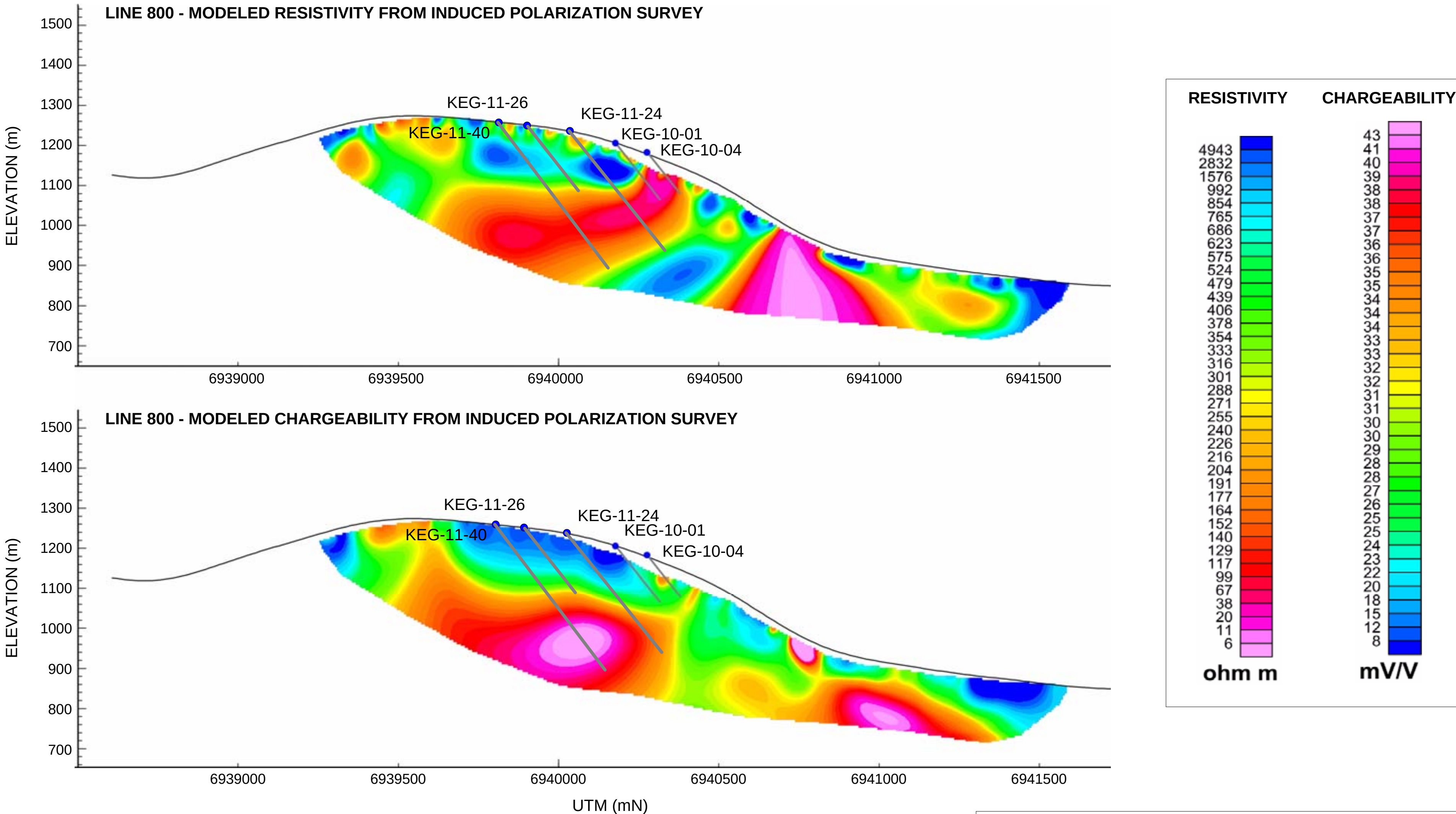
IN PHASE AT 90 Hz

KEG MAIN PROPERTY

0 1000 2000 m

UTM ZONE 8, NAD 83, 105K/11

FILE: ...2012/KEG/FIGURES/EM.wor | DATE: DEC 2012



SILVER RANGE RESOURCES LTD.

FIGURE 17

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

RESISTIVITY & CHARGEABILITY FROM IP SURVEYS

KEG MAIN PROPERTY

0 500 1000 m

UTM ZONE 8, NAD 83, 105K/11

FILE: ...2012/KEG/FIGURES/IP.WOR | DATE: DEC 2012 distinct, discrete conductive feature in the eastern half of the property may represent a large-scale fold. The lows are interpreted as more resistive areas within the mapped units. These lows may represent hydrothermal silicification of the host rocks.

Condor deemed the most significant IP-resistivity features within Keg Main Zone to be coincident conductivity and chargeability highs that coincides with mineralization in the western half of the Keg Main Zone drill grid and in another area about 500 m north of Keg Main Zone. The first of these features appears to continue at least 500 m southwest of the drill grid, after which is either terminates or plunges to a depth beyond the detection limits of the survey. Scout drilling in the vicinity of the westerly highs intersected thick sections of rock containing abundant pyrrhotite on fractures, while holes that tested the northerly highs cut graphitic stratigraphy.

A secondary feature defined by elevated chargeability and moderate conductivity lies to the south of, and directly below, Keg Main Zone. This feature locally coincides with mineralized drill intervals (Figure 17).

10.0 DRILLING

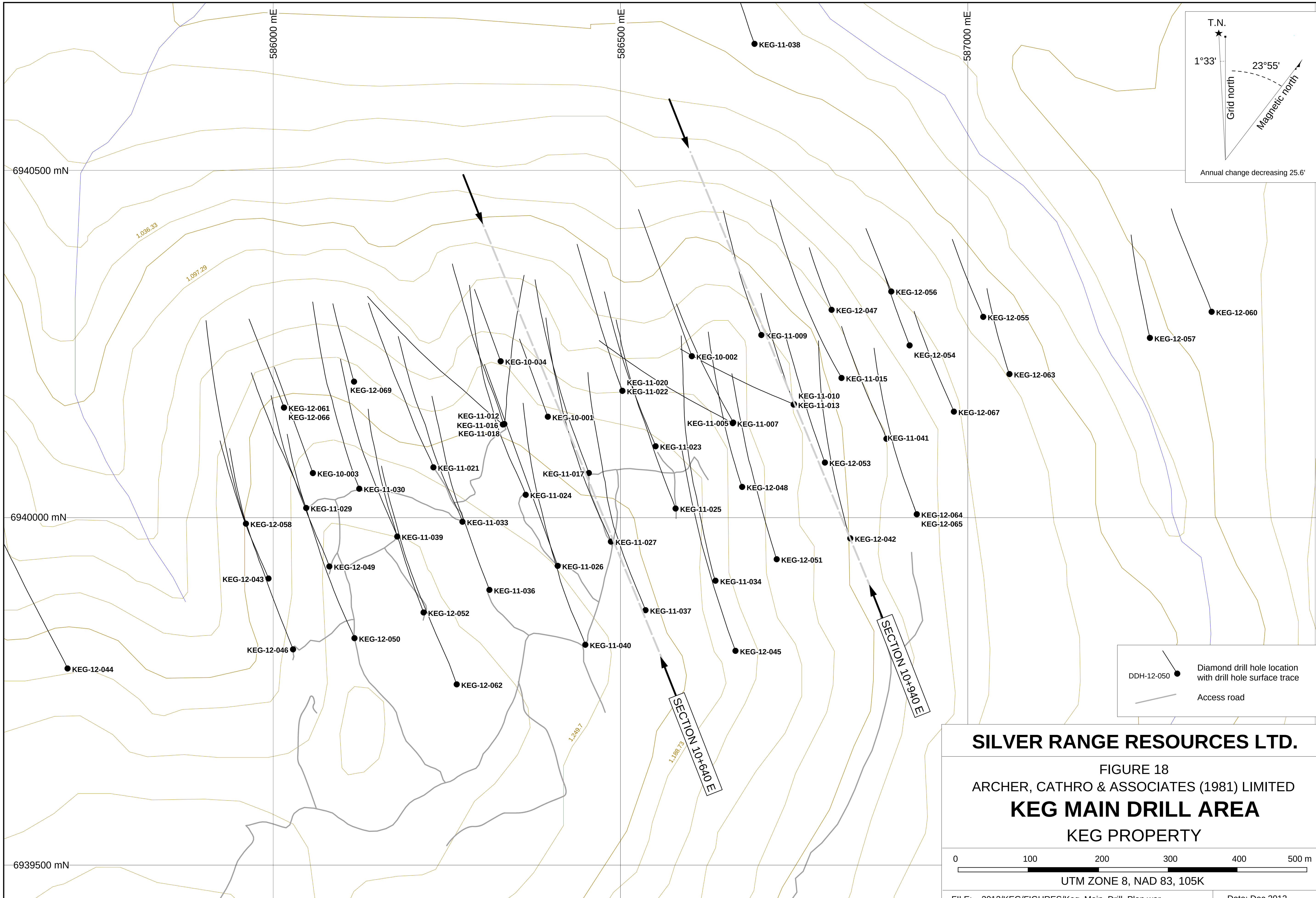
10.1 Historical Diamond Drilling

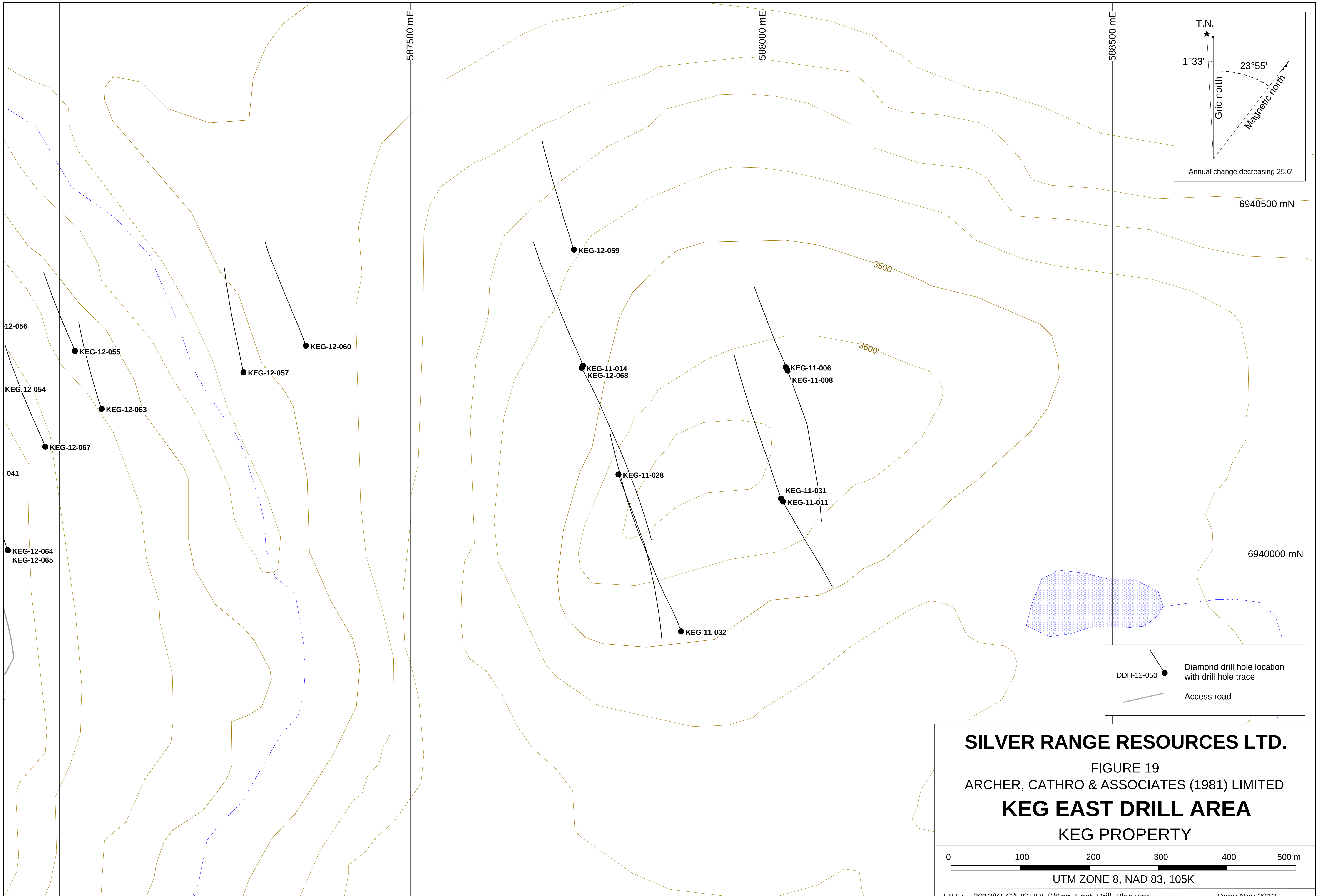
Between 1966 and 1975, a total of nine drill holes were completed on ground currently covered by the Property. Grades and widths obtained from that drilling at Keg Main and Keg East Zones were considered to be disappointing by previous operators, because their target was massive stratiform mineralization like that in nearby deposits of the Anvil District. Wide intercepts of fracture-style mineralization and occasional skarn horizons were cut within Keg Main and Keg East Zones, but grade continuity was not established due to poor recovery caused by small core diameter (mostly AQ) and intermittent sampling of mineralized intervals (see Section 6.0 for results).

10.2 2010, 2011 and 2012 Diamond Drilling

The mineral resource presented in this report was determined using only data from diamond drilling completed between 2010 and 2012 within Keg Main Zone by Silver Range and Strategic Metals. Figures 18 and 19 illustrate the locations of all holes drilled on the Property from 2010 to 2012 (details of which holes were included in the mineral resource are provided in Section 14.0 – Mineral Resource Estimate).

Between 2010 and 2012, a total of 23,014.51 m of exploration and definition drilling in 69 holes was completed on the Property, of which 18,376.81 m in 53 holes was used to estimate the Keg Main Zone mineral resource. Down hole depths for drill holes used in the mineral resource estimation range from 144.00 to 550.77 m, with an average depth of 359.30 m. This drilling was completed at nominal 100 m spacings on an 1100 m long by 300 m wide grid (locally up to 450 m wide, see Figure 18) within the main area of interest. All holes were collared at dips of -50° and most of them are on section lines oriented at 340° (north-northwest). Six holes have different azimuth orientations, which range between 300° and 010° (northwest to north-


T.N.
1°33'
23°55'
Grid north
Magnetic north
Annual change decreasing 25.6'
586000 mE
586500 mE
587000 mE
6940500 mN
6940000 mN
6939500 mN
1,036.33
1,097.29
1,249.7
1,188.73
SECTION 10+640 E
SECTION 10+940 E
KEG-11-038
KEG-12-056
KEG-12-047
KEG-12-055
KEG-12-060
KEG-11-009
KEG-12-057
KEG-10-002
KEG-12-054
KEG-10-034
KEG-11-015
KEG-12-063
KEG-11-020
KEG-11-022
KEG-12-069
KEG-11-010
KEG-11-013
KEG-12-061
KEG-12-066
KEG-12-067
KEG-11-012
KEG-11-016
KEG-11-018
KEG-10-001
KEG-11-005
KEG-11-007
KEG-11-041
KEG-11-023
KEG-12-053
KEG-10-003
KEG-11-021
KEG-11-017
KEG-11-030
KEG-11-024
KEG-12-048
KEG-11-029
KEG-11-025
KEG-12-064
KEG-12-065
KEG-12-058
KEG-11-033
KEG-11-039
KEG-11-027
KEG-12-042
KEG-12-049
KEG-11-026
KEG-12-051
KEG-12-043
KEG-11-034
KEG-11-036
KEG-12-052
KEG-11-037
KEG-12-050
KEG-11-040
KEG-12-046
KEG-12-045
KEG-12-044
KEG-12-062
DDH-12-050
Diamond drill hole location with drill hole surface trace
Access road
SILVER RANGE RESOURCES LTD.
FIGURE 18
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
KEG MAIN DRILL AREA
KEG PROPERTY
0
100
200
300
400
500 m
UTM ZONE 8, NAD 83, 105K
FILE: ...2012/KEG/FIGURES/Keg_Main_Drill_Plan.wor
Date: Dec 2012



587500 mE
588000 mE
588500 mE
6940500 mN
6940000 mN
T.N.
1°33'
23°55'
Grid north
Magnetic north
Annual change decreasing 25.6'
3500'
3600'
KEG-12-059
KEG-12-060
KEG-12-057
KEG-12-055
KEG-12-063
KEG-12-067
KEG-12-054
12-056
-041
KEG-12-064
KEG-12-065
KEG-11-014
KEG-12-068
KEG-11-006
KEG-11-008
KEG-11-028
KEG-11-031
KEG-11-011
KEG-11-032
DDH-12-050
Diamond drill hole location with drill hole trace
Access road
SILVER RANGE RESOURCES LTD.
FIGURE 19
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
KEG EAST DRILL AREA
KEG PROPERTY
0
100
200
300
400
500 m
UTM ZONE 8, NAD 83, 105K
FILE: ...2012/KEG/FIGURES/Keg_East_Drill_Plan.wor
Date: Nov 2012

northeast). The number of holes and total meterages drilled on the Property each year between 2010 and 2012 are listed by zone in Table 10-1.

Table 10-1: 2010 to 2012 Diamond Drilling Summary

Target – Year	Holes Drilled	Total Drilled (m)
Keg Main Zone – 2010	4	958.27
Keg Main Zone – 2011	26	10350.82
Keg Main Zone – 2012	21	7014.99
Keg Main Zone – Abandoned *	3	72.73
Keg East Zone – 2011/2012 *	11	3245.68
Scout Exploration – 2011/2012 *	4	1372.02

* Not included in mineral resource estimate.

Relatively continuous silver-lead-zinc-copper-tin±indium mineralization has been traced along the full 1100 m length of the drill grid, across approximate true widths of 50 to 250 m and to vertical depths of 350 m. Examples of this geometry are illustrated on Figures 20 and 21.

Descriptions of mineralization intersected at both Keg Main and Keg East Zones are provided in Section 8.0. The best grades within both zones are typically from areas where strong fracturing and reactive horizons coincide. The thickest, highest grade mineralization within Keg Main Zone appears to be localized in a fold hinge where axial planar fractures cut silicified and calc-silicate altered Tay and Mount Christie Formation rocks.

The most significant, silver-rich interval obtained from Keg Main Zone to date graded 70.55 g/t silver, 0.54% lead, 0.60% zinc, 0.17% copper, 778 ppm tin and 1.77 ppm indium over 104.70 m from 25.45 to 130.15 m in hole KEG-11-009. The best 2012 interval averaged 63.45 g/t silver, 0.48% lead, 0.43% zinc, 0.09% copper, 448 ppm tin and 0.96 ppm indium over 68.75 m from 6.64 to 75.39 m in hole KEG-12-047. Table 10-2 lists highlight drill results obtained from Keg Main Zone.

Table 10-2: Highlight Keg Main Zone Drill Results

Hole No.	From (m)	To (m)	Interval (m)	Ag (g/t)	Pb (%)	Zn (%)	Cu (%)	Sn (ppm)	In (ppm)
KEG-10-01	59.30	185.00	125.70	50.09	0.65	1.20	0.14	217	9.55
KEG-10-04	24.34	64.46	40.12	49.63	0.74	1.71	0.17	180	14.70
KEG-11-05	135.13	172.82	37.69	49.62	0.45	1.25	0.08	569	4.16
KEG-11-07	213.35	253.10	39.75	71.74	0.60	2.03	0.24	391	14.39
KEG-11-09	25.45	130.15	104.70	70.55	0.54	0.60	0.17	778	1.77
including	78.33	108.81	30.48	119.90	0.72	1.14	0.32	1168	3.38
KEG-11-12	77.12	96.00	18.88	60.78	0.67	1.59	0.21	275	13.78
KEG-11-15	6.10	47.85	41.75	46.62	0.47	0.27	0.06	138	0.91
KEG-11-16	212.72	247.00	34.28	46.66	0.24	1.91	0.33	280	23.58
KEG-11-17	156.06	220.37	64.31	40.55	0.39	1.02	0.10	235	6.49

and	258.17	297.79	39.62	41.81	0.25	1.15	0.41	383	12.30
KEG-11-18	65.60	120.69	55.09	58.46	0.70	1.92	0.17	205	16.37
KEG-11-22	122.02	197.20	75.18	57.46	0.31	2.41	0.64	912	17.66
KEG-11-23	236.83	271.61	34.78	40.09	0.21	1.67	0.55	398	14.42
KEG-12-47	6.64	75.39	68.75	63.45	0.48	0.43	0.09	448	0.96
including	11.00	39.70	28.70	131.59	0.95	0.77	0.15	651	1.70
KEG-12-48	277.16	318.35	41.19	48.81	1.04	1.16	0.12	317	4.70

The best interval from Keg East Zone graded 30.81 g/t silver, 0.18% lead, 0.27% zinc, 0.02% copper, 65 ppm tin and 1.01 ppm indium over 70.11 m from 302.36 to 372.47 m in hole KEG-11-014. The best 2012 result averaged 31.89 g/t silver, 0.39% lead, 0.33% zinc, 0.01% copper, 278 ppm tin and 0.51 ppm indium over 13.4 m from 74.00 to 87.40 m in hole KEG-12-059. None of the holes from Keg East Zone are included in the mineral resource estimate.

The Author does not know of any drilling, sampling or recovery factors that could materially impact the accuracy and reliability of the 2010 to 2012 drill results.

10.3 Diamond Drilling Specifications

All 2010 to 2012 diamond drilling on the Property was conducted by Top Rank Diamond Drilling Ltd. of Ste. Rose du Lac, Manitoba.

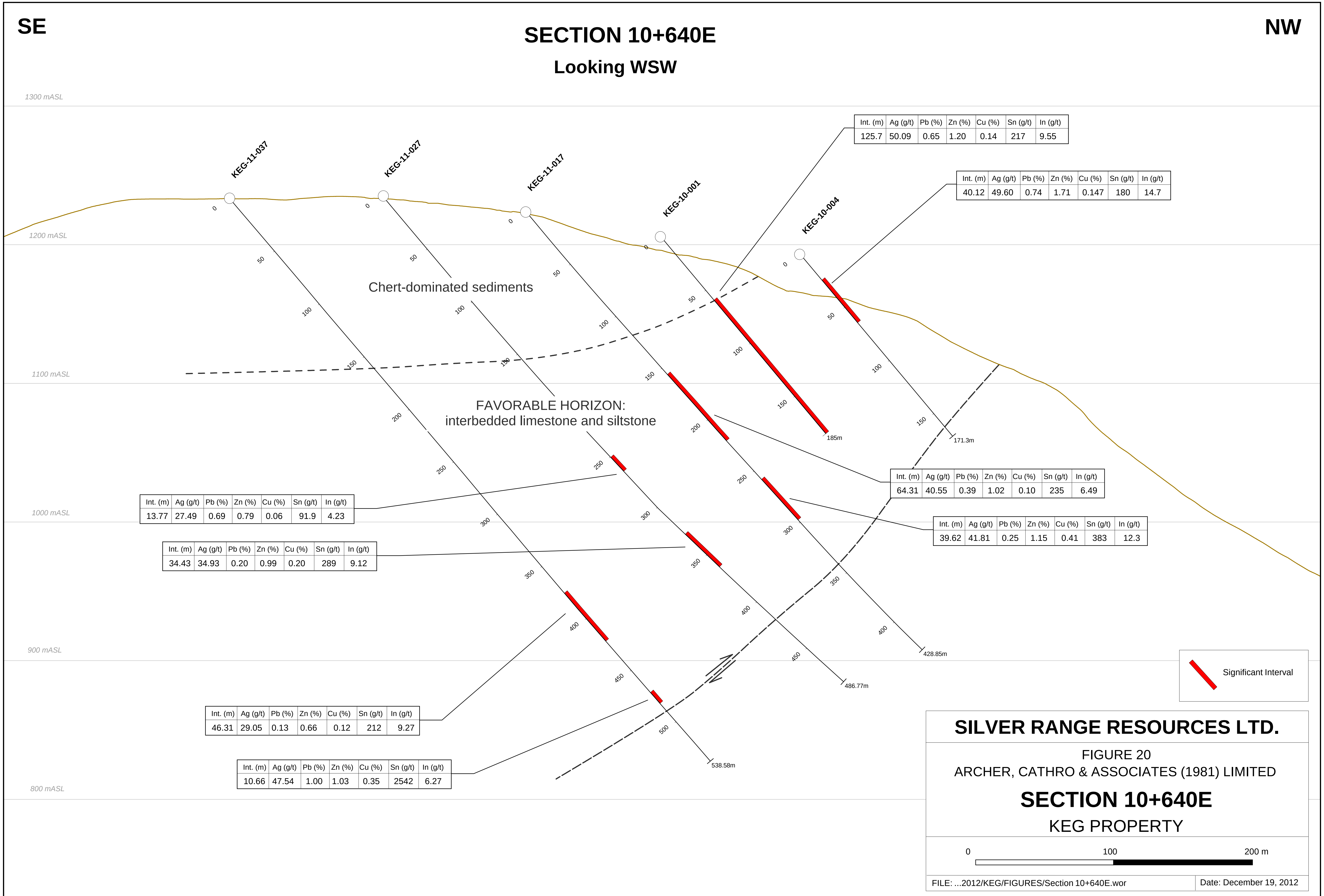
The 2010 work was done with a heli-portable, diesel-powered JKS-300 drill using HQ and BTW equipment. The 2011 and 2012 holes were completed by two heli-portable Multi-Power Discovery II drills using NQ2 equipment.

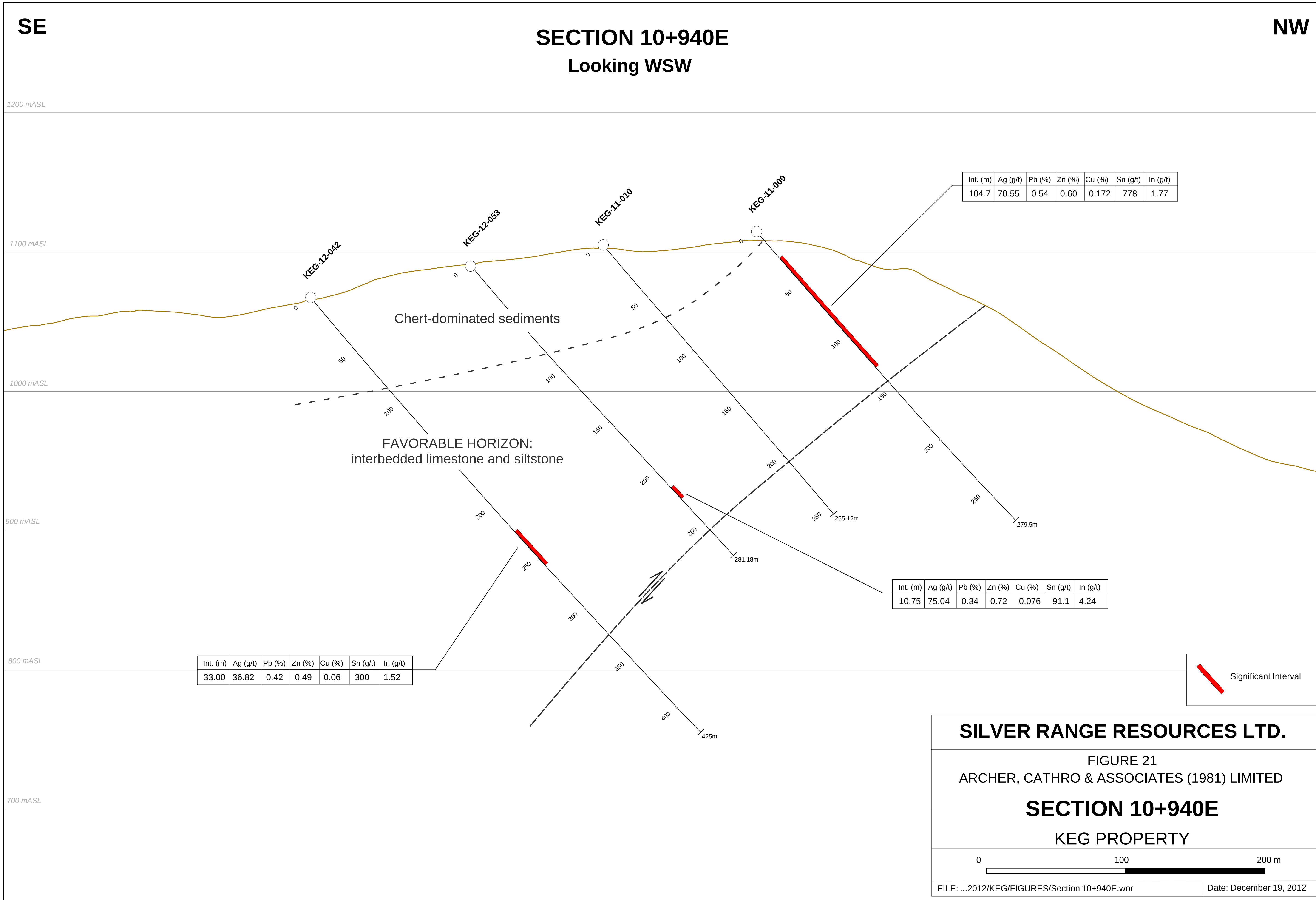
10.4 Drill Collar and Down-Hole Surveys

All drill hole collars were surveyed by Archer Cathro employees using a Trimble SPS882 and SPS852 base and rover Real Time Kinematic (RTK) GPS system. The collars are marked by lengths of drill rod that are cemented into the holes. A metal tag identifying the hole number is affixed to each rod.

Topography along section lines was initially surveyed by chain and compass, but was later resurveyed using the RTK GPS.

Down-hole surveys were conducted using a “Ranger Explorer” magnetic multi-shot tool provided by Ranger Survey Systems. Shots were taken every 50 feet or 15 m in each hole, depending on whether the rods were imperial or metric. The shots recorded azimuth, inclination, temperature, roll angle (gravity and magnetic) plus magnetic intensity, magnetic dip and gravity intensity (for quality assurance). All readings were reviewed and erroneous data were not used when plotting the final hole traces.


SE
NW
SECTION 10+640E
Looking WSW
1300 mASL
1200 mASL
1100 mASL
1000 mASL
900 mASL
800 mASL
KEG-11-037
KEG-11-027
KEG-11-017
KEG-10-001
KEG-10-004
Chert-dominated sediments
FAVORABLE HORIZON:
interbedded limestone and siltstone
185m
171.3m
428.85m
486.77m
538.58m
Int. (m) | Ag (g/t) | Pb (%) | Zn (%) | Cu (%) | Sn (g/t) | In (g/t)
125.7 | 50.09 | 0.65 | 1.20 | 0.14 | 217 | 9.55
Int. (m) | Ag (g/t) | Pb (%) | Zn (%) | Cu (%) | Sn (g/t) | In (g/t)
40.12 | 49.60 | 0.74 | 1.71 | 0.147 | 180 | 14.7
Int. (m) | Ag (g/t) | Pb (%) | Zn (%) | Cu (%) | Sn (g/t) | In (g/t)
64.31 | 40.55 | 0.39 | 1.02 | 0.10 | 235 | 6.49
Int. (m) | Ag (g/t) | Pb (%) | Zn (%) | Cu (%) | Sn (g/t) | In (g/t)
39.62 | 41.81 | 0.25 | 1.15 | 0.41 | 383 | 12.3
Int. (m) | Ag (g/t) | Pb (%) | Zn (%) | Cu (%) | Sn (g/t) | In (g/t)
13.77 | 27.49 | 0.69 | 0.79 | 0.06 | 91.9 | 4.23
Int. (m) | Ag (g/t) | Pb (%) | Zn (%) | Cu (%) | Sn (g/t) | In (g/t)
34.43 | 34.93 | 0.20 | 0.99 | 0.20 | 289 | 9.12
Int. (m) | Ag (g/t) | Pb (%) | Zn (%) | Cu (%) | Sn (g/t) | In (g/t)
46.31 | 29.05 | 0.13 | 0.66 | 0.12 | 212 | 9.27
Int. (m) | Ag (g/t) | Pb (%) | Zn (%) | Cu (%) | Sn (g/t) | In (g/t)
10.66 | 47.54 | 1.00 | 1.03 | 0.35 | 2542 | 6.27
Significant Interval
SILVER RANGE RESOURCES LTD.
FIGURE 20
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
SECTION 10+640E
KEG PROPERTY
0
100
200 m
FILE: ...2012/KEG/FIGURES/Section 10+640E.wor
Date: December 19, 2012



Int. (m)	Ag (g/t)	Pb (%)	Zn (%)	Cu (%)	Sn (g/t)	In (g/t)
104.7	70.55	0.54	0.60	0.172	778	1.77

Int. (m)	Ag (g/t)	Pb (%)	Zn (%)	Cu (%)	Sn (g/t)	In (g/t)
10.75	75.04	0.34	0.72	0.076	91.1	4.24

Int. (m)	Ag (g/t)	Pb (%)	Zn (%)	Cu (%)	Sn (g/t)	In (g/t)
33.00	36.82	0.42	0.49	0.06	300	1.52

SILVER RANGE RESOURCES LTD.

FIGURE 21

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION 10+940E

KEG PROPERTY

0 100 200 m

FILE: ...2012/KEG/FIGURES/Section 10+940E.wor | Date: December 19, 2012

11.0 SAMPLE PREPARATION, SECURITY AND ANALYSIS

This section describes the sampling methods, sample handling, analytical techniques and security measures followed during the 2010 to 2012 exploration programs. The programs were supervised by Archer Cathro on behalf of Strategic Metals and Silver Range.

The methods and approaches, where available, in the pre-2010 historical reports were reviewed. Those reports were prepared prior to the implementation of NI 43-101 and although the methods applied were industry standard at the time, the reports do not meet the standards of NI 43-101.

11.1 Sampling Methods

In 2010, 2011 and 2012, grid soil samples were collected at 50 m intervals along north-south oriented lines spaced 100 m apart. All soil sample locations were recorded using hand-held GPS units. Sample sites are marked by aluminum tags inscribed with the sample numbers and affixed to 0.5 m wooden lath that were driven into the ground. Soil samples were collected from 10 to 80 cm deep holes using hand-held augers. They were placed into individually pre-numbered Kraft paper bags. Sampling was often hindered by permafrost on moss-covered, north-facing slopes. Samples were not collected from many of these locations due to poor sample quality. Very few rock samples were collected form the Keg Main or Keg East Zones, because there are limited bedrock exposures and exploration progressed rapidly to diamond drilling, which largely negated the usefulness of less representative rock samples.

Geotechnical and geological logging was performed on all drill core from the 2010 to 2012 programs. A geotechnical log was filled out prior to geological logging of drill core and included the conversion, where needed, of drill marker blocks from imperial to metric and determinations of recovery, rock quality designations (RQD), hardness and weathering. Wetted core photographs were taken and catalogued prior to logging.

A sample was collected every six boxes for density measurements using both wet and dry evaluation methods to provide base level density data for resource evaluation. Magnetic susceptibility measurements were taken at one metre intervals along each hole.

All logging data were recorded as a hardcopy during the day and transcribed to digital format during the evenings.

Drill core samples were collected using the following procedures:

1) Core was reassembled, lightly washed and measured.
2) Core was photographed.
3) Core was geotechnically logged.
4) Core was geologically logged and sample intervals were designated. Sample intervals were set at geological boundaries, drill blocks or sharp changes in sulphide content.
5) Core recovery was calculated for each sample interval.

6) In 2010, visually promising core intervals were sawn in half using a rock saw and the remainder was split with an impact core splitter. In 2011 and 2012, all core was sawn in half. One-half was sent for analysis and one-half returned to the core box.
7) Samples were double bagged in 6 mm plastic bags, a sample tag was placed in each sample bag, then two or three samples were placed in a fiberglass bag sealed with a metal clasp and sample numbers were written on the outside of that bag with permanent felt pen. The fibreglass bag was sealed with a numbered security tag.
8) Two blank and two standard samples were randomly included in every batch of 31 core samples (in 2012, batches comprised 30 core samples).
9) One quarter-split duplicate sample was included in every batch of 31 core samples (in 2012, batches comprised 30 core samples).
10) In 2012, one coarse reject duplicate sample was included in every batch of 30 core samples.

Core recovery was good, averaging 96% for the 2010 to 2012 drill programs. The holes were mostly sampled top to bottom (about 90% of core was sampled). Care was taken to ensure that the sample split was not biased to sulphide content and, therefore, the sampling should be reliable and representative of the mineralization.

11.2 Sample Handling and Security

In 2010, the drill core was flown by helicopter from the drill sites to the company's staging area at the Faro airport, where it was transferred to a truck and transported to Whitehorse for logging and sampling. In 2011 and 2012, the core was flown by helicopter from the drill sites to a logging and sampling area on the Property. The samples were later flown by helicopter to the Faro staging area and transported to Whitehorse by truck. All samples were controlled by employees of Archer Cathro until they were delivered directly to ALS Minerals' laboratory in Whitehorse for preparation. ALS Minerals was responsible for shipping the prepared sample splits to its North Vancouver laboratory, where they were analyzed.

Archer Cathro ensured that a Chain of Custody form accompanied all batches of drill core during transportation from the Property to the laboratory. A unique security tag was attached to each individual fibreglass bag when the bag was sealed. The bags and security tags had to be intact in order to be delivered to ALS Minerals.

11.3 Sample Analysis

All samples were sent to ALS Minerals' laboratory in Whitehorse for preparation and then on to its laboratory in North Vancouver for analysis. ALS Minerals, a wholly owned subsidiary of ALS Limited, is an independent commercial laboratory specializing in analytical geochemistry services. Both ALS Minerals' Whitehorse and North Vancouver laboratories are individually certified to standards within ISO 9001:2008. The North Vancouver laboratory has also received accreditation to ISO/IEC 17025:2005 from the Standards Council of Canada for several analytical methods.

All 2010 to 2012 soil samples were dried and screened to -180 microns. The 2010 soil samples were analyzed for 35 elements by aqua regia digestion followed by inductively coupled plasma with atomic emission spectroscopy (ME-ICP41). An additional 30 g charge was further analyzed for gold by fire assay with inductively coupled plasma-atomic emissions spectroscopy finish (Au-ICP21). The samples were reanalyzed for 51 elements by aqua regia digestion followed by inductively coupled plasma combined with mass spectroscopy or atomic emission spectroscopy (ME-MS41).

The 2011 soil samples were analyzed for 51 elements using aqua regia digestion followed by inductively coupled plasma combined with mass spectroscopy or atomic emission spectroscopy (ME-MS41). Soil samples were further analyzed for gold by aqua regia digestion followed by inductively coupled mass spectrometry (Au-TL43).

The 2012 soil samples were analyzed for 51 elements using aqua regia digestion followed by inductively coupled plasma combined with mass spectroscopy or atomic emission spectroscopy (ME-MS41). An additional 30 g charge was further analyzed for gold by fire assay with inductively coupled plasma-atomic emissions spectroscopy finish (Au-ICP21).

All 2010 to 2012 rock and core samples were dried, fine crushed to better than 70% passing -2 mm and then a 250 g split was pulverized to better than 85% passing 75 microns.

The 2010 rock and core samples were initially analyzed for gold by fire assay followed by atomic absorption (Au-AA24) and 35 other elements using aqua regia digestion followed by inductively coupled plasma-atomic emission spectroscopy (ME-ICP41). Samples in mineralized intervals were later assayed for silver, zinc, lead and copper (Ag/Zn/Pb/Cu-OG62); geochemically analyzed for 51 elements (which include common refractory elements) by aqua regia digestion followed by inductively coupled plasma combined with mass spectroscopy or atomic emission spectroscopy (ME-MS41); and analyzed for tin and tungsten by pressed pellet XRF (Sn/W-XRF05).

The 2011 rock and core samples were analyzed for 51 elements by aqua regia digestion followed by inductively coupled plasma combined with mass spectroscopy or atomic emission spectroscopy (ME-MS41) and tin using pressed pellet XRF (Sn-XRF05). Samples that exceeded upper detection limits were assayed for silver, zinc, lead and/or copper by Ag/Zn/Pb/Cu-OG46. From the beginning of the program until late July, the core samples were analyzed for gold by aqua regia and mass spectroscopy (Au-TL44). During the QA/QC review, there were difficulties reproducing gold values from standard samples analyzed by this technique. These difficulties, combined with more severe problems encountered using the Au-TL44 technique on other projects with higher gold contents (conducted by another company managed by Archer Cathro) lead Silver Range to change techniques. The difficulties involved understatement of gold contents. For the remainder of the program, the core samples were analyzed for gold by fire assay followed by atomic absorption (Au-AA24).

The 2012 rock and core samples were routinely analyzed for gold by fire assay followed by atomic absorption (Au-AA24), tin using pressed pellet XRF (Sn-XRF05) and for 48 other elements using four acid digestion followed by inductively coupled plasma-mass spectroscopy

(ME-MS61). Samples in mineralized intervals that exceeded the upper detection limits were assayed for silver, zinc, lead and copper by inductively coupled plasma-atomic emission spectroscopy (Ag/Pb/Zn/Cu-OG62).

All 2010 to 2012 standard, blank and duplicate samples passed QA/QC reviews. It is the Author's opinion that the sample preparation, security and analytical procedures used for this project are adequate.

12.0 DATA VERIFICATION

12.1 Database

Geological and geotechnical logging prior to 2012 was initially recorded as a hardcopy and then transcribed into MS Excel®. In 2012, logging was recorded as a hardcopy and then entered into a MS SQL Server® database. All of the pre-2012 data has been transferred to the database.

Visual comparison of hardcopy data and digital data was conducted on select holes to ensure accuracy. Any discrepancies identified by this process were investigated, by examining the core stored on the Property, and corrected.

12.2 Collar Locations

All drill hole collars were re-surveyed in 2012 using a Trimble RTK GPS system and, where necessary, survey data collected in previous years was corrected. The differences between this most recent survey and the earlier surveys can be explained by the poorer accuracy of the hand held equipment used in previous years.

The collar data stored in the MS SQL Server® database have been visually cross-checked with the digital survey reports generated by the Trimble system. No errors were found.

12.3 Down-hole Orientations

Prior to 2011, no down-hole azimuth measurements were made and dip deviations were measured using an acid test at the bottom of each hole. This practice does not follow industry standards, but due to the limited number of holes (four) and shallow depths (all but one less than 255 m), the Author does not consider this to be a significant issue.

Original 2011 and 2012 survey data obtained from the survey tools in CSV format has been imported directly into the MS SQL Server® database. All of the down-hole data was visually inspected and erroneous data has been omitted.

12.4 Assays

Assay certificates, for all of the drilling done to date, were obtained from ALS Minerals in CSV format and imported directly into the MS SQL Server® database. Spot checking of data within the database to hard copy certificates issued by ALS Minerals has not revealed any issues.

Samples from the diamond drilling programs were subjected to a QA/QC program designed by Archer Cathro for Silver Range. The QA/QC program consisted of:

1) Sequentially numbered sample tickets: to identify each sample with a unique number to minimize the possibility of sample numbering errors and to ensure uniform collection of sample data.
2) Sealed sample bags: to secure individual sample bags in order to reduce the possibility of sample contamination, spilling or tampering.
3) Chain of custody: samples were stored in a secure preparation area and delivered to the laboratory directly by Archer Cathro personnel.
4) Sample duplicates: select samples were quartered and re-submitted for assay. In addition, duplicates of coarse reject material of select 2012 samples were re-submitted for assay.
5) Sample blanks: commercial samples were purchased and inserted in the sample sequence. All blank samples yielded background values, including samples inserted directly following a "standard" value to test for "smear effect" during the sample preparation process, indicating no observable contamination. These blanks were assigned unique sample numbers within the sample sequence so as to be "blind" to the laboratory.
6) Reference standard samples: commercially available standard samples for silver, copper, lead and zinc were purchased for the 2010 and 2011 drill program. Four standards were prepared from coarse reject material from the 2011 core samples for use during the 2012 drill program. Standards were assigned a unique sample number within the sample sequence.

All of the samples have passed this QA/QC program. It is the Author's opinion that the assay results contained within the database are suitable for use in a resource estimation.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Introduction

Metallurgical testwork on the Keg Main Zone was completed at SGS Canada Inc. – Lakefield Research located in Lakefield Ontario in 2012. Melis Engineering Ltd. (Melis) of Saskatchewan directed and summarized the metallurgical testwork on behalf of Silver Range. This testwork was directed by Lawrence Melis, P.Eng., who is a qualified person and independent of both the issuer and the title holder, based on the tests outlined in National Instrument 43-101. Melis' full report is provided in Appendix I.

The testwork was completed on six variability composites representing distinct zones of the known mineralization and one overall composite prepared as a blend of the six variability composites. The work encompassed preparation and analyses of test composites, comminution testing, open cycle and lock cycle flotation tests, gravity recovery tests, concentrate analyses and tailings physical and chemical characterization.

13.2 Composite Analyses

Key analyses of the test composites are summarized in Table 13-1.

Table 13-1: Test Composites – Assay Head Grades for Key Elements

Composite	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	In (g/t)	Sn (g/t)
Overall	41.6	0.27	0.31	1.36	11.4	400
A	89.1	0.18	0.62	0.69	1.7	770
B	56.2	0.60	0.30	2.30	15.6	760
C	44.1	0.31	0.34	1.67	13.1	230
D	32.3	0.10	0.27	0.89	8.8	100
E	21.1	0.14	0.15	1.28	19.5	210
F	32.7	0.19	0.28	1.14	9.1	360

The sulphides in the mineralization consist mainly of sphalerite, pyrite, chalcopyrite, pyrrhotite, galena and arsenopyrite. Traces of silver minerals (native silver and silver sulphides) were found, but more detailed examination specific to silver would be required to properly define the mode of occurrence of silver. The main tin minerals, which are typically fine grained, include stannite and lesser cassiterite.

A gravity recovery test on the overall composite indicated that approximately 15% of the silver and only about 3% of the tin could be recoverable by gravity.

Preliminary grinding tests suggest that the Keg Main Zone mineralization is of medium hardness.

13.3 Flotation Testwork

A total of 16 open cycle batch flotation tests were completed on the overall composite to identify the flotation characteristics of Keg Main Zone mineralization and to quantify optimum flotation parameters for the recovery of copper, lead and zinc to concentrates. Six open cycle batch flotation tests were also completed on the six variability composites, one per composite to assess variability ahead of lock cycle testing.

The flotation conditions and reagent scheme identified for the mineralization were generally as follows:

- Target primary grind P_{80} of 100 μm in the presence of lime to maintain pH 8 to 8.5.
- Copper/lead rougher flotation at pH 9 to 9.5 controlled with lime using Aerophine 3418A as collector and MIBC as frother.
- Regrind of the copper/lead rougher concentrate to a target P_{80} of 20 to 25 μm in the presence of zinc sulphate and sodium cyanide used as zinc depressant, additional lime to maintain an elevated pH and additional 3418A collector.
- Three stages of copper/lead cleaners at pH 10 controlled with lime with further 3418A collector addition and MIBC frother.

- Copper/lead separation on the third copper/lead cleaner concentrate at pH 11 in the presence of sodium cyanide with additional 3418A collector and MIBC frother, followed by one cleaning stage at pH 11 with further addition of sodium cyanide, 3418A collector and MIBC frother to produce an upgraded lead concentrate. The rougher tails from the copper/lead separation float constitute the copper concentrate.
- The copper/lead rougher tails and the copper/lead first cleaner tails, feed to the zinc rougher float, are conditioned at pH 11.8 adjusted with lime in the presence of copper sulphate activator.
- Zinc rougher flotation using Aero 5100 as collector with further lime addition to maintain pH 11.8 and further MIBC frother addition.
- Regrind of the zinc rougher concentrate to a target P_{80} of 15 to 20 µm in the presence of additional copper sulphate activator and additional lime to maintain pH 12.
- The reground zinc rougher concentrate was submitted to four zinc cleaning stages with further additions of lime to maintain pH 12, and further Aero 5100 collector addition. The use of sodium metabisulphite (NaMBS) in the zinc cleaners improved the zinc grade to the final zinc cleaner concentrate.

13.4 Results of Lock Cycle Tests

A total of eight lock cycle tests were completed to quantify recoveries and concentrate grades for Keg Main Zone mineralization under conditions approaching steady state. Results are summarized in Table 13-2.

Table 13-2: Summary of Lock Cycle Test Results

Composite	**A**	**B**	**C**	**D**	**E**	**F**	**Avg.**	**Overall**	**Overall**
Test No.	**LCT2**	**LCT3**	**LCT4**	**LCT5**	**LCT6**	**LCT7**	**-**	**LCT1**	**LCT8**
Zinc Concentrate									
% Zn	**39.8**	**49.6**	**46.1**	**28.4**	**48.3**	**45.9**	**43.0**	**47.5**	**49.8**
% Pb	1.65	0.28	0.33	0.45	0.29	0.79	0.63	0.53	0.45
% Cu	1.08	1.11	0.75	0.56	0.71	1.17	0.90	0.91	0.79
g Ag/t	314	95	81	105	92	129	136	117	105
g In/t	90	291	325	249	658	305	320	358	384
% Sn	0.24	0.011	0.002	0.002	0.002	0.002	0.043	<0.002	0.063
% Zinc Recovery	**81.5**	**92.4**	**92.0**	**85.7**	**92.3**	**87.5**	**88.6**	**85.2**	**87.7**
% Silver Recovery	5.9	7.7	6.8	8.6	11.6	8.6	8.2	6.6	5.9
% Indium Recovery	68.8	82.1	63.3	73.6	87.7	70.4	74.3	72.2	77.5
Lead Concentrate									
% Pb	**67.3**	**59.7**	**68.2**	**65.8**	**64.4**	**65.1**	**65.1**	**65.5**	**59.4**
% Cu	3.87	5.85	3.89	3.73	3.86	3.95	4.19	4.90	7.02
% Zn	1.45	1.19	1.00	0.89	1.00	1.43	1.16	1.12	1.21
g Ag/t	7,761	4,521	5,507	6,647	4,895	5,567	5,816	5,924	5,559

g In/t	<50	<50	21	<50	<50	<50	<50	<50	<50
% Sn	1.28	0.51	0.18	0.25	0.15	0.28	0.44	0.44	0.49
% Lead Recovery	**82.9**	**82.9**	**84.9**	**82.4**	**77.5**	**83.9**	**82.4**	**84.8**	**86.0**
% Silver recovery	75.9	38.4	55.3	65.7	43.1	65.0	57.2	60.5	62.9
% Indium Recovery	n/a	n/a	0.5	n/a	n/a	n/a	n/a	n/a	n/a
Copper Concentrate									
% Cu	**23.5**	**29.8**	**29.0**	**25.2**	**28.2**	**27.6**	**27.2**	**28.8**	**28.1**
% Pb	5.93	0.89	2.62	6.79	3.96	4.37	4.09	2.65	2.43
% Zn	8.53	1.19	3.61	3.32	3.25	4.57	4.08	3.85	5.04
g Ag/t	1,454	1,351	1,326	2,062	1,468	1,089	1,458	1,442	1,328
g In/t	61	129	132	169	274	137	150	150	152
% Sn	5.73	1.84	0.76	1.09	0.78	1.72	1.99	2.04	1.88
% Copper Recovery	**62.3**	**80.2**	**75.3**	**59.0**	**72.2**	**67.6**	**69.4**	**71.4**	**69.2**
% Silver Recovery	8.8	42.3	26.2	14.6	28.9	15.6	22.7	22.0	20.5
% Indium Recovery	14.4	14.0	6.1	3.8	5.6	7.5	8.6	7.9	8.0

A comparison of head grade versus recovery for the lock cycle tests is presented in Table 13-3.

Table 13-3: Lock Cycle Tests – Comparison of Head Grades and Recoveries

Composite	**Assay Head Grade**					**% Recovery**				
	Zn (%)	**Pb (%)**	**Cu (%)**	**Ag (g/t)**	**In (g/t)**	**Zn**	**Pb**	**Cu**	**Ag(1)**	**In(2)**
A	0.69	0.62	0.18	89.1	1.7	81.5	82.9	62.3	84.7	83.2
B	2.30	0.30	0.60	56.2	15.6	92.4	82.9	80.2	80.7	96.1
C	1.67	0.34	0.31	44.1	13.1	92.0	84.9	75.3	81.5	69.4
D	0.89	0.27	0.10	32.3	8.8	85.7	82.4	59.0	80.3	77.4
E	1.28	0.15	0.14	21.1	19.5	92.3	77.5	72.2	72.0	93.3
F	1.14	0.28	0.19	32.7	9.1	87.5	83.9	67.6	80.6	77.9
Average	1.33	0.33	0.25	45.9	11.3	88.6	82.4	69.4	80.0	82.9
Overall	1.36	0.31	0.27	41.6	11.4	85.2	84.8	71.4	82.5	80.1
Overall NaMBS	1.36	0.31	0.27	41.6	11.4	87.7	86.0	69.2	83.4	85.5

Notes: 1. Combined silver recovery to lead and copper concentrate
2. Combined indium recovery to zinc and copper concentrate

The results of the lock cycle tests on all test composites show that Keg Main Zone mineralization responds very well to typical copper/lead/zinc flotation circuits with excellent recoveries of payable metals and acceptable copper, lead and zinc concentrate grades in copper, lead and zinc concentrates. General comments and observations on the lock cycle results include the following:

- There was generally good agreement between the results of the Overall Composite and the average results of the six variability composites, both with respect to grades and recoveries.
- Zinc concentrate grades of greater than 45% zinc were achievable on composites with head grades greater than 1.0 % zinc. The use of sodium metabisulphite (NaMBS) in the zinc cleaner circuit leads to a higher zinc grade in the zinc concentrate (approaching 50% zinc) without impacting on zinc recovery.
- The lead grade in the lead concentrate, which averaged 65% lead, was independent of the head grade of the composites. Excellent lead concentrate grades were achieved even down to a low head grade of 0.15% lead. The lower lead concentrate grade in the lead concentrate from the last lock cycle test (59.4% lead versus 65.5% lead in the first lock cycle test) was due to an increase in cleaner flotation time in the copper/lead cleaner float, which pulled more weight to the third copper/lead cleaner concentrate and impacted on copper/lead separation.
- Excellent copper grades were obtained in the copper concentrate, averaging 27.2% copper, even for the composites with relatively low copper head grade.
- Zinc recoveries to zinc concentrate averaged 88.6% and were generally over 90% for composites with zinc head grades greater than 1.0% zinc.
- Lead recoveries to lead concentrate averaged 82.4% and were all greater than 80% except for the one composite with a low lead head grade which had a 77.5% lead recovery for a 0.15% lead head grade, still quite acceptable for a low head grade.
- Copper recoveries averaged 69.4% and generally followed copper head grade, ranging from 80.2% recovery for a 0.60% copper head grade to 59.0% for a 0.10% copper head grade.
- Excellent silver recoveries were achieved, averaging 57.2% recovery to lead concentrate assaying an average of 5,816 g/t silver, and 22.7% recovery to copper concentrate assaying an average of 1,458 g/t silver. A minor amount, an average of 8.2%, reported to the zinc concentrate which assayed an average of 136 g/t silver. Silver head grade did not have much impact on overall silver recovery.
- The majority of the recoverable indium reported to the zinc concentrate, averaging 74.3% recovery and assaying an average of 320 g/t indium. A lesser amount, 8.6%, was recovered to the copper concentrate assaying an average of 150 g/t indium. No indium reported to the lead concentrate. Indium head grade did not seem to have an impact on overall indium recovery.
- The average tin grades were 1.99% tin in the copper concentrate, 0.44% tin in the lead concentrate and 0.04% in the zinc concentrate. The majority of the tin, an average of 60%, was not recovered and reported to the final float tails which had an average tails tin assay of 0.025% tin.

13.5 Concentrate Analyses

Key analyses of the copper, lead and zinc concentrates, composites of the concentrates from the six cycles (A-F) of the lock cycle tests, are summarized in Table 13-4. These analyses can be used as preliminary data in marketing studies and for developing smelter terms for each concentrate.

Table 13-4: Lock Cycle Tests – Key Analyses of Concentrates

Element	Unit	Overall Comp.	Comp A	Comp B	Comp C	Comp D	Comp E	Comp F
Copper Concentrate								
Cu	%	28.6	23.9	29.8	28.5	24.7	28.0	27.2
Pb	%	3.01	5.53	1.02	2.86	8.23	4.10	4.49
Zn	%	3.52	8.50	2.77	3.65	2.76	3.34	4.43
Ag	g/t	1,455	1,454	1,346	1,323	n/a	1,494	1,107
In	g/t	137	53	123	130	n/a	288	132
Sn	%	1.81	5.94	1.52	0.67	n/a	n/a	1.13
Fe	%	26.2	20.7	27.3	26.8	23.4	26.4	25.8
S	%	31.2	29.7	32.4	31.9	n/a	31.6	31.5
Si	%	0.43	0.45	0.51	0.50	n/a	0.54	0.60
Hg	ppm	<0.3	0.4	<0.3	<0.3	n/a	<0.3	<0.3
As	%	0.007	0.0131	<0.003	0.0095	n/a	n/a	0.0475
Bi	%	0.258	0.278	0.127	0.304	n/a	n/a	0.226
Cd	%	0.0773	0.167	0.064	0.0827	n/a	n/a	0.0909
Co	%	0.00139	0.00145	0.00143	0.00136	n/a	n/a	0.000982
Mg	%	0.0577	0.0601	0.0674	0.0626	n/a	n/a	0.0891
Mo	%	0.00136	0.00016	0.00021	0.000782	n/a	n/a	0.00408
Ni	%	0.00308	0.00263	0.00195	0.00339	n/a	n/a	0.00521
Sb	%	0.00564	0.00857	0.00181	0.0035	n/a	n/a	0.00595
Se	%	0.0672	0.0925	0.0372	0.0735	n/a	n/a	0.0882
Lead Concentrate								
Cu	%	5.42	4.02	6.28	3.90	3.73	3.86	4.07
Pb	%	62.9	66.4	58.0	67.1	65.8	64.4	63.0
Zn	%	1.18	1.57	1.16	1.03	0.89	1.00	1.38
Ag	g/t	5,950	7,763	4,568	5,553	n/a	n/a	5,558
In	g/t	n/a	<50	<50	<50	n/a	n/a	<50
Sn	%	n/a	1.25	n/a	n/a	n/a	n/a	n/a
Fe	%	6.55	3.77	8.08	5.16	5.18	5.25	5.77
S	%	n/a	14.2	15.9	13.8	n/a	n/a	14.6
Si	%	n/a	0.34	0.78	0.54	n/a	n/a	0.69
Hg	ppm	n/a	<0.3	<0.3	<0.3	n/a	n/a	<0.3
As	%	n/a	0.0067	n/a	n/a	n/a	n/a	n/a
Bi	%	n/a	1.6	n/a	n/a	n/a	n/a	n/a
Cd	%	n/a	0.0372	n/a	n/a	n/a	n/a	n/a
Co	%	n/a	0.00043	n/a	n/a	n/a	n/a	n/a
Mg	%	n/a	0.0316	n/a	n/a	n/a	n/a	n/a
Mo	%	n/a	0.00031	n/a	n/a	n/a	n/a	n/a

Ni	%	n/a	0.00138	n/a	n/a	n/a	n/a	n/a
Sb	%	n/a	0.0317	n/a	n/a	n/a	n/a	n/a
Se	%	n/a	0.88	n/a	n/a	n/a	n/a	n/a
Zinc Concentrate								
Cu	%	0.93	1.06	1.07	0.59	0.57	0.66	1.02
Pb	%	0.55	1.66	0.28	0.25	0.45	0.28	0.70
Zn	%	48.8	42.0	49.7	47.5	30.0	47.6	46.4
Ag	g/t	125	314	108	66.5	109	82.8	124
In	g/t	364	88	278	333	256	691	329
Sn	%	0.10	0.30	0.14	0.04	0.04	0.05	0.08
Fe	%	14.5	20.2	13.4	14.5	30.1	14.4	14.8
S	%	33.3	33.1	33.4	33.2	34.6	33.3	33.0
Si	%	0.22	0.37	0.19	0.26	0.59	0.39	0.33
Hg	ppm	0.4	0.7	0.3	0.4	0.4	<0.3	0.3
As	%	0.0086	0.005	<0.003	0.0042	0.0058	0.0036	0.0238
Bi	%	0.0208	0.0534	0.0127	0.0105	0.0288	0.0219	0.0258
Cd	%	0.988	0.722	1.19	0.973	0.616	1.07	0.958
Co	%	0.00751	0.0052	0.00663	0.00855	0.00626	0.0118	0.00544
Mg	%	0.0353	0.0446	0.0334	0.0411	0.0736	0.0385	0.0591
Mo	%	0.00228	0.0005	0.00029	0.00055	0.00253	0.00378	0.00726
Ni	%	0.00532	0.0238	0.00281	0.00639	0.0269	0.00614	0.00689
Sb	%	0.00086	0.0026	0.00047	0.00043	0.00181	0.00045	0.00126
Se	%	0.0461	0.0508	0.0438	0.0407	0.0287	0.0412	0.0415

13.6 Tailings Characterization

Tailings solids analyses and the tailings supernatant aging test results to Day 28 are summarized in Tables 13-5 and 13-6. These data can be used in preliminary environmental studies for the project.

Table 13-5: Lock Cycle Test No. 1 – Flotation Tailings Solids Analysis

Analyte	Unit	Value	
		LCT1 Zn Rougher Tails	LCT1 Zn 1st Cleaner Scav Tails
Elemental Analysis			
Si	%	28.1	11.2
Hg	%	<0.00001	<0.00001
Al	%	3.8	1.9
As	%	0.071	1.70
B	%	0.0049	0.0025
Ba	%	0.13	0.048
Be	%	0.0001	0.00005
Bi	%	0.0027	0.014
Ca	%	7.9	5.1

Cd	%	0.0005	0.03
Co	%	0.0005	0.0069
Cr	%	0.01	0.049
Cu	%	0.017	0.21
In	%	0.00006	0.0021
Fe	%	3.1	30
K	%	1.9	0.9
Li	%	0.0035	0.0024
Mg	%	2.1	1.2
Mn	%	0.19	0.13
Mo	%	0.0006	0.0012
Na	%	0.12	0.028
Ni	%	0.0025	0.032
P	%	0.08	0.038
Pb	%	0.022	0.081
Sb	%	0.001	0.0026
Se	%	0.0006	0.012
Sn	%	0.023	0.024
Sr	%	0.016	0.009
Th	%	0.0008	0.0003
Ti	%	0.24	0.13
Tl	%	0.00007	0.00004
U	%	0.0003	0.0002
V	%	0.01	0.0047
W	%	0.0004	0.0004
Y	%	0.0019	0.001
Zn	%	0.037	2.0
Acid Base Accounting Measurements			
Neutralizing Potential (NP)	t $CaCO_3$/1000 t	62.9	70.9
Acid Producing Potential (AP)	t $CaCO_3$/1000 t	21.7	370
NP/AP Ratio	-	2.90	0.19
Net Acid Generation (NAG) pH 4.5	kg H_2SO_4/tonne	0	13
Net Acid Generation (NAG) pH 7.0	kg H_2SO_4/tonne	0	56

Table 13-6: Lock Cycle Test No. 1 – Combined Flotation Tailings Supernatant Aging Test Assays

Analyte	Unit	Day 0	Day 3	Day 7	Day 14	Day 28
TSS	mg/L	29	5	3	2	6
pH	units	10.3	8.04	7.59	6.99	6.77
Conductivity	µS/cm	915	952	960	948	1150
Alkalinity	mg/L as $CaCO_3$	54	31	28	16	34
Acidity	mg/L as $CaCO_3$	80	76	104	56	n/a
TDS	mg/L	751	731	763	723	849
F	mg/L	0.54	0.54	0.55	0.86	0.55
Tot. Reac. P	mg/L	0.20	0.23	0.15	0.20	0.11
Cl	mg/L	25	0.3	26	28	30
NO_2	as N mg/L	< 0.06	< 0.06	< 0.06	< 0.06	0.10
NO_3	as N mg/L	0.07	0.08	0.09	0.08	0.10
SO_4	mg/L	260	2.7	260	260	340
NH_3+NH_4	as N mg/L	0.5	0.3	0.4	0.2	0.3
Hg	µg/L	< 0.1	< 0.1	< 0.1	< 0.1	0.03
Ag	mg/L	0.00055	0.00068	0.00025	0.00184	0.00727
Al	mg/L	1.24	0.16	0.16	0.09	0.06
As	mg/L	1.78	1.71	1.60	1.62	1.43
Ba	mg/L	0.0597	0.0419	0.0403	0.0401	0.0464
Be	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
B	mg/L	0.148	0.140	0.120	0.125	0.115
Bi	mg/L	0.00093	0.00017	0.00035	0.00023	n/a
Ca	mg/L	172	161	159	170	n/a
Cd	mg/L	0.00609	0.00115	0.00265	0.0013	n/a
Co	mg/L	0.000384	0.000221	0.000318	0.000248	0.000305
Cr	mg/L	0.0032	0.0006	0.0018	< 0.0005	0.0005
Cu	mg/L	0.0557	0.0065	0.0098	0.0124	0.0496
Fe	mg/L	1.42	0.081	0.190	0.092	0.268
In	mg/L	0.00029	0.00003	0.00012	0.00002	0.00080
K	mg/L	10.8	11.0	10.2	11.4	13.1
Li	mg/L	0.004	0.006	0.007	0.007	0.009
Mg	mg/L	0.460	0.136	0.232	0.351	0.837
Mn	mg/L	0.0499	0.0028	0.0060	0.0028	0.00863
Mo	mg/L	0.110	0.106	0.0961	0.105	0.116
Na	mg/L	28.1	28.8	27.2	29.8	34.2
Ni	mg/L	0.0031	0.0014	0.0028	0.0016	0.0019
P	mg/L	0.116	0.081	0.080	0.094	n/a
Pb	mg/L	0.0204	0.0016	0.0029	0.0015	0.00251
Sb	mg/L	0.0093	0.0115	0.0114	0.0157	0.0321
Se	mg/L	0.137	0.117	0.084	0.091	0.097

Si	mg/L	9.21	5.79	4.95	4.77	4.56
Sn	mg/L	0.0505	0.0430	0.0513	0.0482	0.0501
Sr	mg/L	0.524	0.518	0.499	0.541	0.636
Th	mg/L	0.000154	< 0.000004	0.000110	0.000006	n/a
Ti	mg/L	0.0557	0.0036	0.0034	0.0024	0.0013
Tl	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
U	mg/L	0.000065	0.000044	0.000068	0.000129	0.000352
V	mg/L	0.0174	0.0121	0.0101	0.0088	0.00434
W	mg/L	0.01057	0.0108	0.0105	0.0111	0.0133
Y	mg/L	0.000539	0.000017	0.000017	0.000007	0.000022
Zn	mg/L	0.289	0.035	0.090	0.040	n/a

A static settling test was completed on the zinc flotation tailings from Test LCT1. This test showed that a thickened tailings density of 69% solids (w/w) could be achieved using a feed pulp density of 10% solids (w/w) and a Magnafloc 10 flocculant dosage of 8 g/t. Allowing for a 25% design factor the thickener unit area was measured at 0.10 m^2/t/day implying that the Keg Main Zone flotation tailings settle relatively well.

14.0 MINERAL RESOURCE ESTIMATE

14.1 Introduction

Silver Range contracted Giroux Consultants Ltd. to complete a mineral resource estimate on the Keg Main Zone. The mineral resource was estimated by Gary Giroux, P.Eng., MASc. who is a qualified person and independent of both the issuer and the title holder, based on the tests outlined in National Instrument 43-101.

The database supplied for this mineral resource has an effective date of October 1, 2012 and contained information on 69 diamond drill holes. A list of drill holes provided is contained in Appendix II.

14.2 Data Analysis

A geologic solid was provided by Matthew Dumala, P.Eng. from Archer Cathro. Keg Main Zone comprises a system of structurally and stratigraphically controlled mineralization within a package of strongly hydrothermally altered and locally skarnified limestone and siltstone. The geologic model focused on defining the upper and lower boundaries of the mineralized zone. Mineralization occurs almost everywhere within this zone; however, much of it is pyrrhotite and not economical. The thickest, highest grade mineralization appears to be localized in a fold hinge where axial planar fractures cut this package (north edge of the deposit, near surface). Of particular interest is a higher grade silver and lead zone that occurs at or near surface on the northern edge of the drill area and is almost entirely fracture controlled. This silver and lead rich zone outcrops in places.

Drill holes were "passed through" this geologic solid with the entry and exit points recorded. Using this information the assays were "back tagged" with a code of MIN if inside the solid and WASTE if outside. Of the 69 supplied drill holes, 53 holes totalling 18,377 m intersected the mineralized solid (See Appendix II – Holes intersecting the mineralized solid are highlighted). Figure 22 shows the drill holes in plan view with samples within the mineralized solid shown in magenta, while Figure 23 provides an isometric view looking southwest at the mineralized solid, drill hole traces and surface topography.

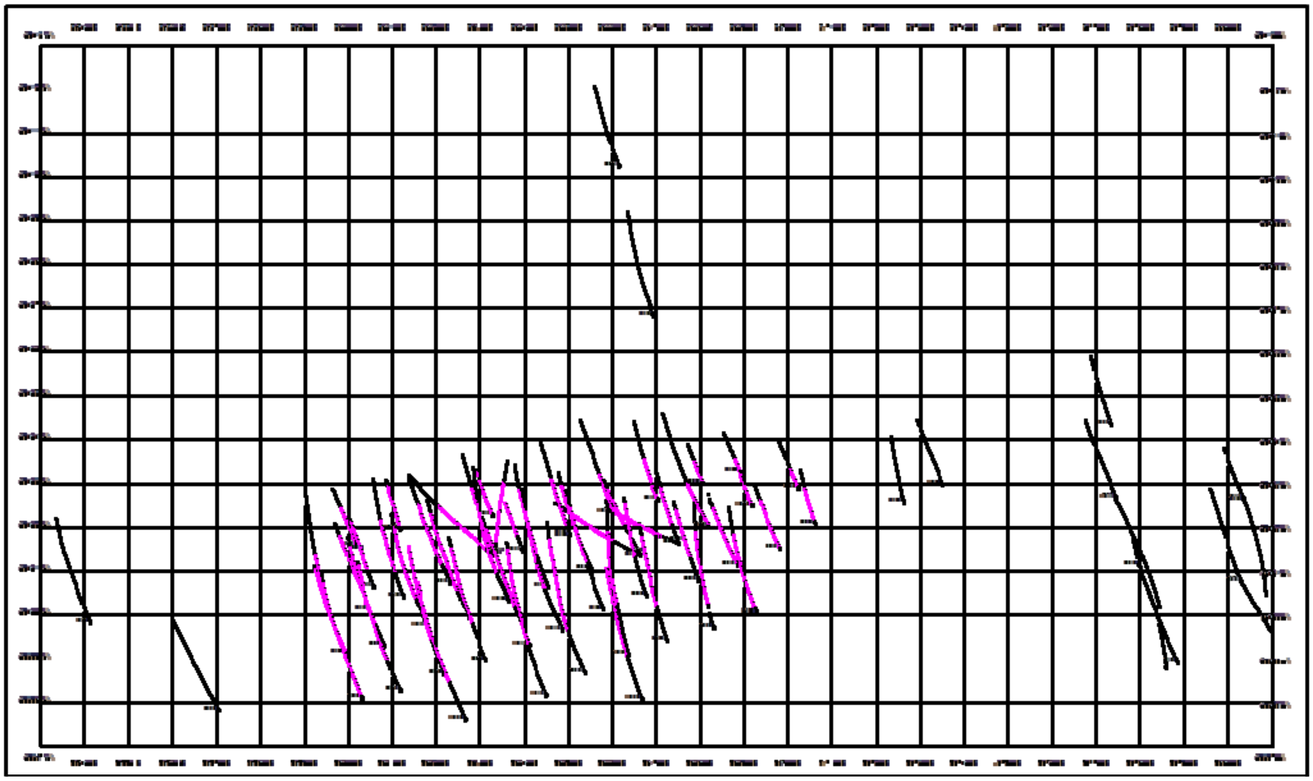


Figure 22 – Plan view showing drill hole traces with samples within mineralized solid in magenta

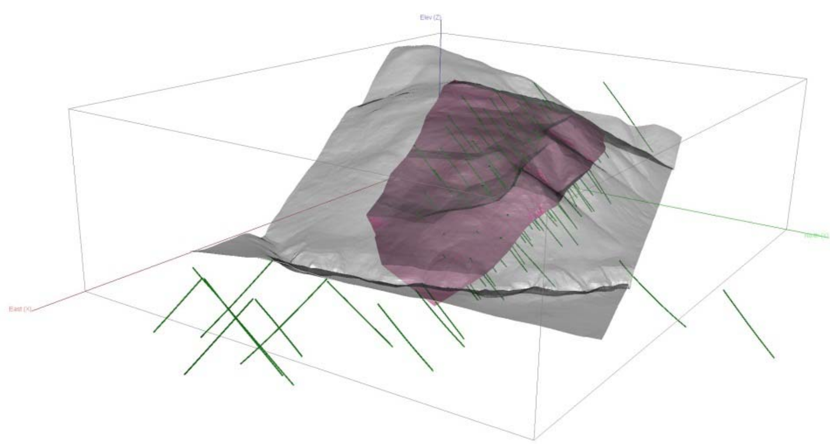


Figure 23 – Isometric view looking SW showing mineralized solid, drill hole traces and surface topography

Statistics for the raw assay data are listed below in Table 14-1 for the mineralized solid and for the surrounding waste.

Table 14-1: Assays within the Mineralized Solid and Waste

	Ag (g/t)	**Pb (%)**	**Zn (%)**	**Cu (%)**	**Sn (ppm)**	**In (ppm)**	**Cd (ppm)**
Within Mineralized Solid (Using 4385 Samples)							
Mean grade	15.66	0.15	0.55	0.09	159.2	4.82	96.49
Standard deviation	46.21	0.52	1.32	0.22	362.7	12.62	189.09
Minimum value	0.01	0.001	0.001	0.001	0.1	0.003	0.01
Maximum value	1230.0	9.3	17.5	4.8	10400	320	1000
Coefficient of variation	2.95	3.58	2.42	2.37	2.28	2.62	1.96
Waste (Using 3684 Samples)							
Mean grade	2.54	0.02	0.06	0.01	52.5	0.26	10.42
Standard deviation	8.95	0.12	0.22	0.03	95.7	1.00	35.63
Minimum value	0.01	0.001	0.001	0.001	0.1	0.003	0.01
Maximum value	158.0	2.9	5.7	1.0	2600	28	801
Coefficient of variation	3.52	4.94	3.44	2.23	1.82	3.92	3.42

To determine if capping was required and if so at what level, the grade distributions for each variable in each domain were examined using lognormal cumulative frequency plots. The procedure used is explained in a paper by Dr. A.J. Sinclair (1976) titled "Applications of probability graphs in mineral exploration." In short, the cumulative distribution of a single normal distribution will plot as a straight line on probability paper while a single lognormal distribution will plot as a straight line on lognormal probability paper. Overlapping populations will plot as curves separated by inflection points. Sinclair proposed a method of separating out these overlapping populations using a technique called partitioning. In 1993, a computer program called P-RES was made available to partition probability plots interactively on a computer (Bentzen and Sinclair, 1993). A screen dump from this program is shown for silver within the mineralized zone in Figure 24. The actual data distribution is shown as black dots. The inflection points that separate the populations are shown as vertical lines and each population is shown by the straight lines of open circles. The interpretation is tested by recombining the data in the proportions selected and the test is shown as triangles compared to the original distribution. Each variable is examined in the following section with the populations broken out and thresholds selected for capping if required.

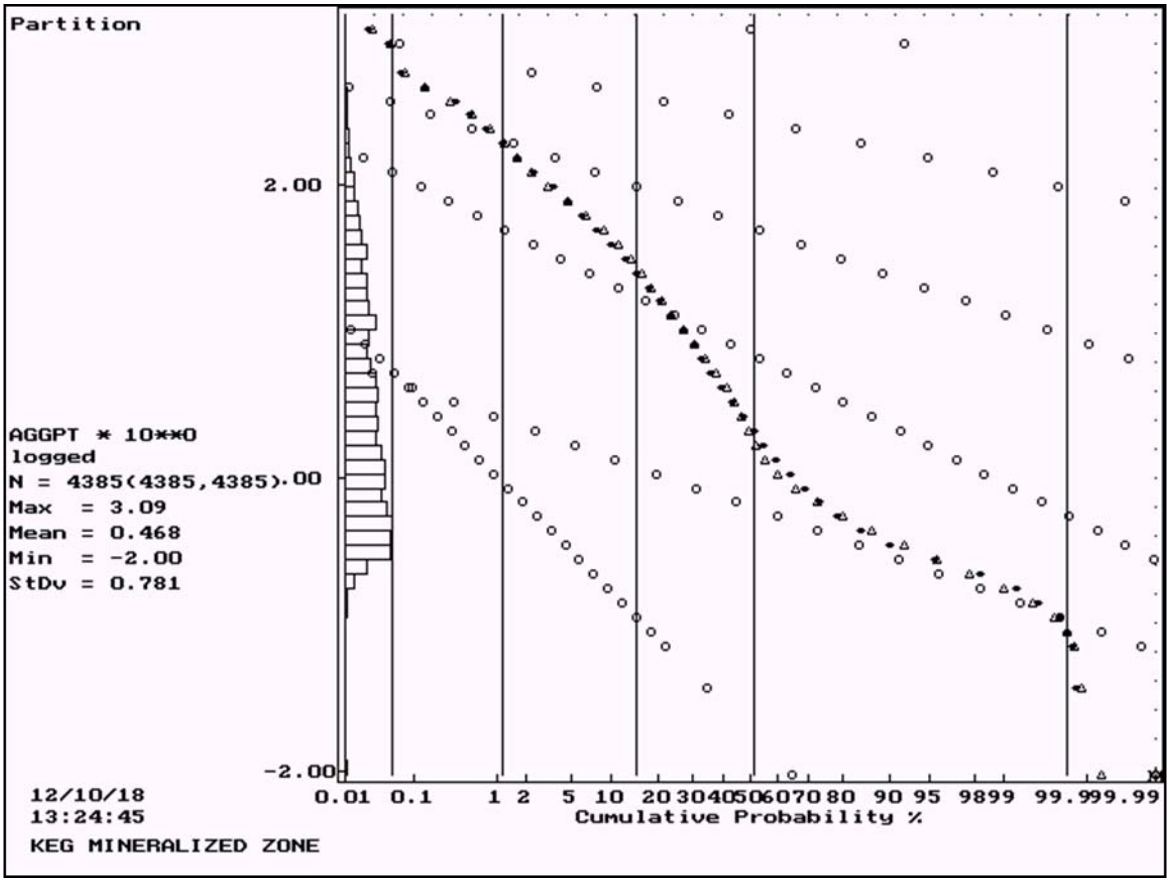


Figure 24 – Lognormal cumulative frequency plot for silver in mineralized solid

The plot shows six overlapping lognormal populations, as tabulated in Table 14-2.

Table 14-2: Silver Populations within the Mineralized Solid

Population	Mean Ag (g/t)	Percentage of Total Data	Number of Assays
1	1134.0	0.05%	2
2	273.9	1.10%	48
3	51.3	13.63%	598
4	6.9	36.55%	1603
5	0.6	48.49%	2126
6	0.02	0.18%	8

Population 1 representing 0.05% of the total samples was considered erratic outlier material and a value of two standard deviations above the mean of Population 2 was used to cap three assays at 576 g/t silver. A similar procedure was used for the other six elements within the mineralized zone and all seven variables within waste. The cap levels are summarized in Table 14-3.

Table 14-3: Capping Levels for all Variables within the Mineralized Solid and Waste

Domain	Variable	Cap Level	Number Capped
Mineralized Solid	Ag	576 g/t	3
	Pb	10.3%	0
	Zn	18.0%	0
	Cu	2.6%	3
	Sn	5280 ppm	4
	In	122 ppm	3
	Cd	1100 ppm	0
Waste	Ag	64 g/t	16
	Pb	1.3%	7
	Zn	2.4%	7
	Cu	0.3%	7
	Sn	1050 ppm	3
	In	10 ppm	5
	Cd	310 ppm	8

The results of capping are shown in Table 14-4.

Table 14-4: Capped Assays within the Mineralized Solid and Waste

	Ag (g/t)	Pb (%)	Zn (%)	Cu (%)	Sn ppm	In ppm	Cd Ppm
Within Mineralized Solid (Using 4385 Samples)							
Mean Grade	15.40	0.15	0.55	0.09	157.1	4.75	96.49
Standard Deviation	41.42	0.52	1.32	0.20	320.8	11.52	189.09
Minimum Value	0.01	0.001	0.001	0.001	0.1	0.003	0.01
Maximum Value	576.0	9.3	17.5	2.6	5280.0	122	1000
Coefficient of Variation	2.69	3.58	2.42	2.22	2.04	2.42	1.96
Waste (Using 3684 Samples)							
Mean Grade	2.32	0.02	0.06	0.01	51.8	0.24	9.80
Standard Deviation	6.14	0.09	0.17	0.02	83.0	0.78	26.17
Minimum Value	0.01	0.001	0.001	0.001	0.1	0.003	0.01
Maximum Value	64.0	1.3	2.4	0.3	1050	10	310
Coefficient of Variation	2.65	3.84	2.72	1.76	1.60	3.22	2.67

14.3 Composites

Uniform down hole composites, 5 m in length, were produced to honour the mineralized solid. Intervals at the solid boundaries, less than 2.5 m in length, were combined with adjoining samples to produce a uniform support of 5 ± 2.5 m. Composites were also produced for areas outside the mineralized solid in areas considered waste. Unsampled intervals at the tops and bottoms of holes were set to low values and used to produce the waste composites. Table 14-5 shows the statistics for both sets of 5 m composites.

Table 14-5: Five Metre Composites within the Mineralized Solid and Waste

	Ag (g/t)	Pb (%)	Zn (%)	Cu (%)	Sn ppm	In ppm	Cd Ppm
Within Mineralized Solid (Using 2202 Samples)							
Mean Grade	10.42	0.10	0.36	0.07	124.3	3.15	65.72
Standard Deviation	21.92	0.25	0.66	0.11	204.8	6.21	110.24
Minimum Value	0.01	0.001	0.001	0.001	0.1	0.003	0.01
Maximum Value	273.9	3.3	10.2	1.5	2471.7	57.9	812.2
Coefficient of Variation	2.10	2.59	1.83	1.66	1.65	1.97	1.68
Waste (Using 2394 Samples)							
Mean Grade	1.81	0.02	0.05	0.01	44.2	0.19	7.74
Standard Deviation	3.73	0.04	0.10	0.02	64.9	0.49	15.72
Minimum Value	0.01	0.001	0.001	0.001	0.1	0.003	0.01
Maximum Value	54.0	0.5	1.3	0.2	903.4	6.9	193.3
Coefficient of Variation	2.06	2.54	1.99	1.45	1.47	2.59	2.03

As all variables showed a strongly positive skewed grade distribution, a Pearson correlation matrix was generated for variables within the mineralized zone from log transformed values. The correlation matrix is provided in Table 14-6.

Table 14-6: Pearson Correlation Coefficients

	Ag	Pb	Zn	Cu	Sn	In	Cd
Ag (g/t)	1.0000						
Pb (%)	0.9098	1.0000					
Zn (%)	0.8359	0.7118	1.0000				
Cu (%)	0.6397	0.3743	0.6883	1.0000			
Sn (ppm)	0.8529	0.7525	0.7604	0.5706	1.0000		
In (ppm)	0.7408	0.5662	0.9461	0.7013	0.6733	1.0000	
Cd (ppm)	0.8330	0.6883	0.9891	0.6879	0.7787	0.9468	1.0000

In general, there is reasonable correlation between all variables but there is an excellent correlation (greater than .90) between silver-lead, zinc-indium, zinc-cadmium and indium-cadmium and good correlation (greater than .70) between silver-zinc, silver-tin, silver-indium, silver-cadmium, lead-zinc, lead-tin, zinc-tin, copper-indium and tin-cadmium.

14.4 Variography

Pairwise relative semivariograms were used to model each variable within the mineralized solid. The down hole direction was modeled first to establish the nugget effect and sill levels. A geometric anisotropy was identified in all cases with the two longest directions of continuity along strike at azimuth 75^{o} and plunging -15^{o} to the east and down dip at azimuth

345° dipping -50°. The third direction along azimuth 165° dipping -40° had no sample pairs closer than 50 m so a short range was assumed. The high correlation between variables is reflected in the variography, with all models similar in shape and overall distances. The nugget to sill ratio, a reflection of the sample variability, was quite reasonable ranging from a low of 20% for indium to a high of 37.5% for lead.

For waste material a single isotropic nested model was fit to all variables with the longest range a constant 180 m.

The models are summarized below in Table 14-7 and shown in Appendix III.

Table 14-7: Semivariogram Parameters

Domain	Variable	C_0	C_1	C_2	Az/Dip	Ranges (m)	Az/Dip	Ranges (m)	Az/Dip	Ranges (m)
Mineralized Solid	Ag	0.24	0.28	0.18	75/-15	35 – 120	345/-50	25 - 100	165/-40	15 - 40
	Pb	0.30	0.34	0.16	75/-15	30 – 120	345/-50	25 - 100	165/-40	15 - 40
	Zn	0.30	0.31	0.20	75/-15	45 – 130	345/-50	25 – 100	165/-40	15 - 40
	Cu	0.15	0.20	0.08	75/-15	25 – 120	345/-50	25 – 100	165/-40	15 - 40
	Sn	0.10	0.30	0.10	75/-15	40 – 120	345/-50	25 – 100	165/-40	15 - 40
	In	0.30	0.35	0.24	75/-15	40 – 120	345/-50	25 – 100	165/-40	15 - 40
	Cd	0.32	0.33	0.24	75/-15	50 – 100	345/-50	25 – 100	165/-40	15 - 40
Waste	Ag	0.25	0.30	0.31	Omni Directional			25 – 180		
	Pb	0.30	0.30	0.30	Omni Directional			25 – 180		
	Zn	0.28	0.30	0.36	Omni Directional			25 – 180		
	Cu	0.14	0.20	0.29	Omni Directional			32 – 180		
	Sn	0.14	0.30	0.26	Omni Directional			26 – 180		
	In	0.30	0.30	0.47	Omni Directional			30 – 180		
	Cd	0.30	0.38	0.32	Omni Directional			25 – 180		

14.5 Block Model

A block model with blocks 20 x 20 x 5 m in dimension was built to cover the mineralized solid. Within each block the percentage below surface topography and the percentage within the mineralized solid were recorded. The block model origin is described below and Figure 25 provides an isometric view looking north of the blocks (in white) and mineralized composites (in magenta).

Lower left corner of model		
585800 East	Column Size = 20 m	71 Columns
6939540 North	Row Size = 20 m	45 Rows
Top of Model		
1345 Elevation	Level Size = 5 m	119 Levels
No Rotation		

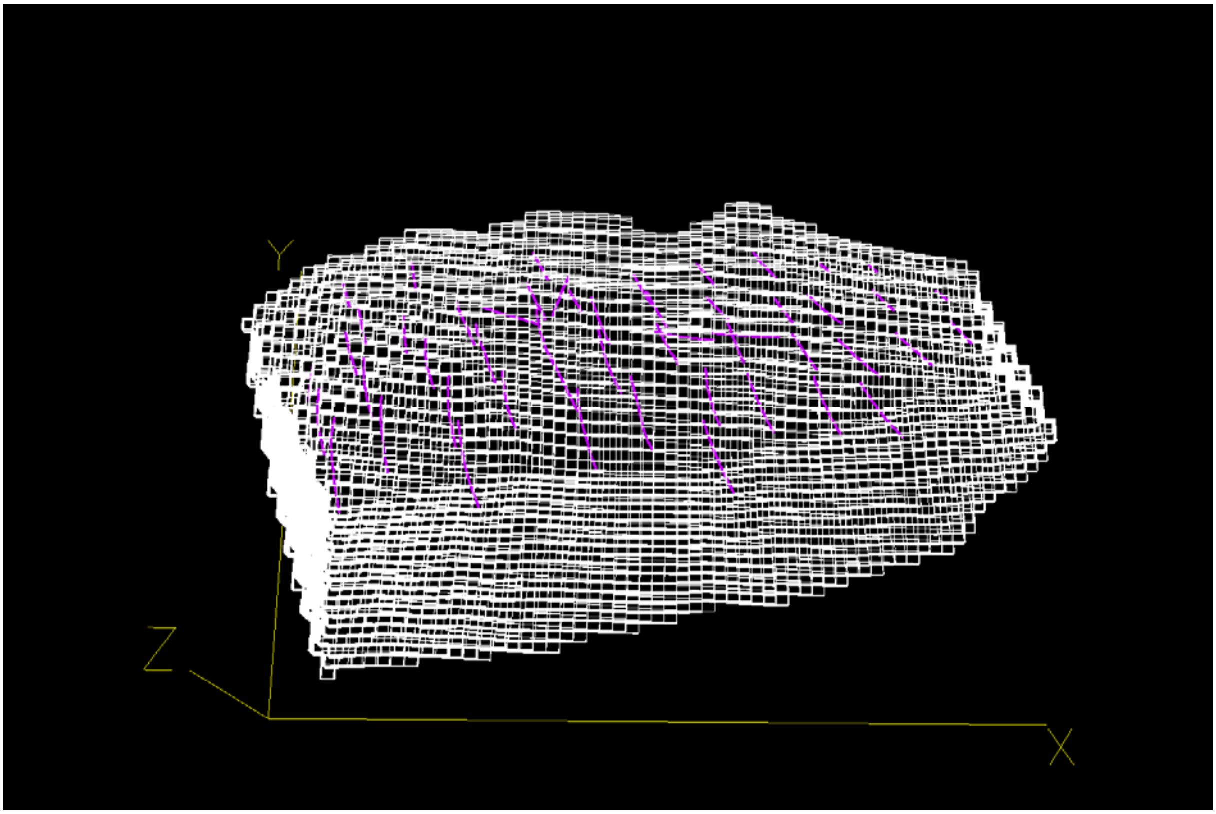


Figure 25 – Isometric view looking North showing blocks in white and mineralized composites in magenta

14.6 Bulk Density

The bulk density for rock at Keg Main Zone was established from 907 specific gravity determinations made from pieces of drill core using the weight in air - weight in water procedure. The results are shown in Appendix IV and the results are summarized as a function of rock type in Table 14-8.

Table 14-8: Specific Gravity Determinations Sorted by Rock Type

Rock Type	Number	Minimum	Maximum	Average
ARG	46	2.38	2.87	2.66
CGL	5	2.62	3.64	2.86
CHT	29	2.48	3.51	2.81
CSL	3	2.63	2.92	2.75
FLR	14	2.31	2.74	2.59
ICL	425	1.84	3.59	2.76
LST	50	2.22	3.07	2.71
MET	7	2.49	2.73	2.60
OVB	1			2.68

SLA	2			2.65
SLM	1			2.59
SLT	252	2.29	3.30	2.71
SSS	72	2.33	3.23	2.73
Total	**907**	**1.84**	**3.64**	**2.73**

As can be seen from Table 14-8 there is a wide range of specific gravities in most of the rock types and the specific gravity of any given sample is more a function of sulphide content than host rock type. As a result, a specific gravity value was interpolated into each block in the model using the inversed distance squared procedure.

14.7 Grade Interpolation

Grades for silver, lead, zinc, copper, tin, indium and cadmium were interpolated into blocks within the mineralized solid using Ordinary Kriging. The kriging exercise was completed in a series of four passes with the search ellipse for each pass determined by the range of the semivariogram in each of the three principal directions. In the first pass the search ellipse dimensions were set to one quarter of the semivariogram range and a minimum of four composites were required to estimate a block. For blocks not estimated in Pass 1 a second pass was completed expanding the search ellipse to half the semivariogram range. Again a minimum of four composites were required to estimate the block. A third pass using the full range and a fourth pass using twice the range completed the kriging exercise. In all cases the maximum number of composites used was set to 12 with a maximum of three composites allowed from any given drill hole. This insured that each block was estimated using a minimum of two drill holes.

For all estimated blocks with some percentage outside the mineralized solid, in waste, a similar exercise was completed using only composites outside the mineralized solid. In this manner the edge dilution was determined for estimated blocks from actual assays.

Finally for all estimated blocks a specific gravity value was estimated using Inverse Distance Squared interpolation.

The search parameters and number of blocks estimated in each pass are shown in Table 14-9 for silver.

Table 14-9: Kriging Search Parameters for Silver

Domain	Pass	Number Estimated	Az/Dip	Dist. (m)	Az/Dip	Dist. (m)	Az/Dip	Dist. (m)
Ag in Mineralized Solid	1	119	75°/-15°	30.0	345°/-50°	25.0	165°/-40°	10.0
	2	1,577	75°/-15°	60.0	345°/-50°	50.0	165°/-40°	20.0
	3	26,736	75°/-15°	120.0	345°/-50°	100.0	165°/-40°	40.0
	4	23,344	75°/-15°	240.0	345°/-50°	200.0	165°/-40°	80.0
Ag in Waste	1	574	Omni Directional			45.0		
	2	4,746	Omni Directional			90.0		

	3	3,196	Omni Directional	180.0		
	4	125	Omni Directional	360.0		

14.8 Classification

Based on the study herein reported, delineated mineralization of Keg Main Zone is classified as a mineral resource according to the following definitions from National Instrument 43-101 and from CIM (2005):

"In this Instrument, the terms "mineral resource", "inferred mineral resource", "indicated mineral resource" and "measured mineral resource" have the meanings ascribed to those terms by the Canadian Institute of Mining, Metallurgy and Petroleum, as the CIM Definition Standards on Mineral Resources and Mineral Reserves adopted by CIM Council, as those definitions may be amended."

The terms Measured, Indicated and Inferred are defined by CIM (2005) as follows:

"A Mineral Resource is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge."

"The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of technical, economic, legal, environmental, socio-economic and governmental factors. The phrase 'reasonable prospects for economic extraction' implies a judgment by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. A Mineral Resource is an inventory of mineralization that under realistically assumed and justifiable technical and economic conditions might become economically extractable. These assumptions must be presented explicitly in both public and technical reports."

Inferred Mineral Resource

"*An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, workings and drill holes."*

"Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic

parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies."

Indicated Mineral Resource

"An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed."

"Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions."

Within the Property surface mapping and drill hole interpretation was used to establish the limits of the mineralized solid and hence geologic continuity. Grade continuity can be quantified by semivariogram analysis. By orienting the search ellipse in the directions of maximum continuity, as established by variography, the grade continuity can be utilized to classify the resource.

In more developed properties, blocks estimated in Pass 1 using one quarter of the semivariogram range might be considered measured, while those estimated in Pass 2 using half the range might be indicated. In the case of Keg Main Zone, the drill hole spacing is still too coarse to classify any of this mineral resource as measured or indicated. Table 14-9 shows that only three percent of the blocks were estimated in Passes 1 and 2. As a result, all blocks are considered inferred at this time.

Table 14-10 shows the mineral resource estimated if one could mine to the limits of the mineralized solid. This mineral resource contains only the mineralized portions of blocks. A silver cut-off grade of 16 g/t is highlighted as a possible open pit cut-off grade, although at this time no economic evaluation has been completed.

Table 14-10: Inferred Mineral Resource within Mineralized Solid

Cut-off (Ag g/t)	Tonnes > Cut-off (tonnes)	Grade > Cut-off						
		Ag (g/t)	Pb (%)	Zn (%)	Cu (%)	Sn (ppm)	In (ppm)	Cd (ppm)
10.0	63,970,000	23.63	0.21	0.64	0.12	224.5	5.07	116.09
12.0	54,640,000	25.80	0.22	0.68	0.13	238.5	5.29	123.40
14.0	46,730,000	27.97	0.24	0.72	0.14	252.0	5.50	130.52
16.0	**39,760,000**	**30.25**	**0.26**	**0.77**	**0.15**	**265.7**	**5.77**	**138.06**
18.0	33,900,000	32.55	0.27	0.81	0.16	278.8	6.02	145.24
20.0	29,210,000	34.74	0.29	0.85	0.16	292.5	6.24	151.64
22.0	25,390,000	36.79	0.31	0.89	0.17	303.4	6.44	157.31
24.0	21,990,000	38.94	0.32	0.92	0.18	315.7	6.63	162.66
26.0	18,970,000	41.16	0.34	0.96	0.19	328.8	6.85	168.21
28.0	16,470,000	43.31	0.36	0.99	0.19	341.8	7.10	173.61
30.0	14,340,000	45.44	0.37	1.02	0.20	355.3	7.24	177.73
32.0	12,520,000	47.54	0.39	1.05	0.20	366.9	7.33	180.84
34.0	10,940,000	49.65	0.41	1.07	0.21	379.9	7.41	183.59
36.0	9,570,000	51.75	0.44	1.09	0.21	390.1	7.41	185.39
38.0	8,430,000	53.75	0.46	1.11	0.21	399.8	7.48	187.91
40.0	7,480,000	55.63	0.48	1.12	0.21	409.4	7.47	188.79

Table 14-11 show the grades and tonnages for the total blocks. This table includes edge dilution along the outside of the mineralized solids and represents the tonnage if whole 20 x 20 x 5 m blocks were mined.

Table 14-11: Inferred Mineral Resource within Total Blocks

Cut-off (Ag g/t)	Tonnes > Cut-off (tonnes)	Grade > Cut-off						
		Ag (g/t)	Pb (%)	Zn (%)	Cu (%)	Sn (ppm)	In (ppm)	Cd (ppm)
10.0	63,940,000	23.26	0.21	0.63	0.12	219.7	4.99	114.08
12.0	54,260,000	25.46	0.22	0.67	0.12	233.9	5.22	121.51
14.0	46,030,000	27.70	0.24	0.71	0.13	247.0	5.45	128.88
16.0	**38,980,000**	**30.00**	**0.25**	**0.76**	**0.14**	**260.5**	**5.73**	**136.50**
18.0	33,070,000	32.33	0.27	0.80	0.15	274.1	6.00	143.86
20.0	28,320,000	34.57	0.29	0.84	0.16	287.8	6.22	150.20
22.0	24,530,000	36.67	0.31	0.88	0.17	299.4	6.43	156.07
24.0	21,160,000	38.86	0.32	0.92	0.18	312.5	6.65	161.90
26.0	18,200,000	41.11	0.34	0.96	0.18	325.9	6.88	167.58
28.0	15,760,000	43.30	0.36	0.99	0.19	338.6	7.11	172.67
30.0	13,650,000	45.52	0.38	1.02	0.20	352.4	7.27	177.30
32.0	11,880,000	47.68	0.40	1.05	0.20	364.2	7.35	180.49

34.0	10,380,000	49.81	0.42	1.07	0.20	376.6	7.42	183.14
36.0	9,120,000	51.85	0.44	1.09	0.21	386.9	7.44	185.24
38.0	8,040,000	53.86	0.46	1.11	0.21	396.8	7.54	188.46
40.0	7,160,000	55.68	0.48	1.12	0.21	406.3	7.49	189.03

14.9 Model Verification

In order to verify the block model results, two methods were used: swath plots and cross sections.

Swath plots take slices through the mineral deposit comparing average grades of blocks with the average grades of composites. The results are shown for east-west slices (Figure 26), for north-south slices (Figure 27) and for slices in the vertical plane (Figure 28). In general, the block estimates match very well with the sample grades with the larger deviations occurring in areas with few sample points. The north-south plot shows pronounced zonation with the grades for both samples and blocks increasing systematically from south to north.

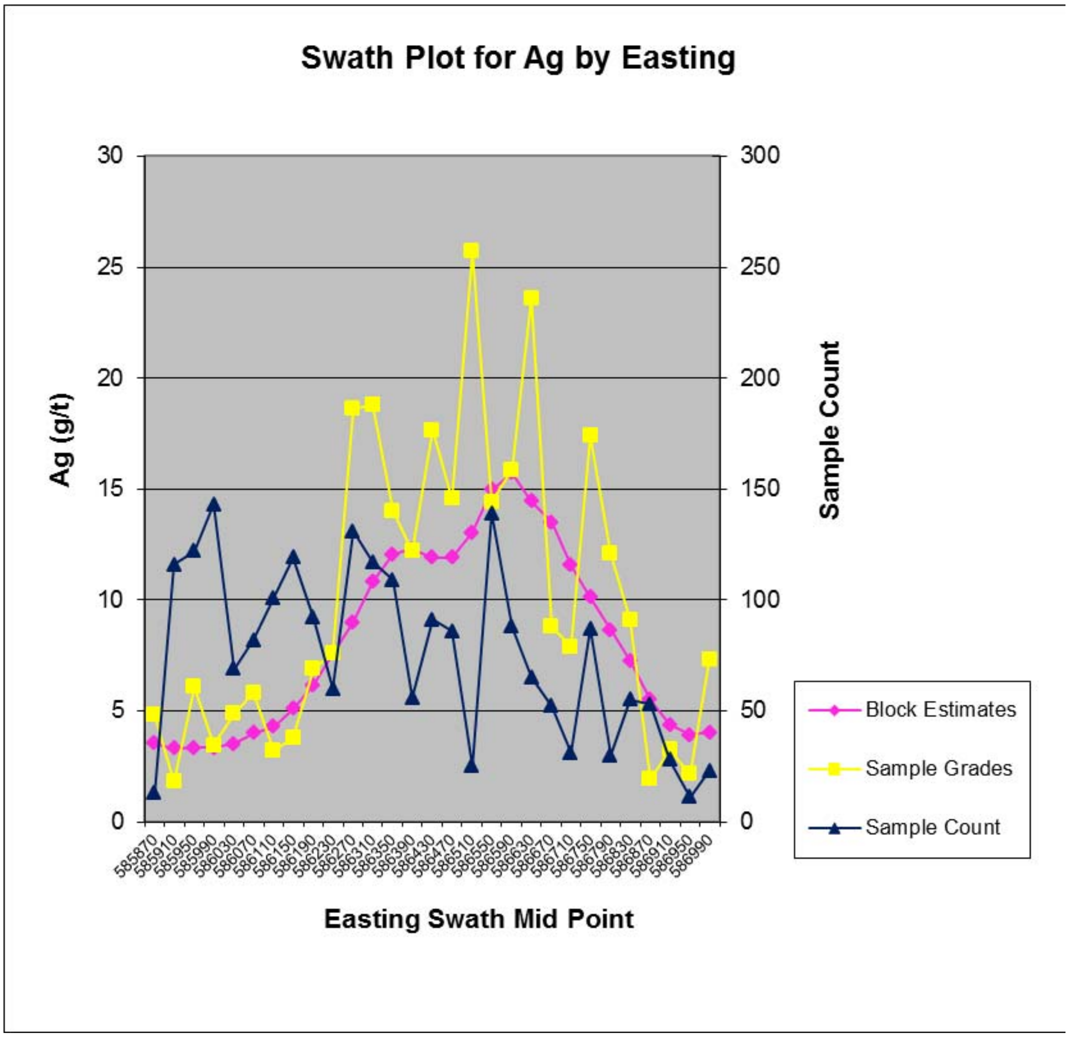


Figure 26 – Swath plot for Keg Main Zone 40 m East-West slices

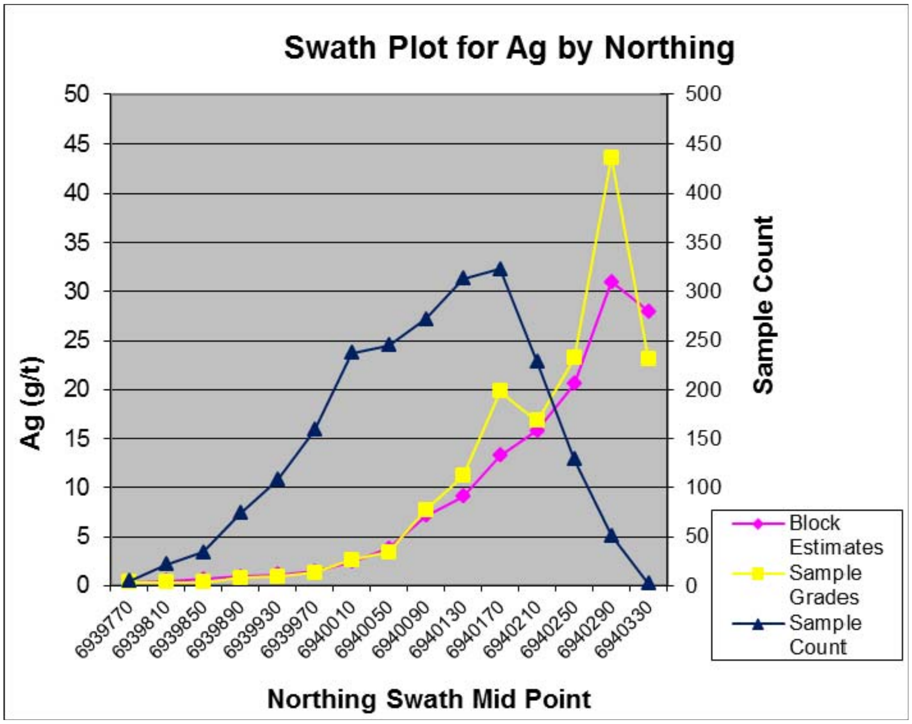


Figure 27 – Swath plot for Keg Main Zone 40 m North-South slices

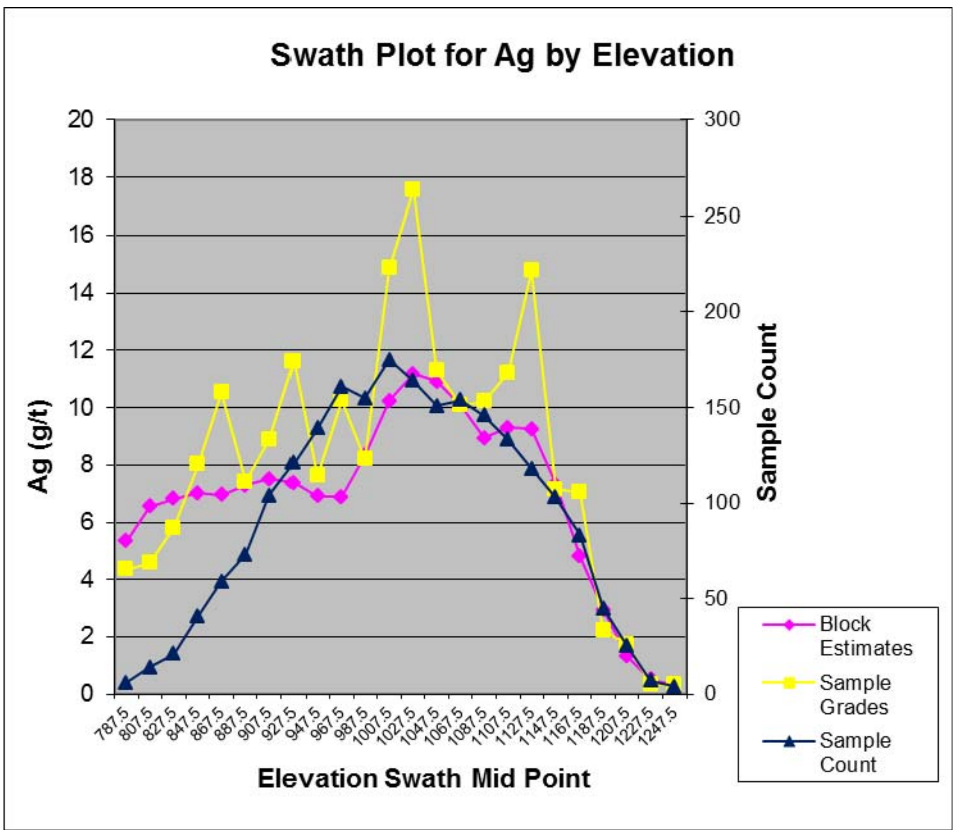


Figure 28 – Swath plot for Keg Main Zone 20 m vertical slices

In addition to swath plots a set of west looking, north-south cross sections was produced where estimated block grades were compared to composite grades. There was no bias indicated, with results matching raw data well. Figures 29 to 32 show example north-south cross sections. The drill hole composites are shown are within a 50 m swath on either side of the blocks.

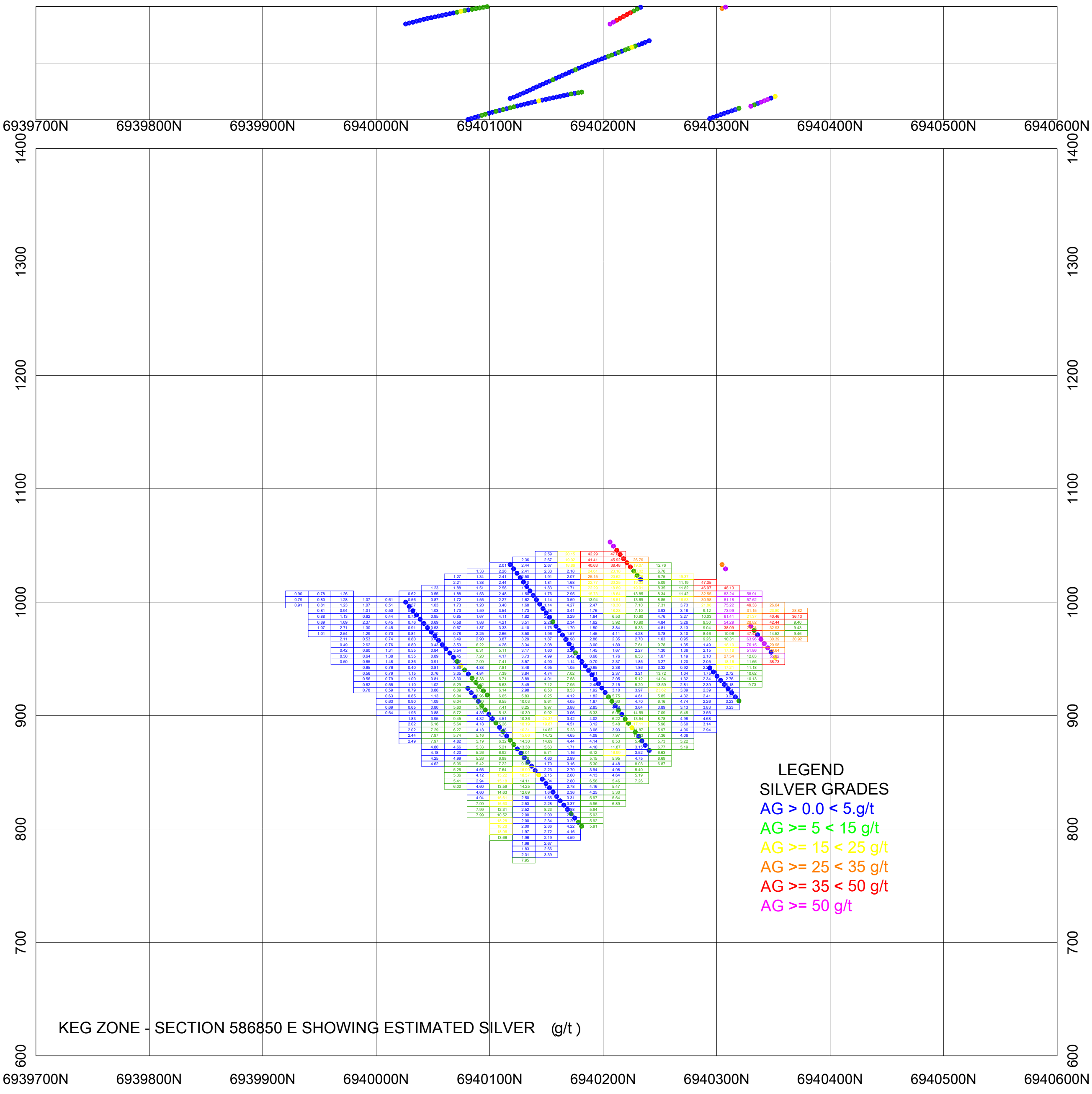


Figure 29 – Section 586850 E showing estimated blocks and composites

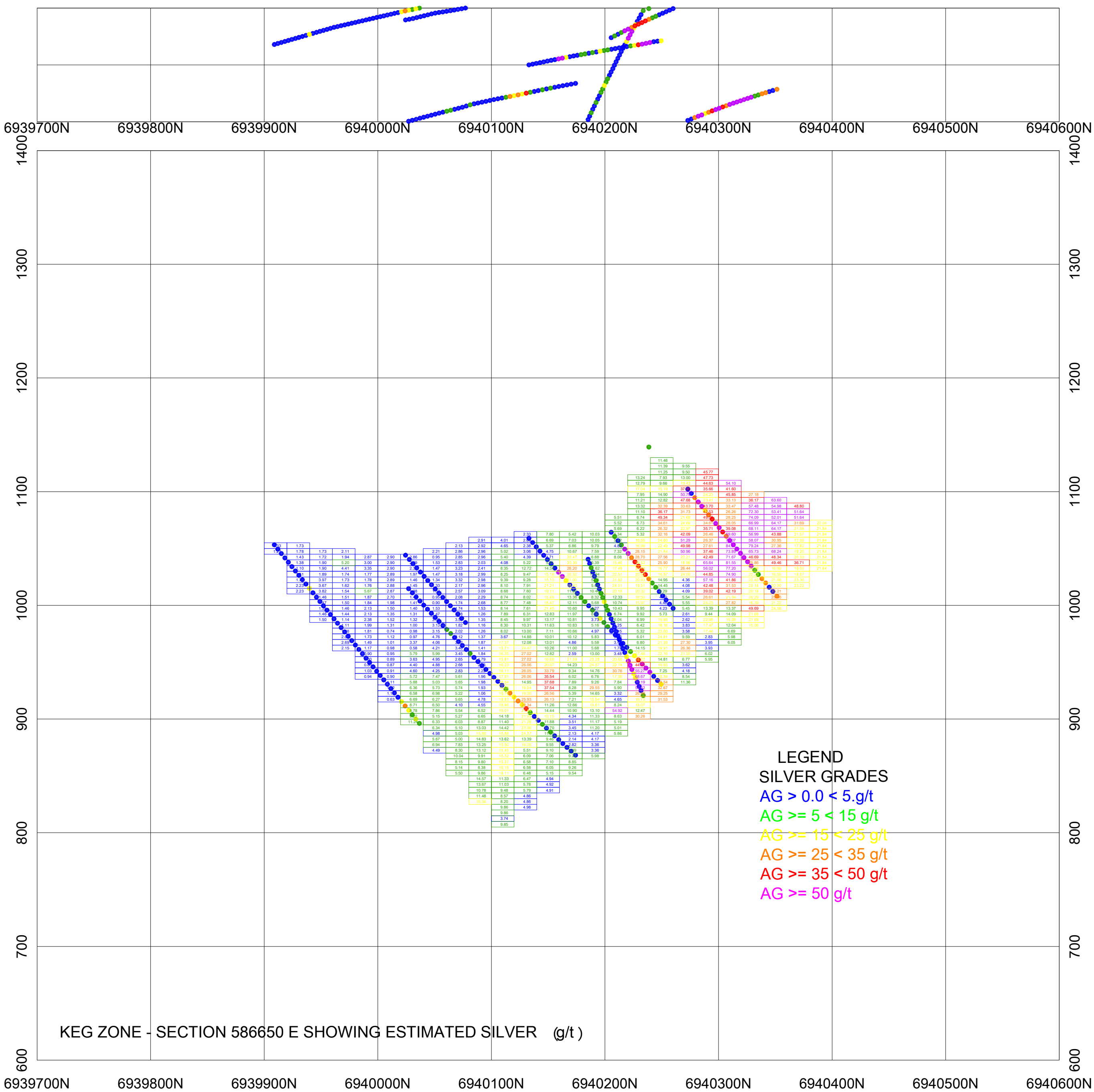


Figure 30 – Section 586650 E showing estimated blocks and composites

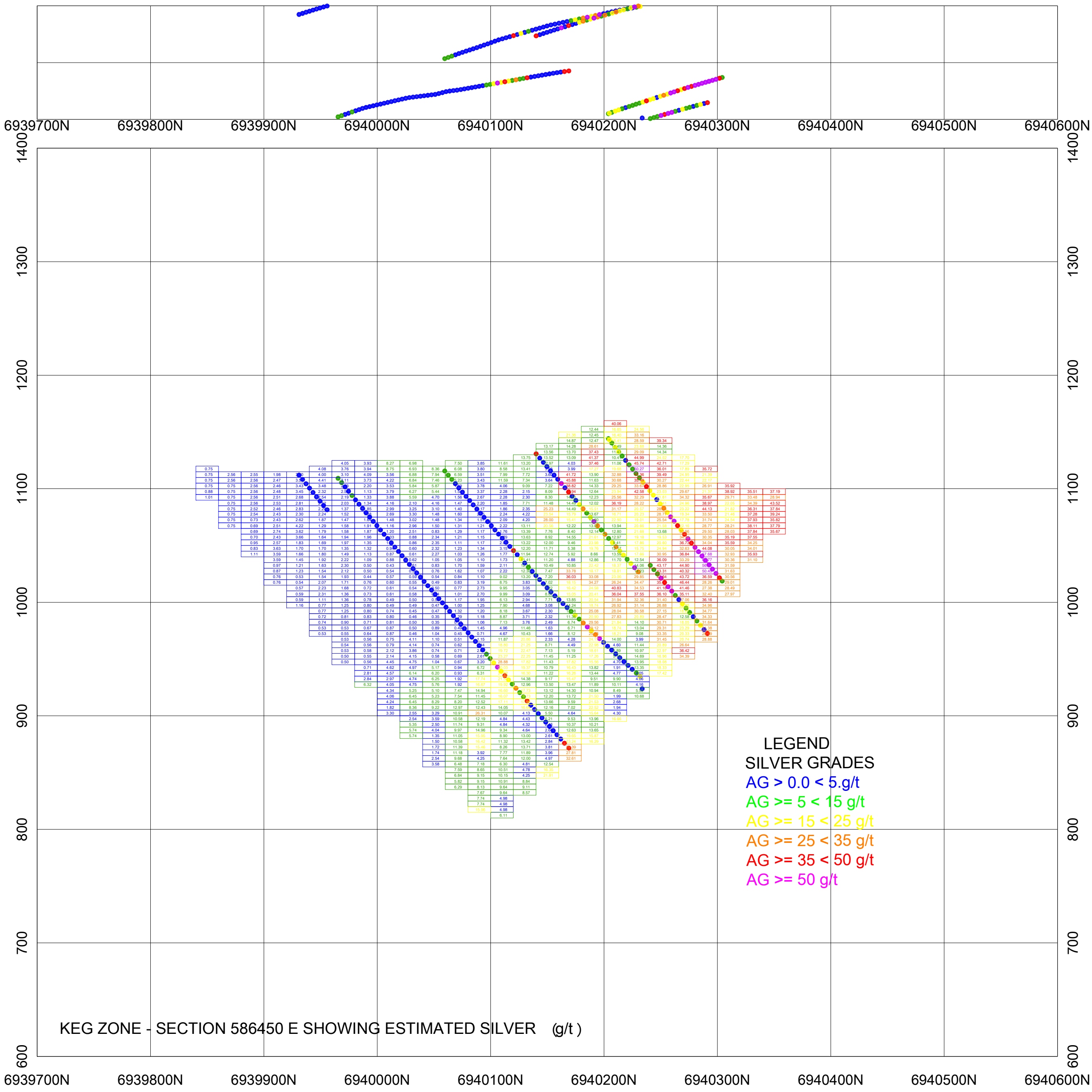


Figure 31 – Section 586450 E showing estimated blocks and composites

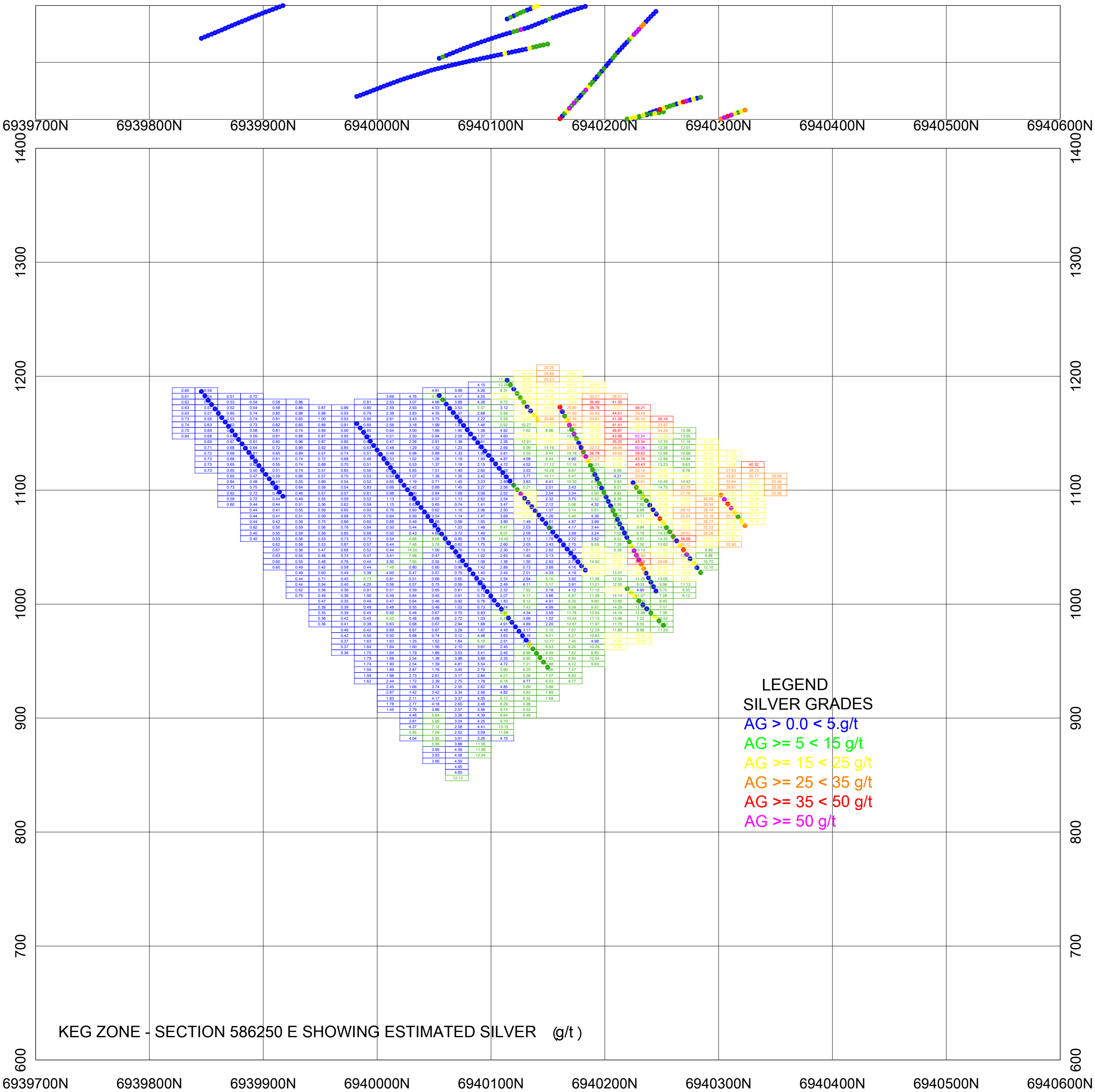


Figure 32 – Section 586250 E showing estimated blocks and composites

15.0 DEPOSIT TYPES

Keg Main Zone comprises a large-scale, low grade, multi-element mineralized system that is being explored as a bulk tonnage target. It is located 25 km north of the former mines of the Anvil District, which comprised concordant and syngenetic sedimentary exhalative zinc-lead-silver deposits that are further described in Section 16.0. Keg Main Zone differs from the deposits of the Anvil District because it is predominantly discordant, epigenetic and lower grade. Keg Main Zone has an atypical metal suite and, although it is believed to be hydrothermal in origin, the deposit is located some distance from the closest known intrusion.

There are no known deposits that are directly analogous to Keg Main Zone. Table 15-1 lists the average grades of the mineral resources from some significant, multi-element, bulk tonnage deposits in comparison to Keg Main Zone.

Table 15-1: Comparison of Keg Main Zone with Multi-Metal, Bulk-Tonnage Deposits

Deposit/ Prospect	Ag (g/t)	Au (g/t)	Zn (%)	Pb (%)	Cu (%)	Sn (ppm)	In (ppm)	Reserve Resource (Mt)	Notes
Keg (Silver Range)	30.25	-	0.77	0.26	0.15	265	5.77	39.76	Inferred[1]
Promontorio (Kootenay)	35.37	-	0.60	0.51	-	-	-	9.17	Measured
	31.18	-	0.51	0.43	-	-	-	26.85	Indicated
	31.18	-	0.53	0.45	-	-	-	36.02	Measured and Indicated[2]
Minto (Capstone)	4.4	0.53	-	-	1.35	-	-	14.83	Measured
	3.7	0.36	-	-	1.03	-	-	38.56	Indicated
	3.9	0.41	-	-	1.12	-	-	53.39	Measured and Indicated[4]
Mt. Milligan (Thompson Creek)	-	0.44	-	-	0.210	-	-	274.6	Proven
	-	0.32	-	-	0.187	-	-	207.8	Probable
	-	0.39	-	-	0.200	-	-	482.4	Proven and Probable[5]
Malku Khota (South American Silver)	33.4	-	0.02	0.07	0.02	-	6.1	30.99	Measured
	27.3	-	0.05	0.08	0.02	-	5.8	224.00	Indicated
	28.10	-	0.04	0.08	0.02	-	5.8	254.99	Measured and Indicated[6]

[1] Inferred resource using a 16 g/t silver cut-off.
[2] Volk and Olin, 2012
[3] Capstone Mining Corp., 2012
[4] Thompson Creek Metals Company Inc., 2012
[5] Armitage et al, 2011

Keg Main Zone lies in the Northern Cordillera, which hosts numerous low grade, bulk tonnage deposits, including Capstone Mining Corp.'s Minto Mine and Thompson Creek Metals Company Inc.'s Mt. Milligan Deposit. The Minto Mine, located in central Yukon, is a copper-gold-silver open pit mine that commenced production in 2007. Its deposit type is also uncertain, but it has attributes of porphyry copper, magnetite skarn and Iron Oxide Copper Gold (IOCG) deposits.

The Mt. Milligan porphyry copper-gold deposit is located in central British Columbia and is under construction as an open pit mine, which is expected to be operating in 2013.

The most similar of the listed deposits in terms of size and grade is Kootenay Silver Inc.'s Promontorio Deposit in northwest Mexico. This deposit comprises a carbonate-rich, diatreme-hosted, polymetallic silver-lead-zinc deposit.

South American Silver Corp.'s Malku Khota deposit in Bolivia appears to be the most analogous to Keg Main Zone in terms of geochemistry and possible genesis. Like Keg Main Zone, early exploration in the Malku Khota area focussed on high grade stratabound sulphide lenses within clastic sedimentary units. These lenses were likely associated with Jurassic and Cretaceous rift development. A later hydrothermal event related to a hypothesized intrusive-hosted gold system brought minor gold with new and redistributed silver, lead, zinc, copper, indium and gallium mineralization into the clastic rocks. The mineralized zone is up to 200 m in true width and is at least four kilometres long.

Keg Main Zone is distinguished from these other bulk tonnage deposits by its uncommonly high tin values.

16.0 ADJACENT PROPERTIES

The Property is part of a larger, contiguous claim block known as the Silver Range Project. The Silver Range Project consists of a total of 4,744 mineral claims that are wholly owned by Silver Range.

The Silver Range Project hosts 24 primary zones of surface mineralization (including the Keg and Keg East Zones) that lie within two parallel, northwest-trending belts. The Tay Belt is the more northerly of the two and covers a 60 by 5 km area that is mainly characterized by mesothermal, fracture-filling and skarn/replacement style mineralization. The Mount Mye Belt is located 15 km south of Tay Belt and 12 km northeast of the former Faro Mine and mill site. It comprises mesothermal and epithermal mineralization that is mostly hosted in veins and fracture zones. Figure 33 shows the locations of the mineralized zones on the Silver Range Project.

Although Silver Range's primary focus is the Keg Main Zone, its exploration programs encompass the entire Silver Range Project and have included regional and detailed scale soil sampling, detailed prospecting, geological mapping, ground and airborne geophysical surveys, reverse circulation drilling and diamond drilling.

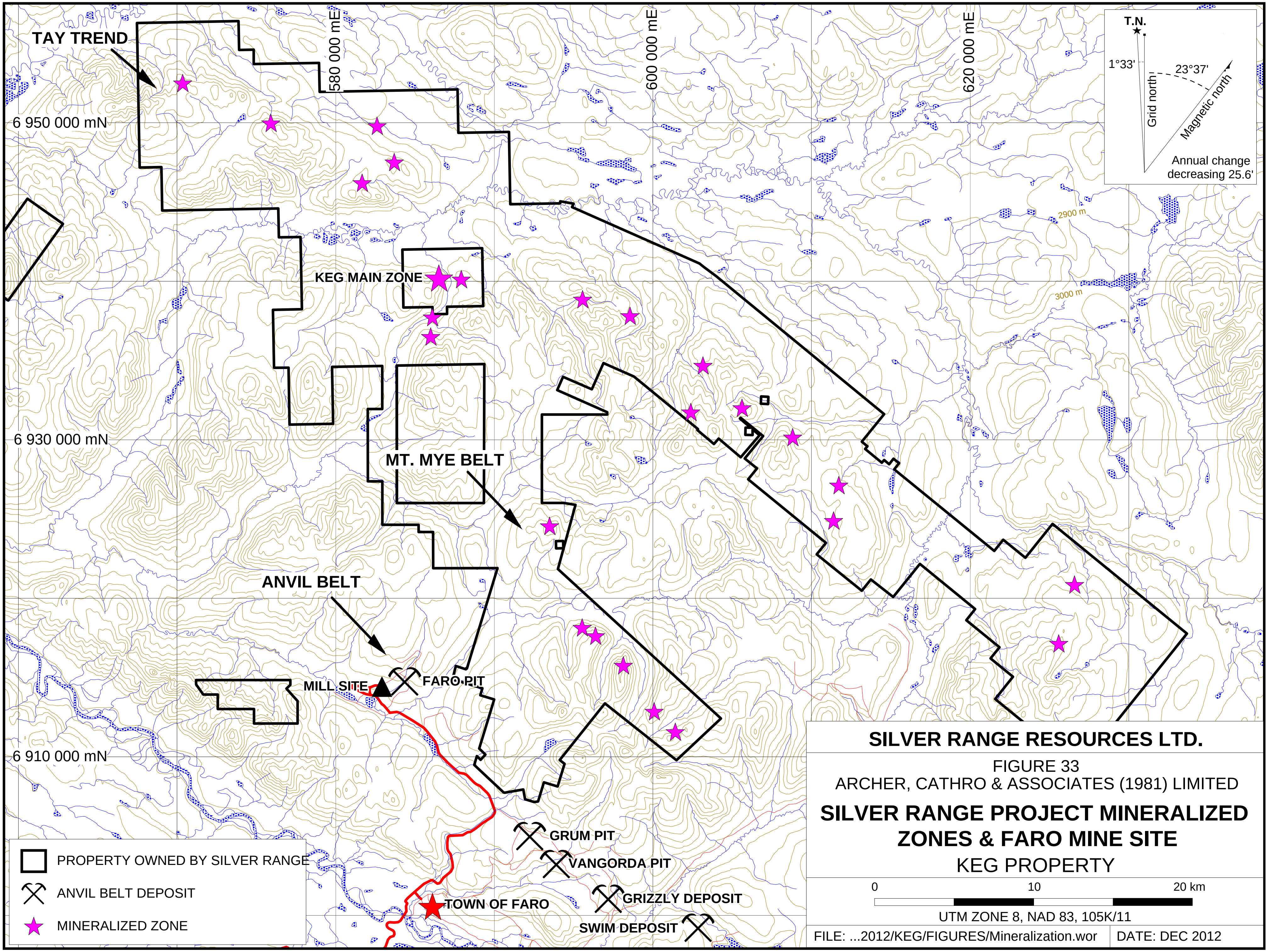
The Faro mill site processed ores from three of the five known sedimentary exhalative zinc-lead-silver deposits within the Anvil District, which is located 25 km south of Keg Main Zone (Figure 33). This style of mineralization has not been identified on the Property.

The three deposits (Vangorda, Faro and Grum) were mined intermittently between 1969 and January 1998. The other two deposits (Grizzly and Swim) were not developed because the operations went into receivership during a period of prolonged low metal prices in the 1990s. The combined pre-mining historical mineral resource estimate for deposits in the belt was 120

Mt grading 5.6% zinc, 3.7% lead and 45 to 50 g/t silver (Yukon Mining, 2011). At their peak, the mines of the Anvil District were collectively the world's third largest zinc producer. As of December 31, 1996, the Grum deposit was estimated to contain a historical resource of 18.64Mt grading 4.43% zinc, 2.68% lead, 45 g/t silver and 0.75 g/t gold (Deklerk and Traynor, 2005). Together, the Grizzly and Swim deposits contain a historical resource estimate of 17.24 Mt grading 6.39% zinc, 4.85% lead, 71.6 g/t silver and 0.75 g/t gold and 4.3 Mt grading 4.7% zinc, 3.8% lead and 42 g/t silver, respectively (Yukon Mining, 2008).

While it is believed that the resource estimates of the Anvil Range met or exceeded industry best practices at the time they were estimated; no recent work is known to have been performed to bring these resources to current standards.

The Faro mine site – including disused buildings, tailings, Vangorda, Faro and Grum pits and undeveloped Grizzly and Swim deposits – is held under receivership by the Government of Canada and part of the area is withdrawn from staking. The site is under care and maintenance and is subject to reclamation.


TAY TREND
580 000 mE
600 000 mE
620 000 mE
6 950 000 mN
6 930 000 mN
6 910 000 mN
T.N.
1°33'
23°37'
Grid north
Magnetic north
Annual change
decreasing 25.6'
2900 m
3000 m
KEG MAIN ZONE
MT. MYE BELT
ANVIL BELT
MILL SITE
FARO PIT
GRUM PIT
VANGORDA PIT
GRIZZLY DEPOSIT
SWIM DEPOSIT
TOWN OF FARO
PROPERTY OWNED BY SILVER RANGE
ANVIL BELT DEPOSIT
MINERALIZED ZONE
SILVER RANGE RESOURCES LTD.
FIGURE 33
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
SILVER RANGE PROJECT MINERALIZED
ZONES & FARO MINE SITE
KEG PROPERTY
0
10
20 km
UTM ZONE 8, NAD 83, 105K/11
FILE: ...2012/KEG/FIGURES/Mineralization.wor
DATE: DEC 2012

17.0 OTHER RELEVANT DATA AND INFORMATION

17.1 Environmental Studies

Environmental monitoring on the Property commenced in 2010 and includes ongoing baseline water quality and wildlife surveys.

The water quality surveys are being performed by J. Gibson Environmental Consulting of Whitehorse. Since August 2010, several sites on the Property have been sampled on a quarterly basis but, as of October 2012, sampling frequency was increased to monthly. The samples are analyzed for routine chemistry, total metals, dissolved metals, total organic carbon, total cyanide and mercury plus field measurements for pH, water temperature and flow volumes.

In summer 2011 and winter 2011-2012, wildlife surveys were conducted on the property by Laberge Environmental Services of Whitehorse, Yukon. Additional surveys are planned.

In November 2012, a base station for monitoring climate was set up on the Property, near the Keg Main Zone.

17.2 Heritage Studies

In May 2012, Matrix Resources Ltd. performed a preliminary heritage resources overview assessment for the Property. Detailed ground follow-up is planned for summer 2013.

17.3 Access Route Studies

In November 2012, EBA Engineering Consultants Ltd. was contracted to evaluate potential routes for an all-season access route from the old Faro mill site to Keg Main Zone. Results of this evaluation are not yet complete.

18.0 INTERPRETATION AND CONCLUSIONS

Keg Main Zone is a bulk-tonnage silver-lead-zinc-copper±tin±indium deposit situated north of the formerly producing Anvil Zinc-Lead-Silver District. The inferred mineral resource for the Keg Main Zone deposit comprises 39,760,000 t grading 30.25 g/t silver, 0.26% lead, 0.77% zinc, 0.15% copper, 265.7 ppm tin, 5.77 ppm indium and 138.06 ppm cadmium. This resource is stated above a 16.0 g/t silver cut-off grade.

The deposit is distinguished from other large base metal showings and deposits elsewhere in Yukon by its uncommonly high silver contents relative to contained base metals and by its enrichments of tin, indium and other relatively rare metals. Metallurgical testwork has demonstrated that flotation processing can effectively recover most of the silver, copper, zinc, lead and indium. Tin recovery is poor.

Keg Main Zone is favourably situated in an area where several regional structural elements occur close together. This cluster of large-scale structures likely played an important role in ground preparation for the deposit. The mineralization is hosted in strongly altered and folded siliceous siltstone and chert, which may have been deformed by a buried thrust fault that failed to break through these units. During folding of siliceous siltstone and chert, small scale fracturing produced permeability in the otherwise relatively impermeable rocks.

In addition to the ground preparation described above other elements probably played roles in the development of mineralization within Keg Main Zone. The folded and fractured siliceous siltstone and chert are interbedded with silty limestone and calcareous siltstone, which are the most reactive rocks in the area. Fluids channeling through the fractured siliceous siltstone and chert likely flowed upwards or laterally into the reactive stratigraphy. A small intrusive plug located approximately two kilometres south of the deposit may have provided a local heat source that powered at the mineralizing hydrothermal cell. Late normal and dip-slip faults crosscut the folded siliceous siltstone and chert and may have acted as deep-seated fluid conduits that localized hydrothermal flow.

Exploration conducted to date at Keg Main Zone has defined a sizeable mineral resource, and metallurgical testwork has produced encouraging results. Keg Main Zone is very well situated in regards to infrastructure. Further work is warranted.

19.0 RECOMMENDATIONS

Silver Range should conduct: a scoping level economic evaluation; additional diamond drilling targeted at better defining and expanding the Keg Main Zone mineral resource; further metallurgical testwork; and additional geotechnical, heritage and environmental studies.

Infill diamond drilling should be completed to upgrade the mineral resource from inferred to indicated or measured. Drilling should also be conducted to determine whether the deposit can be extended further to depth and/or along strike. Larger diameter drill core should be used in some holes to aid in additional metallurgical testwork, and oriented drill core should be obtained to provide data to support preliminary pit slope design for conceptual pit walls.

A Preliminary Economic Assessment has been initiated and evaluation of road access routes is being done. Current environmental and heritage base line studies should continue, and piezometers should be installed for ground water monitoring.

An approximate budget for this work totals $3,946,800 as presented in Table 19-1.

Table 19-1: Proposed Budget for 2013 Exploration at Keg Main Zone

Work Type	Cost ($)
Diamond drilling (5000 m at $150/m including fuel, core boxes, mob/demob)	750,000
Helicopter	600,000
Bulldozer	30,000
Assay & Analytical	150,000
Labour	300,000

Expediting, Safety & Accounting	100,000
Report Preparation & Senior Supervision	180,000
Room & Board	225,000
Airfares, Ground Transportation & Shipping	100,000
Environmental & Heritage Surveys	250,000
Metallurgical Testwork	400,000
Preliminary Economic Assessment	220,000
Road Route Assessment	85,000
Consultant's Management Fee	198,000
Contingency at 10%	358,800
Total (excluding GST)	3,946,800

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21.0 CERTIFICATES OF AUTHORS

21.1 Certificate and Consent of G.H. Giroux

I, G.H. Giroux, of North Vancouver, British Columbia do hereby certify that:

1) I am a consulting geological engineer with an office at 1215 – 675 West Hastings Street, Vancouver, British Columbia

2) I graduated from 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.

4) I have practiced my profession continuously since 1970. I have over 30 years of experience calculating mineral resources. I have previously completed resource estimations on a variety of silver-lead-zinc deposits including the Wolverine, Keno Hill and Logan Deposits in Yukon.

5) I have read the definition of "qualified person" set out in NI 43-101 and certify that by reason of education, experience, independence and affiliation with a professional association, I meet the requirements of an independent Qualified Person as defined in NI 43-101.

6) I am responsible for the preparation of Sections 1.0 to 12.0 (excluding Section 1.3) and Sections 14.0 to 20.0 of the Technical Report titled "Technical Report describing Geology, Mineralization, Geochemical Surveys, Diamond Drilling, Metallurgical Testing and Mineral Resources at the Keg Property" and dated December 19, 2012 and amended on May 27, 2013. I visited the property on August 31st and September 1st, 2011.

7) I have not previously worked on this deposit.

8) As of the date of this certificate, to the best of my knowledge, information and belief, the portion of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make that portion of the Technical Report not misleading.

9) I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.

10) I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

11) I consent to the public filing of the Technical Report with any stock exchange and other regulatory authority and its publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public.

Dated this 27th day of May, 2013.

(signed) *G.H. Giroux* (sealed)
G.H. Giroux, P.Eng., MASc.

21.2 Certificate and Consent of L.A. Melis

I, Lawrence A. Melis, of 259 Egnatoff Cres., Saskatoon, Saskatchewan, do hereby certify that:

1) I am a consulting process engineer, working for Melis Engineering Ltd. with an office at 2366 Ave C North, Saskatoon, Saskatchewan, Canada.
2) I am a graduate of the University of Western Ontario in 1971 with a B.Sc. (Chemistry).
3) I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia (Registration No. 19398).
4) I have practiced my profession continuously since 1971. I have over 40 years of experience in process engineering for the mining industry.
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 association, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101.
6) I am responsible for the preparation of Sections 1.3 and 13.0 of the Technical Report titled "*Technical Report describing Geology, Mineralization, Geochemical Surveys, Diamond Drilling, Metallurgical Testing and Mineral Resources at the Keg Property*" dated December 19, 2012 and amended on May 27, 2013.
7) I have not visited the property and have not previously worked on the project.
8) To the best of my knowledge, information and belief, Sections 1.3 and 13.0 of the Technical Report contain all scientific and technical information that is required to be disclosed to make the metallurgical component of the Technical Report not misleading.
9) I am independent of Silver Range Resources Ltd. as defined by National Instrument 43-101.
10) I have read NI 43-101 and Form 43-101F1, and Sections 1.3 and 13.0 of the Technical Report, for which I am responsible, has been prepared in compliance with that instrument and form.
11) I consent to the public filing of the Technical Report with any stock exchange and other regulatory authority and its publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public.

Dated this 27th day of May, 2013.

(signed) *Lawrence Melis* (sealed)
Lawrence A. Melis, P.Eng.

APPENDIX I

METALLURGICAL SECTION OF DECEMBER 2012 TECHNICAL REPORT

MELIS ENGINEERING LTD.

SILVER RANGE RESOURCES LTD.
SILVER RANGE PROJECT KEG MAIN ZONE
YUKON CANADA
METALLURGICAL SECTION OF
DECEMBER 2012 TECHNICAL REPORT

MELIS Project No. 547

December 17, 2012

prepared for

SILVER RANGE RESOURCES LTD.

by

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MELIS ENGINEERING LTD.

MEMORANDUM

December 17, 2012 **Melis Project No. 547**

To: Bruce A. Youngman, Chairman, Silver Range Resources Ltd.

Cc: Doug Eaton, President and CEO, Silver Range Resources Ltd.

From: Lawrence A. Melis, P.Eng.
Melis Engineering Ltd.

Re: Metallurgy Section of the December 2012 Silver Range Technical Report

Attached, please find the Melis Engineering Ltd. (Melis) report *Silver Range Resources Ltd. Silver Range Project Keg Main Zone Yukon Canada - Metallurgical Section of December 2012 Technical Report*. It is provided as a Word file such that it can be extracted and used as Section 13 of the Technical Report.

This report summarizes results of metallurgical testwork completed at SGS Canada Inc. – Lakefield Research on test composites prepared from drill core of the Keg Main Zone deposit.

This report may be used as part of the 2012 Technical Report being prepared by Silver Range Resources Ltd. A summary section has been included in the report which can be extracted and used in the main body of the report, if preferred by Silver Range Resources Ltd., with the report in its entirety included as an appendix to the Technical Report.

Yours truly,

MELIS ENGINEERING LTD.

Lawrence Melis, P.Eng.
President

SILVER RANGE RESOURCES LTD.
KEG MAIN ZONE OF SILVER RANGE PROJECT
YUKON CANADA
METALLURGICAL SECTION OF
DECEMBER 2012 TECHNICAL REPORT

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13.1 SUMMARY

Introduction

Metallurgical testwork on the Keg Main Zone of the Silver Range Project was completed at SGS Canada Inc. – Lakefield Research located in Lakefield Ontario in 2012.

The testwork was completed on six variability composites representing distinct zones of the known mineralization and one overall composite prepared as a blend of the six variability composites. The work encompassed preparation and analyses of test composites, comminution testing, open cycle and lock cycle flotation tests, gravity recovery tests, concentrate analyses and tailings physical and chemical characterization.

Composite Analyses

Key analyses of the test composites are summarized in the table below.

Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork Test Composites – Assay Head Grades for Key Elements						
Composite	**Ag, g/t**	**Cu, %**	**Pb, %**	**Zn, %**	**In, g/t**	**Sn, g/t**
Overall	41.6	0.27	0.31	1.36	11.4	400
A	89.1	0.18	0.62	0.69	1.7	770
B	56.2	0.60	0.30	2.30	15.6	760
C	44.1	0.31	0.34	1.67	13.1	230
D	32.3	0.10	0.27	0.89	8.8	100
E	21.1	0.14	0.15	1.28	19.5	210
F	32.7	0.19	0.28	1.14	9.1	360

The sulphides in the mineralization consist mainly of sphalerite, pyrite, chalcopyrite, pyrrhotite, galena and arsenopyrite. Traces of silver minerals (native silver and silver sulphides) were found, but more detailed examination specific to silver would be required to properly define the mode of occurrence of silver. The main tin minerals, which are typically fine grained, include stannite and lesser cassiterite.

A gravity recovery test on the overall composite indicated that approximately 15% of the silver and only about 3% of the tin could be recoverable by gravity.

Preliminary grinding tests suggest that the Keg Main Zone mineralization is of medium hardness.

Flotation Testwork

A total of 16 open cycle batch flotation tests were completed on the overall composite to identify the flotation characteristics of the Keg Main Zone mineralization and to quantify optimum flotation parameters for the recovery of copper, lead and zinc to concentrates. Six open cycle batch flotation tests were also completed on the six variability composites, one per composite to assess variability ahead of lock cycle testing.

The flotation conditions and reagent scheme identified for the mineralization were generally as follows:

- Target primary grind P_{80} of 100 µm in the presence of lime to maintain pH 8 to 8.5.
- Copper/lead rougher flotation at pH 9 to 9.5 controlled with lime using Aerophine 3418A as collector and MIBC as frother.
- Regrind of the copper/lead rougher concentrate to a target P_{80} of 20 to 25 µm in the presence of zinc sulphate and sodium cyanide used as zinc depressant, additional lime to maintain an elevated pH and additional 3418A collector.
- Three stages of copper/lead cleaners at pH 10 controlled with lime with further 3418A collector addition and MIBC frother.
- Copper/lead separation on the third copper/lead cleaner concentrate at pH 11 in the presence of sodium cyanide with additional 3418A collector and MIBC frother, followed by one cleaning stage at pH 11 with further addition of sodium cyanide, 3418A collector and MIBC frother to produce an upgraded lead concentrate. The rougher tails from the copper/lead separation float constitute the copper concentrate.
- The copper/lead rougher tails and the copper/lead first cleaner tails, feed to the zinc rougher float, are conditioned at pH 11.8 adjusted with lime in the presence of copper sulphate activator.
- Zinc rougher flotation using Aero 5100 as collector with further lime addition to maintain pH 11.8 and further MIBC frother addition.
- Regrind of the zinc rougher concentrate to a target P_{80} of 15 to 20 µm in the presence of additional copper sulphate activator and additional lime to maintain pH 12.

- The reground zinc rougher concentrate was submitted to four zinc cleaning stages with further additions of lime to maintain pH 12, and further Aero 5100 collector addition. The use of sodium metabisulphite (NaMBS) in the zinc cleaners improved the zinc grade to the final zinc cleaner concentrate.

Results of Lock Cycle Tests

A total of eight lock cycle tests were completed to quantify recoveries and concentrate grades for the Keg Main Zone mineralization under conditions approaching steady state. Results are summarized in the table below.

Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork Summary of Lock Cycle Test Results									
Composite	**A**	**B**	**C**	**D**	**E**	**F**	**Avg.**	**Overall**	**Overall**
Test No.	**LCT2**	**LCT3**	**LCT4**	**LCT5**	**LCT6**	**LCT7**	**-**	**LCT1**	**LCT8**
Zinc Concentrate									
% Zn	**39.8**	**49.6**	**46.1**	**28.4**	**48.3**	**45.9**	**43.0**	**47.5**	**49.8**
% Pb	1.65	0.28	0.33	0.45	0.29	0.79	0.63	0.53	0.45
% Cu	1.08	1.11	0.75	0.56	0.71	1.17	0.90	0.91	0.79
g Ag/t	314	95	81	105	92	129	136	117	105
g In/t	90	291	325	249	658	305	320	358	384
% Sn	0.24	0.011	0.002	0.002	0.002	0.002	0.043	<0.002	0.063
% Zinc Recovery	**81.5**	**92.4**	**92.0**	**85.7**	**92.3**	**87.5**	**88.6**	**85.2**	**87.7**
% Silver Recovery	5.9	7.7	6.8	8.6	11.6	8.6	8.2	6.6	5.9
% Indium Recovery	68.8	82.1	63.3	73.6	87.7	70.4	74.3	72.2	77.5
Lead Concentrate									
% Pb	**67.3**	**59.7**	**68.2**	**65.8**	**64.4**	**65.1**	**65.1**	**65.5**	**59.4**
% Cu	3.87	5.85	3.89	3.73	3.86	3.95	4.19	4.90	7.02
% Zn	1.45	1.19	1.00	0.89	1.00	1.43	1.16	1.12	1.21
g Ag/t	7,761	4,521	5,507	6,647	4,895	5,567	5,816	5,924	5,559
g In/t	<50	<50	21	<50	<50	<50	<50	<50	<50
% Sn	1.28	0.51	0.18	0.25	0.15	0.28	0.44	0.44	0.49
% Lead Recovery	**82.9**	**82.9**	**84.9**	**82.4**	**77.5**	**83.9**	**82.4**	**84.8**	**86.0**
% Silver recovery	75.9	38.4	55.3	65.7	43.1	65.0	57.2	60.5	62.9
% Indium Recovery	n/a	n/a	0.5	n/a	n/a	n/a	n/a	n/a	n/a
Copper Concentrate									
% Cu	**23.5**	**29.8**	**29.0**	**25.2**	**28.2**	**27.6**	**27.2**	**28.8**	**28.1**
% Pb	5.93	0.89	2.62	6.79	3.96	4.37	4.09	2.65	2.43
% Zn	8.53	1.19	3.61	3.32	3.25	4.57	4.08	3.85	5.04
g Ag/t	1,454	1,351	1,326	2,062	1,468	1,089	1,458	1,442	1,328
g In/t	61	129	132	169	274	137	150	150	152
% Sn	5.73	1.84	0.76	1.09	0.78	1.72	1.99	2.04	1.88
% Copper Recovery	**62.3**	**80.2**	**75.3**	**59.0**	**72.2**	**67.6**	**69.4**	**71.4**	**69.2**
% Silver Recovery	8.8	42.3	26.2	14.6	28.9	15.6	22.7	22.0	20.5
% Indium Recovery	14.4	14.0	6.1	3.8	5.6	7.5	8.6	7.9	8.0

A comparison of head grade versus recovery for the lock cycle tests is presented in the table below.

Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork Lock Cycle Tests – Comparison of Head Grades and Recoveries										
	Assay Head Grade					% Recovery				
Composite	**%Zn**	**%Pb**	**%Cu**	**g Ag/t**	**g In/t**	**Zn**	**Pb**	**Cu**	**Ag(1)**	**In(2)**
A	0.69	0.62	0.18	89.1	1.7	81.5	82.9	62.3	84.7	83.2
B	2.30	0.30	0.60	56.2	15.6	92.4	82.9	80.2	80.7	96.1
C	1.67	0.34	0.31	44.1	13.1	92.0	84.9	75.3	81.5	69.4
D	0.89	0.27	0.10	32.3	8.8	85.7	82.4	59.0	80.3	77.4
E	1.28	0.15	0.14	21.1	19.5	92.3	77.5	72.2	72.0	93.3
F	1.14	0.28	0.19	32.7	9.1	87.5	83.9	67.6	80.6	77.9
Average	1.33	0.33	0.25	45.9	11.3	88.6	82.4	69.4	80.0	82.9
Overall	1.36	0.31	0.27	41.6	11.4	85.2	84.8	71.4	82.5	80.1
Overall NaMBS	1.36	0.31	0.27	41.6	11.4	87.7	86.0	69.2	83.4	85.5

Notes: 1. Combined silver recovery to lead and copper concentrate
2. Combined indium recovery to zinc and copper concentrate

The results of the lock cycle tests on all test composites show that the Keg Main Zone mineralization responds very well to typical copper/lead/zinc flotation circuits with excellent recoveries of payable metals and acceptable copper, lead and zinc concentrate grades in copper, lead and zinc concentrates. General comments and observations on the lock cycle results include the following:

- There was generally good agreement between the results of the Overall Composite and the average results of the six variability composites, both with respect to grades and recoveries.
- Zinc concentrate grades of greater than 45% Zn were achievable on composites with head grades greater than 1.0 % Zn. The use of sodium metabisulphite (NaMBS) in the zinc cleaner circuit leads to a higher zinc grade in the zinc concentrate (approaching 50% Zn) without impacting on zinc recovery.
- The lead grade in the lead concentrate, which averaged 65% Pb, was independent of the head grade of the composites. Excellent lead concentrate grades were achieved even down to a low head grade of 0.15% Pb. The lower lead concentrate grade in the lead concentrate from the last lock cycle test (59.4% Pb versus 65.5% Pb in the first lock cycle test) was due to an increase in cleaner flotation time in the copper/lead cleaner float, which pulled more weight to the third copper/lead cleaner concentrate and impacted on copper/lead separation.

- Excellent copper grades were obtained in the copper concentrate, averaging 27.2% Cu, even for the composites with relatively low copper head grade.
- Zinc recoveries to zinc concentrate averaged 88.6% and were generally over 90% for composites with zinc head grades greater than 1.0% Zn.
- Lead recoveries to lead concentrate averaged 82.4% and were all greater than 80% except for the one composite with a low lead head grade which had a 77.5% lead recovery for a 0.15% Pb head grade, still quite acceptable for a low head grade.
- Copper recoveries averaged 69.4% and generally followed copper head grade, ranging from 80.2% recovery for a 0.60% Cu head grade to 59.0% for a 0.10% Cu head grade.
- Excellent silver recoveries were achieved, averaging 57.2% recovery to lead concentrate assaying an average of 5,816 g Ag/t, and 22.7% recovery to copper concentrate assaying an average of 1,458 g Ag/t. A minor amount, an average of 8.2%, reported to the zinc concentrate which assayed an average of 136 g Ag/t. Silver head grade did not have much impact on overall silver recovery.
- The majority of the recoverable indium reported to the zinc concentrate, averaging 74.3% recovery and assaying an average of 320 g In/t. A lesser amount, 8.6%, was recovered to the copper concentrate assaying an average of 150 g In/t. No indium reported to the lead concentrate. Indium head grade did not seem to have an impact on overall indium recovery.
- The average tin grades were 1.99% Sn in the copper concentrate, 0.44% Sn in the lead concentrate and 0.04% in the zinc concentrate. The majority of the tin, an average of 60%, was not recovered and reported to the final float tails which had an average tails tin assay of 0.025% Sn.

Concentrate Analyses

Key analyses of the copper, lead and zinc concentrates, composites of the concentrates from the six cycles (A-F) of the lock cycle tests, are summarized in the table below. These analyses can be used as preliminary data in marketing studies and for developing smelter terms for each concentrate.

Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Lock Cycle Tests – Key Analyses of Concentrates

Element	Unit	Overall Comp.	Comp A	Comp B	Comp C	Comp D	Comp E	Comp F
Copper Concentrate								
Cu	%	28.6	23.9	29.8	28.5	24.7	28.0	27.2
Pb	%	3.01	5.53	1.02	2.86	8.23	4.10	4.49
Zn	%	3.52	8.50	2.77	3.65	2.76	3.34	4.43
Ag	g/t	1,455	1,454	1,346	1,323	n/a	1,494	1,107
In	g/t	137	53	123	130	n/a	288	132
Sn	%	1.81	5.94	1.52	0.67	n/a	n/a	1.13
Fe	%	26.2	20.7	27.3	26.8	23.4	26.4	25.8
S	%	31.2	29.7	32.4	31.9	n/a	31.6	31.5
Si	%	0.43	0.45	0.51	0.50	n/a	0.54	0.60
Hg	ppm	<0.3	0.4	<0.3	<0.3	n/a	<0.3	<0.3
As	%	0.007	0.0131	<0.003	0.0095	n/a	n/a	0.0475
Bi	%	0.258	0.278	0.127	0.304	n/a	n/a	0.226
Cd	%	0.0773	0.167	0.064	0.0827	n/a	n/a	0.0909
Co	%	0.00139	0.00145	0.00143	0.00136	n/a	n/a	0.000982
Mg	%	0.0577	0.0601	0.0674	0.0626	n/a	n/a	0.0891
Mo	%	0.00136	0.00016	0.00021	0.000782	n/a	n/a	0.00408
Ni	%	0.00308	0.00263	0.00195	0.00339	n/a	n/a	0.00521
Sb	%	0.00564	0.00857	0.00181	0.0035	n/a	n/a	0.00595
Se	%	0.0672	0.0925	0.0372	0.0735	n/a	n/a	0.0882
Lead Concentrate								
Cu	%	5.42	4.02	6.28	3.90	3.73	3.86	4.07
Pb	%	62.9	66.4	58.0	67.1	65.8	64.4	63.0
Zn	%	1.18	1.57	1.16	1.03	0.89	1.00	1.38
Ag	g/t	5,950	7,763	4,568	5,553	n/a	n/a	5,558
In	g/t	n/a	<50	<50	<50	n/a	n/a	<50
Sn	%	n/a	1.25	n/a	n/a	n/a	n/a	n/a
Fe	%	6.55	3.77	8.08	5.16	5.18	5.25	5.77
S	%	n/a	14.2	15.9	13.8	n/a	n/a	14.6
Si	%	n/a	0.34	0.78	0.54	n/a	n/a	0.69
Hg	ppm	n/a	<0.3	<0.3	<0.3	n/a	n/a	<0.3
As	%	n/a	0.0067	n/a	n/a	n/a	n/a	n/a
Bi	%	n/a	1.6	n/a	n/a	n/a	n/a	n/a
Cd	%	n/a	0.0372	n/a	n/a	n/a	n/a	n/a
Co	%	n/a	0.00043	n/a	n/a	n/a	n/a	n/a
Mg	%	n/a	0.0316	n/a	n/a	n/a	n/a	n/a
Mo	%	n/a	0.00031	n/a	n/a	n/a	n/a	n/a
Ni	%	n/a	0.00138	n/a	n/a	n/a	n/a	n/a
Sb	%	n/a	0.0317	n/a	n/a	n/a	n/a	n/a
Se	%	n/a	0.88	n/a	n/a	n/a	n/a	n/a
Zinc Concentrate								
Cu	%	0.93	1.06	1.07	0.59	0.57	0.66	1.02
Pb	%	0.55	1.66	0.28	0.25	0.45	0.28	0.70
Zn	%	48.8	42.0	49.7	47.5	30.0	47.6	46.4

Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork Lock Cycle Tests – Key Analyses of Concentrates								
Element	**Unit**	**Overall Comp.**	**Comp A**	**Comp B**	**Comp C**	**Comp D**	**Comp E**	**Comp F**
Ag	g/t	125	314	108	66.5	109	82.8	124
In	g/t	364	88	278	333	256	691	329
Sn	%	0.10	0.30	0.14	0.04	0.04	0.05	0.08
Fe	%	14.5	20.2	13.4	14.5	30.1	14.4	14.8
S	%	33.3	33.1	33.4	33.2	34.6	33.3	33.0
Si	%	0.22	0.37	0.19	0.26	0.59	0.39	0.33
Hg	ppm	0.4	0.7	0.3	0.4	0.4	<0.3	0.3
As	%	0.0086	0.005	<0.003	0.0042	0.0058	0.0036	0.0238
Bi	%	0.0208	0.0534	0.0127	0.0105	0.0288	0.0219	0.0258
Cd	%	0.988	0.722	1.19	0.973	0.616	1.07	0.958
Co	%	0.00751	0.0052	0.00663	0.00855	0.00626	0.0118	0.00544
Mg	%	0.0353	0.0446	0.0334	0.0411	0.0736	0.0385	0.0591
Mo	%	0.00228	0.0005	0.00029	0.00055	0.00253	0.00378	0.00726
Ni	%	0.00532	0.0238	0.00281	0.00639	0.0269	0.00614	0.00689
Sb	%	0.00086	0.0026	0.00047	0.00043	0.00181	0.00045	0.00126
Se	%	0.0461	0.0508	0.0438	0.0407	0.0287	0.0412	0.0415

Tailings Characterization

Tailings solids analyses and the tailings supernatant aging test results to Day 28 are summarized in the two tables below. These data can be used in preliminary environmental studies for the project.

Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork Lock Cycle Test No. 1 – Flotation Tailings Solids Analysis			
Analyte	**Unit**	**Value**	
		LCT1 Zn Rougher Tails	**LCT1 Zn 1st Cleaner Scav Tails**
Elemental Analysis			
Si	%	28.1	11.2
Hg	%	<0.00001	<0.00001
Al	%	3.8	1.9
As	%	0.071	1.70
B	%	0.0049	0.0025
Ba	%	0.13	0.048
Be	%	0.0001	0.00005
Bi	%	0.0027	0.014
Ca	%	7.9	5.1
Cd	%	0.0005	0.03
Co	%	0.0005	0.0069
Cr	%	0.01	0.049
Cu	%	0.017	0.21
In	%	0.00006	0.0021
Fe	%	3.1	30
K	%	1.9	0.9

Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork Lock Cycle Test No. 1 – Flotation Tailings Solids Analysis			
Analyte	Unit	Value	
		LCT1 Zn Rougher Tails	LCT1 Zn 1st Cleaner Scav Tails
Li	%	0.0035	0.0024
Mg	%	2.1	1.2
Mn	%	0.19	0.13
Mo	%	0.0006	0.0012
Na	%	0.12	0.028
Ni	%	0.0025	0.032
P	%	0.08	0.038
Pb	%	0.022	0.081
Sb	%	0.001	0.0026
Se	%	0.0006	0.012
Sn	%	0.023	0.024
Sr	%	0.016	0.009
Th	%	0.0008	0.0003
Ti	%	0.24	0.13
Tl	%	0.00007	0.00004
U	%	0.0003	0.0002
V	%	0.01	0.0047
W	%	0.0004	0.0004
Y	%	0.0019	0.001
Zn	%	Saska0.037	2.0
Acid Base Accounting Measurements			
Neutralizing Potential (NP)	t $CaCO_3$/1000 t	62.9	70.9
Acid Producing Potential (AP)	t $CaCO_3$/1000 t	21.7	370
NP/AP Ratio	-	2.90	0.19
Net Acid Generation (NAG) pH 4.5	kg H_2SO_4/tonne	0	13
Net Acid Generation (NAG) pH 7.0	kg H_2SO_4/tonne	0	56

Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork Lock Cycle Test No. 1 Combined Flotation Tailings Supernatant Aging Test Assays						
Analyte	Unit	Day 0	Day 3	Day 7	Day 14	Day 28
TSS	mg/L	29	5	3	2	6
pH	units	10.3	8.04	7.59	6.99	6.77
Conductivity	µS/cm	915	952	960	948	1150
Alkalinity	mg/L as $CaCO_3$	54	31	28	16	34
Acidity	mg/L as $CaCO_3$	80	76	104	56	n/a
TDS	mg/L	751	731	763	723	849
F	mg/L	0.54	0.54	0.55	0.86	0.55
Tot. Reac. P	mg/L	0.20	0.23	0.15	0.20	0.11
Cl	mg/L	25	0.3	26	28	30
NO_2	as N mg/L	< 0.06	< 0.06	< 0.06	< 0.06	0.10
NO_3	as N mg/L	0.07	0.08	0.09	0.08	0.10
SO_4	mg/L	260	2.7	260	260	340
NH_3+NH_4	as N mg/L	0.5	0.3	0.4	0.2	0.3
Hg	µg/L	< 0.1	< 0.1	< 0.1	< 0.1	0.03

Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork Lock Cycle Test No. 1 Combined Flotation Tailings Supernatant Aging Test Assays						
Analyte	**Unit**	**Day 0**	**Day 3**	**Day 7**	**Day 14**	**Day 28**
Ag	mg/L	0.00055	0.00068	0.00025	0.00184	0.00727
Al	mg/L	1.24	0.16	0.16	0.09	0.06
As	mg/L	1.78	1.71	1.60	1.62	1.43
Ba	mg/L	0.0597	0.0419	0.0403	0.0401	0.0464
Be	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
B	mg/L	0.148	0.140	0.120	0.125	0.115
Bi	mg/L	0.00093	0.00017	0.00035	0.00023	n/a
Ca	mg/L	172	161	159	170	n/a
Cd	mg/L	0.00609	0.00115	0.00265	0.0013	n/a
Co	mg/L	0.000384	0.000221	0.000318	0.000248	0.000305
Cr	mg/L	0.0032	0.0006	0.0018	< 0.0005	0.0005
Cu	mg/L	0.0557	0.0065	0.0098	0.0124	0.0496
Fe	mg/L	1.42	0.081	0.190	0.092	0.268
In	mg/L	0.00029	0.00003	0.00012	0.00002	0.00080
K	mg/L	10.8	11.0	10.2	11.4	13.1
Li	mg/L	0.004	0.006	0.007	0.007	0.009
Mg	mg/L	0.460	0.136	0.232	0.351	0.837
Mn	mg/L	0.0499	0.0028	0.0060	0.0028	0.00863
Mo	mg/L	0.110	0.106	0.0961	0.105	0.116
Na	mg/L	28.1	28.8	27.2	29.8	34.2
Ni	mg/L	0.0031	0.0014	0.0028	0.0016	0.0019
P	mg/L	0.116	0.081	0.080	0.094	n/a
Pb	mg/L	0.0204	0.0016	0.0029	0.0015	0.00251
Sb	mg/L	0.0093	0.0115	0.0114	0.0157	0.0321
Se	mg/L	0.137	0.117	0.084	0.091	0.097
Si	mg/L	9.21	5.79	4.95	4.77	4.56
Sn	mg/L	0.0505	0.0430	0.0513	0.0482	0.0501
Sr	mg/L	0.524	0.518	0.499	0.541	0.636
Th	mg/L	0.000154	< 0.000004	0.000110	0.000006	n/a
Ti	mg/L	0.0557	0.0036	0.0034	0.0024	0.0013
Tl	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
U	mg/L	0.000065	0.000044	0.000068	0.000129	0.000352
V	mg/L	0.0174	0.0121	0.0101	0.0088	0.00434
W	mg/L	0.01057	0.0108	0.0105	0.0111	0.0133
Y	mg/L	0.000539	0.000017	0.000017	0.000007	0.000022
Zn	mg/L	0.289	0.035	0.090	0.040	n/a

A static settling test was completed on the zinc flotation tailings from Test LCT1. This test showed that a thickened tailings density of 69% solids (w/w) could be achieved using a feed pulp density of 10% solids (w/w) and a Magnafloc 10 flocculant dosage of 8 g/t. Allowing for a 25% design factor the thickener unit area was measured at 0.10 m^2/t/day implying that the Silver Range flotation tailings settle relatively well.

13.2 INTRODUCTION

Metallurgical testwork on the Keg Main Zone of the Silver Range Project was completed at SGS Canada Inc. – Lakefield Research located in Lakefield Ontario in 2012.

The testwork, completed on six variability composites and one overall composite, encompassed preparation and analyses of test composites, comminution testing, open cycle and lock cycle flotation tests, gravity recovery tests, concentrate analyses and tailings physical and chemical characterization.

The results of the test program were used to arrive at a suitable process flowsheet and to provide metallurgical efficiencies for project evaluation, as well as providing concentrate analyses for market evaluation and preliminary tailings characteristics for use in environmental studies.

13.3 COMPOSITE PREPARATION AND ANALYSES

A set of diamond drill hole (DDH) coarse assay reject samples, collected from 11 drill holes over a strike length of 600 m, were collected and sent to SGS Canada Inc.'s Vancouver laboratory to prepare test composites for metallurgical testwork. Sample collection and composite preparation instructions were prepared by Archer, Cathro & Associates (1981) Limited.

A total of six variability composites of approximately 100 kg each were prepared to represent distinct zones of the known mineralization, designated as Composites A, B, C, D, E, and F. The drill core calculated grades for these six composites are summarized in Table 13.1 below.

Table 13.1
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Test Composites - Drill Core Calculated Grades for Key Elements

Composite	Hole	Section	Ag, g/t	Cu, %	Pb, %	Zn, %	In, g/t	Sn, g/t
A	KEG-11-09	940E	73.7	0.181	0.558	0.631	1.86	808.4
B	KEG-11-22	740E	56.0	0.622	0.325	2.436	17.54	896.5
C	KEG-11-23 KEG-11-25 KEG-11-34	740E	42.3	0.326	0.326	1.661	14.37	316.4
D	KEG-11-12	540E	34.4	0.107	0.260	0.884	9.05	169.9
E	KEG-11-24 KEG-11-26 KEG-11-40	540E	23.1	0.185	0.141	1.344	24.07	287.7
F	KEG-11-30 KEG-11-39	340E	31.3	0.174	0.296	1.024	9.41	356.0

For the initial testwork a portion of each variability composite was taken and mixed, on a weighted basis, to prepare an overall master composite.

Samples of each prepared composite were submitted for detailed head analyses. Key elemental analyses are summarized in Table 13.2 and detailed analyses are listed in Table 13.3.

Table 13.2
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Test Composites – Assay Head Grades for Key Elements

Composite	Ag, g/t	Cu, %	Pb, %	Zn, %	In, g/t	Sn, g/t
Overall	41.6	0.27	0.31	1.36	11.4	400
A	89.1	0.18	0.62	0.69	1.7	770
B	56.2	0.60	0.30	2.30	15.6	760
C	44.1	0.31	0.34	1.67	13.1	230
D	32.3	0.10	0.27	0.89	8.8	100
E	21.1	0.14	0.15	1.28	19.5	210
F	32.7	0.19	0.28	1.14	9.1	360

Table 13. 3
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Test Composites-Detailed Assay Head Grades

Element	Unit	Overall Comp	Comp A	Comp B	Comp C	Comp D	Comp E	Comp F
XRF - Pyrosulphate Fusion								
Cu	%	0.27	0.18	0.60	0.31	0.10	0.14	0.19
Pb	%	0.31	0.62	0.30	0.34	0.27	0.15	0.28
Zn	%	1.36	0.69	2.30	1.67	0.89	1.28	1.14
Fe	%	4.70	3.20	5.51	4.53	4.57	4.84	4.87
Internal Standards								
Sn	%	0.040	0.077	0.076	0.023	0.010	0.021	0.036
AAS								
Ag	g/t	41.6	89.1	56.2	44.1	32.3	21.1	32.7
In	g/t	11.4	1.7	15.6	13.1	8.8	19.5	9.1
Metallics Assay								
Ag	g/t	44.6	81.7	58.3	39.5	32.8	22.9	33.4
Au	g/t	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
LECO								
S	%	2.81	1.83	4.14	2.93	2.77	2.58	2.77
Fire Assay								
Au	g/t	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pt	g/t	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pd	g/t	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Whole Rock Analysis								
SiO_2	%	59.2	58.8	56.2	59.9	61.9	60.1	57.1
Al_2O_3	%	7.30	7.11	6.44	7.35	7.62	7.24	8.12
Fe_2O_3	%	6.81	4.70	8.43	6.82	6.91	7.38	7.20
MgO	%	3.94	4.01	3.90	4.07	3.90	3.52	4.09
CaO	%	11.4	12.4	11.4	10.6	10.5	11.9	12.1
Na_2O	%	0.60	0.38	0.87	0.69	0.51	0.57	0.48
K_2O	%	1.99	2.14	1.42	2.65	1.99	1.53	1.99
TiO_2	%	0.44	0.45	0.39	0.45	0.45	0.44	0.48
P_2O_5	%	0.23	0.18	0.22	0.24	0.26	0.18	0.27

Table 13. 3
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Test Composites-Detailed Assay Head Grades

Element	Unit	Overall Comp	Comp A	Comp B	Comp C	Comp D	Comp E	Comp F
MnO	%	0.29	0.23	0.37	0.33	0.24	0.37	0.23
Cr_2O_3	%	0.02	0.02	0.02	0.10	0.02	0.02	0.02
V_2O_5	%	0.02	0.01	0.02	0.02	0.03	0.02	0.04
LOI	%	3.42	5.02	3.41	3.40	3.43	3.90	3.33
Sum	%	95.6	95.4	93.1	96.6	97.7	97.1	95.5
ICP-OES								
As	ppm	176	148	39	101	31	99	432
Ba	ppm	1000	1520	793	1540	845	918	1180
Be	ppm	1.07	1.00	0.98	1.08	1.04	1.05	1.09
Bi	ppm	96	132	119	89	105	68	66
Cd	ppm	279	112	521	327	168	278	201
Co	ppm	14	9.9	18	19	12	17	13
Li	ppm	35	38	44	26	29	20	42
Mo	ppm	< 10	< 10	< 10	< 10	< 10	11	13
Ni	ppm	37	36	39	42	33	39	45
Sb	ppm	< 10	14	< 10	< 10	< 10	< 10	13
Se	ppm	69	82	86	77	40	38	62
Sr	ppm	168	177	134	153	165	148	172
Tl	ppm	< 30	< 30	< 30	< 30	< 30	< 30	< 30
U	ppm	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Y	ppm	21.1	19.8	20.1	20.4	20.1	19.7	21.2

A comparison of the expected drill core calculated head grades in Table 13.1 against the assay head grades of the test composites listed in Table 13.2 shows good agreement for copper, lead and zinc, good agreement for indium, reasonable agreement for tin and, except for Composite A, good agreement for silver.

The metallics silver assay on Composite A carried out at 150 mesh (81.7 g Ag/t versus the assay head grade of 89.1 g Ag/t and the drill core calculated grade of 73.7 g Ag/t) suggests the presence of "coarse silver" but only 0.1% of the silver was in the plus 150 mesh fraction.

Mineralogical examination of the Overall Composite, a blend of the six variability composites, was completed to quantify the mode of occurrence of minerals of interest. Quartz is the dominant mineral in all size fractions accounting for 30.6 % of the Overall Composite sample, followed by pyroxene, K-feldspar and plagioclase which account for 22.1 %, 12.2 % and 8.1 % of the sample respectively. Calcite accounts for 5.7 %, epidote for 5.2 %, chlorite for 3.0 % and titanite for 2.0 %.

The sulphides consist mainly of sphalerite (2.6 %), pyrite (2.2 %), chalcopyrite (1.1 %), pyrrhotite (0.7 %), arsenopyrite (0.4 %) and galena (0.5 %). Other minerals are present in trace amounts (<1 %). Traces of silver minerals (native silver and silver sulphides) were found, but more detailed examination specific to silver would be required to properly define the mode of occurrence of silver. The main tin minerals, which are typically fine grained, include stannite (0.2 %) and rare cassiterite (0.01 %).

The overall composite was submitted to a gravity recoverable test under the standard conditions used for a GRG (Gravity Recoverable Gold) test. The test gravity recovery value for silver was 25% which implies that approximately 15% of the silver could be recoverable by gravity under plant operating conditions. The test gravity recovery value for tin was 5.1% which implies that only about 3% of the tin could be recovered by gravity under plant operating conditions.

13.4 COMMINUTION DATA

Each composite was submitted to a Bond Ball Mill Work Index test to provide some initial information on the grinding characteristics of the Keg Main Zone mineralization. Results are summarized in Table 13.4 below. Except for Composite D which was slightly harder, all composites suggest that the Keg Main Zone mineralization is of medium hardness.

Table 13.4
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Test Composites-Ball Mill Bond Work Index (BWI) Measurements (kWh/t - Metric)

Measurement	Overall Comp	Comp A	Comp B	Comp C	Comp D	Comp E	Comp F
BWI (kWh/tonne)	n/a	16.1	16.5	16.1	17.5	16.0	15.9

13.5 FLOTATION TESTWORK

13.5.1 Batch Flotation Tests

A total of 16 open cycle batch flotation tests were completed on the overall composite to identify the flotation characteristics of the Keg main zone mineralization and to quantify optimum flotation parameters for the recovery of copper, lead and zinc to concentrates. Six open cycle batch flotation tests were also completed on the six variability composites, one per composite to assess variability ahead of lock cycle testing.

Initial rougher flotation tests indicated that target rougher recoveries to a bulk copper/lead rougher concentrate would be approaching 90% for copper, lead and silver with a mass pull of about 3%. The target zinc rougher recovery to a bulk zinc rougher concentrate was in the range of 80% to 90% with a mass pull of about 7%.

Coarsening the primary grind from a P_{80} of 59 µm to a P_{80} of 195 µm caused a 4% drop in copper rougher recovery, a 6% drop in zinc rougher recovery and a 3% drop in silver rougher recovery. Lead liberation was good in all tests, even at the coarser grind P_{80} of 195 µm which yielded an acceptable lead rougher recovery of 92%. A P_{80} of 100 µm was chosen as the target primary grind.

Increasing the fineness of the copper/lead rougher concentrate regrind increased copper recovery to the copper/lead third cleaner concentrate and to the final copper concentrate with no impact on copper grade in the concentrate. Adding a single lead cleaning stage to the lead was required to maximize lead concentrate grade. Adding cyanide to control redox potential in the copper/lead separation float likely enhanced copper/lead separation.

A slightly finer regrind of the zinc cleaner feed and adding a fourth cleaning stage improved the zinc grade in the final zinc cleaner to above 40% Zn. Increasing the collector dosage in the zinc cleaning stage did not increase zinc recovery.

Batch testing showed that complete replacement of sodium cyanide with NaMBS (sodium metabisulphite) resulted in poor copper/lead separation and a drop in zinc recovery to the fourth cleaner concentrate with only a slight improvement in zinc concentrate grade. The use of NaMBS in the zinc cleaner circuit improved the zinc concentrate grade to 48.5% Zn with four cleaners, compared to the 46.9% Zn grade achieved with five cleaners or the 43.4% Zn grade achieved with four cleaners in a previous test.

The majority of the silver, about 80% to 85%, reports to the copper/lead rougher concentrate and possibly 5% to 10% is expected to report to the zinc concentrate. In the downstream copper/lead separation float, as expected, the silver mostly reports to the lead concentrate.

Preliminary values for indium recovery suggested that about 40% to 75% of the indium could report to a zinc concentrate assaying above 45% Zn and about 400 g In/t. A small amount of the indium, less than 10%, would report to the copper concentrate.

About half the tin reports to the copper/lead rougher concentrate. Separate tin recovery by flotation proved difficult and was therefore not pursued further in this test program.

In open cycle batch tests on the six variability composites there was no direct correlation between head grade and recovery and grade in concentrate for zinc and lead which implies that there are other (mineralogical) factors affecting recovery and deportment of zinc and lead to concentrate. Copper on the other hand generally showed increasing recovery and copper grade to copper concentrate with increasing head grade.

13.5.2 Selection of Flotation Conditions and Reagent Scheme

Based on the results of the open cycle batch flotation tests, the flowsheet selected for separate recovery of copper, lead, and zinc concentrates in lock cycle tests is depicted in Figures 13.1 and 13.2 below.

Figure 13.1
Silver Range Project –Lock Cycle Test Flowsheet
Copper/Lead Circuit
(from SGS Canada Inc. Lakefield Research)

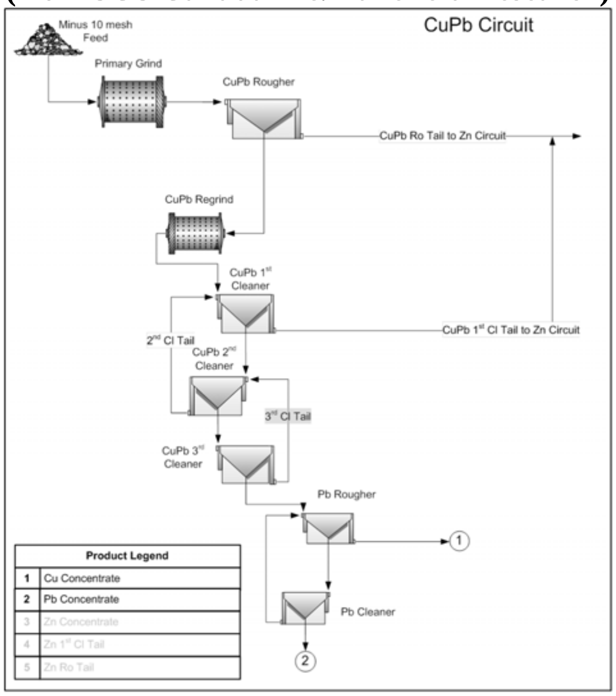
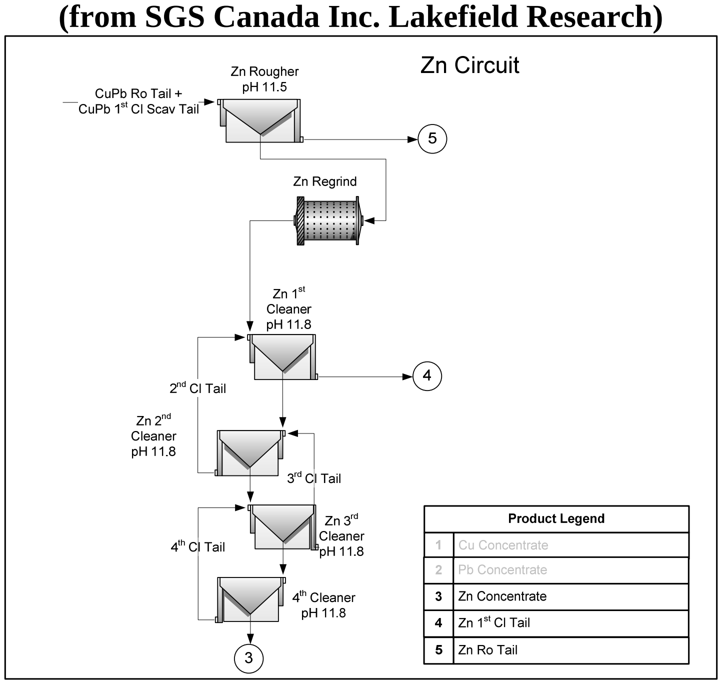


Figure 13.2
Silver Range Project – Lock Cycle Test Flowsheet
Zinc Circuit
(from SGS Canada Inc. Lakefield Research)



The flotation conditions and reagent scheme generally used in the lock cycle tests were as follows:

- Target primary grind P_{80} of 100 µm in the presence of 200 g/t lime (pH 8 to 8.5).
- A five minute pulp aeration time ahead of copper/lead rougher flotation.
- Copper/lead rougher flotation using Aerophine 3418A (10 g/t) as collector and MIBC (methyl isobutyl carbinol) (22.5 g/t) as frother with a six minute laboratory flotation time at pH 9 to 9.5 controlled with further addition of lime (approximately 250 g/t).
- Regrind of the copper/lead rougher concentrate to a target P_{80} of 20 to 25 µm in the presence of zinc sulphate (75 g/t) and sodium cyanide (12.5 g/t) used as zinc depressant, additional lime (75 g/t) to maintain an elevated pH (pH 9) and additional 3418A collector (5 g/t).
- Three stages of copper/lead cleaners, approximately 4 minutes per stage, with further 3418A collector addition (5 g/t) and lime addition (approximately 50 g/t) to maintain pH 10, and 15 g/t MIBC frother addition.
- Copper/lead separation one minute rougher float on the third copper/lead cleaner concentrate at pH 11 in the presence of sodium cyanide (approximately 400 g/t), additional 3418A collector (2.5 g/t) and MIBC frother (2.5 g/t); followed by one two minute cleaning stage at pH 11 with further addition of sodium cyanide (approximately 160 g/t), 3418A collector (2.5 g/t) and MIBC frother (2.5 g/t) to produce an upgraded lead concentrate. The copper/lead separation rougher tails constitute the copper concentrate.
- The copper/lead rougher tails and the copper/lead first cleaner tails are fed to the zinc flotation circuit consisting of rougher and cleaner floats.
- The feed to the zinc rougher float is conditioned at pH 11.8 adjusted with lime (approximately 1300 g/t) and with copper sulphate activator (250 g/t).
- Zinc rougher flotation consists of a six to eight minute flotation time using Aero 5100 as collector (25 g/t) with further lime addition (approximately 350 g/t) to maintain pH 11.8 and further MIBC frother addition (20 g/t).

- Regrind of the zinc rougher concentrate to a target P_{80} of 15 to 20 µm in the presence of additional copper sulphate activator (approximately 50 g/t) and additional lime (approximately 500 to 750 g/t) to maintain an elevated pH (pH 12).
- The reground zinc rougher concentrate was submitted to four zinc cleaning stages with further additions of lime (varying from 200 to 800 g/t) to maintain pH 12, and further Aero 5100 collector addition (7.5 g/t). One additional lock cycle test evaluated the use of sodium metabisulphite (NaMBS) in the zinc cleaners (total addition of 375 g/t), which improved the zinc grade to the final zinc cleaner concentrate.

13.5.3 Lock Cycle Flotation Tests

A total of eight lock cycle tests were completed to quantify recoveries and concentrate grades for the Keg Main Zone mineralization under conditions approaching steady state. One lock cycle test was completed on each variability composite and two lock cycle tests were completed on the overall composite to test the effect of sodium metabisulphite (NaMBS) in the zinc cleaner float. It is noted that increasing the cleaner float time in the copper/lead cleaner float in this test resulted in a slightly negative impact on copper/lead separation.

As summarized in Tables 13.5 and 13.6 below, the results of the lock cycle tests on all test composites show that the Keg Main Zone mineralization responds very well to typical copper/lead/zinc flotation circuits with excellent recoveries of payable metals and acceptable copper, lead and zinc concentrate grades in copper, lead and zinc concentrates.

Table 13.5
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Summary of Lock Cycle Test Results

Composite	A	B	C	D	E	F	Avg.	Overall	Overall NaMBS
Test No.	**LCT2**	**LCT3**	**LCT4**	**LCT5**	**LCT6**	**LCT7**	**-**	**LCT1**	**LCT8**
Zinc Concentrate									
% Zn	**39.8**	**49.6**	**46.1**	**28.4**	**48.3**	**45.9**	**43.0**	**47.5**	49.8
% Pb	1.65	0.28	0.33	0.45	0.29	0.79	0.63	0.53	0.45
% Cu	1.08	1.11	0.75	0.56	0.71	1.17	0.90	0.91	0.79
g Ag/t	314	95	81	105	92	129	136	117	105
g In/t	90	291	325	249	658	305	320	358	384
% Sn	0.24	0.011	0.002	0.002	0.002	0.002	0.043	<0.002	0.063
% Zinc Recovery	**81.5**	**92.4**	**92.0**	**85.7**	**92.3**	**87.5**	**88.6**	**85.2**	**87.7**
% Silver Recovery	5.9	7.7	6.8	8.6	11.6	8.6	8.2	6.6	5.9
% Indium Recovery	68.8	82.1	63.3	73.6	87.7	70.4	74.3	72.2	77.5
Lead Concentrate									
% Pb	**67.3**	**59.7**	**68.2**	**65.8**	**64.4**	**65.1**	**65.1**	**65.5**	**59.4**
% Cu	3.87	5.85	3.89	3.73	3.86	3.95	4.19	4.90	7.02
% Zn	1.45	1.19	1.00	0.89	1.00	1.43	1.16	1.12	1.21
g Ag/t	7,761	4,521	5,507	6,647	4,895	5,567	5,816	5,924	5,559
g In/t	<50	<50	21	<50	<50	<50	<50	<50	<50
% Sn	1.28	0.51	0.18	0.25	0.15	0.28	0.44	0.44	0.49
% Lead Recovery	**82.9**	**82.9**	**84.9**	**82.4**	**77.5**	**83.9**	**82.4**	**84.8**	**86.0**
% Silver recovery	75.9	38.4	55.3	65.7	43.1	65.0	57.2	60.5	62.9
% Indium Recovery	n/a	n/a	0.5	n/a	n/a	n/a	n/a	n/a	n/a
Copper Concentrate									
% Cu	**23.5**	**29.8**	**29.0**	**25.2**	**28.2**	**27.6**	**27.2**	**28.8**	**28.1**
% Pb	5.93	0.89	2.62	6.79	3.96	4.37	4.09	2.65	2.43
% Zn	8.53	1.19	3.61	3.32	3.25	4.57	4.08	3.85	5.04
g Ag/t	1,454	1,351	1,326	2,062	1,468	1,089	1,458	1,442	1,328
g In/t	61	129	132	169	274	137	150	150	152
% Sn	5.73	1.84	0.76	1.09	0.78	1.72	1.99	2.04	1.88
% Copper Recovery	**62.3**	**80.2**	**75.3**	**59.0**	**72.2**	**67.6**	**69.4**	**71.4**	**69.2**
% Silver Recovery	8.8	42.3	26.2	14.6	28.9	15.6	22.7	22.0	20.5
% Indium Recovery	14.4	14.0	6.1	3.8	5.6	7.5	8.6	7.9	8.0

A comparison of head grade versus recovery is presented in Table 13.6 below.

Table 13.6
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Lock Cycle Tests – Comparison of Head Grades and Recoveries

	Assay Head Grade					% Recovery				
Composite	**%Zn**	**%Pb**	**%Cu**	**g Ag/t**	**g In/t**	**Zn**	**Pb**	**Cu**	**Ag(1)**	**In(2)**
A	0.69	0.62	0.18	89.1	1.7	81.5	82.9	62.3	84.7	83.2
B	2.30	0.30	0.60	56.2	15.6	92.4	82.9	80.2	80.7	96.1
C	1.67	0.34	0.31	44.1	13.1	92.0	84.9	75.3	81.5	69.4
D	0.89	0.27	0.10	32.3	8.8	85.7	82.4	59.0	80.3	77.4
E	1.28	0.15	0.14	21.1	19.5	92.3	77.5	72.2	72.0	93.3
F	1.14	0.28	0.19	32.7	9.1	87.5	83.9	67.6	80.6	77.9
Average(3)	1.33	0.33	0.25	45.9	11.3	88.6	82.4	69.4	80.0	82.9
Overall(4)	1.36	0.31	0.27	41.6	11.4	85.2	84.8	71.4	82.5	80.1
Overall NaMBS(5)	1.36	0.31	0.27	41.6	11.4	87.7	86.0	69.2	83.4	85.5

Notes: 1. Combined silver recovery to lead and copper concentrate
2. Combined indium recovery to zinc and copper concentrate
3. The average values are an average of the Composites A to F results.
4. The overall values are the results of the test on the Overall Composite, a blend of Composites A to F.
5. The overall NaMBS values are the results of the test on the Overall Composite using NaMBS in the zinc cleaner float.

General comments and observations on the lock cycle results include the following:

- There was generally good agreement between the results of the Overall Composite and the average results of the six variability composites, both with respect to grades and recoveries.
- Zinc concentrate grades of greater than 45% Zn were achievable on composites with head grades greater than 1.0 % Zn. The use of sodium metabisulphite (NaMBS) in the zinc cleaner circuit leads to a higher zinc grade in the zinc concentrate (approaching 50% Zn) without impacting on zinc recovery.
- The lead grade in the lead concentrate, which averaged 65% Pb, was independent of the head grade of the composites. Excellent lead concentrate grades were achieved even down to a low head grade of 0.15% Pb in Composite E. The lower lead concentrate grade in the lead concentrate from the last lock cycle test (59.4% Pb versus 65.5% Pb in the first lock cycle test) was due an increase in cleaner flotation time in the copper/lead cleaner

float, which pulled more weight to the third copper/lead cleaner concentrate and impacted on copper/lead separation.

- Excellent copper grades were obtained in the copper concentrate, averaging 27.2% Cu, even for the composites with relatively low copper head grade. For example Composite D with a copper head grade of only 0.10% Cu achieved a 25.2% Cu concentrate grade.
- Zinc recoveries to zinc concentrate averaged 88.6% and were generally over 90% for composites with zinc head grades greater than 1.0% Zn.
- Lead recoveries to lead concentrate averaged 82.4% and were all greater than 80% except for the one composite with a low lead head grade which had a 77.5% lead recovery for a 0.15% Pb head grade, still quite acceptable for a low head grade.
- Copper recoveries averaged 69.4% and generally followed copper head grade, ranging from 80.2% recovery for a 0.60% Cu head grade (Composite B) to 59.0% for a 0.10% Cu head grade (Composite D).
- Excellent silver recoveries were achieved, averaging 57.2% recovery to lead concentrate assaying an average of 5,816 g Ag/t, and 22.7% recovery to copper concentrate assaying an average of 1,458 g Ag/t. A minor amount, an average of 8.2%, reported to the zinc concentrate which assayed an average of 136 g Ag/t. Silver head grade did not have much impact on overall silver recovery.
- The majority of the recoverable indium reported to the zinc concentrate, averaging 74.3% recovery and assaying an average of 320 g In/t. A lesser amount, 8.6%, was recovered to the copper concentrate assaying an average of 150 g In/t. No indium reported to the lead concentrate. Indium head grade did not seem to have an impact on overall indium recovery.
- The average tin grades were 1.99% Sn in the copper concentrate, 0.44% Sn in the lead concentrate and 0.04% in the zinc concentrate. The majority of the tin, an average of 60%, was not recovered and reported to the final float tails which had an average tails tin assay of 0.025% Sn.

13.6 CONCENTRATE ANALYSES

Available detailed analyses of the copper, lead and zinc concentrates, composites of the concentrates from the six cycles (A-F), are summarized in Tables 13.7, 13.8 and 13.9 below for the first lock cycle test completed on the Overall Composite, Test LCT1, and for the lock cycle tests completed on the six variability composites, Tests LCT 2 to LCT7. These analyses can be used as preliminary data in marketing studies and for developing smelter terms for each concentrate.

Table 13.7
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Lock Cycle Tests – Detailed Analyses of Copper Concentrates

Element	Unit	Overall Comp.	Comp A	Comp B	Comp C	Comp D	Comp E	Comp F
Cu	%	28.6	23.9	29.8	28.5	24.7	28.0	27.2
Pb	%	3.01	5.53	1.02	2.86	8.23	4.10	4.49
Zn	%	3.52	8.50	2.77	3.65	2.76	3.34	4.43
Ag	g/t	1,455	1,454	1,346	1,323	n/a	1,494	1,107
In	g/t	137	53	123	130	n/a	288	132
Sn	%	1.81	5.94	1.52	0.67	n/a	n/a	1.13
Fe	%	26.2	20.7	27.3	26.8	23.4	26.4	25.8
S	%	31.2	29.7	32.4	31.9	n/a	31.6	31.5
Si	%	0.43	0.45	0.51	0.50	n/a	0.54	0.60
Au	g/t	0.24	0.10	0.08	0.22	n/a	0.49	0.22
Pt	g/t	< 0.02	0.08	< 0.02	0.02	n/a	< 0.02	0.04
Pd	g/t	0.02	0.04	< 0.02	0.11	n/a	0.03	0.12
Rh	g/t	n/a	n/a	< 0.02	< 0.02	n/a	n/a	n/a
Re	g/t	<50	<50	<50	<50	n/a	<50	<50
Hg	ppm	<0.3	0.4	<0.3	<0.3	n/a	<0.3	<0.3
F	%	0.006	0.012	0.016	0.005	n/a	0.005	0.01
Al	%	0.0913	0.0919	0.0992	0.0981	n/a	n/a	0.146
As	%	0.007	0.0131	<0.003	0.0095	n/a	n/a	0.0475
Ba	%	0.15	0.00256	0.00119	0.00394	n/a	n/a	0.0037
Be	%	<0.000003	0.000006	<0.000003	0.000004	n/a	n/a	0.000006
Bi	%	0.258	0.278	0.127	0.304	n/a	n/a	0.226
Ca	%	0.363	0.648	0.507	0.312	n/a	n/a	0.383
Cd	%	0.0773	0.167	0.064	0.0827	n/a	n/a	0.0909
Co	%	0.00139	0.00145	0.00143	0.00136	n/a	n/a	0.000982
Cr	%	0.0011	0.0018	0.0012	0.0016	n/a	n/a	0.0005
K	%	0.0103	0.0097	0.009	0.0152	n/a	n/a	0.0305
Li	%	<0.0008	<0.0008	<0.0008	<0.0008	n/a	n/a	<0.0008
Mg	%	0.0577	0.0601	0.0674	0.0626	n/a	n/a	0.0891
Mn	%	0.0336	0.0622	0.0323	0.0418	n/a	n/a	0.0318
Mo	%	0.00136	0.00016	0.00021	0.000782	n/a	n/a	0.00408

Table 13.7 Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork Lock Cycle Tests – Detailed Analyses of Copper Concentrates								
Element	**Unit**	**Overall Comp.**	**Comp A**	**Comp B**	**Comp C**	**Comp D**	**Comp E**	**Comp F**
Na	%	0.0094	0.006	0.0098	0.0098	n/a	n/a	0.0155
Ni	%	0.00308	0.00263	0.00195	0.00339	n/a	n/a	0.00521
P	%	<0.02	<0.02	<0.02	<0.02	n/a	n/a	<0.02
Sb	%	0.00564	0.00857	0.00181	0.0035	n/a	n/a	0.00595
Se	%	0.0672	0.0925	0.0372	0.0735	n/a	n/a	0.0882
Sr	%	0.000566	0.00072	0.00072	0.000577	n/a	n/a	0.000864
Ti	%	0.0135	0.0125	0.0135	0.0131	n/a	n/a	0.0237
Tl	%	0.000145	0.00033	<0.00004	0.000139	n/a	n/a	0.000181
U	%	<0.00004	<0.00004	<0.00004	0.00006	n/a	n/a	0.00006
V	%	0.0004	0.0003	0.0003	0.0003	n/a	n/a	0.0009
Y	%	0.00011	0.00013	0.0001	0.00011	n/a	n/a	0.00019

Table 13.8 Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork Lock Cycle Tests – Detailed Analyses of Lead Concentrates								
Element	**Unit**	**Overall Comp.**	**Comp A**	**Comp B**	**Comp C**	**Comp D**	**Comp E**	**Comp F**
Cu	%	5.42	4.02	6.28	3.90	3.73	3.86	4.07
Pb	%	62.9	66.4	58.0	67.1	65.8	64.4	63.0
Zn	%	1.18	1.57	1.16	1.03	0.89	1.00	1.38
Ag	g/t	5,950	7,763	4,568	5,553	n/a	n/a	5,558
In	g/t	n/a	<50	<50	<50	n/a	n/a	<50
Sn	%	n/a	1.25	n/a	n/a	n/a	n/a	n/a
Fe	%	6.55	3.77	8.08	5.16	5.18	5.25	5.77
S	%	n/a	14.2	15.9	13.8	n/a	n/a	14.6
Si	%	n/a	0.34	0.78	0.54	n/a	n/a	0.69
Au	g/t	0.10	0.07	0.05	0.09	n/a	n/a	0.07
Pt	g/t	0.03	0.02	< 0.02	0.03	n/a	n/a	0.02
Pd	g/t	0.06	0.03	0.07	0.18	n/a	n/a	0.10
Rh	g/t	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Re	g/t	n/a	<50	n/a	n/a	n/a	n/a	n/a
Hg	ppm	n/a	<0.3	<0.3	<0.3	n/a	n/a	<0.3
F	%	0.008	0.005	0.016	<0.005	n/a	n/a	0.009
Al	%	n/a	0.065	n/a	n/a	n/a	n/a	n/a
As	%	n/a	0.0067	n/a	n/a	n/a	n/a	n/a
Ba	%	n/a	0.00074	n/a	n/a	n/a	n/a	n/a
Be	%	n/a	<0.000003	n/a	n/a	n/a	n/a	n/a
Bi	%	n/a	1.6	n/a	n/a	n/a	n/a	n/a
Ca	%	n/a	0.32	n/a	n/a	n/a	n/a	n/a
Cd	%	n/a	0.0372	n/a	n/a	n/a	n/a	n/a
Co	%	n/a	0.00043	n/a	n/a	n/a	n/a	n/a
Cr	%	n/a	0.0015	n/a	n/a	n/a	n/a	n/a
K	%	n/a	0.0065	n/a	n/a	n/a	n/a	n/a

Table 13.8
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Lock Cycle Tests – Detailed Analyses of Lead Concentrates

Element	Unit	Overall Comp.	Comp A	Comp B	Comp C	Comp D	Comp E	Comp F
Li	%	n/a	<0.0008	n/a	n/a	n/a	n/a	n/a
Mg	%	n/a	0.0316	n/a	n/a	n/a	n/a	n/a
Mn	%	n/a	0.0156	n/a	n/a	n/a	n/a	n/a
Mo	%	n/a	0.00031	n/a	n/a	n/a	n/a	n/a
Na	%	n/a	0.0023	n/a	n/a	n/a	n/a	n/a
Ni	%	n/a	0.00138	n/a	n/a	n/a	n/a	n/a
P	%	n/a	<0.02	n/a	n/a	n/a	n/a	n/a
Sb	%	n/a	0.0317	n/a	n/a	n/a	n/a	n/a
Se	%	n/a	0.88	n/a	n/a	n/a	n/a	n/a
Sr	%	n/a	0.0005	n/a	n/a	n/a	n/a	n/a
Ti	%	n/a	0.00472	n/a	n/a	n/a	n/a	n/a
Tl	%	n/a	0.00349	n/a	n/a	n/a	n/a	n/a
U	%	n/a	0.00006	n/a	n/a	n/a	n/a	n/a
V	%	n/a	0.0003	n/a	n/a	n/a	n/a	n/a
Y	%	n/a	0.00006	n/a	n/a	n/a	n/a	n/a

Table 13.9
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Lock Cycle Tests – Detailed Analyses of Zinc Concentrates

Element	Unit	Overall Comp.	Comp A	Comp B	Comp C	Comp D	Comp E	Comp F
Cu	%	0.93	1.06	1.07	0.59	0.57	0.66	1.02
Pb	%	0.55	1.66	0.28	0.25	0.45	0.28	0.70
Zn	%	48.8	42.0	49.7	47.5	30.0	47.6	46.4
Ag	g/t	125	314	108	66.5	109	82.8	124
In	g/t	364	88	278	333	256	691	329
Sn	%	0.10	0.30	0.14	0.04	0.04	0.05	0.08
Fe	%	14.5	20.2	13.4	14.5	30.1	14.4	14.8
S	%	33.3	33.1	33.4	33.2	34.6	33.3	33.0
Si	%	0.22	0.37	0.19	0.26	0.59	0.39	0.33
Au	g/t	0.08	1.63	0.07	0.06	0.05	0.08	0.07
Pt	g/t	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Pd	g/t	0.05	< 0.02	< 0.02	0.04	0.02	< 0.02	0.02
Rh	g/t	< 0.02	< 0.02	< 0.02	< 0.02	---	< 0.02	< 0.02
Re	g/t	<50	<50	<50	<50	<50	<50	<50
Hg	ppm	0.4	0.7	0.3	0.4	0.4	<0.3	0.3
F	%	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Al	%	0.0438	0.0642	0.0352	0.042	0.125	0.0649	0.0742
As	%	0.0086	0.005	<0.003	0.0042	0.0058	0.0036	0.0238
Ba	%	0.00069	0.00127	0.00017	0.00105	0.00253	0.00115	0.00188
Be	%	<0.000003	<0.000003	<0.000003	<0.000003	<0.000003	<0.000003	0.000004
Bi	%	0.0208	0.0534	0.0127	0.0105	0.0288	0.0219	0.0258
Ca	%	0.222	0.383	0.189	0.222	0.483	0.256	0.291

Table 13.9
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Lock Cycle Tests – Detailed Analyses of Zinc Concentrates

Element	Unit	Overall Comp.	Comp A	Comp B	Comp C	Comp D	Comp E	Comp F
Cd	%	0.988	0.722	1.19	0.973	0.616	1.07	0.958
Co	%	0.00751	0.0052	0.00663	0.00855	0.00626	0.0118	0.00544
Cr	%	0.0025	0.036	0.0015	0.0016	0.012	0.0023	0.002
K	%	0.0092	0.012	0.0039	0.018	0.0369	0.0088	0.0167
Li	%	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008
Mg	%	0.0353	0.0446	0.0334	0.0411	0.0736	0.0385	0.0591
Mn	%	0.396	0.299	0.397	0.459	0.28	0.375	0.337
Mo	%	0.00228	0.0005	0.00029	0.00055	0.00253	0.00378	0.00726
Na	%	<0.001	0.0034	0.0012	<0.001	0.0171	0.0065	0.0035
Ni	%	0.00532	0.0238	0.00281	0.00639	0.0269	0.00614	0.00689
P	%	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sb	%	0.00086	0.0026	0.00047	0.00043	0.00181	0.00045	0.00126
Se	%	0.0461	0.0508	0.0438	0.0407	0.0287	0.0412	0.0415
Sr	%	0.00029	0.00053	0.00024	0.00025	0.00072	0.00032	0.000396
Ti	%	0.00274	0.0043	0.0024	0.00372	0.00783	0.00709	0.0103
Tl	%	<0.00004	0.00012	<0.00004	<0.00004	<0.00004	<0.00004	0.000044
U	%	<0.00004	0.00008	<0.00004	<0.00004	<0.00004	<0.00004	0.00004
V	%	0.0002	<0.0002	0.0002	<0.0002	0.0002	0.0002	0.0005
Y	%	0.00005	0.00007	0.00004	0.00006	0.00011	0.00007	0.00011

13.7 TAILINGS PHYSICAL AND CHEMICAL CHARACTERIZATION

13.7.1 Tailings Analyses

The combined zinc flotation tailings solids and tailings supernatant from the first lock cycle test were submitted to a detailed analysis. The tailings were also submitted to tailings aging tests with analysis of the supernatant at regular intervals. The tailings solids analyses are summarized in Table 13.10 and the tailings aging test results to Day 28 are summarized in Table 13.11. These data can be used in preliminary environmental studies for the project.

Table 13.10
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Lock Cycle Test No. 1 – Flotation Tailings Solids Analysis

Analyte	Unit	Value	
		LCT1 Zn Rougher Tails	LCT1 Zn 1st Cleaner Scav Tails
Elemental Analysis			
Si	%	28.1	11.2
Hg	%	<0.00001	<0.00001
Ag	%	0.0004	0.0021
Al	%	3.8	1.9
As	%	0.071	1.70
B	%	0.0049	0.0025
Ba	%	0.13	0.048
Be	%	0.0001	0.00005
Bi	%	0.0027	0.014
Ca	%	7.9	5.1
Cd	%	0.0005	0.03
Co	%	0.0005	0.0069
Cr	%	0.01	0.049
Cu	%	0.017	0.21
In	%	0.00006	0.0021
Fe	%	3.1	30
K	%	1.9	0.9
Li	%	0.0035	0.0024
Mg	%	2.1	1.2
Mn	%	0.19	0.13
Mo	%	0.0006	0.0012
Na	%	0.12	0.028
Ni	%	0.0025	0.032
P	%	0.08	0.038
Pb	%	0.022	0.081
Sb	%	0.001	0.0026
Se	%	0.0006	0.012
Sn	%	0.023	0.024

Table 13.10
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Lock Cycle Test No. 1 – Flotation Tailings Solids Analysis

Analyte	Unit	Value	
		LCT1 Zn Rougher Tails	LCT1 Zn 1st Cleaner Scav Tails
Sr	%	0.016	0.009
Th	%	0.0008	0.0003
Ti	%	0.24	0.13
Tl	%	0.00007	0.00004
U	%	0.0003	0.0002
V	%	0.01	0.0047
W	%	0.0004	0.0004
Y	%	0.0019	0.001
Zn	%	0.037	2.0
Acid Base Accounting Measurements			
Neutralizing Potential (NP)	t $CaCO_3$/1000 t	62.9	70.9
Acid Producing Potential (AP)	t $CaCO_3$/1000 t	21.7	370
NP/AP Ratio	-	2.90	0.19
Net Acid Generation (NAG) pH 4.5	kg H_2SO_4/tonne	0	13
Net Acid Generation (NAG) pH 7.0	kg H_2SO_4/tonne	0	56
Particle Size Analysis			
Weight % Passing	425 µm	99.3	100
	212 µm	97.6	100
	150 µm	92.9	100
	75 µm	70.8	99.8
	41 µm	50.1	n/a
	33 µm	44.7	51.1
	22 µm	38.1	47.6
	16 µm	33.4	46.0
	12 µm	27.9	43.1
	8 µm	22.3	38.9
	6 µm	16.7	33.5
	4 µm	13.9	25.6
	1 µm	6.5	10.4

Table 13.11
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Lock Cycle Test No. 1 Combined Flotation Tailings Supernatant Aging Test Assays

Analyte	Unit	Day 0	Day 3	Day 7	Day 14	Day 28
TSS	mg/L	29	5	3	2	6
pH	units	10.3	8.04	7.59	6.99	6.77
Conductivity	µS/cm	915	952	960	948	1150
Alkalinity	mg/L as $CaCO_3$	54	31	28	16	34
Acidity	mg/L as $CaCO_3$	80	76	104	56	n/a
TDS	mg/L	751	731	763	723	849
F	mg/L	0.54	0.54	0.55	0.86	0.55

Table 13.11
Silver Range Resources Ltd. - Keg Main Zone Metallurgical Testwork
Lock Cycle Test No. 1 Combined Flotation Tailings Supernatant Aging Test Assays

Analyte	Unit	Day 0	Day 3	Day 7	Day 14	Day 28
Tot. Reac. P	mg/L	0.20	0.23	0.15	0.20	0.11
Cl	mg/L	25	0.3	26	28	30
NO_2	as N mg/L	< 0.06	< 0.06	< 0.06	< 0.06	0.10
NO_3	as N mg/L	0.07	0.08	0.09	0.08	0.10
SO_4	mg/L	260	2.7	260	260	340
NH_3+NH_4	as N mg/L	0.5	0.3	0.4	0.2	0.3
Hg	µg/L	< 0.1	< 0.1	< 0.1	< 0.1	0.03
Ag	mg/L	0.00055	0.00068	0.00025	0.00184	0.00727
Al	mg/L	1.24	0.16	0.16	0.09	0.06
As	mg/L	1.78	1.71	1.60	1.62	1.43
Ba	mg/L	0.0597	0.0419	0.0403	0.0401	0.0464
Be	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
B	mg/L	0.148	0.140	0.120	0.125	0.115
Bi	mg/L	0.00093	0.00017	0.00035	0.00023	n/a
Ca	mg/L	172	161	159	170	n/a
Cd	mg/L	0.00609	0.00115	0.00265	0.0013	n/a
Co	mg/L	0.000384	0.000221	0.000318	0.000248	0.000305
Cr	mg/L	0.0032	0.0006	0.0018	< 0.0005	0.0005
Cu	mg/L	0.0557	0.0065	0.0098	0.0124	0.0496
Fe	mg/L	1.42	0.081	0.190	0.092	0.268
In	mg/L	0.00029	0.00003	0.00012	0.00002	0.00080
K	mg/L	10.8	11.0	10.2	11.4	13.1
Li	mg/L	0.004	0.006	0.007	0.007	0.009
Mg	mg/L	0.460	0.136	0.232	0.351	0.837
Mn	mg/L	0.0499	0.0028	0.0060	0.0028	0.00863
Mo	mg/L	0.110	0.106	0.0961	0.105	0.116
Na	mg/L	28.1	28.8	27.2	29.8	34.2
Ni	mg/L	0.0031	0.0014	0.0028	0.0016	0.0019
P	mg/L	0.116	0.081	0.080	0.094	n/a
Pb	mg/L	0.0204	0.0016	0.0029	0.0015	0.00251
Sb	mg/L	0.0093	0.0115	0.0114	0.0157	0.0321
Se	mg/L	0.137	0.117	0.084	0.091	0.097
Si	mg/L	9.21	5.79	4.95	4.77	4.56
Sn	mg/L	0.0505	0.0430	0.0513	0.0482	0.0501
Sr	mg/L	0.524	0.518	0.499	0.541	0.636
Th	mg/L	0.000154	< 0.000004	0.000110	0.000006	n/a
Ti	mg/L	0.0557	0.0036	0.0034	0.0024	0.0013
Tl	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
U	mg/L	0.000065	0.000044	0.000068	0.000129	0.000352
V	mg/L	0.0174	0.0121	0.0101	0.0088	0.00434
W	mg/L	0.01057	0.0108	0.0105	0.0111	0.0133
Y	mg/L	0.000539	0.000017	0.000017	0.000007	0.000022
Zn	mg/L	0.289	0.035	0.090	0.040	n/a

13.7.2 Tailings Settling Test

A static settling test was completed on the zinc flotation tailings from Test LCT1. This test showed that a thickened tailings density of 69% solids (w/w) could be achieved using a feed pulp density of 10% solids (w/w) and a Magnafloc 10 flocculant dosage of 8 g/t. The thickener unit area was measured at 0.08 m^2/t/day.

Allowing for a 25% design factor the net thickener area would be 0.10 m^2/t/day, which implies that the Silver Range flotation tailings settle relatively well.

13.8 REFERENCES

1. Archer, Cathro & Associates (1981) Limited, Silver Range Resources Ltd. – Keg Main Zone Metallurgical Test Program Composite Preparation (Proposal #13589-PR1) – Revised, February 27, 2012.
2. Melis Engineering Ltd, Melis Status Report No. 1, May 28, 2012.
3. Melis Engineering Ltd, Melis Status Report No. 2, July 9, 2012.
4. Melis Engineering Ltd, Melis Status Report No. 3, September 14, 2012.
5. Melis Engineering Ltd, Melis Status Report No. 4 - Rev 1, November 16, 2012.
6. Melis Engineering Ltd, Melis Status Report No. 5 – Rev 1, December 14, 2012.
7. SGS Canada Inc. Lakefield Research, email communications and excel spreadsheets of results, 2012.

APPENDIX II

LIST OF DRILL HOLES USED FOR MINERAL RESOURCE CALCULATIONS

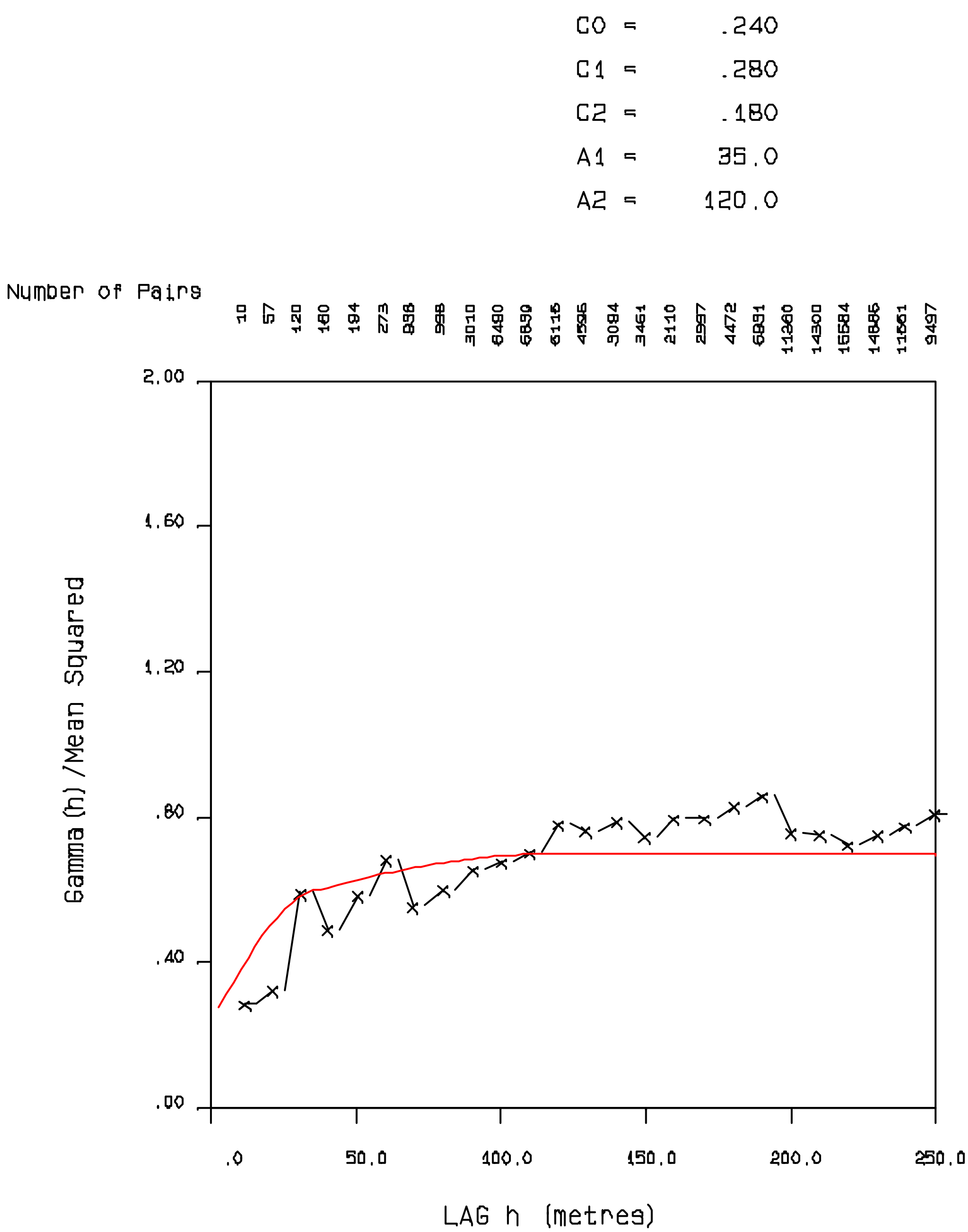
The drill holes that penetrate the mineralized solid are highlighted.

HOLE	EASTING	NORTHING	ELEVATION	HOLE LENGTH (m)
KEG-10-001	586395.42	6940145.34	1205.47	185.00
KEG-10-002	586602.73	6940232.49	1147.03	349.60
KEG-10-003	586057.16	6940064.28	1276.85	252.37
KEG-10-004	586327.49	6940225.17	1193.11	171.30
KEG-11-005	586662.30	6940136.97	1152.43	284.07
KEG-11-006	588034.55	6940265.94	1117.73	191.72
KEG-11-007	586661.68	6940136.09	1152.47	352.93
KEG-11-008	588037.00	6940261.13	1118.31	339.41
KEG-11-009	586702.84	6940262.90	1114.82	279.50
KEG-11-010	586749.78	6940163.38	1105.27	255.12
KEG-11-011	588030.46	6940074.63	1128.89	214.18
KEG-11-012	586332.11	6940134.76	1223.81	387.00
KEG-11-013	586749.30	6940162.81	1105.36	273.41
KEG-11-014	587744.00	6940265.00	1083.00	393.80
KEG-11-015	586818.26	6940201.10	1059.59	394.41
KEG-11-016	586330.68	6940134.16	1224.01	432.00
KEG-11-017	586454.44	6940064.36	1224.13	428.85
KEG-11-018	586332.78	6940134.89	1223.78	336.00
KEG-11-019	586615.00	6941025.00	872.00	288.65
KEG-11-020	586502.71	6940182.65	1171.04	37.23
KEG-11-021	586230.69	6940072.52	1251.34	394.19
KEG-11-022	586502.71	6940182.65	1171.04	343.51
KEG-11-023	586550.57	6940102.84	1200.67	355.70
KEG-11-024	586363.58	6940033.05	1240.81	461.00
KEG-11-025	586579.36	6940013.28	1211.70	428.85
KEG-11-026	586409.64	6939930.74	1248.93	480.00
KEG-11-027	586486.20	6939965.64	1235.15	486.77
KEG-11-028	587796.25	6940113.21	1118.80	366.98
KEG-11-029	586047.52	6940013.94	1278.58	331.48
KEG-11-030	586123.97	6940041.75	1273.58	436.17
KEG-11-031	588027.83	6940078.91	1129.16	333.45
KEG-11-032	587885.34	6939889.59	1074.82	447.14
KEG-11-033	586272.49	6939994.21	1259.04	425.00
KEG-11-034	586636.76	6939909.31	1177.68	532.49
KEG-11-035	585413.00	6939982.00	1253.00	395.33
KEG-11-036	586311.30	6939896.15	1267.72	458.57
KEG-11-037	586536.07	6939866.90	1233.45	538.58
KEG-11-038	586693.00	6940682.00	922.00	320.04

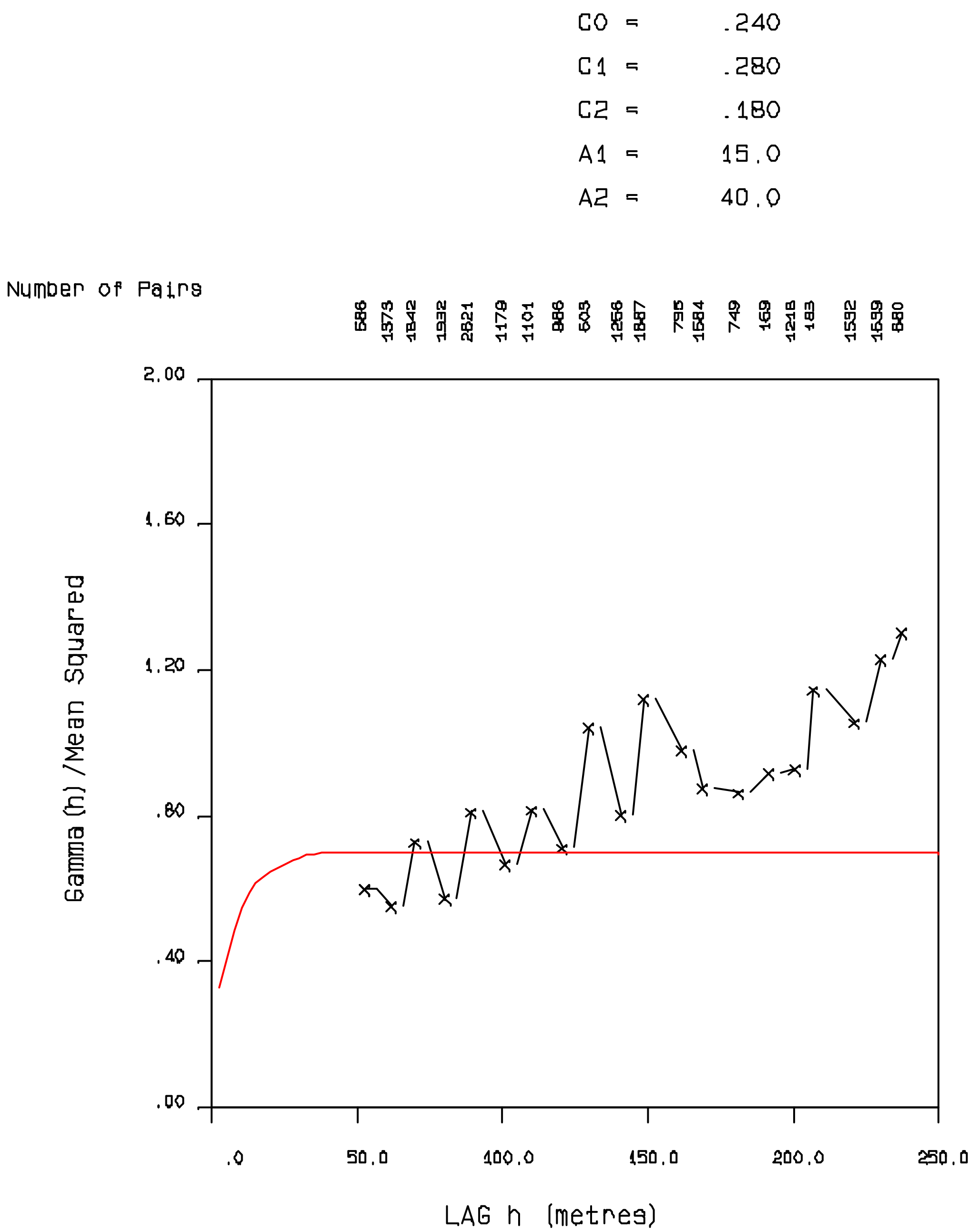
KEG-11-039	586178.65	6939972.96	1285.77	428.00
KEG-11-040	586449.45	6939817.18	1254.89	550.77
KEG-11-041	586882.82	6940113.63	1038.83	276.45
KEG-12-042	586830.86	6939970.34	1067.14	425.00
KEG-12-043	585993.27	6939912.48	1246.40	341.69
KEG-12-044	585704.00	6939783.00	1267.00	368.00
KEG-12-045	586665.55	6939808.37	1179.54	477.00
KEG-12-046	586028.68	6939810.56	1277.82	503.83
KEG-12-047	586803.93	6940299.25	1040.19	144.00
KEG-12-048	586675.16	6940044.39	1166.29	342.00
KEG-12-049	586080.94	6939929.92	1293.94	413.00
KEG-12-050	586117.08	6939826.67	1306.38	506.00
KEG-12-051	586724.93	6939940.23	1118.74	393.00
KEG-12-052	586216.56	6939863.69	1291.62	491.65
KEG-12-053	586794.30	6940079.40	1090.31	281.18
KEG-12-054	586916.16	6940247.98	997.15	159.94
KEG-12-055	587022.19	6940289.02	939.20	182.00
KEG-12-056	586889.90	6940325.63	984.66	152.00
KEG-12-057	587262.16	6940258.80	918.72	224.00
KEG-12-058	585960.85	6939991.43	1223.48	476.00
KEG-12-059	587732.88	6940433.40	1045.94	239.00
KEG-12-060	587351.07	6940296.35	931.80	236.00
KEG-12-061	586015.65	6940158.53	1233.61	15.50
KEG-12-062	586264.26	6939760.17	1296.25	519.70
KEG-12-063	587060.02	6940206.78	941.91	191.00
KEG-12-064	586926.54	6940004.99	1020.53	20.00
KEG-12-065	586926.54	6940004.99	1020.53	383.00
KEG-12-066	586015.65	6940158.53	1233.61	218.00
KEG-12-067	586979.95	6940152.71	986.69	236.00
KEG-12-068	587745.61	6940267.95	1077.28	260.00
KEG-12-069	586116.50	6940195.89	1209.69	179.00

APPENDIX III

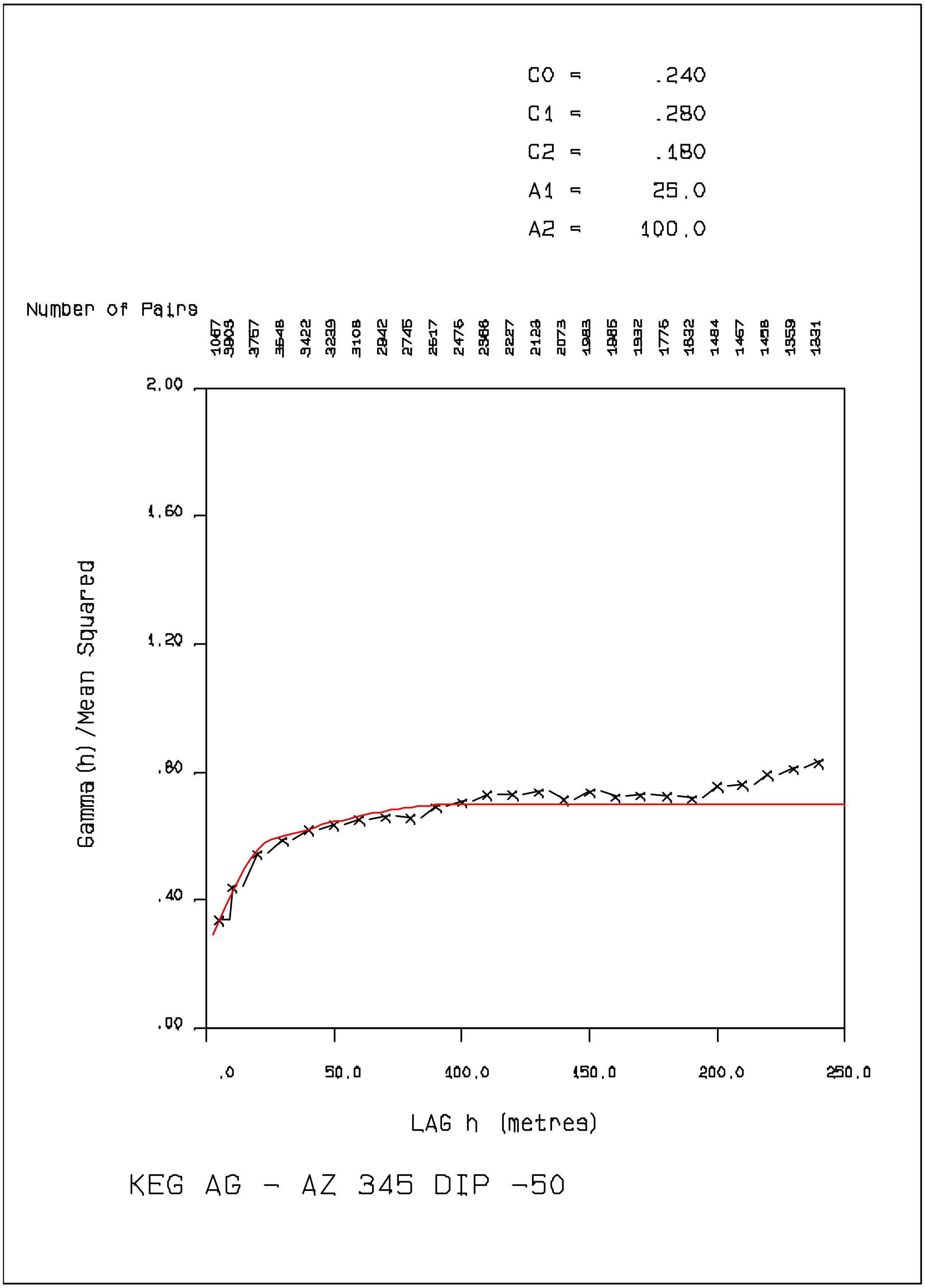
SEMIVARIOGRAMS FOR SILVER, LEAD, ZINC, COPPER, TIN, INDIUM AND CADMIUM WITHIN THE MINERALIZED SOLID AND IN WASTE – USED FOR MINERAL RESOURCE CALCULATIONS



KEG AG - AZ 75 DIP -15



KEG AG - AZ 165 DIP -40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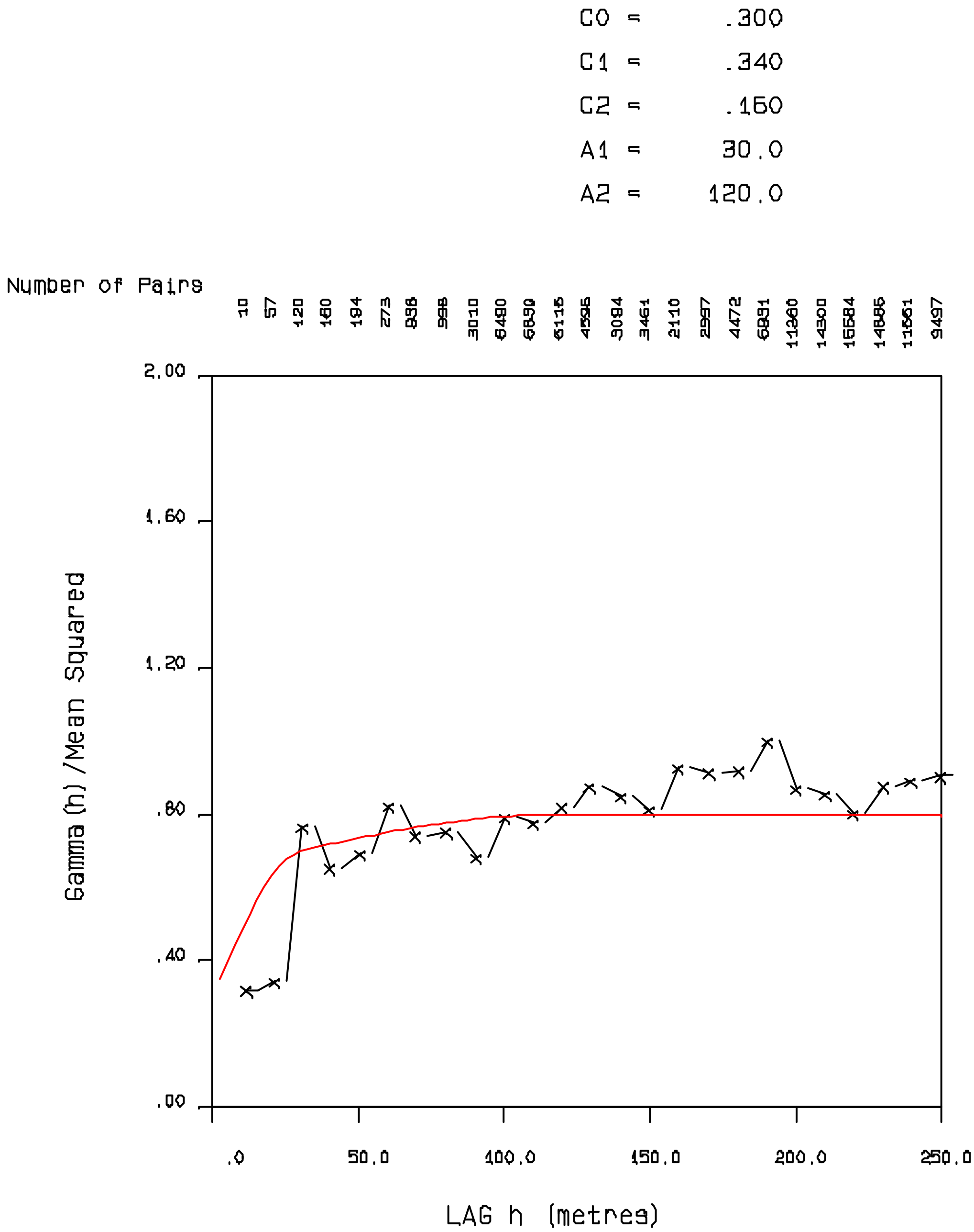
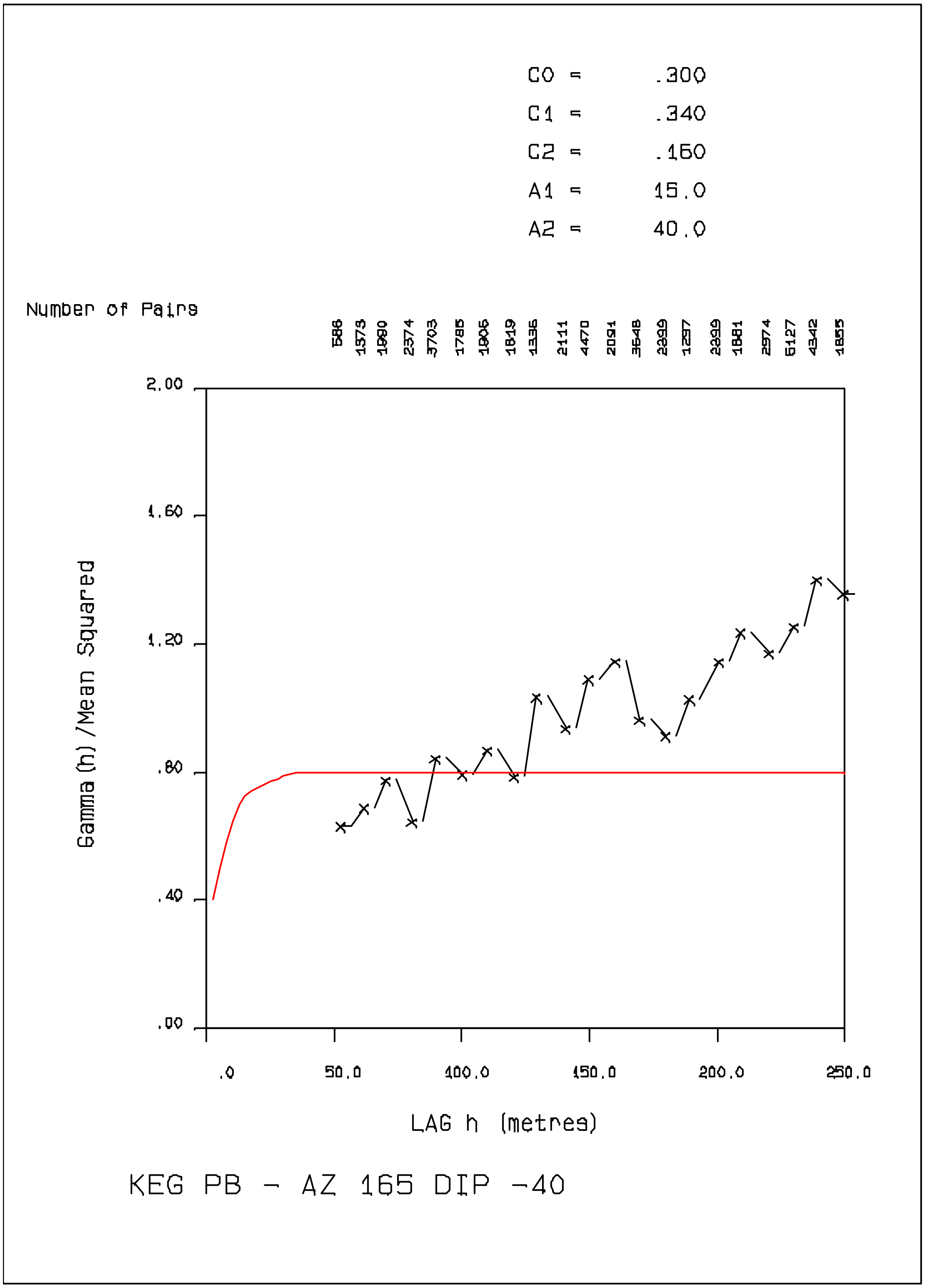
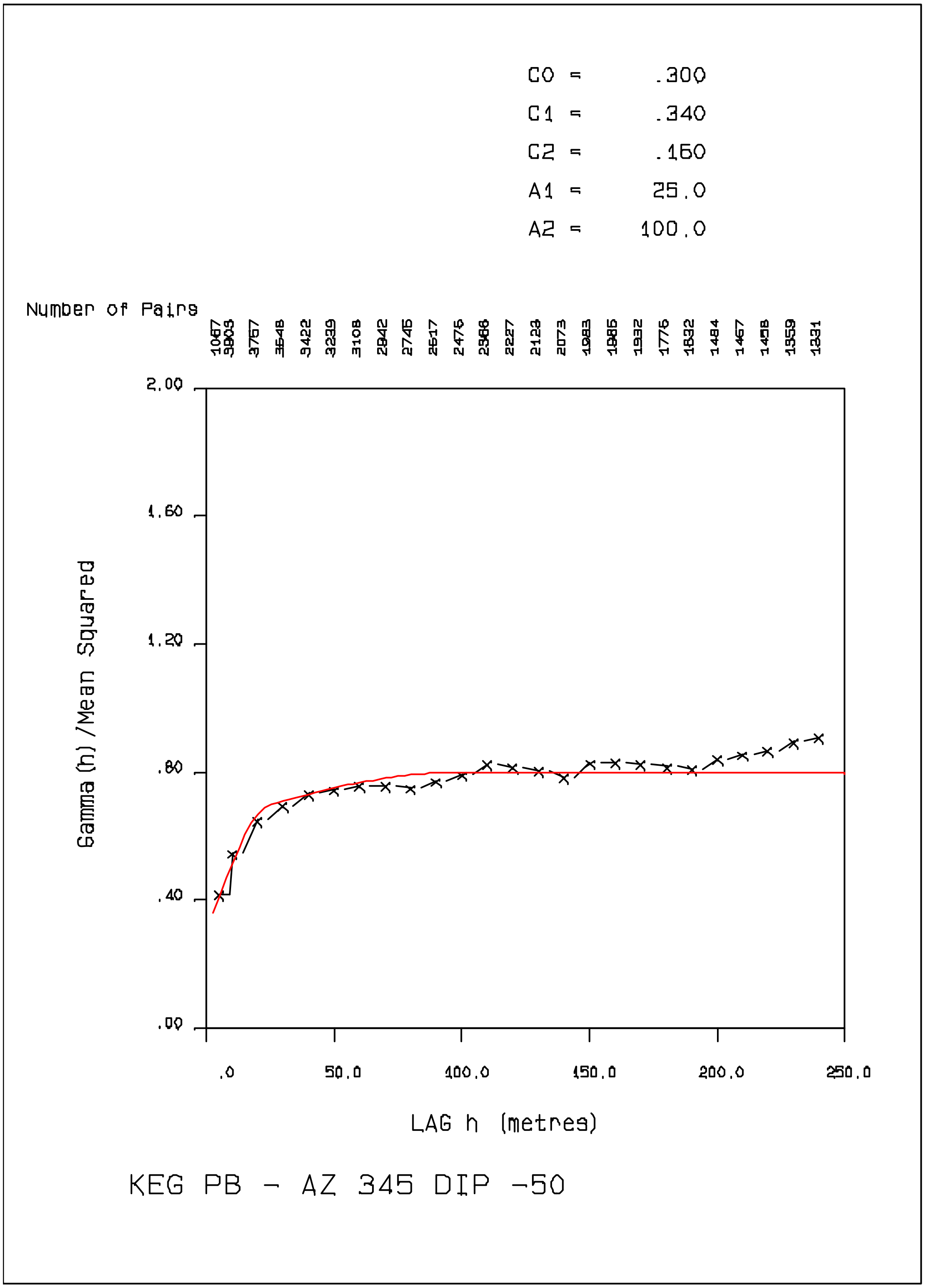
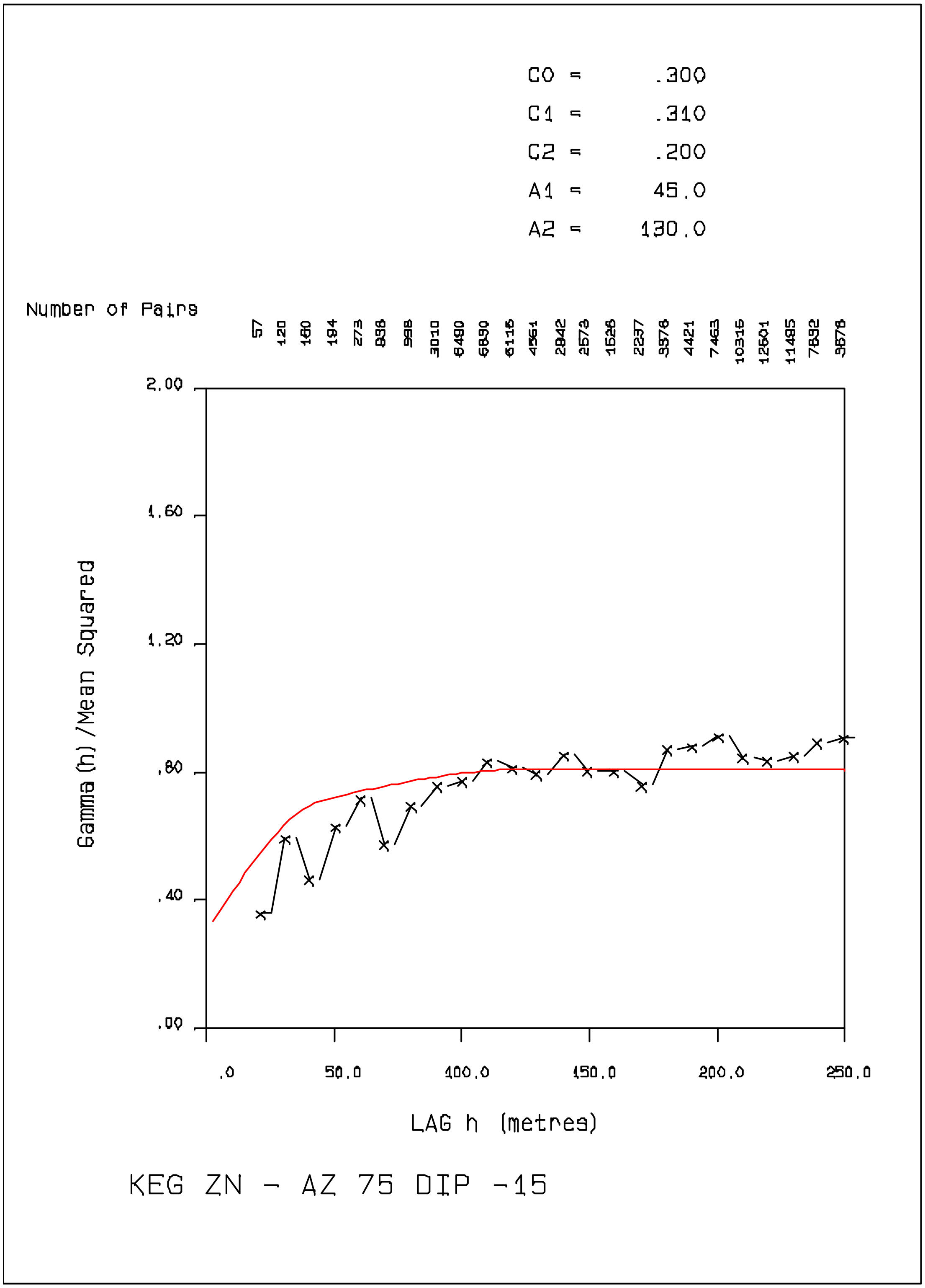
C1 = .280
C2 = .180
A1 = 25.0
A2 = 100.0
Number of Pairs
1067
3757
3548
3422
3239
3108
2842
2745
2617
2476
2227
2123
2073
1983
1932
1776
1484
1467
1331
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG AG - AZ 345 DIP -50



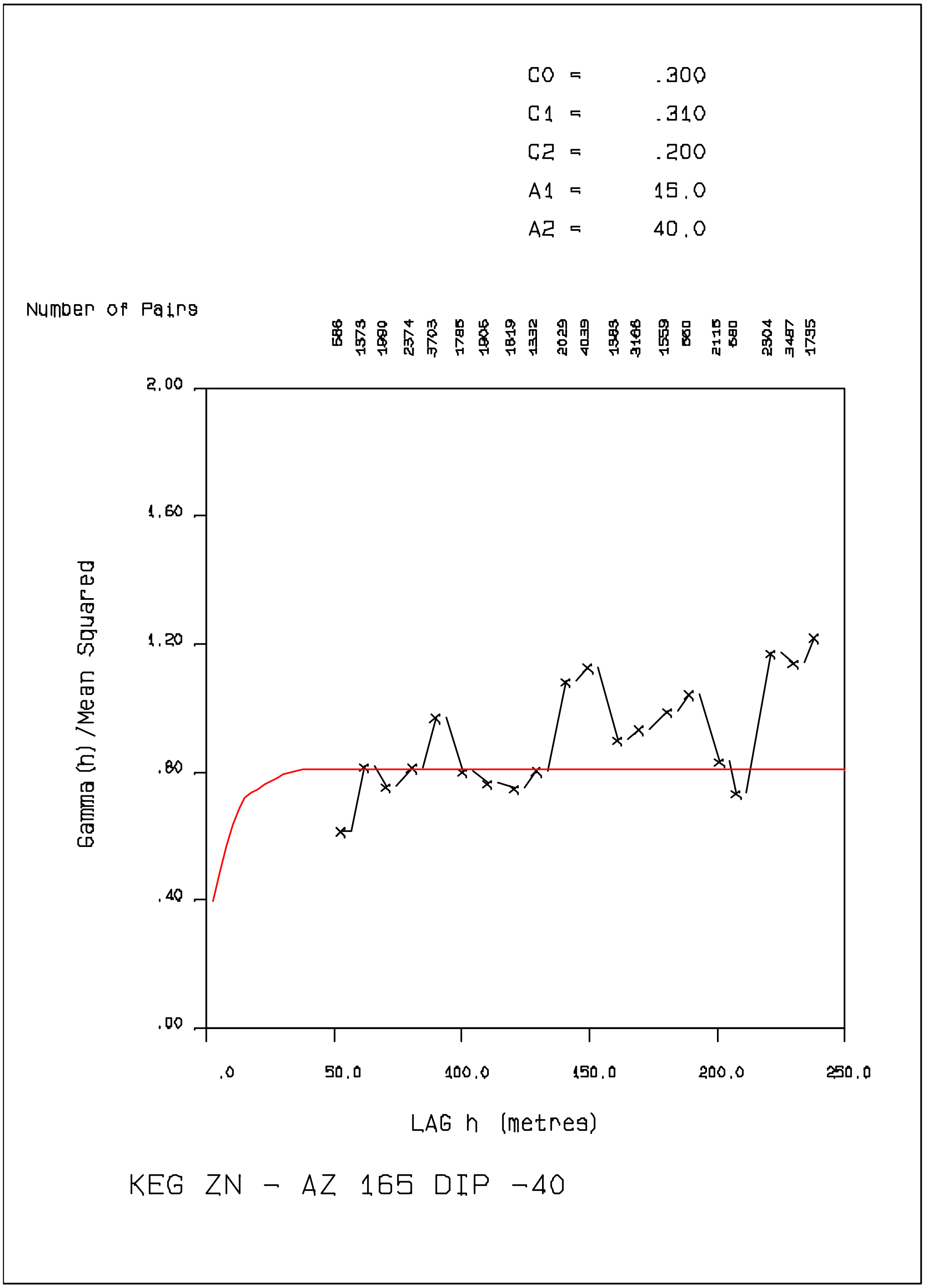
KEG PB - AZ 75 DIP -15


C0 = .300
C1 = .340
C2 = .160
A1 = 15.0
A2 = 40.0
Number of Pairs
586
1573
1980
2374
3703
1785
1906
1619
1336
2111
4470
2091
3548
2339
1297
2339
1881
2974
6127
4342
1855
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG PB - AZ 165 DIP -40

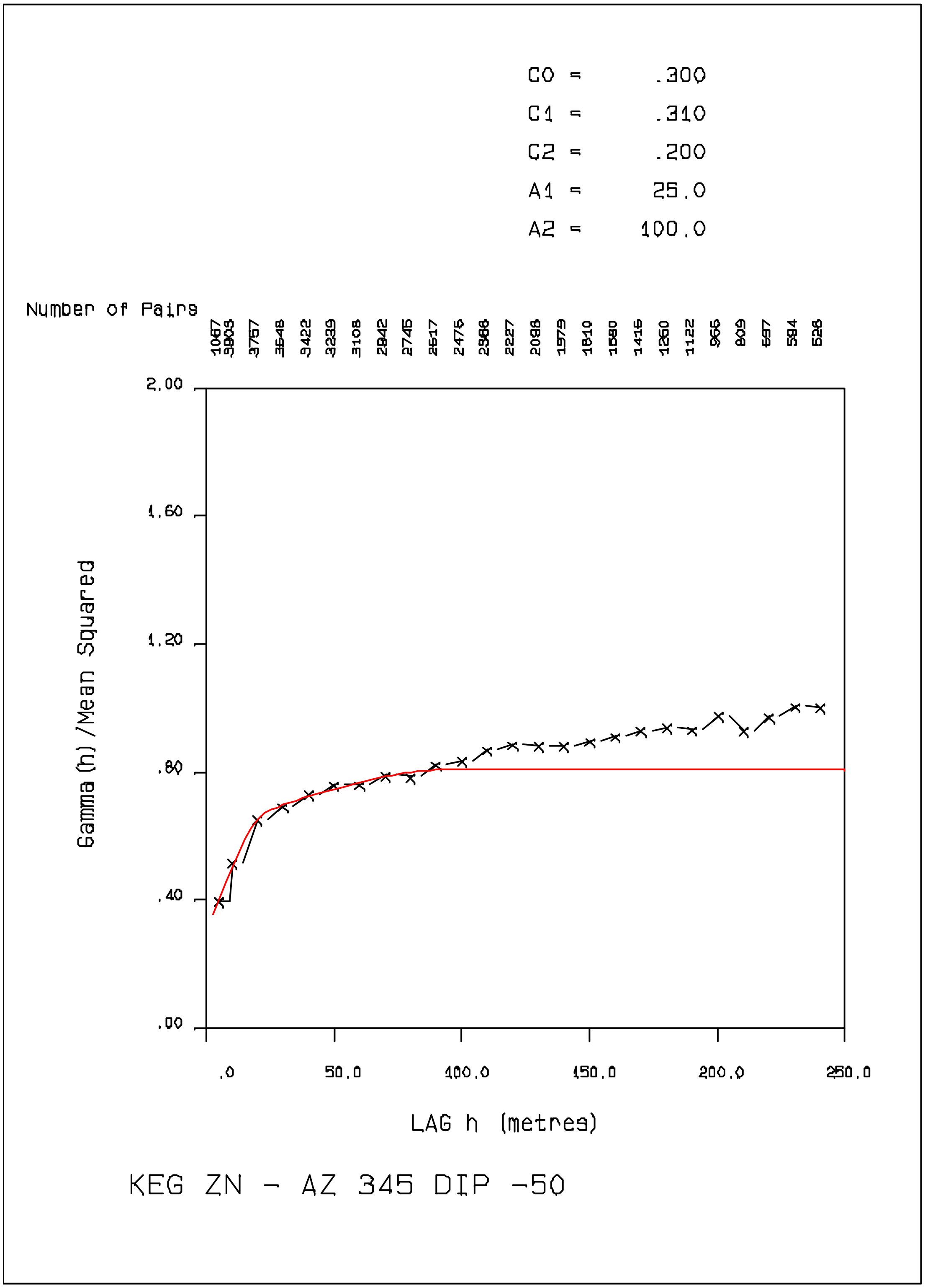

C0 = .300
C1 = .340
C2 = .160
A1 = 25.0
A2 = 100.0
Number of Pairs
1067 3903 3767 3548 3422 3239 3108 2842 2745 2517 2476 2366 2227 2123 2073 1983 1985 1932 1776 1632 1484 1467 1458 1359 1331
Gamma (h) /Mean Squared
2.00
1.60
1.20
.80
.40
.00
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG PB - AZ 345 DIP -50



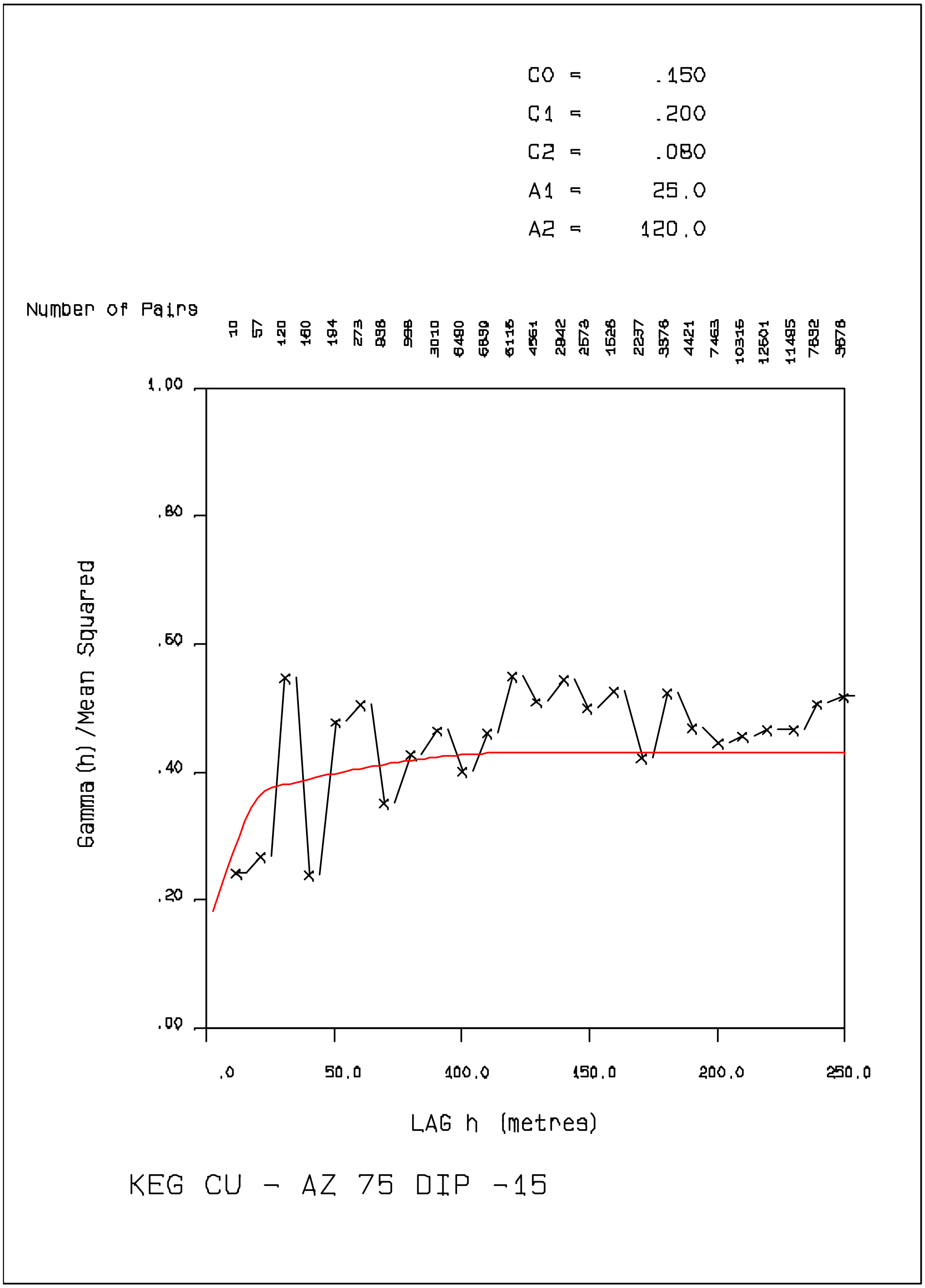
C0 = .300
C1 = .310
C2 = .200
A1 = 45.0
A2 = 130.0
Number of Pairs
57
120
160
194
273
898
998
3010
6490
6830
6115
4561
2842
2573
1526
2237
3376
4421
7463
10316
12501
11495
7832
3578
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG ZN - AZ 75 DIP -15

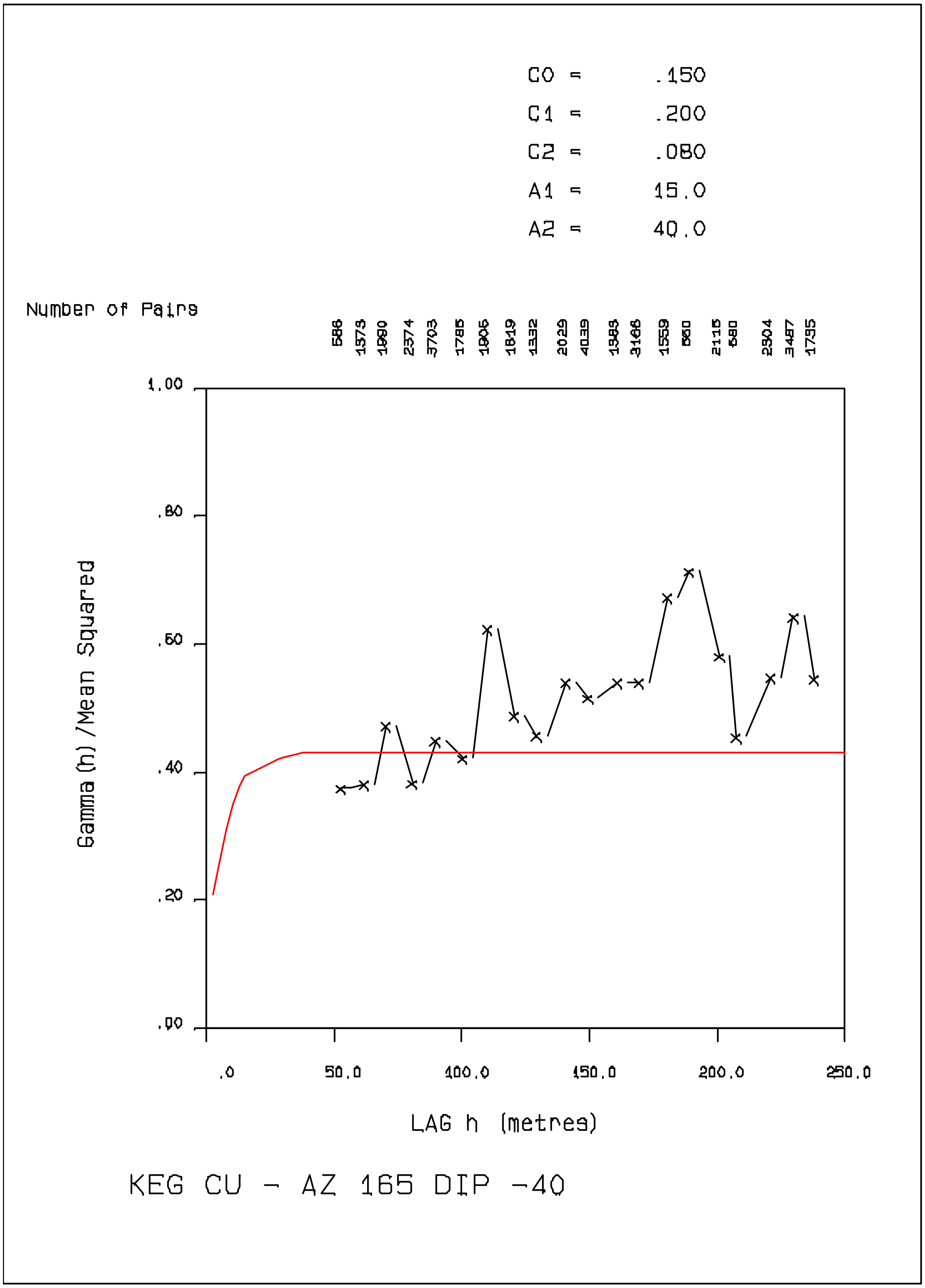


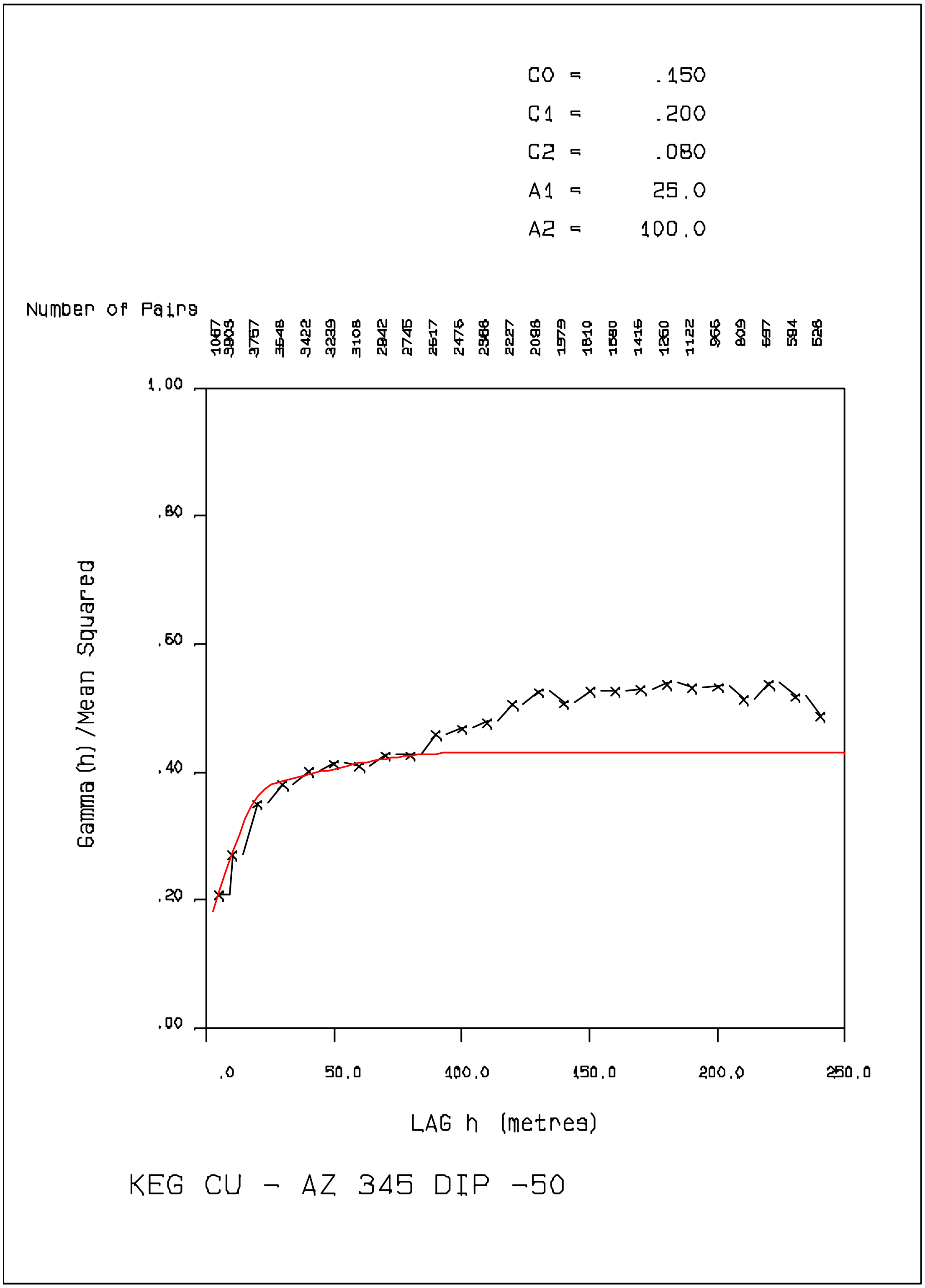
C0 = .300
C1 = .310
C2 = .200
A1 = 15.0
A2 = 40.0
Number of Pairs
Gamma (h) /Mean Squared
LAG h (metres)
KEG ZN - AZ 165 DIP -40



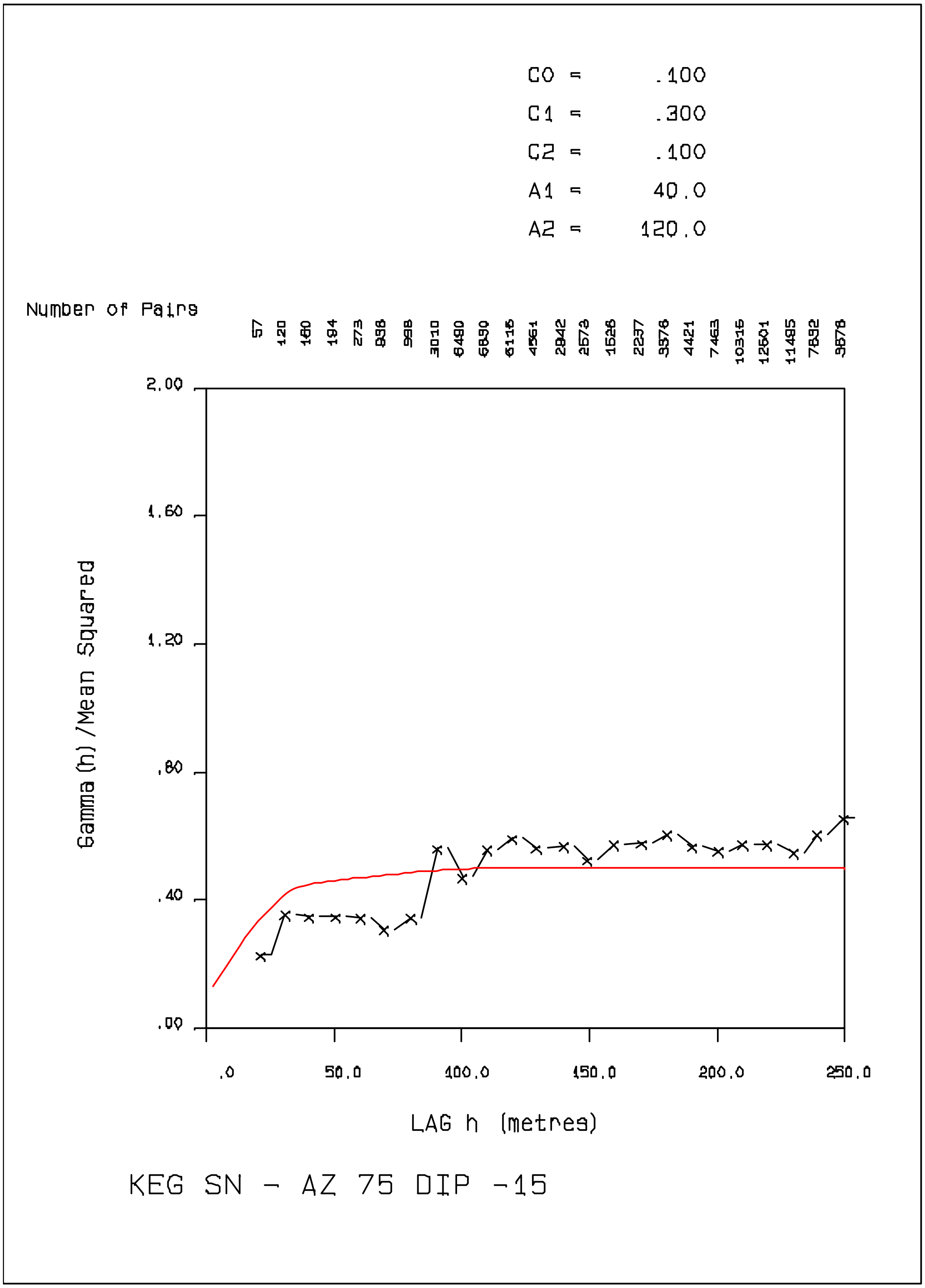
C0 = .300
C1 = .310
C2 = .200
A1 = 25.0
A2 = 100.0
Number of Pairs
1067 3803 3757 3548 3422 3239 3108 2842 2745 2517 2475 2366 2227 2098 1979 1810 1580 1416 1260 1122 965 809 697 594 526
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG ZN - AZ 345 DIP -50


C0 = .150
C1 = .200
C2 = .080
A1 = 25.0
A2 = 120.0
Number of Pairs
10 57 120 160 194 273 838 998 3010 6490 6839 6115 4561 2842 2573 1526 2237 3376 4421 7463 10316 12601 11495 7832 3678
1.00
.80
.60
.40
.20
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG CU - AZ 75 DIP -15

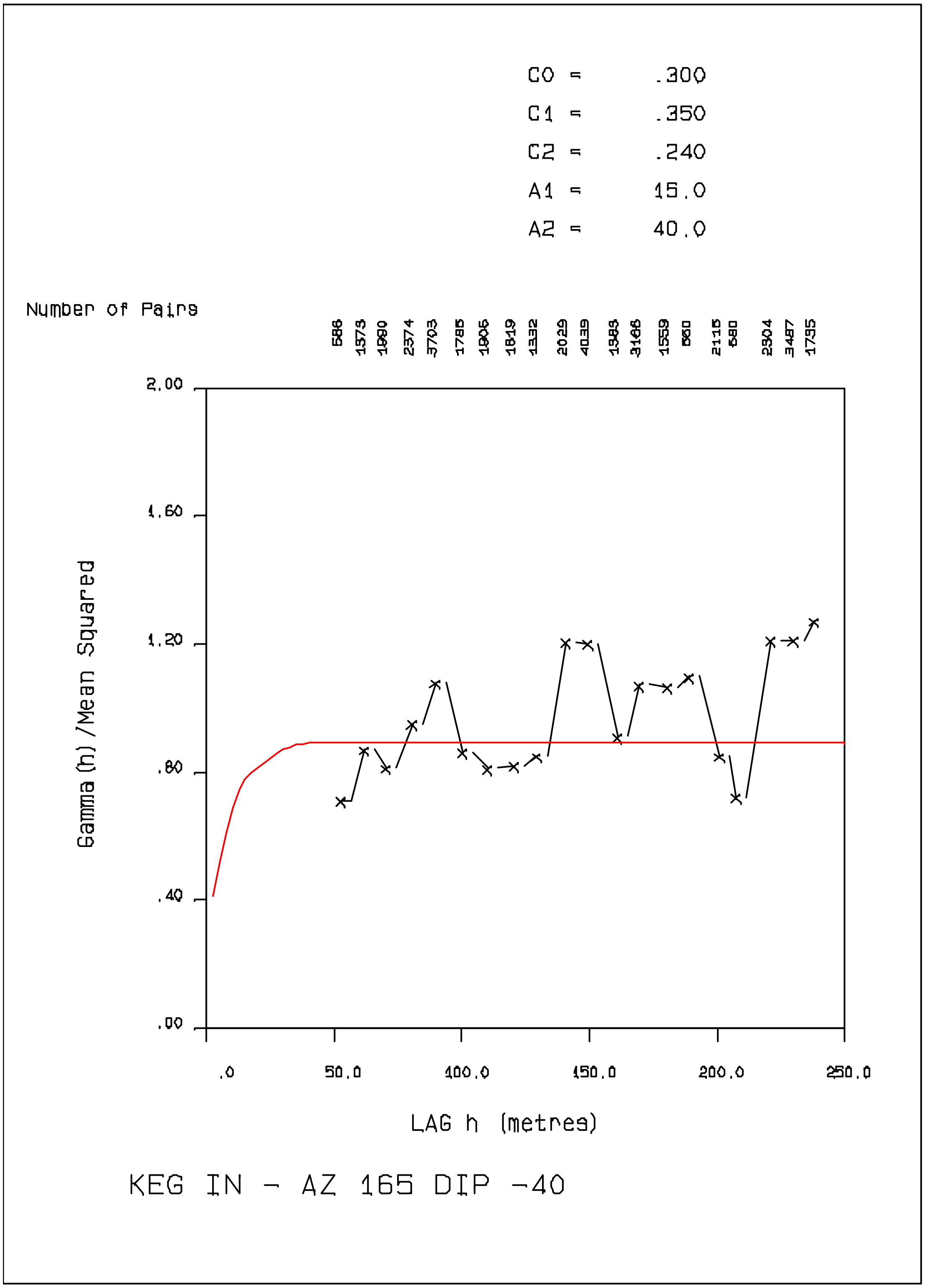

C0 = .150
C1 = .200
C2 = .080
A1 = 15.0
A2 = 40.0
Number of Pairs
586
1573
1980
2374
3703
1785
1906
1619
1332
2029
4039
1583
3168
1559
580
2115
580
2304
3487
1755
1.00
.80
.60
.40
.20
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG CU - AZ 165 DIP -40



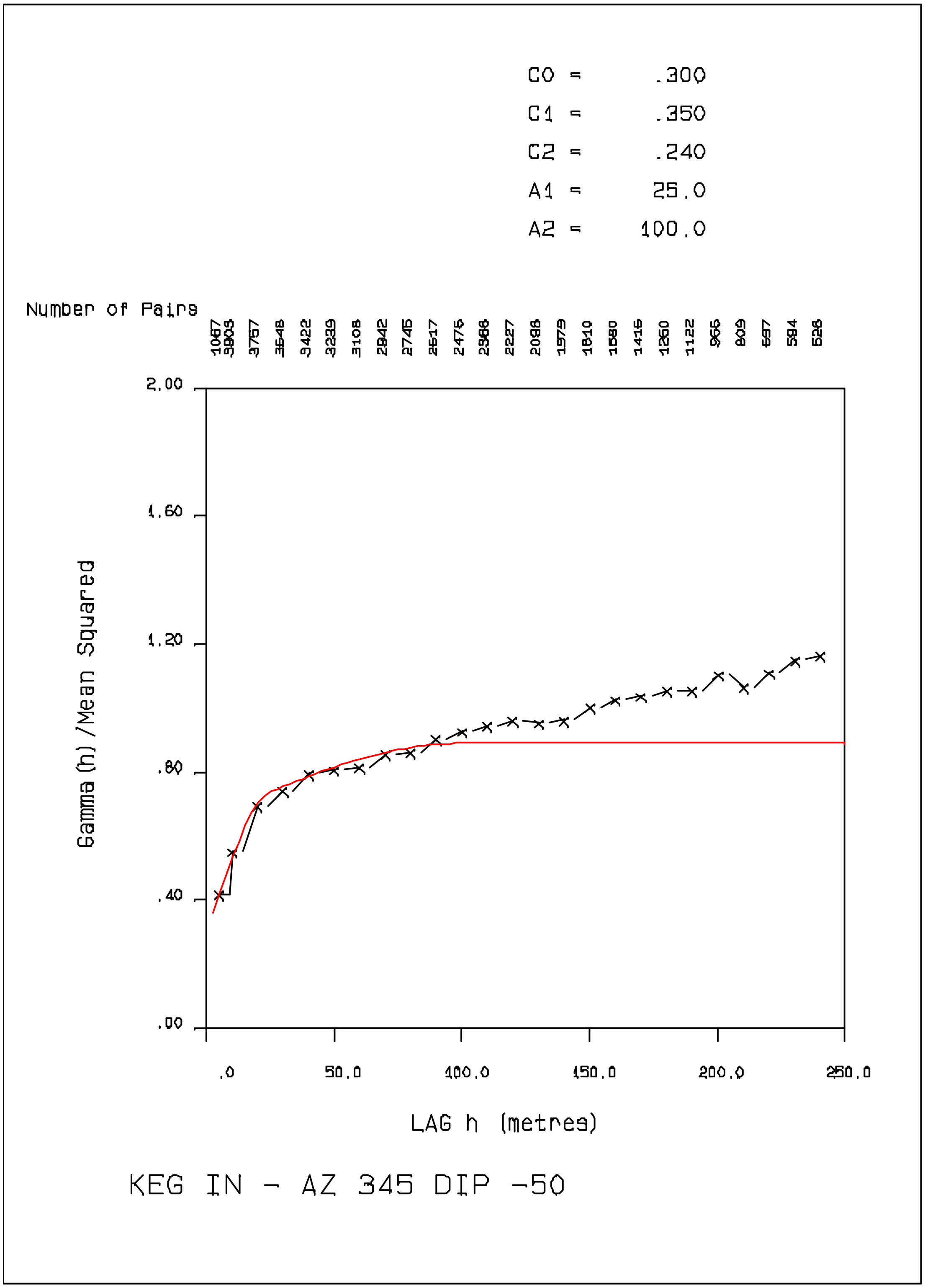
C0 = .150
C1 = .200
C2 = .080
A1 = 25.0
A2 = 100.0
Number of Pairs
1067 3903 3767 3548 3422 3239 3108 2842 2745 2517 2475 2386 2227 2098 1979 1810 1580 1415 1260 1122 966 809 697 584 528
1.00
.80
.60
.40
.20
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG CU - AZ 345 DIP -50

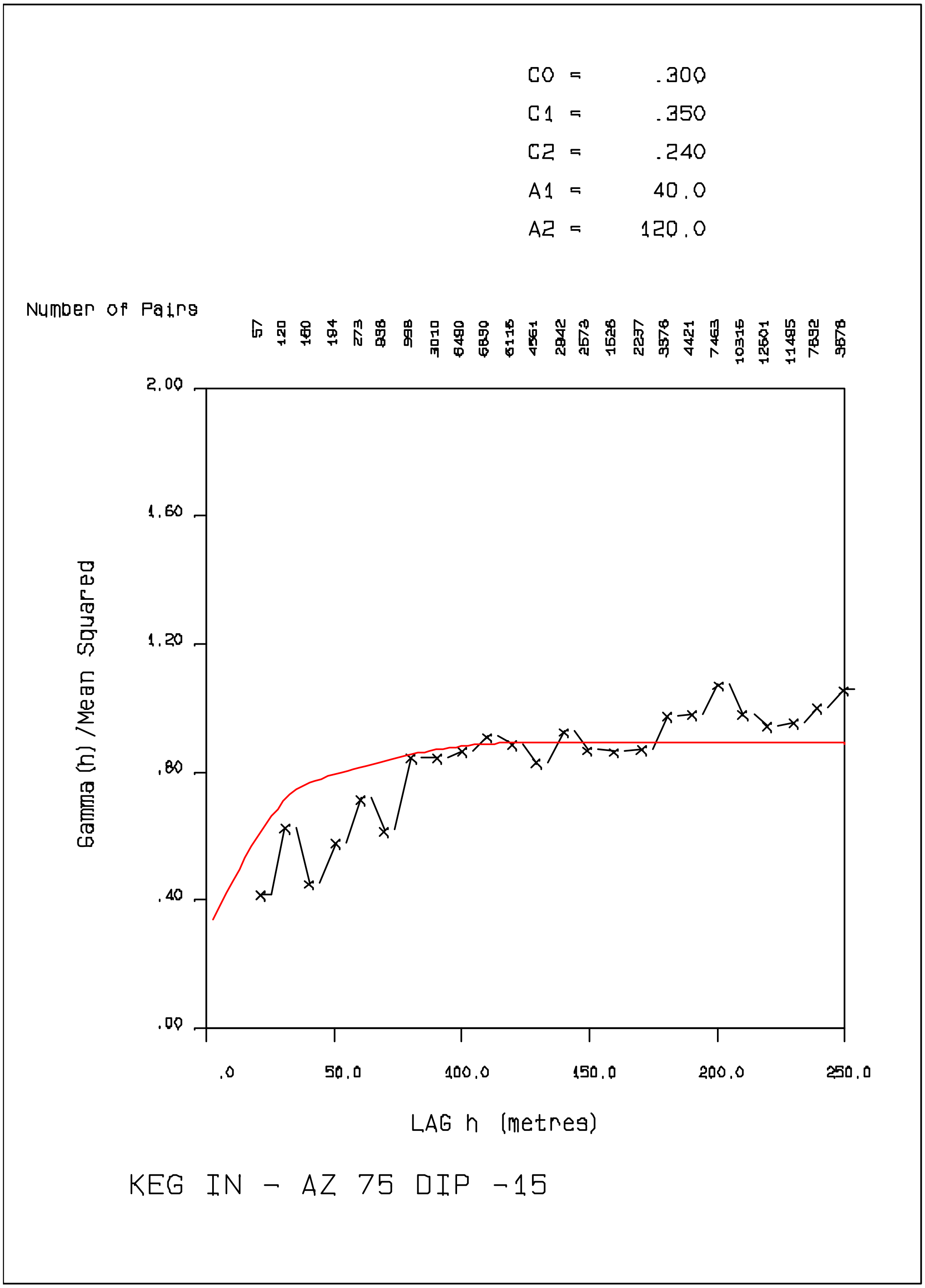


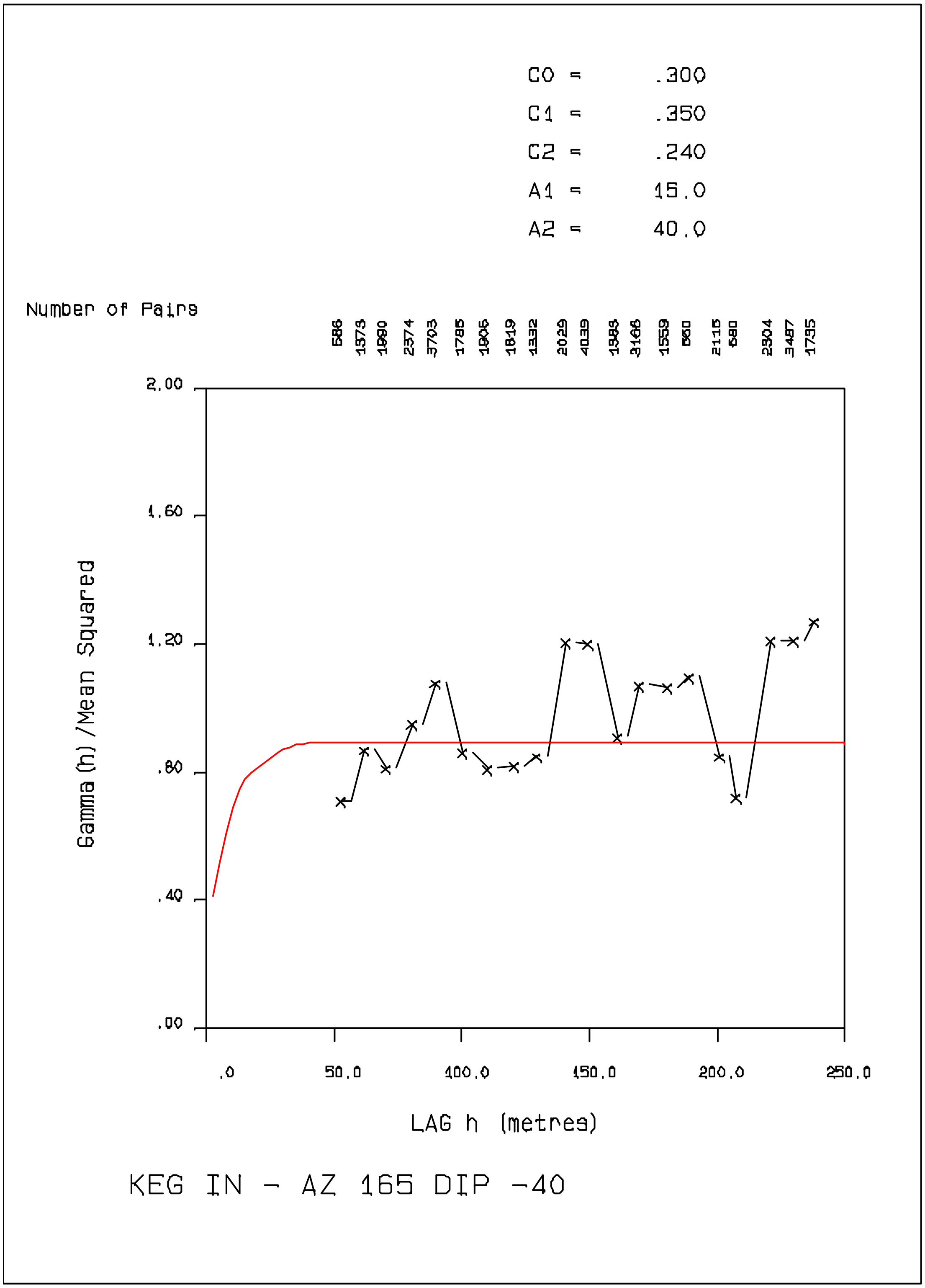
C0 = .100
C1 = .300
C2 = .100
A1 = 40.0
A2 = 120.0
Number of Pairs
57
120
160
194
273
858
998
3010
6490
6830
6115
4561
2842
2573
1526
2237
3376
4421
7463
10316
12601
11495
7632
3578
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG SN - AZ 75 DIP -15



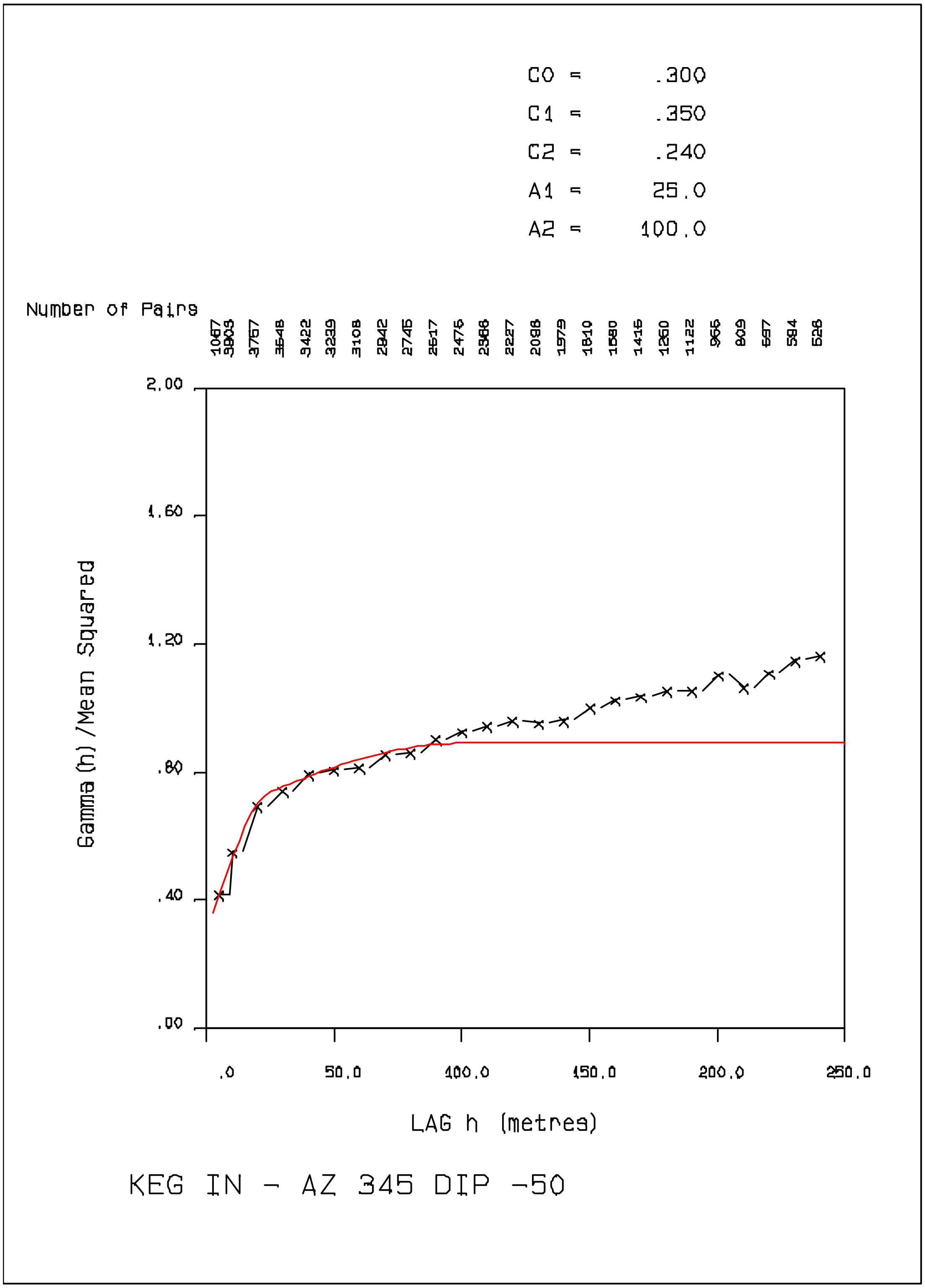
C0 = .300
C1 = .350
C2 = .240
A1 = 15.0
A2 = 40.0
Number of Pairs
586
1373
1090
2374
3703
1785
1905
1819
1332
2029
4039
1383
3166
1559
560
2115
580
2304
3487
1795
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG IN - AZ 165 DIP -40

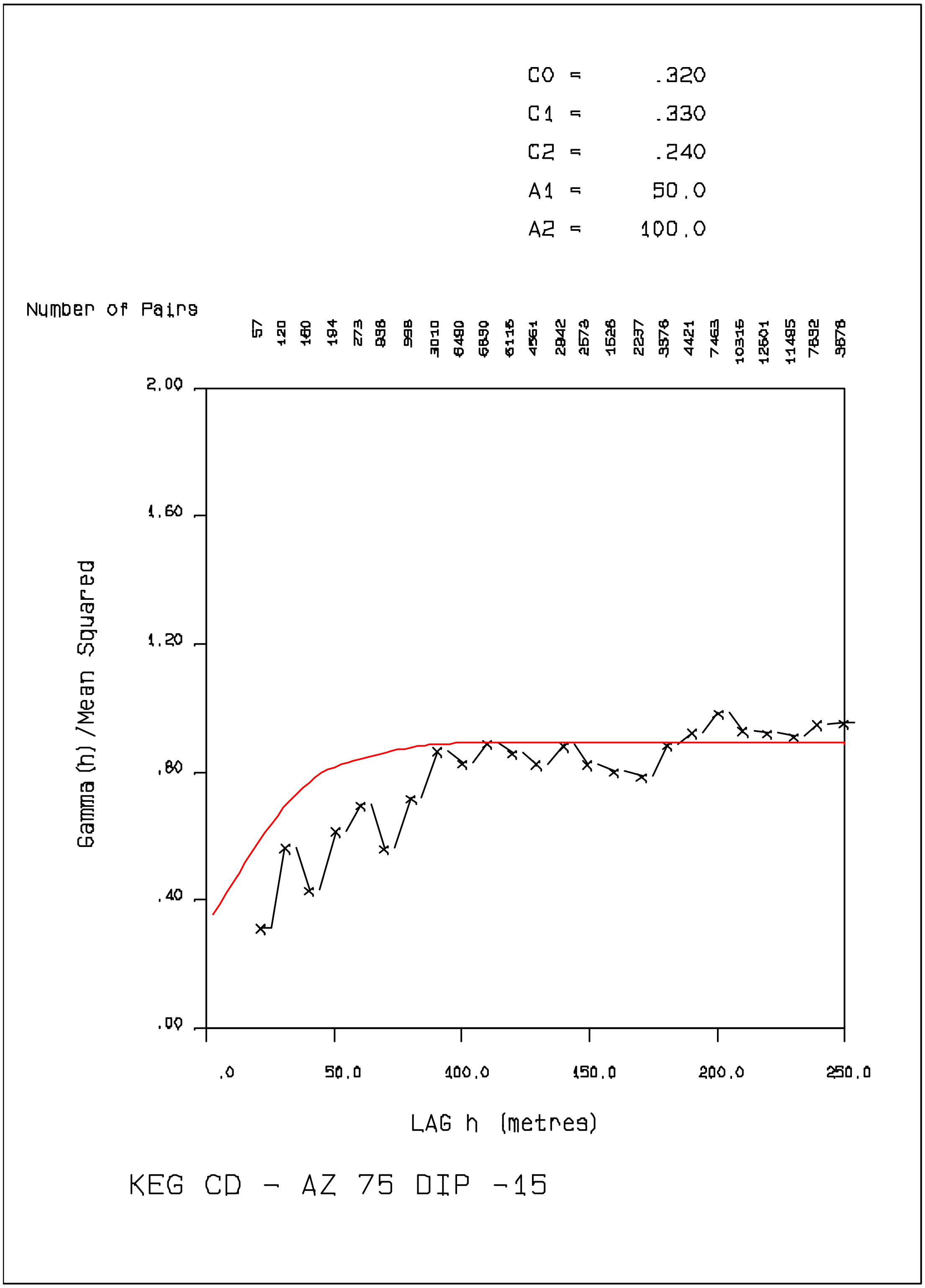

C0 = .300
C1 = .350
C2 = .240
A1 = 25.0
A2 = 100.0
Number of Pairs
1067 3803 3767 3548 3422 3239 3108 2842 2745 2617 2475 2366 2227 2098 1979 1810 1580 1416 1260 1122 965 809 697 584 526
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG IN - AZ 345 DIP -50

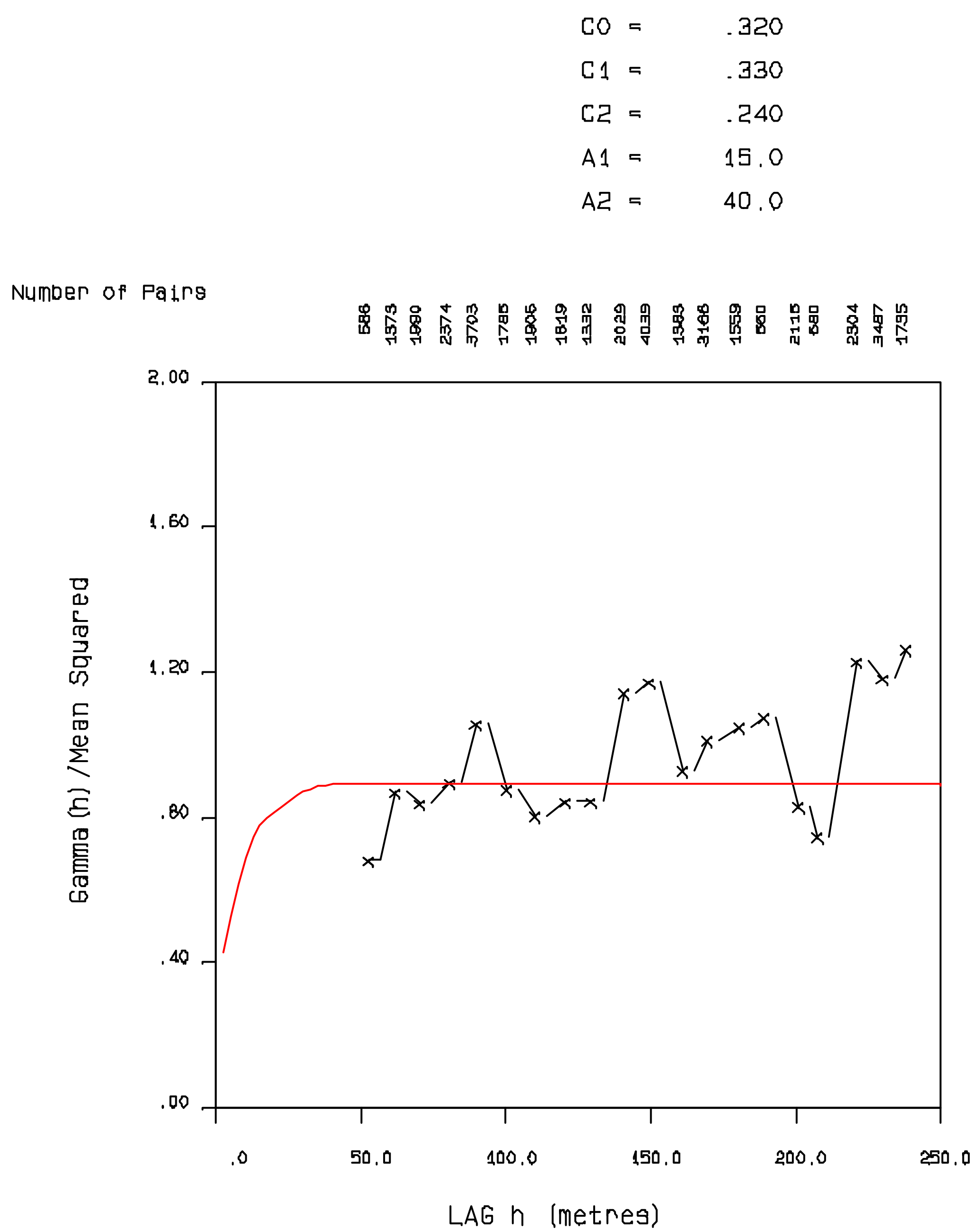

C0 = .300
C1 = .350
C2 = .240
A1 = 40.0
A2 = 120.0
Number of Pairs
57
120
160
194
273
838
998
3010
6490
6830
6115
4561
2842
2573
1526
2237
3376
4421
7463
10316
12601
11495
7832
3878
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG IN - AZ 75 DIP -15



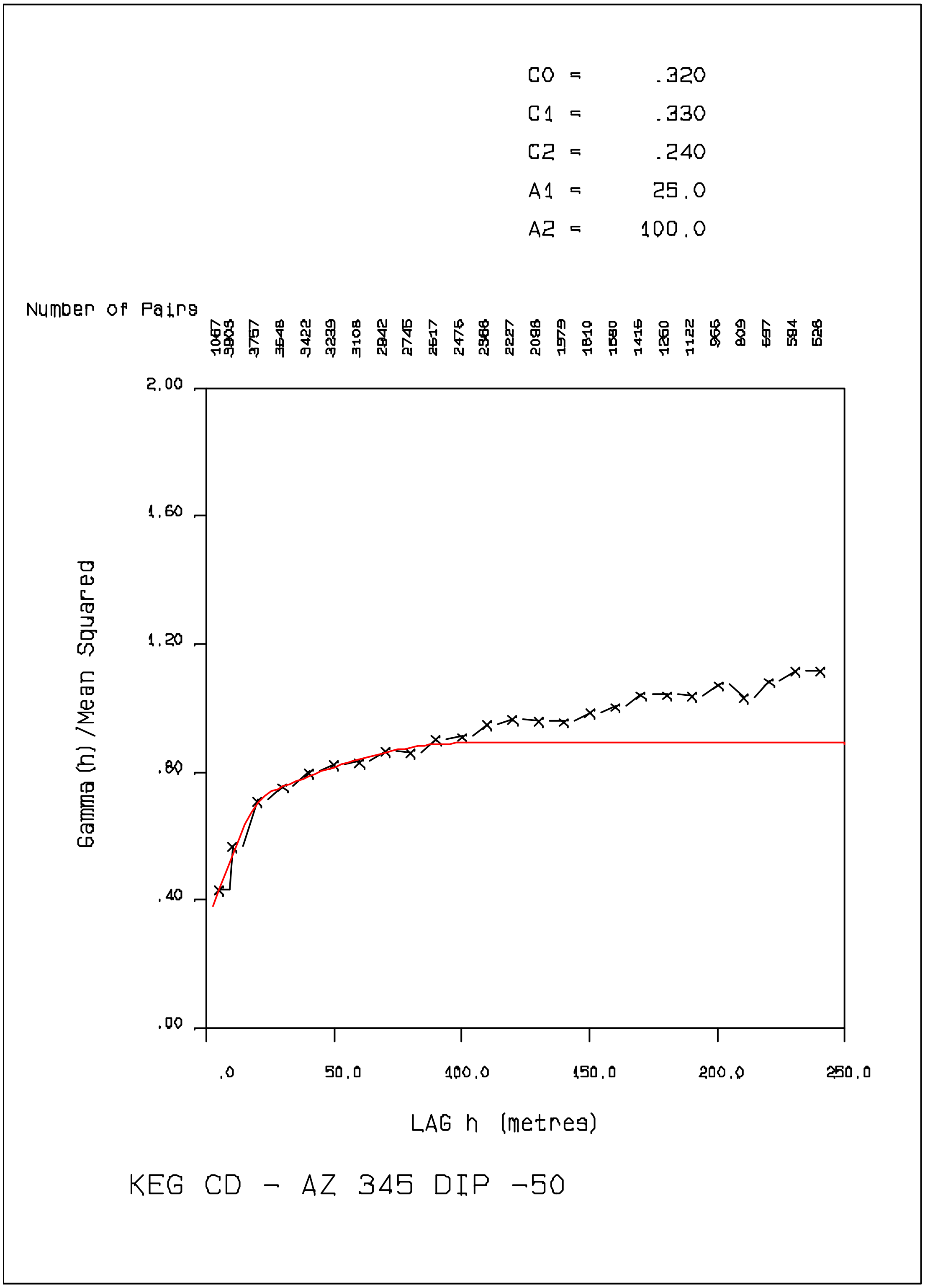
C0 = .300
C1 = .350
C2 = .240
A1 = 15.0
A2 = 40.0
Number of Pairs
586
1373
1990
2374
3703
1785
1906
1819
1332
2029
4039
1383
3166
1559
560
2115
680
2304
3487
1795
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG IN - AZ 165 DIP -40


C0 = .300
C1 = .350
C2 = .240
A1 = 25.0
A2 = 100.0
Number of Pairs
1067
3803
3757
3548
3422
3239
3108
2842
2745
2617
2475
2386
2227
2098
1979
1810
1580
1416
1260
1122
966
809
697
594
526
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG IN - AZ 345 DIP -50

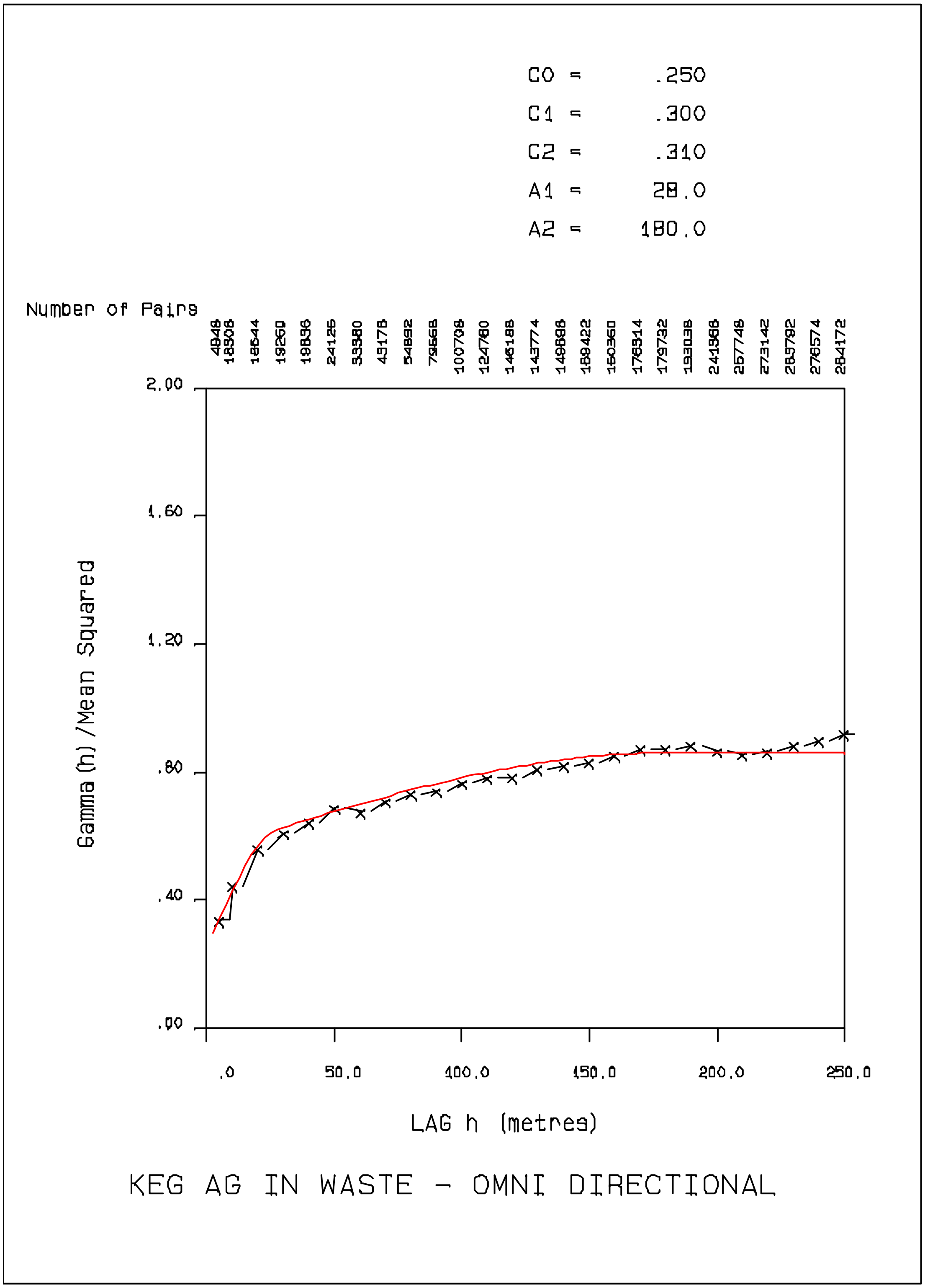

C0 = .320
C1 = .330
C2 = .240
A1 = 50.0
A2 = 100.0
Number of Pairs
57 120 160 194 273 838 998 3010 6490 6830 6115 4561 2842 2573 1526 2237 3376 4421 7463 10316 12601 11495 7832 3676
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG CD - AZ 75 DIP -15



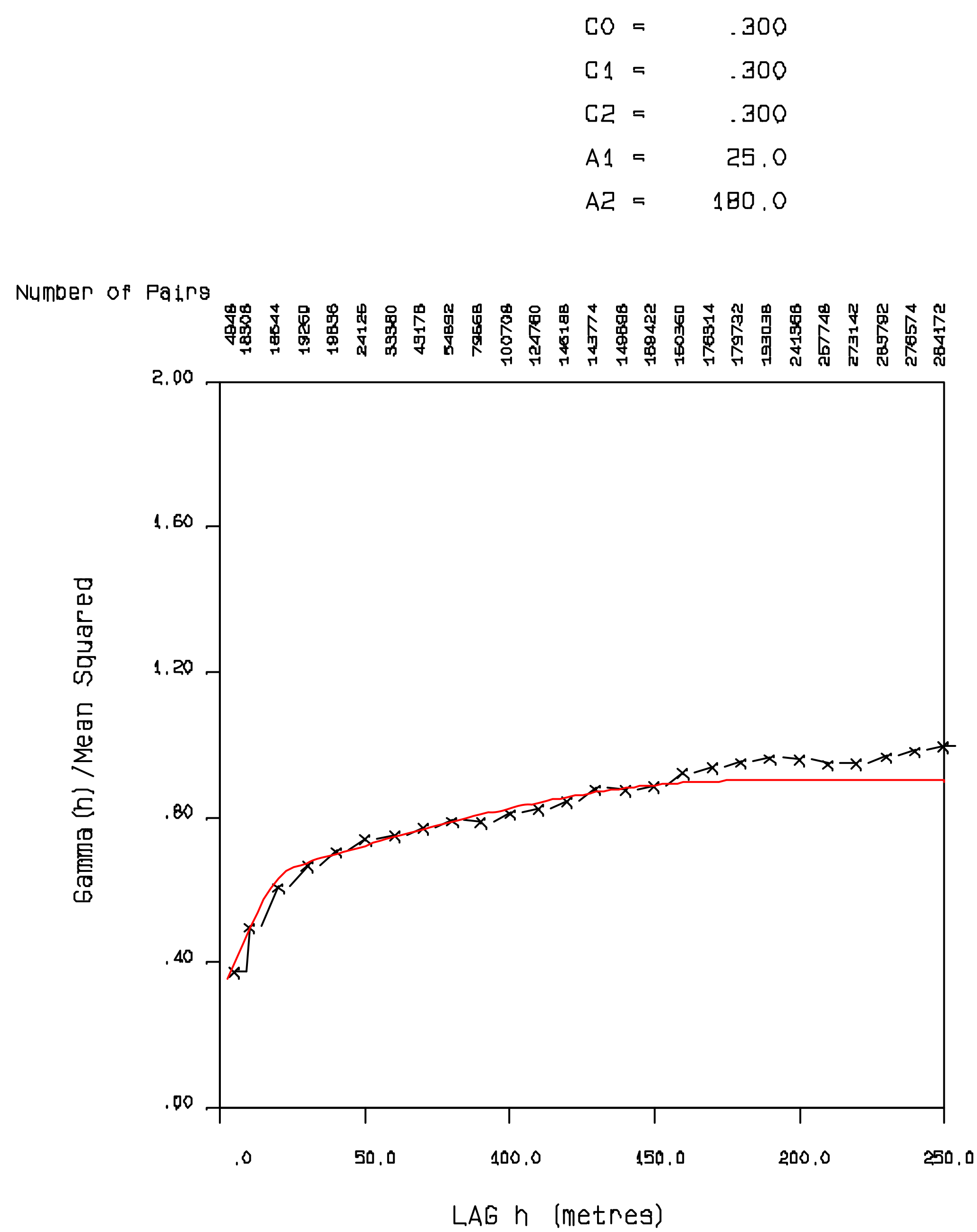
KEG CD - AZ 165 DIP -40



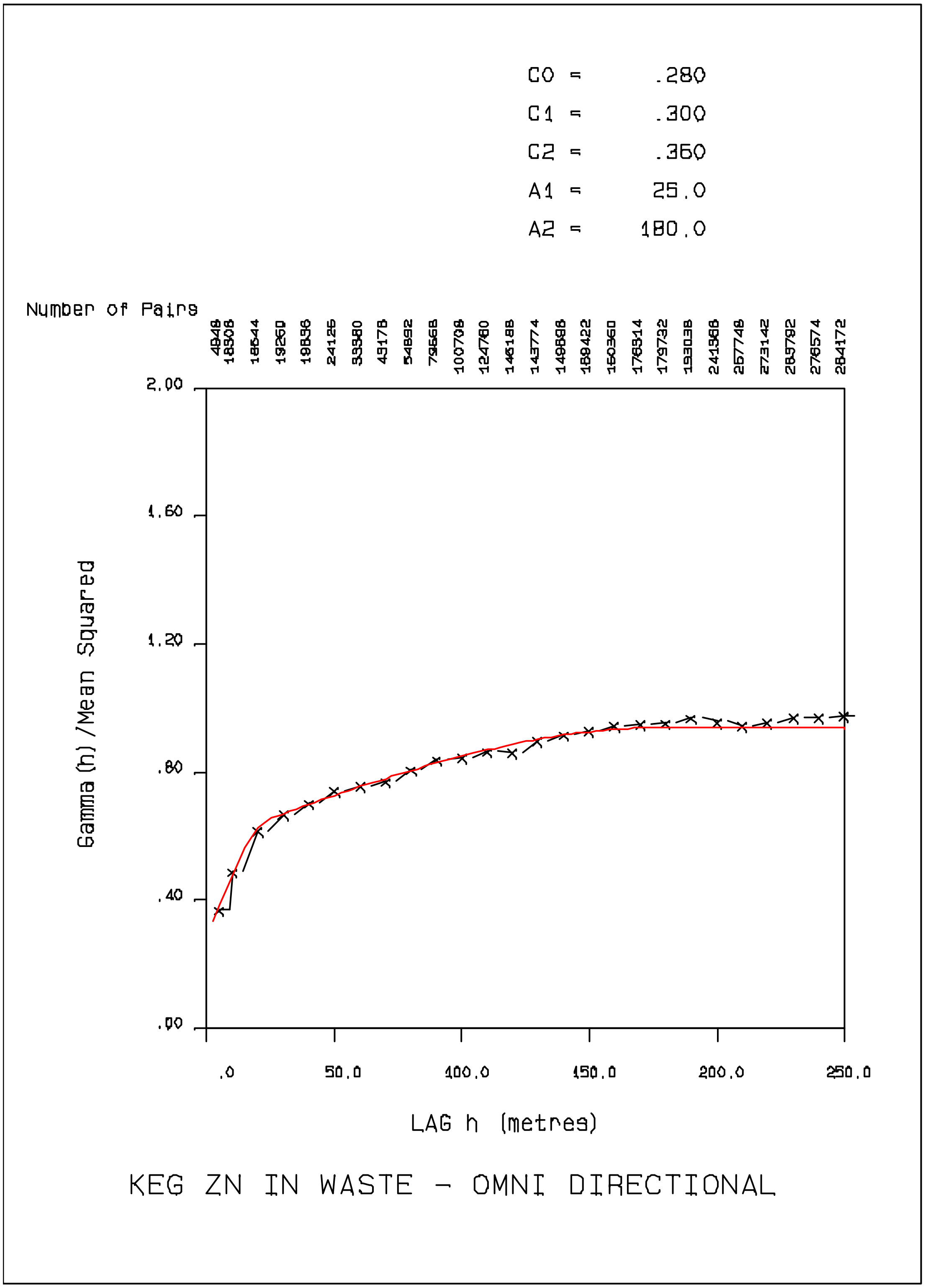
C0 = .320
C1 = .330
C2 = .240
A1 = 25.0
A2 = 100.0
Number of Pairs
1067
3903
3767
3548
3422
3239
3108
2842
2745
2617
2476
2366
2227
2098
1979
1810
1680
1415
1260
1122
966
809
697
584
526
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG CD - AZ 345 DIP -50

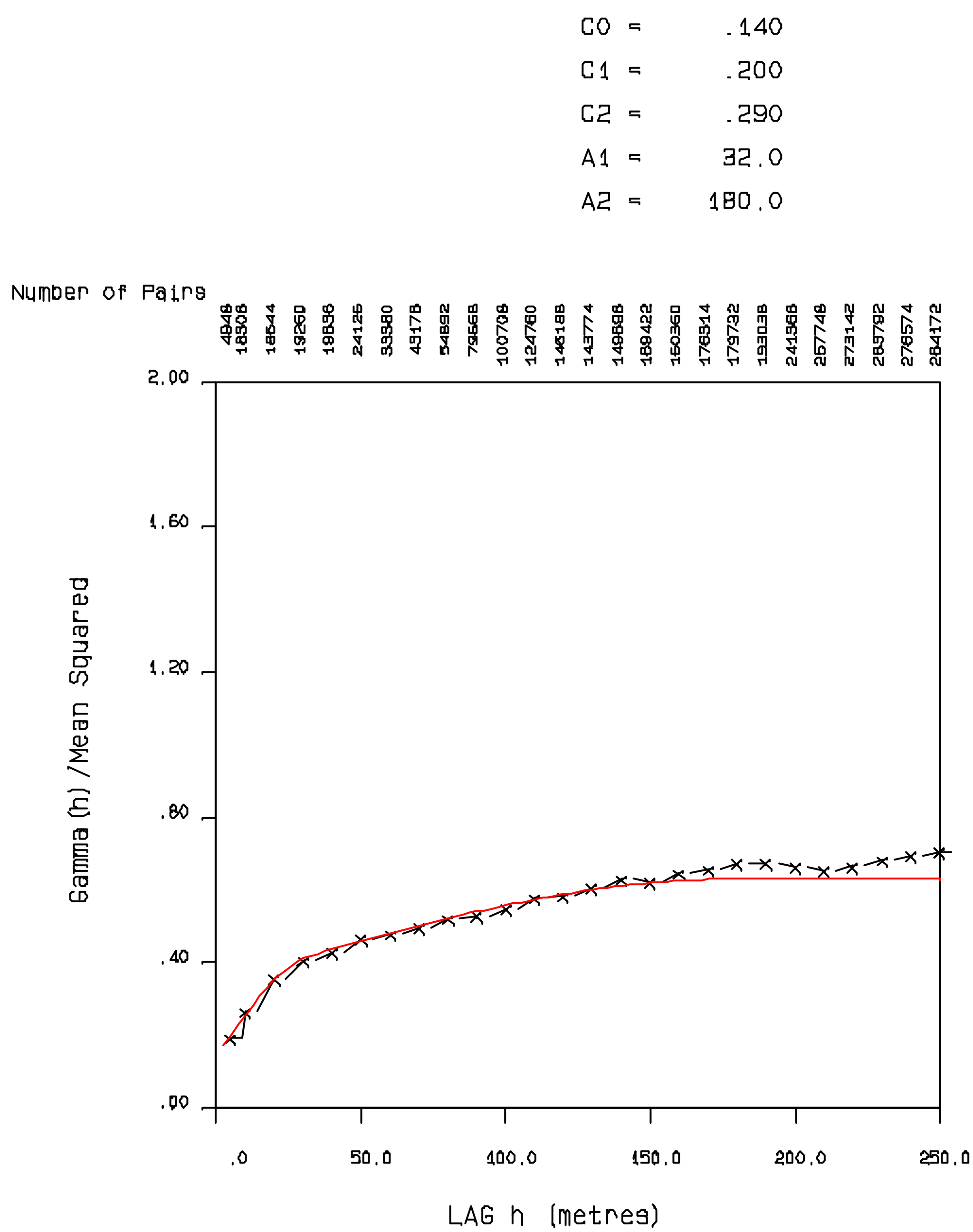


C0 = .250
C1 = .300
C2 = .310
A1 = 28.0
A2 = 180.0
Number of Pairs
4948
18308
18644
19260
19836
24125
33380
43178
54892
79568
100708
124780
146188
143774
149898
189422
160360
176314
179732
193038
241368
257748
273142
283792
276574
284172
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG AG IN WASTE - OMNI DIRECTIONAL

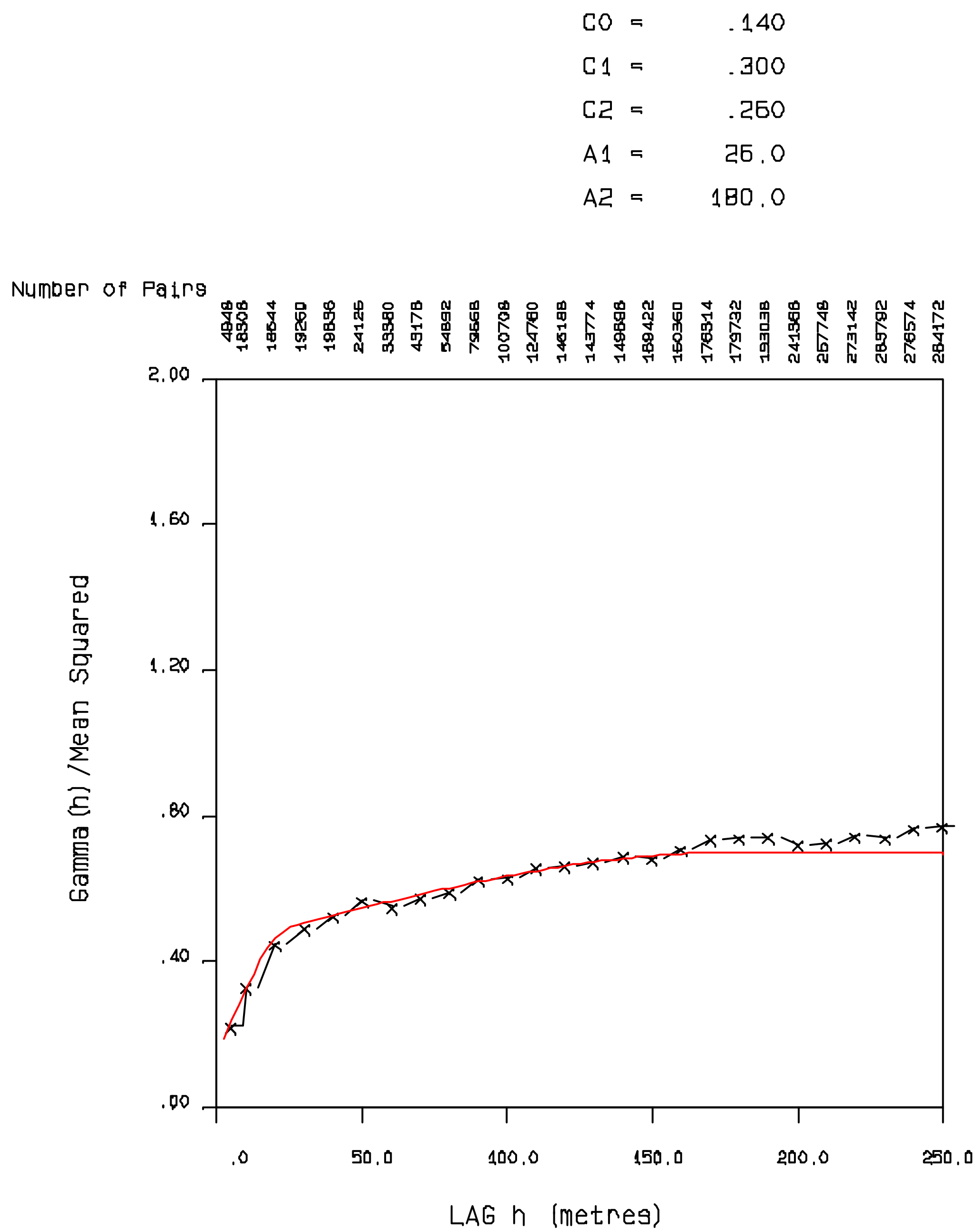


KEG PB IN WASTE - OMNI DIRECTIONAL

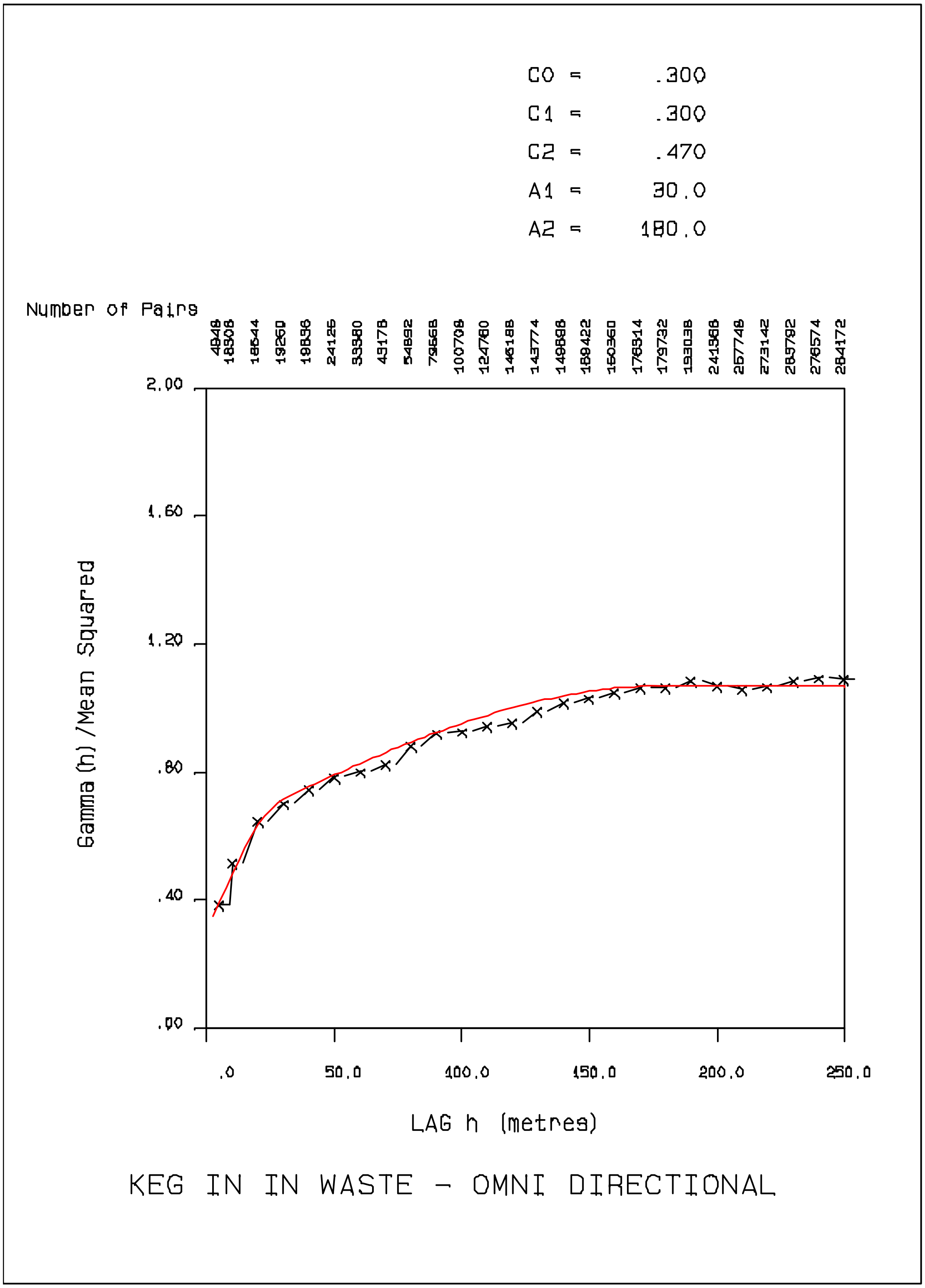

C0 = .280
C1 = .300
C2 = .360
A1 = 25.0
A2 = 180.0
Number of Pairs
4848
18308
18544
19260
19836
24125
33380
43178
54892
79568
100708
124780
146188
143774
149898
189422
160360
176314
179732
193038
241368
257748
273142
285792
276574
284172
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG ZN IN WASTE - OMNI DIRECTIONAL

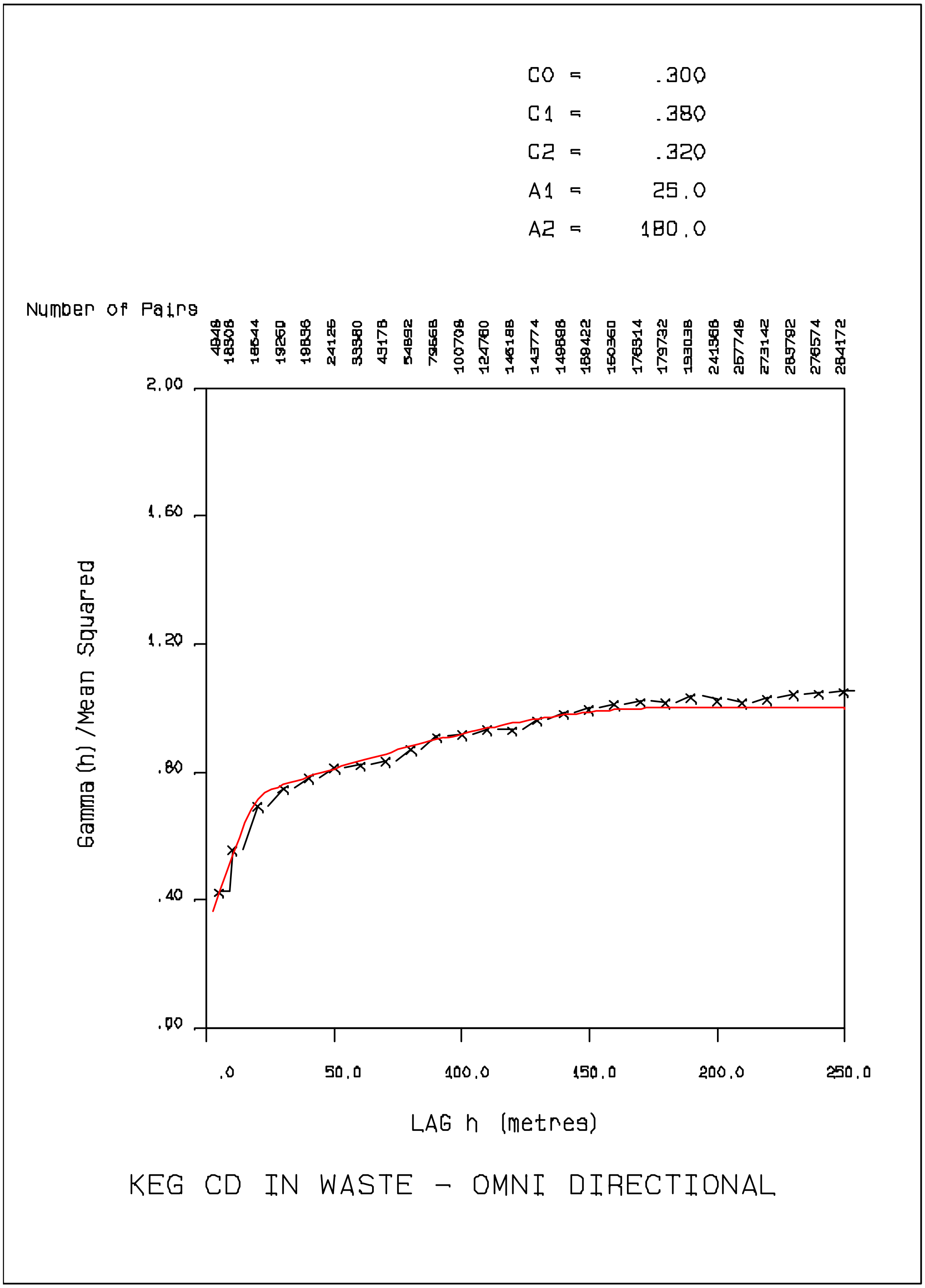


KEG CU IN WASTE - OMNI DIRECTIONAL



KEG SN IN WASTE - OMNI DIRECTIONAL


C0 = .300
C1 = .300
C2 = .470
A1 = 30.0
A2 = 180.0
Number of Pairs
4948
18308
18544
19260
19836
24125
33380
43178
54892
79568
100708
124760
146188
143774
149898
169422
160360
176314
179732
193038
241368
257748
273142
283792
276574
284172
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG IN IN WASTE - OMNI DIRECTIONAL


C0 = .300
C1 = .380
C2 = .320
A1 = 25.0
A2 = 180.0
Number of Pairs
4848 18308 18544 19260 19836 24126 33380 43178 54892 79568 100708 124780 146188 143774 149898 159422 150360 176314 179732 193038 241368 257748 273142 283792 276574 284172
2.00
1.60
1.20
.80
.40
.00
Gamma (h) /Mean Squared
.0
50.0
100.0
150.0
200.0
250.0
LAG h (metres)
KEG CD IN WASTE - OMNI DIRECTIONAL

APPENDIX IV

SPECIFIC GRAVITY DETERMINATIONS USED IN MINERAL RESOURCE CALCULATIONS

Hole	Density From	Rock Type	Length cm.	Core Size	Density
KEG-10-001	5.11	CHT	13.0	NTW	2.66
KEG-10-001	28.86	CHT	11.0	BTW	2.84
KEG-10-001	80.08	CHT	10.6	BTW	2.85
KEG-10-001	83.22	CHT	11.9	BTW	3.30
KEG-10-001	101.60	CHT	13.9	BTW	3.21
KEG-10-002	17.00	ICL	11.0	HQ	2.63
KEG-10-002	32.68	ICL	10.9	HQ	2.32
KEG-10-002	70.54	ICL	15.6	HQ	2.47
KEG-10-002	170.25	ICL	10.7	BTW	2.72
KEG-10-002	233.65	ICL	12.5	BTW	2.83
KEG-10-002	261.07	ICL	14.7	BTW	2.66
KEG-10-002	285.86	ICL	12.4	BTW	2.74
KEG-10-002	310.45	ARG	11.1	BTW	2.73
KEG-10-003	56.08	ICL	7.7	HQ	2.20
KEG-10-003	68.27	ICL	11.4	HQ	2.62
KEG-10-003	125.14	ICL	10.5	HQ	2.41
KEG-10-003	170.07	ICL	11.0	BTW	2.74
KEG-10-004	9.75	SLT	10.7	HQ	2.39
KEG-10-004	50.90	SLT	10.6	HQ	2.76
KEG-10-004	83.32	SLT	10.5	HQ	2.43
KEG-10-004	97.34	SLT	11.1	HQ	2.49
KEG-10-004	126.86	SLT	13.8	HQ	2.82
KEG-10-004	142.24	SLT	10.4	HQ	2.29
KEG-11-005	41.12	LST	10.4	NQ2	2.83
KEG-11-005	85.98	LST	11.1	NQ2	2.70
KEG-11-005	93.15	LST	15.1	NQ2	2.69
KEG-11-005	121.81	LST	9.8	NQ2	2.74
KEG-11-005	154.25	LST	13.8	NQ2	2.91
KEG-11-005	166.48	LST	11.6	NQ2	2.91
KEG-11-005	179.16	LST	11.7	NQ2	2.54
KEG-11-005	198.87	LST	13.0	NQ2	2.73
KEG-11-005	222.40	LST	13.8	NQ2	3.07
KEG-11-005	243.87	LST	10.4	NQ2	2.74
KEG-11-005	274.20	LST	13.7	NQ2	2.67
KEG-11-006	32.85	SLT	15.4	NTW	2.54
KEG-11-006	49.00	SLT	13.7	NTW	2.59
KEG-11-006	185.16	SLT	12.1	NTW	2.60
KEG-11-007	26.11	LST	13.4	NQ2	2.69

KEG-11-007	42.22	ICL	10.3	NQ2	2.71
KEG-11-007	87.30	ICL	9.6	NQ2	2.73
KEG-11-007	124.57	ICL	12.2	NQ2	2.31
KEG-11-007	158.12	ICL	9.9	NQ2	3.22
KEG-11-007	166.90	ICL	13.2	NQ2	2.72
KEG-11-007	179.50	ICL	14.0	NQ2	2.83
KEG-11-007	198.06	ICL	12.1	NQ2	3.04
KEG-11-007	221.15	ICL	14.0	NQ2	2.73
KEG-11-007	233.85	ICL	13.7	NQ2	3.02
KEG-11-007	271.30	ICL	10.3	NQ2	2.68
KEG-11-007	284.85	ICL	13.7	NQ2	3.25
KEG-11-007	301.15	ICL	12.4	NQ2	2.78
KEG-11-008	11.83	MET	12.0	NTW	2.59
KEG-11-008	37.67	LST	12.1	NTW	2.66
KEG-11-008	66.85	MET	9.9	NTW	2.49
KEG-11-008	87.17	MET	12.8	NTW	2.62
KEG-11-008	97.59	MET	13.7	NTW	2.58
KEG-11-008	128.84	MET	13.2	NTW	2.58
KEG-11-008	169.00	SLT	11.7	NTW	2.66
KEG-11-008	188.80	SLT	11.9	NTW	2.60
KEG-11-008	219.10	SLT	12.6	NTW	2.81
KEG-11-008	237.56	SLT	12.3	BTW	2.70
KEG-11-008	263.60	MET	10.9	BTW	2.63
KEG-11-008	289.67	MET	16.2	BTW	2.73
KEG-11-008	321.39	LST	14.8	BTW	2.70
KEG-11-009	16.00	SLT	12.7	NQ2	2.67
KEG-11-009	30.65	ICL	14.0	NQ2	2.82
KEG-11-009	57.50	ICL	14.1	NQ2	2.89
KEG-11-009	92.37	ICL	14.0	NQ2	2.99
KEG-11-009	136.80	SLT	13.8	NQ2	2.65
KEG-11-009	143.50	SLT	13.2	NQ2	3.10
KEG-11-009	175.55	LST	13.8	NQ2	2.61
KEG-11-009	202.00	ICL	13.7	NQ2	2.64
KEG-11-009	236.10	SLT	8.5	NQ2	2.56
KEG-11-009	273.55	SLT	11.7	NQ2	2.58
KEG-11-010	29.47	LST	14.4	NQ2	2.74
KEG-11-010	59.34	LST	11.9	NQ2	2.71
KEG-11-010	83.33	LST	14.3	NQ2	2.59
KEG-11-010	114.00	LST	13.9	NQ2	2.75
KEG-11-010	142.38	LST	9.2	NQ2	2.66
KEG-11-010	157.40	LST	10.3	NQ2	2.70

KEG-11-010	157.71	LST	14.1	NQ2	2.72
KEG-11-010	169.31	LST	9.3	NQ2	2.94
KEG-11-010	186.55	LST	10.1	NQ2	2.63
KEG-11-011	22.12	SLT	13.8	NTW	2.58
KEG-11-011	49.00	SLT	10.3	NTW	2.48
KEG-11-011	82.50	SLT	9.9	NTW	2.65
KEG-11-011	90.90	SLT	10.9	NTW	2.45
KEG-11-011	129.40	SLT	12.4	NTW	2.50
KEG-11-011	149.74	SLT	11.9	NTW	2.46
KEG-11-011	163.37	ARG	11.1	NTW	2.59
KEG-11-011	185.09	ARG	12.7	NTW	2.38
KEG-11-011	200.86	ARG	12.7	NTW	2.66
KEG-11-011	207.97	ARG	13.9	NTW	2.57
KEG-11-012	41.75	ICL	10.8	NQ2	2.73
KEG-11-012	55.30	ICL	10.8	NQ2	2.89
KEG-11-012	96.47	ICL	13.6	NQ2	2.90
KEG-11-012	118.24	ICL	13.0	NQ2	2.72
KEG-11-012	158.80	ICL	13.3	NQ2	2.72
KEG-11-012	170.84	ICL	11.3	NQ2	3.13
KEG-11-012	203.92	ICL	12.1	NQ2	2.68
KEG-11-012	223.29	ICL	13.7	NQ2	3.32
KEG-11-012	248.15	LST	15.2	NQ2	2.83
KEG-11-012	268.84	LST	13.2	NQ2	2.54
KEG-11-012	304.76	ICL	12.8	NQ2	2.75
KEG-11-012	323.55	ICL	10.7	NQ2	2.83
KEG-11-012	354.02	ICL	12.2	NQ2	2.65
KEG-11-012	384.36	ARG	13.1	NQ2	2.72
KEG-11-013	33.34	ICL	10.9	NQ2	2.37
KEG-11-013	52.50	ICL	11.6	NQ2	2.65
KEG-11-013	79.56	ICL	12.2	NQ2	2.75
KEG-11-013	98.33	ICL	11.6	NQ2	2.70
KEG-11-013	201.33	ICL	11.1	NQ2	2.96
KEG-11-013	217.63	ICL	11.7	NQ2	3.01
KEG-11-013	229.08	ICL	12.3	NQ2	2.70
KEG-11-014	10.48	SLT	12.2	NTW	2.56
KEG-11-014	32.03	CGL	10.7	NTW	2.62
KEG-11-014	41.84	CGL	10.7	NTW	3.64
KEG-11-014	146.00	SLT	11.6	NTW	2.68
KEG-11-014	153.88	SLT	12.3	NTW	2.64
KEG-11-014	174.88	SLT	13.2	NTW	2.62
KEG-11-014	194.91	SLT	13.9	NTW	2.58

KEG-11-014	217.75	SLT	12.4	NTW	2.58
KEG-11-014	227.05	SLT	11.8	NTW	2.62
KEG-11-014	240.91	SLT	11.0	BTW	2.61
KEG-11-014	261.07	LST	13.8	BTW	2.57
KEG-11-014	278.05	SLT	8.9	BTW	2.57
KEG-11-014	293.30	SLT	9.4	BTW	2.64
KEG-11-014	306.01	SLT	13.3	BTW	2.57
KEG-11-014	320.72	SLT	9.9	BTW	2.57
KEG-11-014	334.37	SLT	12.3	BTW	2.71
KEG-11-014	353.75	SLT	10.8	BTW	2.75
KEG-11-015	18.14	ICL	11.6	NQ2	3.08
KEG-11-015	36.69	ICL	11.3	NQ2	2.98
KEG-11-015	66.33	ICL	11.3	NQ2	2.76
KEG-11-015	102.93	ICL	14.3	NQ2	2.65
KEG-11-015	124.55	ICL	11.1	NQ2	2.52
KEG-11-015	149.00	ICL	11.1	NQ2	2.89
KEG-11-015	156.12	ICL	11.6	NQ2	2.83
KEG-11-015	179.00	LST	11.2	NQ2	2.22
KEG-11-015	326.78	LST	13.6	NQ2	2.69
KEG-11-016	26.85	ICL	13.2	NQ2	2.72
KEG-11-016	46.56	ICL	14.4	NQ2	2.79
KEG-11-016	111.05	ICL	13.6	NQ2	2.66
KEG-11-016	132.82	ICL	14.1	NQ2	2.72
KEG-11-016	149.29	ICL	13.0	NQ2	2.76
KEG-11-016	166.40	ICL	12.9	NQ2	2.88
KEG-11-016	180.78	ICL	8.7	NQ2	2.78
KEG-11-016	191.72	ICL	8.9	NQ2	2.82
KEG-11-016	210.88	ICL	11.3	NQ2	2.82
KEG-11-016	230.14	ICL	11.6	NQ2	2.72
KEG-11-016	247.54	ICL	10.5	NQ2	2.73
KEG-11-016	267.80	ICL	11.2	NQ2	2.82
KEG-11-016	294.10	ICL	11.2	NQ2	2.76
KEG-11-016	305.35	ICL	10.8	NQ2	2.66
KEG-11-016	318.86	ICL	9.9	NQ2	2.75
KEG-11-016	353.60	ICL	12.8	NQ2	2.64
KEG-11-016	370.12	ICL	12.3	NQ2	2.65
KEG-11-016	385.54	ICL	10.7	NQ2	2.75
KEG-11-016	405.25	ICL	12.8	NQ2	2.83
KEG-11-016	414.00	ICL	11.9	NQ2	2.83
KEG-11-017	20.28	ICL	11.0	NQ2	2.76
KEG-11-017	32.68	ICL	10.0	NQ2	2.58

KEG-11-017	57.07	ICL	10.8	NQ2	2.70
KEG-11-017	77.83	ICL	10.3	NQ2	2.52
KEG-11-017	111.43	ICL	11.7	NQ2	2.72
KEG-11-017	131.76	ICL	12.9	NQ2	2.87
KEG-11-017	139.82	ICL	9.0	NQ2	2.69
KEG-11-017	149.85	ICL	8.9	NQ2	2.92
KEG-11-017	157.22	ICL	10.7	NQ2	3.34
KEG-11-017	175.31	ICL	11.1	NQ2	2.67
KEG-11-017	187.24	ICL	10.2	NQ2	3.59
KEG-11-017	203.02	ICL	10.1	NQ2	3.47
KEG-11-017	213.45	ICL	13.6	NQ2	2.78
KEG-11-017	225.70	ICL	14.7	NQ2	3.15
KEG-11-017	240.92	ICL	13.3	NQ2	2.85
KEG-11-017	255.70	ICL	12.5	NQ2	2.78
KEG-11-017	259.72	ICL	13.7	NQ2	2.71
KEG-11-017	288.03	ICL	13.8	NQ2	2.75
KEG-11-017	305.87	ICL	10.5	NQ2	3.06
KEG-11-017	343.06	ICL	15.0	NQ2	2.72
KEG-11-017	353.68	ICL	13.1	NQ2	2.73
KEG-11-017	369.10	ICL	11.8	NQ2	2.65
KEG-11-017	381.56	ICL	11.2	NQ2	2.67
KEG-11-017	390.47	ICL	13.2	NQ2	2.74
KEG-11-017	406.76	ICL	13.4	NQ2	2.78
KEG-11-017	419.78	ARG	12.7	NQ2	2.73
KEG-11-018	18.50	ICL	11.2	NQ2	2.73
KEG-11-018	32.25	ICL	9.0	NQ2	2.76
KEG-11-018	55.75	ICL	11.3	NQ2	2.83
KEG-11-018	77.50	ICL	11.7	NQ2	2.80
KEG-11-018	87.31	ICL	14.6	NQ2	2.92
KEG-11-018	111.76	ICL	13.7	NQ2	2.70
KEG-11-018	133.52	ICL	15.5	NQ2	2.38
KEG-11-018	141.26	ICL	13.9	NQ2	2.73
KEG-11-018	162.36	ICL	14.6	NQ2	3.16
KEG-11-018	168.00	ICL	13.8	NQ2	3.19
KEG-11-018	187.41	ICL	14.2	NQ2	2.97
KEG-11-018	204.87	ICL	12.2	NQ2	3.03
KEG-11-018	219.69	ICL	15.4	NQ2	2.91
KEG-11-018	245.78	ICL	14.1	NQ2	2.80
KEG-11-018	273.06	ICL	14.7	NQ2	2.75
KEG-11-018	306.84	ICL	13.3	NQ2	2.71
KEG-11-018	331.00	ARG	14.7	NQ2	2.74

KEG-11-019	45.00	CGL	9.9	NTW	2.69
KEG-11-019	69.90	CGL	10.6	NTW	2.66
KEG-11-019	86.70	CGL	9.9	NTW	2.68
KEG-11-019	110.44	SLT	12.8	NTW	2.64
KEG-11-019	117.19	SLT	12.1	NTW	2.59
KEG-11-019	128.37	SLT	13.4	BTW	2.71
KEG-11-019	157.18	SLT	13.6	BTW	2.73
KEG-11-019	171.10	SLT	13.7	BTW	2.69
KEG-11-019	204.25	SLT	13.2	BTW	2.73
KEG-11-019	276.26	SLT	11.2	BTW	2.69
KEG-11-020	30.21	ICL	11.0	NQ2	2.70
KEG-11-021	29.66	ICL	15.2	NQ2	2.74
KEG-11-021	40.14	ICL	14.7	NQ2	2.77
KEG-11-021	56.51	ICL	13.7	NQ2	2.61
KEG-11-021	79.08	ICL	12.5	NQ2	2.68
KEG-11-021	99.75	ICL	11.1	NQ2	2.90
KEG-11-021	111.90	ICL	12.0	NQ2	2.82
KEG-11-021	132.75	ICL	12.2	NQ2	2.86
KEG-11-021	147.70	ICL	9.7	NQ2	2.77
KEG-11-021	151.90	ICL	10.7	NQ2	2.80
KEG-11-021	173.12	ICL	13.2	NQ2	2.78
KEG-11-021	206.06	ICL	12.5	NQ2	3.07
KEG-11-021	224.61	ICL	11.0	NQ2	2.65
KEG-11-021	239.00	ICL	11.1	NQ2	3.08
KEG-11-021	265.10	ICL	10.9	NQ2	3.03
KEG-11-021	282.90	ICL	13.3	NQ2	2.89
KEG-11-021	285.85	ICL	11.2	NQ2	2.73
KEG-11-021	311.40	ICL	14.7	NQ2	2.54
KEG-11-021	324.37	ICL	14.7	NQ2	2.78
KEG-11-021	342.80	ICL	16.5	NQ2	2.75
KEG-11-021	355.65	ICL	11.8	NQ2	2.72
KEG-11-021	380.07	ARG	12.8	NQ2	2.75
KEG-11-022	23.65	ICL	12.0	NQ2	2.72
KEG-11-022	45.80	ICL	12.8	NQ2	2.74
KEG-11-022	76.70	ICL	13.7	NQ2	2.73
KEG-11-022	89.50	ICL	11.8	NQ2	2.76
KEG-11-022	108.53	ICL	13.0	NQ2	2.94
KEG-11-022	125.50	ICL	12.4	NQ2	2.82
KEG-11-022	136.65	ICL	10.9	NQ2	2.77
KEG-11-022	154.00	ICL	11.1	NQ2	2.99
KEG-11-022	170.90	ICL	10.6	NQ2	3.29

KEG-11-022	187.70	ICL	11.1	NQ2	2.83
KEG-11-022	212.75	ICL	12.3	NQ2	2.68
KEG-11-022	227.80	ICL	10.3	NQ2	2.73
KEG-11-022	244.53	ICL	10.8	NQ2	2.71
KEG-11-022	277.34	ARG	10.1	NQ2	2.75
KEG-11-022	294.57	ARG	10.5	NQ2	2.72
KEG-11-022	304.00	ARG	13.7	NQ2	2.66
KEG-11-023	30.19	ICL	11.2	NQ2	2.66
KEG-11-023	44.85	ICL	10.7	NQ2	2.71
KEG-11-023	77.92	ICL	11.4	NQ2	2.55
KEG-11-023	87.04	ICL	10.7	NQ2	2.70
KEG-11-023	106.92	ICL	13.4	NQ2	2.66
KEG-11-023	131.70	ICL	10.9	NQ2	2.69
KEG-11-023	155.11	ICL	11.3	NQ2	2.77
KEG-11-023	169.52	ICL	10.3	NQ2	2.80
KEG-11-023	187.87	ICL	10.2	NQ2	2.71
KEG-11-023	192.05	ICL	11.4	NQ2	2.72
KEG-11-023	234.20	ICL	10.9	NQ2	2.85
KEG-11-023	244.80	ICL	11.3	NQ2	2.83
KEG-11-023	262.25	ICL	12.4	NQ2	2.68
KEG-11-023	274.00	ICL	11.3	NQ2	3.11
KEG-11-023	290.85	ICL	13.7	NQ2	3.29
KEG-11-023	310.40	ARG	13.6	NQ2	2.65
KEG-11-023	349.09	ARG	10.1	NQ2	2.76
KEG-11-024	20.19	ICL	9.7	NQ2	2.77
KEG-11-024	33.70	ICL	12.5	NQ2	2.74
KEG-11-024	46.20	ICL	12.9	NQ2	2.71
KEG-11-024	69.95	ICL	11.0	NQ2	2.70
KEG-11-024	75.35	ICL	11.5	NQ2	2.75
KEG-11-024	100.00	ICL	12.6	NQ2	2.75
KEG-11-024	134.86	ICL	11.4	NQ2	2.75
KEG-11-024	152.46	ICL	12.7	NQ2	2.94
KEG-11-024	164.38	ICL	13.8	NQ2	2.62
KEG-11-024	180.57	ICL	12.1	NQ2	2.82
KEG-11-024	198.70	ICL	12.3	NQ2	2.79
KEG-11-024	217.40	ICL	11.4	NQ2	2.94
KEG-11-024	232.52	ICL	13.4	NQ2	2.81
KEG-11-024	242.03	ICL	13.3	NQ2	3.10
KEG-11-024	245.49	ICL	12.9	NQ2	2.87
KEG-11-024	280.70	ICL	15.3	NQ2	3.10
KEG-11-024	282.48	ICL	14.4	NQ2	3.16

KEG-11-024	298.29	ICL	10.8	NQ2	2.68
KEG-11-024	301.45	ICL	12.9	NQ2	2.83
KEG-11-024	312.20	ICL	12.3	NQ2	2.83
KEG-11-024	313.65	ICL	11.0	NQ2	2.81
KEG-11-024	332.98	ICL	10.3	NQ2	2.99
KEG-11-024	350.12	ICL	10.5	NQ2	2.92
KEG-11-024	367.80	ICL	13.4	NQ2	2.68
KEG-11-024	386.64	ICL	13.4	NQ2	2.68
KEG-11-024	401.80	ICL	16.3	NQ2	2.70
KEG-11-024	416.75	ICL	13.0	NQ2	2.74
KEG-11-024	430.02	ICL	10.3	NQ2	2.65
KEG-11-024	444.71	ARG	11.8	NQ2	2.87
KEG-11-024	450.67	ARG	12.1	NQ2	2.78
KEG-11-024	460.48	ARG	11.5	NQ2	2.78
KEG-11-025	8.94	ICL	13.1	NQ2	2.64
KEG-11-025	22.74	ICL	12.7	NQ2	2.85
KEG-11-025	39.47	ICL	14.4	NQ2	2.74
KEG-11-025	53.39	ICL	11.9	NQ2	2.80
KEG-11-025	72.38	ICL	12.4	NQ2	2.98
KEG-11-025	87.63	ICL	12.7	NQ2	2.67
KEG-11-025	101.29	ICL	11.5	NQ2	2.68
KEG-11-025	136.00	ICL	10.3	NQ2	2.74
KEG-11-025	168.49	ICL	10.7	NQ2	2.76
KEG-11-025	181.47	ICL	11.0	NQ2	2.65
KEG-11-025	202.85	ICL	11.4	NQ2	2.70
KEG-11-025	220.23	ICL	10.2	NQ2	2.71
KEG-11-025	230.80	ICL	10.7	NQ2	2.68
KEG-11-025	241.84	ICL	11.9	NQ2	2.87
KEG-11-025	244.80	ICL	13.0	NQ2	3.04
KEG-11-025	260.69	ICL	14.4	NQ2	2.69
KEG-11-025	288.67	ICL	9.7	NQ2	2.69
KEG-11-025	294.30	ICL	12.8	NQ2	2.95
KEG-11-025	311.26	ICL	13.4	NQ2	3.26
KEG-11-025	332.84	ICL	14.2	NQ2	2.80
KEG-11-025	355.73	ICL	14.2	NQ2	2.89
KEG-11-025	365.06	ICL	13.7	NQ2	2.82
KEG-11-025	375.60	ICL	14.0	NQ2	2.70
KEG-11-025	400.43	ICL	11.5	NQ2	2.64
KEG-11-025	413.63	ICL	13.3	NQ2	3.29
KEG-11-025	425.20	ICL	13.7	NQ2	2.72
KEG-11-026	1.64	OVB	9.5	NQ2	2.68

KEG-11-026	41.19	ICL	10.6	NQ2	2.74
KEG-11-026	92.23	ICL	12.0	NQ2	2.73
KEG-11-026	112.33	ICL	10.8	NQ2	2.82
KEG-11-026	127.64	ICL	10.1	NQ2	2.77
KEG-11-026	147.63	ICL	12.0	NQ2	2.63
KEG-11-026	167.66	ICL	10.7	NQ2	2.82
KEG-11-026	179.34	ICL	13.7	NQ2	2.86
KEG-11-026	195.93	ICL	13.7	NQ2	2.89
KEG-11-026	231.08	ICL	14.6	NQ2	2.66
KEG-11-026	237.56	ICL	12.8	NQ2	2.72
KEG-11-026	266.23	ICL	11.1	NQ2	2.81
KEG-11-026	280.57	ICL	9.7	NQ2	3.05
KEG-11-026	288.70	ICL	13.9	NQ2	2.64
KEG-11-026	310.31	ICL	12.0	NQ2	2.80
KEG-11-026	335.36	ICL	11.8	NQ2	3.03
KEG-11-026	365.81	ICL	12.9	NQ2	2.74
KEG-11-026	384.67	ICL	14.5	NQ2	3.11
KEG-11-026	401.14	ICL	10.7	NQ2	2.83
KEG-11-026	408.04	ICL	12.8	NQ2	2.72
KEG-11-026	441.56	ICL	12.0	NQ2	2.81
KEG-11-027	22.06	ICL	11.1	NQ2	2.69
KEG-11-027	46.42	ICL	12.2	NQ2	2.75
KEG-11-027	76.68	ICL	11.2	NQ2	2.83
KEG-11-027	91.37	ICL	10.1	NQ2	2.73
KEG-11-027	123.60	ICL	10.9	NQ2	2.73
KEG-11-027	141.88	ICL	10.2	NQ2	2.77
KEG-11-027	179.64	ICL	10.9	NQ2	2.81
KEG-11-027	189.87	ICL	10.6	NQ2	3.08
KEG-11-027	212.00	ICL	11.6	NQ2	2.79
KEG-11-027	223.00	ICL	11.6	NQ2	2.74
KEG-11-027	229.67	ICL	11.1	NQ2	2.57
KEG-11-027	247.85	SLT	13.6	NQ2	2.73
KEG-11-027	263.29	SLT	11.8	NQ2	2.69
KEG-11-027	297.22	SLT	10.3	NQ2	2.73
KEG-11-027	301.36	SLT	11.1	NQ2	2.75
KEG-11-027	331.61	SLT	12.5	NQ2	2.85
KEG-11-027	345.17	SLT	10.0	NQ2	2.92
KEG-11-027	356.05	SLT	11.1	NQ2	2.70
KEG-11-027	366.84	SLT	10.3	NQ2	2.79
KEG-11-027	395.46	SLT	10.5	NQ2	2.73
KEG-11-027	410.94	SLT	10.4	NQ2	3.05

KEG-11-027	433.15	SLT	12.7	NQ2	2.73
KEG-11-027	447.85	SLT	10.6	NQ2	2.74
KEG-11-027	462.92	SLT	9.7	NQ2	2.82
KEG-11-027	485.22	SLT	14.4	NQ2	2.70
KEG-11-028	23.57	SLT	13.5	NTW	2.67
KEG-11-028	37.95	SLT	12.0	NTW	2.66
KEG-11-028	57.90	SLT	11.0	NTW	2.72
KEG-11-028	79.69	SLT	12.9	NTW	2.50
KEG-11-028	114.00	ICL	10.6	NTW	2.59
KEG-11-028	131.30	ICL	11.0	BTW	2.70
KEG-11-028	157.80	ICL	12.1	BTW	2.67
KEG-11-028	177.45	ICL	10.9	BTW	2.70
KEG-11-028	195.70	ICL	11.5	BTW	2.75
KEG-11-028	218.76	ICL	13.7	BTW	2.71
KEG-11-028	234.00	ICL	13.8	BTW	2.75
KEG-11-028	246.65	ICL	14.0	BTW	2.69
KEG-11-028	266.20	SLT	12.3	BTW	2.71
KEG-11-028	281.38	SLT	12.7	BTW	2.68
KEG-11-028	298.46	ARG	14.1	BTW	2.72
KEG-11-028	320.37	ARG	11.6	BTW	2.76
KEG-11-028	334.44	ARG	14.0	BTW	2.51
KEG-11-028	364.95	ARG	12.4	BTW	2.66
KEG-11-029	18.74	ICL	12.4	NQ2	2.75
KEG-11-029	38.76	ICL	10.3	NQ2	2.76
KEG-11-029	65.45	ICL	13.6	NQ2	3.22
KEG-11-029	81.44	ICL	12.4	NQ2	2.95
KEG-11-029	106.12	ICL	11.5	NQ2	2.88
KEG-11-029	137.12	ICL	11.5	NQ2	3.21
KEG-11-029	163.32	ICL	12.2	NQ2	2.70
KEG-11-029	183.30	ICL	14.1	NQ2	3.01
KEG-11-029	210.62	ICL	14.0	NQ2	2.77
KEG-11-029	220.47	ICL	15.0	NQ2	2.76
KEG-11-029	254.79	ICL	15.1	NQ2	2.70
KEG-11-029	281.70	ICL	14.7	NQ2	2.79
KEG-11-029	298.13	ICL	13.1	NQ2	2.48
KEG-11-029	328.69	ICL	10.7	NQ2	2.66
KEG-11-030	14.40	SLT	8.4	NQ2	2.68
KEG-11-030	31.22	SLT	10.9	NQ2	2.61
KEG-11-030	51.00	SLT	13.1	NQ2	3.01
KEG-11-030	65.80	SLT	12.3	NQ2	2.69
KEG-11-030	86.90	SLT	10.8	NQ2	2.74

KEG-11-030	109.40	SLT	11.3	NQ2	2.69
KEG-11-030	134.31	SLT	12.3	NQ2	2.89
KEG-11-030	150.85	SLT	10.2	NQ2	2.54
KEG-11-030	166.90	SLT	12.2	NQ2	2.68
KEG-11-030	176.00	FLR	11.8	NQ2	2.71
KEG-11-030	187.20	SLT	12.5	NQ2	2.72
KEG-11-030	202.12	SLT	11.3	NQ2	2.74
KEG-11-030	220.66	SLT	10.4	NQ2	3.04
KEG-11-030	255.36	SLT	13.2	NQ2	3.11
KEG-11-030	272.49	SLT	10.0	NQ2	2.76
KEG-11-030	289.73	SLT	9.9	NQ2	2.79
KEG-11-030	306.66	SLT	9.6	NQ2	2.72
KEG-11-030	318.61	SLT	12.1	NQ2	2.68
KEG-11-030	335.28	SLT	13.2	NQ2	2.79
KEG-11-030	351.75	SLT	12.7	NQ2	2.73
KEG-11-030	368.40	FLR	9.3	NQ2	2.62
KEG-11-030	384.52	FLR	12.1	NQ2	2.31
KEG-11-030	400.90	SLT	12.7	NQ2	2.54
KEG-11-031	19.91	ICL	11.6	NTW	2.67
KEG-11-031	34.33	ICL	11.5	NTW	2.69
KEG-11-031	66.78	ICL	12.4	NTW	2.60
KEG-11-031	79.64	ICL	11.3	NTW	2.63
KEG-11-031	109.24	ICL	13.5	NTW	2.70
KEG-11-031	113.53	ICL	12.3	NTW	2.63
KEG-11-031	126.82	ICL	12.8	NTW	2.57
KEG-11-031	146.16	ICL	13.2	BTW	2.55
KEG-11-031	169.77	SLT	12.1	BTW	2.78
KEG-11-031	197.44	SLT	10.9	BTW	2.62
KEG-11-031	265.95	SLT	11.5	BTW	2.56
KEG-11-031	281.78	SLT	11.5	BTW	2.42
KEG-11-031	293.95	SLT	13.4	BTW	2.63
KEG-11-031	311.31	ICL	16.0	BTW	2.64
KEG-11-031	330.71	ICL	12.5	BTW	2.59
KEG-11-032	30.75	SLT	13.7	NTW	2.68
KEG-11-032	50.38	SLT	12.1	NTW	2.61
KEG-11-032	64.65	SLT	12.8	NTW	2.58
KEG-11-032	82.70	ARG	12.5	NTW	2.70
KEG-11-032	97.30	ARG	10.6	NTW	2.69
KEG-11-032	116.00	ARG	12.0	NTW	2.62
KEG-11-032	132.38	ARG	12.3	NTW	2.65
KEG-11-032	147.09	ARG	9.2	BTW	2.73

KEG-11-032	182.75	ARG	10.8	BTW	2.62
KEG-11-032	208.15	ARG	11.6	BTW	2.59
KEG-11-032	231.58	ARG	11.4	BTW	2.60
KEG-11-032	252.90	SLT	11.2	BTW	2.51
KEG-11-032	259.46	SLT	12.5	BTW	2.68
KEG-11-032	276.48	SLT	11.5	BTW	2.69
KEG-11-032	291.71	SLT	12.2	BTW	2.53
KEG-11-032	310.76	SLT	12.0	BTW	2.74
KEG-11-032	322.28	SLT	11.7	BTW	2.73
KEG-11-032	339.29	SLT	11.0	BTW	2.72
KEG-11-032	347.95	SLT	11.4	BTW	2.68
KEG-11-032	378.26	SLT	12.3	BTW	2.70
KEG-11-032	400.45	SLT	11.6	BTW	2.69
KEG-11-032	413.26	SLT	12.0	BTW	2.76
KEG-11-032	440.30	SLT	12.0	BTW	2.73
KEG-11-033	16.49	ICL	11.8	NQ2	2.73
KEG-11-033	37.40	ICL	13.9	NQ2	3.11
KEG-11-033	48.00	ICL	12.5	NQ2	2.73
KEG-11-033	60.50	ICL	12.9	NQ2	2.71
KEG-11-033	69.41	ICL	12.3	NQ2	2.74
KEG-11-033	91.13	ICL	11.4	NQ2	3.08
KEG-11-033	103.51	ICL	12.9	NQ2	3.22
KEG-11-033	110.03	ICL	12.7	NQ2	2.78
KEG-11-033	139.34	ICL	12.1	NQ2	2.78
KEG-11-033	170.45	ICL	12.0	NQ2	2.86
KEG-11-033	192.90	ICL	13.8	NQ2	2.76
KEG-11-033	218.05	ICL	15.1	NQ2	2.72
KEG-11-033	228.70	ICL	14.0	NQ2	2.76
KEG-11-033	260.85	ICL	12.1	NQ2	2.83
KEG-11-033	288.10	ICL	14.2	NQ2	2.79
KEG-11-033	310.20	ICL	14.5	NQ2	2.81
KEG-11-033	337.05	ICL	14.0	NQ2	2.83
KEG-11-033	351.02	ICL	11.2	NQ2	3.19
KEG-11-033	366.71	ICL	10.8	NQ2	2.55
KEG-11-033	383.07	SLT	13.4	NQ2	2.70
KEG-11-033	398.07	SLT	12.5	NQ2	2.64
KEG-11-033	404.19	SLT	11.4	NQ2	2.81
KEG-11-033	421.38	SLT	12.7	NQ2	2.73
KEG-11-034	407.35	LST	11.7	NQ2	2.82
KEG-11-034	434.14	LST	11.0	NQ2	2.66
KEG-11-034	455.52	LST	12.0	NQ2	2.98

KEG-11-034	471.65	LST	12.0	NQ2	2.68
KEG-11-034	479.76	LST	12.3	NQ2	2.49
KEG-11-034	495.96	LST	10.0	NQ2	2.71
KEG-11-034	512.11	LST	10.7	NQ2	2.70
KEG-11-034	527.70	LST	13.5	NQ2	2.93
KEG-11-035	11.06	SLT	12.5	NTW	2.71
KEG-11-035	29.00	SLT	11.7	NTW	2.76
KEG-11-035	33.53	SLT	11.6	NTW	2.85
KEG-11-035	55.53	SLT	11.7	NTW	2.94
KEG-11-035	70.87	SLT	12.3	NTW	2.69
KEG-11-035	84.36	SLT	12.3	NTW	2.70
KEG-11-035	103.13	SLT	12.4	NTW	2.62
KEG-11-035	120.17	SLT	11.8	NTW	2.75
KEG-11-035	132.34	SLT	11.7	NTW	2.62
KEG-11-035	183.27	SLT	11.3	BTW	2.77
KEG-11-035	195.00	SLT	12.9	BTW	2.66
KEG-11-035	217.17	SLT	10.5	BTW	2.66
KEG-11-035	234.77	CHT	12.1	BTW	2.68
KEG-11-035	257.71	SLT	11.7	BTW	2.69
KEG-11-035	274.18	SLT	11.7	BTW	2.70
KEG-11-035	292.37	SLT	11.4	BTW	2.74
KEG-11-035	305.00	SLT	12.1	BTW	2.63
KEG-11-035	322.40	SLT	12.0	BTW	2.65
KEG-11-035	340.20	ICL	11.7	BTW	2.84
KEG-11-035	355.04	ICL	12.3	BTW	2.87
KEG-11-035	370.61	ICL	11.9	BTW	2.69
KEG-11-035	385.16	ICL	12.3	BTW	2.82
KEG-11-035	393.71	ICL	12.4	NQ2	1.84
KEG-11-036	24.83	SLT	13.1	NQ2	2.71
KEG-11-036	57.76	SLT	12.7	NQ2	2.74
KEG-11-036	67.53	SLT	11.5	NQ2	2.71
KEG-11-036	96.59	SLT	10.9	NQ2	2.72
KEG-11-036	112.80	SLT	11.5	NQ2	2.90
KEG-11-036	142.37	SLT	11.9	NQ2	2.94
KEG-11-036	155.15	SLT	14.6	NQ2	2.91
KEG-11-036	168.46	SLT	11.9	NQ2	2.76
KEG-11-036	190.80	SLT	12.0	NQ2	2.77
KEG-11-036	236.39	SLT	14.0	NQ2	2.69
KEG-11-036	300.39	SLT	13.8	NQ2	3.01
KEG-11-036	338.50	SLT	13.6	NQ2	2.69
KEG-11-036	392.43	SLT	14.3	NQ2	3.30

KEG-11-036	402.23	SLT	13.9	NQ2	3.13
KEG-11-036	411.19	SLT	12.0	NQ2	3.23
KEG-11-036	434.48	SLT	14.1	NQ2	2.79
KEG-11-036	453.16	SLT	14.0	NQ2	2.84
KEG-11-037	18.22	ICL	13.5	NQ2	2.06
KEG-11-037	33.13	ICL	13.3	NQ2	2.18
KEG-11-037	48.08	ICL	12.2	NQ2	1.98
KEG-11-037	62.64	ICL	13.8	NQ2	1.95
KEG-11-037	84.49	ICL	12.0	NQ2	1.90
KEG-11-037	97.38	ICL	11.4	NQ2	2.60
KEG-11-037	107.23	ICL	12.1	NQ2	2.74
KEG-11-037	124.21	ICL	12.1	NQ2	2.74
KEG-11-037	138.12	ICL	12.2	NQ2	2.52
KEG-11-037	166.88	ICL	10.8	NQ2	2.92
KEG-11-037	187.47	ICL	14.0	NQ2	2.55
KEG-11-037	199.10	ICL	14.1	NQ2	2.94
KEG-11-037	223.27	ICL	13.4	NQ2	2.79
KEG-11-037	243.60	ICL	13.8	NQ2	2.66
KEG-11-037	260.67	SLT	14.4	NQ2	2.59
KEG-11-037	267.36	SLT	12.0	NQ2	2.73
KEG-11-037	282.61	SLT	12.9	NQ2	2.71
KEG-11-037	299.31	SLT	12.9	NQ2	2.76
KEG-11-037	315.06	SLT	11.7	NQ2	2.73
KEG-11-037	333.24	SLT	12.0	NQ2	2.65
KEG-11-037	351.14	SLT	10.4	NQ2	3.13
KEG-11-037	377.08	SLT	12.5	NQ2	2.94
KEG-11-037	392.51	SLT	12.6	NQ2	2.76
KEG-11-037	410.60	SLT	12.2	NQ2	2.81
KEG-11-037	424.65	SLT	12.0	NQ2	2.88
KEG-11-037	455.12	SLT	13.5	NQ2	2.78
KEG-11-037	479.55	SLT	12.6	NQ2	2.83
KEG-11-037	509.08	SLT	11.2	NQ2	2.72
KEG-11-037	528.04	SLT	11.5	NQ2	3.00
KEG-11-037	538.26	SLT	12.3	NQ2	2.80
KEG-11-038	66.57	SLT	13.8	BTW	2.86
KEG-11-038	83.06	SLT	12.6	BTW	2.81
KEG-11-038	86.55	SLT	13.9	BTW	2.96
KEG-11-038	106.77	SLT	13.3	BTW	2.80
KEG-11-038	128.62	SLT	11.9	BTW	2.73
KEG-11-038	147.73	SLT	12.2	BTW	2.57
KEG-11-038	161.93	SLT	12.1	BTW	2.68

KEG-11-038	178.82	SLT	11.9	BTW	2.82
KEG-11-038	197.84	SLT	11.3	BTW	2.70
KEG-11-038	215.32	SLT	12.3	BTW	2.69
KEG-11-038	227.07	SLT	11.0	BTW	2.77
KEG-11-038	228.39	SLT	10.8	BTW	2.72
KEG-11-038	247.31	SLT	11.9	BTW	2.71
KEG-11-038	261.09	SLT	13.2	BTW	2.72
KEG-11-038	278.31	SLT	10.1	BTW	2.78
KEG-11-038	296.27	SLT	11.6	BTW	2.79
KEG-11-039	13.78	ICL	12.1	NQ2	2.66
KEG-11-039	26.27	ICL	12.7	NQ2	2.75
KEG-11-039	40.59	ICL	11.6	NQ2	2.75
KEG-11-039	57.48	ICL	12.4	NQ2	2.59
KEG-11-039	72.44	ICL	12.0	NQ2	2.72
KEG-11-039	83.90	ICL	12.1	NQ2	2.74
KEG-11-039	104.07	ICL	10.6	NQ2	2.65
KEG-11-039	118.59	SLT	12.5	NQ2	2.96
KEG-11-039	135.00	SLT	12.9	NQ2	2.75
KEG-11-039	149.06	SLT	11.8	NQ2	3.01
KEG-11-039	165.95	ICL	12.1	NQ2	2.96
KEG-11-039	186.94	ICL	13.6	NQ2	2.69
KEG-11-039	204.27	ICL	11.9	NQ2	2.72
KEG-11-039	219.86	ICL	12.0	NQ2	2.84
KEG-11-039	232.80	ICL	11.6	NQ2	2.88
KEG-11-039	249.17	ICL	11.6	NQ2	2.83
KEG-11-039	271.05	ICL	12.0	NQ2	2.71
KEG-11-039	282.90	ICL	11.6	NQ2	2.72
KEG-11-039	303.49	ICL	12.1	NQ2	2.89
KEG-11-039	315.59	ICL	12.3	NQ2	2.71
KEG-11-039	337.27	ICL	12.2	NQ2	2.79
KEG-11-039	349.44	ICL	12.6	NQ2	2.93
KEG-11-039	367.45	ICL	11.3	NQ2	2.65
KEG-11-039	381.76	ICL	12.1	NQ2	2.72
KEG-11-039	398.71	ICL	13.1	NQ2	2.96
KEG-11-040	17.67	SLT	12.0	NQ2	2.65
KEG-11-040	29.96	SLT	11.3	NQ2	2.71
KEG-11-040	46.93	SLT	11.4	NQ2	2.67
KEG-11-040	59.64	SLT	11.4	NQ2	2.70
KEG-11-040	77.17	SLT	11.6	NQ2	2.62
KEG-11-040	90.23	SLT	10.5	NQ2	2.65
KEG-11-040	106.58	SLT	12.0	NQ2	2.70

KEG-11-040	124.23	SLT	12.0	NQ2	2.74
KEG-11-040	140.83	SLT	11.2	NQ2	2.74
KEG-11-040	155.71	SLT	11.1	NQ2	2.71
KEG-11-040	172.23	SLT	11.9	NQ2	2.75
KEG-11-040	189.00	SLT	12.8	NQ2	3.04
KEG-11-040	206.53	SLT	13.4	NQ2	3.04
KEG-11-040	239.92	SLT	13.2	NQ2	2.69
KEG-11-040	273.62	SLT	13.0	NQ2	2.79
KEG-11-040	301.51	SLT	14.1	NQ2	2.71
KEG-11-040	340.60	SLT	12.7	NQ2	2.70
KEG-11-040	368.83	SLT	15.1	NQ2	2.69
KEG-11-040	387.35	SLT	13.6	NQ2	2.69
KEG-11-040	402.87	SLT	13.9	NQ2	2.76
KEG-11-040	452.73	SLT	13.6	NQ2	3.15
KEG-11-040	506.04	SLT	11.8	NQ2	3.29
KEG-11-040	533.93	LST	12.2	NQ2	2.79
KEG-11-040	547.98	LST	12.2	NQ2	2.99
KEG-11-041	12.25	LST	12.8	NQ2	2.69
KEG-11-041	33.80	LST	12.1	NQ2	2.64
KEG-11-041	63.29	LST	12.3	NQ2	2.68
KEG-11-041	72.88	LST	12.6	NQ2	2.58
KEG-11-041	93.09	LST	12.0	NQ2	2.72
KEG-11-041	119.69	LST	13.0	NQ2	2.54
KEG-11-041	129.31	LST	11.4	NQ2	2.68
KEG-11-041	148.77	LST	14.0	NQ2	2.57
KEG-11-041	160.71	LST	13.9	NQ2	2.80
KEG-11-041	171.99	LST	13.4	NQ2	2.61
KEG-11-041	194.25	FLR	13.6	NQ2	2.74
KEG-11-041	213.89	LST	12.9	NQ2	2.60
KEG-11-041	230.82	SLA	12.5	NQ2	2.65
KEG-11-041	274.04	SLA	13.0	NQ2	2.64
KEG-12-042	22.53	ICL	10.6	NQ2	2.61
KEG-12-042	51.61	ICL	11.4	NQ2	2.64
KEG-12-042	84.43	ICL	11.0	NQ2	2.52
KEG-12-042	109.33	ICL	11.0	NQ2	2.52
KEG-12-042	141.44	ICL	10.9	NQ2	2.67
KEG-12-042	174.69	ICL	11.6	NQ2	2.92
KEG-12-042	213.54	ICL	12.5	NQ2	2.72
KEG-12-042	240.49	ICL	13.1	NQ2	2.82
KEG-12-042	254.90	ICL	12.2	NQ2	2.95
KEG-12-042	259.07	ICL	13.4	NQ2	2.55

KEG-12-042	300.90	SLT	11.4	NQ2	2.67
KEG-12-042	317.18	SLT	10.5	NQ2	2.73
KEG-12-042	333.67	SLT	10.3	NQ2	2.48
KEG-12-042	342.72	SLT	12.7	NQ2	2.78
KEG-12-042	363.90	SLT	11.5	NQ2	2.59
KEG-12-042	378.95	SLT	13.5	NQ2	2.75
KEG-12-042	398.90	SLT	13.7	NQ2	2.72
KEG-12-042	414.83	SLT	12.8	NQ2	2.70
KEG-12-043	17.82	CHT	11.3	NQ2	2.70
KEG-12-043	27.30	CHT	10.1	NQ2	2.65
KEG-12-043	48.33	CHT	10.0	NQ2	2.73
KEG-12-043	77.13	CHT	9.5	NQ2	2.71
KEG-12-043	136.10	CHT	9.8	NQ2	2.53
KEG-12-043	183.00	CHT	10.0	NQ2	2.48
KEG-12-043	196.65	CHT	15.5	NQ2	2.70
KEG-12-043	239.35	CHT	12.4	NQ2	2.52
KEG-12-043	271.42	CHT	13.2	NQ2	2.67
KEG-12-043	288.30	CHT	11.7	NQ2	3.01
KEG-12-043	327.37	ICL	12.9	NQ2	2.75
KEG-12-044	100.06	CHT	11.3	NQ2	2.62
KEG-12-044	131.41	CHT	13.1	NQ2	2.54
KEG-12-044	162.92	FLR	8.8	NQ2	2.56
KEG-12-044	188.04	CHT	13.1	NQ2	2.51
KEG-12-044	272.16	CHT	10.0	NQ2	3.21
KEG-12-044	288.78	CHT	12.1	NQ2	3.29
KEG-12-044	317.46	CHT	10.2	NQ2	3.51
KEG-12-044	339.78	CHT	12.1	NQ2	3.29
KEG-12-045	29.84	ICL	10.0	NQ2	2.58
KEG-12-045	42.75	ICL	13.5	NQ2	2.66
KEG-12-045	82.75	ICL	12.5	NQ2	2.62
KEG-12-045	92.48	ICL	14.0	NQ2	2.79
KEG-12-045	126.58	ICL	14.0	NQ2	2.20
KEG-12-045	157.76	ICL	11.1	NQ2	2.64
KEG-12-045	182.36	ICL	11.9	NQ2	2.72
KEG-12-045	208.33	ICL	12.7	NQ2	2.76
KEG-12-045	237.33	SSS	11.4	NQ2	2.62
KEG-12-045	281.19	SSS	11.3	NQ2	2.76
KEG-12-045	311.63	SSS	11.8	NQ2	2.60
KEG-12-045	349.78	ICL	11.7	NQ2	2.83
KEG-12-045	383.15	ICL	11.7	NQ2	2.81
KEG-12-045	411.88	ICL	11.9	NQ2	2.78

KEG-12-045	447.27	ICL	12.2	NQ2	2.70
KEG-12-045	456.73	ICL	12.1	NQ2	2.71
KEG-12-046	27.00	SSS	12.6	NQ2	2.67
KEG-12-046	54.10	SSS	12.4	NQ2	2.68
KEG-12-046	91.00	SSS	12.4	NQ2	2.85
KEG-12-046	119.13	SSS	13.4	NQ2	2.70
KEG-12-046	161.10	SSS	13.1	NQ2	2.62
KEG-12-046	188.49	SSS	11.4	NQ2	2.68
KEG-12-046	230.84	SSS	14.0	NQ2	2.68
KEG-12-046	268.27	SSS	14.3	NQ2	2.72
KEG-12-046	299.85	SSS	11.5	NQ2	2.73
KEG-12-046	334.36	SSS	12.1	NQ2	2.67
KEG-12-046	367.81	SSS	13.2	NQ2	2.66
KEG-12-046	419.64	SSS	12.3	NQ2	3.23
KEG-12-046	450.45	SSS	12.8	NQ2	2.83
KEG-12-046	485.42	SSS	12.2	NQ2	2.70
KEG-12-047	20.79	SLT	12.0	NQ2	2.67
KEG-12-047	53.10	SLT	12.4	NQ2	2.70
KEG-12-047	69.97	SLT	13.3	NQ2	2.69
KEG-12-047	86.90	ARG	13.7	NQ2	2.51
KEG-12-047	129.70	SLT	16.4	NQ2	2.71
KEG-12-048	16.73	ICL	11.8	NQ2	2.71
KEG-12-048	57.36	ICL	11.4	NQ2	2.63
KEG-12-048	73.18	ICL	10.7	NQ2	2.83
KEG-12-048	125.28	ICL	10.5	NQ2	2.67
KEG-12-048	154.00	ICL	12.9	NQ2	2.68
KEG-12-048	160.08	ICL	10.7	NQ2	2.78
KEG-12-048	189.38	ICL	12.9	NQ2	2.68
KEG-12-048	233.66	ICL	10.4	NQ2	2.57
KEG-12-048	267.16	SSS	12.4	NQ2	2.63
KEG-12-048	280.16	ICL	13.1	NQ2	3.05
KEG-12-048	299.47	ICL	19.9	NQ2	2.53
KEG-12-048	339.06	ARG	12.7	NQ2	2.66
KEG-12-049	29.87	SSS	11.4	NQ2	2.71
KEG-12-049	53.25	SSS	13.3	NQ2	2.72
KEG-12-049	92.46	SSS	13.8	NQ2	2.73
KEG-12-049	123.64	SSS	12.9	NQ2	2.69
KEG-12-049	155.98	CHT	12.2	NQ2	2.88
KEG-12-049	189.38	CHT	12.0	NQ2	2.72
KEG-12-049	217.27	CHT	12.8	NQ2	2.72
KEG-12-049	248.70	CHT	12.7	NQ2	2.67

KEG-12-049	281.80	CHT	12.7	NQ2	2.68
KEG-12-049	310.66	CHT	14.1	NQ2	2.75
KEG-12-049	347.71	SSS	11.5	NQ2	2.92
KEG-12-049	364.27	SSS	12.5	NQ2	2.92
KEG-12-049	405.33	SSS	11.4	NQ2	2.70
KEG-12-050	24.73	SSS	13.7	NQ2	2.65
KEG-12-050	60.54	SSS	12.7	NQ2	2.70
KEG-12-050	92.54	SSS	11.9	NQ2	2.66
KEG-12-050	129.86	SSS	11.2	NQ2	2.67
KEG-12-050	161.44	SSS	14.7	NQ2	2.95
KEG-12-050	191.28	SSS	13.3	NQ2	2.69
KEG-12-050	223.24	SSS	12.6	NQ2	2.71
KEG-12-050	261.37	SSS	13.0	NQ2	2.73
KEG-12-050	288.79	SSS	11.6	NQ2	2.86
KEG-12-050	323.05	SSS	11.6	NQ2	2.69
KEG-12-050	355.18	SSS	11.8	NQ2	2.68
KEG-12-050	404.42	SSS	11.0	NQ2	3.19
KEG-12-050	432.50	SSS	13.2	NQ2	2.66
KEG-12-050	473.54	ICL	12.4	NQ2	2.86
KEG-12-051	20.51	ICL	13.5	NQ2	2.44
KEG-12-051	42.44	ICL	12.6	NQ2	2.55
KEG-12-051	92.06	ICL	11.7	NQ2	2.72
KEG-12-051	128.64	ICL	10.8	NQ2	2.74
KEG-12-051	141.51	ICL	11.6	NQ2	2.34
KEG-12-051	178.59	SSS	14.2	NQ2	2.63
KEG-12-051	214.92	SSS	12.3	NQ2	2.73
KEG-12-051	245.00	ICL	12.1	NQ2	2.72
KEG-12-051	281.16	ICL	11.1	NQ2	2.92
KEG-12-051	324.56	ICL	11.9	NQ2	2.62
KEG-12-051	349.14	ICL	9.4	NQ2	2.72
KEG-12-051	384.23	ICL	10.3	NQ2	2.70
KEG-12-052	35.59	SSS	12.2	NQ2	2.69
KEG-12-052	58.74	SSS	11.6	NQ2	2.68
KEG-12-052	90.81	SSS	11.4	NQ2	2.67
KEG-12-052	126.47	SSS	10.1	NQ2	2.67
KEG-12-052	156.82	SSS	10.2	NQ2	2.73
KEG-12-052	198.69	SSS	11.1	NQ2	2.71
KEG-12-052	234.10	SSS	12.6	NQ2	2.53
KEG-12-052	270.84	SSS	12.5	NQ2	2.66
KEG-12-052	304.84	SSS	10.0	NQ2	2.68
KEG-12-052	332.18	SSS	11.7	NQ2	2.69

KEG-12-052	362.73	SSS	13.4	NQ2	2.75
KEG-12-052	405.88	SSS	11.6	NQ2	2.72
KEG-12-052	440.00	SSS	11.6	NQ2	3.20
KEG-12-052	467.37	SSS	11.8	NQ2	2.73
KEG-12-052	489.71	SSS	11.4	NQ2	2.86
KEG-12-053	32.23	ICL	11.7	NQ2	2.66
KEG-12-053	65.35	ICL	13.2	NQ2	2.70
KEG-12-053	83.45	ICL	14.0	NQ2	2.72
KEG-12-053	107.07	ICL	13.9	NQ2	2.68
KEG-12-053	131.70	ICL	12.7	NQ2	2.64
KEG-12-053	158.10	ICL	12.2	NQ2	2.72
KEG-12-053	179.61	ICL	13.2	NQ2	2.68
KEG-12-053	213.80	ICL	13.9	NQ2	2.70
KEG-12-053	220.30	ICL	14.6	NQ2	2.61
KEG-12-053	249.14	ICL	12.0	NQ2	2.60
KEG-12-053	275.90	ARG	14.7	NQ2	2.60
KEG-12-054	26.04	ICL	12.4	NQ2	2.65
KEG-12-054	59.50	ICL	13.2	NQ2	2.72
KEG-12-054	88.74	ICL	13.8	NQ2	2.70
KEG-12-054	117.76	ICL	12.8	NQ2	2.71
KEG-12-054	155.47	ARG	12.4	NQ2	2.58
KEG-12-055	41.55	ICL	13.7	NQ2	2.65
KEG-12-055	75.55	ARG	12.7	NQ2	2.65
KEG-12-055	111.28	ARG	13.2	NQ2	2.62
KEG-12-056	27.85	ICL	12.8	NQ2	3.18
KEG-12-056	77.98	ICL	11.0	NQ2	2.67
KEG-12-056	99.67	ICL	13.3	NQ2	2.72
KEG-12-056	107.74	ICL	14.9	NQ2	2.55
KEG-12-056	144.90	ARG	12.1	NQ2	2.70
KEG-12-057	45.41	SLT	12.3	NQ2	2.63
KEG-12-057	55.46	SLT	12.3	NQ2	2.66
KEG-12-057	74.92	ARG	11.0	NQ2	2.66
KEG-12-057	102.84	ARG	12.0	NQ2	2.66
KEG-12-057	146.07	ARG	10.4	NQ2	2.64
KEG-12-057	172.00	ARG	12.6	NQ2	2.54
KEG-12-057	190.18	ARG	12.6	NQ2	2.64
KEG-12-058	15.79	SSS	13.3	NQ2	2.71
KEG-12-058	46.91	SSS	11.8	NQ2	2.64
KEG-12-058	58.60	SSS	13.2	NQ2	2.75
KEG-12-058	76.78	SSS	14.7	NQ2	2.72
KEG-12-058	79.04	SSS	11.5	NQ2	2.61

KEG-12-058	128.01	SSS	13.5	NQ2	2.80
KEG-12-058	140.89	SLT	17.4	NQ2	2.66
KEG-12-058	161.75	SLT	10.3	NQ2	2.68
KEG-12-058	177.87	SLT	10.6	NQ2	2.74
KEG-12-058	199.70	SLT	12.3	NQ2	3.01
KEG-12-058	212.90	SLT	11.5	NQ2	2.62
KEG-12-058	233.10	SLT	10.4	NQ2	2.61
KEG-12-058	242.09	SLT	18.3	NQ2	2.59
KEG-12-058	276.35	SLT	17.1	NQ2	2.63
KEG-12-058	290.72	SLT	13.5	NQ2	2.51
KEG-12-058	347.18	CSL	12.3	NQ2	2.92
KEG-12-058	370.81	CSL	13.2	NQ2	2.71
KEG-12-058	400.71	CSL	11.7	NQ2	2.63
KEG-12-058	429.00	FLR	13.0	NQ2	2.66
KEG-12-058	459.00	FLR	14.1	NQ2	2.34
KEG-12-059	38.24	SLT	10.1	NQ2	2.55
KEG-12-059	60.47	SLT	11.1	NQ2	2.48
KEG-12-059	98.62	SLT	10.5	NQ2	2.61
KEG-12-059	128.11	SLT	11.9	NQ2	2.64
KEG-12-059	146.29	SLT	10.3	NQ2	2.50
KEG-12-059	207.23	SLT	14.4	NQ2	2.74
KEG-12-059	215.30	SLT	10.8	NQ2	2.53
KEG-12-059	239.00	SLT	15.4	NQ2	2.59
KEG-12-060	35.06	ICL	12.5	NQ2	2.34
KEG-12-060	64.30	ICL	13.7	NQ2	2.58
KEG-12-060	96.00	ICL	12.2	NQ2	2.72
KEG-12-060	120.69	ICL	11.0	NQ2	2.64
KEG-12-060	203.05	SLT	12.4	NQ2	2.75
KEG-12-060	216.77	SLT	12.5	NQ2	2.74
KEG-12-062	28.60	SSS	12.2	NQ2	2.86
KEG-12-062	64.37	SSS	13.9	NQ2	2.74
KEG-12-062	95.86	FLR	11.7	NQ2	2.60
KEG-12-062	138.80	FLR	12.7	NQ2	2.61
KEG-12-062	174.80	SLT	10.5	NQ2	2.78
KEG-12-062	204.30	SLT	12.1	NQ2	2.66
KEG-12-062	231.80	SLT	13.9	NQ2	2.41
KEG-12-062	280.10	SLT	10.9	NQ2	2.69
KEG-12-062	304.15	SLT	11.3	NQ2	2.82
KEG-12-062	356.10	SLT	14.2	NQ2	2.81
KEG-12-062	389.62	SLT	10.4	NQ2	2.69
KEG-12-062	416.48	SLT	11.9	NQ2	2.64

KEG-12-062	450.89	SSS	13.3	NQ2	2.70
KEG-12-062	482.16	SSS	11.4	NQ2	2.78
KEG-12-063	26.84	ICL	12.5	NQ2	2.73
KEG-12-063	65.30	ICL	11.7	NQ2	2.47
KEG-12-063	110.94	ICL	11.8	NQ2	2.73
KEG-12-063	143.23	ICL	13.2	NQ2	2.66
KEG-12-063	176.98	ARG	12.5	NQ2	2.66
KEG-12-065	11.68	ICL	11.8	NQ2	2.70
KEG-12-065	42.92	ARG	12.0	NQ2	2.64
KEG-12-065	127.82	ICL	11.3	NQ2	2.63
KEG-12-065	154.00	ICL	10.6	NQ2	2.76
KEG-12-065	188.18	ICL	13.8	NQ2	2.69
KEG-12-065	192.12	ICL	11.4	NQ2	2.64
KEG-12-065	225.44	FLR	12.4	NQ2	2.55
KEG-12-065	237.20	FLR	14.8	NQ2	2.64
KEG-12-065	265.00	ICL	11.5	NQ2	2.70
KEG-12-065	302.00	ICL	13.9	NQ2	2.63
KEG-12-065	321.59	SLT	11.2	NQ2	2.57
KEG-12-065	361.54	ICL	11.1	NQ2	2.60
KEG-12-065	369.19	ICL	12.7	NQ2	2.64
KEG-12-066	24.00	SSS	12.4	NQ2	2.57
KEG-12-066	42.05	SSS	13.2	NQ2	2.87
KEG-12-066	73.79	SSS	13.0	NQ2	2.33
KEG-12-066	112.23	SSS	11.8	NQ2	2.74
KEG-12-066	138.00	SSS	11.7	NQ2	2.77
KEG-12-066	167.11	SSS	10.7	NQ2	2.68
KEG-12-066	201.06	SSS	11.3	NQ2	2.80
KEG-12-067	18.27	ICL	11.8	NQ2	2.75
KEG-12-067	50.75	FLR	12.0	NQ2	2.70
KEG-12-067	89.67	ICL	12.5	NQ2	2.75
KEG-12-067	122.52	ICL	13.1	NQ2	2.66
KEG-12-067	150.52	ICL	12.7	NQ2	2.59
KEG-12-067	159.45	ICL	12.9	NQ2	2.62
KEG-12-067	190.52	SLM	12.7	NQ2	2.59
KEG-12-067	222.89	ARG	14.5	NQ2	2.68
KEG-12-067	222.89	ARG	14.5	NQ2	2.68
KEG-12-068	45.06	SLT	12.1	NQ2	2.60
KEG-12-068	60.64	SLT	15.3	NQ2	2.55
KEG-12-068	96.11	SLT	13.8	NQ2	2.64
KEG-12-068	136.22	SLT	11.2	NQ2	2.68
KEG-12-068	167.38	SLT	10.8	NQ2	2.58

KEG-12-068	209.62	FLR	10.3	NQ2	2.63
KEG-12-068	235.76	FLR	10.1	NQ2	2.52
KEG-12-068	255.86	SLT	11.6	NQ2	2.60
KEG-12-069	18.04	SLT	12.2	NQ2	2.79
KEG-12-069	68.29	SLT	11.5	NQ2	2.77
KEG-12-069	101.75	SLT	11.6	NQ2	2.82
KEG-12-069	134.02	SLT	12.5	NQ2	2.78
KEG-12-069	159.87	ARG	13.2	NQ2	2.73