MINATURA ALUVIALES CORP.

Kenema Diamond Project

Sierra Leone, West Africa

Exploration Report

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Contents

List of Figures

List of Tables

1.0 SUMMARY

This report has been written by Andrea M. Rae, Hons. B.Sc., G.G., Geologist and Gemologist for Minatura Aluviales Corporation. It is the result of a site visit to the property in Sierra Leone, West Africa in April of this year, and a trip taken during the 2010 season. The purpose of these visits was to determine the diamond and gold potential of a few small claims in an area of indigenous workings and the potential of the larger area of the Matemu and Sewa Rivers.

An alluvial bulk sampling program was initiated in the river and terrace gravels along the Matamu River in the Kenema District in Sierra Leone, West Africa. Three pits were excavated to bedrock and the gravel was processed for diamonds and gold. Twelve Diamonds were recovered from 39.5 bcm (bank cubic meters) of gravels, resulting in a combined weight of 15.02 carats (ct). This indicates an average grade of 0.38 ct/bcm.

The average appraised value for the uncut stones is $6,600.00USD or $440.00USD per carat. Six of the diamonds were selected for processing and the measured total weight of the six stones was 7.63 carats before cutting. The finished product yielded 2.71 carats at a value of $2,130USD per carat, wholesale, equivalent to $5,225USD per carat market retail.

Gold was recovered in two of the pits averaging 0.45 grams/bcm. This adds a significant by- product value to future operations in the area. The sampling was completed by mid-April, as the rainy season was starting.

This sampling program and report is a follow up to an earlier sampling program and report done by John Rae, P.Geo in December 2010. At the time of Mr. Rae's trip, the area was waterlogged and as such, the potential of the terrace gravels was tested in lieu of channel access. This 2010 program recovered 5 diamonds weighing 8.21 carats. The volume of gravel processed was 5.5 bcm resulting in an average grade of 1.5 ct/bcm. The pits were located in terrace gravels near the village of Diema, an area of previous small scale mining activity. Minimal, but identifiable, gold values were observed when processing the terrace gravel for diamonds. Sample processing equipment was designed for diamond recovery; the implementation of fine alluvial gold processing equipment could increase the recoverable gold values in these terrace gravels.

Uncut diamond values varied from $135 USD per carat from "The Diamond Exchange" valuator in Toronto, up to $380 USD per carat from the GGDO in Freetown, SL. Both valuations utilized Kimberley Process guidelines. Estimated cut values by The Diamond Exchange provided a wholesale cut value averaging $1190 per carat.

The two programs complement each other as one tested the floodplain gravel in the dry season and the other tested the terrace gravel during the wet season. Results from these programs indicate that diamonds are found in both the terraces and floodplain of the Matamu River. This river enters the Sewa River, a much larger river system which gets its source from the famous diamond mining area

of Kono. The Sewa River has been successfully mined by individual artisanal miners and larger dredging operations since the early 1950"s and was a source of much of the country"s early diamond and gold production (Hall, 1968). In addition, the gravels of the Matemu river basin were found to possess the 2nd highest ratio of clear, sale grade diamonds (90:10) to less valuable "coated" coloured diamonds in Sierra Leone; this in in contrast to the Yangweya area, which contains large volumes of stones but only produces colourless at a rate of 50:50 (Hall, 1968).

While the sampled grades and stone quality varied between the floodplain & terrace locations, initial results have demonstrated the continuity of diamond & Au bearing gravels throughout the property. Mapping of samples and ore thickness indicates a potential diamond-gold bearing gravel volume of 5M bcm and minimal sampling has suggested average diamond grades of 0.5 ct/bcm and gold grades of 0.2 g/bcm.

2.0 PROPERTY DESCRIPTION, LOCATION AND ACCESS

The area of interest covers the Matamu River and parallel drainages which flow in a westerly direction to the Sewa River. The company initially approached the local community and was given permission to bulk sample several 2.5 acre, small-scale diamond mining leases. This area is controlled by Alhaji Gbando Momoh Young, the leader of the communities from Diema to Gbado along the Matamu River. Alhaji has signed an agreement with Hardrock Diamonds (SL) Limited of Toronto which gives Hardrock exclusive rights to mine the diamonds on these leases in return for a 10% NSR (Net Smelter Return). The area that Hardrock has the first right of refusal on covered by the leases spans the Matamu River over a 10 km distance and includes both the "river channel" and the "terrace" gravels. The property covers an area of approximately 10 x 5 km or 5,000 ha (12,800 acres). While this is a large area, Hardrock Diamonds (SL) Limited together with its joint venture partner, Minatura (SL) Ltd. is applying for a larger 220 km^2 Exploration License covering the Matamu River and approximately 20Km of the Sewa River as well as a small scale license on the upper end of the Matemu River to legitimize the license/permission given by the local Paramount Chief. A map of this area of interest for alluvial diamond exploration and mine development is shown in Figure 1 below.

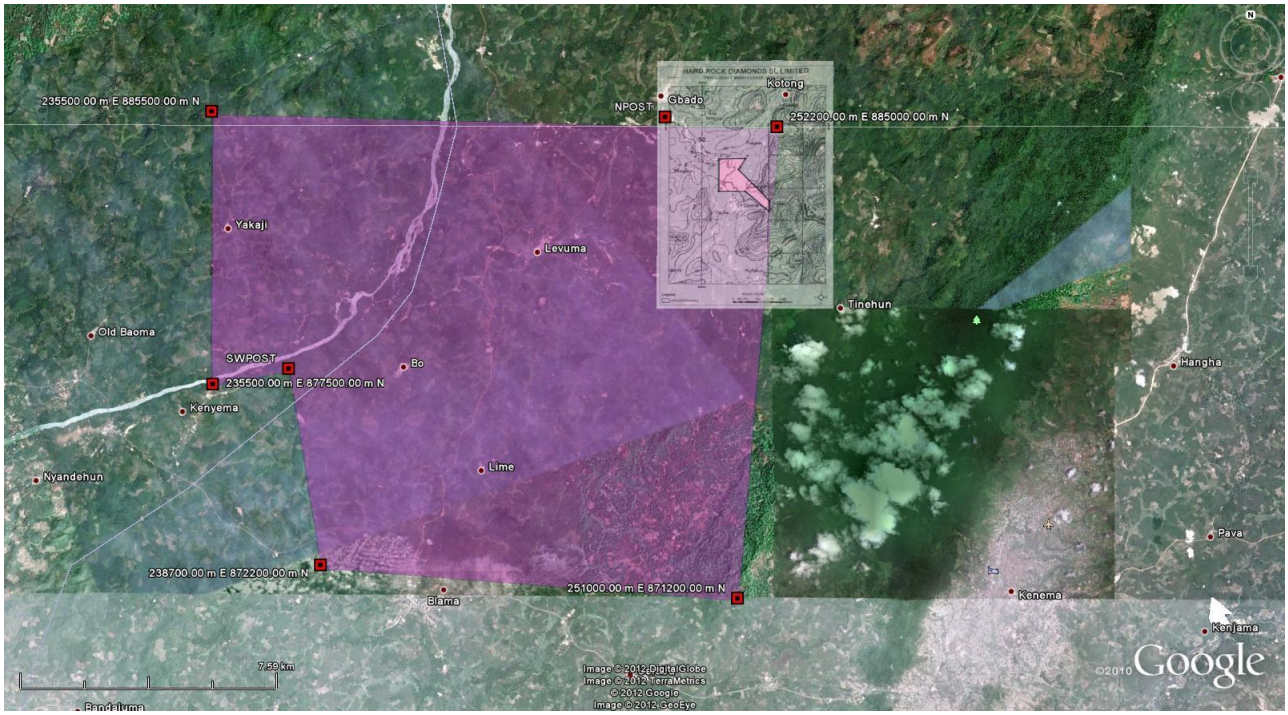

Figure 1: Proposed Area of Diamond Exploration & Mine Development (Google Earth Pro, 2012)

2.1 PROPERTY OWNERSHIP

The current property consists of two, 2.5 acre, small-scale diamond mining leases (SSML) renewable in two-year periods. These licenses were granted by the SL Director of Mines and the local Paramount Chief, Alhaji Gbando Momoh Young. Alhaji has signed an agreement with Hardrock Diamonds (SL) Limited of Toronto which gives Hardrock exclusive rights to mine the diamonds on these leases in return for a 10% NSR.

In addition to these leases, the company was granted by Alhaji, a first right of refusal to acquire a 10 km area along the Matemu River all the way to the Sewa and includes both the "river channel" and the "terrace" gravels. The property covers an area of approximately 10 x 5 km or 5000 ha (12,355 acres). In Sierra Leone, the local chieftancy has considerable power and while the Director of Mines also needs to grant the appropriate licenses, getting the Paramount Chiefs approval and a letter to that effect is required prior to applying for the more formal license from the Director of Mines.

2.2 PROPERTY LOCATION AND ACCESS

The project area is located in the Eastern Province of Sierra Leone, approximately 300 km east and 50 km south of the capital city of Freetown. Figure 2, below, shows the site location relative to the Capitol.

Access is via the paved Sierra Leone highway from Freetown, east to Mile 91 (approx. 150 km) then southeast on the paved, main Kenema Highway for another 130 km toward the town of Kenema. At approximately 20 km before Kenema at the village of Blama, turn north and travel north on a gravel road to Gbomgboma approximately 14 km. At this point head northeast for another 10 km to the village of Diema which lies on the eastern edge of the property.

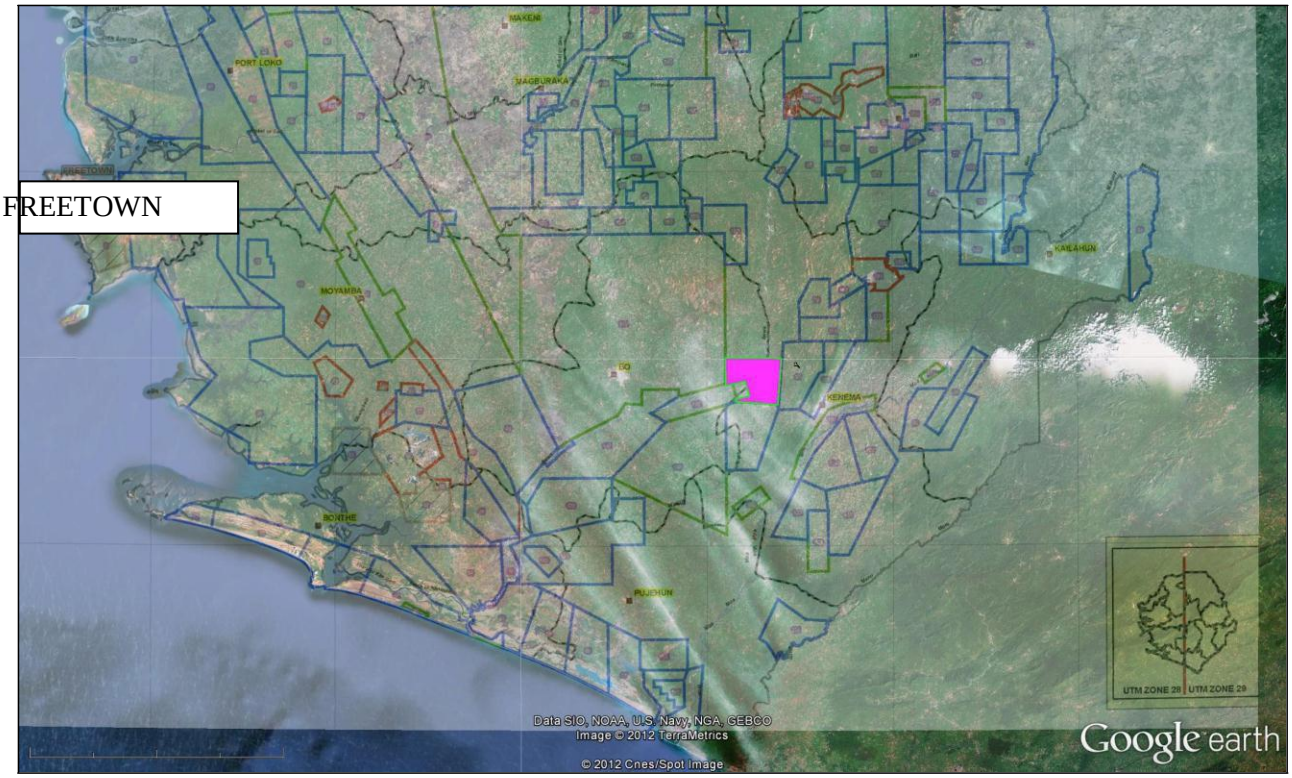

Figure 2: Site Location from Freetown (Google Earth Pro, 2012)

3.0 HISTORY

The alluvial diamond mining fields cover most of the Eastern Province of Sierra Leone and the eastern half of the Southern Province. The area is approximately 7,700 square miles (20,000 km2) and the town of Kenema is roughly the centre of the diamond fields. In January 1930, a Geological Survey field party (British), consisting of the Director N.R. Junner and his Assistant Geologist, J.D. Pollett, was traversing the Kono District. Pollett's traverse took him across the Gbobora stream near the village of Fotingaia and on examining the stream-bed gravels for heavy minerals; he recovered a crystal which was subsequently identified as a diamond. On the following day, Junner recovered another diamond from the same site.
The discovery was reported in the Annual Report of the Geological and Mines Department for the year 1929, but no interest was shown in it until Junner brought it to the attention of Consolidated African Selection in the Gold Coast. A prospecting party from CAS was deployed and arrived in Sierra Leone in March 1931. In the same month, Pollett found two more diamonds in the gravels of the Kenja stream at Pava, 51 miles south of his first discovery which gave initial indications of the widespread nature of the diamond occurrences.

CAS initiated and extensive exploration program and alluvial mining operations started around the village of Yengema after the formation of Sierra Leone Selection Trust (wholly owned by CAS), was formed in 1934.

For 25 years, the Sierra Leone Selection Trust (SLST), a subsidiary of the Consolidated African Selection Trust, had exclusive diamond prospecting rights and gave the government 27.5% of its annual net profit. However, this monopoly, plus numerous finds of gem diamonds at or close to the surface, encouraged so much illicit mining and exportation that, in 1955, the government renegotiated SLST's concession, limiting it to two areas, Yengema, in Kono District, and Tongo, in Kenema District, and compensated the company for surrendering its rights in other areas.

In 1956, the government introduced the Alluvial Diamond Mining Scheme, in which Sierra Leoneans were issued licenses to dig in declared areas totaling more than 23,300 sq km (9,000 sq mi). In addition to a licensing fee, each licensee had to pay land rental to the local chiefdom authorities and could employ up to 20 diggers. A buying organization, the Government Diamond Office (the Government Gold and Diamond Office since 1985), was set up in agreement with the Diamond Corp., in London. Foreigners, who had figured significantly in illicit diamond dealing, were removed from the diamond-mining areas. In 1962, the government ordered the SLST to sell all its diamond through the government office. In 1970, the government acquired a 51% interest in SLST and formed the National Diamond Mining Co. (NDM). In 1991, the government started returning control of diamond and gold export activities back to the private sector, to curtail illicit trading and maximize revenues. New mining policy in 1994 made requirements for licensing miners and exporters more rigid, to address the heavy revenue losses from illegal trading in diamonds and gold.

The civil war started in 1991 and NDM ceased operations in 1992, largely because of rebel activities in the Yengema mining district. Diamond production was reduced significantly from 1992 to 1998 but with the end of the war in 1999, diamond output was up to 600,000 carats in 1999, 2000, and 2001; most production was by artisanal miners.

In July 1999, following over eight years of civil conflict, negotiations between the Government of Sierra Leone and the Revolutionary United Front led to the signing of the Lome Peace Agreement under which the parties agreed to the cessation of hostilities, disarmament of all combatants and the formation of a government of national unity.

Following international concern at the role played by the illicit diamond trade in fuelling conflict in Sierra Leone, the Security Council adopted resolution 1306 on 5 July 2000 imposing a ban on the direct or indirect import of rough diamonds from Sierra Leone not controlled by the Government of Sierra Leone through a Certificate of Origin regime.

The Kimberley Process Certification System was formally adopted in 2003 and guards against conflict diamonds entering the legitimate diamond supply chain. Today, 50 governments have enshrined into their national law the Kimberley Process Certification System.

Koidu Holdings, wholly owned by BSG Resources Limited, operates the Koidu Kimberlite Project in the Kono District, under a 25-year mining lease agreement. The company also has an exploration license for the Tongo Diamond Field. The company also holds two alluvial diamond Exploration Licenses on the Sewa River and another in an area away from the present main drainage systems, the Matemu Exploration License.

The Kono area of Sierra Leone is renowned for the quality of diamonds produced. The 970-carat Star of Sierra Leone was recovered from this area and regular discoveries of 100-carat plus diamonds are made. It is estimated that total diamond production from the Kono area is in excess of 9 million carats. The Tongo dykes have reported grades of up to 300 carats per hundred tons and diamond values of $175 per carat.

Stellar Diamonds is a diamond production and development company that was formed from the merger of Stellar Diamonds Limited and West African Diamonds plc. Stellar owns rights over two high-grade kimberlites in Sierra Leone.

Paragon Diamonds Limited plans to continue production from its established operating Konoma Diamond mine in Sierra Leone. Paragon‟s licenses cover a combined total area of over 162 km2 in Sierra Leone, where an indicated and inferred resource of 119,000 carats of diamonds has been estimated.

With the find of the 620 carat "Sefadu" diamond in 1970, and the 968 carat "Star of Sierra Leone" diamond at the 'Diminco Mine' in 1972, legitimate mining interests have been chomping at the bit to start major exploration of Sierra Leone's primary kimberlite deposits. As the political situation in Sierra Leone has begun to stabilize, mining companies have ramped up exploration projects.

Up until recently, the only large-scale mechanized mining operation in Sierra Leone was the Magna Egoli alluvial mine (aka Zimmi property mine) along the Sewa River between the towns of Bo and Kenema. The mine was developed and run by Rex Mining of Antwerp until 2002, when operations were taken over by Fauvilla Ltd. and Waldman Diamond Resources of Israel.

3.1 KIMBERLITE MINING IN SIERRA LEONE

Mano River Resources Inc. was founded in 1996 by Guy Pas. Mano, is a Sierra Leone corporation that is exploring underground kimberlite mines in the 'Kono "Lion" Kimberlite Dykes' project. Mano River Resources is also evaluating the BHP JV Project, along the Sierra Leone and Liberia boarder, which will be a joint venture with BHP Billiton and the Sierra Leone government.

Geneva-based Steinmetz Diamond Group along with Koidu Holdings has also invested millions into the exploration and building of two Kimberlite diamond mines in Sierra Leone. Although "hard rock" or "open-pit" mining for diamonds buried within Kimberlite pipes is still in its infancy in Sierra Leone, money and resources are now flooding to the area in search of the next big strike.

4.0 GEOLOGY

4.1 Regional Geology

South-east Sierra Leone overlays the westernmost "plateau" range of the West-African craton, and almost all of the region is underlain by Pre-Cambrian basement formations, predominantly granitic. The south-eastern region where the property is located is characterised by low, undulating erosional hills at an average elevation of between 200-400m ASL, increasing to the N-NE. The major geological features in the area are the schist ranges known as the Kambui Hills, which strike 0-25° true. These basement units are believed to be a result of the continental rifting during the late Precambrian period and are heavily metamorphosed (Hall, 1968). The area is typically intruded with Jurassic (200 MA) dolerite dykes and Cretaceous (100 MA) kimberlitic dykes (M. Field, 2012).

The terrain observed during the site visit consisted of weathered alluvium and lateritic soils which comprise the bulk of the tropical overburden in the low lying waterlogged valleys. Some bedrock outcrops were observed in the form of ridges and creek beds comprised primarily of gneiss with small volumes of mica schist. A 25cm thick milky quartz vein was observed in one outcrop striking 195° true in a schistose outcrop.

4.2 LOCAL GEOLOGY

The area where the Hardrock property lies is dominated by the Matamu River valley. P.K. Hall wrote in his report; Geological Survey of Sierra Leone, The Diamond Fields of Sierra Leone, 1968.

"The Matemu is a 7th order stream which is diamond-bearing from its confluence with the Sewa to Diema, where it emerges from the Kambui Hills. Information on the Matemu channel and flats is rather limited. Most sectors of the river have achieved a stable shallow gradient and are forming flood-plain, consequently rock bars are few and the channel gravels are everywhere covered by sandy overburden. Under these conditions, neither diving nor the construction of coffer-dams is a practicable mining method. The channel gravels are in fact continuous with those below the flood-plain and are only likely to be extracted as part of a unified mining operation for the whole deposit. The flood plain or flat is almost continuous along the river, being interrupted by only three breaks-of-slope between Diema and the Sewa River, and it has an average width of 600 feet. Gravel thickness is variable from 3 feet to nil, and the overburden, which consists of about 16 feet of running sand and silt, has so far prevented exploitation. Gravel samples could be obtained in only three sites and the average recovery from them was 0.6 carats per cubic yard. It is unlikely that the licenced miners will ever be able efficiently to tackle the Matemu flats; if the reserves have been correctly estimated, they would appear to be most suitable for exploitation by dredge."

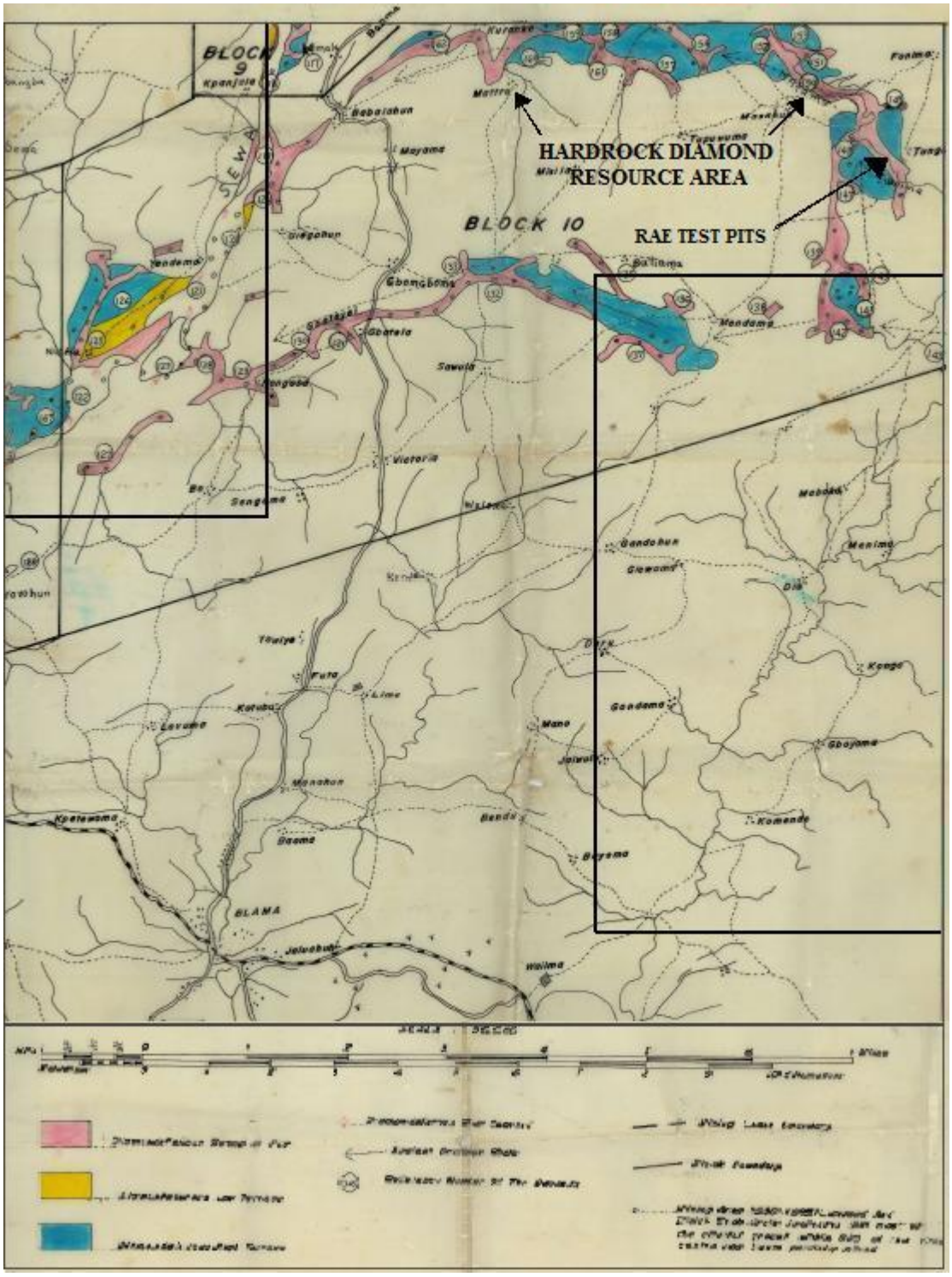

Figure 3 : Showing River and Terrace Gravel outline on the Matemu River (Hall 1968)

4.3 LITHOLOGY OF THE GRAVEL

Typical 7th to 4th order river valleys in Sierra Leone consist of three separate areas of alluvial deposition, namely river gravel, a lower terrace and an upper terrace (Hall, 1968). The relative proportions of which depend on the topography of the particular region, the climatic conditions and the presence or lack of pre-existing alluvium sources or materials. The property in question is located on the boundary between the flat "elevated plain" to the north and the stepped "escarpment" transition down the low coastal flats area. Stream gradients range from 1:1000 m in the hilly upper valley reaches to as low as .2:1000 m in the major 1st order river in the region, the Sewa (Hall, 1968).

RIVER GRAVEL

The diamond and gold bearing gravel in the river deposit is found directly above bedrock. Overburden of up to 5 metres thick consists of uniform, sandy, lateritic material. Layers of clay deposition may be common. The gravel unit varies in thickness from 30cm to over 1.0m. It consists of well-rounded material indicating considerable transport or reworking of larger, ancient channels.

Gold and diamond bearing Matemu River gravel – overlying weathered schist bedrock

LOWER TERRACE MATERIAL

The lower terrace deposits are considerably shallower than the river deposits. Typically only 1m or 2m of well sorted sandy, iron rich laterite is present before reaching bedrock. Gravel layers, may or may not be present. Well sorted and well rounded, uniform quartz material was present in the terrace pitting done on the property.

UPPER TERRACE MATERIAL

The upper terrace gravels are typically located 3-10 m above stream or river channel elevations. While less common than lower terrace gravels or river gravels, these deposits typically possess very thick gravel layers relative to the former. Sorted gravel layers of 3 meters, with an equivalent layer of lateritic overburden, are not uncommon, although the reported grades of this material are consistently lower than channel or low terrace gravels. The origin of these terraces is believed to be alluvial-fluvial, resulting from the large retreating delta which was formed as uplifting occurred on the WA craton (Hall, 1968).

DIAMOND SOURCES

It is now generally accepted that the principle source of the Sierra Leone diamond-bearing gravels are Cretaceous-era kimberlite dykes, remnants from ancient, ultramafic intrusive pipes which arose during the heavy metamorphism of this era. The wide areal distribution of the diamonds in Sierra Leone seems to support this conclusion, as opposed to a single rich point source (Hall, 1968). Known deposits of these types can be found 45kms to the north-northeast of the city of Kenema in the Koidu and Tongo areas. The narrow, erratic and discontinuous nature of the diamond bearing kimberlite dykes indicates the main body and structure of the original pipe or pipe system, has eroded completely.

The kimberlite occurs principally in the form of narrow dykes which intrude the granite; all have a near vertical dip and strike between 60-70 degrees. Individual dykes are relatively short, less than 300 m in length but are numerous and are disposed in a series of parallel zones. In the Koidu area, average grades when mining the dykes, is 0.46 carats per m3 over a mining width of 1.2 m. At Tongo, there are four small pipes which are related to the dykes at Koidu. Pipes 1 and 2 represent approximately 2800m^3 at outcrop with pipes 3 and 4 being much smaller (M. Field, 2012). The alluvial deposits formed from the erosion of these diamond bearing kimberlites have been the most important source of diamonds in Sierra Leone. Six principle types of alluvial or secondary diamond deposits have been identified in Sierra Leone and are as follow:

- River Channel gravels
- Recent Flat or Flood Plain gravels
- Low Terrace gravels
- High Terrace deposits (gravel in place, disturbed terrace gravel and gravel residue)
- Swamp or Tributary gravels along erosional plains
- Penetration deposits in fast moving river systems (“honey pots”)

5.0 FIELDWORK TO DATE

5.1 KENEMA 2010

Test pitting was first done on the property in December, 2010. The site visit involved a general survey of the area, walking along the Matemu River, generally mapping gravels from old workings and the extent of the river valley; sampling old workings and digging several pits and hand processing the gravel to recover diamonds.

The rainy season had just ended so the groundwater table was still high within the gravels. As a result, initial pitting and sampling was done on an area at the break in slope, in laterite terrace gravel. Pits SL-01, 04 and 05 were dug in the terrace material and pits SL-02, 03 and 06 were completed at the break in slope, on the outside edge of the river gravel. The results indicated good values from pits 01, 03 & 05, while pits 02, 04 & 06 were found to be barren. Table 2, below, contains the results from the individual test pits.

Five diamonds recovered in the 2010 Field Program totalling 8.2 carats

A total of 5.5 bcm^3 were processed and 5 diamonds, totalling 8.21 carats were recovered from the gravel indicating a grade of 1.5 carats per cubic meter. A map indicating the location of the Hardrock property, and the 2012 pits is shown below, in Figure 4.

Processing Terrace Gravel in the 2010 Field Program - Hand jigging for diamonds

5.2 VALUATION OF DIAMONDS, 2010 RESULTS

The diamonds were sent to Canada for valuation. Each stone was graded and the results of each stone are shown below in Table 3.

The valuation of the "mine run" sample of diamonds recovered, dated February 2011, indicated a rough value of $134.74 US per carat. After cutting, an average value of $1,184 US per carat was realized.

Figure 4: 2012 Pit Locations and HR Property (Google Earth Pro, 2012)

Pit	Total wt	Volume	Grade	Avg Grade
SL-01	4.03	1.5	2.7	
SL-02	0	1	0	
Sl-03	2.91	1	2.9	
SL-04	0	1	0	
SL-05	1.27	0.5	2.5	
SL-06	0	0.5	0	
Total	8.21	5.5	Ave. Grade ct/m^3	1.5

Table 2: Kenema Diamond Project 2010 Pit Results

Recovered Stones			Rough Stone		Cut Stone		Cut Stone Value
1	SL-01	2.16	120	259.2	0.43	500	1162.79
2	SL-01	1.87	200	374	0.7	1500	2142.86
3	SL-03	1.15	50	57.5	0.34	170	500
4	SL-03	1.76	200	352	0.7	1130	1614.29
5	SL-05	1.27	50	63.5	0.2	100	500
Total		8.21	1106.2		2.37	3400	$5919.93
Ave Rough $/ct							$134.74
Ave Cut $/ct							$1,183.99

Table 3: Valuation of 2010 Recovered Diamonds

5.3 KENEMA DIAMOND PROJECT 2012 PIT RESULTS

In February, 2012 a field crew was assembled to begin bulk sampling of the terraces and river gravel. This program was supervised by the author and an additional geologist, utilizing a similar procedure to the 2010 program previously mentioned. A total of 12 diamonds were recovered from processing 39.5bcm of gravels for an average grade of 0.38ct/bcm.

Figure 6: Twelve diamonds recovered from the 2012 Pitting program totalling 15 carats

Gold was recovered from a small sluice box installed to handle the run-off from the diamond jig on Pits 136 and 137. The results of this program are displayed in Table 4. As many as 45 workers per day were employed to excavate the pits. In addition to salary, the workers were given breakfast and lunch. Clean drinking water was provided at all times for the workers. A map showing the locations of these pits in detail is shown below, in Figure 7.

Pit #137 being dug on the Kenema Diamond Project in 2012

Figure 5: Close up of 2012 Pit Results (Google Earth Pro, 2012)

ID	Total	Volume	Diamond	Recovered Grade	Gold
136	7.5	24	0.31	12.7	0.53
137	6.64	8	0.83	1.71	0.21
139	0.86	8.75	0.1		
Total	15.02	41.6		14.41	
Ave. Grade ct/m^3			0.38	0.45	

Table 4: Kenema 2012 Successful Pit Results

Pitting was done using local labour with the overburden first removed, then the diamond bearing gravel layer at the bedrock interface was removed and processed using local mechanical jigs. The material was fed by hand and the diamonds were trapped in the basket of the jig.

Using a mechanical jig to process the gold and diamond bearing gravel – gold recovered from sluice box

Diamonds and gold which were smaller than the jig basket screen (3mm) would fall into the hutch and then the sluice box. Diamonds have a SG of 3.8 while gold is 19, the fine gold is more easily recovered in a sluice box than the very small diamonds are so it is possible that the smaller diamonds were lost in this process. The same is true for very fine gold as sluice boxes are notorious for not recovering -100 mesh (150 micron) gold particles and in the future, a centrifugal bowl will be used for processing the gravel for gold. The small diamonds will be recovered in a multi stage jigging or DMS plant.

5.4 VALUATION OF DIAMONDS, 2012 RESULTS

The rough diamonds were appraised by the GGDO (Government Gold and Diamond Office) in Sierra Leone and by R.J Boyd, an independent diamond expert in Toronto, Ontario. The processed stones were appraised by Embee Diamond Technology Inc., Prince Albert, Saskachewan and Gem Scope Appraisal Laboratories, Toronto, Ontario. The processed stones were then appraised by Gemscope for market retail values. Further sampling must be completed and a larger number of diamonds must be studied to get a more accurate assessment of the value of the deposit. The results of the diamond valuation are shown below, in Table 5.

Recovered Stones	Rough		Cut Stones		Wholesale		
ID	Ave.	Ave.Stone	Size Cut	Per Ct	Per Stone		
1360312003	136	0.43	365	157			
1360312005	136	0.82	340	278			
1360312006	136	3.66	415	1520			
1370412002	137	0.8	340	272			
1370412003	137	1.07	480	515			
1370412004	137	0.63	480	300			
1360312002	136	0.96	465	445	0.254	$690	$175
1360312004	136	1.67	640	1070	0.565	$2,300	$1,300
1370412001	137	1.15	490	565	0.445	$2,500	$1,112
1370412005	137	1.22	480	585	0.401	$2,500	$1,002
1370412006	137	1.77	480	850	0.713	$3,100	$2,210
1390312001	139	0.86	390	335	0.333	$1,700	$566
Total	15.02		5365	6892	2.711	$6,365.00	
Average			$447.00	$574.00	0.45	$2,130.00	$1,060.00
Ave Rough $/ct							$447.00
Ave Cut $/ct							$2,130.00

Table 5: 2012 Diamond Valuation Results

6.0 REVENUES

Revenue from the sale of gold is determined by the world market price on the day of sale. Rough diamond values are also determined by market prices. The diamond values however are dependent on several factors, namely, carat weight, crystal shape, colour and clarity of the stones.

6.1 ROUGH DIAMONDS

Rough diamonds recovered must be sorted for size or carat weight. They are then assessed and appraised according to colour and shape by the Government Diamond Office in Freetown. Colourless diamonds are the most valuable. The shape of the diamond crystal determines its cutting potential. Diamonds are cubic and the ideal crystal is an octahedron, or a four sided double pyramid. Good octahedron crystals are classified as "Sawable" and bring the highest dollar value. Mis-shapen or distorted crystals that still can yield a good cut are classified as "Makeable". Thin, flat or platy crystals are classified "Maccle" and bring the lowest value. "Special Stones" or those over 10.8 carats in weight, will bring a higher dollar value per carat, regardless of its colour, clarity or shape. On the other hand, "Melee" or stones weighing less than 0.64 carats, bring the lowest dollar values.

Duties and taxes are assigned and the diamonds are sealed in parcels. Once the fees are paid, the parcel is released with the accompanying government documentation for export. When the parcel reaches its final country of destination, the Kimberley Process certification is registered there.

6.2 PROCESSED DIAMONDS

"Processed diamond" is the term used to describe a faceted or cut diamond. The most common cut is the round brilliant. Not only does it maximize weight recovered in the process, it produces the optimal brilliance or intensity of the internal and external reflections of white light from the polished surface. This in turn has a direct effect on the value of the processed diamond. The clarity of a diamond is the absence or presence of internal inclusions or blemishes. The visibility of the inclusions determines value. Inclusions that are visible to the naked eye greatly reduce the value of a diamond as opposed to those inclusions only visible under magnification.

The nature of inclusions can affect the cutting process. A good diamond cutter will consider all these factors in determining final cut. The characteristics of the recovered diamonds in Kenema make for very suitable cuts, due to a lack of surface coating, high clarity and low occurrence of inclusions within the stones. The details of the 2012 cutting results are shown below in Table 6.

Stone	Rough	Shape	Cut Ct	Colour	Clarity	Finished	Embee	Ref. #	Weight
1370412005	1.224	RB		VG	H	VS1	0.401	CAT20120501-13005-4	
1390312001	0.862	RB		VG	I	VS2	0.333	CAT20120501-13005-6	
1370412001	1.14	RB		EX	H	VS1	0.445	CAT20120501-13005-3	
1360312004	1.675	SS80		EX	E	I1	0.565	CAT20120501-13005-2	
1360312002	0.963	RB		VG	H	I1	0.254	CAT20120501-13005-5	
1370412006	1.768	RB		EX	E	I1	0.713	CAT20120501-13005-1	

Table 6: Results of 2012 Diamond Quality

6.3 KIMBERLEY PROCESS CERTIFICATION

The Kimberley Process started when South African diamond-producing states met in Kimberley, South Africa, in May 2000 to discuss ways to stop the trade in "conflict diamonds' and ensure that diamond purchases were not financing violence by rebel movements and their allies seeking to undermine legitimate governments

In December 2000, the United Nations General Assembly adopted a landmark resolution supporting the creation of an international certification scheme for rough diamonds. By November

2002, negotiations between governments, the international diamond industry and civil society organisations resulted in the creation of the Kimberley Process Certification Scheme (KPCS) . The KPCS document sets out the requirements for controlling rough diamond production and trade. The KPCS entered into force in 2003, when participating countries started to implement its rules.

The Kimberley Process (KP) is open to all countries that are willing and able to implement its requirements. As of January 2012, the KP has 50 participants, representing 76 countries, with the European Union and its Member States counting as a single participant. KP members account for approximately 99.8% of the global production of rough diamonds. In addition, the World Diamond Council, representing the international diamond industry, and civil society organisations such as Partnership-Africa Canada, participate in the KP and have played a major role since its onset.

7.0 POTENTIAL RESOURCES

The gravel varied from silty clay rich laterite gravel in the terrace pits to sandier, sorted typical river gravels. Gravels averaged 1 meter thick with overburden varying between 2.5 meters in pit SL-03 to 1 meter on most of the terrace pits.

The map in Figure 7 above was prepared by the Geological Survey in conjunction with the P.K. Hall report in 1968 but it is unlikely that much has changed since then as no commercial scale mining has taken place in the area. The area denoted as river gravels (pink) is calculated to cover an area of 2,190,000 m2 and the terrace area (blue) is calculated at 2,800,000 m2. This indicates that there is a potential resource of 5 million m3 assuming an average diamond bearing gravel thickness of 1 meter in these zones. Using a grade of only 0.5 ct/m3, this could represent a resource of 2.5 million carats with an accompanying 30,000 ounces of gold.

7.1 RECOMMENDED FUTURE EXPLORATION PROGRAM

It is important to further outline the alluvial targets of the river gravel and the terrace gravel. Pitting and sampling is an ongoing process to assure a constant feed of gravel to the plant operation. A survey should be done to determine accurate elevations and contours. Diamond distribution and physical characteristics should be closely mapped. This may reveal patterns that indicate kimberlite sources. A study of the topographical nature of the area may indicate an anomalous geological feature such as a kimberlite pipe or dyke. A heavy mineral survey should be undertaken to look for kimberlite indicators such as pyrope or magnesian ilmenite. A surface bedrock mapping program should be undertaken to construct a contour and geological map of the area. It is recommended a 1:5,000 scale be used. A small centrifugal bowl should be implemented to get a more accurate assessment of the gold grades.

An exploratory pitting program should be instituted in all the valleys on the eastern side of the Sewa within the license area, in order to identify virgin and bearing gravel regions. Due to the high rainfall and water surface these valleys, which intersect the Sewa river, are very amenable to dredge mining, versus other regions which cinch and plummet through terrain. In addition sampling techniques need to be utilized in order to property recover both gold and diamonds, versus having diamond recovery as a primary target.

A larger exploration license covering the entire area should be applied for as well as a small scale mining license covering the area that has been pitted. I have been told that applications are pending on these areas but I have not been able to verify the status of the licenses or the extent of their coverage.

Small scale mining/bulk sampling should be undertaken immediately on the area that has been pitted and a regional program undertaken on the large area. A cash flow can be quickly realized from the area which could help fund a larger exploration program for both alluvial and hard rock diamond resources

8.0 CONCLUSIONS

The pitting and sampling completed indicates a high grade diamond deposit exists on the Matemu River drainage. An alluvial field program is required to outline target mining areas, confirm grades and determine ore reserves. A feasible diamond and gold recovery system plant design should be decided on and implemented.

On-site diamond evaluation is recommended to consider marketing the rough material, processed material or a combination of both.

Field exploration for possible kimberlite sources should be conducted in conjunction with the alluvial sampling program.

An official 100 ha mining license must be permitted with the Mines Department of Sierra Leone. The 100 ha mining area will cost $600 per ha but allows the title holder to start mining in the area where the pitting was completed. This permit application will take a couple of weeks and an environmental license is also required and is expected to take only a few weeks to acquire at the cost of $15,000.

The recently acquired exploration license covers the downstream areas of the samples property, in addition to a 7 km stretch of the Sewa River, where the channel curves left and changes from the Sewa gorge into what is known as the Sewa Valley. This area has been identified as possessing a high potential for dredge mining techniques and was the least intensively mined river section, due to the deep water and difficulty of coffer dam construction. This area also contains the drainage of the Matemu River into the Sewa, which would be the confluence point of alluvial transport for diamond and gold bearing material.

APPENDIX A: BIBLIOGRAPHY

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