

**KEY FEATURES**

Independent Qualified Person  
Non-Independent QP  
Effective Date  
Prepared for  
Purpose  
Company Year End:  
Personal Inspection

General Location

Licence Status

BEE Compliance

Climate  
Infrastructure/Accessibility

Deposit Types

Dr. Tania R Marshall (Pr. Sci. Nat) of Explorations Unlimited, South Africa  
Mr Glenn A Norton (Pr. Sci. Nat.) of Rockwell Resources Inc  
30 November 2010  
Rockwell Diamonds Inc  
Annual Information Form and Mineral Resource/Reserve Statement Update  
Ends February 28

Site visits by independent QP on 30August- 2 Sept,2010. All operating areas, infrastructure and plants inspected.

Located in the Prieska district of the Northern Cape Province of South Africa approximately 110km southwest of Kimberley. The operations are located on Saxendrift 20 and Annex Saxendrift 21 (5,142.52ha) as well as Kwartelspan 25 and Kransfontein 19 (903.65)

The Saxendrift mine right (28/2008MR) is valid until 2018. A further prospecting right (in the name of HC van Wyk) is valid until 2010. The prospecting right renewal for Saxendrift was accepted by DME in Sept 2008. The prospecting right renewal for the Kwartelspan section was accepted by DME in April 2008.

African Vanguard Resources owns 26% of the Saxendrift project. An accepted Social & Labour Plan is in place, covering all of the Rockwell operations.

Saxendrift project is located in an arid to semi-arid, Karoo environment.

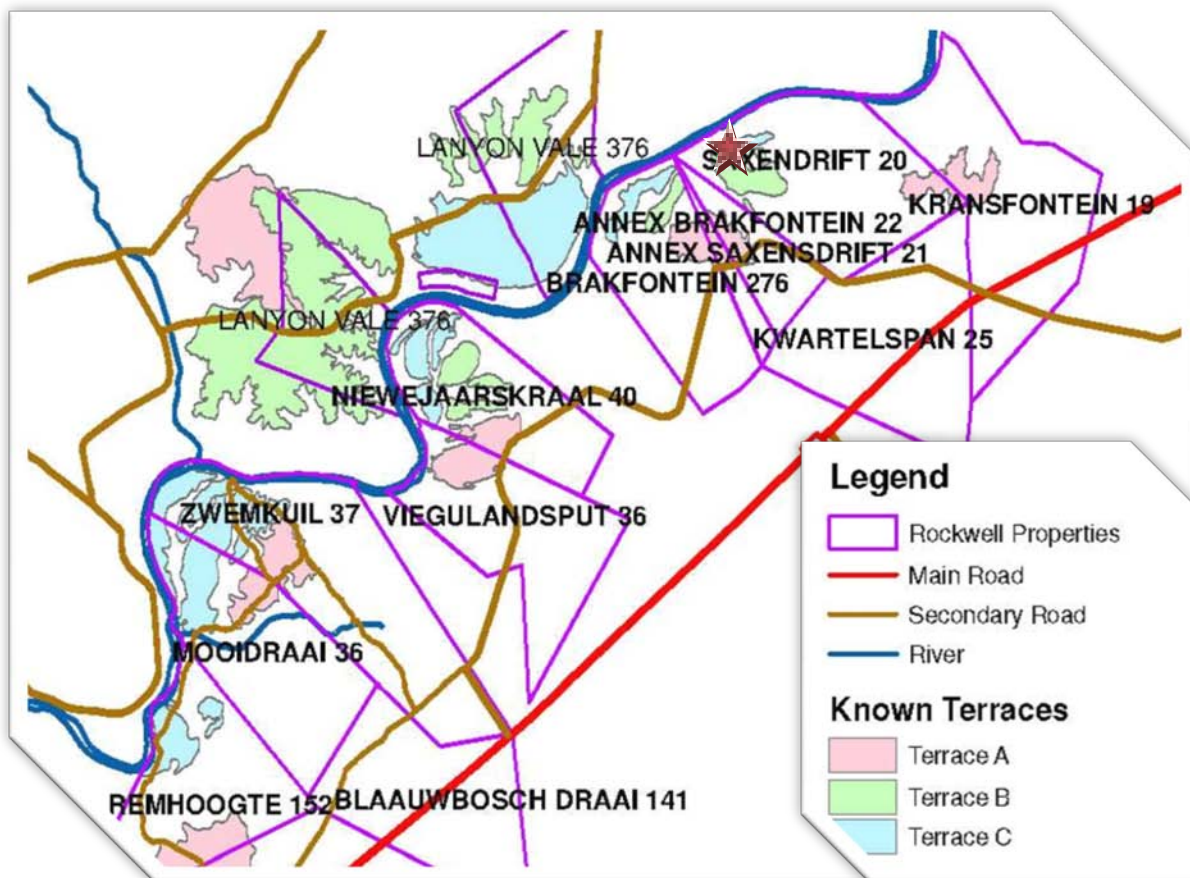
Electrical power and water resources have been accounted for. Mining personal readily available and regularly rotated. Tailings and waste disposal sites have been identified and are currently in use. Operations accessed by good network of all-weather gravel roads.

Alluvial diamond deposits preserved in fluvial-alluvial palaeochannel and deflation gravels (Rooikoppie) in Orange River terraces.

**HISTORY**

During 1925/26 numerous artisanal diggers recovered over 98,000cts from Saxendrift and Annex Saxes Drift ("Higgs Hope" diggings). From the 1980's a number of terraces on Saxendrift were evaluated by a number of companies including Moonstone Diamonds, Northern Cape Diamond Mining, Gem Diamonds and

TransHex Operations (Pty) Ltd (THO). Between commissioning (2000/2001) and the end of 2005, the Saxendrift Mine produced a total of 76,803cts. Only minor production occurred thereafter until, in January 2007, Saxendrift Mine was placed on care and maintenance.



A single (high-level) terrace was identified by TransHex to exist on the Kwartelspan prospect area. It was thought that more may be found as the exploration programme was expanded further. Some 481 RC drillholes (2,940m) was completed on a 50x100m grid on the A terrace. A total of 13 trenches were excavated during the 2004 programme, only one of which was excavated into the basal gravels – the others sampled Rooikoppie gravels. Only a single stone of 0.27ct was recovered from the 924m<sup>3</sup> of basal fluvial-alluvial gravels for a grade of 0.03ct/100m<sup>3</sup>. Although this result was in no way representative of the gravels THO, nonetheless, decided to limit sampling to the Rooikoppie gravels. A total of 28,139m<sup>3</sup> was processed from these trenches to recover 432.42cts (229 stones) for a sample grade of 1.54ct/100m<sup>3</sup>. These diamonds were sold in 2004/2005 for an average of USD1,656/ct.

## GEOLOGICAL SETTING

The present Orange River between Douglas and Prieska, generally referred to as the Middle Orange River (MOR) displays a meandering channel morphology, best developed in areas underlain by the Dwyka Group. Palaeochannel depositional packages of the MOR are preserved at different elevations above the present Orange River bed, namely:

Lower (+20m or C) Terrace:	0-30m
Intermediate (or B) Terrace:	30-60m
Upper (+70m or A) Terrace:	60-90m
High Terrace:	+ 110m

Diamondiferous Rooikoppie gravel scree slopes higher than the oldest preserved fluvial deposits suggest that even older and higher elevation palaeo-deposits were present and have been removed completely by erosion.

The ages of these terraces young with decreasing elevation and vary from Pleistocene-Pliocene for the lower terraces to Plio-Miocene for the upper terraces. Conversely, the probability of preservation decreases with increasing age and elevation.

The most consistent high level palaeo deposit, and the one on which the geological model for this area was developed, occurs between 60-90m above river level. These deposits represent palaeomeanders exhibiting a wavelength of approximately 13km and an amplitude of about 6km, very similar to that of the modern-river. These gravel deposits occur at about 1000 masl. and generally slope slightly to the south, away from the Orange River. Both the calcrete cap and the bedrock exhibit this same slope. The meanders are generally covered entirely by either calcrete or wind-blown sand, or both, but careful mapping have defined points of entry and emergence of palaeochannel deposits from underneath the upper calcrete cap, along the valley scarps.

Frequency of occurrence suggests that the known deposits represent the complete palaeochannel profile for this section of the river. The correspondence in palaeo- and modern river morphology, for this cycle, indicates that this sector of the Orange River system remained in relative equilibrium since, probably, the Miocene. All the preserved meanders at this elevation lie to the south of the present river channel suggesting that meander cut-off occurred mostly along the northern loops of the meanders. This may be an indication of regional slope to the south or slow, continuous uplift to the north.

The primary sources of diamonds trapped in the palaeogravels of the Orange River are kimberlites and intermediate secondary sources like eluvial, colluvial and fluvial deposits in the catchment regions of the Vaal and Orange rivers. These diamonds were deposited along the course of the river in

favourable trap sites either in bedrock-traps or in point-bar complexes and within-channel bars, particularly in meanders, scour pools and areas of divergent flow.

In the range of deposits on Wouterspan and within the context of the model presented diamonds were first deposited in gravel units at an elevation of + 110m above the present river. As a result of consecutive cycles of continental uplift and erosion, the oldest diamondiferous gravels deposited by the Orange River have been recycled and re-deposited repeatedly through time down to the lowest level gravels as preserved today. Lower elevation terraces (less than about 30 m above present river bed) of the Orange River are typified by up to 30% sand matrix with a high proportion of zeolite-rich sand lenses and a high proportion of red Drakensberg basalt clasts. These gravels normally exhibit intermediate to low diamond grades. They are typically cobble-pebble gravels with occasional boulders. Clast composition is dominated by BIF +60%, andesite, dolerite, shale, quartzite, riebeckite and others with a low percentage of agate and amygdaloids. Clast-rounding is moderate, packing is moderate to poor which impacts negatively on diamond entrapment potential. Average grades of 0.5-1.2ct/m<sup>3</sup> or 0.23-0.54cpht are known with the occurrence of occasional large stones.

The lowest terrace does not appear to be as calcreted as the upper two terraces and mining is, therefore, easier. Lower terrace deposits are generally covered by 1-4 m of sand whereas the upper terrace deposits are capped by a hard calcrete layer some 2 - 3 m thick which protected the gravel deposits from erosion and prevented exploitation in the past.

The Saxendrift deposit comprises three known terraces – A, B, and C. The bedrock is well exposed in the workings and shale and tillite of the Karoo age Dwyka Group, are common. The bedrock displays an irregular erosional surface with gully and pothole features creating high diamond trapping potential.

Thin (<2m), extensive Rooikoppie blanket the property. The fluvial-alluvial sequence is comprised of a basal gravel overlain by a generally upward-fining sequence with hanging gravel lenses known as "Middlings". The sequence is covered by a (non-silcreted) calcrete cap, generally less than 5m thick. Post-depositional weathering of this calcrete has formed solution hollows called "makondos" which are often filled with diamond-enriched Rooikoppie gravels.

## MINERALISATION

The palaeochannel gravels are mineralised by diamonds derived from the weathering and erosion of kimberlites present in the headwaters of the palaeo-Vaal River system. Colluvial and eluvial post-depositional modification of these fluvial-alluvial deposits resulted in the formation of the Rooikoppie gravels.

Numerous studies have shown that the majority of the alluvial diamonds in gravel deposits along the Vaal River are derived from two distinct gravel horizons. These comprise an upper deflation deposit (Rooikoppie) and an underlying (Primary fluvial-alluvial) gravel unit. The Rooikoppie is not an alluvial deposit, but rather a lag-derived or deflation deposit. Subsequent to its deposition, the terrace gravel has been calcreted through the evaporation and subsequent re-deposition of carbonate-rich meteoric water during relatively dry periods. This has led to the replacement of both the matrix material and all but the most siliceous clasts in the upper parts of the gravel by calcrete. Spaces between the clasts of this gravel were later filled with wind-blown iron-stained sand.



The primary palaeo-fluvial succession comprises various proportions of gravel, sand and silt (typically with a basal gravel unit of up to 2m in thickness and an overlying "middlings" unit of up to 6m). Cross-bedded, fine-grained to granular sand layers and lenses reflect lateral stream migration and point bar build-out. Stacked, upward fining sand to pebbly sand to gravel cycles generally represent channel fill deposition. Very fine-grained silty sands reflect upper meander deposits that formed prior to meander cut-off (ox-bow lake phase). Massive, clast-supported gravel beds are generally chaotic without any visible gradation or layering. Most of the primary sedimentary features have been destroyed by the subsequent calcretisation. The poorly sorted gravels vary from pebble to cobble gravels, generally with a fair percentage of boulders (rarely + 1m diameter). Interbedded sandy or granule beds and lenses occur frequently in more sandy, matrix supported gravel successions.

Under arid conditions low stream flow typically results in wide, shallow channels. The valleys displays moderate sinuosity and braiding may be frequent. Braided streams are highly transient environments. The braided channels are unstable through time and gravel bars are formed and destroyed continuously. Shifting bars and channels cause wide variations in local flow conditions resulting in varied depositional assemblages. Common features in braided stream deposits include irregular bed thicknesses, restricted lateral and vertical variations within the sediments, and abundant evidence of erosion and re-deposition.

In alluvial deposits diamonds occur in clusters formed by natural traps such as gullies, potholes and gravel bars. Diamonds constitute discrete units of varying size (weight) and usual parameters of grade measurements are not entirely applicable. Individual diamonds are not evenly or uniformly distributed throughout an alluvial deposit; neither are they randomly distributed. Rather, their distribution has been described as a random distribution of clusters of points. Consequently, in order to be effective and reliable, individual sample sizes may need to be relatively large. Due to the nature of the distribution of diamonds throughout a deposit the grade estimated from any individual sample can vary widely. A single sample provides only a limited amount of information and the conclusions drawn are, correspondingly, uncertain.

## EXPLORATION

Due to the nature of mineralization of alluvial diamond deposits with low grades and large stone sizes, it is not possible to assay for diamond. To date no other minerals or elements that

can be assayed are known to show positive (or negative) relationships with diamonds in alluvial deposits. Consequently, neither borehole nor pit samples are collected for assay. Rather, large bulk-samples are typically processed to determine in-situ grades and diamond qualities.

## DRILLING

The existing THO drill database was used to estimate the gravel volumes present on Saxendrift. After the data had been verified volume estimation was completed using two software programmes. Based on Rockwell's standard criteria, the Indicated and Inferred resource volumes present on Saxendrift (Terraces A and B) were estimated and figures represent volumes available in the ground, fully depleted of material removed by the trial mining programme.

## SAMPLING

During May through to October 2008, some 1,520.17ct of diamonds were sold (by Rockwell) from Saxendrift for an average value of USD2,154.02/ct. These diamonds were recovered from (primarily) in-situ gravels from Terrace A and also from (minor) bantams. However, in February 2009 a USD695/ct value was recovered from the sale of only 549.37cts. This is an indication of the state of the current diamond market. In the quarter ended November 30, 2008, market demand continued to decrease as retailers continued to resist committing their limited capital towards polished diamond inventory. This situation was caused by world financial crisis and banks not lending money to retailers to purchase new stock until their debt had been reduced.

During 2008 Rockwell has been processing material from these areas on Terrace A to verify grade distribution values. Since Rockwell has been using different mining and processing methods to TransHex, diamond liberation and, consequently, grade recovery has increased significantly to 1.01ct/100m<sup>3</sup> for the identified Indicated resources

## PRE-FEASIBILITY STUDY

During 2009/2010 trial-mining was initiated on Saxendrift, as part of a Pre-Feasibility study to determine what portion of the gravel resource could be converted to a reserve. Capital costs of plant and equipment was determined through formal quotations acquired from suppliers. Operational parameters and operating costs were determined both during the bulk-sampling and, subsequent, trial-mining phases on Saxendrift.

The preferred method of mining the alluvial gravels on Saxendrift mine is by means of strip-mining in a shallow, opencast operation. The diamondiferous alluvial gravels are relatively thin, unconsolidated to semi-consolidated, tabular bodies with generally less than 20m overburden and, accordingly, lend themselves to opencast mining methods. The upper 2-3m of the fluvial-alluvial sequence is calcreted to varying degrees – usually to laminar or hardpan levels. As a result, prior to excavation, the sample block needs to be blasted. This has the effect of breaking up the hard calcrete carapace without damaging diamonds. The broken calcrete material is then stripped off using hydraulic excavators. In various areas of the property varying depths of calcretisation has meant that some of the upper gravel layers are also highly cemented. If this material is simply excavated and then loaded, large amounts of calcreted gravel chunks are sent to the plant. Due to the nature of these chunks, unknown numbers of diamonds would be locked up and lost to the

recovery system. However, in order to mitigate against this problem, prior to excavation, the gravels are ripped by a bulldozer which effectively liberates the gravels (and the diamonds) from the calcrete matrix. The disaggregated material is then loaded by excavator, onto articulated dump trucks (ADT's) and transported to the screening plant where some 23% of the gravel is removed (mostly sand).

The material is then processed through four 18' rotary pan plants. With an expected annual treatment of 1, 800,000m<sup>3</sup> some 9,000ct of diamonds are expected to be recovered through a bank of ten FLOWSORT machines and an electronic

grease table, as well as final hand-sort in a glove-box under secure conditions.

#### MINERAL RESOURCE/RESERVE ESTIMATES

The mineral resources at 30 November 2010 were estimated by Rockwell's Manager, Resources, G. Norton, (Pr. Sci. Nat.), a qualified person who is not independent of the Company and reviewed by Dr. T.R. Marshall, (Pr. Sci. Nat.), a qualified person who is independent of the Company and is responsible for the estimate.

MINING AREA	RESOURCE CLASSIFICATION	VOLUME (m <sup>3</sup> )	GRADE* (ct/100m <sup>3</sup> )	Value# (USD/ct)
Terrace A	Indicated	4,859,900	0.50	2,029
Terrace B	Indicated	1,774,600	1.15	
<b>Total/Average Saxendrift Mine Indicated</b>		<b>6,634,500</b>	<b>0.66</b>	<b>2,029</b>
Terrace A	Inferred	5,400,000	0.50	2,029
Terrace B	Inferred	86,000	0.68	
Kwartelspan prospect	Inferred	500,000	1.00	
<b>Total/Average Saxendrift Inferred</b>		<b>5,986,000</b>	<b>0.56</b>	<b>2,029</b>

Comparing the resource figures with the previous (2009) technical report it is important to note:

- For Terrace A, there has been a significant increase in both the indicated and inferred resource gravel volumes. This has been the result in a change of mining method – from mining only the basal gravels, to including the entire gravel sequence. There has been a corresponding drop in the average recovered grade, for the same reason.
- There has been no change in either the grade or volume for the terrace B gravels. There has been no further sampling or trial-mining of these deposits and preliminary concerns with the silcrete capping layer may limit the potential to mine the entire sequence. Until further metallurgical testing has taken place on these gravels, no change will be made to the expected gravel volumes and grades.
- Kwartelspan volumes have been re-estimated according to Rockwell's standard resource criteria, resulting in a decrease over the volume previously reported.
- The accepted diamond value is R2,029/ct, which is the sales figure received for the sale of 5,560.64ct from Saxendrift A terrace gravels during March-November 2010.

On the basis of the trial-mining on terrace A and, subsequent, pre-feasibility study, the following probable reserves were estimated for the Saxendrift Mine, all located on terrace A.

VOLUME (m <sup>3</sup> )	GRADE* (ct/100m <sup>3</sup> )	CARATS	Value (USD/ct)
4,859,900	0.50	24,299	2,029

\* At 2mm bottom cut-off

The life-of-mine, based on these Probable Reserves, at the proposed rate of mining of 150,000m<sup>3</sup>/month, is estimated at 2.7 years. If the indicated resources are included, with the same parameters as the reserves, then the LoM could be expected to be extended by an additional 0.98 years.

The key parameters and their results are tabulated below:

Volume of gravel	Cubic Metres
Probable Reserves only	4,859,900
Average Grade	0.5ct/100m <sup>3</sup>
Average sales value (2011)	USD2,029/ct
Proposed monthly throughput	150,000m <sup>3</sup>
Proposed mine life (reserves only)	2.7
Operating Costs (2011)	ZAR43/m <sup>3</sup>
Mining Royalties	0.5-7%
Capex required to bring mine into production	ZA4,705,208
Earthmoving fleet budget	N/A
Tax	28%
IRR (reserves only)	46%
NPV at 20% discount (reserves only)	ZAR68,601,948

The operation is particularly sensitive to changes in grade, diamond price, exchange rates and volume of gravel available. As with all alluvial diamond operations, operating costs and Capex need to be controlled carefully, or they may cease to be commercial.

During 2011, Rockwell will continue to mine gravels from the A terrace. In addition, it is planned to complete 1,120 drillholes on terrace C and the area to the south of the A terrace currently being mined. This drilling will be split over the next two years – only 560 holes (to a total of some 8,400m) will be drilled during 2011. Mining costs on Saxendrift run to R7.5M/month. Total exploration drilling costs have been budgeted at R4M for the 2011 programme.