

Preliminary Geology, Mineral Chemistry and Diamond Results from the C29/30 Candle Lake Volcanic Complex, Saskatchewan, Canada



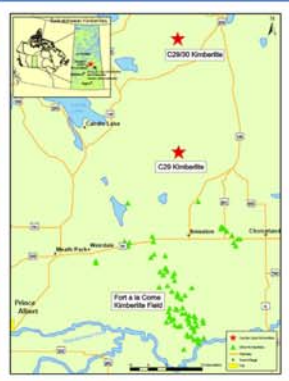
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INTRODUCTION

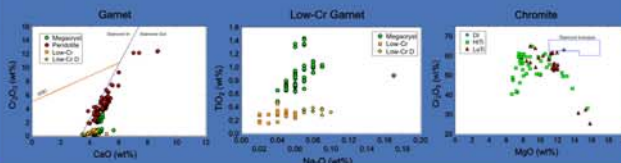
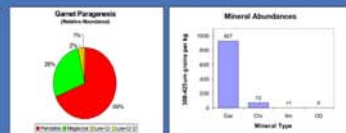
The C29/30 kimberlite is one of the two diamondiferous bodies that comprise the Candle Lake kimberlite cluster located ~70km North of the Fort a la Corne. It was discovered in 1994 by War Eagle Mining and Great Western Gold and has recently been subject to extensive exploration and evaluation by Great Western Diamonds Corp (a wholly own subsidiary of Vaaldiam resources Ltd.).

The Candle Lake kimberlites are hosted within a Cretaceous sedimentary sequence consisting of poorly consolidated marine mudstones and shales of the Lower Colorado Group overlying silt and sands of the Maanville Group. This sequence overlies Paleozoic carbonates that were deposited over Proterozoic granitoids of the Sask Craton. The Quaternary glacial sediments covering the kimberlites range in thickness from 145 to 165m.



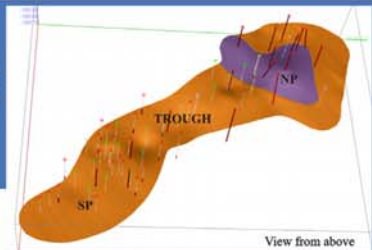
MINERAL CHEMISTRY

The mineral composition data suggested that diamond-bearing lithospheric mantle was sampled by the kimberlite during emplacement, which is consistent with the recovery of diamonds from C29/30 kimberlite.

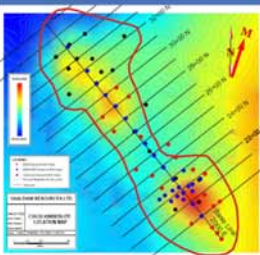


GEOLOGY

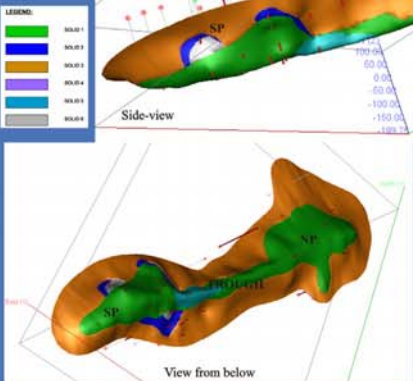
Investigation of new and historical drill holes and inversion of magnetic data suggested that C29/30 is one continuous body with a complex shape and a surface expression of 75.3ha and extends for approximately 2km.



The C29/30 kimberlite body can be divided into three main zones: South Palaeolow (SP), Trough and North Palaeolow (NP).



The geophysical data over the body suggests that the feeder vent is located in the SP; however this has yet to be confirmed by drilling.



PETROGRAPHY

- Top NP:** Distinctive, juvenile-poor and mud-rich unit (Solid 4).
- Basal NP:** Massive, medium-grained, clast-supported and poorly sorted VK comprised of abundant juvenile material with a mud-free matrix and common country rock xenoliths (Solid 1).
- Top SP:** Fine-grained, clast-supported and well sorted VK dominated by olivine phenocrysts. Juvenile clasts are rare (Solid 3).
- Median SP:** Massive, medium-grained, clast to matrix-supported and poorly sorted VK characterized by common juvenile clasts. There is an increase in country rock xenoliths abundance with increasing depth (Solid 1).
- Basal SP:** Massive, medium to coarse-grained, matrix-supported and poorly sorted VK with common limestone xenoliths. Juvenile clasts are abundant and include conspicuous altered phlogopite phenocrysts (Solid 1).

DIAMOND RESULTS

Total counts for the individual drill holes sampled for micro-diamonds in 2006-2007 vary from 155 to 981stones/tonne with many of the higher values being reported from SP.

A total of 370 macro-diamonds (stones >0.5 mm in at least two dimensions) with a cumulative weight of 14 carats were recovered from a mini-bulk sample collected in 2006-2007.

Both micro-diamond stone counts and macro-diamond grades commonly vary with depth without an obvious pattern.

CONCLUSIONS

Following the investigation of 47 drill cores from the C29/30 kimberlite it appears that this body is a single volcanic complex that was likely emplaced in a marine setting. The complex shape of the body is interpreted to result from a combination of explosive volcanic activity that formed a crater over the main vent, and an erosive process that transported material away from the vent through poorly to unconsolidated Cretaceous sediments. This erosive process created a deep trough and distal palaeolow into which the transported kimberlite were deposited. The body infill is dominated by a single phase of kimberlite characterized by variations in structure, texture and relative abundance of juvenile and xenolithic components that reflect the varied eruption, transport and depositional processes.