

Peninsula Minerals_{of}

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Companies Announcement Office
Via Electronic Lodgement

POSITIVE URANIUM RESULTS AT THE KAROO PROJECT, SOUTH AFRICA

Highlights

- Top 10 airborne anomalies at Site 29 validated on ground and average 0.09% eU₃O₈
- The highest on ground reading was 0.6% eU₃O₈ with numerous values over 0.1%
- Four very high priority drill targets have been identified
- Uranium and molybdenum assays from rock chip samples imminent
- Increased prospectivity of the other 5 project areas hosting similar airborne anomalies

Summary

Ground checking at Site 29, the first of the Company's six uranium and molybdenum project areas to be tested following the detailed radiometric survey conducted over the Karoo Projects in South Africa (Airborne Survey), has validated the intensity and locations of the Airborne Survey anomalies. In particular, the review has identified several areas with significant potential to host economic uranium mineralisation (with readings to a maximum of 0.6% eU₃O₈ and numerous values over 0.1%). Thirty eight rock chip samples were taken and submitted for laboratory uranium and molybdenum analysis.

The highlight of the initial field review on Site 29 was the identification of a triangular region covering 2.8km² within the central portion of the project area, defined by the location of Anomalous Zones 1, 2, 3 and 4 (see Figure 2). The mineralised areas are located on the exposed limbs of an open syncline and it is possible that the strata of the two limbs are connected in the subsurface with the anomalies hosted within three vertically stacked sandstone units. The historic "Quaggasfontein 166" resource drilled by Union Carbide in the 1970's is located just south and down dip of Anomalous Zone 3, close to the synclinal axis. The presence of the historic resource provides compelling evidence that the mineralisation extends into the core of the synclinal structure (See Figure 3).

Anomalous Zones 5, 7 and 10 remain of high interest as exploration targets with high eU₃O₈ values, but are considered a lower priority than Anomalous Zones 2-4 because of the smaller area of potential mineralisation, and in the case of Anomalous Zone 10, a lack of outcrop upon which to judge the anomaly. Anomalous Zones 6, 8 and 9 are considered to have lower potential even though they returned several high scintillometer values. This conclusion is

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primarily a result of the anomalies being located within small erosional remnants of strata, with little or no potential for lateral extension of the mineralisation being identified.

Radiometric Survey Anomaly Ground Checking

The radiometric anomalies at Site 29, located to the immediate south-east of Beaufort West, referred to as Anomalous Zones 1-10, were visited during July 2008. (Refer Figures 1 and 2). The aims of the field visit were to locate and validate the uranium channel anomalies identified in the Airborne Survey, to calculate eU_3O_8 values for anomalies located in the field and to investigate the geological setting of the areas.

All high ranking airborne anomalies were able to be located on ground. The anomalies had their position recorded with a handheld GPS and the eU_3O_8 value for each anomaly was calculated using a Radeye scintillometer. The eU_3O_8 estimates were then combined with geological mapping and facies analysis to prioritise targets.

The host formation (Poortjie Member of the Teekloof Formation) is equivalent to that hosting the mineralisation at the Ryst Kuil uranium deposit (located approximately 30km SE of Site 29 with endowment of 19m lb U_3O_8) and both share a similar northeast trending channel sandstone geometry. Mapping by the South African Council for Geoscience has identified the Poortjie Member to be the most prospective in the Karoo Basin with respect to combined uranium and molybdenum potential.

The Poortjie Member is also the probable host of the historic "Quaggasfontein 166" resource drilled by Union Carbide in the 1970's and located to the south and down dip of Anomalous Zone 3. The mineralisation was reported to be approximately 1m thick and 12m deep which would explain the lack of a surface radiometric response.

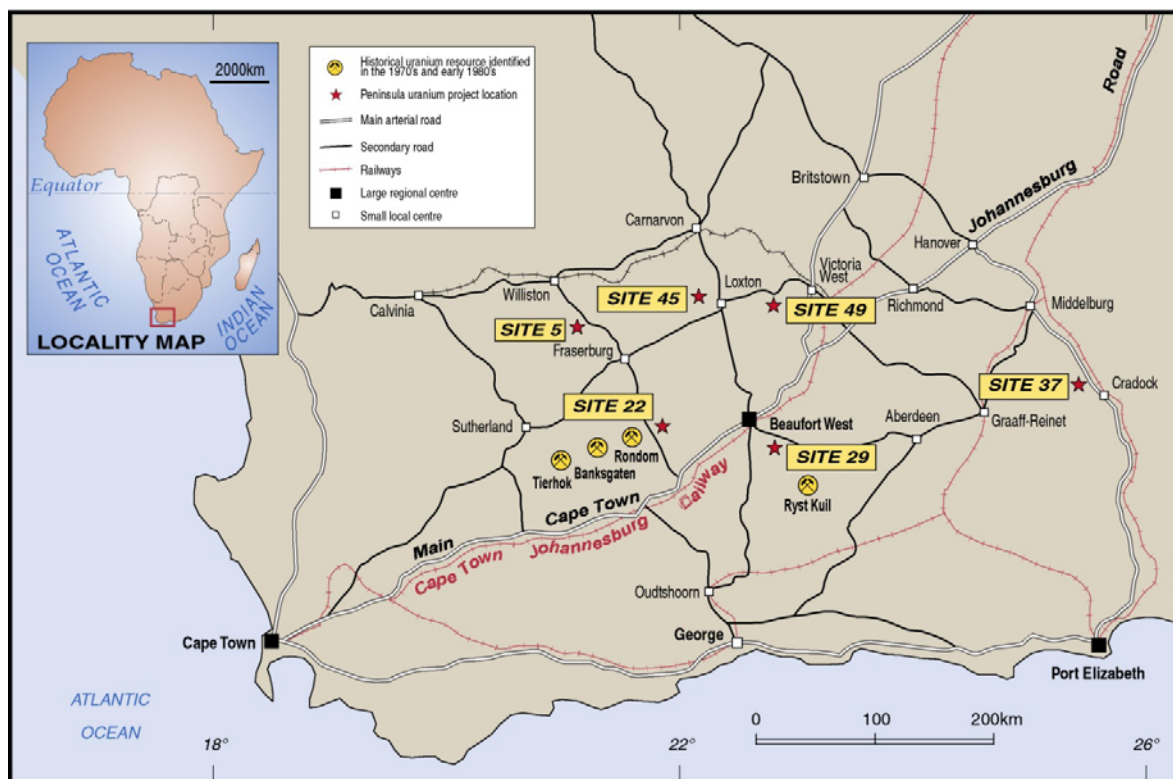


Figure 1 Karoo Project Locations

Calculation of eU₃O₈ values and Sedimentological Mapping

The eU₃O₈ values listed in Table 1 for each of the anomalous zones represent a calculation based on the average radiation (in counts per second - CPS) for each site. Each value represents a compilation of ten measurements (of ten seconds each) for each site with the measurements spread over a diameter of 2m around a central point. The average value (in CPS) for each individual measurement was used and the individual measurements averaged to arrive at a final value of CPS. This value was then multiplied by a calibration factor (unique to the Radeye scintillometer used where averaged counts less than 1000cps were multiplied by 0.76; whilst averaged counts greater than 1000cps were multiplied by 0.84) to arrive at the eU₃O₈ value.

Whilst the intensity of the readings is encouraging, the majority of readings measured a single exposed surface at many localities. Further work is required to establish what a true section through the mineralised sandstone averages to get a better understanding of grades within the mineralised zone.

Twenty three hand samples were collected and submitted to SGS Laboratories for uranium and molybdenum analyses via XRF (X Ray Fluorescence). Samples were taken from the localities with the highest eU₃O₈ values and were collected where the presence of outcrop allowed.

Geological interpretation and evaluation of each radiometrically anomalous zone was conducted in conjunction with the above mentioned procedures by sedimentologist and regional expert Dr Barry Millsted in order to provide an understanding of the geological context of the anomalies. This assessment of the economic potential of the anomalous zones forms the basis for prioritisation of further exploration activities. Amongst the data collected were detailed measurements of the dip, dip direction and palaeo-flow direction (to identify palaeo-channel orientation). Collectively these geological observations combine to facilitate a better understanding of the direction of lateral extension of mineralisation away from the anomaly as well as optimising drill hole targeting.

Ground Checking Results

The highlight of the initial field review on Site 29 is the identification of a triangular region within the central portion of Site 29, defined by the location of Anomalous Zones 1, 2, 3 and 4. The calculated eU₃O₈ values in Anomalous Zones 2, 3 and 4 are relatively high (averaging 0.13%, 0.05% and 0.2% eU₃O₈ respectively), and while those from Anomalous Zone 1 are lower in intensity they are still considered encouraging with mapping indicating possible dilution of the radiometric signal due to the highly weathered nature of the outcrop in that area.

The attractiveness of Anomalous Zones 1-4 is increased by their location on the exposed limbs of an open syncline (Anomalous Zones 1, 2 and 3 are on the northern limb and Anomalous Zone 4 on the southern limb with limbs dipping between 3 and 6 degrees). Specifically their location suggests that the strata of the two limbs are connected in the subsurface although the anomalies appear to be hosted within three different, vertically stacked sandstone units (comprising a package approximately 50-60m thick) with similar NE trending palaeo-flow directions. Anomalous Zones 2 and 3 in addition to the historically discovered mineralisation at "Quaggasfontein 166" are interpreted to be within sandstone 2, and Zone 4 is interpreted to be hosted by overlying sandstone 3.

Significantly, many of the surface radiometric readings are of a similar grade to the historic mineralisation which averages 0.12% eU₃O₈.

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The aerial extent of any mineralised pods, their grade and whether they have continuity will need to be identified with further mapping and drilling. As mentioned above, the highest priority area (between Anomalous Zones 2, 3 and 4) which potentially contains these stacked mineralised zones defines a triangle of approximately 2.4km². Should Anomalous Zone 1 prove to be related to mineralisation then the size of the area of interest would increase to approximately 2.8km².

Anomalous Zones 5 and 7 (average readings of 0.10% and 0.17% respectively) remain of high interest as exploration targets, albeit of slightly lower priority than Anomalous Zones 2, 3 and 4 because of the smaller area of potential mineralisation present. Anomalous Zone 6 has some promising grades but has a relatively small size potential based on possible subcrop of the mineralised sand unit. The calculated eU₃O₈ values for Anomalous Zone 10 are low and if taken at face value do not warrant further exploration activity. However there is evidence to suggest that the values may represent an under-calculation due to the thickness of regolith in the anomalous zone.

Anomalous Zones 8 and 9 are considered to have limited potential to host significant mineralisation. This conclusion is primarily a result of the anomalies being located within small erosional remnants of strata, with little or no potential for lateral extension of the mineralisation being identified.

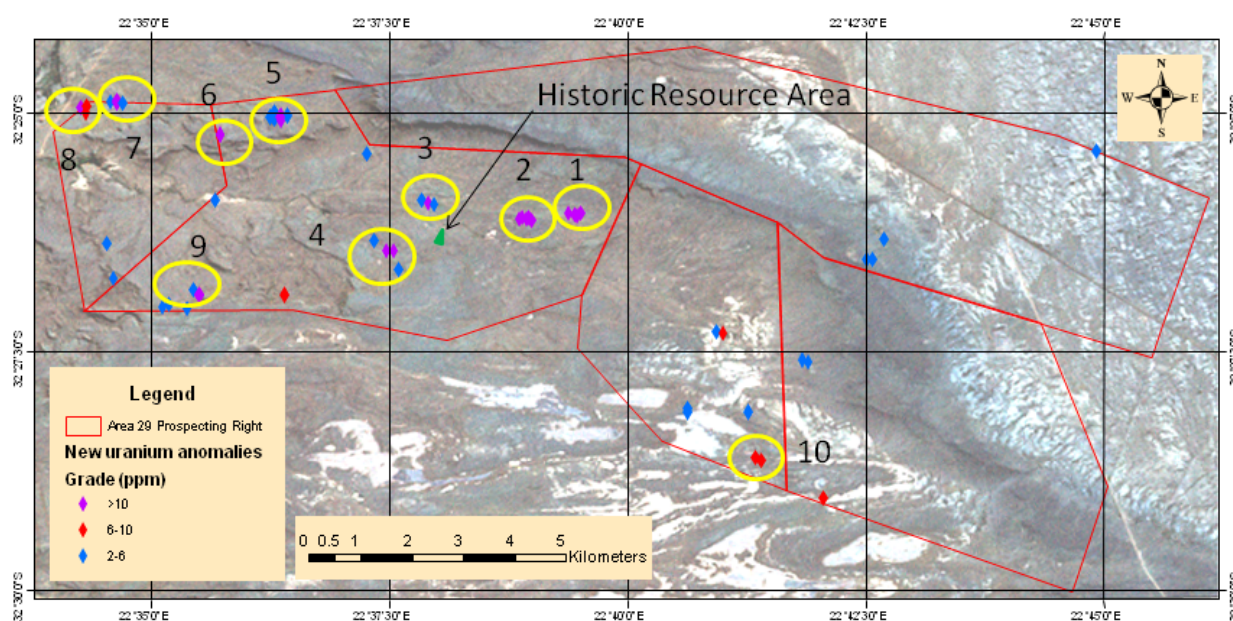


Figure 2 Site 29 Airborne radiometric anomaly intensities draped on Landsat image

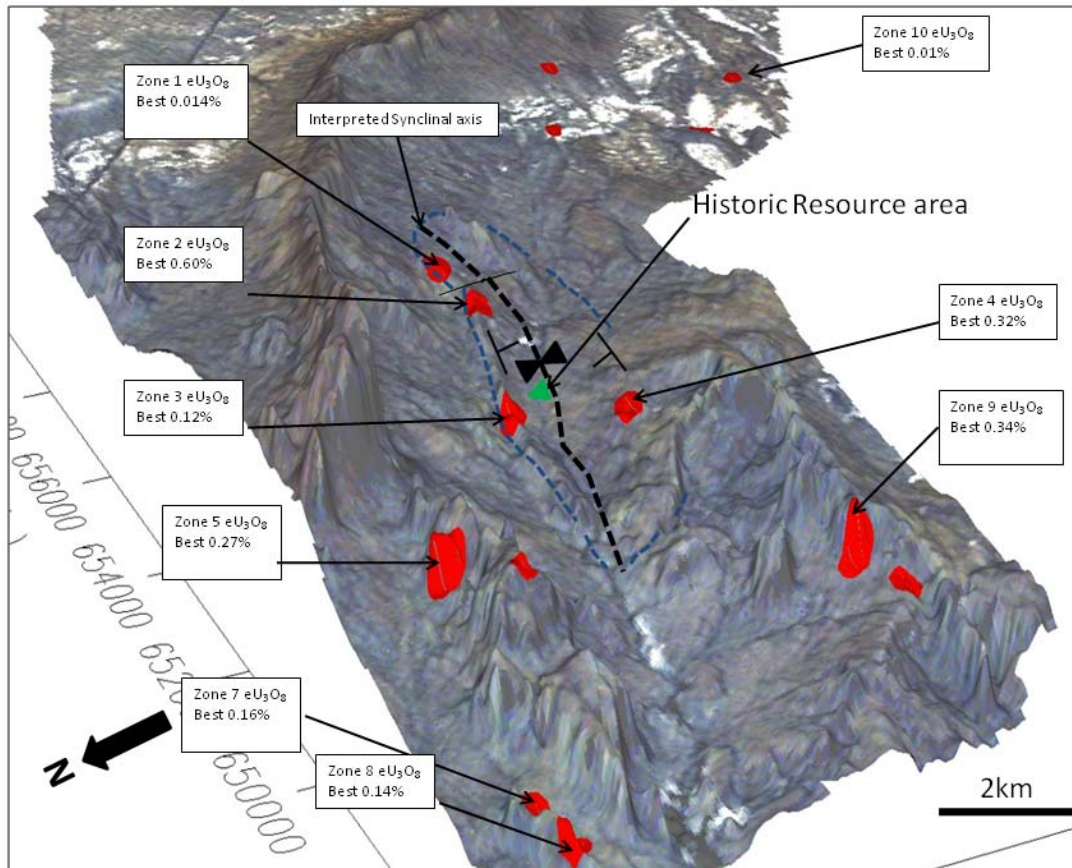


Figure 3 Site 29 ground radiometric readings at each airborne anomaly, draped over vertically exaggerated topography and Landsat image

Background on Karoo Uranium / Molybdenum Properties

Previous exploration for uranium was conducted over the Karoo region through the late 1960's and into the early 1980's. Many sandstone-hosted uranium deposits and prospects were identified but little analysis was carried out for the associated molybdenum, due to prevailing low prices for that metal. Private exploration in the region ceased in the early 1980's after the worldwide fall in the demand for uranium, but the South African Council for Geoscience completed a broad spaced airborne radiometric survey and then conducted surface sampling of radioactive anomalies located by the airborne survey. The government identified significant uranium and molybdenum mineralisation at each of the six project areas but there has been no follow-up work conducted on these projects since the Geological Survey work was undertaken.

Future Work

Peninsula's field team will continue to make first pass visits to the other 5 project areas over the next quarter to assess the new radiometric anomalies in those areas. Rock chip samples will be collected for U/Mo assay and once the results have been received and interpreted, follow-up geological mapping will be conducted on the best targets within all of the Karoo project areas to prioritise targets for drill testing in 2009.

Conclusion

The successful identification of airborne radiometric anomalies on ground highlights the potential of the Karoo project to host additional uranium resources. In addition, the ground validation of the anomalies gives great confidence that untested anomalies on the other five project areas may also reflect bedrock mineralisation.

Yours Sincerely



John (Gus) Simpson
Chairman

For further information, please contact our office on (08)9420 9333 during normal business hours.

Competent Person

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Andrew Ford and Dr Alan Marlow, both Members of The Australasian Institute of Mining and Metallurgy. Mr Ford is Chief Operating Officer and Dr Marlow is a Director of the Company. Mr Ford and Dr Marlow has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Marlow consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Disequilibrium Explanatory Statement: eU_3O_8 refers to the equivalent eU_3O_8 grade. This is estimated from scintillometer measurements recorded by a hand held scintillometer. These results are provisional upon the application of calibration correction factors which are determined from geochemical analysis. Geochemical analysis may show higher or lower amounts of actual U_3O_8 , the difference being referred to as disequilibrium. All eU_3O_8 results above are affected by issues pertaining to possible disequilibrium and uranium mobility which should be taken into account when interpreting those pending confirmatory chemical analyses.

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ANOMALOUS ZONE	SAMPLE NO.	eU ₃ O ₈ (ppm)	LAT (south)	LONG (east)
1	29_1	112	32° 26' 4.2"	22° 39' 26.7"
1	29_2	138	32° 26' 4.7"	22° 39' 26.3"
1	29_3	74	32° 26' 4.1"	22° 39' 30.6"
1	29_4	67	32° 26' 5.0"	22° 39' 27.8"
1	29_5	114	32° 26' 3.2"	22° 39' 22.1"
2	29_6,7	2730	32° 26' 6.8"	22° 38' 52.5"
2	29_8	544	32° 26' 7.0"	22° 38' 56.5"
2	29_9	574	32° 26' 7.1"	22° 38' 57.1"
2	29_10	908	32° 26' 7.2"	22° 38' 59.8"
2	29_11,12	6013	32° 26' 6.5"	22° 38' 53.5"
2	None	313	32° 26' 7.4"	22° 38' 57.3"
2	None	175	32° 26' 7.6"	22° 38' 58.1"
2	None	272	32° 26' 7.7"	22° 38' 58.5"
2	None	1806	32° 26' 6.6"	22° 38' 58.0"
3	29_13	206	32° 25' 57.8"	22° 37' 55.5"
3	29_14	1223	32° 25' 58.0"	22° 37' 54.1"
3	None	50	32° 25' 58.3"	22° 37' 58.8"
4	29_18	3245	32° 26' 26.4"	22° 37' 27.0"
4	29_19	1478	32° 26' 28.0"	22° 37' 32.1"
4	None	2494	32° 26' 26.9"	22° 37' 27.1"
4	None	2357	32° 26' 26.7"	22° 37' 27.3"
4	None	227	32° 26' 27.2"	22° 37' 29.1"
5	29_15	1807	32° 25' 2.0"	22° 36' 22.4"
5	29_16	2668	32° 25' 5.0"	22° 36' 20.5"
5	29_17	450	32° 25' 2.4"	22° 36' 21.8"
5	None	238	32° 25' 2.1"	22° 36' 26.1"
5	None	62	32° 25' 4.8"	22° 36' 21.5"
6	None	1918	32° 25' 14.1"	22° 35' 44.2"
6	None	407	32° 25' 13.8"	22° 35' 43.6"
7	29_23	3562	32° 24' 52.8"	22° 34' 37.3"
7	None	1579	32° 24' 52.9"	22° 34' 38.1"
7	None	34	32° 24' 54.1"	22° 34' 33.8"
8	29_22	1443	32° 24' 55.8"	22° 34' 18.9"
8	None	61	32° 24' 59.8"	22° 34' 17.9"
9	29_20	3403	32° 26' 55.3"	22° 35' 30.8"
9	29_21	1530	32° 26' 55.3"	22° 35' 30.5"
9	None	35	32° 26' 52.8"	22° 35' 26.3"
9	None	26	32° 27' 2.3"	22° 35' 6.7"
10	None	130	32° 28' 37.8"	22° 41' 24.8"
10	None	75	32° 28' 37.4"	22° 41' 20.2"
10	None	84	32° 28' 37.4"	22° 41' 17.6"

Table 1 Scintillometer readings, locations and rock chip sample numbers.