20th June 2012

Companies Announcement Office
Via Electronic Lodgement

HIGH-GRADE URANIUM CONFIRMED AT SITE 45 KAROO, SOUTH AFRICA

Highlights

- **High grade drill results confirm historic mineralisation and exploration potential at Site 45**

- **Significant Intercepts include:**

  - **4.1 ft @ 2,026ppm eU_3O_8 from 20.8ft**
  - **4.3 ft @ 1,837ppm eU_3O_8 from 55.5ft**
  - **4.4 ft @ 1,177ppm eU_3O_8 from 58.4ft**

- **Maiden JORC-compliant resource estimate completion target December 2012**

Summary

Peninsula Energy Limited (Peninsula) is pleased to announce the first results from the drilling program at the highly prospective Site 45 at the Karoo Uranium/Molybdenum Projects in South Africa.

The initial drilling program at Site 45 has been designed to confirm the historic mineralisation defined by the Johannesburg Consolidated Investment Company (JCI) during the 1970's.

To date Peninsula has completed a total of 63 reverse circulation holes for a total of 15,207 feet at Site 45. A total of 54 holes intersected mineralisation > 100ppm and 28 holes reported multiple intersections of stacked uranium. A total of 13 holes reported grades in excess of 1,000ppm eU_3O_8.

Peninsula is of the opinion that the results to date are representative and confirm the presence of high grade uranium mineralisation within the areas defined by the previous exploration.

Peninsula Executive Chairman Gus Simpson stated "*The initial drilling programme has confirmed the historic uranium mineralisation reported at Site 45. Upon completion of this programme, and following on from the success of the drill programmes at Site 22 and 29, we expect to calculate a maiden JORC compliant estimate for the Karoo*".

Site 45 RC Drilling Program

Site 45 is located 120km northwest of Beaufort West and comprises a contiguous area of 489km² (see Figure 2). During the late 1970's JCI drilled 431 exploration holes in a small central portion of the project area at Site 45 which resulted in a mineralisation estimate of 4.8mlbs eU3O8 (non JORC compliant). This near surface mineralisation occurs in broad, stacked paleochannels with a mostly south-easterly trend.

Post the JCI drilling, a broader rock chip sampling programme conducted by the South African Geological Survey returned a number of high grade results (previously reported) with maximum values of 4,210ppm eU_3O_8 and 1,372ppm Mo within the project area indicating an associated high grade molybdenum occurrence.

During December 2011 the Peninsula field crew was able to undertake non-invasive exploration work in preparation for the planned drilling campaign. A total of 15 drillholes, that were open to the mineralised depth, were probed with a gamma tool, with results from 13 drillholes returning intersections exceeding 200ppm.

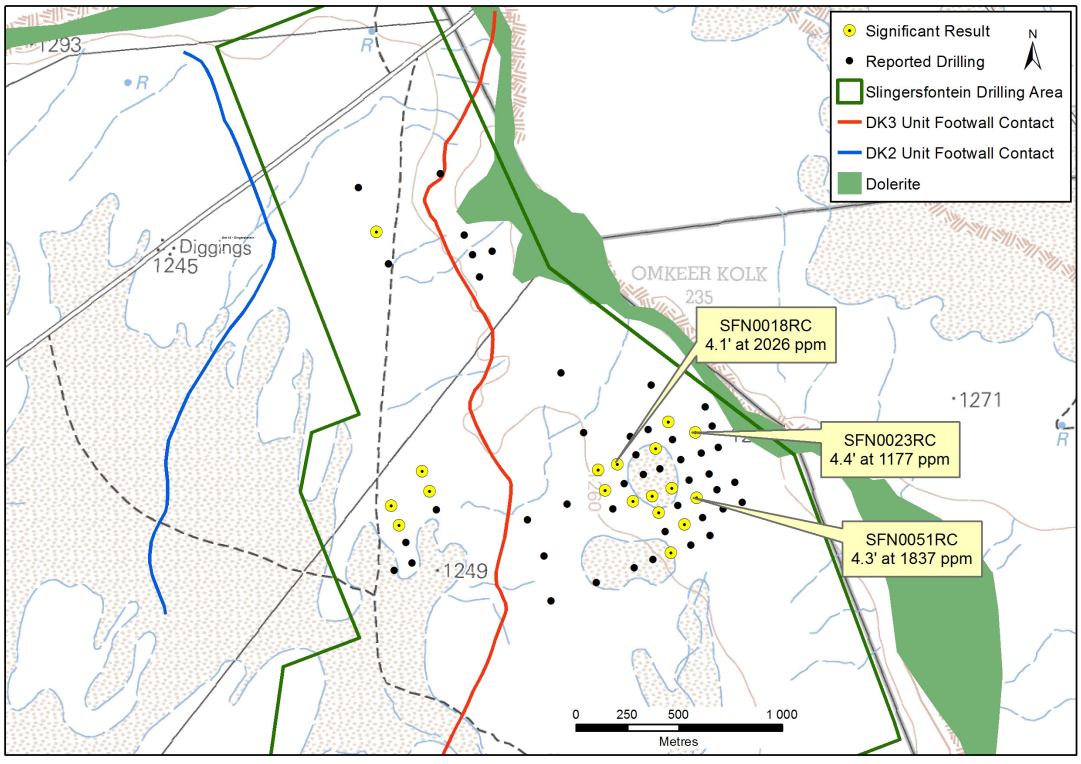
In early May 2012, following approval from the Department of Mineral Resources (DMR), Peninsula commenced an RC drilling programme at Site 45 to twin a representative sample of the historic holes to confirm the presence of the uranium defined by the previous exploration.

A total of 130 ore grade holes have been targeted and to date Peninsula has completed 63 reverse circulation holes for a total of 15,207 feet at Site 45.

Fifty four (54) holes have intersected mineralisation > 100ppm and 28 holes reported multiple intersections of uranium mineralisation.

Thirteen (13) holes reported grades exceeding 1,000ppm eU_3O_8. (Refer Figure 1 below and Table 1).

Figure 1: Site 45 Drilling Map showing Location of Significant Results.



Uranium at Site 45 is developed in sandstones that belong to the Davidskolk Formation. Two south-southwest trending mineralised sandstone horizons, DK2 and DK3 (refer Figure 1), are being targeted with a third possible horizon currently being investigated. The dip of the units ranges from 1°to 5°east-southeast with the paleo-trend from a north-westerly direction.

The lowermost sandstone (DK2) varies in thickness from 10 to 30 metres and extends across the entire current drilling area from surface to approximately 75 metres depth in the southeast corner. The upper sandstone (DK3) varies in thickness from 10 to 20 metres and is exposed at surface across the approximate centre of the EMP drilling area, reaching a depth of around 40 metres in the southeast corner. The sandstone units are separated by a mudstone/siltstone unit with an average thickness of 30 to 35 metres.

The results from the drilling program to date are consistent with the historic drilling results and Peninsula is of the opinion that they are representative and confirm the presence of high grade uranium mineralisation within the project area.

Peninsula expects to complete an initial JORC compliant estimate for the Karoo Projects before December 2012.

Figure 2: Karoo Uranium/Molybdenum Projects, South Africa.

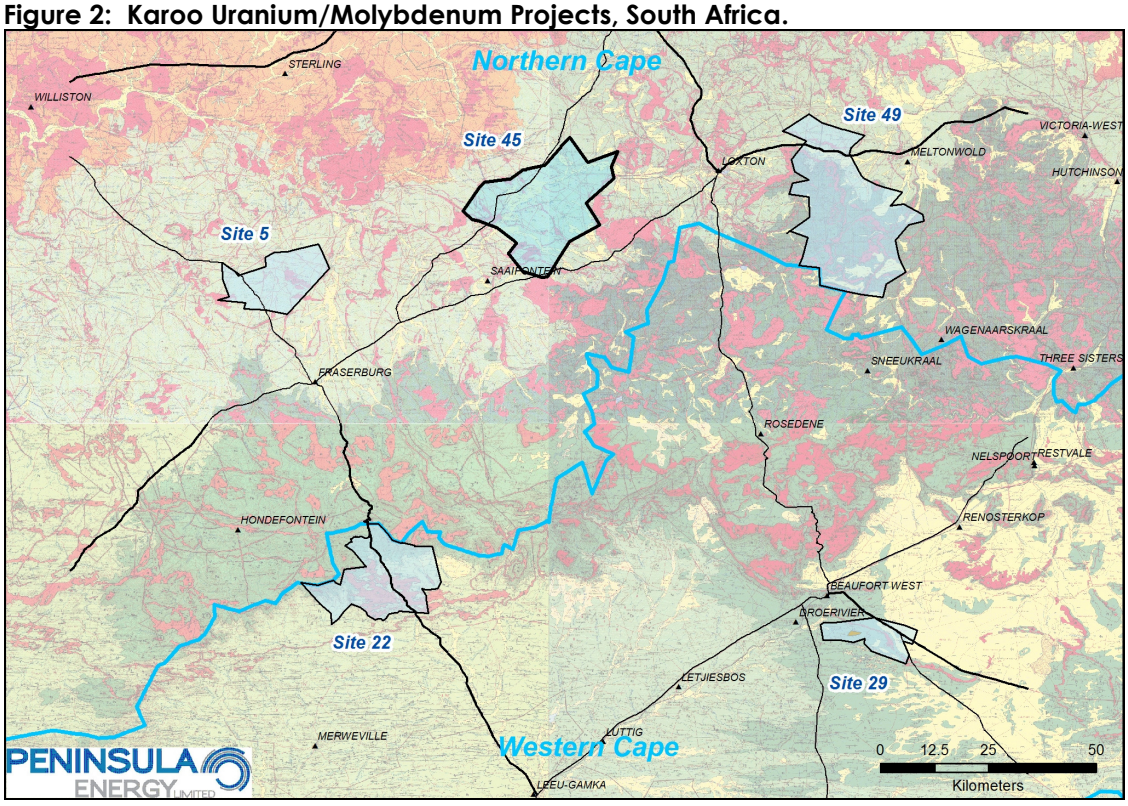


Table 1: Drilling Results Site 45 Karoo Projects, South Africa (200ppm cut off).

Hole-ID	East	North	Total Depth Drilled (ft)	From (ft)	To (ft)	Interval (ft)	Grade (ppm eU3O8)	Horizon
SFN0007RC	94064	-3494424	197	160.10	162.73	2.62	1,256	DK2
SFN0013RC	93063	-3494593	180	81.53	83.83	2.30	956	DK2
SFN0014RC	93025	-3494499	164	70.37	72.83	2.46	1,480	DK2
SFN0015RC	93176	-3494332	180	78.08	82.19	4.10	1,075	DK2
SFN0016RC	93211	-3494428	197	78.74	82.19	3.44	1,426	DK2
SFN0018RC	94030	-3494325	197	20.83	24.93	4.10	2,026	DK3
SFN0019RC	94124	-3494297	213	36.75	41.01	4.27	468	DK3
SFN0021RC	94309	-3494220	394	177.99	179.79	1.80	1,165	DK2
SFN0023RC	94503	-3494143	213	58.40	62.83	4.43	1,177	DK3
SFN0027RC	94370	-3494091	213	47.90	55.28	7.38	385	DK3
SFN0034RC	92952	-3493170	213	40.03	48.06	8.04	637	DK2
SFN0043RC	94200	-3494477	213	44.62	50.36	5.74	644	DK3
SFN0043RC	94200	-3494477	213	155.84	160.27	4.43	888	DK2
SFN0043RC	94200	-3494477	213	162.73	164.86	2.13	916	DK2
SFN0044RC	94292	-3494452	394	48.56	52.00	3.44	1,002	DK3
SFN0045RC	94387	-3494414	213	56.27	61.19	4.92	879	DK3
SFN0049RC	94324	-3494531	213	44.62	46.59	1.97	1,252	DK3
SFN0049RC	94324	-3494531	213	157.48	159.45	1.97	1,167	DK2
SFN0051RC	94508	-3494461	213	55.45	59.71	4.27	1,837	DK3
SFN0055RC	94449	-3494589	230	53.31	56.92	3.61	1,075	DK3
SFN0055RC	94449	-3494589	230	159.12	160.93	1.80	1,155	DK2
SFN0061RC	94383	-3494726	230	177.33	181.92	4.59	556	DK2

*Significant Result definition: grade*thickness (ft)/10000>0.2*

Karoo Projects – Exploration Potential

In addition to the existing resource drilling, ten high ranking drill targets distributed across all six of the Company's Project Areas have been prioritised from the 392 uranium occurrences generated by the 2008 helicopter-borne radiometric and magnetic surveys, site mapping and ground sampling.

Further targets have been identified following recent acquisition and review of exploration reports compiled by Union Carbide during the 1970s and early 1980s. Peninsula obtained these reports from the South African Nuclear Energy Corporation during the September 2010 quarter.

Preliminary geological studies have estimated a combined exploration potential in the Karoo of 30-60m tonnes @ 700 – 1,400ppm eU_3O_8 for 90 – 150mlbs eU_3O_8.

The Company's target over the next 12 months is to delineate 30mlbs of eU_3O_8 (15-25m tonnes @ 700–1,400ppm eU_3O_8). The source of this material may include the historic mineral occurrences, their extensions and new exploration targets. If this target is achieved a conceptual study has suggested that this quantity of uranium would support the development of a central processing facility near Site 29.

Yours sincerely

John (Gus) Simpson
Executive Chairman

For further information, please contact our office on +61(0)89380 9920 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 Alfred Gillman and Mr George van der Walt. Mr Gillman is a CP and Fellow of the Australian Institute of Mining and Metallurgy. Mr Gillman is Technical Director of Peninsula Energy Ltd and is a Competent Person under the definition of the 2004 JORC Code. Mr van der Walt is a member of a Recognised Overseas Professional Organisation included in a list promulgated by the ASX (The South African Council of Natural Scientific Professions, Geological Society of South Africa). Mr van der Walt is a Director of Geo-Consult International (Pty) Ltd. Both Mr Gillman and Mr van der Walt have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking as Competent Persons as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Both Mr Gillman and Mr van der Walt consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

Please note that in accordance with Clause 18 of the JORC (2004) Code, the potential quantity and grade of the "Mineralised Potential" in this announcement must be considered conceptual in nature as there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.

Where eU_3O_8 results are reported, it relates to values obtained from radiometric logging of drillholes. GeoVista and Geotron equipment was used and all the probes were calibrated at the IAEA accepted Pelindaba Calibration facility in South Africa with calibration certificates supplied by Geotron Systems (Pty) Ltd, a geophysical consultancy based in South Africa.

All eU_3O_8 values reported may be affected by issues such as possible disequilibrium and uranium mobility which should be taken into account when interpreting the results, pending confirmatory chemical analyses. Disequilibrium Explanatory Statement: eU3O8 refers to the equivalent U_3O_8 grade. This is estimated from gross-gamma down hole measurements corrected for water and drilling mud in each hole. Geochemical analysis may show higher or lower amounts of actual U3O8, the difference being referred to as disequilibrium.