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Companies Announcement Office
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EXPLORATION DRILLING INTERSECTS HIGH-GRADE URANIUM AND MOLYBDENUM AT KAROO SITE 45

Highlights

- **High grade drill results confirm historically mineralised zone at Site 45**
- **High grade Molybdenum mineralisation in association with uranium confirmed**
- **Significant URANIUM Intercepts include:**
  - **9.4 ft @ 1,054ppm eU_3O_8 from 45.3ft**
  - **3.1 ft @ 2,351ppm eU_3O_8 from 134.8ft**
  - **4.3 ft @ 1,620ppm eU_3O_8 from 77.9ft**
- **Significant MOLYBDENUM Intercepts include:**
  - **1.3ft @ 2,073ppm Mo from 60ft**
  - **2.6ft @ 1,226 ppm Mo from 81.2ft**
- **Maiden JORC-compliant resource estimate targeted for December 2012 completion**

Summary

Peninsula Energy Limited (Peninsula) is pleased to announce further positive 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. Since the previous announcement on 20 June 2012 the Company has completed a further 66 drill holes at Site 45 for a total of 16,975 feet.

To date Peninsula has completed a total of 123 reverse circulation holes and 6 diamond holes for a total of 32,182 feet at Site 45. A total of 105 holes intersected mineralisation > 100ppm and 43 holes reported multiple intersections of stacked uranium. A total of 28 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. In addition, step out drilling beyond the historically mineralised zone has returned high grade intersections.

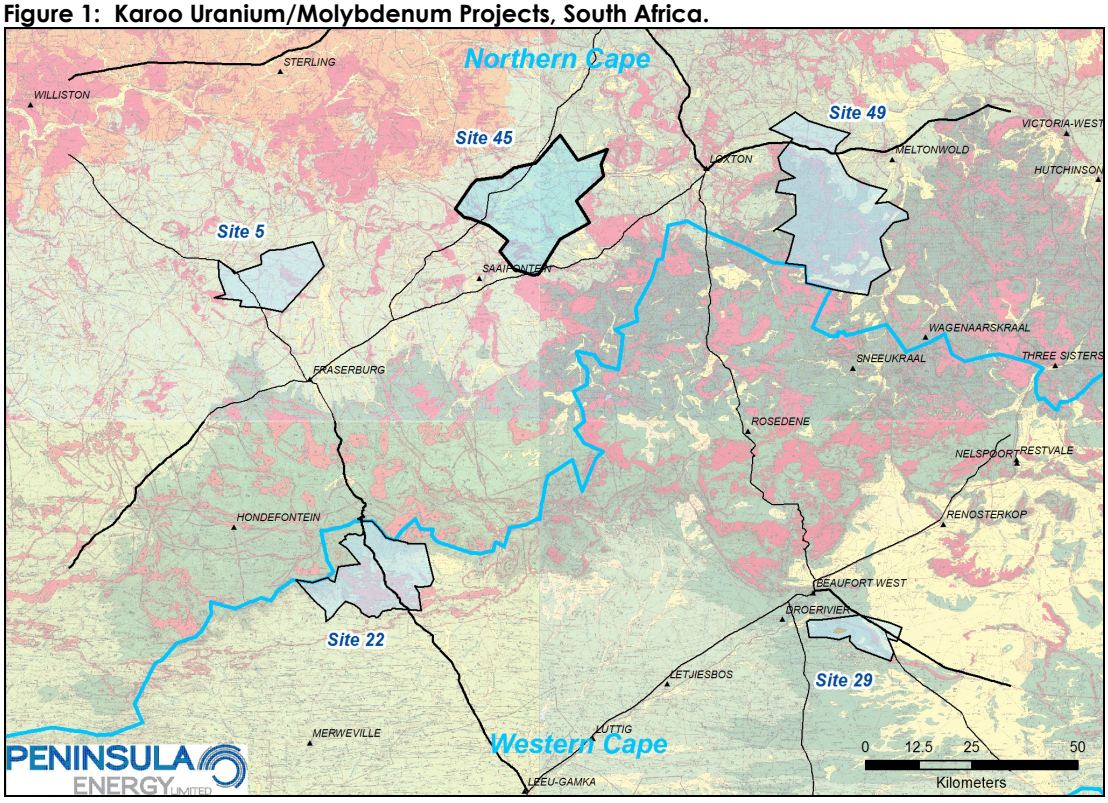
In addition to validating the high grade uranium reported from the down-hole gamma logging program, Peninsula completed an initial series of six diamond core holes. The diamond core program returned high grades of associated molybdenum.

Peninsula Executive Chairman Gus Simpson stated "*The drilling programme has confirmed the historic uranium mineralisation reported at Site 45 and these latest results confirm significant molybdenum mineralisation in association with uranium*".

Site 45 RC Drilling Program

Site 45 is located 120km northwest of Beaufort West and comprises a contiguous area of 489km² (see Figure 1). 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.

Figure 1: Karoo Uranium/Molybdenum Projects, South Africa.



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.

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.

To date Peninsula has completed 123 reverse circulation holes for a total of 32,182 feet at Site 45. 105 holes have intersected mineralisation > 100ppm and 43 holes reported multiple intersections of uranium mineralisation. 28 holes reported grades exceeding 1,000ppm eU_3O_8. (Refer Figure 1 below and Table 1).

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 2), 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 lower-most 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.

Figure 2: Site 45 Drilling Map showing Location of Significant Results.

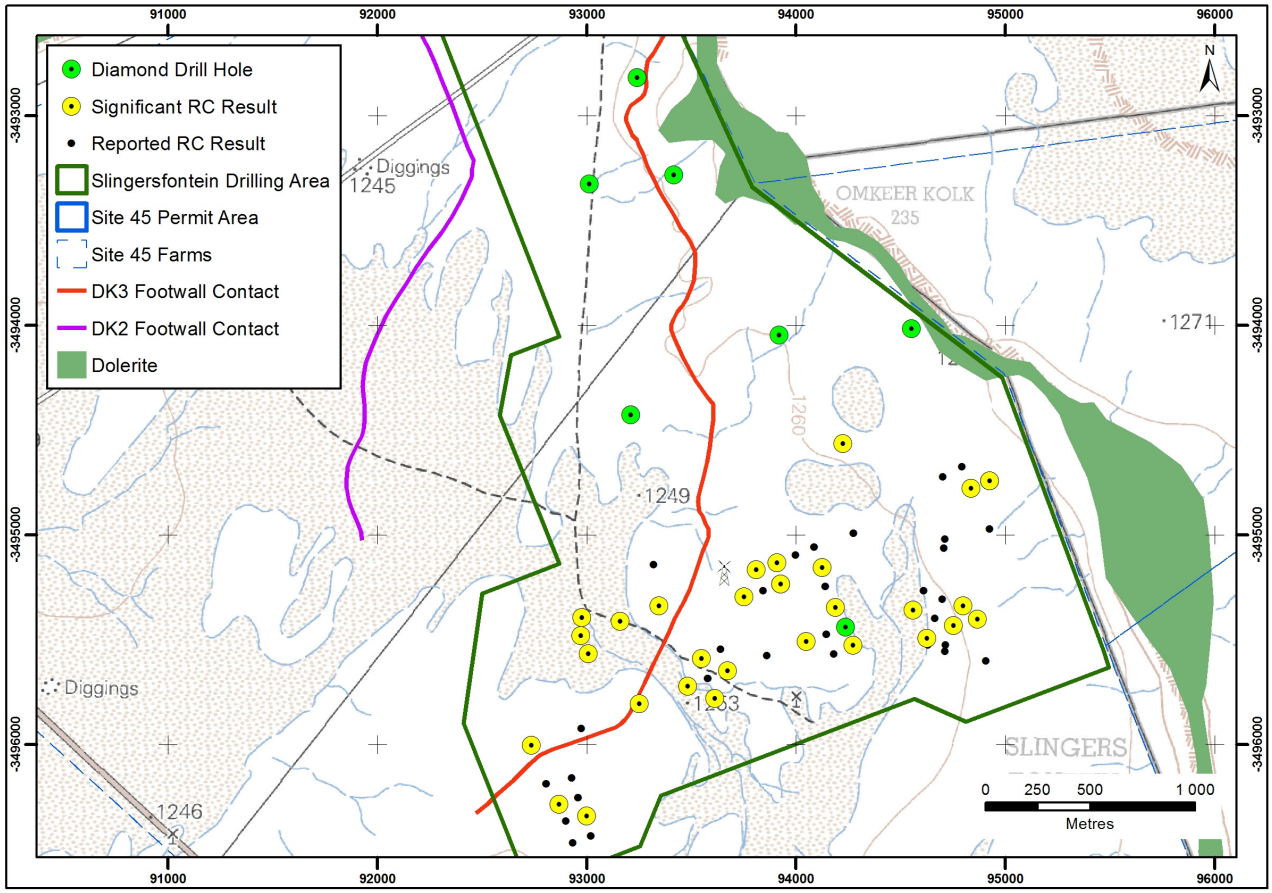


Table 1: Drilling Results Site 45 Karoo Projects, South Africa (200ppm cut off, gamma logging).

Hole-ID	Type	East	North	From (ft)	To (ft)	Interval (ft)	Total Depth Drilled (ft)	eU3O8 (ppm)	Horizon
SFN0035DD	DD	93242	-3492818	77.92	82.19	4.3	328	1620	DK2
SFN0048DD	DD	93920	-3494046	130.74	132.38	1.6	164	784	DK2
SFN0064RC	RC	94927	-3494741	211.61	212.93	1.3	394	739	DK2
SFN0064RC	RC	94927	-3494741	224.08	226.71	2.6	394	567	DK2
SFN0065RC	RC	94837	-3494778	60.70	62.99	2.3	262	1624	DK3
SFN0075RC	RC	94560	-3495360	243.44	249.02	5.6	394	612	DK2
SFN0076RC	RC	94626	-3495493	234.42	239.01	4.6	279	713	DK2
SFN0079RC	RC	94798	-3495339	222.28	224.25	2.0	262	514	DK2
SFN0080RC	RC	94752	-3495433	225.39	227.36	2.0	246	570	DK2
SFN0083RC	RC	94867	-3495403	200.79	202.43	1.6	246	969	DK2
SFN0086RC	RC	94274	-3495528	164.04	169.13	5.1	246	664	DK2
SFN0088DD	DD	94237	-3495440	59.38	61.19	1.8	220	2067	DK3
SFN0088DD	DD	94237	-3495440	165.03	169.13	4.1	220	867	DK2
SFN0090RC	RC	94050	-3495508	171.42	175.85	4.4	246	1141	DK2
SFN0091RC	RC	94190	-3495346	45.28	54.63	9.4	394	1054	DK3
SFN0093RC	RC	94126	-3495157	50.36	52.33	2.0	230	901	DK3
SFN0097RC	RC	93674	-3495648	151.08	154.69	3.6	394	776	DK2
SFN0099RC	RC	93550	-3495591	135.83	137.63	1.8	394	743	DK2
SFN0101RC	RC	93613	-3495780	130.09	132.05	2.0	213	1183	DK2
SFN0102RC	RC	93252	-3495807	121.88	123.85	2.0	197	1235	DK2
SFN0103RC	RC	93483	-3495722	134.84	137.96	3.1	394	2351	DK2
SFN0105RC	RC	93909	-3495132	150.10	153.54	3.4	230	487	DK2
SFN0106RC	RC	93929	-3495236	29.53	31.82	2.3	230	660	DK3
SFN0106RC	RC	93929	-3495236	42.49	44.29	1.8	230	772	DK3
SFN0108RC	RC	93810	-3495165	31.82	34.28	2.5	246	1623	DK3
SFN0109RC	RC	93717	3495193	26.41	29.69	3.3	394	1109	DK3
SFN0110RC	RC	93753	-3495295	34.12	36.58	2.5	246	1644	DK3
SFN0111RC	RC	93346	-3495340	102.69	104.17	1.5	230	751	DK2
SFN0112RC	RC	93161	-3495413	107.94	111.22	3.3	213	475	DK2
SFN0114RC	RC	92978	-3495396	81.86	86.45	4.6	213	1894	DK2
SFN0115RC	RC	92974	-3495482	86.45	88.75	2.3	394	1409	DK2
SFN0116RC	RC	93008	-3495568	85.96	87.93	2.0	197	1251	DK2
SFN0118RC	RC	92738	-3496003	105.48	109.09	3.6	197	815	DK2
SFN0121RC	RC	94226	-3494565	173.23	175.85	2.6	394	428	DK2
SFN0122RC	RC	92870	-3496286	124.02	126.48	2.5	197	549	DK2
SFN0125RC	RC	93001	-3496343	118.93	123.85	4.9	197	1115	DK2
SFN0200DD	DD	93212	-3494427	79.40	81.69	2.3	328	923	DK2

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

In addition to validating the high grade uranium reported from the down-hole gamma logging program Peninsula completed an initial series of six diamond core holes. The diamond core program returned high grades of associated molybdenum. Best results include **1.3ft @ 2,073ppm Mo from 60ft** and **2.6ft @ 1,226ppm Mo** from 81.2ft down-hole. The significant results are listed in Table 2.

Peninsula plans to complete a representative number of diamond final analyses to more accurately determine the ratio of molybdenum to uranium together with potential disequilibrium effects.

Table 2: Drilling Results Site 45 Karoo Projects, South Africa (200ppm U_3O_8 cut off, XRF Analysis).

Hole-ID	From (ft)	To (ft)	Interval ft)	U3O8 (ppm)	Mo (ppm)
SFN0035DD	81.7	86.3	4.6	1,565	534
SFN0048DD	131.1	132.7	1.6	818	133
SFN0088DD	60.0	61.4	1.3	2,880	2,073
SFN0200DD	81.2	83.8	2.6	874	1,226

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

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 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.

Chemical analyses for uranium and molybdenum were conducted by Scientific Services C.C, Cape Town (ISO9001-2008 certified) using the pressed pellet XRF technique. Calibration curves were established for both U_3O_8 and Mo using an array of certified reference material. The lower level of detection is 20ppm for both U_3O_8 and Mo.