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Companies Announcement Office
Via Electronic Lodgement

OUTSTANDING URANIUM AND ASSOCIATED MOLYBDENUM GRADES RETURNED FROM RC DRILLING AND CHEMICAL ASSAYING AT SITE 22

HIGHLIGHTS

- **High grade results returned for Uranium and Molybdenum include:**
 - DH 06F0101RC - **6.6 ft @ 3,625 ppm U₃O₈ and 2,560 ppm Mo** from 68.9ft
 - DH 06F0473RC - **6.6 ft @ 3,102 ppm U₃O₈ and 2,549 ppm Mo** from 32.8ft
 - DH 06F0102RC - **6.6 ft @ 2,030 ppm U₃O₈ and 1,230 ppm Mo** from 98.4ft
 - DH 06F0066RC - **4.9 ft @ 1,547 ppm U₃O₈ and 1,395 ppm Mo** from 67.3ft
 - DH 06F0509RC - **1.6 ft @ 1,972 ppm U₃O₈ and 4,308 ppm Mo** from 49.2ft
 - DH 06F0802RC - **4.9 ft @ 3,225 ppm U₃O₈ and 963 ppm Mo** from 75.5ft
- DH 06F0151RC - **1.6 ft @ 8,420 ppm U₃O₈** from 29.6ft
- **Assay Results indicate widespread high grade Uranium and associated Molybdenum at Site 22**
- **RC Sampling program to be expanded over entire historic drilling area to determine extent of Molybdenum**
- **Assay results validate down hole gamma probe results**

Peninsula Energy Limited (Peninsula) is pleased to announce assay results from recently completed reverse circulation (RC) holes located in the western portion of the historic drilling area at Site 22 in the Karoo. The results to date indicate a widespread distribution of high grade Uranium and associated Molybdenum. Due to these outstanding results, for both grade and mineral correlation, Peninsula will now expand the RC drilling program to encompass the entire area associated with the historic drilling.

In addition to recording the presence of high grade associated molybdenum the assay results also validate the very high grade uranium reported from the down-hole gamma logging program.

Site 22 RC Drilling Program

Site 22 is located on an escarpment approximately 45km south of Fraserburg (see Figure 1). As previously reported, on 19 February 2011 Peninsula commenced a program comprising the relogging of the historic JCI boreholes. In conjunction with the relogging Peninsula began a program of RC drilling designed to provide samples for Uranium and Molybdenum geochemical analysis and to establish a correlation between Molybdenum and Uranium. Historic reports suggested a high ratio of Molybdenum to Uranium within these areas of the Karoo.

The RC holes sampled to date are located in the western portion of the historic drilling area (see Figure 2). To date assay results from a total of 38 RC holes have been received with the results confirming a widespread distribution of Molybdenum in association with Uranium.

Due to this positive correlation and grade of the associated Molybdenum Peninsula is extending the RC drilling program to encompass the entire historic drilling area.

In addition to validating the high grade Uranium reported from the down-hole gamma logging program, the very high grade of the associated Molybdenum is particularly encouraging and has led to the decision to expand the RC drilling program to fully determine the extent of the Molybdenum.

These results suggest there is potential to delineate a significant level of Molybdenum with very favourable implications for the economics of the project.

The highlights of the RC drilling include DH 06F0101RC which intersected **6.6ft @ 3,625ppm U₃O₈ and 2,560ppm Mo** from 68.9ft to 75.5ft, DH 06F0473RC which intersected **6.6 ft @ 3,102ppm U₃O₈ and 2,549ppm Mo** from 32.8ft to 39.4ft and DH 06F0509RC which intersected **1.6 ft @ 1,972ppm U₃O₈ and 4,308ppm Mo** from 49.2ft to 50.9ft.

In addition to the numerous high grade U₃O₈ and Mo assays several holes reported mineralised thicknesses in excess of 10ft with a maximum thickness of 16.4ft returned from DH 06F0113RC. The highest uranium intersection received to date is from DH 06F0151RC which reported **1.6ft grading 8,420ppm U₃O₈**.

Refer to Table 1 for the assay results that exceed 200ppm U₃O₈.

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. This process has included site mapping, ground sampling and aerial extent studies of the project areas conducted by Peninsula over the last 3 years.

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 – 150m lbs eU_3O_8 .

The Company's target over the next 18 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.

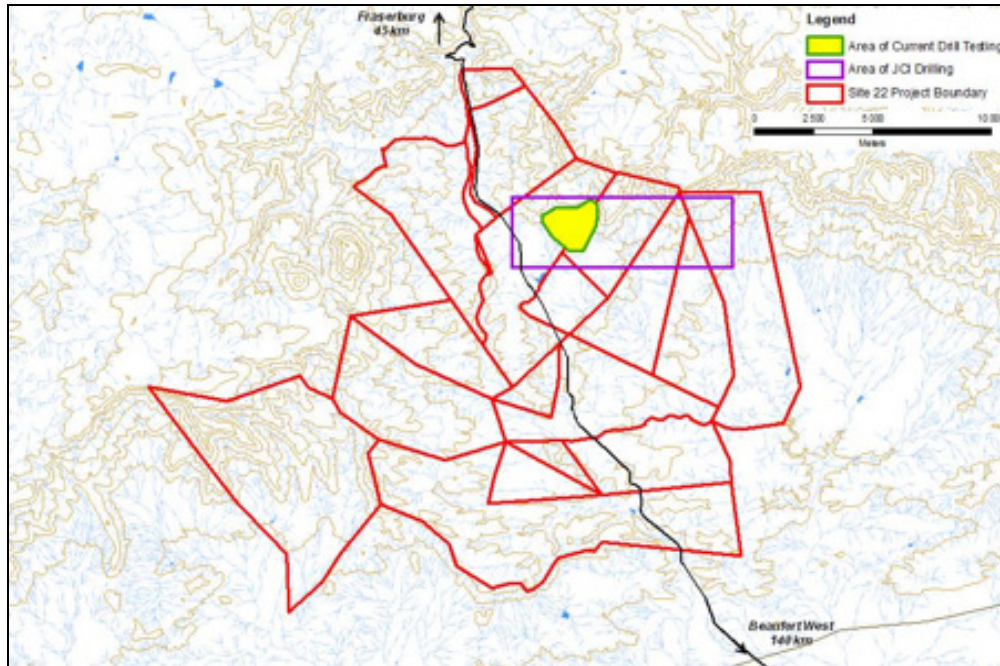


Figure 1: Site 22 Location Plan

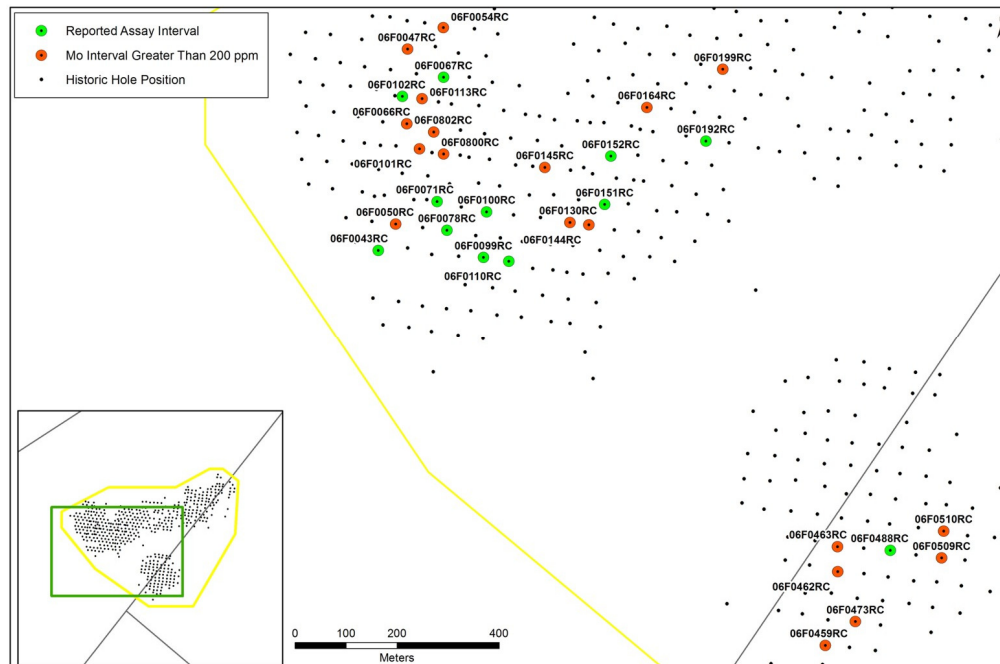


Figure 2: Site 22 RC Drilling Program

HOLE ID	From (ft)	To (ft)	Interval (ft)	U ₃ O ₈ (ppm)	Mo (ppm)
06F0043RC	32.8	36.1	3.3	297	22
06F0047RC	108.3	114.8	6.6	472	916
06F0050RC	42.7	45.9	3.3	819	3,005
06F0054RC	114.8	118.1	3.3	1,818	1,416
06F0066RC	67.3	72.2	4.9	1,547	1,395
06F0067RC	113.2	116.5	3.3	261	26
06F0071RC	55.8	59.1	3.3	897	10
06F0078RC	29.5	39.4	9.8	348	134
06F0099RC	52.5	55.8	3.3	802	44
06F0100RC	32.8	36.1	3.3	2,239	49
06F0100RC	52.5	55.8	3.3	579	10
06F0101RC	68.9	75.5	6.6	3,625	2,560
06F0102RC	88.6	91.9	3.3	265	10
06F0102RC	98.4	105.0	6.6	2,030	1,230
06F0110RC	59.1	62.3	3.3	347	106
06F0113RC	91.9	108.3	16.4	830	283
06F0130RC	24.6	31.2	6.6	1,649	542
06F0144RC	52.5	54.1	1.6	2,413	3,890
06F0145RC	65.6	72.2	6.6	567	581
06F0151RC	29.5	31.2	1.6	8,420	187
06F0152RC	59.1	64.0	4.9	421	10
06F0152RC	82.0	83.7	1.6	377	371
06F0164RC	75.5	78.7	3.3	852	1,261
06F0164RC	95.1	98.4	3.3	838	400
06F0192RC	136.2	141.1	4.9	642	20
06F0199RC	131.2	132.9	1.6	1,885	1,690
06F0459RC	16.4	21.3	4.9	736	646
06F0462RC	27.9	41.0	13.1	1,223	985
06F0462RC	45.9	47.6	1.6	1,687	29
06F0463RC	45.9	47.6	1.6	1,376	1,604
06F0473RC	32.8	39.4	6.6	3,102	2,549
06F0488RC	62.3	64.0	1.6	262	39
06F0509RC	49.2	50.9	1.6	1,972	4,308
06F0510RC	67.3	72.2	4.9	1,756	1,837
06F0800RC	55.8	68.9	13.1	735	624
06F0802RC	75.5	80.4	4.9	3,225	963

Table 1: Karoo Site 22 Assay Results – Uranium and Molybdenum (using a lower grade cut-off of 200ppm U₃O₈)

Yours sincerely



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Executive Chairman

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Competent Person

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Alf Gillman. Mr Gillman is a Fellow of the Australian Institute of Mining and Metallurgy. Mr Gillman is General Manager Project Development and is a Competent Person under the definition of the 2004 JORC Code. Mr Gillman 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'. Mr Gillman consents to the inclusion in the report of the matters based on his 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 boreholes. 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: eU_3O_8 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 U_3O_8 , 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.