



15th March 2011

Companies Announcement Office
Via Electronic Lodgement

HIGH GRADE URANIUM CONFIRMED AT SITE 22 – KAROO PROJECT

Highlights:

- **High grade intercepts included:**

DH 6F473 from 31.8ft to 39.5ft intersected **7.7 ft @ 3,769ppm** eU₃O₈

DH 6F101 from 72.2ft to 76.6ft intersected **4.4 ft @ 3,210ppm** eU₃O₈

DH 6F510 from 71.0ft to 74.6ft intersected **3.6 ft @ 2,152ppm** eU₃O₈

DH 6F803 from 79.7ft to 84.6ft intersected **4.9 ft @ 2,351ppm** eU₃O₈

- **15 significant interceptions confirmed out of 43 holes logged**

- **Historical Mineralisation now validated on Sites 22 and 29**

Peninsula Energy Limited (Peninsula) is pleased to announce the first results from the resource delineation drilling on Project Site 22 at the Karoo Uranium Projects in South Africa. The initial program comprised a dedicated diamond coring rig clearing blocked drill holes and the re-logging of these historic holes using a down hole gamma probe to validate the mineralisation (non JORC compliant) that was defined by exploration in the 1970's.

The objective of the initial program at both Site 22 and Site 29 was to confirm the location and grade of the historic drill results. Peninsula is of the opinion that the results are representative and confirm the presence of high-grade uranium mineralisation within the areas defined by previous exploration.

A program of RC drilling will commence within the month to obtain samples of uranium and molybdenum for geochemical analysis. This will enable the assessment of the previously reported molybdenum; provide Quality Assurance & Quality Control (QAQC) and disequilibrium information.

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Site 22

Site 22 is located on an escarpment approximately 45km south of Fraserburg. To date a total of 43 of the original 707 percussion holes have been re-logged. This represents approximately 6% of the holes drilled by JCI who calculated the presence of approximately 4,800,000 lbs eU_3O_8 grading >1,000ppm eU_3O_8 .

Several spectacular grades were returned from the initial program, including 7.7ft @ 3,769ppm eU_3O_8 from hole 06FN473, 4.4ft @ 3,210ppm eU_3O_8 from hole 06F101, 4.9ft @ 2,351ppm eU_3O_8 from hole 06F803 and 3.6ft @ 2,152ppm eU_3O_8 from hole 06F510.

Of the 43 holes that have been logged to date, 31 have returned uranium mineralisation, 15 of these exceed a grade thickness product of 0.15%ft eU_3O_8 and 4 holes returned multiple mineralised intersections. Table 1 lists the most significant results. Appendix 1 lists all the results received to date.

TABLE 1: Karoo Site 22 Results– February-March 2011 (based on grade thickness > 0.15 ft% eU_3O_8)

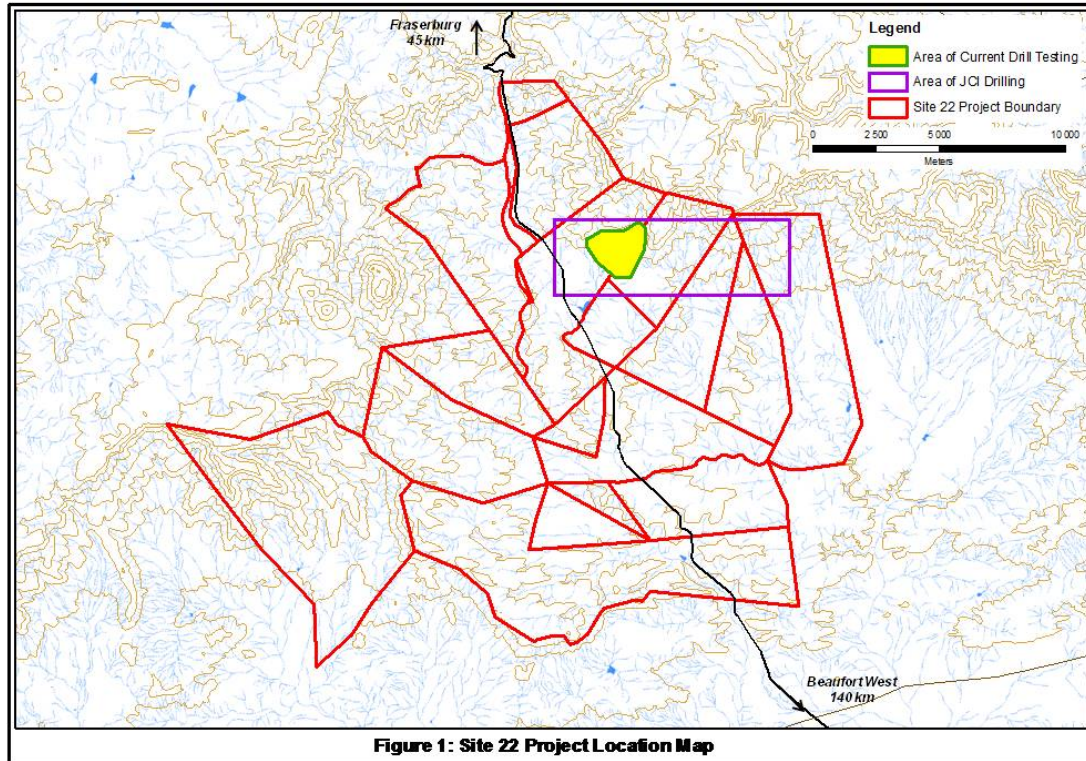
Site	Hole-ID	From (ft)	To (ft)	Interval (ft)	Grade (ppm eU_3O_8)
22	06F086	38.5	45.8	7.2	1,424
22	06F101	72.2	76.6	4.4	3,210
22	06F287	181.1	183.9	2.8	1,447
22	06F292	201.8	203.6	1.8	1,142
22	06F365	384.4	388.9	4.6	1,023
22	06F450	34.0	42.8	8.9	530
22	06F465	38.9	40.5	1.6	1,334
22	06F473	31.8	39.5	7.7	3,769
22	06F474	30.7	33.6	3.0	694
22	06F475	33.0	36.4	3.4	596
22	06F479	158.5	160.6	2.1	952
22	06F510	71.0	74.6	3.6	2,152
22	06F801	64.5	72.2	7.7	649
22	06F801	75.6	77.3	1.6	1,149
22	06F803	79.7	84.6	4.9	2,351

In addition to the re-logging program on Site 22, Peninsula will carry out a program of RC drilling designed to provide samples for uranium and molybdenum geochemical analysis. Historic reports suggest a high ratio of molybdenum to uranium within these areas of the Karoo.

The assay results from the drilling program will be compared to the historic results and also to Peninsula's down hole gamma probe results thereby providing QAQC data. The effect of disequilibrium is not considered to be an issue in the Karoo due to the age of the deposits (Permo-Triassic ~250 million years ago) but it will be checked by comparing the geochemical assay results against the down hole gamma logging.

Approximately 40% of Site 22's 120km² project area is underlain by the target host sandstone that is known as the Poortjie Member of the Teekloof Formation. This equates to approximately 48km² of prospective sandstone. Exploration activity to date has been restricted to a small portion of the project area.

Figure 1 illustrates the area that has been drill-tested to date.



Karoo Projects – Exploration Potential

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 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.

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 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'.

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 eU₃O₈ 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 eU₃O₈ 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 U₃O₈ 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.

APPENDIX 1: Karoo Site 22 Results- February-March 2011

Site	Hole-ID	From (ft)	To (ft)	Interval (ft)	Grade (ppm eU3O8)
22	06F036	38.9	40.2	1.3	257
22	06F058	57.7	59.9	2.1	373
22	06F058	62.0	63.8	1.8	211
22	06F058	66.3	67.3	1.0	246
22	06F086	38.5	45.8	7.2	1,424
22	06F101	72.2	76.6	4.4	3,210
22	06F183	75.3	76.3	1.0	231
22	06F187	137.8	138.1	0.3	245
22	06F187	142.4	143.2	0.8	453
22	06F212	0.0	0.0	0.0	-
22	06F214	0.0	0.0	0.0	-
22	06F220	0.0	0.0	0.0	-
22	06F238	65.8	67.3	1.5	980
22	06F268	0.0	0.0	0.0	
22	06F269	351.5	352.9	1.3	783
22	06F279	0.0	0.0	0.0	
22	06F287	181.1	183.9	2.8	1,447
22	06F291	0.0	0.0	0.0	-
22	06F292	201.8	203.6	1.8	1,142
22	06F325	396.7	397.6	1.0	318
22	06F333	410.9	411.1	0.2	213
22	06F344	401.7	402.7	1.0	540
22	06F365	380.2	381.6	1.3	718
22	06F365	384.4	388.9	4.6	1,023
22	06F440	0.0	0.0	0.0	
22	06F448	32.2	33.0	0.8	292
22	06F450	34.0	42.8	8.9	530
22	06F453	0.0	0.0	0.0	-
22	06F455	0.0	0.0	0.0	-
22	06F461	34.1	34.9	0.8	372
22	06F465	38.9	40.5	1.6	1,334
22	06F465	60.9	61.8	1.0	949
22	06F472	24.8	25.6	0.8	384
22	06F473	31.8	39.5	7.7	3,769
22	06F474	25.9	26.2	0.3	201
22	06F474	30.7	33.6	3.0	694
22	06F475	33.0	36.4	3.4	596
22	06F479	158.5	160.6	2.1	952
22	06F480	0.0	0.0	0.0	
22	06F480	0.0	0.0	0.0	
22	06F484	0.0	0.0	0.0	
22	06F487	34.4	36.1	1.6	398
22	06F494	133.7	136.0	2.3	439
22	06F494	138.3	138.6	0.3	381
22	06F495	0.0	0.0	0.0	-
22	06F508	38.2	39.0	0.8	382
22	06F510	71.0	74.6	3.6	2,152
22	06F517	0.0	0.0	0.0	
22	06F801	64.5	72.2	7.7	649
22	06F801	75.6	77.3	1.6	1,149
22	06F803	79.7	84.6	4.9	2,351
22	06F804	64.8	66.3	1.5	753