

31 January 2012

Australian Stock Exchange Limited (ASX) Company Announcements Platform

Via e-lodgement

# 31 DECEMBER 2011 QUARTERLY ACTIVITIES REPORT HIGHLIGHTS

# WYOMING, USA - LANCE URANIUM PROJECTS

- Definitive Feasibility & Expanded Economic Studies Confirm Viability of Lance Projects
- NRC Approves Deep Disposal Well Testing
- Resource Upgrade Drilling Intercepts Further High Grade Mineralisation

## SOUTH AFRICA – URANIUM / MOLYBDENUM EXPLORATION

- Shallow High Grade Drill Results at Site 29 include:
  - > DH QFN0162RC 10.7ft @ 1,755ppm eU3O8 from 29.2ft
  - > DH QFN0167RC 3.6ft @ 2,560ppm eU308 from 31.2ft
- Exploration commences at highly prospective Site 45 with Positive Initial Results
  - > 13 of 15 re-logged holes returned intersections greater than 200ppm
  - Highlight DH SFN0336 9.2ft @ 1,095ppm eU3O8 from 45.4ft
- On-going work programs aimed at providing sufficient information to declare future JORC-compliant resource

# **CORPORATE**

Cash at 31 December 2011 \$19.3m

# WYOMING, USA - LANCE PROJECTS

(Peninsula Energy 100%)

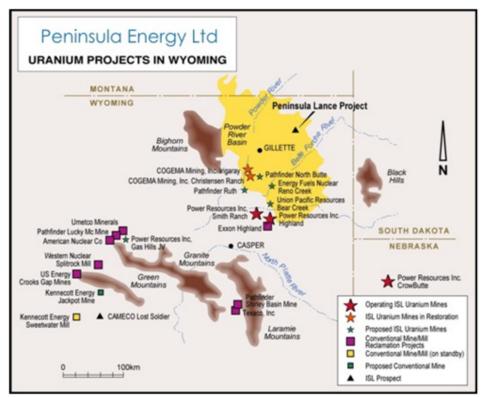


Figure 1: Lance Projects location, Wyoming USA

## Definitive Feasibility and Expanded Economic Studies Confirm the Viability of Lance Projects

On 21 December 2011 Peninsula announced the completion of the Ross project Definitive Feasibility Study (DFS) and the Lance projects Expanded Economic Study (EES) on three production units planned for Ross, Kendrick and Barber.

The key results of the DFS and EES are summarized below:

- The Ross DFS and the Lance EES confirmed the technical and economic viability of the Lance in-situ recovery (ISR) uranium projects;
- Ross DFS NPV US\$46 million;
- Lance EES NPV US\$207 million with an initial capital requirement of US\$79 million including the capital cost
  of the Central Processing Plant (CPP);
- Steady state total production cost of US\$31.55 per pound U<sub>3</sub>O<sub>8</sub> including indirect taxes, royalties and ongoing well-field development (C1 cash costs of US\$11.93 per pound); and
- Planned steady state annual production rate of 2.19mlbs U<sub>3</sub>O<sub>8</sub> per annum from three production units within three years of start-up with initial mine plan based on 17.2mlbs recovered U<sub>3</sub>O<sub>8</sub>
- Exploration potential of Lance projects estimated at 95-145mlbs U<sub>3</sub>O<sub>8</sub>

The Lance ISR uranium projects are ready to be progressed to development stage following permitting and project funding which are well advanced. Subject to Board approval, construction is estimated at six months commencing 2012, with first production targeted for late 2012/early 2013, ramping up over 2013. This timeline is subject to permitting approvals.

The Company is now working towards detailed design and engineering and to awarding an EPCM contract for the projects ahead and the commencement of site preparation works.

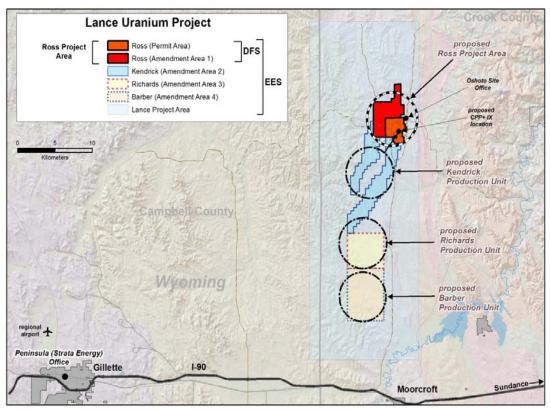


Figure 2: Lance Uranium Project DFS and EES, Wyoming USA

## DFS Results

The DFS was completed by Lyntek Inc. (Denver based engineers) on the June 2011 measured and indicated resources of 8.8mlbs  $U_3O_8$  at the Ross production unit only and established the operating costs, well-field parameters and development costs which are applied in the EES to the first three production units being Ross, Kendrick and Barber.

The DFS was completed on the Ross production unit which will produce 750klbs  $U_3O_8$  per annum for a 10 year minimum life from the JORC-compliant measured and indicated resources contained within the original Ross project permit application and an area containing further measured and indicated resources that is an extension of the Ross permit area (see figure 2).

The DFS assumes a network of well units, each containing four injection wells, one extraction (production) well, gathering station and monitor wells. On a standalone basis, the Ross production unit has a NPV of US\$46 million.

The DFS includes US\$46.1 million initial capital expenditure for the setup of Ross, all variable costs associated with production from Ross (including the variable costs of processing in the CPP) and all labour related fixed costs of operating Ross. The DFS excludes, however, the capital cost of the CPP, the fixed costs of operating the CPP and decommissioning costs as, in practice, these costs will be spread across multiple production units within Lance (as illustrated in the EES) over an extended period of time.

#### EES Results

The Lance projects have 312 line kilometres of identified roll fronts, 13 zones of drill-determined mineralisation and an exploration target of 95-145mlbs U<sub>3</sub>O<sub>8</sub>.

Rockbury Capital FZ LLC and the Company applied the parameters used in the DFS to the EES which includes a total 23.3mlbs of  $U_3O_8$ . This number assumes the conversion of a 12.1mlbs of the 30.1mlbs of inferred  $U_3O_8$  resources that are currently delineated at the Lance projects to indicated category or better.

A further resource calculation will be completed prior to the mining approval board meeting scheduled for late March 2012. This re-calculation will include all drill-hole results from July 2011 to March 2012.

The EES anticipates the expanded project including Ross, Kendrick and Barber production units feeding a Central Processing Plant (CPP) with an expandable capacity of up to 3.0mlbs per annum. The CPP evaluation was included in the Lyntek Scope of Work and as such is to a DFS level of accuracy.

In the EES the first production unit will be at Ross with a capacity of 750klbs per annum and production ramping up over 3 years to 2.19mlbs per annum steady-state production with the inclusion of the Kendrick and Barber production units.

The EES was completed to demonstrate the potential of the broader Lance projects. Realisation of this potential will be dependent on continued exploration and permitting success. In the EES further production units are assumed to be permitted for development at Kendrick and Barber and to follow Ross into production at 12 month intervals feeding the CPP.

The economic evaluation of these production units conducted as part of the EES yield standalone NPVs of US\$111 million at Ross, US\$75 million at Kendrick and US\$64 million at Barber. The expanded project producing 2.19mlbs per annum U $_3$ O $_8$  has an estimated NPV of US\$207 million including all capital and operating costs associated with the CPP.

It should be noted that the EES is not to the same level of certainty as the DFS, however these estimates are based on the existing JORC compliant resources within the Lance projects and have had the operational, production and financial parameters generated by the DFS applied to them. The Company and its advisors consider this to be appropriate due to the homogeneity of the mineralisation and operating environment.

The Company is also continuing the drill program at Kendrick and Barber with the aim of upgrading a minimum 40% of the inferred resources into a measured or indicated category to provide the feedstock for the expanded project.

## Central Processing Plant

The CPP has been designed and permitted with the capacity to produce up to 3.0mlbs  $U_3O_8$  per annum. It has a modular design that will allow expansion of up to four 750klbs per annum production units.

The CPP will house the initial ion exchange (IX) circuit and will see an additional IX circuit installed with the commissioning of the second production unit planned for Kendrick located in close proximity to the CPP.

Additional IX circuits for remote satellite production units will not be housed at the CPP but at locations near the remote production units. Loaded resin from these facilities will be transported to the CPP for further processing into yellow cake.

The cost of the CPP (initial 1.5mlbs pa capacity) is estimated by Lyntek Inc. at US\$38m (excluding the IX circuits but inclusive of a vanadium circuit, ancillaries and mobile equipment) and will be operational for all phases of the Lance projects. Prior to the commissioning of the Barber production unit an additional US\$8m capital investment will be required to expand CPP capacity to 2.25mlbs per annum. Lyntek estimates the fixed operating costs of the CPP to be US\$4.1 million per annum, which will be spread across all production units operating at that point in time. As such, fixed CPP operating costs were excluded from the Ross DFS, but included in the EES.

# Capital Expenditure

Table 1: Initial Capital Requirement as per DFS

Capital Costs	Total US\$m Including Contingency	US\$ Per lb U₃O₃ Including Contingency
Ross IX, RO, 1st DDW & WF infrastructure	18.6	2.99
Capitalised Operating Costs	1.2	0.20
Capitalised Wellfield Dev. Costs	19.1	3.08
Working Capital Requirements	2.8	0.46
Intangible Costs	4.4	0.71
Total	46.1	7.45

Table 2: Initial Capital Requirement as per EES

Capital Costs	Total US\$m Excluding Contingency	US\$ Per lb U₃O <sub>8</sub> Excluding Contingency
Central Plant	17.3	1.00
Ancillaries – Plant	5.0	0.29
Ancillaries – Site	5.7	0.33
Vanadium Circuit	3.0	0.18
Mobile Equipment	2.9	0.17
Indirect Capital	4.0	0.23
Sub-total CPP	38.0	2.21
Ross IX, RO, 1st DDW & WF infrastructure	21.8	1.27
Capitalised Operating Costs	3.3	0.18
Capitalised Wellfield Dev. Costs	15.2	0.88
Working Capital Requirements	0.6	0.03
Total	78.9	4.58

# Cash Operating Expenditure

Table 3: Steady-State Operating Costs as per EES

Cash Operating Cost	US\$m Per Annum	US\$ Per Ib U₃O <sub>8</sub>
Operating Costs	26.1	11.93
Royalties / Indirect Taxes	23.6	10.80
Wellfield Development	19.3	8.82
Total	69.0	31.56

## Revenues

Sales of U3O8 are predominantly contracted on a long term basis with prices determined by a pre-set formulae linked to the reported term and/or spot prices.

In the DFS, Lyntek used a price forecast of US\$63.31-79.50 per pound for the 2013-2022 period of operations.

For EES modeling purposes the Company has adopted a price forecast based on a UX Consulting Inc. (UxC) independent report on the long term uranium market for the period 2013-2030. The EES assumes  $U_3O_8$  production is sold at a contract price of US\$62.58 per pound, 2011 base escalated at an average 2.6% per annum.

# Nuclear Regulatory Commission Approves Earlier Deep Disposal Well Testing

On 16 January 2012 the United States Nuclear Regulatory Commission (NRC) advised Peninsula's wholly owned subsidiary Strata Energy, Inc. that the development of a deep disposal well to test subsurface conditions would be considered exploration activity (as opposed to construction) and therefore Strata can begin drilling without any further approval.

This decision allows the Company to proceed with DDW testing significantly ahead of original schedule and could see flow rates at the upper limits of expectation that would lead to significant capital expenditure reductions at the Lance Projects.

Construction and operation of up to five Underground Injection Control (UIC) Class 1 wells at the Lance Central Processing Plant site was approved by the Wyoming Department of Environmental Quality (WDEQ) in April 2011. At the time of WDEQ permit issuance, the NRC regulations classified the drilling of any deep disposal well as part of the operation of an ISR project and subsequently a NRC Source Material License (SML) or an Exception was required to develop and test a deep disposal well (DDW).

Late in 2011 amendments to the NRC regulations relating to construction, including necessary borings to determine foundation conditions or other preconstruction monitoring to establish background information related to the suitability of the site, the environmental impacts of construction or operation, or the protection of environmental value, are excluded from the definition of construction and therefore do not require an Exception from the NRC.

The DDW'S will be used to inject non-hazardous wastes at depths in excess of 8,000 feet below the surface in order to meet the water management requirements of the proposed operations at the Lance Projects.

The NRC has confirmed that Strata can, upon the issue of the SML, apply to have the test deep disposal well converted for operations.

# **Permitting and Project Development Timeline**

The Company has submitted technical and environmental applications to the Wyoming Department of Environmental Quality (WDEQ) for the Permit to Mine and the Nuclear Regulatory Commission (NRC) for the Source Materials License. These submissions have been accepted as technical/environmental complete for review by both agencies. The quality of the submissions has provided the Company with the basis to submit amendments to bring on the further production units in a timely and efficient manner.

The WDEQ has finalised its technical and environmental reviews and the Company has completed the submission on the request for further information. The WDEQ has advised that subject to the Company lodging the appropriate restoration and reclamation bonds, and finalizing the acquisition of land for the CPP, the Permit to Mine will be issued for public comment.

The NRC is continuing its technical and environmental review and has advised that request for further information will be issued to the Company in December 2011. The Company is well advanced in collating additional information that may be required (based on precedent). The NRC has also advised that it will complete the draft supplemental environmental impact statement (DSEIS) by no later than December 2012.

Based on the quality of the applications submitted by the Company it is anticipated that the DSEIS will be released prior to the timeline indicated by the NRC.

# **Drilling Programme**

Ross Drilling – October to December 2011

During the December quarter Peninsula completed a further 180 development drillholes for a total of 165,790 feet at the Ross Project area. Two rotary mud rigs were engaged during the quarter.

The highlights of the drilling during the quarter were drillhole RMR1531 which intersected 21ft @ 830ppm  $eU_3O_8$  (GT 1.74) including a peak intersection of 1.5ft @ 1,150ppm  $eU_3O_8$ , drillhole RMRD1610 which intersected 26.5ft @ 390ppm  $eU_3O_8$  (GT 1.03) and drillhole RMR1595 which intersected 20.5ft @ 371ppm  $eU_3O_8$  (GT 0.76) including a peak intersection of 2.5ft @ 1,750ppm  $eU_3O_8$ .

Of the 180 drill holes completed at Ross during the quarter, a total of 20 holes encountered mineralisation greater than 0.2GT. A total of 18 holes recorded multiple stacked intersections of uranium mineralisation.

Current drilling at Ross is testing extensions of the known mineralised zones identified by the 3D geological model, enhancing the grade and definition of the current 41,428,559 lb U<sub>3</sub>O<sub>8</sub> JORC compliant resource and upgrading existing inferred resources to indicated status.

The majority of the drilling during the quarter has been stepped out into to the western parts of the Ross project area and was primarily focused on converting inferred mineralisation to indicated category. In addition, the drilling has identified new occurrences of stacked roll front mineralisation in sparsely drilled areas.

The drilling to the west of the Ross project area during the quarter has targeted roll fronts occurring in three main sandstone horizons:

- D Sandstone (Upper Lance Formation) with an average depth to mineralisation of 178ft;
- C Sandstone (Lower Lance Formation) with an average depth to mineralisation of 720ft; and
- B Sandstone (Lower Lance Formation) with and average depth to mineralisation of 805ft.

The high grade intersections are located within the mineralised C and D horizons in sandstones belonging to the Lower Lance Formation. These two horizons are located above the mineralised A and B horizons in sandstones of the Fox Hills Formation which, within the eastern parts of the Ross project area, contain the majority of the existing resources<sup>1</sup>. The results highlight the additional potential of the C and D mineralised horizons within the Lower Lance Formation. Like the Fox Hills Formation the Lance Formation is developed over most of the project area.

Within the eastern parts of the Ross project area the majority of the roll fronts are developed in the A and B sandstones of the Upper Hills Formation and the Lower Lance Formations respectively. The exploration results to date suggest that mineralisation within the C and D sandstones may be more dominant to the west. The A sandstones remain an open exploration target with several near-seepage and remote barren zones, which are indicative of roll front systems, having been identified. On-going drilling is extending this mineralisation to the west and south within the Lower Lance Formation together with further testing of the roll fronts located in the underlying Fox Hills Formation.

The recent drilling has produced thick higher grade intercepts, and the area is now recognised as a key area for resource expansion given its close proximity to the proposed Central Processing Plant site. .

The highlight of the drilling was hole RMR1531 which intersected 21ft @ 830ppm  $eU_3O_8$  (GT 1.74) from 714.75ft to 735.75ft. Significantly, this intersection contained a 11.5ft peak intersection grading 1,150ppm  $eU_3O_8$ . In addition, hole RMR1610 which is located 1,200m (3,950ft) northeast from RMR1531, intersected 26.5ft @ 390ppm  $U_3O_8$  demonstrating the continuation of strong mineralisation in this roll front system.

While this drilling is exploring the potential for additional roll front systems not previously identified, results such as these also contribute directly to the indicated resource inventory. To date, the regional exploration program has been very successful in identifying new mineralised roll front systems and drilling will continue to step out into these targeted areas that have the potential to significantly increase the existing resource inventory<sup>1</sup>

Table 4: Best Drilling Results (based on grade thickness > 0.2 ft%), Drill Period October to December 2011 ROSS DRILLING

Hole ID	Local Northing	Local Easting	Depth (ft)	From (ft)	Intercept ft / eU3O8 grade ppm	Peak Concentration Intercept ft eU3O8 grade ppm	Grade Thickness ft%e U3O8
RMR1648	4934606	500728	1000	839.75	6'@350ppm	1.5'@700 ppm	0.21
RMR1615	4935773	500716	860	723	13.5'@156ppm	3' @ 480 ppm	0.21
RMR1634	4934653	500770	1000	847	17'@124ppm		0.21
RMR1631	4935549	500856	860	699	15'@165ppm	4' @ 360 ppm	0.25
RMR1491	4936662	500702	940	165.75	6'@420ppm	4' @ 560 ppm	0.25
RMR1519	4936706	500985	980	854.25	20.5'@123ppm	2'@610ppm	0.25
RMR1495	4936672	500984	970	848.25	13'@200ppm	2.5'@310ppm	0.26
RMR1644	4934605	500746	1000	848.75	17'@153ppm		0.26
RMR1505	4936573	500960	1000	824.75	16.5'@164ppm	2'@670ppm	0.27
RMR1607	4935816	500801	860	692.75	2.5'@400ppm		0.31
RMR1620	4934631	500752	1020	840	32.5'@100ppm	2.5' @ 450 ppm	0.33
RMR1570	4935857	500805	840	694.25	10.5'@310ppm	1.5'@540ppm	0.33
RMR1591	4935796	500766	860	722.75	6'@550ppm	4.5' @ 690 ppm	0.33
RMR1570	4935857	500805	840	716.75	5.5'@614ppm	2'@1450ppm	0.34
RMR1514	4935918	500794	880	714.25	17'@240ppm	2.5'@320ppm	0.41
RMR1501	4936617	500983	960	865.25	11'@390ppm	3.5'@730ppm	0.43
RMR1568	4935796	500787	840	703.25	10.5'@460ppm	2'@1000ppm	0.48
RMR1595	4935782	500745	860	711.75	20.5'@371ppm	2.5'@1750ppm	0.76
RMR1610	4935590	500838	860	716.25	26.5'@390ppm	6.5' @ 540 ppm	1.03
RMR1531	4935919	500813	880	714.75	21'@830ppm	11.5' @1150ppm	1.74

# Lance Projects - Exploration Potential

The Lance project covers an area of over 120km² within which there is a combined total of at least 305 line kilometres (190 miles) of known stacked roll fronts. Of this total, only a small percentage has been explored with over 90% of the drilling concentrated within the more advanced Ross and Barber areas. Based on the historic conversion rate from roll front length to a drill-defined resource the mineralised potential of the Lance Projects, which is in addition to the JORC-compliant resource, is assessed at between 95 and 145 Mlbs eU<sub>3</sub>O<sub>8</sub>.

**Table 5: Lance Project Exploration Potential** 

Exploration Areas	Tonnes (M)		Ioration Areas Tonnes (M) Grade (ppm eU₃O₃)		eU₃O <sub>8</sub> (Mlbs)	
Range	From	То	From	То	From	То
Total	117.7	134.7	360	500	95	145

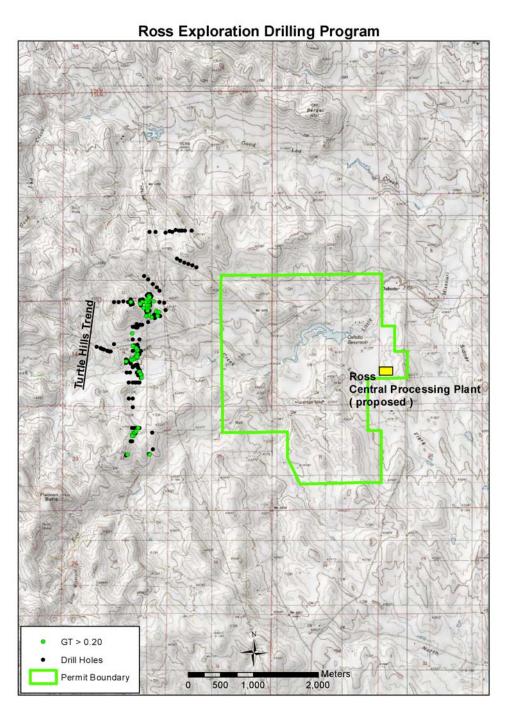


Figure 3: Ross and Barber Drilling December 2011 Quarter

## SOUTH AFRICA – URANIUM / MOLYBDENUM EXPLORATION

(Peninsula Energy 74% / BEE Group 26%)

# Karoo Projects, South Africa

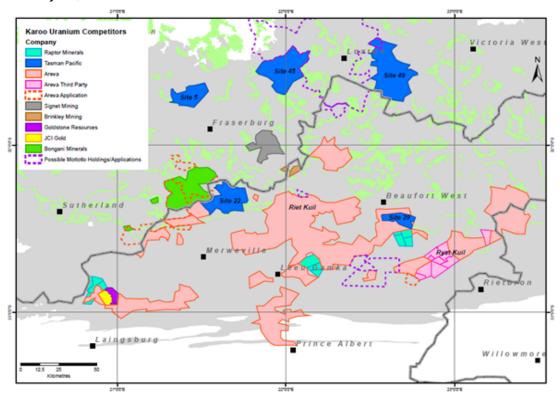


Figure 4: South Africa - Uranium / Molybdenum Project Area Locations

Peninsula's wholly owned subsidiary Tasman Pacific Minerals Limited holds prospecting rights to six project areas in the Karoo region of South Africa. They are designated Site 5 (Fraserburg District), Site 22 (Fraserburg District), Site 29 (Beaufort West District), Site 37 (Cradock District), Site 45 (Loxton District) and Site 49 (Loxton District). Two of the sites (22 and 45) contain resource estimates by JCI in the early 1980's and one site (29) contains a resource estimate by Union Carbide in the early 1980's. *Introduction* 

Approximately 1500 boreholes were drilled by JCI (Site 22 and 45) and Union Carbide (Site 29) during the late 1970's from which historic mineral estimates were derived. The first phase of the Tasman Pacific drilling programme in the Karoo commenced on 25 January 2011 at Site 29 and is focused on a selection of the JCI and Union Carbide drill holes to be re-drilled and logged to determine uranium correlations in order to confirm the historical resources. Further exploration work has identified numerous other untested uranium occurrences at these sites and other sites (Site 5, 49 and 37). In many cases old boreholes were re-opened and gamma probed for  $eU_3O_8$  values to be determined. Where reverse circulation (RC) or diamond drilling (DD) work was undertaken, the samples were submitted for analysis at an accredited laboratory to verify the gamma probe grades and obtain a value for molybdenum, which is considered to be an important by-product.

RC drilling continued at Site 29 during the quarter and further demonstrated the widespread distribution of near surface high grade uranium located in broad paleochannels. Initial exploration also commenced at the highly prospective Site 45 with the re-logging of 15 open historic drillholes, with 13 of these recording intersections greater than 200ppm.

#### Site 29

Since the commencement of exploration at Site 29 in January 2011, Peninsula has completed 210 RC drillholes for 5,381m (17,654ft). This drilling has returned a total of 95 intersections in excess of 200ppm. A further 167 historic holes have also been probed returning 82 intersections in excess of 200ppm eU3O8.

Since July 2011 a total of 113 RC, diamond and historic-hole-confirmation drillholes have been completed, with the majority during the current quarter. Of these completed holes, a total of 47 intersections were returned in excess of 200ppm eU<sub>3</sub>O<sub>8</sub>. The full list of significant intersections (>200ppm) is detailed below in Table 6.

The drill results continue to confirm strong high-grade mineralisation in paleochannels averaging a thickness of 3.05ft (at 200ppm  $eU_3O_8$  cut off). This mean thickness is consistent with the historic results for the project site and is typical of the thickness of mineralised zones in the Karoo.

# Highlights included:

QFN0162RC 10.7ft at 1,755ppm eU<sub>3</sub>O<sub>8</sub> from 29.2ft
 QFN0382RC 20.5ft at 300ppm eU<sub>3</sub>O<sub>8</sub> from 23.8ft
 QFN0167RC 3.61ft at 2,560ppm eU<sub>3</sub>O<sub>8</sub> from 31.2ft

During the 1970's Union Carbide calculated the presence of approximately 600,000lbs eU<sub>3</sub>O<sub>8</sub> in a small part of Site 29 which in total covers 128km<sup>2</sup> (refer Figure 5).

Union Carbide reported an average grade exceeding 1,000ppm eU<sub>3</sub>O<sub>8</sub> and the mineralisation being hosted by the Poortjie formation. This sedimentary sandstone formation is the main target for uranium mineralisation in the Karoo.

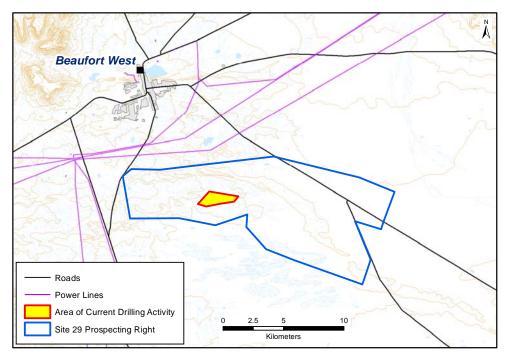


Figure 5: Site 29 Location Plan, Karoo RSA.

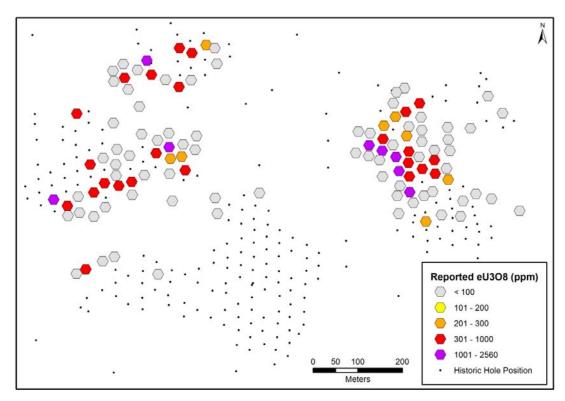


Figure 6: Site 29 July to December 2011 Reported Drillhole Location Plan (>200ppm eU3O8), Karoo RSA.

Hole-ID	Easting	Northing	Drill Depth (ft)	From (ft)	To (ft)	Interval (ft)	Grade (ppm eU3O8)
QFN0106RC	-34433	-3590416	68.90	14.93	15.58	0.66	281
QFN0139RC	-34447	-3590151	65.62	32.64	35.10	2.46	470
QFN0155RC	-34471	-3590259	65.62	37.40	41.67	4.27	589
QFN0156RC	-34472	-3590284	65.62	27.23	29.69	2.46	972
QFN0159RC	-34469	-3590350	75.46	23.46	25.59	2.13	2137
QFN0162RC	-34500	-3590271	65.62	29.20	39.86	10.66	1755
QFN0163RC	-34493	-3590303	65.62	28.71	31.00	2.30	2012
QFN0167RC	-34531	-3590257	65.62	31.17	34.78	3.61	2560
QFN0169RC	-34529	-3590231	65.62	31.66	33.96	2.30	541
QFN0173RC	-34560	-3590245	65.62	31.33	34.28	2.95	1558
QFN0202RC	-34957	-3590038	75.46	57.41	60.04	2.62	485
QFN0206RC	-34985	-3590027	75.46	57.91	59.06	1.15	333
QFN0209RC	-35058	-3590055	78.74	53.48	55.77	2.30	1063
QFN0221RC	-34972	-3590301	98.43	56.10	57.74	1.64	869
QFN0222RC	-34980	-3590270	98.43	62.17	65.62	3.44	250
QFN0226RC	-35008	-3590249	82.02	63.65	66.44	2.79	1529
QFN0227RC	-35005	-3590275	82.02	58.40	59.22	0.82	266

QFN0232RC	-35037	-3590263	82.02	59.06	62.34	3.28	795
QFN0232RC	-35037	-3590263	82.02	68.73	69.23	0.49	239
QFN0241RC	-35092	-3590327	98.43	54.13	62.17	8.04	407
QFN0245RC	-35108	-3590094	82.02	62.01	62.66	0.66	303
QFN0255RC	-35153	-3590330	75.46	54.79	56.10	1.31	420
QFN0255RC	-35153	-3590330	75.46	61.68	64.30	2.62	754
QFN0263RC	-35185	-3590288	78.74	60.70	63.16	2.46	397
QFN0270RC	-35215	-3590174	82.02	56.43	60.04	3.61	463
QFN0280DD	-35267	-3590367	131.23	47.74	49.70	1.97	1142
QFN0280DD	-35267	-3590367	131.23	52.99	58.89	5.91	729
QFN0353RC	-35236	-3590381	78.74	46.26	51.67	5.41	938
QFN0359RC	-35048	-3590087	75.46	57.91	59.22	1.31	502
QFN0362RC	-35195	-3590523	98.43	74.80	76.44	1.64	541
QFN0364RC	-34470	-3590315	75.46	22.97	25.26	2.30	532
QFN0364RC	-34470	-3590315	75.46	27.40	28.87	1.48	412
QFN0365RC	-34441	-3590298	52.49	25.43	25.59	0.16	209
QFN0365RC	-34441	-3590298	52.49	28.87	30.68	1.80	734
QFN0366RC	-34412	-3590309	59.06	25.10	31.17	6.07	711
QFN0367RC	-34383	-3590322	55.77	26.57	29.86	3.28	270
QFN0368RC	-34925	-3590020	78.74	53.15	54.63	1.48	239
QFN0372RC	-34986	-3590114	75.46	59.22	60.20	0.98	335
QFN0374RC	-34414	-3590278	65.62	27.72	28.87	1.15	426
QFN0377RC	-34476	-3590224	65.62	27.89	28.05	0.16	205
QFN0382RC	-34527	-3590201	65.62	23.79	44.29	20.51	300
QFN0383RC	-34501	-3590181	65.62	25.26	25.59	0.33	207
QFN0383RC	-34501	-3590181	65.62	34.12	39.21	5.09	199
QFN0384RC	-34478	-3590170	65.62	29.53	30.84	1.31	421
QFN0384RC	-34478	-3590170	65.62	37.89	38.55	0.66	221
QFN0401RC	-35177	-3590351	82.02	50.85	56.10	5.25	654
QFN0402RC	-35121	-3590336	98.43	52.17	59.38	7.22	490

Table 6: Site 29 - Karoo Site 29 RC Results for July to December 2011- Uranium (> 200ppm eU308)

It is important to note that exploration activity to date has been concentrated on a very limited part of Site 29. Further exploration drilling is planned for 2012 to determine the sub-surface extent of the host sandstone unit and to target further mineralization. This will be accomplished by drilling 200m spaced stratigraphic holes in both east-west and north-south fences across the property.

#### Site 45

Site 45 is located 120km northwest of Beaufort West and comprises a contiguous area of 489km<sup>2</sup>. During the late-1970's JCI completed a total of 431 exploration holes in a central portion of the project area. Based on this data JCI calculated the presence of approximately 4.8Mlbs eU<sub>3</sub>O<sub>8</sub> in the Davidskolk formation.

Post the JCI drilling, rock chip sampling by the South African Geological Survey returned maximum values of  $4,210ppm\ U_3O_8$  and 1,372ppm Mo within the project area indicating an associated high grade molybdenum occurrence.

During December 2011 Peninsula field crew were able to undertake non-invasive exploration work in preparation for an extensive drilling campaign planned for 2012 at Site 45. A total of 15 drillholes that were open to the expected mineralised depth were probed with a gamma tool. This initial program returned results for 13 with intersections exceeding 200ppm with highlights including:

DH SFN0336
 9.2ft at 1,095ppm eU<sub>3</sub>O<sub>8</sub> from 45.4ft
 DH SFN0443
 7.7ft at 592ppm eU<sub>3</sub>O<sub>8</sub> from 47.4ft

An RC drilling programme is planned at Site 45 for 2012 and the Company is awaiting the final approval of drill permits. The completion of this programme should allow the generation of an initial JORC compliant resource for the Karoo Project Sites 22, 29 and 45.

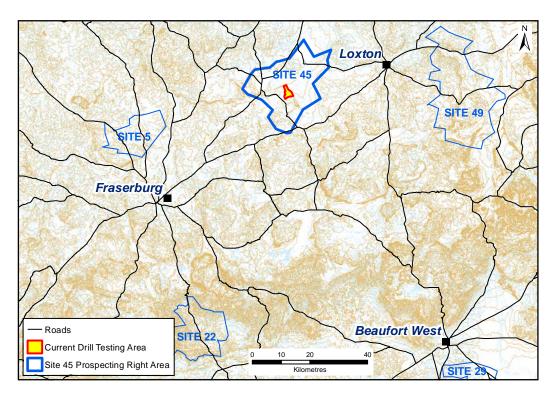


Figure 7: Site 45 Location Plan, Karoo RSA.

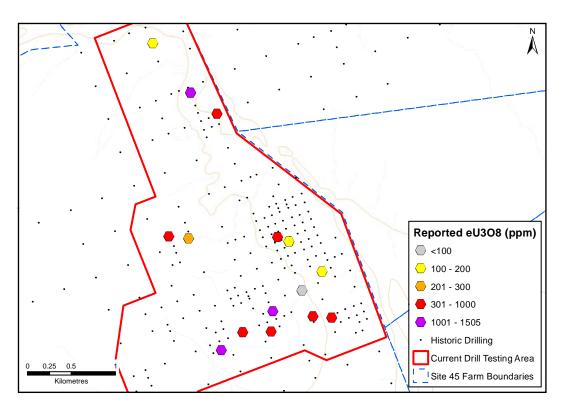


Figure 8: Site 45 Drillhole Location Plan, Karoo RSA.

Hole-ID	Easting	Northing	Total Depth Logged (ft)	From (ft)	To (ft)	Interval (ft)	Grade (ppm eU3O8)
SFN0021	93862	-3495579	55.0	36.7	38.4	1.64	688
SFN0058	93244	-3494521	213.9	85.5	86.0	0.49	372
SFN0099	93570	-3493121	309.4	158.5	166.2	7.71	488
SFN0315	93617	-3495779	157.2	129.8	132.1	2.30	1,689
SFN0320	94185	-3495569	193.2	163.1	164.4	1.31	654
SFN0326	94875	-3495413	212.9	201.1	202.9	1.80	1,179
SFN0332	94661	-3495400	251.5	231.8	232.8	0.98	632
SFN0336	94205	-3495343	184.4	45.4	54.6	9.19	1,095
SFN0413	93022	-3494501	107.6	70.4	72.0	1.64	389
SFN0425	93266	-3492886	145.3	89.2	90.4	1.15	1,012
SFN0425	93266	-3492886	145.3	97.1	98.8	1.64	1,337
SFN0433	94260	-3494508	206.4	47.4	55.1	7.71	592
SFN0434	94389	-3494558	203.2	55.9	56.1	0.16	214

Table 7: Karoo Site 45 Re-logging Results – Uranium (> 200ppm eU308)

Karoo Projects - Exploration Potential

Results achieved to date are generally very positive and indications are that the current strategy has successfully confirmed the presence of high-grade uranium and molybdenum mineralisation located at depths that can easily be reached by conventional open pit mining.

In addition to the existing resource drilling areas, a total of 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 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.

#### FIJI – RAKIRAKI GOLD PROJECT

(Peninsula Energy 50% / Geopacific Resources NL operator 50%)

During mid to late 2010 Geopacific Resources NL (GPR), through Geotech Ltd (Geotech), carried out a helicopterborne geophysical survey over several areas of Fiji including the RakiRaki project area. The ZTEM method employed utilized an AFMAG Z-axis Tipper electromagnetic sensor.

Preliminary and final data processing, including generation of final digital data and map products were undertaken at the offices of Geotech in Aurora, Ontario. Further processing and interpretation of the data was undertaken by Southern Geoscience Consultants Pty Ltd of Perth (SGC).

The RakiRaki survey area is located in north east Viti Levu and consists of 42 survey lines oriented in a northwest direction and covering an area of 173 km² with 400m line spacing. Six conductive trends have been interpreted by Geotech, with potential correlation of these conductive trends with known structural features.

Historic exploration is being compiled and is being used in conjunction with the recent ZTEM data to define and prioritise drilling targets.

# **CORPORATE**

# **Project Development Funding**

The Company is well advanced in structuring and implementing the funding plan for the development of the operation. It is anticipated that funding will be sourced from a combination of debt and equity.

In conjunction with Rockbury Capital FZ LLC and Boswell Capital Corporation, the Company has executed Non Disclosure Agreements with several international banking and uranium industry groups. These groups are currently reviewing the Company's electronic data room with a view to proposing a financing arrangement, or part thereof. In several cases this will be combined with U3O8 sale and purchase arrangements.

#### Cash Position

The Company's cash position at the end of the quarter, including commercial bills, bonds and security deposits, was \$19.32 million.

# For further information please contact:

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#### **Competent Persons Statement**

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves at the Lance Projects is based on information compiled by Mr Alf Gillman and Mr Jim Guilinger. 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 Guilinger is a Member of a Recognised Overseas Professional Organisation included in a list promulgated by the ASX (Member of Mining and Metallurgy Society of America and SME Registered Member of the Society of Mining, Metallurgy and Exploration Inc). Mr Guilinger is Principal of independent consultants World Industrial Minerals. Both Mr Gillman and Mr Guilinger 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 a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

The information in this report that relates to Exploration Results and Exploration Potential at Peninsula's Karoo projects is based on information compiled by Mr Alf Gillman and Mr George van der Walt. 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 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 Geoconsult International. 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.

The information in this report that relates to Exploration Results and Exploration Potential at the Raki Raki Project in Fiji is based on information compiled by Dr Ian Pringle, Member of the Australasian Institute of Mining and Metallurgy. Dr Pringle is Managing Director of Geopacific Resources NL. Dr Pringle 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, Mr Guilinger, Mr van der Walt and Dr Pringle 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 report 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.

### Cautionary and Inferred Resources Notices

The DFS completed on the Ross production unit includes measured and indicated resources within the Ross project area, excluding vanadium. The EES includes measured and indicated resources within the remainder of the Lance projects including an assumed resource conversion of 40% (inferred to indicated or greater) and vanadium in accordance with the ratio of 2.6:1 U3O8 to V2O5 mineralisation identified within the permit area.

The EES is based on various assumptions, including homogeneity of the delineated ore body contained within the Lance projects. This is considered reasonable by Company's technical consultants, competent persons and independent external consultants.

The purpose of the EES was to demonstrate the Lance projects continued economic viability and robustness over an extended life beyond the Ross production unit - which is limited to measured and indicated resources of 6.2mlbs recovered U3O8.

In accordance with the relevant regulations governing the disclosure of mineral projects, readers are cautioned that mineable resources based on inferred resource material are considered too speculative geologically to enable them to be classified as reserves.

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. Disequilibrium factors were calculated using the Peninsula PFN database and categorized by area and lithological horizon. Specific disequilibrium factors have been applied to the relevant parts of the resource based on comparative studies between PFN and gamma data. There is an average positive 11% factor applied. All  $eU_3O_8$  results above are affected by issues pertaining to possible disequilibrium and uranium mobility.

## <sup>1</sup> Current JORC Compliant Resource Estimate

Resource Classification	Tonnes Ore (M)	U₃O <sub>8</sub> kg (M)	U <sub>3</sub> O <sub>8</sub> lbs (M)	Grade (ppm U₃O <sub>8</sub> )
Measured	3.6	1.7	3.8	479
Indicated	7.9	3.4	7.5	433
Inferred	33.1	13.7	30.2	414
Total	44.6	18.8	41.5	422

(The JORC resource is reported above a lower grade cut-off of 200ppm and a GT of 0.2)