5th May 2011

Companies Announcement Office
Via Electronic Lodgement

NEW ROLL FRONT SYSTEM DISCOVERED AT LANCE AND HIGH GRADE DRILL RESULTS CONTINUE

Highlights

- **New Roll front system discovered and confirmed in Area 16, average thickness 12.4ft grading 470ppm U_3O_8 (GT 0.58)**
- **Significant Intercepts include:**

  RMR1020 from 524.25ft to 538.75ft intersected **14.5 ft @ 380ppm** U_3O_8 **(GT 0.55)**

  RMR0997 from 584.75ft to 600.25ft intersected **15.5 ft @ 281ppm** U_3O_8 **(GT 0.46)**

  RMR0999 from 635.25ft to 645.75ft intersected **10.5 ft @ 409ppm** U_3O_8 **(GT 0.41)**
  (including peak intersection of **4.5ft @ 740ppm** U_3O_8)

  RMR1023 from 618.25ft to 637.25ft intersected **19.0 ft @ 215ppm** U_3O_8 **(GT 0.41)**

- **Drilling continues to convert indicated resource from inferred status**
- **Results will also add to inferred resources at next resource upgrade**

Summary

Peninsula Energy Limited (Peninsula) is pleased to announce that it has completed a further 89 exploration drill holes for a total of 40,420 feet at the Lance Project, of which 50 holes encountered significant mineralisation and 12 holes reported multiple stacked intersections of uranium.

Current drilling is designed to convert the existing inferred resource[1] to indicated JORC compliant resource status within and adjacent to the Ross Permit Area. Most of the current drilling is either targeted at extensions to the existing resource perimeters or at identifying new roll front mineralisation that is yet to be categorised.

To this end a new mineralised roll front has been identified in Area 16, with average thickness of 12.4ft and grade 470ppm. This roll front was previously unclassified and will add directly to the next resource estimate.

Results continue to demonstrate thick intervals of stacked mineralisation present in the high priority, previously untested area immediately to the north west of Ross. One drilling rig is currently engaged within the Ross Permit Area while a second drilling rig is dedicated to the expanded Ross and Barber areas.

2011 Lance Drilling Program

During the period 22 March to 26 April 2011 Peninsula has completed 89 drill holes at Ross of which 50 holes encountered significant mineralisation and 12 holes reported multiple stacked intersections of uranium.

The focus of the drilling was within and adjacent to the resource zones in the Ross Permit area, (predominantly in Sections 12, 13 and 24 as shown in Figure 1 below).

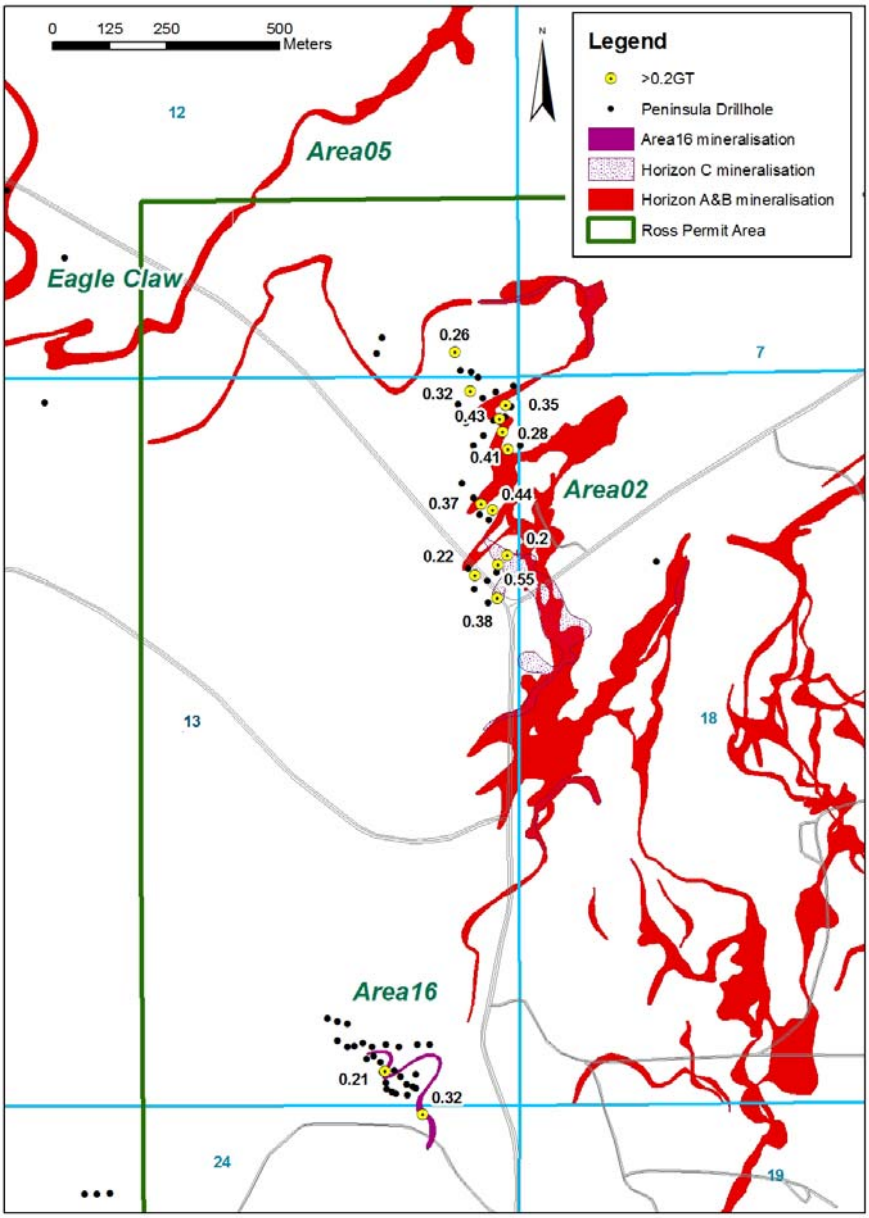

Figure 1: Location Map Showing Significant Results

Resource definition drilling during the period was mostly outside the existing resource perimeter of resource Area 02 in the northern parts of Section 13 and southern portion of Section 12. Exploration drilling also continued to test extensions of the newly-discovered roll front system in the southern parts of Section 13 known as Area16.

The latest drilling results include 12 separate intersections with GT greater than 0.2ft/%. (Refer Figure 1 and Table 1). Most of these intersections are located outside the existing measured/indicated resource boundaries and will add further to the recently announced resource inventory.

On-going drilling in the southern parts of Section 12 is designed to test the continuity of roll fronts between Area02 and the newly discovered rollfront mineralisation known as "Eagle Claw" located further to the west where exploration drilling has extended the resource 1,200m along strike. A feature of the Eagle Claw area is the almost coincident nature of the lower A Horizon and the upper B Horizon roll fronts. The Horizon A and B drilling is currently targeting the "noses" of the roll fronts with the intention of increasing the overall resource grade. Further testing of the north-westerly extension of this trend is continuing.

In addition, towards the south western portion of the Ross Permit Area a second newly-identified roll front has been confirmed with average thickness of 12.4ft and grade 470ppm (Figure 1). Further drilling continues to determine the full extent of this system, which is not included in the current resource estimate.

TABLE 1: Drilling Results Ross March -April 2011 (based on grade thickness > 0.2GT)

Hole ID	Local Northing	Local Easting	Depth (ft)	From (ft)	Intercept ft / PFN U3O8 grade ppm	Peak Concentration Intercept ft /PFN U3O8 grade ppm	Grade Thickness ft% U3O8
RMR0944	4935064	502720	660	575.75	7'@460ppm	3.5'@720ppm	0.32
RMR0968	4935158	502637	700	582.75	7.5' @ 279 ppm	3'@520ppm	0.21
RMR0969	4536546	502882	720	622.25	12'@214ppm	1.5'@540ppm	0.26
RMR0976	4936661	502825	720	689.25	5.5'@590ppm	0.5'@1110ppm	0.32
RMR0994	4936532	502909	700	629.25	16.5'@170ppm	6.5'@260ppm	0.28
RMR0997	4936398	502874	680	584.75	15.5'@281ppm	1'@580ppm	0.44
RMR0999	4936571	502897	720	635.25	10.5'@409ppm	4.5'@740ppm	0.43
RMR1002	4936412	502849	660	605.25	8.5'@430ppm	4'@580ppm	0.37
RMR1008	4936255	502836	640	574.25	6.5'@340ppm	2'@550ppm	0.22
RMR1010	4936204	502884	640	496.75	15.5'@240ppm	7.5'@350ppm	0.38
RMR1018	4936278	502887	640	535.75	3'@680ppm	1'@1220ppm	0.20
RMR1019	4936747	502792	740	605.75	9'@285ppm	3'@620ppm	0.26
RMR1020	4936299	502906	640	524.25	14.5'@380ppm	3.5'@570ppm	0.55
RMR1020	4936299	502906	640	583.75	4'@740ppm	1.5'@1070ppm	0.30
RMR1023	4936599	502889	740	618.25	19'@215ppm	1.5'@540ppm	0.41
RMR1027	4936631	502904	720	641.75	15'@230ppm	9'@280ppm	0.35

(Cutoff > 2 feet and 100ppm). Refer Table 2 for complete list of results for the period.

Peninsula continue to utilise an advanced 3D geological and resource modelling system to assist in the identification of targets in previously unexplored areas. Significantly, the area of strong mineralisation defined over the last three months in the area to the north west of Ross had not been drill tested previously by the Nubeth drilling in the 1970s.

Conclusion

These results are reporting a high percentage of ore grade holes. This is due to a robust geological model which forms the basis of on-going drill planning.

Peninsula is pursuing a strategy of converting inferred resource to indicated resource as well as undertaking regional exploration that aims to locate the mineralised portions of over 320 lineal kilometres of mapped redox boundaries. To date this regional exploration has proved successful in identifying new mineralised roll front systems (such as Eagle Claw and Area 16) and drilling will continue to step out into these targeted areas that have the potential to significantly increase the existing resource inventory.

Yours sincerely

John (Gus) Simpson
Executive Chairman

For further information, please contact our office on (08) 9380 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 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'. Both Mr Gillman and Mr Guilinger consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

All U_3O_8 grades from the 2008-2010 drilling are obtained from the prompt fission neutron (PFN) down-hole probe and are not subject to disequilibrium effects.

1 Current JORC Compliant Resource Estimate

Resource Classification	Tonnes Ore (M)	U3O8 kg (M)	U3O8 lbs (M)	Grade (ppm U3O8)
Measured	3.7	1.7	3.8	472
Indicated	7.0	3.0	6.7	434
Inferred	22.6	10.2	22.5	450
Total	33.3	14.9	32.9	449

Table of Results Complete

Hole ID	Local Northing	Local Easting	Depth (ft)	From (ft)	Intercept ft / PFN U3O8 grade ppm	Peak Concentration Intercept ft /PFN U3O8 grade ppm	Grade Thickness ft% U3O8
RMR0938	4936636	501887	780	651	4'@30ppm		0.01
RMR0939	4936955	501932	880	737	8'@15ppm		0.01
RMR0940	4937105	501804	880	810	6'@16ppm		0.01
RMR0941	4935218	502736	700				0.00
RMR0942	4934467	503247	700				0.00
RMR0943	4934452	503207	680				0.00
RMR0944	4935064	502720	660	575.75	7'@460ppm	3.5'@720ppm	0.32
RMR0945	4935121	502705	660	563.25	2'@100ppm		0.02
RMR0946	4935217	502708	700	608	5'@20ppm		0.01
RMR0947	4934436	503164	660				0.00
RMR0948	4935212	502668	700				0.00
RMR0949	4934413	503131	620				0.00
RMR0950	4935125	502699	660				0.00
RMR0951	4935151	502705	660				0.00
RMR0952	4934379	503098	620				0.00
RMR0953	4934472	503291	660	530.25	1.5' @ 150ppm		0.02
RMR0954	4934478	503326	680	561.25	2' @ 110ppm		0.02
RMR0955	4934386	503061	620				0.00
RMR0956	4935129	502685	660	568.75	2.5' @ 170ppm	0.5' @ 210ppm	0.04
RMR0957	4935146	502671	660				0.00
RMR0958	4935161	502657	660	515.75	4.5' @ 150ppm	0.5' @ 200ppm	0.07
RMR0959	4934383	503146	640				0.00
RMR0960	4935218	502639	700				0.00
RMR0961	4935213	502608	700				0.00
RMR0962	4935215	502569	700	612.75	1' @ 120ppm		0.01
RMR0963	4934477	503351	680				0.00
RMR0964	4934351	503303	640	491.25	5.5' @160ppm	0.5' @ 210ppm	0.09
RMR0965	4935192	502612	700	544.75	2.5' @ 180ppm	1.0' @ 230ppm	0.05
RMR0966	4935226	502533	700				0.00
RMR0967	4935213	502555	700				0.00
RMR0968	4935158	502637	700	582.75	7.5' @ 279 ppm	3'@520ppm	0.21
RMR0969	4536546	502882	720	622.25	12'@214ppm	1.5'@540ppm	0.26
RMR0969	4536546	502882	720	644.75	1.5'@120ppm		0.02
RMR0970	4935222	502589	700	609.25	2'@130ppm		0.03
RMR0971	4936597	502876	720	632.25	2'@190ppm	0.5'@150ppm	0.04
RMR0972	4935106	502687	680	572.75	1.5'@110ppm		0.02
RMR0973	4936597	502845	720	646.75	1.5'@120ppm		0.02
RMR0974	4935119	502640	680	579	6'@20ppm		0.01
RMR0975	4935157	502631	680	587.75	2'@120ppm		0.02
RMR0976	4936661	502825	720	600.75	6.5'@120ppm		0.08
RMR0976	4936661	502825	720	689.25	5.5'@590ppm	0.5'@1110ppm	0.32
RMR0977	4935109	502662	680	667	3'@25ppm		0.01
RMR0978	4936562	502854	720	639.25	3'@140ppm		0.04
RMR0979	4935113	502653	680	577.75	2'@410ppm	1'@580ppm	0.08
RMR0980	4936645	502852	720				0.00
RMR0981	4934888	502002	780	580	2'@25ppm		0.00
RMR0982	4936743	502618	800	728.75	2'@120ppm		0.02
RMR0983	4934890	502031	780	566	4'@25ppm		0.01
RMR0984	4934888	501976	780				0.00
RMR0985	4936779	502630	780	692.25	0.5'@110ppm		0.01
RMR0986	4936632	502799	720	598.75	5'@160ppm		0.08
RMR0987	4935133	502639	680	572	4'@25ppm		0.01

RMR0988	4936593	502816	560				0.00
RMR0989	4935179	502628	700	597.75	8.5'@70ppm		0.06
RMR0990	4935185	502597	700	601.75	2'@140ppm		0.03
RMR0991	4935263	502554	700				0.00
RMR0992	4935268	502533	700				0.00
RMR0993	4935276	502510	700	608	3'@25ppm		0.00
RMR0994	4936532	502909	700	629.25	16.5'@170ppm	6.5'@260ppm	0.28
RMR0995	4936376	502866	660	521.25	1.5'@120ppm		0.02
RMR0995	4936376	502866	660	544.75	5'@108ppm	1'@260ppm	0.05
RMR0995	4936376	502866	660	590.25	2'@150ppm		0.03
RMR0996	4936591	502815	700	645.75	3'@160ppm		0.05
RMR0997	4936398	502874	680	584.75	15.5'@281ppm	1'@580ppm	0.44
RMR0998	4936541	502833	700	602.25	1.5'@140ppm		0.02
RMR0999	4936571	502897	720	635.25	10.5'@409ppm	4.5'@740ppm	0.43
RMR1000	4940229	500472	1000	856	8'@10ppm		0.01
RMR1001	4936540	502935	720	645.75	1'@120ppm		0.01
RMR1002	4936412	502849	660	562.75	2'@100ppm		0.02
RMR1002	4936412	502849	660	605.25	8.5'@430ppm	4'@580ppm	0.37
RMR1003	4936388	502846	660	602.25	1'@100ppm		0.01
RMR1004	4936426	502832	700	564	3'@25ppm		0.01
RMR1005	4940225	500415	1000	853	3'@25ppm		0.01
RMR1006	4936243	502862	640	500.75	2'@130ppm		0.03
RMR1006	4936243	502862	640	576.75	5'@170ppm		0.09
RMR1007	4936457	502807	720	563.25	2.5'@220ppm		0.06
RMR1007	4936457	502807	720	637.25	1.5'@130ppm		0.02
RMR1008	4936255	502836	640	574.25	6.5'@340ppm	2'@550ppm	0.22
RMR1009	4936604	502901	720	626	10'@10ppm		0.01
RMR1010	4936204	502884	640	533.25	1.5'@160ppm		0.02
RMR1010	4936204	502884	640	579.75	6.5'@260ppm	1'@550ppm	0.17
RMR1010	4936204	502884	640	496.75	15.5'@240ppm	7.5'@350ppm	0.38
RMR1011	4936627	502916	740	642.75	7.5'@75ppm		0.06
RMR1012	4936270	502821	640	563.25	1.5'@130ppm		0.02
RMR1013	4936659	502882	740	650.75	5'@150ppm	1.5'@280ppm	0.08
RMR1014	4936284	503236	600	670	10'@10ppm		0.01
RMR1015	4936692	502842	740	593.25	16'@113ppm	2.5'@270ppm	0.18
RMR1015	4936692	502842	740	681.25	1'@110ppm		0.01
RMR1016	4936261	502883	640	533.25	4.5'@154ppm	1.5'@310ppm	0.07
RMR1017	4936706	502803	740	700.75	1.5'@150ppm		0.02
RMR1018	4936278	502887	640	586.25	1.5'@170ppm		0.03
RMR1018	4936278	502887	640	535.75	3'@680ppm	1'@1220ppm	0.20
RMR1019	4936747	502792	740	706.25	1.5'@130ppm		0.02
RMR1019	4936747	502792	740	605.75	9'@285ppm	3'@620ppm	0.26
RMR1020	4936299	502906	640	524.25	14.5'@380ppm	3.5'@570ppm	0.55
RMR1020	4936299	502906	640	583.75	4'@740ppm	1.5'@1070ppm	0.30
RMR1021	4936703	502827	740	607.25	4.5'@118ppm		0.05
RMR1021	4936703	502827	740	687.75	3'@340ppm	0.5'@530ppm	0.10
RMR1022	4936194	502864	640	508.25	6'@117ppm		0.07
RMR1023	4936599	502889	740	618.25	19'@215ppm	1.5'@540ppm	0.41
RMR1024	4936224	502834	640	582.75	2.5'@210ppm		0.05
RMR1025	4936673	502920	740	620	3'@25ppm		0.01
RMR1027	4936631	502904	720	641.75	15'@230ppm	9'@280ppm	0.35