

**FORM 51-102F3**

**Material Change Report**

**ITEM 1. REPORTING ISSUER**

Kivalliq Energy Corporation (the "Issuer")  
Suite 1020, 800 W. Pender St.  
Vancouver, British Columbia, V6C 2V6

**ITEM 2. DATE OF MATERIAL CHANGE**

January 15, 2013

**ITEM 3. PRESS RELEASE**

Issued January 15, 2013 and distributed through the facilities of Marketwire, via Canadian Timely Disclosure, and Blender Media to the Issuer's email list. The news release was also posted to the Issuer's website ([www.kivalliqenergy.com](http://www.kivalliqenergy.com)) and the Aurora Mineral Resource Group's website ([www.auroraresource.com](http://www.auroraresource.com)).

**ITEM 4. SUMMARY OF MATERIAL CHANGE**

The Issuer announced a significant increase in the NI 43-101 compliant Mineral Resource estimate for the Lac 50 Trend uranium deposits, located within the Issuer's 340,268 acre Angilak Property in Nunavut, Canada. The Issuer has received a summary report from Robert Sim, P.Geo. of SIM Geological Inc. that describes an Inferred Mineral Resource Estimate of 2,831,000 tonnes grading 0.69% U<sub>3</sub>O<sub>8</sub> (15.2 lbs U<sub>3</sub>O<sub>8</sub>/tonne), totalling 43.3 million lbs U<sub>3</sub>O<sub>8</sub> at a 0.2% U<sub>3</sub>O<sub>8</sub> cut-off grade. This is a 60% increase over the previous Resource Estimate of 27.1 million pounds.

**ITEM 5. FULL DESCRIPTION OF MATERIAL CHANGE**

See attached News Release.

**ITEM 6. RELIANCE ON SUBSECTION 7.1(3) OF NATIONAL INSTRUMENT 51-102**

Not applicable. This report is not being filed on a confidential basis

**ITEM 7. OMITTED INFORMATION**

No information has been omitted on the basis that it is confidential information.

**ITEM 8. EXECUTIVE OFFICER**

Contact: James Paterson

Telephone: 604-646-4527

**ITEM 9. DATE OF REPORT**

DATED at Vancouver, B.C., this 15<sup>th</sup> day of January 2013.

## Kivalliq Announces 60% Increase in Uranium Resource; Lac 50 Trend Deposits Expand to 43.3 million lbs U<sub>3</sub>O<sub>8</sub>

January 15, 2012

**Vancouver, B.C. – Kivalliq Energy Corporation (KIV: TSX-V “Kivalliq”)** announces a significant increase in the NI 43-101 compliant Mineral Resource estimate for the Lac 50 Trend uranium deposits, located within Kivalliq’s 340,268 acre Angilak Property in Nunavut, Canada. Kivalliq has received a summary report from Robert Sim, P.Geo. of SIM Geological Inc. that describes an Inferred Mineral Resource Estimate of 2,831,000 tonnes grading 0.69% U<sub>3</sub>O<sub>8</sub> (15.2 lbs U<sub>3</sub>O<sub>8</sub>/tonne), totalling 43.3 million lbs U<sub>3</sub>O<sub>8</sub> at a 0.2% U<sub>3</sub>O<sub>8</sub> cut-off grade. This is a 60% increase over the previous Resource Estimate of 27.1 million pounds.

“Since announcing our initial inferred resource for Lac 50 Trend in early 2011, Kivalliq’s exploration programs have increased the contained U<sub>3</sub>O<sub>8</sub> in resources by more than 300% and we have one of the largest undeveloped and highest-grade uranium resources in Canada, outside of the Athabasca Basin,” stated Kivalliq CEO Jim Paterson. “Our low finding costs, the rate of new discoveries and the third consecutive year of substantial uranium resource growth clearly demonstrate the “District Scale” potential of the Angilak Property.”

**Table 1: Updated Inferred Mineral Resources Estimate for Lac 50 Trend (0.2% U<sub>3</sub>O<sub>8</sub> cut-off)**

| Deposit          | Tonnes<br>(t x 1000) | U <sub>3</sub> O <sub>8</sub><br>(%) | Ag<br>(g/t) | Mo<br>(%)   | Cu<br>(%)   | U <sub>3</sub> O <sub>8</sub><br>(M lbs) | Ag<br>(oz x 1000) | Mo<br>(M lbs) | Cu<br>(M lbs) |
|------------------|----------------------|--------------------------------------|-------------|-------------|-------------|------------------------------------------|-------------------|---------------|---------------|
| Lac<br>Cinquante | 1,906                | 0.67                                 | 16          | 0.15        | 0.25        | 28                                       | 983               | 6.3           | 10.4          |
| J4 / Ray         | 925                  | 0.75                                 | 30.1        | 0.20        | 0.26        | 15.3                                     | 895               | 4.1           | 5.2           |
| <b>Total</b>     | <b>2,831</b>         | <b>0.69</b>                          | <b>20.6</b> | <b>0.17</b> | <b>0.25</b> | <b>43.3</b>                              | <b>1,878</b>      | <b>10.4</b>   | <b>15.6</b>   |

Notes:

- At Lac Cinquante, high U<sub>3</sub>O<sub>8</sub> grades were cut to 5% and grade limiting was applied to those grades above 3%. At J4/Ray high U<sub>3</sub>O<sub>8</sub> grades were cut to 4%
- Mineral Resources are not Mineral Reserves. Mineral Resources do not have demonstrated economic viability, and may never be converted into Mineral Reserves.

### Mineral Resource Estimate

The updated Mineral Resource estimate for the Lac 50 Trend was prepared under the direction of Robert Sim, P.Geo. of SIM Geological Inc. Resource models were generated using drill core sample assay results and interpretation of a geological model relating to spatial distribution of uranium deposits within the Lac 50 Trend, i.e. Lac Cinquante (Main, Eastern and Western Extension Zones), J4 and Ray deposits. All assay and geological information was derived from work conducted by Kivalliq as part of exploration programs between 2009 and 2012 and available at December 31, 2012. At a base case cut-off grade of 0.2% U<sub>3</sub>O<sub>8</sub>, an Inferred Mineral Resource is estimated at 2,831,000 tonnes grading 0.69% U<sub>3</sub>O<sub>8</sub>, containing 43.3 million lbs. U<sub>3</sub>O<sub>8</sub>. For evaluation purposes, three additional metals: silver (Ag g/t), molybdenum (Mo %) and copper (Cu %) have also been estimated within the resource model.

The increase in the Inferred Mineral Resource from the previous 2012 estimate is primarily attributed to the addition of the newly-discovered J4 and Ray deposits, situated near surface and 1.8 kilometres along strike from the eastern margin of the Lac Cinquante Eastern Extension zone. The sensitivity of mineral resources contained within the Lac 50 Trend is presented at a series of U<sub>3</sub>O<sub>8</sub> cut-off thresholds for

comparison purposes in Table 2 and the base case cut-off grade of 0.2% U<sub>3</sub>O<sub>8</sub> is highlighted. Kivalliq believes that the base case used is conservative but appropriate at this stage of the project's development.

**Table 2: Sensitivity of Inferred Mineral Resources within Lac 50 Trend**

| Cut-off Grade (U <sub>3</sub> O <sub>8</sub> %) | Tonnes (T x 1000) | U <sub>3</sub> O <sub>8</sub> (%) | Ag (g/t)    | Mo (%)      | Cu (%)      | U <sub>3</sub> O <sub>8</sub> (M lbs) | Ag (oz x 1000) | Mo (M lbs)  | Cu (M lbs)  |
|-------------------------------------------------|-------------------|-----------------------------------|-------------|-------------|-------------|---------------------------------------|----------------|-------------|-------------|
| <b>Lac Cinquante</b>                            |                   |                                   |             |             |             |                                       |                |             |             |
| 0.1                                             | 2,547             | 0.53                              | 13.7        | 0.13        | 0.23        | 30                                    | 1123           | 7.1         | 12.7        |
| <b>0.2</b>                                      | <b>1,906</b>      | <b>0.67</b>                       | <b>16</b>   | <b>0.15</b> | <b>0.25</b> | <b>28</b>                             | <b>983</b>     | <b>6.3</b>  | <b>10.4</b> |
| 0.3                                             | 1,479             | 0.79                              | 17.2        | 0.17        | 0.25        | 25.6                                  | 818            | 5.5         | 8.3         |
| 0.4                                             | 1,136             | 0.92                              | 17.7        | 0.19        | 0.25        | 23                                    | 647            | 4.8         | 6.3         |
| 0.5                                             | 882               | 1.06                              | 18.9        | 0.22        | 0.25        | 20.5                                  | 534            | 4.3         | 4.9         |
| <b>J4/Ray</b>                                   |                   |                                   |             |             |             |                                       |                |             |             |
| 0.1                                             | 1,039             | 0.69                              | 28.4        | 0.19        | 0.25        | 15.7                                  | 947            | 4.3         | 5.7         |
| <b>0.2</b>                                      | <b>925</b>        | <b>0.75</b>                       | <b>30.1</b> | <b>0.20</b> | <b>0.26</b> | <b>15.3</b>                           | <b>895</b>     | <b>4.1</b>  | <b>5.2</b>  |
| 0.3                                             | 791               | 0.84                              | 31.7        | 0.21        | 0.25        | 14.6                                  | 806            | 3.7         | 4.3         |
| 0.4                                             | 553               | 1.04                              | 38          | 0.26        | 0.25        | 12.7                                  | 675            | 3.1         | 3           |
| 0.5                                             | 495               | 1.11                              | 40.1        | 0.27        | 0.25        | 12.1                                  | 637            | 2.9         | 2.7         |
| <b>Combined Lac Cinquante and J4/Ray</b>        |                   |                                   |             |             |             |                                       |                |             |             |
| 0.1                                             | 3,585             | 0.58                              | 18          | 0.14        | 0.23        | 45.7                                  | 2070           | 11.4        | 18.4        |
| <b>0.2</b>                                      | <b>2,831</b>      | <b>0.69</b>                       | <b>20.6</b> | <b>0.17</b> | <b>0.25</b> | <b>43.3</b>                           | <b>1878</b>    | <b>10.4</b> | <b>15.6</b> |
| 0.3                                             | 2,270             | 0.80                              | 22.3        | 0.18        | 0.25        | 40.2                                  | 1624           | 9.2         | 12.6        |
| 0.4                                             | 1,689             | 0.96                              | 24.3        | 0.21        | 0.25        | 35.7                                  | 1322           | 7.9         | 9.4         |
| 0.5                                             | 1,377             | 1.08                              | 26.5        | 0.24        | 0.25        | 32.6                                  | 1171           | 7.2         | 7.7         |

Note:

-Base case cut-off limit of 0.2% U<sub>3</sub>O<sub>8</sub> is highlighted in the table

The distribution of Inferred Mineral Resources in the different zones within the Lac 50 Trend is listed below in Table 3.

**Table 3: Inferred Mineral Resource Estimate for Lac 50 Trend by Zone (0.2% U<sub>3</sub>O<sub>8</sub> cut-off)**

| Zone                     | Tonnes (T x 1000) | U <sub>3</sub> O <sub>8</sub> (%) | Ag (g/t)    | Mo (%)      | Cu (%)      | U <sub>3</sub> O <sub>8</sub> (M lbs) | Ag (oz x 1000) | Mo (M lbs)  | Cu (M lbs)  |
|--------------------------|-------------------|-----------------------------------|-------------|-------------|-------------|---------------------------------------|----------------|-------------|-------------|
| Lac 50 Main              | 892               | 0.83                              | 13.5        | 0.23        | 0.17        | 16.2                                  | 387            | 4.5         | 3.3         |
| Lac 50 Western Extension | 709               | 0.51                              | 17.5        | 0.04        | 0.33        | 7.9                                   | 399            | 0.7         | 5.2         |
| Lac 50 Eastern Extension | 304               | 0.57                              | 20.1        | 0.17        | 0.28        | 3.8                                   | 197            | 1.1         | 1.9         |
| J4 Upper                 | 592               | 0.70                              | 23.3        | 0.15        | 0.28        | 9.1                                   | 443            | 1.9         | 3.7         |
| J4 Lower                 | 258               | 0.94                              | 45.8        | 0.28        | 0.24        | 5.3                                   | 379            | 1.6         | 1.4         |
| Ray                      | 76                | 0.53                              | 29.9        | 0.37        | 0.1         | 0.9                                   | 73             | 0.6         | 0.2         |
| <b>Total</b>             | <b>2,831</b>      | <b>0.69</b>                       | <b>20.6</b> | <b>0.17</b> | <b>0.25</b> | <b>43.3</b>                           | <b>1878</b>    | <b>10.4</b> | <b>15.6</b> |

Note:

- Contained metal values may not add due to rounding.

Kivalliq has drilled 449 core holes totalling 75,782 metres on the Angilak Property over the past four years. Sixteen were completed in 2009, 107 holes in 2010, 153 holes in 2011, and 173 during the 2012 field season. Of these, 335 NQ-size holes totalling 59,716 metres were dedicated to delineating the Lac Cinquante (Main, East and Western Extension Zones), J4 and Ray deposits, which have been used in the generation of the mineral resource estimate.

The distribution of the inferred resource above the 0.2%  $U_3O_8$  cut-off at Lac Cinquante, J4 and Ray is shown in images at [http://kivalliqenergy.com/projects/angilak/program\\_images/](http://kivalliqenergy.com/projects/angilak/program_images/).

The resource models are constrained within 3-dimensional domains representing the mineralized portion of the host mafic tuff and shear zones. Drill hole samples are composited to the full width of the zone and true thicknesses are determined for each drill hole intercept. At Lac Cinquante, blocks in the model measure 5x5x5 metres in size whereas at J4 and Ray, blocks in the model are 5x3x3 metres. Only the portion of those model blocks within the mineralized domain is included in the final resource estimate. The method used for the estimation of  $U_3O_8$  grade is ordinary kriging using length-weighted composited drill hole intervals. Estimates for Ag, Mo and Cu utilize the inverse distance weighting ( $ID^2$ ) interpolation method.

Resource tonnages are calculated using a bulk density database containing 1,579 samples that were collected during the 2010, 2011 and 2012 drilling programs. Samples were composited to the full width of the mineralized domain and bulk densities at Lac Cinquante range from 2.35 t/m<sup>3</sup> to 3.77 t/m<sup>3</sup> with a mean of 2.85 t/m<sup>3</sup>. Bulk densities at J4 and Ray range from 2.52 t/m<sup>3</sup> to 3.52 t/m<sup>3</sup> with a mean of 2.84 t/m<sup>3</sup>. Estimates of bulk density were made using the inverse distance weighting ( $ID^2$ ) interpolation method. All mineral resources are classified in the inferred category. Model blocks are included in the inferred category if they form relatively continuous zones of mineralization within a maximum distance of 50 metres from a drill hole intercept.

During the past several years, the Lac 50 Trend deposits have been evaluated through a series of exploration and delineation drilling programs, and at this relatively early stage, little is known about their potential mineability or metallurgical characteristics. When subjected to estimated technical and economic operating parameters, the base case mineral resource, at a 0.2%  $U_3O_8$  cut-off, forms a relatively continuous zone with thicknesses and grades that exhibit reasonable prospects for the economic extraction using a combination of open pit and underground mining scenarios. Note that these are generalized evaluations on mineral resources, not mineral reserves, as the true economic viability has not been demonstrated.

A technical report will be filed on SEDAR within 45 days of the date of this news release.

### **Comparison with the Previous Mineral Resource Estimate**

The previous Mineral Resource Estimate for Lac Cinquante (Main, East and Western Extension Zones) was presented in a technical report dated March 1, 2012 and was based on drill results available up to the end of the 2011 field season. The majority of the increase in Lac 50 Trend resources is attributable to the J4 and Ray deposits that were discovered in 2012. Overall, the contained pounds of  $U_3O_8$  within the Lac 50 Trend have increased 60%, from approximately 27.1 to 43.3 million lbs.  $U_3O_8$ .

### **Geology Model of Lac Cinquante, J4 and Ray**

The geologic characteristics for the Lac Cinquante, J4 and Ray deposits are very similar. Separated by only 1,800 metres and exhibiting the same general trends, it is likely that these three deposits represent the same, or related mineralized structures. Deposits in the Lac 50 Trend are basement hosted, vein-hydrothermal type. The emplacement of uranium is structurally controlled, often associated with a graphite-chlorite tuffaceous metasediment interlayered in Archean metavolcanics. Mineralization consists of disseminated and patchy pitchblende with sulphides within fracture controlled, brecciated, hematite-quartz-carbonate veins that can occur in either the host shear or tuff unit. Potential also exists for unconformity-style uranium deposits to occur on the Angilak Property

The Lac Cinquante deposit is comprised of three distinct mineralized sections occurring over 3.8 kilometres of strike length and interpreted to be off-set by faults. The central "Main" Lac Cinquante zone is the largest, measuring 1.4 kilometres in drilled strike length, at an azimuth of 115 degrees and dipping to the SSW at roughly -65 degrees. The "Western Extension" is a 120 metre, left-lateral displacement of the Main zone that has a drilled strike length of approximately 650 metres, is oriented at 125 degrees azimuth and dips to the SSW at -70 degrees. The "Eastern Extension" is interpreted as a 250 metre, left-lateral displacement of the Main zone with a strike of 122 degrees azimuth, a -78 degree SSW dip and an overall drilled strike length of approximately 600 metres. The true thickness of the mineralized domain varies from 0.05 to a maximum of 13.5 metres with an average of 2.2 metres.

At the J4 and Ray deposits, mineralization is comprised of several sub-parallel zones. At J4, an Upper and Lower zone are variably separated by five to 35 metres (average about 20 metres). The J4 Upper zone has a drilled strike length of 800 metres and remains "open" along strike and at depth. The true thickness of the J4 Upper zone ranges from 0.2 to 11 metres and averages about two metres. The J4 Lower zone has a strike length of about 500 metres and the along-strike extents appear to be closed by drilling but the zone remains open at depth. The true thickness of the J4 Lower zone ranges from 0.1 to 4 metres and averages 1.5 metres. Ray occurs as a separate mineralized zone about 250 metres SW and in the hanging wall of J4. The Ray zone currently has a drilled strike length of about 300 metres and remains open along strike and at depth. The true thickness at Ray ranges from 0.2 to 1.7 metres and average 0.8 metres. All zones trend at an azimuth of about 120 degrees and dip at -60 degrees to the SSW.

### **Continuing Resource Expansion**

The Lac 50 Trend is a three kilometre wide by 15 kilometre long southeast striking structural trend within Archean volcanic rocks adjacent to an unconformity with Proterozoic sediments of the Angikuni sub-basin.

The Lac 50 Trend hosts five deposits which comprise the current NI 43-101 Inferred Resource Estimate, two of which were discovered, drilled and converted into resources in 2012. The Lac 50 Trend is also host to six additional uranium occurrences discovered by Kivalliq since 2010 and numerous high priority targets not yet tested.

On September 24, 2012, Kivalliq announced the completion of its aggressive 2012 exploration program including 38,856 metres of core and reverse circulation ("RC") drilling, which focused on adding inferred resources and testing new targets within the Lac 50 Trend. Kivalliq has demonstrated expansion potential within the Lac 50 Trend by increasing the contained  $U_3O_8$  in the maiden inferred resource by more than 300% in the past two years. In addition, Kivalliq's exploration programs have consistently identified new mineralized zones, validating the "District Scale" potential of the Angilak Property.

### **QA/QC**

The information in this release related to the mineral resource estimate has been approved by Robert Sim, P.Geol of SIM Geological Inc., who is an independent Qualified Person as defined under National Instrument 43-101. Jeff Ward, P.Geol, President of Kivalliq and a Qualified Person, has reviewed and approved the scientific and technical information contained in this release.

### **About Kivalliq Energy**

Kivalliq Energy Corporation (TSXV: KIV) is a Vancouver-based uranium exploration company holding Canada's highest grade uranium deposit outside of Saskatchewan's Athabasca Basin. Its flagship project, the 340,268 acre Angilak Property in Nunavut Territory, hosts the Lac 50 Trend with a NI 43-101 Inferred Resource of 2,831,000 tonnes grading 0.69%  $U_3O_8$ , totaling 43.3 million pounds  $U_3O_8$ . Kivalliq's comprehensive exploration programs continue to advance the Lac 50 Trend and demonstrate the "District Scale" potential of the Angilak Property.

Kivalliq's team of northern exploration specialists have forged strong relationships with sophisticated resource sector investors and project partner Nunavut Tunngavik Inc. ("NTI") in order to advance the

Angilak Property. Kivalliq was the first company to sign a comprehensive agreement to explore for uranium on Inuit Owned Lands in Nunavut Territory, Canada and is committed to building shareholder value while adhering to high levels of environmental and safety standards and proactive local community engagement.

On behalf of the Board of Directors

James R. Paterson, CEO

Kivalliq Energy Corporation

Kivalliq Energy Corporation is a member of the Aurora Mineral Resource Group of companies. For further information about Kivalliq Energy Corporation or this news release, please visit our websites at [www.kivalliqenergy.com](http://www.kivalliqenergy.com) and [www.auroraresource.com](http://www.auroraresource.com)

Certain disclosures in this release, including the growth and value of the Angilak Property, constitute forward-looking statements that are subject to numerous risks, uncertainties and other factors relating to Kivalliq's operations as a mineral exploration company that may cause future results to differ materially from those expressed or implied in such forward-looking statements, including risks as to market price of Kivalliq's securities and the market for securities of resource exploration companies in general; commodity prices and, in particular, the price of uranium and the completion of Kivalliq's plans and projects. Readers are cautioned not to place undue reliance on forward-looking statements. Other than as required by applicable securities legislation, Kivalliq expressly disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events, or otherwise.

**Cautionary Note concerning estimates of Inferred Resources:**

This news release uses the term "inferred resources". Inferred resources have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an Inferred Mineral Resource will ever be upgraded to a higher category. Kivalliq advises U.S. investors that while this term is recognized and required by Canadian regulations, the U.S. Securities and Exchange Commission does not recognize it. **U.S. investors are cautioned not to assume that part or all of an inferred resource exists, or is economically or legally mineable.**

FOR FURTHER INFORMATION PLEASE CONTACT:

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