FORM 52-102F3
MATERIAL CHANGE REPORT

1. Name and Address of Company

Solitaire Minerals Corp.
Suite 430-609 Granville Street
Vancouver, British Columbia V7Y 1G5

2. **Date of Material Change**

September 12, 2008

3. **Press Release**

The Press Release dated September 12, 2008 was disseminated via Market News Publishing and Canada Stockwatch.

4. **Summary of Material Change**

The Company has granted incentive stock options to its directors, officers, consultants and employees to purchase in the total of 2,500,000 common shares in the capital stock of the company exercisable for a period of five years, at a price of $0.10 cents per share.

5. **Full Description of Material Change**

See attached press release dated September 12, 2008

6. **Reliance on Subsection 7.1(2) or (3) of National Instrument 51-102**

Not Applicable

7. **Omitted Information**

Not Applicable

8. **Executive Officer**

Charles Desjardins, President

(604) 683-5445

9. **Date of Report**

September 15, 2008

Schedule “A”

Solitaire Minerals Corp. Property Updates

September 12, 2008: Solitaire Minerals Corp. (TSX-V symbol: SLT) (the Company) would like to provide an exploration update for its regions of interest which are Red Lake (Gold), Eldorado/Mystery Island (Uranium, Silver, IOCG), the Athabasca basin (Uranium), and Lateral Lake (Molybdenum, Rubidium).

Red Lake, Ontario (Gold Camp)

The Company is well situated in the historic Red Lake area with several strategically acquired land holdings representing the third largest land holdings by any Company in the core area of the Red Lake Greenstone Belt. The company is currently in the process of completing a ground soil sampling program on the Humlin property which borders Goldcorp. Solitaire is currently working towards fulfilling its Humlin work commitments for 2008.

Solitaire Minerals has significantly advanced the Option agreement with Rubicon Minerals Corp. on the Red Lake North property where initial drilling has successfully tested the extension of the down dip deposit from the Goldcorp/Planet discovery zone. The terms of the Red Lake North Option agreement have been satisfied well into 2010; however the Company plans to do work well before then.

Eldorado/Mystery Island, NWT (Uranium, Silver, IOCG)

The Mystery Island property is situated adjacent to Alberta Star Development Corp.’s Contact Lake (Eldorado) property which is being explored for iron-oxide, copper, gold, and high grade uranium and silver mineralization. An airborne VTEM-survey, carried out by Geotech Ltd., has identified a 12 kilometer long magnetic low which is coincident with the largest fault in the Port Radium mining camp. Preliminary interpretation suggests that this is an expression of a major alteration zone. This is very significant because this fault bounds the mining camp and has the same orientation as the faults which hosted the Eldorado mines and Echo Bay mines high-grade uranium, silver and copper orebodies. Currently the company is in the final step of the permitting process and anticipates receiving a 5 year exploration permit.

Work by Echo Bay Mines in 1981 noted that the geology of Mystery Island (100% Solitaire interest) is similar to that of Contact Lake mine. Sampling by Echo Bay around the adit located on Mystery Island returned grades of up to 16.90% copper and 3.4 oz silver per ton. Sampling by Solitaire Minerals in 2006 at a nearby location on Mystery Island returned values of up to 2.665 % copper, 0.179% cobalt and 0.13% uranium (previously reported January 15, 2007).

The Great Bear Lake area contains three historic mining camps, which are in close proximity and are geologically connected. These are the Port Radium, the Contact Lake and the Terra camps. The formerly producing mines in these camps produced intermittently from 1930 until 1985 over 48 million ounces silver, 15 million pounds of U_3O_8 and 7,000 tons of copper (Strand, 1996). The Mineralization and geology of the Great Bear magmatic zone also indicate similarities with the Olympic Dam IOCG deposit.

Athabasca Basin, Saskatchewan (Uranium)

Riou Lake

Solitaire Minerals had selected several high priority targets available to drill on the Riou Lake property located in the northern part of the Athabasca basin surrounded to the north by UEX Corp. The selection of these drill targets was in part due to the interpretation by Actlabs of the Soil Gas Hydrocarbon (SGH) analyses collected from a grid of soil sampling, in conjunction with other geochemistry from the area.

The analysis from Actlabs produced two strongly anomalous locations indicating a” Very High Probability” of a Uranium target at depth. This is the highest level of detection possible under the SGH Rating System under which there are 6 categories ranging from a “Low Probability” rating to a “Very High Probability” rating. A “Very High Probability” rating means that the SGH classes most important to describing a Uranium signature are all present and consistently describe the same location with well defined anomalies. To obtain this rating there also needs to be other SGH classes that when mapped lend support to the prediction location.

Cabo Drilling (Pacific) Corp. of Surrey, British Columbia drilled two holes, in March 2008, to completion and left the final hole just above basement due to seasonal break-up concerns. All holes have been capped and the Company will re-enter the final hole that finished just above basement.

C and D block

The Company contracted the services of Durama Enterprises Limited of La Ronge, Saskatchewan to establish and manage the program for the “C” and “D” blocks, which involved the establishment of camps, grid lines, level survey and support services. Lamontagne Geophysics Ltd. of Kingston, Ontario developed the UTEM system to pursue deep exploration beyond the capabilities of other TEM systems. The UTEM system measures the EM response while the transmitter field is changing, the only way to measure extremely conductive targets. Interpretation of the data to pinpoint the strongest conductive response will assist to plan possible drill targets and is expected shortly.

Highrock

The Company announces that it is no longer pursuing the disputed Highrock claim located in Saskatchewan; the company will focus its efforts on exploring its other properties.

Lateral Lake, Ontario (Molybdenum, Rubidium)

Solitaire Minerals completed an unsuccessful diamond drill program in the summer of 2007. The work completed has provided the Company with the minerals rights into the year 2013 for all of the Lateral Lake claims.

Granting of Options

Solitaire Minerals Corp. would like to announce that pursuant to its stock option plan, the Company has granted incentive stock options to its directors, officers, consultants, and employees to purchase 2.5 million common shares in the capital stock of the company, exercisable for a period of five years, at a price of 10 cents per share. These options are subject to a four-month hold period.

About Solitaire Minerals Corp. Solitaire Minerals Corp. (TSX-V symbol: SLT) is a diversified junior Canadian mineral exploration company with a specific focus on mineral properties in North America. The Company has assembled a portfolio of precious and base metal exploration prospects in Ontario, Saskatchewan, Alberta, and the North West Territories. Solitaire's Ontario properties in the Red Lake/Birch-Uchi Greenstone Belt include the Baird, Heyson and Chukuni Prospects, in which the Company has agreements to earn 100% interest. In addition, the Company has entered into an option agreement with another company, whereby that company may earn up to a 75% interest in the Baird Property. The Company also has an option to earn 100% in the Lateral Lake West property located in the Webb township of Ontario. In Saskatchewan, the Company has signed a purchase agreement to acquire a 90% interest in the Riou Lake Property located in the Athabasca Basin. The Company has also acquired the Riou Lake North and South properties in which the company has 100% interest. In Alberta, the Company has purchased the Ravenscrag property in which the Company has 100% interest. In the North West Territories, the Company has purchased the Mystery Island IOCG Property located in the Great Bear Lake area in which the Company has 100% interest.

For additional information please contact Solitaire Minerals Corp. or visit www.solitaireminerals.com.

On Behalf of the Board of Directors
SOLITAIRE MINERALS CORP.
"Charles Desjardins"

Charles Desjardins,
President and Director

Cautionary note:

This report contains forward looking statements. Resource estimates, unless specifically noted, are considered speculative. Any and all other resource or reserve estimates are historical in nature, and should not be relied upon. By their nature, forward looking statements involve risk and uncertainties because they relate to events and depend on factors that will or may occur in the future. Actual results may vary depending upon exploration activities, industry production, commodity demand and pricing, currency exchange rates, and, but not limited to, general economic factors.

Cautionary Note to US investors: The U.S. Securities and Exchange Commission specifically prohibits the use of certain terms, such as "reserves" unless such figures are based upon actual production or formation tests and can be shown to be economically and legally producible under existing economic and operating conditions.