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ASX Limited Company Announcements Office

## 6th December 2011

## **Excellent Additional Gold + Bismuth Drill Intercepts from the Stormont Deposit**

- Additional high grade gold-bismuth intersections have been drilled at the Stormont Deposit, such as 4m at 18.6g/t gold with 0.96% bismuth and 3m at 17.28g/t gold with 0.59% bismuth.
- Bismuth has emerged as a significant possible bi-product for the Stormont Deposit, with intercepts such as 2.2m at 1.54% bismuth and 17.6m at 0.50% bismuth.
- Drill intersections in 8 holes (SFD22, SFD32, SFD33, SFD34, SFD36 SFD37, SFD38 and SFD 39) have now extended the gold – bismuth mineralisation beyond the previously defined resource boundary to the SE.

Frontier Resources Ltd is very pleased to announce gold assay results for a further 17 diamond core holes (SDF23 to SDF39) and bismuth results for 23 holes (SDF17 to SDF39) from the Stormont Deposit, Moina Project, northern Tasmania, Australia.

Peter McNeil, MSc, Chairman and Managing Director commented:

The diamond core drill intersections announced today continue to improve, develop and extend the gold + bismuth mineralisation at the Company's 100% owned Stormont Deposit in Tasmania. The assay results are very favourable for future development and mining, particularly considering:

- the mineralisation is at or very near surface with a very low probable stripping ratio
- the gold mineralisation has excellent metallurgical recoveries via direct cyanidation
- the deposit contains substantial bismuth as a possible bi-product
- *b* the location is convenient and close to required infrastructure
- *b* the deposit would likely be simple and relatively inexpensive to develop and mine.

Bismuth is presently 3 to 4 times the value of copper and it may become a significant bi-product of future mining at Stormont if future metallurgical testing demonstrates its extractability.

There are also numerous magnetic features (shown on Figure 2), that are similar to Stormont and may reflect repetitions of the Stormont mineralisation (see ASX release dated 14<sup>th</sup> September 2011).Ground magnetics has defined a strong, linear magnetic anomaly at the Far West Prospect, that is very similar to the Stormont magnetic anomaly (Figures 2 and 3). Reconnaissance outcrop sampling has returned 0.30% bismuth from a rare outcrop, with the gold assay pending. The far West Prospect is an excellent target which could represent a repetition of the Stormont Deposit and add tonnage to any possible future mining operation.

In addition to the drilling at Stormont, drilling will also commence at the nearby Narrawa Prospect within the next week with the objectives e of increasing the total resource and increasing the confidence level of the known mineralisation to allow the Indicated and Inferred resource to be re-classified as Measured and Indicated. The Company will then update its Conceptual Mining Study (that was completed in 2009) and release the associated economic/financial evaluation of both deposits.

The 3D-IP survey (see Figure 3) is now well advanced, with preliminary results of the grid completed to date expected within the next week. This survey will continue until Christmas and may extend into January, dependent on results. It is unlikely however, that any results from the IP survey will be released prior to the finalisation of the program.

Gold and bismuth intercepts from holes SFD23 to SFD39 include:

- SFD24: 14.5m grading 4.74g/t gold plus 0.18% bismuth, from 1.5m to 16.0m
- SFD25: 10.1m grading 3.87g/t gold plus 0.15% bismuth, from 1.5m to 11.6m
- SFD27: 12.5m grading 7.77g/t gold plus 0.36% bismuth, from 11.5m to 24.0m
- SFD28: 6.0m grading 1.91g/t gold plus 0.2% bismuth, from 7.3m to 13.3m
  - plus 9.2m grading 0.31g/t gold plus 0.68% bismuth, from 11.8m to 21.0
- SFD30: 7.0m grading 5.4g/t gold and 0.59% bismuth, from 10.0m to 17.0m
- SFD33: 7.8m grading 9.92g/t gold plus 0.55% bismuth, from 13.0m to 20.8m
  - Inc. 4.0m grading 18.6g/t gold, 0.96% bismuth, from 14.0m to 18.0m
  - plus 2.2m grading 25.8g/t gold and 1.54% bismuth, from 23.1m to 25.3m
- SFD35: 4.9m grading 1.65g/t gold plus 0.06% bismuth, from 20.1m to 25.0m
- SFD39: 2.0m grading 12.65g/t gold plus 0.19% bismuth, from 15.0m to 17.0m
  - plus 1.8m grading 12.6g/t gold plus 0.36% bismuth, from 22.0m to 23.8m.

Gold assay results for the first 6 holes (SFD17 to SFD22) were reported on 14th September 2011 and bismuth assay results (now reported) include:

- SFD17: 4.3m grading 0.12g/t gold plus 0.38% bismuth, from 0.7m to 5.0m
- SFD18: 4.95m grading 0.08g/t gold plus 0.33% bismuth, from 1.05m to 6.0m
- SFD20: 16.5m grading 7.02g/t gold plus 0.12% bismuth, from 1.5m to 18.0m
  - Inc. 4.0m grading 19.4g/t gold plus 0.29% bismuth, from 14.0m to 18.0m
- SFD21: 17.6m grading 10.8g/t gold plus 0.5% bismuth, from 0.4m to 18.0m

Drill hole locations are documented in Table 1, with complete assay results listed in Table 2. Figure 1 shows the hole locations with respect to the previously announced Inferred Resource and to local geology.

## DETAILS

Exploration activity has been ramped up significantly at the Moina Project in central northern Tasmania with:

- 22 holes completed in later 2011 for 608.05m,
- assays received for 17 of these holes (SFD23 to SFD39),
- > ground magnetic definition of helimagnetic anomalies commenced
- > initial ground follow-up of ground magnetic anomalies was undertaken (as detailed herein) and
- the commencement of a 3D IP survey over a large area of highly prospective ground (see ASX release 27<sup>th</sup> October 2011).

Most holes were drilled within and around the current Stormont Deposit; Inferred Resource of 112,500t grading 3.94g/t gold + 3.41g/t silver + 0.24% bismuth, as part of the work required to upgrade the resource's status to Indicated. All gold results above a cut-off of 0.5g/t gold are listed in Table 2 and they confirm the robustness and continuity of the gold mineralisation (see earlier assay results and Table 2).

Assay results have confirmed the strong relationship or correlation between gold and bismuth.

The drilling has also confirmed the presence of substantial higher grade zones within the orebody including:

- SFD24: 3.0m grading 17.28g/t gold plus 0.59% bismuth, from 10.5m to 13.5m
- SFD33: 4.0m grading 18.6g/t gold plus 0.96% bismuth, from 14.0m to 18.0m
  - plus2.2m grading 25.8g/t gold plus 1.54% bismuth, from 23.1m to 25.3m.



Figure 1: Stormont gold+bismuth deposit showing drill holes, better assays, the previous Inferred Resource model and geology.

A number of holes were designed to intersect lithologic contacts and faults to better define the geology of the deposit and so not all holes were expected to intersect mineralisation.

Grant MacDonald, Exploration Manager, Tasmania noted that some of the holes completed extend the known boundaries of the mineralisation. Grant commented: "The zone to the south east of Stormont is a high priority to extend the known mineralisation. At surface this zone is covered by more recent basalt and thus could not be prospected by earlier explorers."

Holes SFD32, SFD33 and SFD34 were drilled on section 2125E (local grid) to further define the mineralisation intersected in SFD22 (i.e. 6.5m grading 6.56g/t gold). All three holes intersected mineralised skarn with SFD33 intersecting 7.8m grading 9.92g/t gold plus 0.55% bismuth (from 13.0m) and 2.2m grading 25.8g/t gold plus 1.54% bismuth (from 23.1m), confirming the strike extension of the resource in this area.

Holes SFD36, SFD37, SFD38 and SFD39 were drilled on section 2150E, 25m southeast of SFD22 and thus 25m beyond the current south eastern margin of resource in order to extend the resource. The high grade mineralised zone was intersected as expected with better intercepts such as:

- SFD36: 3.5m grading 1.65g/t gold plus 0.08% bismuth, from 17.5m to 21.0m
  - SFD39: 1.5m grading 1.54g/t gold plus 0.04% bismuth, from 9.0m to 10.5m
    - plus 2.0m grading 12.65g/t gold plus 0.19% bismuth, from 15.0m to 17.0m
    - also 1.8m grading 12.6g/t gold plus 0.36% bismuth, from 22.0m to 23.8m.

Table 1: Collar details SFD23 to SFD44

| Hole  |                    |                     | RL         | Azimuth |     | Depth |
|-------|--------------------|---------------------|------------|---------|-----|-------|
| ID    | AMG/AGD66_east (m) | AMG/AGD66_north (m) | (m.a.s.l.) | (true)  | Dip | (m)   |
| SFD17 | 418885.52          | 5405921.66          | 629.3      | 224     | -80 | 33    |
| SFD18 | 418885.47          | 5405921.57          | 629.386    | 224     | -60 | 30    |
| SFD19 | 418885.35          | 5405921.38          | 629.33     | 224     | -50 | 28.5  |
| SFD20 | 418914.89          | 5405897.38          | 634.514    | 225     | -50 | 34.5  |
| SFD21 | 418915.1           | 5405897.56          | 634.517    | 225     | -65 | 34.1  |
| SFD22 | 418933.3           | 5405863.86          | 638.901    | 39      | -60 | 21.4  |
| SFD23 | 418876.58          | 5405929.15          | 628.614    | 231     | -90 | 26    |
| SFD24 | 418876.21          | 5405928.84          | 628.304    | 231     | -45 | 25    |
| SFD25 | 418876.44          | 5405928.96          | 628.422    | 231     | -60 | 23.9  |
| SFD26 | 418887.2           | 5405906.86          | 629.889    | 0       | -90 | 20    |
| SFD27 | 418903.4           | 5405923.09          | 630.681    | 215     | -60 | 35.9  |
| SFD28 | 418903.66          | 5405923.46          | 630.712    | 215     | -45 | 39.5  |
| SFD29 | 418903.79          | 5405923.62          | 630.859    | 215     | -75 | 33.9  |
| SFD30 | 418893.41          | 5405937.04          | 628.985    | 225     | -45 | 35    |
| SFD31 | 418893             | 5405936.76          | 628.994    | 225     | -65 | 35.2  |
| SFD32 | 418943.78          | 5405877.98          | 637.716    | 223     | -90 | 28    |
| SFD33 | 418943.58          | 5405877.63          | 637.684    | 223     | -45 | 31.5  |
| SFD34 | 418943.58          | 5405877.63          | 637.684    | 223     | -70 | 26    |
| SFD35 | 418886.5           | 5405907.6           | 629.8      | 47      | -60 | 33.65 |
| SFD36 | 418951             | 5405848             | 644        | 225     | -90 | 37.5  |
| SFD37 | 418951             | 5405848             | 644        | 225     | -85 | 18    |
| SFD38 | 418961.4           | 5405856.2           | 643.865    | 225     | -90 | 36.8  |
| SFD39 | 418961.4           | 5405856.2           | 643.865    | 225     | -60 | 27    |
| SFD40 | 418876.4           | 5405949.1           | 628.302    | 225     | -55 | 5.6   |
| SFD41 | 418882             | 5405954.8           | 628.3      | 225     | -43 | 12.3  |
| SFD42 | 418930.8           | 5405877.4           | 636.5      | 225     | -90 | 25.5  |
| SFD43 | 418930.8           | 5405877.4           | 636.5      | 225     | -45 | 26.7  |
| SFD44 | 418930.8           | 5405877.4           | 636.5      | 225     | -65 | 25.1  |

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| Hole   | From  | То    | Length | Gold  | Bismuth |
|--------|-------|-------|--------|-------|---------|
| Number | (m)   | (m)   | (m)    | (g/t) | (%)     |
| SFD17  | 0.7   | 5.0   | 4.3    | 0.12  | 0.38    |
| Plus   | 10.0  | 11.0  | 1.0    | 0.73  | 0.03    |
| Plus   | 17.0  | 17.9  | 0.9    | 0.69  | 0.10    |
| SFD18  | 1.05  | 13.0  | 11.95  | 0.82  | 0.02    |
| SFD19  | 1.5   | 16.0  | 14.5   | 1.08  | 0.05    |
| SFD20  | 1.5   | 18.0  | 16.5   | 5.92  | 0.10    |
| Inc.   | 14.0  | 18.0  | 4.0    | 18.60 | 0.96    |
| Plus   | 22.35 | 28.0  | 5.65   | 2.27  | 0.04    |
| SFD21  | 0.4   | 18.0  | 17.6   | 7.22  | 0.33    |
| Inc.   | 7.5   | 12.0  | 4.5    | 24.9  | 0.17    |
| Plus   | 23.0  | 26.8  | 3.8    | 2.43  | 0.04    |
| SFD22  | 8.5   | 15.0  | 6.5    | 5.45  | 0.11    |
| Inc.   | 12.5  | 15.0  | 2.5    | 10.50 | 0.08    |
| SFD23  | 1.2   | 3.7   | 2.5    | 0.26  | 0.55    |
| and    | 6.0   | 8.0   | 2.0    | 0.70  | 0.05    |
| and    | 13.0  | 17.0  | 4.0    | 1.60  | 0.11    |
| SFD24  | 1.5   | 16.0  | 14.5   | 3.18  | 0.12    |
| Inc.   | 10.5  | 13.5  | 3      | 11.50 | 0.40    |
| SFD25  | 1.5   | 11.6  | 10.1   | 2.93  | 0.11    |
| SFD26  | 1.5   | 3.6   | 2.1    | 0.82  | 0.02    |
| and    | 12.0  | 12.75 | 0.75   | 5.10  | 0.05    |
| and    | 18.0  | 20.5  | 2.5    | 0.47  | 0.14    |
| SFD27  | 11.5  | 24.0  | 12.5   | 8.43  | 0.37    |
| SFD28  | 7.3   | 13.3  | 6.0    | 1.27  | 0.13    |
| also   | 7.3   | 21.0  | 13.7   | 0.004 | 0.65    |
| and    | 22.0  | 23.0  | 1.0    | 1.80  | 0.04    |
| and    | 29.0  | 30.0  | 1.0    | 2.10  | 0.26    |
| SFD29  | 23.0  | 24.0  | 1.0    | 1.20  | 0.02    |
| SFD30  | 10.0  | 17.0  | 7.0    | 5.39  | 0.59    |
| and    | 21.0  | 22.0  | 1.0    | 2.85  | 0.04    |
| SFD33  | 13.0  | 20.8  | 7.8    | 9.86  | 0.53    |
| Inc.   | 14.0  | 18.0  | 4.0    | 18.60 | 0.96    |
| also   | 23.1  | 25.3  | 2.2    | 23.40 | 1.40    |
| SFD35  | 3.44  | 8.0   | 4.56   | 2.44  | 0.29    |
| and    | 14.0  | 25.0  | 11.0   | 0.78  | 0.34    |
| and    | 28.0  | 30.2  | 2.2    | 3.65  | 0.38    |
| SFD36  | 17.5  | 21.0  | 3.5    | 2.52  | 0.13    |
| SFD39  | 9.0   | 10.5  | 1.5    | 1.50  | 0.04    |
| and    | 15.0  | 17.0  | 2.0    | 12.65 | 0.19    |
| and    | 22.0  | 23.8  | 1.8    | 12.90 | 0.37    |

Table 2: Assay Results, Holes SFD23 to SFD39. (cut-off grade 0.5/t gold)

Previous helimagnetic data was acquired, processed, enhanced and imaged in late 2010. This evaluation revealed a number of Stormont look-alike linear magnetic highs (Figure 2) that will be targeted by future exploration. Some of these helimagnetic anomalies have seen limited historical drilling such as:

- 12 relatively short and mostly poorly sited drill holes at the Western Syncline, with results such as 2.0m grading 3.5g/t gold (STO4) and 3.0m grading 1.34g/t gold (SD51)
- 8 holes at Fletchers Adit, with results such as 2.0m grading 1.5g/t gold and 21.0m grading 0.3g/t gold (FD7 and FD8, respectively)
- > 8 holes at Ti Tree Creek, with most holes intersecting gold anomalous skarn.



Figure 2: Helimagnetic 1<sup>st</sup> vertical derivative image, showing location of Stormont Inferred Resource plus numerous analogous magnetic anomalies, plus the location of future 3D IP grid lines.



Figure 3: Ground magnetics image of Stormont region showing drilling to date and the essentially untested magnetic highs located to the west and southwest of Stormont, plus the location of outcropping mineralised skarn.

The Far West helimagnetic anomaly was located and defined by a small ground magnetics survey (Figure 3) and whilst there is little outcrop in this generally low lying area, the initial ground reconnaissance located a magnetite + actinolite skarn outcrop in a small creek. An initial XRF assay using Frontier's in-house equipment gave an assay of 0.30% bismuth (XRF cannot assay for gold and silver at acceptable detection limits). Bismuth is a <u>pathfinder</u> element for gold mineralised skarn at Stormont. Gold assays from an accredited laboratory are awaited.

Frontier is presently carrying out work at the Moina Project that is required for upgrade the current resources at the Company's Stormont and Narrawa Deposits and convert them from Inferred to Indicated status and Indicated and Inferred to Measured and Indicated, respectively. This work includes drilling, surveying, check re-assaying and other tasks that when complete will then allow the lodging and ultimately the granting of Mining Leases over both prospects.

Regional exploration such as the 3D-IP and soil sampling are being undertaken to locate possible World Class or major gold, tungsten - tin -molybdenum systems that are thought to be present beneath basalt cover or at depth associated with the highly fertile Dolcoath Granite. The current resources are modest but the deposits are possibly a highly viable mining operation. The Stormont Deposit crops out on surface and extends to a depth of about 30 metres, it has a 'curved' base through being located in a syncline, meaning open-cut mining would result in low strip or ore to waste ratios. Some preliminary discussions have been entered into with a mining contractor with considerable experience of mining in the state (including open cut mining in the region) regarding alternate possibilities to an owner/ operator scenario.

For additional information relating to Frontier Resources and/ or its projects, please visit the Company's website at <u>www.frontierresources.com.au</u> or feel free to contact me.

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The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by, or compiled under the supervision of Peter A. McNeil - Member of the Aust. Inst. of Geoscientists. Peter McNeil is the Managing Director of Frontier Resources, who consults to the Company. Peter McNeil has sufficient experience which is relevant to the type of mineralisation and type of deposit under consideration to qualify as Competent Person as defined in the 2004 Edition of the Australasian Code of Reporting Exploration Results, Mineral Resources and Ore Resources. Peter McNeil consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.