

# CDN Resource Laboratories Ltd.

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## REFERENCE MATERIAL: CDN-ME-1607

Recommended values and the “Between Lab” Two Standard Deviations

|        |          |   |          |                       |                 |
|--------|----------|---|----------|-----------------------|-----------------|
| Gold   | 3.33 g/t | ± | 0.27 g/t | 30 g FA, instrumental | Certified value |
| Silver | 150 ppm  | ± | 5 ppm    | 4-Acid / ICP          | Certified value |
| Copper | 0.310 %  | ± | 0.008 %  | 4 Acid / ICP          | Certified value |
| Lead   | 1.72 %   | ± | 0.06 %   | 4 Acid / ICP          | Certified value |
| Zinc   | 0.56 %   | ± | 0.02 %   | 4 Acid / ICP          | Certified value |

**Note:** Standards with an RSD of near or less than 5% are certified; RSD's of between 5% and 15% are Provisional; RSD's over 15% are Indicated. Provisional and Indicated values cannot be used to monitor accuracy with a high degree of certainty.

**PREPARED BY:** CDN Resource Laboratories Ltd.  
**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia  
**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.  
**DATE OF CERTIFICATION:** July 26, 2017

### ORIGIN OF REFERENCE MATERIAL:

Standard CDN-ME-1605 was prepared by combining a variety of low and high-grade ores.

### METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized and then passed through a 270-mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone mixer. Splits were taken and sent to 15 commercial laboratories for round robin assaying.

**Approximate chemical composition (from whole rock analysis) is as follows:**

|                                | Percent |                   | Percent |
|--------------------------------|---------|-------------------|---------|
| SiO <sub>2</sub>               | 60.6    | Na <sub>2</sub> O | 0.3     |
| Al <sub>2</sub> O <sub>3</sub> | 7.2     | MgO               | 5.1     |
| Fe <sub>2</sub> O <sub>3</sub> | 12.9    | K <sub>2</sub> O  | 0.6     |
| CaO                            | 1.9     | TiO <sub>2</sub>  | 0.3     |
| MnO                            | 0.1     | LOI               | 7.8     |
| S                              | 6.3     | C                 | 0.7     |

### Statistical Procedures:

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside

of the mean  $\pm 2$  standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual “between-laboratory” standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

### Assay Procedures:

**Au:** Fire assay pre-concentration, AA or ICP finish.  
**Ag, Cu, Pb, Zn:** 4-acid digestion, AA or ICP finish.

### Results from round-robin assaying:

| Instrumental | Lab 1  | Lab 2  | Lab 3  | Lab 4  | Lab 5  | Lab 6  | Lab 7  | Lab 8  | Lab 9  | Lab 10 | Lab 11 | Lab 12 | Lab 13 | Lab 14 | Lab 15 |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|              | Au g/t | Au g/t | Au g/t | Au g/t | Au g/t | Au g/t | Au g/t | Au g/t | Au g/t | Au g/t | Au g/t | Au g/t | Au g/t | Au g/t | Au g/t |
| GS-3R-1      | 3.18   | 3.46   | 2.90   | 3.57   | 3.21   | 3.37   | 3.55   | 3.45   | 3.16   | 3.13   | 3.27   | 3.45   | 3.41   | 3.25   | 3.65   |
| GS-3R-2      | 3.12   | 3.44   | 3.15   | 3.49   | 3.29   | 3.21   | 3.47   | 3.64   | 3.09   | 3.24   | 3.19   | 3.37   | 3.47   | 3.17   | 3.37   |
| GS-3R-3      | 3.09   | 3.30   | 3.54   | 3.50   | 3.12   | 3.23   | 3.45   | 3.53   | 3.10   | 3.05   | 3.19   | 3.41   | 3.31   | 3.14   | 3.41   |
| GS-3R-4      | 3.08   | 3.35   | 3.46   | 3.49   | 3.19   | 3.31   | 3.47   | 3.28   | 3.15   | 3.24   | 3.27   | 3.49   | 3.39   | 3.25   | 3.37   |
| GS-3R-5      | 3.19   | 3.12   | 3.25   | 3.42   | 3.18   | 3.30   | 3.45   | 3.52   | 3.17   | 3.19   | 3.30   | 3.32   | 3.38   | 3.29   | 3.27   |
| GS-3R-6      | 3.23   | 3.21   | 3.41   | 3.51   | 3.11   | 3.45   | 3.47   | 3.35   | 3.20   | 3.14   | 3.33   | 3.35   | 3.55   | 3.31   | 3.35   |
| GS-3R-7      | 3.28   | 3.62   | 3.49   | 3.48   | 3.26   | 3.30   | 3.43   | 3.52   | 3.29   | 3.24   | 3.20   | 3.38   | 3.38   | 3.31   | 3.51   |
| GS-3R-8      | 3.14   | 3.48   | 3.69   | 3.41   | 3.15   | 3.35   | 3.39   | 3.31   | 3.17   | 3.06   | 3.30   | 3.31   | 3.44   | 3.21   | 3.43   |
| GS-3R-9      | 3.27   | 3.38   | 3.55   | 3.57   | 3.28   | 3.47   | 3.35   | 3.57   | 3.28   | 3.07   | 3.30   | 3.31   | 3.61   | 3.30   | 3.32   |
| GS-3R-10     | 3.25   | 3.39   | 3.38   | 3.43   | 3.12   | 3.32   | 3.49   | 3.44   | 3.27   | 3.13   | 3.29   | 3.50   | 3.46   | 3.27   | 3.39   |
| Mean         | 3.18   | 3.38   | 3.38   | 3.49   | 3.19   | 3.33   | 3.45   | 3.46   | 3.19   | 3.15   | 3.26   | 3.39   | 3.44   | 3.25   | 3.41   |
| Std. Devn.   | 0.07   | 0.14   | 0.23   | 0.06   | 0.07   | 0.08   | 0.05   | 0.12   | 0.07   | 0.08   | 0.05   | 0.07   | 0.09   | 0.06   | 0.11   |
| % RSD        | 2.33   | 4.20   | 6.76   | 1.61   | 2.12   | 2.51   | 1.54   | 3.39   | 2.22   | 2.40   | 1.60   | 2.11   | 2.56   | 1.82   | 3.14   |

| Instrumental | Lab 1  | Lab 2  | Lab 3  | Lab 4  | Lab 5  | Lab 6  | Lab 7  | Lab 8  | Lab 9  | Lab 10 | Lab 11 | Lab 12 | Lab 13 | Lab 14 | Lab 15 |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|              | Ag g/t | Ag g/t | Ag g/t | Ag g/t | Ag g/t | Ag g/t | Ag g/t | Ag g/t | Ag g/t | Ag g/t | Ag g/t | Ag g/t | Ag g/t | Ag g/t | Ag g/t |
| GS-3R-1      | 153.0  | 146.0  | 151.0  | 145.0  | 149.0  | 155.0  |        | 149.0  | 152.0  | 151.0  | 149.0  | 145.0  | 147.0  | 152.6  | 150.0  |
| GS-3R-2      | 152.0  | 151.0  | 151.0  | 146.0  | 149.0  | 150.0  |        | 150.0  | 151.0  | 148.0  | 149.1  | 145.0  | 149.0  | 151.2  | 151.0  |
| GS-3R-3      | 151.0  | 150.0  | 151.0  | 148.0  | 149.0  | 152.0  |        | 149.0  | 150.0  | 149.0  | 149.3  | 145.0  | 147.0  | 150.8  | 152.0  |
| GS-3R-4      | 150.0  | 142.0  | 154.0  | 145.0  | 146.0  | 151.0  |        | 148.0  | 151.0  | 151.0  | 149.1  | 144.0  | 142.0  | 152.3  | 152.0  |
| GS-3R-5      | 149.0  | 154.0  | 153.0  | 146.0  | 151.0  | 150.0  |        | 148.0  | 150.0  | 149.0  | 147.7  | 144.0  | 144.0  | 151.8  | 151.0  |
| GS-3R-6      | 149.0  | 146.0  | 152.0  | 145.0  | 149.0  | 152.0  |        | 147.0  | 148.0  | 149.0  | 153.1  | 145.0  | 147.0  | 153.1  | 152.0  |
| GS-3R-7      | 152.0  | 158.0  | 153.0  | 147.0  | 148.0  | 151.0  |        | 148.0  | 149.0  | 148.0  | 153.7  | 147.0  | 143.0  | 149.6  | 153.0  |
| GS-3R-8      | 147.0  | 155.0  | 154.0  | 146.0  | 150.0  | 152.0  |        | 148.0  | 150.0  | 148.0  | 148.8  | 146.0  | 145.0  | 152.8  | 152.0  |
| GS-3R-9      | 153.0  | 149.0  | 152.0  | 148.0  | 150.0  | 153.0  |        | 148.0  | 148.0  | 148.0  | 147.6  | 144.0  | 146.0  | 149.6  | 152.0  |
| GS-3R-10     | 152.0  | 154.0  | 153.0  | 147.0  | 147.0  | 152.0  |        | 149.0  | 151.0  | 148.0  | 149.9  | 151.0  | 148.0  | 150.3  | 153.0  |
| Mean         | 150.8  | 150.5  | 152.4  | 146.3  | 148.8  | 151.8  |        | 148.4  | 150.0  | 148.9  | 149.7  | 145.6  | 145.8  | 151.4  | 151.8  |
| Std. Devn.   | 1.99   | 4.90   | 1.17   | 1.16   | 1.48   | 1.48   |        | 0.84   | 1.33   | 1.20   | 2.06   | 2.12   | 2.25   | 1.31   | 0.92   |
| % RSD        | 1.32   | 3.26   | 0.77   | 0.79   | 0.99   | 0.97   |        | 0.57   | 0.89   | 0.80   | 1.38   | 1.46   | 1.54   | 0.86   | 0.61   |

| Instrumental | Lab 1 | Lab 2 | Lab 3 | Lab 4 | Lab 5 | Lab 6 | Lab 7 | Lab 8 | Lab 9 | Lab 10 | Lab 11 | Lab 12 | Lab 13 | Lab 14 | Lab 15 |
|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
|              | % Cu  | % Cu  | % Cu  | % Cu  | % Cu  | % Cu  | % Cu  | % Cu  | % Cu  | % Cu   | % Cu   | % Cu   | % Cu   | % Cu   | % Cu   |
| GS-3R-1      | 0.31  | 0.31  | 0.31  | 0.31  | 0.31  | 0.31  |       | 0.31  | 0.32  | 0.32   | 0.32   | 0.31   | 0.31   | 0.31   | 0.31   |
| GS-3R-2      | 0.31  | 0.30  | 0.31  | 0.31  | 0.30  | 0.31  |       | 0.31  | 0.31  | 0.31   | 0.31   | 0.31   | 0.31   | 0.31   | 0.32   |
| GS-3R-3      | 0.31  | 0.31  | 0.31  | 0.31  | 0.30  | 0.32  |       | 0.31  | 0.31  | 0.31   | 0.31   | 0.30   | 0.31   | 0.31   | 0.32   |
| GS-3R-4      | 0.31  | 0.30  | 0.31  | 0.31  | 0.31  | 0.32  |       | 0.31  | 0.31  | 0.31   | 0.31   | 0.31   | 0.31   | 0.31   | 0.31   |
| GS-3R-5      | 0.31  | 0.31  | 0.31  | 0.31  | 0.30  | 0.31  |       | 0.31  | 0.32  | 0.31   | 0.31   | 0.31   | 0.31   | 0.31   | 0.32   |
| GS-3R-6      | 0.31  | 0.29  | 0.31  | 0.31  | 0.30  | 0.31  |       | 0.31  | 0.31  | 0.31   | 0.32   | 0.31   | 0.31   | 0.31   | 0.31   |
| GS-3R-7      | 0.31  | 0.30  | 0.31  | 0.30  | 0.30  | 0.32  |       | 0.31  | 0.31  | 0.31   | 0.31   | 0.30   | 0.30   | 0.31   | 0.31   |
| GS-3R-8      | 0.32  | 0.30  | 0.31  | 0.31  | 0.31  | 0.32  |       | 0.31  | 0.31  | 0.31   | 0.31   | 0.30   | 0.30   | 0.31   | 0.31   |
| GS-3R-9      | 0.31  | 0.30  | 0.31  | 0.31  | 0.30  | 0.31  |       | 0.31  | 0.31  | 0.31   | 0.31   | 0.31   | 0.30   | 0.31   | 0.31   |
| GS-3R-10     | 0.32  | 0.31  | 0.30  | 0.31  | 0.30  | 0.31  |       | 0.31  | 0.31  | 0.31   | 0.31   | 0.30   | 0.30   | 0.31   | 0.31   |
| Mean         | 0.313 | 0.304 | 0.308 | 0.308 | 0.304 | 0.313 |       | 0.310 | 0.312 | 0.311  | 0.312  | 0.306  | 0.306  | 0.312  | 0.314  |
| Std. Devn.   | 0.002 | 0.005 | 0.003 | 0.004 | 0.002 | 0.003 |       | 0.000 | 0.004 | 0.003  | 0.003  | 0.005  | 0.004  | 0.002  | 0.006  |
| % RSD        | 0.768 | 1.519 | 1.009 | 1.280 | 0.818 | 0.942 |       | 0.000 | 1.351 | 1.026  | 0.953  | 1.688  | 1.365  | 0.738  | 1.857  |

## Results from round-robin assaying-Continue:

| Instrumental | Lab 1<br>% Pb | Lab 2<br>% Pb | Lab 3<br>% Pb | Lab 4<br>% Pb | Lab 5<br>% Pb | Lab 6<br>% Pb | Lab 7<br>% Pb | Lab 8<br>% Pb | Lab 9<br>% Pb | Lab 10<br>% Pb | Lab 11<br>% Pb | Lab 12<br>% Pb | Lab 13<br>% Pb | Lab 14<br>% Pb | Lab 15<br>% Pb |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|
| GS-3R-1      | 1.74          | 1.69          | 1.74          | 1.74          | 1.71          | 1.74          |               | 1.72          | 1.73          | 1.69           | 1.73           | 1.67           | 1.68           | 1.77           | 1.71           |
| GS-3R-2      | 1.75          | 1.70          | 1.77          | 1.70          | 1.69          | 1.72          |               | 1.72          | 1.74          | 1.71           | 1.72           | 1.63           | 1.67           | 1.76           | 1.75           |
| GS-3R-3      | 1.76          | 1.72          | 1.75          | 1.73          | 1.69          | 1.73          |               | 1.73          | 1.75          | 1.70           | 1.72           | 1.75           | 1.73           | 1.76           | 1.74           |
| GS-3R-4      | 1.77          | 1.69          | 1.77          | 1.73          | 1.70          | 1.73          |               | 1.73          | 1.75          | 1.74           | 1.70           | 1.60           | 1.70           | 1.74           | 1.68           |
| GS-3R-5      | 1.72          | 1.73          | 1.76          | 1.72          | 1.68          | 1.72          |               | 1.72          | 1.73          | 1.70           | 1.71           | 1.66           | 1.68           | 1.77           | 1.69           |
| GS-3R-6      | 1.75          | 1.70          | 1.77          | 1.73          | 1.70          | 1.73          |               | 1.72          | 1.74          | 1.70           | 1.73           | 1.63           | 1.67           | 1.75           | 1.72           |
| GS-3R-7      | 1.75          | 1.70          | 1.77          | 1.67          | 1.70          | 1.74          |               | 1.73          | 1.74          | 1.69           | 1.72           | 1.72           | 1.66           | 1.75           | 1.67           |
| GS-3R-8      | 1.77          | 1.71          | 1.78          | 1.72          | 1.69          | 1.72          |               | 1.72          | 1.74          | 1.67           | 1.72           | 1.67           | 1.62           | 1.74           | 1.68           |
| GS-3R-9      | 1.77          | 1.67          | 1.77          | 1.70          | 1.69          | 1.72          |               | 1.74          | 1.75          | 1.67           | 1.72           | 1.60           | 1.65           | 1.76           | 1.72           |
| GS-3R-10     | 1.78          | 1.73          | 1.77          | 1.70          | 1.69          | 1.69          |               | 1.73          | 1.75          | 1.68           | 1.72           | 1.61           | 1.64           | 1.76           | 1.72           |
| Mean         | 1.76          | 1.70          | 1.77          | 1.71          | 1.69          | 1.72          |               | 1.73          | 1.74          | 1.69           | 1.72           | 1.65           | 1.67           | 1.76           | 1.71           |
| Std. Devn.   | 0.02          | 0.02          | 0.01          | 0.02          | 0.01          | 0.02          |               | 0.01          | 0.01          | 0.02           | 0.01           | 0.05           | 0.03           | 0.01           | 0.03           |
| % RSD        | 1.01          | 1.11          | 0.67          | 1.24          | 0.43          | 0.87          |               | 0.41          | 0.40          | 1.18           | 0.54           | 3.06           | 1.86           | 0.58           | 1.54           |

| Instrumental | Lab 1<br>% Zn | Lab 2<br>% Zn | Lab 3<br>% Zn | Lab 4<br>% Zn | Lab 5<br>% Zn | Lab 6<br>% Zn | Lab 7<br>% Zn | Lab 8<br>% Zn | Lab 9<br>% Zn | Lab 10<br>% Zn | Lab 11<br>% Zn | Lab 12<br>% Zn | Lab 13<br>% Zn | Lab 14<br>% Zn | Lab 15<br>% Zn |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|
| GS-3R-1      | 0.58          | 0.57          | 0.55          | 0.54          | 0.56          | 0.58          |               | 0.54          | 0.55          | 0.56           | 0.56           | 0.56           | 0.56           | 0.57           | 0.57           |
| GS-3R-2      | 0.58          | 0.57          | 0.55          | 0.52          | 0.56          | 0.57          |               | 0.54          | 0.55          | 0.55           | 0.55           | 0.56           | 0.55           | 0.56           | 0.58           |
| GS-3R-3      | 0.58          | 0.58          | 0.55          | 0.54          | 0.58          | 0.58          |               | 0.54          | 0.55          | 0.56           | 0.56           | 0.56           | 0.57           | 0.57           | 0.57           |
| GS-3R-4      | 0.58          | 0.57          | 0.55          | 0.54          | 0.57          | 0.57          |               | 0.55          | 0.55          | 0.57           | 0.55           | 0.54           | 0.56           | 0.56           | 0.56           |
| GS-3R-5      | 0.57          | 0.58          | 0.55          | 0.53          | 0.56          | 0.58          |               | 0.55          | 0.54          | 0.55           | 0.56           | 0.56           | 0.56           | 0.57           | 0.58           |
| GS-3R-6      | 0.57          | 0.57          | 0.55          | 0.54          | 0.57          | 0.58          |               | 0.54          | 0.55          | 0.55           | 0.55           | 0.55           | 0.55           | 0.56           | 0.57           |
| GS-3R-7      | 0.57          | 0.57          | 0.55          | 0.51          | 0.56          | 0.58          |               | 0.54          | 0.55          | 0.56           | 0.55           | 0.55           | 0.56           | 0.56           | 0.55           |
| GS-3R-8      | 0.58          | 0.57          | 0.56          | 0.54          | 0.55          | 0.58          |               | 0.55          | 0.55          | 0.55           | 0.55           | 0.55           | 0.55           | 0.56           | 0.56           |
| GS-3R-9      | 0.57          | 0.57          | 0.55          | 0.53          | 0.56          | 0.58          |               | 0.55          | 0.55          | 0.55           | 0.55           | 0.56           | 0.55           | 0.57           | 0.55           |
| GS-3R-10     | 0.58          | 0.58          | 0.55          | 0.54          | 0.56          | 0.57          |               | 0.54          | 0.55          | 0.54           | 0.56           | 0.56           | 0.56           | 0.57           | 0.57           |
| Mean         | 0.58          | 0.57          | 0.55          | 0.53          | 0.56          | 0.58          |               | 0.54          | 0.55          | 0.55           | 0.55           | 0.55           | 0.56           | 0.57           | 0.57           |
| Std. Devn.   | 0.01          | 0.01          | 0.00          | 0.01          | 0.01          | 0.00          |               | 0.01          | 0.00          | 0.01           | 0.00           | 0.01           | 0.01           | 0.00           | 0.01           |
| % RSD        | 0.90          | 0.89          | 0.58          | 1.65          | 1.17          | 0.81          |               | 0.95          | 0.81          | 1.24           | 0.68           | 1.46           | 1.09           | 0.61           | 1.76           |

Notes: Ag results from Lab 12 were removed for failing the t test.  
Pb results from Lab 12 were removed for failing the t test.  
Zn results from Lab 4 were removed for failing the t test.  
Lab 7 only reported Au assay results.

### Participating Laboratories:

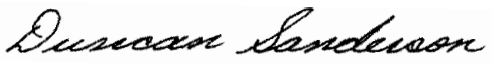
(not in same order as table of assays)

Bureau Veritas, Vancouver, BC, Canada  
Activation Laboratories, Ancaster, Ontario, Canada  
Activation Laboratories, Thunder Bay, Ontario, Canada  
ALS Canada, North Vancouver, BC, Canada  
ALS, Loughrea, Ireland  
ALS, Lima, Peru  
Argetest, Ankara, Turkey  
Certimin S.A., Lima, Peru  
AGAT Labs, Mississauga, Ontario, Canada  
MS Analytical, Langley, BC, Canada  
SGS, Vancouver, BC, Canada  
SGS, Lima, Peru  
SGS, Lakefield, Ontario, Canada  
TSL Laboratories Ltd., Saskatoon, SK, Canada  
Andes Analytical Assay Ltda., Santiago, Chile

**Legal Notice:**

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. or Barry Smee accept no liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by

  
Duncan Sanderson, Certified Assayer of B.C.

Geochemist

  
Dr. Barry Smee, Ph.D., P. Geo.