Acid-Base Account including the following parameters:

Total Sulfur
Sulfate Sulfur
Sulfide Sulfur
Residual Sulfur
Neutralization Potential
SMP Lime Requirement

Reference: EPA-600/2-78-054. Field and Laboratory Methods Applicable to Overburdens and Minesoils. Industrial Environmental Research Laboratory, Office of Research and Development U.S. EPA, Cincinnati

EPA-670/2-74-070. Mine Spoil Potentials for Soil and Water Quality. National Environmental Research Center, Office of Research and Development, U.S. EPA, Cincinnati.

These procedures are modified in the following method(s)

Modified ABP Procedure

The following narrative details a modified procedure for the acid-base account which takes into account recent research conducted by the USGS on sulfur forms in hard-rock mine waste. In addition, it takes into account the presence of some of the acid-forming sulfate minerals likely to be present in our mine waste samples. Attached are detailed descriptions of each method including:

- o neutralization potential
- o modified acid-base account
- o SMP buffer

1.1 Measurement of Potential Acidity

Generation of acidity from oxidation of sulfide-rich mine waste is a commonly observed environmental problem. (Caruccio 1968, Sobek and others 1978). It is important to measure the amount of potential acidity that may be formed by mine waste materials. For most soils, the lime requirement is the amount ~~to~~ necessary to neutralize the "active" or "titratable acidity" which is a function of the soil pH and its buffering capacity. Sulfide-rich soils also have "residual acidity" which may be released over many years. Oxidation of pyrite and other sulfides forms sulfuric acid. Research on coal overburden in the Eastern U.S. indicated that residual acidity is a function of sulfide sulfur and to an extent organic sulfur. Sulfate is already oxidized thus does not contribute to acid generation.

Several methods have been devised for determining the lime required to neutralize acidity. Methods based on measurement of titratable acidity (McLean and others 1966, McLean 1982, Peech 1965) have been used to predict lime requirement for most natural soils. The SMP Buffer method (Shoemaker and others 1961) has received wide acceptance as a standard method for measuring titratable acidity.

The "acid-base accounting" method has been used to calculate potential acid release form sulfide-rich materials (Smith and others 1976, Sobek and others 1978, Sturey and others 1982). These methods have been criticized as overestimating lime requirement because coarse sulfide materials are not reactive or may be coated with iron oxides (Burt and Caruccio 1986) and because organic sulfur was shown to be less acid-producing than inorganic sulfur (Sullivan and Sobek 1982).

1.2 Proposed Methods

Tailings material is unlike coal overburden in being low in organic sulfur. Therefore sulfide sulfur gives a good indication of maximum residual acidity. Sobek and others (1978) noted that lime required in tons per acre to neutralize residual acidity is percent sulfide sulfur times 31.25. A modified acid-base account method for determining lime rate based on non-sulfate inorganic sulfur may be most appropriate for tailings.

Many workers have found that the acid-base account as developed by Sobek and others (1978) may not accurately predict potential acid production. The method has been modified to account for some of these potential problems. The 1:7 HNO_3 digestion performed overnight at room temperature may not be adequate to remove all sulfides (Larry Jackson, USGS, personnal communication; Gary Bigham, personnal communication). Jackson (personnal communication) suggested using the same acid normality but heating the solution. A less than 100 mesh samples size has also been recommended to liberate all micro-crystalline pyrite from the silicate matrix.

Bigham (1987) described a number of problems encountered using the standard Acid-Base Account methods on tailings and mine waste at the Anaconda Smelter site. Discussions with Bigham indicate that modifications suggested in this document are consistent with the analytical results obtained at the Anaconda Smelter site. Further, extractions will be consistent (comparable) with those used at the Smelter site. Potential acid production for the Anaconda site was predicted based on total sulfur minus HCl leach sulfur (assumed to be sulfate).

The sulfate removal step (leaching with 50 ml 2:3 HCl) may also remove many acid-forming sulfide and sulfate minerals. Jackson (personal communication) has shown that sphalerite, pyrrhotite, chalcopyrite and a number of potential acid-formers are dissolved by the HCl solution typically used for sulfate removal. In addition, many acid-forming sulfate minerals may form in oxidized pyritic mine waste (Van Breemen 1982, Nordstrom 1982). Jarosite is the most prevalent acid-forming sulfate ($KFe_3(SO_4)_2(OH)_6$). Jarosite liberates 3 moles of H^+ when it undergoes hydrolysis to form goethite ($FeOOH$). Alunite which is the aluminus counterpart of jarosite may undergo similar reactions. Nordstrom (1982) discussed a complex series of variably hydrated ferrous and ferric sulfate minerals. Many of these highly soluble minerals (melanterite, rozenite) liberate acid when dissolution releases ferrous iron into solution. Two soluble sulfur removal steps will be used in the modified acid-base account proposed. Hot distilled water will be leached through the sample to remove sulfate until the EC of the leachate is less than a threshold value. In addition, the traditional HCl leach will also be used. Care should be taken in interpretation of the acid-base account results. Hydrated ferrous sulfates may be liberated by the distilled water rinse but not alunite or jarosite.

The neutralization potential method (3.2.3) will be used to assess the amount of acid buffering capacity of the mine waste material. Sources of neutralization capacity include calcium carbonate, clay minerals, organic matter and other soil constituents. The SMP buffer lime requirement test will also be run to help interpret the active acidity of tailings material (for samples where the neutralization potential is less than zero).

The methods for the neutralization potential (3.2.3), total sulfur determination (3.2.4), the modified acid-base account (3.2.6), and the SMP buffer test are attached.

Total sulfur determination performed on an untreated sample as well as on the distilled water, HCl, and HNO3 sub-samples will be compared to find the sulfide-S content of the tailings. Acid dissociable sulfide and moderately insoluble sulfate S content will also be assessed as well as the residual S level.

The lime requirement for each soil will based on a technical assessment of the amount of sulfur in each fraction, and on the presumed chemical composition and likely reactions within each S form. As an example, a calculation of lime requirement for a typical mine waste sample is shown below.

LR (tons/acre) = [HNO3-S * 31.25 + HCl-S * 15.6
+ SMP buffer] * 1.25

HNO3-S = sulfide S
HCL -S = insoluble sulfate S

The lower multiplier (15.6) for the insoluble sulfate S fraction indicates the smaller amount of acidity (3 moles/mole S) that can be formed from this fraction. The multiplier of 1.25 is a mixing design safety factor to account for inadequate sample mixing.

2.0 REFERENCES

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ENERGY LABORATORIES

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ACID POTENTIAL AND FORMS OF SULFUR

1.0 Sample Preparation

Samples should be dried thoroughly and ground to 100 mesh. Samples should be prevented from excess contact with metal (iron) grinding apparatus. After grinding, mix sample very well.

1.1 Analysis of Sulfur Forms

1.1.1 Total Sulfur

Analyze the untreated sample on the Leco sulfur determinator.

1.1.2 Hot Water Wash (Water Soluble Sulfur)

Place a #41 Whatman Filter in a 15 cm diameter funnel. In the filter place 3-5 grams of sample. Wash the sample with 150 ml of hot (boiling) deionized water (DI). Then rinse with 200 ml of room temperature DI. Dry and mix the sample. Analyze the sample on the Leco sulfur determinator. The sulfur detected here is the non-sulfate sulfur.

1.1.3 HCl Wash

Place a #41 Whatman Filter in a 15 cm diameter funnel. In the filter place 3-5 grams of sample. Wash the sample with 150 mls of 2:3 HCl. Rinse very thoroughly with at least 300 mls of DI. Dry and mix the sample. Run the sample on the Leco determinator.

1.1.4 HNO3 Wash

Weigh 1 gram of sample into a 150 ml beaker. Add 50 ml of 1 + 7 HNO3 to the beaker. Put watch glass over the beaker and heat to near boiling for at least 6 hours. Let sample cool overnight. Rinse the solution into a #41 Whatman filter and rinse with 200 ml of DI. Dry and mix the sample. Analyze on the Leco sulfur determinator.

2.0 Calculations

Non-sulfate Sulfur = Total S after hot water leach

Hot Water Extractable Sulfur (mostly sulfates) =
(Total S of untreated sample) minus (Total S after hot water leach)

HCl Extractable Sulfur (acid dissociable sulfides and less soluble sulfates) =
(Total S after hot water leach) minus (Total S after HCl leach)

HNO3 Extractable Sulfur (mostly pyrite or other acid forming sulfides) =
(Total S after HCl leach) minus (Total S after HNO3 leach)

Residual Sulfur (mostly organic Sulfur {should be near zero}) =
Total Sulfur after HNO3 treatment

Acid Potential, meq/100 g = Non-sulfate sulfur, % x 62.5

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NEUTRALIZATION POTENTIAL

1.0 Principles

The amount of neutralizing bases, including carbonates, present in overburden materials is found by treating a sample with a known excess of standardized hydrochloric acid. The sample and acid are heated to insure that the reaction between the acid and the neutralizers goes to completion.

The calcium carbonate equivalent of the sample is obtained by determining the amount of unconsumed acid by titration with standardized sodium hydroxide.

2.0 Chemicals

2.2 Sulfuric acid, 0.02N certified reagent.

2.3 Sodium hydroxide (NaOH), approximately 0.5 N: Dissolve 20.0 g of NaOH pellets in carbon dioxide-free water and dilute to 1 liter. Protect from CO2 in the air with ascarite tube. Standardize solution by placing 50 ml of 0.02N H_2SO_4 in a beaker and titrating with the prepared 0.5 N NaOH to a phenolphthalien endpoint. Calculate the Normality of the NaOH using the following equation:

N2 = (N1V1)/V2, where:

V1 = Volume of H_2SO_4 used.

N1 = Normality of H_2SO_4 used.
V2 = Volume of NaOH used.
N2 = Calculated Normality of NaOH.

2.4 Hydrochloric acid (HCl), approximately 0.5 N: Dilute 42 ml of concentrated HCl to a volume of 1 liter with distilled water. Standardize the solution by placing 20 ml of the known Normality NaOH prepared in 2.3 in a beaker and titrating with the prepared HCl to a phenolphthalien endpoint. Calculate the Normality of the HCl using the following equation:

N1 = (N2V2)/V1, where:

V2 = Volume of NaOH used.
N2 = Normality of NaOH used.
V1 = Volume of HCl used.
N1 = Calculated Normality of HCl.

3.0 Procedure

3.1 Weight 5.00 g of sample (less than 60 mesh) into a 250 ml beaker.

3.2 Carefully add 50.0 ml of 0.5N HCl into the flask containing sample.

3.3 Heat nearly to boiling, swirling flask every 5 minutes, until the reaction is complete. NOTE: The reaction is complete when no gas evolution is visible and particles settle evenly over the bottom of the flask.

3.6 Measure the pH of the solution. If it is < 1.0, proceed with step 3.7. If the pH ≥ 1.0, repeat the test starting at 3.1 using one half as much soil.

3.7 Titrate using 0.5 N NaOH, to pH 7.0 using an electrometric pH meter and buret.

3.8 Run a blank by titrating 50 ml of 0.5 N HCl with 0.5 N NaOH.

4.0 Calculations

4.1 Neutralization Potential, Tons $CaCO_3$/1000 Tons material =

(B-V) X N X 50/Sample grams

Where:
B = Volume of NaOH blank titration.
V = Volume of NaOH sample titration.
N = Normality of NaOH

4.2 Lime, % = (Neutralization Potential, Tons $CaCO_3$/1000 Tons material)/10

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ACID BASE POTENTIAL

1.0 Summary

Acid-base potential is calculated from acid potential and neutralization potential.

2.0 Calculations

2.1 Acid potential is usually reported as meq H/100 g of soil. Convert to Tons $CaCO_3$/1000 Tons of material.

Acid potential, Tons $CaCO_3$/1000 Tons = (Acid potential, meq/100g)/2

2.2 Acid base potential[1] = Neutralization potential[1] - acid potential[1]

A positive result indicates an excess of lime, a negative result indicates a potential lime deficiency.

[1] Tons $CaCO_3$/1000 Tons Material.

ALS Chemex

Fire Assay Procedure – Au-AA23 & Au-AA24
Fire Assay Fusion, AAS Finish

Sample Decomposition: Fire Assay Fusion (FA-FUS01 & FA-FUS02)
Analytical Method: Atomic Absorption Spectroscopy (AAS)

A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead.

The bead is digested in 0.5 mL dilute nitric acid in the microwave oven, 0.5 mL concentrated hydrochloric acid is then added and the bead is further digested in the microwave at a lower power setting. The digested solution is cooled, diluted to a total volume of 4 mL with de-mineralized water, and analyzed by atomic absorption spectroscopy against matrix-matched standards.

Method Code	Element	Symbol	Units	Sample Weight (g)	Lower Limit	Upper Limit	Default Overlimit Method
Au-AA23	Gold	Au	ppm	30	0.005	10.0	Au-GRA21
Au-AA24	Gold	Au	ppm	50	0.005	10.0	Au-GRA22

ALS Chemex

Fire Assay Procedure – Ag-GRA21, Ag-GRA22, Au-GRA21 and Au-GRA22
Precious Metals Gravimetric Analysis Methods

Sample Decomposition: Fire Assay Fusion (FA-FUSAG1, FA-FUSAG2, FA-FUSGV1 and FA-FUSGV2)

Analytical Method: Gravimetric

A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents in order to produce a lead button. The lead button containing the precious metals is cupelled to remove the lead. The remaining gold and silver bead is parted in dilute nitric acid, annealed and weighed as gold. Silver, if requested, is then determined by the difference in weights.

Method Code	Element	Symbol	Units	Sample Weight (g)	Detection Limit	Upper Limit
Ag-GRA21	Silver	Ag	ppm	30	5	10,000
Ag-GRA22	Silver	Ag	ppm	50	5	10,000
Au-GRA21	Gold	Au	ppm	30	0.05	1000
Au-GRA22	Gold	Au	ppm	50	0.05	1000

ALS Chemex

Fire Assay Procedure – Au-AA23 & Au-AA24
Fire Assay Fusion, AAS Finish

Sample Decomposition: Fire Assay Fusion (FA-FUS01 & FA-FUS02)
Analytical Method: Atomic Absorption Spectroscopy (AAS)

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Method Code	Element	Symbol	Units	Sample Weight (g)	Lower Limit	Upper Limit	Default Overlimit Method
Au-AA23	Gold	Au	ppm	30	0.005	10.0	Au-GRA21
Au-AA24	Gold	Au	ppm	50	0.005	10.0	Au-GRA22

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Standard Operating Procedure for the Meteoric Water Mobility Procedure (MWMP)

Document Title: Standard Operating Procedure for the Meteoric Water Mobility Procedure.

Document Control Number: S – MWMP - 1.0

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Standard Operating Procedure for the Meteoric Water Mobility Procedure (MWMP).

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Standard Operating Procedure for the Meteoric Water Mobility Procedure

1.0 Scope and Application.

1.1 This method follows a procedure developed by the Nevada Department of Environmental Protection (NDEP 1996) and outlined in ASTM-E2242 to evaluate the potential for dissolution and mobility of certain constituents within a mine rock sample using simulated meteoric water.

2.0 Summary of Method.

2.1 A mine rock sample is loaded into a 6-inch diameter PVC column and extracted for at least 24 hours using a single pass of Type II reagent grade deionized water. The resulting effluent is then submitted for a variety of chemical analyses.

3.0 Definitions.

3.1 MWMP – Meteoric Water Mobility Procedure

4.0 Interferences, Considerations.

4.1 Mine rock samples that have a particularly high clay concentration may form a layer within the column that is impermeable to continuing water infiltration. In addition, samples with a relatively high degree of fine material may clog filters, limiting infiltration into the effluent collection bucket. A clean glass rod may be used during the analysis to poke holes through the barrier or clean the filter, and hopefully allow for a greater degree of infiltration. However, the development of these situations can significantly interfere with test continuation, and during these circumstances, a different extraction method may be advised.

5.0 Sample Collection, Preservation, and Handling.

5.1 Mine rock samples should be evaluated to ensure that only minus 2 inch material is loaded into the extraction column.

5.2 The extraction device must be loaded with material gently, with material dropping from no more than 24 inches to minimize sample compaction.

6.0 Safety.

6.1 Follow standard laboratory safety procedures.

6.2 Wear gloves and safety glasses when working with the soils.

6.3 Some MWMP materials may have high concentrations of particularly deleterious chemical constituents (i.e., arsenic, cyanide). Avoid touching the rock material or extract, and avoid breathing dust generated by the loading of the extraction device.

7.0 Apparatus & Materials.

7.1 Extraction device consisting of a 6-inch diameter round PVC column, which measures approximately 14 to 18 inches in length. The extraction device contains a "punch plate" on its lower end, upon which mine rock rests. An inert filter covers the plate to ensure that fine material does not migrate from the sample into the effluent collection container.

7.2 Effluent collection container, and associated tubing and fittings that mate the container to the extraction column.

7.3 Water delivery system (either pump driven or constant head) that ensures a consistent and accurate delivery rate for the extraction water.

7.4 Laboratory balance capable of measuring up to 8 kilograms of material to the nearest 1.0 gram.

7.5 Drying pans for moisture content determination.

8.0 Reagents and Consumable Materials.

8.1 Type II Reagent Grade deionized water.

8.2 15-centimeter qualitative filter paper, such as Advantec No. 232.

9.0 Calibration and Standardization.

9.1 Prior to initiation of the MWMP, the flow rate from the water system should be tested to ensure the proper delivery of extraction water. To test, the drips from the water system can be collected in a graduated cylinder over a period of five minutes. The graduated cylinder should then, of course, read as five times the desired flow rate (in milliliters/minute), with an allowable error of less than 1 milliliter.

10.0 Quality Control.

10.1 A sample consisting of blank extraction water is submitted with each batch of client samples. This blank sample can be collected from the water delivery system (i.e., system blank), or by running the extraction water from the delivery system through a cleaned extraction device (with filters) and collecting the effluent in a cleaned collection bucket (i.e., method blank).

11.0 Procedure.

11.1 Determine the moisture percentage of the mine rock sample to be extracted prior to initiation of the meteoric water method. The moisture percentage determination is as follows:

%Moisture = [(wet sample & pan) – (dry sample & pan)] / [(dry sample & pan) – (pan)] *100

The moisture percentage is then considered when determining the quantity of material to be added to the extraction column. The method requires that the sample equivalent of 5

kilograms dry mass be loaded into the extraction device. To determine the quantity of "wet" sample material equivalent to 5 kilograms dry mass, the following equation is used:

Sample mass for column analysis (g) = 5000 * [1 + (%moisture/100)]

Please note, on occasion a sample quantity smaller than 5 kilograms (dry mass) may be required because insufficient sample is received or the sample that is received contains a relatively high moisture content. During these instances, a smaller sample size may be utilized, but this change to the methodology must be reported to the client and accounted for in the following steps (see Step 11.4).

11.2 Prepare the extraction column for use by thoroughly cleaning each part with a Neutrad solution, rinsing each part with deionized water, and properly assembling the extraction device. Ensure that all joints are sealed with Parafilm to minimize the potential for contamination by dust and sample debris.

11.3 Place two 15-centimeter filters at the bottom of the extraction column. Load the appropriate quantity of sample material into the extraction column, as determined by the formula presented in Step 11.1 above. Drop sample material into the column from no higher than 24 inches. Level out the top of the sample material. Place one 15-centimeter filter on top of the level material. The filter will ensure that extraction water is wicked/distributed across the sample material from the single drip point.

11.4 Prepare the water distribution system by rinsing and purging the water delivery pipe. Start the water distribution system. Begin the extraction water drip at a rate that will apply a quantity of extraction water over a 24-hour period equivalent to the quantity of dry mine rock sample. In other words, the extraction water volume applied over a 24-hour period and the dry mass of the sample should be in a 1:1 ratio. For a sample containing the recommended 5 kilograms (dry mass) of material, extraction water should be applied at a rate of approximately 3.5 milliliters per minute. For other quantities of mine rock samples, the following formula may be used to determine the extraction water rate:

Extraction water rate (ml/min) = sample dry mass (g) / (60*24)

Please note, in a constant-head water delivery system, the flow rate adjustment must be made by altering the length of the 0.020-inch diameter tubing. This adjustment can be made on a proportion basis, relative to the base length for the standard flow rate (i.e., 5 inches of tubing for a flow rate of 3.5 ml/min). Always check the flow rate prior to initiation of any MWMP extraction using the methods outlined in Section 9.0 (Calibration and Standardization).

11.5 Evaluate the quantity of effluent collected after 24 hours. If the quantity of effluent collected is not equivalent to the quantity of mine rock sample utilized (dry mass), then the extraction should continue at the same rate until the quantity of effluent is equivalent to the mass of the mine rock sample utilized (dry mass). For example, for a 5-kilogram (dry mass) sample, allow the extraction to continue until 5 liters of effluent is collected. The additional time required beyond the 24-hour target extraction period is due to the absorption of extraction water by samples exhibiting initial (feed) moisture contents below their water holding capacities.

11.6 Discontinue the extraction upon collection of the required effluent volume. Distribute effluent into labeled sample bottles as necessary for the required analyses. Submit the sample bottles to Sample Receiving for sample filtration, preservation and analysis, as necessary.

11.7 Allow the extraction column and wetted sample to drain until the surface of the material no longer glistens and the effluent drip reaches a negligible rate. Remove a representative sample from the mine rock column and determine a moisture percentage for the post-extraction material, using the moisture percentage formula presented in Step 11.1.

12.0 Calculations.

12.1 Each calculation required for the meteoric water extraction has been presented in context in Section 11.0 (Procedure).

13.0 Reporting

13.1 The following information and values must be reported to the client:

- Procedure utilized for the extraction.
- Alterations to the standard extraction procedure, including any changes to the quantity of mine rock material used.
- pH of the extraction fluid.
- Feed and retained moisture contents of the mine rock sample.
- Total dry mass of the mine rock material utilized for the extraction procedure.
- Time of contact in the extraction device.
- Results of the requested analyses related to the extraction effluent.

14.0 Precision & Accuracy

14.1 All quality control measures related to the analysis of extraction effluent should meet IML guidelines.

15.0 Comments

15.1 None.

16.0 References

16.1 Nevada Mining Association (1996), Meteoric Water Mobility Procedure (MWMP), Standardized Column Percolation Test Procedure, Nevada Mining Association, Reno, NV, 5p.

KINETIC TEST PROCEDURE – HUMIDITY CELL

Cell Preparation

1kg of crushed (minus 1/4") solid sample is typically used in the cell. For requested alterations please inform the Humidity Cell Account Manager.

Weekly Maintenance

Humidity Cells are on weekly cycles that alternate between the circulation of dry air and wet air over the samples to emulate the environment. Although this cycle can continue for 40 weeks or more, ALS Laboratory Group provides customized cell cycles to suit client-specific needs.

Leaching Process

Leaching is performed on a weekly basis. The first weekly leach uses 750mL de-ionized water while all subsequent leaches use 500mL. The leaching process includes filtering through a 0.45micron membrane filter prior to analysis.

Leachate analysis

Filtrates are analyzed the same day for pH and Conductivity. Other analyses that are usually done include Alkalinity, Acidity, Sulphate and a metals scan. The suite of analyses for humidity cells may vary and additional analysis are available upon request. Please communicate your required analytical suite prior to the set-up of the Humidity Cell(s).

Cell Closedown

Cell closure is done the same day as the final leach of the cell. An extraction procedure (3:1 water:solid ratio) on the cell residue followed by the same suite of analysis as listed in this quote is optional. Please inform the Humidity Cell Account Manager if you require the additional extraction procedure.

References

Guidelines and Recommended Methods for the prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia. Dr. William A. Price.

ASTM D5744-96 – Standard test Method for accelerated Weathering of Solid Material Using a Modified Humidity Cell

Nitrate Analysis Methodology

Rock samples were analyzed by Energy Labs for nitrate following methods described by Page et al [1982][1]. A summary extract of those methods is provided below.

A Lachat QuikChem AE apparatus was used for the analysis.

> *NO_3- is extracted from soil by shaking with 2M KCl for 1 hour, the extract is filtered, NO_3- in the extract is reduced to NO_2- by passage through a column of copperized Cd, and the resulting NO2- is quantitated. In the analysis procedure, the NO_3- is an aliquot of filtered soil extract is quantitatively reduced to NO_2- by reaction with copperized Cd in a NH4Cl matrix within the pH range of 5 to 10.*
>
> ***Reagents***
>
> 1. *Potassium chloride (KCl) solution, 2M.*
> 2. *Copperized Cd reagent: Treat a 50-g sample of Cd metal having a size 1 mm in diam by 2 mm in length or smaller with 250 ml of 6N hydrochloric acid (HCl) for 1 min. Decant the HCl, and thoroughly wash the Cd metal with deionized water. Twice treat the powdered Cd with 250 ml of a 2% (wt/vol) cupric sulfate pentahydrate ($CuSO_4$ *$5H_2O$)) solution that is separated by a wash with deionized water. Decant the $CuSO_4$*$5H_2O$ solution , and thoroughly wash the copperized Cd with deionized water until all blue and light gray color disappears from the wash water. Place the copperized Cd into reducing columns.*
> 3. *Ammonium chloride (NH_4Cl) solution, concentrated. Dissolve 100 g of NH_4Cl in 500 ml of deionized water. Store in a glass or plastic bottle.*
> 4. *Ammonium chloride (NH_4Cl) solution, diluted. Dilute 50 ml of conc NH_4Cl solution to 2 liters with deionized water and store in a glass or plastic bottle.*
> 5. *Diazotizing reagent: Dissolve 0.5 g of sulfanilamide in 100 ml of 2.4M hydrochloric acid (HCl). Sore the solution in a refrigerator at 4°C.*
> 6. *Coupling reagent: Dissolve 0.3 g of [N-(1-naphthyl)-ethylenediamine] hydrochloride in 100 ml of 0.12 M hydrochloric acid (HCl). Store the solution in a brown bottle in the refrigerator.*
> 7. *Standard nitrate (NO_3-) solution: Dissolve 0.3609 g of potassium nitrate (KNO_3) in deionized water, and dilute to 1 liter. If pure, dry KNO_3 is used, this solution contains 50 μg of NO_3^- -N/ml. Store the solution in a refrigerator.*

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[1] **Page, A.L., Miller, R.H., Keeney, D.R., 1982.** *Methods of Soil Analysis*, Chemical and Microbiological Properties, Second Edition, Number 9 (Part 2) in the series, Agronomy, American Society of Agronomy, Inc., and Soil Science Society of America, Inc., Madison, WI.

Procedure

1. *Preparation of filtered soil extract.*

2. *Preparation of reduction column.*

   Fill the Pyrex columns with dilute NH4Cl solution and pour in sufficient copperized Cd particles to give a depth of 20 cm. Ensure that all air bubbles are removed as the column is filled with copperized Cd, and drain off excess NH_4Cl solution. Wash the column thoroughly (10-pore volumes) with dilute NH_4Cl solution using a flow rate of about 8 ml/min. When the reducing columns are not in use, ensure that Cd metal is covered by at least 1-cm depth of dilute NH4Cl solution.

   Immediately before use of column for NO_3- analysis, add 1 ml of conc NH_4Cl solution (reagent 3), and lower the liquid level to the top of the column. Add 75 ml of dilute NH_4Cl solution (reagent 4) to the reservoir on top of the column, attach a 100-ml volumetric flask to the rubber stopper on the column outlet, and pass the NH_4Cl solution through the column at a rate of 100 ml/min by regulating the vacuum and the stopcock position.

3. *Analysis of extract.*

   Drain excess NH_4Cl solution from the column such that the solution level is even with the top of the metal in the column. Pipette 1 ml of the conc NH_4Cl solution (reagent 3) onto the top of the column, and add an aliquot of 2M KCl extract containing not more than 20 μg of NO3- -N (aliquot size will normally vary from 2 to 5 ml). Attach a 100-ml volumetric flask to the rubber stopper on the column outlet, and allow the treated extract to enter the copperized Cd bed by draining NH_4Cl solution from the lower end of the column. Use 2 ml of dilute NH_4Cl solution to wash the inside of the column, and drain the washings into the column bed. Add 75 ml of dilute NH_4Cl solution to the reservoir on top of the column, and begin the flow through the column at a rate of 110 ml/min. Collect the entire volume of eluent in the 100-ml volumetric flask. After elution is complete, add 2 ml of diazotizing reagent to the contents of the volumetric flask and mix. After 5 min, add 2 ml of the coupling reagent. Mix the solution, bring to volume, and allow to stand for 20 min. Measure the absorbance of the solution at a wavelength of 540 nm against a reagent blank solution.

   Determine the NO_3^- -N concentration in the soil extract by reference to a calibration curve obtained with samples containing 0, 2, 4, 6, 10, and 20 μg of NO_3^- -N. To prepare this curve, dilute 20 ml of the standard $NO3^-$ -N solution (reagent 7) to 500 ml with 2M KCl, and mix the solution thoroughly. Then add 0, 1, 2, 3, 5, and 10 ml of the diluted NO_3^- -N standard to the copperized Cd reducing column, and perform the reduction and color development as described.

The eluent coming from the Cd reduction column contains NO_2- initially present in the soil extract plus that formed from reduction of NO_3-. Therefore, to determine the actual NO_3- content of the extract, NO2- must be removed before placement of the extract on the column or a separate NO_2- measurement must be performed on the extract. Nitrate in the soil extracts may conveniently be quantitated by the Griess-Ilosvay procedure.

Table 1. Current Acid Base Accounting for Upper Contact and Glauconitic Sandstone Deadwood Formation (Page 1 of 3)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
47579	7.7	0	10	9	1	0.02	FALSE
47802	8.3	1	32	31	1	0.05	FALSE
47828	8.1	0	39	39	1	0.02	FALSE
49194	8.4	0	331	330	1	0.01	FALSE
49377	8.6	0	286	286	1	0.01	FALSE
49657	7.5	7	3	0	1	0.3	FALSE
49827	7.8	0	183	183	1	0.01	FALSE
49977	7.8	18	8	–10	1	0.57	FALSE
50208	7.2	1	13	12	1	0.02	FALSE
50874	8.6	0	372	372	1	0.01	FALSE
50995	8.3	0	186	186	1	ND	FALSE
51374	7.7	0	15	15	1	ND	FALSE
51666	8.4	0	326	326	1	0.02	FALSE
51714	8	0	10	10	1	0.02	FALSE
52387	8.7	0	270	269	1	0.01	FALSE
52429	8.6	0	233	232	1	0.02	FALSE
52534	8.6	0	288	288	1	ND	FALSE
52724	8.5	0	355	355	1	0.01	FALSE
52773	7.8	0	41	40	1	0.02	FALSE
56587	8.4	0	148	147	1	0.02	FALSE
59756	8.3	0	303	303	1	0.01	FALSE
59890	8.4	0	259	259	1	ND	FALSE
59935	8.4	0	295	295	1	ND	FALSE
61957	8.4	ND	79	79	1	0.01	FALSE
62005	8.2	ND	26	25	1	ND	FALSE
62255	8.6	ND	200	200	1	ND	FALSE
62355	8.4	ND	244	244	1	0.01	FALSE
62649	9	ND	297	297	1	0.02	FALSE
63143	8.4	ND	250	250	1	0.01	FALSE
63252	9	ND	140	140	1	ND	FALSE
59595	8.3	ND	411	411	1	ND	FALSE
59710	8.4	ND	319	319	1	ND	FALSE
49331	7.5	2	57	55	1	0.07	FALSE
50452	8	ND	352	352	1	0.01	FALSE
51199	8.7	ND	225	225	1	0.01	FALSE

Table 1. Current Acid Base Accounting for Upper Contact and Glauconitic Sandstone Deadwood Formation (Page 2 of 3)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
60339	8.3	0	204	204	2	0.01	FALSE
49439	8.1	0	175	175	1	0.01	FALSE
49893	8.2	0	189	189	1	0.01	FALSE
50274	7.3	1	47	46	1	0.05	FALSE
50683	8	10	21	11	1	0.36	FALSE
51617	6.9	4	4	0	1	0.16	FALSE
52921	8	3	15	12	1	0.1	FALSE
55123	8	1	87	86	1	0.05	FALSE
62104	8.4	ND	138	138	1	0.02	FALSE
62472	8.4	ND	39	39	1	0.01	FALSE
50095	8.4	0	241	240	1	0.01	TRUE
52965	8.6	0	297	296	1	0.01	TRUE
53012	8.5	0	280	279	1	0.01	TRUE
53076	9	0	12	11	1	0.04	TRUE
53210	8.5	0	325	325	1	0.01	TRUE
53330	8.5	0	161	161	1	0.01	TRUE
53456	8.5	0	133	133	1	0.01	TRUE
53521	8.6	0	264	264	1	0.01	TRUE
53641	8.6	0	297	297	1	0.01	TRUE
53700	8.4	0	175	175	1	ND	TRUE
53963	8.5	0	217	216	1	0.01	TRUE
54380	8.1	0	122	122	1	0.01	TRUE
54446	8.3	0	151	151	1	0.01	TRUE
54800	8.5	0	221	221	1	0	TRUE
54839	8.4	0	341	341	1	0.01	TRUE
54918	7.9	0	139	139	1	0	TRUE
54973	7.8	12	13	2	1	0.43	TRUE
55246	8.6	0	344	344	1	0.02	TRUE
55375	8.5	0	305	305	1	0.01	TRUE
55386	8.4	0	162	162	1	0	TRUE
55635	8.3	0	185	184	1	0	TRUE
56244	8.3	0	325	325	1	0.01	TRUE
56374	8.1	0	114	114	1	0.01	TRUE
56909	8.7	8	11	3	1	0.28	TRUE
56978	8.5	2	6	4	1	0.06	TRUE
58198	8.4	0	394	394	1	0	TRUE

Table 1. Current Acid Base Accounting for Upper Contact and Glauconitic Sandstone Deadwood Formation (Page 3 of 3)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
59049	8.4	0	304	303	1	0.02	TRUE
62303	8.5	ND	169	169	1	ND	TRUE
62416	8.5	ND	319	319	1	ND	TRUE
63363	9.8	ND	92	91	1	0.01	TRUE
50565	7.9	1	200	199	1	0.05	TRUE
48625	8.8	3	519	516	2	0.12	TRUE
52958	8.7	0	344	344	2	ND	TRUE
53632	8.1	0	25	25	2	0.01	TRUE
54313	8.3	0	400	400	2	0.02	TRUE
55690	8	0	241	241	2	0	TRUE
49118	7.9	2	17	14	1	0.09	TRUE
52208	7.6	15	28	13	1	0.57	TRUE
52219	8.2	0	31	31	1	0.02	TRUE
53142	8	7	86	79	1	0.28	TRUE
53273	8.7	0	314	314	1	0.02	TRUE
53398	8.7	1	344	343	1	0.05	TRUE
53776	8.5	0	106	105	1	0.03	TRUE
53835	8.2	0	100	99	1	0.02	TRUE
54322	8.6	0	179	178	1	0.04	TRUE
55068	8.2	0	59	59	1	0.01	TRUE
55178	8.2	0	68	68	1	0.02	TRUE
55439	8.2	0	207	207	1	0.01	TRUE
55570	8.4	0	85	85	1	0.02	TRUE
56036	8.6	0	136	136	1	0.02	TRUE
56724	7.8	8	10	2	1	0.31	TRUE
56742	8	0	19	18	1	0.03	TRUE
56938	8.1	1	16	14	1	0.04	TRUE
57017	7.7	0	17	17	1	0.03	TRUE
57047	7.6	10	15	5	1	0.35	TRUE
57094	8.1	2	17	16	1	0.06	TRUE
58219	7.9	0	14	13	1	0.03	TRUE
58229	8.4	0	57	56	1	0.03	TRUE
58618	8.2	1	26	25	1	0.05	TRUE
59209	8.4	0	292	292	1	ND	TRUE
62203	8.2	ND	23	23	1	0.02	TRUE
53388	8.1	0	18	17	2	0.01	TRUE

Table 2. Current Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 1 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
47077	7.2	1	16	15	3	0.05	FALSE
47462	7.9	2	13	12	3	0.06	FALSE
47478	8.1	0	104	103	3	0.02	FALSE
47613	8.6	0	519	519	3	0.02	FALSE
47671	8	0	21	21	3	0.03	FALSE
47694	8.1	0	194	194	3	0.02	FALSE
47709	7.7	7	13	6	3	0.26	FALSE
47736	8.2	0	20	20	3	0.01	FALSE
47810	7.8	4	15	11	3	0.13	FALSE
47896	8.1	0	82	82	3	0.01	FALSE
47923	8.6	0	29	29	3	0.03	FALSE
47982	8	0	84	84	3	0.02	FALSE
48011	8	4	101	97	3	0.13	FALSE
48056	8.2	0	13	12	3	0.03	FALSE
48103	8.4	3	258	255	3	0.09	FALSE
48146	8	0	17	17	3	0.01	FALSE
48152	8	0	10	10	3	0.01	FALSE
48156	7.9	0	197	197	3	0.01	FALSE
48172	7.7	2	9	7	3	0.09	FALSE
48233	7.8	2	142	140	3	0.04	FALSE
48262	7.8	11	18	7	3	0.39	FALSE
48272	8.4	0	36	35	3	0.02	FALSE
48861	8.5	0	275	275	3	0.02	FALSE
49254	7.5	3	7	5	3	0.1	FALSE
49339	8.3	0	25	25	3	0.01	FALSE
49584	7.6	10	17	7	3	0.37	FALSE
49585	7.3	39	5	–34	3	1.4	FALSE
49705	7.4	8	8	0	3	0.3	FALSE
49765	7.6	3	17	13	3	0.12	FALSE
49989	8	0	329	329	3	0.01	FALSE
50024	7.4	18	7	–11	3	0.71	FALSE
50218	8.2	0	197	197	3	0.01	FALSE
50266	7.9	0	111	110	3	0.03	FALSE
50285	8.2	1	44	43	3	0.05	FALSE
50361	8.3	0	29	28	3	0.04	FALSE

Table 2. Current Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 2 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
50478	8.3	0	67	67	3	0.02	FALSE
50618	7.6	23	17	–6	3	0.81	FALSE
50620	7.8	13	38	25	3	0.49	FALSE
50801	8.5	0	86	86	3	0.02	FALSE
50818	8.1	0	38	38	3	0.01	FALSE
50865	8	0	71	71	3	0.01	FALSE
50930	8.5	0	367	366	3	ND	FALSE
51190	7.9	0	139	138	3	0.02	FALSE
51312	8.1	0	222	222	3	ND	FALSE
51322	8.2	7	12	4	3	0.26	FALSE
51383	8.1	4	14	10	3	0.13	FALSE
51518	8	1	28	27	3	0.05	FALSE
51522	7.7	8	8	0	3	0.32	FALSE
51572	7.6	2	10	8	3	0.07	FALSE
51581	7.8	3	131	127	3	0.12	FALSE
51630	8	3	183	181	3	0.09	FALSE
51724	7.9	3	366	363	3	0.1	FALSE
52376	7.9	3	11	8	3	0.12	FALSE
52438	8.7	0	216	215	3	0.02	FALSE
52447	8.5	0	57	56	3	0.02	FALSE
52470	7.8	0	48	47	3	0.01	FALSE
52526	8.4	0	274	273	3	0.04	FALSE
52536	8.4	0	297	296	3	0.01	FALSE
52576	8.6	0	372	372	3	0.01	FALSE
52621	8	0	204	204	3	ND	FALSE
52631	8.5	0	249	249	3	0.02	FALSE
52714	8.1	0	246	246	3	ND	FALSE
52817	7.8	13	22	9	3	0.48	FALSE
52828	8.2	0	341	341	3	0.01	FALSE
52856	7.5	1	6	5	3	0.04	FALSE
52985	8.6	1	123	122	3	0.04	FALSE
53183	8.3	5	167	161	3	0.2	FALSE
53355	8	4	278	274	3	0.14	FALSE
53368	8.9	0	283	283	3	0.02	FALSE
53372	6.8	0	28	27	3	0.04	FALSE

Table 2. Current Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 3 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
53430	8.6	0	225	225	3	0.02	FALSE
53677	8.5	0	23	22	3	0.02	FALSE
53770	7.9	2	17	15	3	0.08	FALSE
54000	8.6	2	164	162	3	0.06	FALSE
54655	7.4	5	6	0	3	0.19	FALSE
54962	8	0	11	10	3	0.01	FALSE
55338	8.1	6	132	126	3	0.18	FALSE
55611	8.6	0	610	609	3	0.02	FALSE
55762	8.2	0	15	15	3	0.01	FALSE
56005	8.3	0	18	17	3	0.02	FALSE
56017	8.6	2	214	212	3	0.05	FALSE
56056	8.4	0	27	27	3	0.02	FALSE
56145	8.4	0	15	15	3	0.01	FALSE
56195	8.7	0	16	16	3	0.02	FALSE
56223	7.9	0	289	289	3	0	FALSE
56235	8.6	0	20	20	3	0.01	FALSE
56598	8.2	0	14	14	3	0.02	FALSE
56970	8.6	3	52	49	3	0.1	FALSE
57347	8.1	9	363	354	3	0.29	FALSE
57374	8.4	0	437	436	3	0.02	FALSE
58073	8.1	0	46	45	3	0.01	FALSE
58113	8.5	0	672	671	3	0.03	FALSE
58359	8.6	0	406	405	3	0.02	FALSE
58391	8.7	0	561	561	3	0.02	FALSE
58420	7.7	0	9	9	3	0.01	FALSE
58567	8.6	0	122	121	3	0.02	FALSE
58703	8.7	0	372	372	3	0.02	FALSE
58822	8.4	0	12	11	3	0.03	FALSE
59033	8.5	0	10	9	3	0.03	FALSE
59071	8.3	0	48	47	3	0.02	FALSE
59220	8.2	3	295	292	3	0.11	FALSE
59232	8.2	0	173	173	3	ND	FALSE
59241	8.8	1	11	10	3	0.04	FALSE
59789	7.9	10	366	356	3	0.33	FALSE
59833	8.2	0	288	287	3	0.01	FALSE

Table 2. Current Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 4 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
59866	7.6	28	196	168	3	0.9	FALSE
59876	8.7	0	395	394	3	0.03	FALSE
59968	8.3	0	167	167	3	0.03	FALSE
60027	8.2	2	355	353	3	0.05	FALSE
60207	8.3	0	298	298	3	0.01	FALSE
60252	8.2	0	156	156	3	0.01	FALSE
60296	8.2	0	312	312	3	0.02	FALSE
60536	8	0	406	405	3	0.01	FALSE
60547	8.6	0	670	669	3	0.02	FALSE
60610	8.7	1	494	492	3	0.05	FALSE
60669	8.7	0	567	567	3	ND	FALSE
60695	8.2	2	318	315	3	0.08	FALSE
60725	8.8	4	409	405	3	0.13	FALSE
60782	8.3	5	270	265	3	0.16	FALSE
60804	7.8	5	431	427	3	0.16	FALSE
60816	8.8	0	272	272	3	0.02	FALSE
60852	8.5	0	664	664	3	0.01	FALSE
60945	7.8	4	153	149	3	0.14	FALSE
60987	8.7	0	380	379	3	0.03	FALSE
61131	8.3	0	15	14	3	0.01	FALSE
61154	8.6	0	533	533	3	0.02	FALSE
61184	8.2	6	363	357	3	0.19	FALSE
61193	8.4	0	57	57	3	0.01	FALSE
61215	8	0	31	30	3	0.03	FALSE
61274	8.4	0	18	17	3	0.01	FALSE
61316	8.6	0	332	332	3	0.02	FALSE
61394	8.6	0	473	473	3	0.04	FALSE
61535	8.1	0	90	90	3	ND	FALSE
61565	8.1	2	508	505	3	0.15	FALSE
61715	7.9	12	355	343	3	0.38	FALSE
62016	8.5	ND	294	294	3	0.01	FALSE
62027	8.8	ND	181	180	3	0.01	FALSE
62050	8.9	ND	18	18	3	0.02	FALSE
62078	8.5	ND	169	169	3	0.03	FALSE
62089	8.8	ND	158	158	3	0.02	FALSE
62148	8.7	ND	44	44	3	0.02	FALSE

Table 2. Current Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 5 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
62176	8.5	ND	172	172	3	0.01	FALSE
62187	8.2	ND	197	197	3	0.02	FALSE
62225	8.5	ND	21	20	3	0.01	FALSE
62278	8	ND	197	197	3	0.01	FALSE
62289	8.3	ND	73	73	3	0.02	FALSE
62326	8.6	ND	175	175	3	ND	FALSE
62338	8.4	ND	425	425	3	0.01	FALSE
62377	8.5	ND	117	117	3	ND	FALSE
62388	8.3	ND	189	188	3	0.03	FALSE
62438	8.5	ND	206	205	3	0.03	FALSE
62448	8.5	1	13	12	3	0.04	FALSE
62506	8.1	4	36	33	3	0.11	FALSE
62618	7.8	ND	71	70	3	0.01	FALSE
62683	8.7	ND	383	383	3	0.03	FALSE
62726	8.1	3	150	147	3	0.09	FALSE
62737	8.3	ND	369	369	3	0.03	FALSE
62882	8.5	ND	12	12	3	0.01	FALSE
62936	8.2	ND	48	48	3	0.03	FALSE
63002	8.3	ND	14	13	3	0.02	FALSE
63013	7.9	ND	49	49	3	0.01	FALSE
63056	8.1	ND	13	13	3	0.01	FALSE
63068	8.5	ND	12	12	3	0.02	FALSE
63089	8.2	ND	206	205	3	0.01	FALSE
63200	10	ND	133	132	3	0.01	FALSE
63309	9.6	ND	108	108	3	ND	FALSE
63331	8.9	8	36	29	3	0.24	FALSE
63385	9.1	ND	71	71	3	ND	FALSE
59552	8.4	ND	369	369	3	0.01	FALSE
59733	8.4	3	68	65	3	0.11	FALSE
54675	5.6	22	ND	–22	3	0.77	FALSE
54729	6.7	19	ND	–19	3	0.69	FALSE
56091	7.9	ND	12	11	3	0.01	FALSE
57606	6.8	7	5	–2	3	0.28	FALSE
50441	7.2	ND	3	2	3	0.02	FALSE
50576	7.9	ND	299	298	3	0.03	FALSE

Table 2. Current Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 6 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
50778	7.6	13	12	–1	3	0.47	FALSE
51133	8.2	ND	366	366	3	0.01	FALSE
51188	8.6	ND	270	270	3	ND	FALSE
52092	7.8	2	17	16	3	0.07	FALSE
48091	8	11	275	264	4	0.39	FALSE
49966	7.5	0	13	13	4	0.07	FALSE
50126	7.9	9	313	305	4	0.27	FALSE
50250	8.0	8	311	303	4	0.27	FALSE
50345	7.5	0	17	17	4	0.01	FALSE
50674	7.7	3	8	5	4	0.1	FALSE
50755	5.3	13	4	–9	4	0.45	FALSE
51677	8	2	278	276	4	0.07	FALSE
52241	8.3	8	322	314	4	0.26	FALSE
52398	7.5	20	312	292	4	0.67	FALSE
52417	6.5	13	7	–6	4	0.45	FALSE
52735	8.1	9	420	411	4	0.29	FALSE
52782	8.1	2	297	294	4	0.08	FALSE
52873	8.2	4	12	8	4	0.15	FALSE
52936	8	3	257	255	4	0.09	FALSE
53041	8	16	215	200	4	0.5	FALSE
53106	7.9	15	169	155	4	0.52	FALSE
53174	7.9	8	281	272	4	0.29	FALSE
53240	8	27	308	282	4	0.92	FALSE
53418	8.3	5	294	289	4	0.19	FALSE
53486	8.1	10	275	265	4	0.34	FALSE
53548	8.1	9	186	177	4	0.33	FALSE
53672	8.2	8	192	184	4	0.25	FALSE
53732	8.1	8	124	116	4	0.26	FALSE
53993	8.1	8	375	367	4	0.25	FALSE
55268	7.9	5	227	221	4	0.18	FALSE
55279	8.2	0	19	19	4	0.02	FALSE
55408	8.1	7	221	214	4	0.22	FALSE
55731	8.2	8	77	69	4	0.26	FALSE
55781	8.1	8	54	46	4	0.24	FALSE
56185	7.8	15	347	333	4	0.55	FALSE

Table 2. Current Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 7 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
56266	7.7	10	308	299	4	0.31	FALSE
56413	7.9	10	122	112	4	0.35	FALSE
57078	8.4	1	15	14	4	0.05	FALSE
58104	7.5	0	5	5	4	0.02	FALSE
58350	7.5	1	6	5	4	0.02	FALSE
58994	7.7	0	5	5	4	0.04	FALSE
59774	7.8	12	315	303	4	0.39	FALSE
59778	7.7	9	342	334	4	0.27	FALSE
59811	7.6	5	285	280	4	0.16	FALSE
59855	7.8	9	269	260	4	0.3	FALSE
59957	7.7	12	246	233	4	0.4	FALSE
60006	8.2	9	130	121	4	0.28	FALSE
60041	8	8	306	298	4	0.26	FALSE
60082	8.9	10	360	350	4	0.34	FALSE
60224	7.9	12	261	249	4	0.37	FALSE
60269	7.8	9	298	289	4	0.29	FALSE
60637	7.9	0	22	22	4	ND	FALSE
60664	7.7	0	24	24	4	ND	FALSE
60842	7.8	8	329	322	4	0.27	FALSE
60876	7.6	9	374	366	4	0.29	FALSE
60911	7.4	11	414	403	4	0.35	FALSE
61115	7.8	6	372	365	4	0.21	FALSE
61163	8	0	142	141	4	0.02	FALSE
61351	7.8	7	395	388	4	0.23	FALSE
61422	7.7	6	476	470	4	0.2	FALSE
61455	8	6	261	255	4	0.2	FALSE
61595	7.9	8	465	457	4	0.26	FALSE
61624	8.3	10	129	119	4	0.32	FALSE
61652	8.3	11	114	103	4	0.37	FALSE
61684	8.2	12	186	174	4	0.38	FALSE
61741	8.2	11	54	43	4	0.35	FALSE
61981	7.5	10	214	204	4	0.32	FALSE
62039	8.1	5	68	62	4	0.17	FALSE
62126	8.3	1	247	246	4	0.03	FALSE
62236	7.8	4	94	90	4	0.17	FALSE

Table 2. Current Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 8 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
62671	8.1	7	292	285	4	0.22	FALSE
62835	7.9	7	317	310	4	0.23	FALSE
62947	8	8	286	278	4	0.26	FALSE
63165	7.9	4	261	257	4	0.16	FALSE
63176	8	5	450	445	4	0.17	FALSE
63223	9.1	7	247	240	4	0.25	FALSE
63275	9.1	8	314	306	4	0.25	FALSE
59115	7.9	ND	31	30	4	0.01	FALSE
59575	7.9	5	119	114	4	0.18	FALSE
59619	7.9	7	317	309	4	0.24	FALSE
56103	7.8	ND	175	174	4	0.02	FALSE
50770	6.9	ND	11	10	4	ND	FALSE
50820	8	7	321	314	4	0.24	FALSE
51145	7.7	8	327	319	4	0.27	FALSE
51210	7.7	10	251	240	4	0.34	FALSE
51995	8	8	242	234	4	0.25	FALSE
48353	7.3	1	18	17	3	0.03	TRUE
48884	8.7	0	122	121	3	0.03	TRUE
53466	8.5	0	319	319	3	0.01	TRUE
54049	7.7	0	11	11	3	0.01	TRUE
54087	8.1	5	206	201	3	0.15	TRUE
54125	7.6	0	21	20	3	0.01	TRUE
54229	7.3	0	15	14	3	0.03	TRUE
54263	7.1	68	9	–59	3	2.3	TRUE
54273	7.2	20	1	–19	3	0.63	TRUE
54390	8.2	0	55	55	3	0.02	TRUE
54579	7	13	1	–12	3	0.41	TRUE
54995	7.9	0	13	12	3	0.04	TRUE
55017	7.8	0	13	12	3	0.02	TRUE
55091	8.2	1	13	12	3	0.04	TRUE
55200	8.2	0	15	14	3	0.01	TRUE
55581	8.4	0	77	76	3	0	TRUE
55721	8.2	0	243	243	3	0	TRUE
56135	8.5	0	76	75	3	0.02	TRUE
56175	8.2	2	214	212	3	0.09	TRUE
56213	8.2	0	228	228	3	0.01	TRUE

Table 2. Current Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 9 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
56294	8.2	0	16	15	3	0.02	TRUE
56330	8.3	0	25	25	3	0.02	TRUE
56340	8.5	0	98	98	3	0	TRUE
56512	8.3	0	13	13	3	0.01	TRUE
56556	8.3	0	298	298	3	ND	TRUE
57608	7.8	10	5	–5	3	0.38	TRUE
57633	8	3	7	3	3	0.12	TRUE
57882	7.6	1	9	8	3	0.05	TRUE
57974	8.3	0	11	11	3	0.02	TRUE
58015	8.2	0	12	11	3	0.01	TRUE
58042	7.9	0	12	12	3	0.03	TRUE
58063	8.2	0	9	9	3	0.02	TRUE
58169	8.1	0	59	59	3	0.01	TRUE
58179	8	0	15	15	3	0.02	TRUE
58190	8.2	0	12	12	3	0.01	TRUE
58210	8.3	0	13	13	3	0.01	TRUE
58268	8.3	0	119	119	3	0	TRUE
58298	8.4	0	22	21	3	0.02	TRUE
58312	8.2	0	16	15	3	0.02	TRUE
58324	8.4	0	233	233	3	0.01	TRUE
58441	8.1	0	16	16	3	0.02	TRUE
58519	8.6	0	100	99	3	0.04	TRUE
58540	8.4	0	14	14	3	0.02	TRUE
58600	8.6	0	247	247	3	0.02	TRUE
59139	8.6	0	15	14	3	0.01	TRUE
60432	8.7	1	71	70	3	0.04	TRUE
60515	8.4	0	306	306	3	0.02	TRUE
60566	8.3	0	39	38	3	0.02	TRUE
60578	8.6	0	417	417	3	0.02	TRUE
60599	8.6	5	230	225	3	0.15	TRUE
60654	8.4	0	12	11	3	0.02	TRUE
62593	8.4	1	27	26	3	0.04	TRUE
57633	7.7	3	5	2	3	0.12	TRUE
59092	8.1	ND	322	322	3	ND	TRUE
54272	7	9	2	–6	3	0.32	TRUE

Table 2. Current Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 10 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
54274	6.5	25	1	–24	3	0.86	TRUE
54696	7.1	11	3	–8	3	0.47	TRUE
T54262	7.1	17	3	–14	3	0.57	TRUE
54578	6.4	20	3	–17	3	0.63	TRUE
54580	6.6	9	3	–7	3	0.32	TRUE
48417	8.1	19	49	30	4	0.55	TRUE
51540	7.2	1	8	7	4	0.05	TRUE
51829	6.8	3	4	0	4	0.1	TRUE
51852	7.3	0	18	18	4	0.02	TRUE
53086	8.3	0	322	322	4	ND	TRUE
54028	8.1	0	14	14	4	0.01	TRUE
54059	8.1	0	261	260	4	0.03	TRUE
54206	7.3	0	15	14	4	0.04	TRUE
54253	6.9	1	2	0	4	0.05	TRUE
54413	8.2	2	196	194	4	0.06	TRUE
54476	7.9	9	453	444	4	0.3	TRUE
54510	7.5	2	15	13	4	0.09	TRUE
54544	8	2	12	10	4	0.07	TRUE
54770	7.8	0	11	10	4	0	TRUE
54951	7.8	0	20	20	4	0.01	TRUE
55006	7.9	0	44	44	4	0	TRUE
55102	7.9	0	16	16	4	0.02	TRUE
55460	8	9	249	240	4	0.28	TRUE
55470	7.9	7	322	315	4	0.22	TRUE
55603	8.1	0	319	318	4	0.03	TRUE
55671	8.2	11	140	129	4	0.34	TRUE
55751	7.8	2	18	16	4	0.08	TRUE
57985	8	0	161	161	4	0.01	TRUE
58291	7.9	2	17	16	4	0.07	TRUE
58498	7.7	20	297	277	4	0.68	TRUE
58589	7.7	10	386	377	4	0.33	TRUE
54215	7.5	3	11	9	4	0.11	TRUE
54598	7.1	14	3	–10	4	0.49	TRUE
54619	7.1	14	5	–9	4	0.52	TRUE
54709	7.1	12	3	–9	4	0.43	TRUE

Table 2. Current Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 11 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
47109	6.9	2	13	11	3	0.1	TRUE
47223	7.7	0	9	9	3	0.03	TRUE
47307	8.7	0	31	30	3	0.05	TRUE
47320	7.9	5	16	12	3	0.16	TRUE
48326	8.2	1	16	14	3	0.03	TRUE
48389	8	0	47	46	3	0.05	TRUE
48565	8.2	1	153	151	3	0.06	TRUE
48710	8.7	0	456	455	3	0.03	TRUE
48736	8.8	0	397	396	3	0.06	TRUE
48904	8.2	3	94	91	3	0.11	TRUE
49009	8.2	0	461	461	3	0.04	TRUE
49513	8.0	0	11	11	3	0.02	TRUE
51550	7.1	0	15	14	3	0.03	TRUE
52165	7.4	0	12	12	3	0.02	TRUE
52187	8.1	0	10	9	3	0.04	TRUE
53267	8.3	0	286	286	3	0.02	TRUE
53302	7.2	0	18	18	3	0.02	TRUE
53786	8.3	0	27	26	3	0.01	TRUE
53844	8.3	0	23	22	3	0.01	TRUE
54020	7.9	0	17	17	3	0.01	TRUE
54079	7.8	0	14	13	3	0.02	TRUE
54708	7.1	26	6	–20	3	0.84	TRUE
54940	8.1	2	15	13	3	0.06	TRUE
55145	8.4	0	27	27	3	0.02	TRUE
55701	8.1	0	82	82	3	0.02	TRUE
56990	8.4	1	5	4	3	0.04	TRUE
58149	7.6	1	8	7	3	0.04	TRUE
58669	8.3	2	11	8	3	0.08	TRUE
58719	8.7	1	20	19	3	0.04	TRUE
58855	8.8	0	20	20	3	0.01	TRUE
59149	8.6	0	17	17	3	0.01	TRUE
59175	8.3	2	15	13	3	0.07	TRUE
60442	7.7	2	11	9	3	0.07	TRUE
47043	6.7	11	16	5	3	0.39	TRUE
47045	7.9	2	17	15	3	0.07	TRUE
51122	7.6	5	172	167	3	0.16	TRUE

Table 2. Current Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 12 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
54238	7.2	34	3	–31	3	1.2	TRUE
54569	6	39	3	–36	3	1.4	TRUE
54644	7.3	4	4	0.08	3	0.15	TRUE
54707	7	24	6	–18	3	0.81	TRUE
54533	7.2	1	9	8	4	0.03	TRUE
54559	7.8	3	9	6	4	0.12	TRUE
55050	7.7	0	8	8	4	0	TRUE
56753	8.5	0	27	27	4	ND	TRUE
56764	8.7	2	16	14	4	0.08	TRUE
56960	8.7	7	13	5	4	0.25	TRUE
57028	10	2	18	16	4	0.09	TRUE
56782	7.3	12	5	–7	4	0.39	TRUE
56784	7.3	7	16	9	4	0.24	TRUE

Table 3. Current Acid Base Accounting for Lower Contact Unit Deadwood Formation (Page 1 of 2)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
47080	8.1	13	14	0	10	0.43	FALSE
47125	7.2	16	17	1	10	0.54	FALSE
47344	7.7	1	9	8	10	0.05	FALSE
47377	7.8	25	147	123	10	0.79	FALSE
47701	8.2	0	244	244	10	0.02	FALSE
47740	8.6	2	544	543	10	0.09	FALSE
48020	8.2	2	121	118	10	0.08	FALSE
48076	8.4	5	700	695	10	0.17	FALSE
48184	8.2	0	8	8	10	0.04	FALSE
48242	8	0	139	138	10	0.02	FALSE
48392	7.9	1	16	15	10	0.05	FALSE
48491	8.5	14	178	163	10	0.46	FALSE
48512	7.6	2	18	16	10	0.05	FALSE
48686	8.1	2	102	100	10	0.08	FALSE
48818	8.3	2	116	113	10	0.08	FALSE
51558	6.7	4	15	10	10	0.16	FALSE
53052	8.5	1	341	340	10	0.05	FALSE
53250	8.5	0	59	58	10	0.04	FALSE
53559	8.1	13	38	25	10	0.55	FALSE
53760	8	4	17	14	10	0.14	FALSE
53826	7.6	1	3	1	10	0.07	FALSE
54302	7.5	10	6	–4	10	0.38	FALSE
54495	7.6	9	44	35	10	0.3	FALSE
54528	7	1	14	13	10	0.05	FALSE
54676	6.4	56	2	–54	10	1.8	FALSE
55114	7.3	3	18	16	10	0.11	FALSE
55349	7.9	13	42	29	10	0.43	FALSE
56155	8.5	0	14	14	10	0.01	FALSE
56313	8.5	0	16	15	10	0.02	FALSE
58084	8.4	1	16	14	10	0.06	FALSE
58551	8.6	2	239	237	10	0.08	FALSE
60921	8.3	1	26	24	10	0.05	FALSE
61125	8.7	1	79	78	10	0.04	FALSE
61250	8.8	2	70	68	10	0.06	FALSE
61286	8.6	1	23	22	10	0.04	FALSE
61664	8	3	3	0	10	0.12	FALSE

Table 3. Current Acid Base Accounting for Lower Contact Unit Deadwood Formation (Page 2 of 2)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
62848	8.6	2	139	137	10	0.06	FALSE
62964	8.4	7	7	0.5	10	0.27	FALSE
63234	9.7	2	57	54	10	0.09	FALSE
63457	9.5	2	16	13	10	0.09	FALSE
59122	8.8	ND	378	377	10	0.01	FALSE
59628	8.3	2	164	162	10	0.06	FALSE
54284	6.6	27	2	–25	10	0.95	FALSE
54301	6.7	2	4	2	10	0.09	FALSE
54528	6.7	2	15	14	10	0.06	FALSE
54608	6.5	22	2	–20	10	0.81	FALSE
54609	7.1	36	6	–30	10	1.3	FALSE
54657	6.7	87	2	–84	10	3.1	FALSE
54677	5.7	22	3	–19	10	0.77	FALSE
54698	7	37	4	–33	10	1.3	FALSE
54742	6	58	4	–54	10	2	FALSE
48360	8.1	2	69	66	10	0.1	TRUE
48653	8.3	1	381	379	10	0.05	TRUE
51838	6.8	2	2	0	10	0.06	TRUE
54040	7.6	0	20	19	10	0.02	TRUE
54072	7.9	1	21	20	10	0.04	TRUE
54135	7.7	3	10	7	10	0.11	TRUE
54181	7.8	0	12	12	10	0.02	TRUE
54216	6.8	22	12	–10	10	0.75	TRUE
54239	5.9	49	4	–45	10	1.6	TRUE
55060	7.3	1	24	23	10	0.05	TRUE
57441	7.9	0	12	11	10	0.02	TRUE
54240	7.3	22	7	–15	10	0.8	TRUE
54547	6.1	21	3	–19	10	0.76	TRUE
54570	6.3	40	3	–37	10	1.4	TRUE
54697	6.9	117	4	–113	10	3.9	TRUE
54264	6.8	14	11	–3	10	0.5	TRUE

Table 4. Current Acid Base Accounting for Monzonite Porphyry (Page 1 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
47061	8.2	5	12	7	6	0.16	FALSE
47333	8.5	7	11	4	6	0.24	FALSE
47454	7	32	4	–28	6	1.1	FALSE
47578	7.7	0	12	12	6	0.02	FALSE
47591	7.8	0	14	14	6	0.01	FALSE
47681	8.2	0	19	19	6	0.02	FALSE
47718	8.1	0	18	17	6	0.03	FALSE
47887	8.8	1	4	3	6	0.06	FALSE
47912	8.5	3	8	6	6	0.11	FALSE
47969	8.7	1	9	8	6	0.05	FALSE
48000	8	1	0	0	6	0.06	FALSE
48487	8.6	52	112	60	6	1.6	FALSE
48795	8.4	2	17	15	6	0.08	FALSE
49063	8.1	26	164	138	6	0.84	FALSE
49152	8.5	0	7	6	6	0.03	FALSE
49243	7.8	0	28	28	6	ND	FALSE
49350	8.5	16	14	–2	6	0.55	FALSE
49389	8.9	0	6	6	6	0.02	FALSE
49449	8.3	3	14	11	6	0.11	FALSE
49668	8.5	0	10	9	6	0.04	FALSE
49679	8.4	9	10	0	6	0.34	FALSE
49716	8.7	0	8	7	6	0.05	FALSE
49775	8.7	1	32	31	6	0.04	FALSE
49909	8.6	0	24	23	6	0.03	FALSE
50116	8.3	1	132	130	6	0.04	FALSE
50415	7.9	5	12	7	6	0.18	FALSE
50543	8.6	3	143	139	6	0.12	FALSE
51585	8.3	1	13	12	6	0.06	FALSE
51688	8.5	10	13	3	6	0.33	FALSE
51699	8.6	2	3	1	6	0.08	FALSE
51735	8.8	5	18	13	6	0.18	FALSE
51746	8.6	0	15	14	6	0.04	FALSE
51757	8.8	0	6	6	6	0.02	FALSE
52231	8.1	0	83	83	6	0.02	FALSE
52483	8.2	0	71	70	6	ND	FALSE
52591	8.1	0	15	14	6	ND	FALSE

Table 4. Current Acid Base Accounting for Monzonite Porphyry (Page 2 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
52750	8.4	0	30	29	6	0.04	FALSE
52998	8.7	0	115	114	6	0.03	FALSE
53023	8.6	0	115	115	6	0.01	FALSE
53031	8	2	88	86	6	0.06	FALSE
53061	8.5	0	157	156	6	ND	FALSE
53095	8.2	0	13	13	6	ND	FALSE
53114	8.3	0	271	271	6	0.02	FALSE
53154	8.2	0	77	76	6	0.03	FALSE
53164	8.2	0	18	17	6	0.03	FALSE
53193	8.9	0	6	5	6	0.04	FALSE
53220	8.6	1	93	92	6	0.05	FALSE
53230	8.2	3	86	83	6	0.11	FALSE
53283	8.4	2	104	102	6	0.09	FALSE
53292	8.6	0	63	62	6	0.01	FALSE
53343	8.5	5	134	129	6	0.18	FALSE
53408	8.5	0	41	41	6	0.01	FALSE
53440	9	0	10	9	6	0.03	FALSE
53476	8.6	0	62	62	6	0.01	FALSE
53497	7.9	10	11	0	6	0.38	FALSE
53531	8.3	0	48	48	6	0.01	FALSE
53536	8.7	0	54	54	6	0.01	FALSE
53660	8.5	0	16	15	6	0.01	FALSE
53687	9.1	0	6	5	6	0.02	FALSE
53721	8.3	0	34	34	6	0.02	FALSE
53741	8.8	0	6	5	6	0.03	FALSE
53751	8.8	2	5	3	6	0.06	FALSE
53761	8.6	5	11	6	6	0.16	FALSE
53876	8.9	3	6	3	6	0.09	FALSE
53983	8.3	0	13	13	6	0.01	FALSE
54008	8.9	0	9	9	6	0.03	FALSE
54192	9.1	0	6	5	6	0.04	FALSE
54224	7.4	6	8	2	6	0.23	FALSE
54356	8.9	0	11	10	6	0.03	FALSE
54420	8.7	2	18	16	6	0.09	FALSE
54665	7.8	4	9	6	6	0.13	FALSE
54728	6.8	23	9	–14	6	0.76	FALSE

Table 4. Current Acid Base Accounting for Monzonite Porphyry (Page 3 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
54739	8.9	8	14	6	6	0.29	FALSE
55028	7.4	0	20	19	6	0.03	FALSE
55257	8.4	0	36	36	6	0.01	FALSE
55288	8.5	0	11	10	6	0.04	FALSE
55294	9	0	4	4	6	0.02	FALSE
55397	8.3	0	18	18	6	0	FALSE
55479	8.3	2	33	31	6	0.07	FALSE
55680	8.8	0	5	4	6	0.04	FALSE
55740	8.8	0	6	5	6	0.02	FALSE
55793	9	0	6	5	6	0.03	FALSE
56276	8.6	3	11	8	6	0.1	FALSE
56360	8.3	1	22	20	6	0.05	FALSE
56404	8.3	7	9	2	6	0.24	FALSE
56422	8	0	9	9	6	0.02	FALSE
56430	7.8	15	9	–6	6	0.5	FALSE
56441	8.2	0	27	26	6	0.03	FALSE
56533	8.9	1	24	22	6	0.05	FALSE
56567	8.6	9	7	–2	6	0.33	FALSE
56609	7.9	5	241	237	6	0.16	FALSE
56644	8.7	14	10	–4	6	0.49	FALSE
56655	8.8	7	15	8	6	0.25	FALSE
56665	8.8	6	17	11	6	0.22	FALSE
56702	9	10	15	5	6	0.32	FALSE
56713	7.9	1	7	6	6	0.05	FALSE
56804	7.9	6	22	16	6	0.2	FALSE
56841	9	0	34	33	6	0.03	FALSE
56850	8.5	0	25	24	6	0.02	FALSE
56879	8.6	0	22	22	6	0.02	FALSE
56888	8.2	0	22	21	6	0.02	FALSE
57310	8.4	0	8	8	6	0.03	FALSE
57321	8.5	0	9	8	6	0.02	FALSE
57335	8.1	5	125	120	6	0.16	FALSE
57360	8.1	10	122	112	6	0.31	FALSE
57384	8.5	0	14	13	6	0.03	FALSE
57512	8.4	5	14	9	6	0.2	FALSE
57522	8.4	11	11	0	6	0.39	FALSE

Table 4. Current Acid Base Accounting for Monzonite Porphyry (Page 4 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
57536	8.5	3	11	7	6	0.11	FALSE
57548	8.5	16	4	–11	6	0.52	FALSE
57558	7.9	0	13	12	6	0.04	FALSE
57588	8.4	2	8	6	6	0.09	FALSE
57619	8.2	1	9	7	6	0.05	FALSE
57643	8.4	1	6	5	6	0.05	FALSE
57654	8.6	9	8	0	6	0.31	FALSE
57669	8.4	0	16	15	6	0.04	FALSE
57680	8.4	6	14	9	6	0.2	FALSE
57686	8.2	0	6	5	6	0.04	FALSE
57709	8.4	1	6	4	6	0.05	FALSE
57721	8.1	2	14	12	6	0.06	FALSE
57733	8.2	0	6	6	6	0.02	FALSE
57745	8.4	0	7	6	6	0.03	FALSE
57760	8.2	0	3	3	6	0.02	FALSE
57772	8.5	8	8	0	6	0.27	FALSE
57786	8.3	0	4	4	6	0.03	FALSE
57800	8.2	2	8	5	6	0.09	FALSE
57955	8.8	5	20	15	6	0.17	FALSE
58031	7.3	0	12	11	6	0.04	FALSE
58093	7.8	4	5	1	6	0.14	FALSE
58125	8.6	1	8	7	6	0.04	FALSE
58135	8.3	0	6	5	6	0.01	FALSE
58237	8.1	3	11	8	6	0.11	FALSE
58339	8	0	6	5	6	0.05	FALSE
58368	8.2	3	7	4	6	0.1	FALSE
58379	8.1	0	7	7	6	0.02	FALSE
58399	8.5	0	14	14	6	0.01	FALSE
58410	8.6	0	10	9	6	0.04	FALSE
58470	8.6	2	68	66	6	0.07	FALSE
58561	8.5	2	11	9	6	0.11	FALSE
58640	8	1	9	8	6	0.04	FALSE
58680	8.2	0	13	13	6	0.03	FALSE
58741	8.6	3	11	8	6	0.09	FALSE
58758	6.8	1	42	41	6	0.04	FALSE
58799	8.8	1	6	4	6	0.05	FALSE

Table 4. Current Acid Base Accounting for Monzonite Porphyry (Page 5 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
58810	9	8	7	0	6	0.26	FALSE
58836	8.6	16	97	81	6	0.51	FALSE
58844	8.4	0	17	16	6	0.02	FALSE
58905	8.9	3	10	7	6	0.11	FALSE
58917	8.2	0	17	16	6	0.02	FALSE
59011	8.4	0	17	17	6	ND	FALSE
59082	8.5	19	13	0	6	0.63	FALSE
59159	8.5	0	15	14	6	0.02	FALSE
59196	8.1	0	9	8	6	0.02	FALSE
59273	8.2	0	10	9	6	0.02	FALSE
59670	8.8	7	16	9	6	0.23	FALSE
59767	7.9	1	130	128	6	0.04	FALSE
59800	8.3	0	35	35	6	ND	FALSE
59822	8.5	2	11	9	6	0.06	FALSE
59844	8.2	3	178	175	6	0.09	FALSE
59902	8.1	5	152	147	6	0.16	FALSE
59913	7.8	3	209	207	6	0.09	FALSE
59946	8.2	2	118	115	6	0.08	FALSE
59980	8.6	0	6	6	6	0.02	FALSE
59991	7.8	1	125	124	6	0.04	FALSE
60071	8.2	0	78	77	6	0.01	FALSE
60115	8.1	0	106	106	6	0.01	FALSE
60131	8.5	0	9	8	6	ND	FALSE
60315	8.3	0	26	25	6	0.04	FALSE
60355	8.4	0	9	9	6	ND	FALSE
60386	8.3	2	122	120	6	0.06	FALSE
60400	7.7	1	42	41	6	0.05	FALSE
60683	8.5	0	28	27	6	0.02	FALSE
60713	8.1	2	68	66	6	0.07	FALSE
60738	7.9	1	125	124	6	0.04	FALSE
60748	8.2	9	170	161	6	0.32	FALSE
60768	7.9	0	103	102	6	0.01	FALSE
60793	8	0	23	23	6	ND	FALSE
60829	8.5	1	97	96	6	0.04	FALSE
60864	8	1	73	72	6	0.05	FALSE
60899	7.6	0	57	56	6	0.02	FALSE

Table 4. Current Acid Base Accounting for Monzonite Porphyry (Page 6 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
60971	8	3	111	108	6	0.09	FALSE
61066	8.5	0	88	88	6	0.01	FALSE
61077	8.4	0	87	87	6	ND	FALSE
61103	8.2	0	48	48	6	0.01	FALSE
61142	7.9	5	111	105	6	0.19	FALSE
61174	8.2	0	88	88	6	ND	FALSE
61204	8.4	0	18	17	6	ND	FALSE
61228	8.3	2	103	101	6	0.08	FALSE
61239	8.3	0	15	15	6	0.02	FALSE
61263	8.3	2	57	55	6	0.1	FALSE
61294	8.5	0	39	39	6	0.02	FALSE
61305	8.1	4	76	72	6	0.13	FALSE
61329	8.2	0	53	53	6	0.03	FALSE
61340	8.3	1	92	90	6	0.05	FALSE
61371	8.2	2	131	129	6	0.07	FALSE
61382	8.6	0	39	39	6	ND	FALSE
61400	8.2	1	114	113	6	0.05	FALSE
61411	8.1	0	123	122	6	0.02	FALSE
61444	8.1	0	39	39	6	ND	FALSE
61519	8.3	0	54	54	6	0.01	FALSE
61550	8.1	1	103	101	6	0.05	FALSE
61611	8.2	1	119	118	6	0.05	FALSE
61640	8.2	3	115	112	6	0.11	FALSE
61671	8.2	5	134	129	6	0.15	FALSE
61699	8.3	3	101	98	6	0.1	FALSE
61730	8.4	1	98	97	6	0.05	FALSE
61969	8	3	117	114	6	0.11	FALSE
61993	8.8	ND	17	16	6	0.03	FALSE
62066	8.7	ND	127	127	6	0.01	FALSE
62100	9	ND	14	14	6	0.02	FALSE
62137	8.8	ND	23	23	6	0.03	FALSE
62165	8.3	ND	33	33	6	0.01	FALSE
62214	8.3	ND	51	50	6	0.02	FALSE
62246	8.8	ND	7	6	6	0.03	FALSE
62267	8.6	ND	24	24	6	0.01	FALSE
62299	8.7	1	37	36	6	0.04	FALSE

Table 4. Current Acid Base Accounting for Monzonite Porphyry (Page 7 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
62315	8.6	ND	31	31	6	0.01	FALSE
62349	9.1	ND	24	24	6	0.03	FALSE
62366	8.3	ND	59	59	6	0.03	FALSE
62399	9.1	1	23	22	6	0.04	FALSE
62427	8.1	5	122	117	6	0.16	FALSE
62461	8.7	ND	142	142	6	ND	FALSE
62484	8.5	ND	31	30	6	ND	FALSE
62660	8.7	ND	61	60	6	ND	FALSE
62695	9	ND	23	23	6	0.03	FALSE
62715	8.3	ND	41	40	6	0.01	FALSE
62749	8.6	6	19	14	6	0.21	FALSE
62823	8.7	ND	10	10	6	0.02	FALSE
62859	9.1	ND	13	12	6	0.02	FALSE
62871	8.6	ND	39	39	6	0.01	FALSE
62904	8.9	ND	4	3	6	0.02	FALSE
62925	8.4	ND	21	20	6	0.01	FALSE
62980	8.2	ND	28	28	6	0.01	FALSE
62991	8.4	ND	11	10	6	0.02	FALSE
63045	8	ND	6	5	6	0.02	FALSE
63100	8.1	ND	24	24	6	ND	FALSE
63154	7.9	9	128	119	6	0.28	FALSE
63211	9.6	ND	31	30	6	ND	FALSE
63245	10	ND	6	5	6	0.04	FALSE
63263	9	2	11	9	6	0.07	FALSE
63287	11	ND	17	17	6	0.03	FALSE
63342	9.8	ND	13	12	6	0.04	FALSE
63374	9	ND	55	55	6	ND	FALSE
63396	10	ND	9	8	6	0.03	FALSE
63420	9.4	ND	17	16	6	ND	FALSE
63431	9.2	ND	10	10	6	0.02	FALSE
63443	9.5	ND	26	25	6	0.03	FALSE
58679	8	2	9	7	6	0.06	FALSE
59103	8	ND	133	133	6	0.01	FALSE
59563	8.3	1	36	35	6	0.04	FALSE
59607	7.9	1	150	149	6	0.04	FALSE
59721	7.6	21	144	124	6	0.68	FALSE

Table 4. Current Acid Base Accounting for Monzonite Porphyry (Page 8 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
59744	8.6	2	594	593	6	0.06	FALSE
49342	8.4	6	17	11	6	0.19	FALSE
49353	7.8	8	3	–5	6	0.26	FALSE
49364	8	2	21	19	6	0.08	FALSE
51156	8.5	ND	21	20	6	0.03	FALSE
51166	8.9	ND	17	16	6	0.02	FALSE
51221	9.2	ND	16	16	6	0.02	FALSE
51299	8.5	5	20	16	6	0.16	FALSE
52006	8.8	ND	26	25	6	0.03	FALSE
52101	8.5	ND	113	112	6	0.02	FALSE
56771	7	ND	5	4	6	0.03	FALSE
47044	7.1	6	4	–2	6	0.19	TRUE
47092	7.9	11	4	–7	6	0.38	TRUE
47179	8.2	6	8	2	6	0.19	TRUE
47235	8.1	0	8	7	6	0.04	TRUE
48928	8.9	2	8	6	6	0.05	TRUE
48989	7.9	6	4	0	6	0.18	TRUE
50106	8.2	0	56	56	6	ND	TRUE
52176	8.3	2	6	4	6	0.1	TRUE
53316	8.3	0	9	8	6	0.05	TRUE
53652	8.5	0	97	97	6	0.01	TRUE
53798	8.3	0	19	19	6	ND	TRUE
53866	7.9	11	317	306	6	0.35	TRUE
53973	8.3	0	136	136	6	0.01	TRUE
54160	7.8	0	24	23	6	0.02	TRUE
54457	8.3	0	64	64	6	0	TRUE
54520	8	14	11	–3	6	0.45	TRUE
54618	7.3	22	10	–12	6	0.84	TRUE
54748	8.1	0	16	16	6	0	TRUE
54759	7.9	0	13	12	6	0.02	TRUE
54814	8	0	45	45	6	0	TRUE
54825	8.2	0	51	51	6	0.03	TRUE
54850	8	0	58	58	6	0	TRUE
55080	8.2	0	58	58	6	0	TRUE
55189	8.5	0	13	13	6	0	TRUE
55236	8	7	7	0	6	0.27	TRUE

Table 4. Current Acid Base Accounting for Monzonite Porphyry (Page 9 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
55449	8	0	57	57	6	0	TRUE
55592	8.3	0	57	56	6	0	TRUE
55647	8.4	0	65	65	6	0	TRUE
55659	8.4	0	38	38	6	0.01	TRUE
55711	8.4	0	12	12	6	0	TRUE
55995	8.3	0	54	54	6	0.01	TRUE
56046	8.6	0	16	16	6	0	TRUE
56125	7.9	8	102	94	6	0.28	TRUE
56164	8.2	0	12	12	6	0.01	TRUE
56203	8.5	0	3	3	6	0	TRUE
56384	8.3	0	34	34	6	0.01	TRUE
56521	8.5	0	17	17	6	0.03	TRUE
56633	8.6	3	14	10	6	0.13	TRUE
56691	9.1	15	17	2	6	0.53	TRUE
56772	7.1	17	16	–1	6	0.55	TRUE
56794	8.8	1	10	8	6	0.05	TRUE
56819	7.8	11	12	0	6	0.36	TRUE
56830	8.3	16	6	–10	6	0.52	TRUE
56857	8.1	11	11	0	6	0.37	TRUE
56868	8.8	12	7	–5	6	0.39	TRUE
56949	9.1	9	11	2	6	0.3	TRUE
57058	8	5	13	8	6	0.18	TRUE
57069	9	7	12	4	6	0.24	TRUE
57299	8.3	2	8	6	6	0.07	TRUE
57658	7.9	0	12	11	6	0.01	TRUE
57893	7.9	2	10	8	6	0.06	TRUE
57933	8.7	0	94	94	6	0.02	TRUE
57944	8.5	2	21	19	6	0.08	TRUE
57963	8	1	9	8	6	0.05	TRUE
58004	7.8	3	4	1	6	0.11	TRUE
58026	8.3	0	369	369	6	0.02	TRUE
58053	8.8	0	116	116	6	0.02	TRUE
58160	7.6	5	7	2	6	0.2	TRUE
58243	8	4	6	2	6	0.15	TRUE
58250	8.2	0	10	9	6	0.02	TRUE
58259	8.2	0	81	80	6	0	TRUE

Table 4. Current Acid Base Accounting for Monzonite Porphyry (Page 10 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
58280	8.5	0	18	17	6	0.04	TRUE
58459	7.8	0	9	9	6	ND	TRUE
58487	8.1	0	12	11	6	0.01	TRUE
58530	8.5	0	30	29	6	0.02	TRUE
58578	8.5	0	42	41	6	0.01	TRUE
58629	7.5	12	7	–5	6	0.4	TRUE
58867	8.4	1	12	11	6	0.05	TRUE
58883	8.6	2	65	63	6	0.07	TRUE
58894	9.1	9	11	1	6	0.29	TRUE
58972	8.3	0	94	94	6	0.02	TRUE
59022	8.2	0	141	141	6	0.01	TRUE
59060	8.5	0	43	42	6	0.01	TRUE
59129	8.3	2	87	85	6	0.07	TRUE
59185	9	0	16	16	6	0.03	TRUE
59251	8.3	0	46	46	6	ND	TRUE
59262	8.5	0	7	7	6	0.03	TRUE
59650	8.7	2	10	8	6	0.06	TRUE
59660	8.8	1	9	7	6	0.05	TRUE
60498	8.4	3	12	10	6	0.09	TRUE
60526	8.2	1	13	12	6	0.05	TRUE
60555	8.5	1	15	14	6	0.22	TRUE
60626	8.6	0	7	7	6	ND	TRUE
57183	9.9	3	16	13	6	0.1	TRUE
57289	10	1	14	13	6	0.04	TRUE
57609	11	3	9	6	6	0.12	TRUE
57883	7.9	ND	9	9	6	0.04	TRUE
58529	8.9	ND	41	40	6	0.02	TRUE
58630	8.2	ND	8	8	6	0.03	TRUE
60522	8.4	ND	26	25	6	0.01	TRUE
47136	8	4	10	5	6	0.15	TRUE
47146	7.9	10	12	2	6	0.33	TRUE
54519	8.3	12	9	–3	6	0.41	TRUE
54521	8.1	7	10	3	6	0.25	TRUE
54543	7.9	2	5	2	6	0.09	TRUE
54617	6.8	19	5	–14	6	0.68	TRUE
56669	7.9	2	6	4	6	0.06	TRUE
50554	7.3	ND	3	3	6	ND	TRUE

Table 4. Current Acid Base Accounting for Monzonite Porphyry (Page 11 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
56773	7.6	13	15	2	6	0.43	TRUE
56829	7.9	12	7	–5	6	0.42	TRUE
56831	9	12	12	0.6	6	0.41	TRUE
56860	8.8	6	10	3	6	0.22	TRUE
56867	8.2	8	7	–0.2	6	0.25	TRUE
56869	8.2	10	7	–3	6	0.35	TRUE
56908	8.2	9	6	–3	6	0.29	TRUE
47201	7.8	2	8	6	6	0.06	TRUE
48482	8.6	2	17	15	6	0.1	TRUE
52221	8.1	2	7	5	6	0.07	TRUE
52975	8.3	0	25	24	6	ND	TRUE
53709	8.3	0	29	29	6	0.03	TRUE
53817	8.9	4	6	2	6	0.13	TRUE
53856	8.1	0	10	10	6	0.02	TRUE
54034	8.9	1	5	4	6	0.05	TRUE
54069	8.3	0	17	17	6	0.03	TRUE
54098	8.1	0	21	21	6	0.02	TRUE
54114	7.6	0	11	11	6	0.02	TRUE
54149	7.8	0	13	13	6	0.02	TRUE
54172	8	2	21	19	6	0.06	TRUE
54334	8.5	0	17	17	6	0	TRUE
54403	8.5	0	18	18	6	0.02	TRUE
54466	8.7	0	32	32	6	0	TRUE
54489	8.7	2	15	14	6	0.06	TRUE
54929	8.2	0	34	34	6	0.01	TRUE
54984	8	0	7	7	6	0.03	TRUE
55039	8.1	0	27	26	6	0.01	TRUE
55134	8.1	0	13	13	6	0	TRUE
56284	8.5	0	75	75	6	0.02	TRUE
56305	8.3	0	14	14	6	0.03	TRUE
56349	8.5	0	67	21	6	0.02	TRUE
56545	8.3	0	6	5	6	0.02	TRUE
56622	7.4	5	6	1	6	0.18	TRUE
56668	7.5	11	13	2	6	0.35	TRUE
56783	7.2	10	3	–7	6	0.33	TRUE
56874	8.1	5	21	16	6	0.16	TRUE

Table 4. Current Acid Base Accounting for Monzonite Porphyry (Page 12 of 12)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
56898	7.9	5	11	6	6	0.18	TRUE
56920	8.7	0	13	13	6	0.04	TRUE
57028	7.9	3	15	12	6	0.09	TRUE
57039	8.6	0	20	19	6	0.04	TRUE
57105	7.6	7	10	3	6	0.24	TRUE
57116	8.3	2	20	19	6	0.06	TRUE
57179	8.3	8	17	9	6	0.29	TRUE
57280	7.7	0	7	7	6	0.15	TRUE
57288	7.1	13	11	–2	6	0.45	TRUE
57411	7.8	0	19	19	6	0.02	TRUE
57434	8.6	4	15	11	6	0.15	TRUE
57460	8	7	13	6	6	0.23	TRUE
57848	8.5	1	14	13	6	0.05	TRUE
57863	8.1	0	10	9	6	0.03	TRUE
57871	8.2	1	13	12	6	0.05	TRUE
57905	8.1	0	6	5	6	0.02	TRUE
57922	6.5	61	12	–49	6	2.1	TRUE
58730	8.5	2	11	9	6	0.06	TRUE
58774	7.8	0	16	15	6	0.03	TRUE
58788	8.2	5	6	1	6	0.2	TRUE
59640	8.1	2	20	18	6	0.08	TRUE
59685	8.1	12	19	7	6	0.41	TRUE
60443	6.8	69	16	–53	6	2.2	TRUE
60453	8	23	23	0	6	0.8	TRUE
60486	8	2	11	9	6	0.08	TRUE
60588	8.2	4	15	11	6	0.13	TRUE
63034	8.4	ND	22	21	6	0.02	TRUE
57017	9.9	ND	29	28	6	0.04	TRUE
57138	8.5	88	17	–71	6	2.8	TRUE
57287	8.2	5	8	3	6	0.2	TRUE
58628	7.5	7	7	–0.5	6	0.27	TRUE
58788	8.6	5	13	7	6	0.2	TRUE
60444	5.5	38	3	–35	6	1.2	TRUE
54237	7.5	19	6	–13	6	0.68	TRUE
57923	7.2	10	6	–4	6	0.34	TRUE
56623	7.3	5	8	3	6	0.2	TRUE
56742	7.8	ND	16	15	6	0.03	TRUE

Table 5. Current Acid Base Accounting for Phonolite Porphyry (Page 1 of 2)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
49178	7.8	0	41	41	7	0.01	FALSE
49303	8.5	0	59	58	7	0.05	FALSE
49632	8.5	0	65	64	7	0.06	FALSE
49646	7.8	0	22	21	7	0.09	FALSE
49955	8.3	0	50	50	7	0.03	FALSE
50009	8.4	0	64	64	7	0.04	FALSE
50075	8.6	0	65	64	7	0.07	FALSE
50136	8.5	0	66	65	7	0.07	FALSE
50334	8.4	0	69	68	7	0.06	FALSE
50402	8.2	0	62	62	7	0.05	FALSE
50467	8.3	0	60	59	7	0.06	FALSE
50530	8.5	0	67	67	7	0.02	FALSE
50595	8.3	0	58	57	7	0.01	FALSE
50660	8.4	0	67	66	7	0.04	FALSE
50722	8.3	0	64	64	7	0.02	FALSE
50733	8.1	0	48	47	7	0.04	FALSE
50745	8.3	0	61	60	7	0.08	FALSE
50791	8.4	0	69	69	7	0.06	FALSE
50808	8.4	0	48	47	7	0.05	FALSE
50854	8.2	0	60	60	7	0.02	FALSE
50920	8.3	0	66	66	7	0.06	FALSE
50984	8.5	0	67	66	7	0.08	FALSE
51180	8	0	73	73	7	0.01	FALSE
51244	8.6	2	69	68	7	0.08	FALSE
51436	7.3	5	17	13	7	0.19	FALSE
51508	8.4	0	66	65	7	0.05	FALSE
51965	9	0	61	61	7	0.04	FALSE
51976	8.4	0	51	51	7	0.05	FALSE
52014	8.7	0	61	60	7	0.04	FALSE
52025	9	2	62	60	7	0.08	FALSE
52354	8.6	0	52	51	7	0.04	FALSE
52365	8.5	0	58	57	7	0.05	FALSE
52405	8.5	0	65	64	7	0.03	FALSE
52460	8.1	0	43	43	7	0.03	FALSE
52512	8.3	0	65	65	7	0.02	FALSE
52562	8.4	0	65	64	7	0.02	FALSE

Table 5. Current Acid Base Accounting for Phonolite Porphyry (Page 2 of 2)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
52611	8.3	0	70	69	7	0.04	FALSE
52661	8.1	0	62	61	7	0.03	FALSE
52760	8	0	58	58	7	ND	FALSE
52808	8.3	0	56	55	7	0.04	FALSE
52909	7.8	0	38	38	7	0.02	FALSE
62055	7.8	ND	27	26	7	0.01	FALSE
62115	8.7	ND	133	133	7	0.02	FALSE
62154	7.6	ND	12	11	7	0.01	FALSE
62495	8.5	ND	75	74	7	0.03	FALSE
63320	9	ND	16	16	7	ND	FALSE
49320	7.5	ND	50	49	7	0.05	FALSE
50760	8.6	ND	57	56	7	0.03	FALSE
51177	8.5	ND	55	54	7	0.01	FALSE
49108	6.7	61	12	12	7	0.02	TRUE
49503	8.3	0	63	62	7	0.08	TRUE
49569	8.4	0	67	66	7	0.04	TRUE
53200	8.2	0	30	30	7	0.01	TRUE
53805	8.3	0	122	122	7	0.01	TRUE
54345	8.3	3	114	111	7	0.1	TRUE
54788	7.9	0	24	24	7	0.01	TRUE
54828	8.1	0	11	11	7	0.02	TRUE
54861	8.2	0	86	85	7	0.03	TRUE
55365	8	0	35	34	7	0.02	TRUE
55495	8.5	0	45	45	7	0.04	TRUE
55559	8.6	0	36	36	7	0.01	TRUE
55624	8.5	0	34	33	7	0.01	TRUE
47091	8.3	16	11	–5	7	0.54	TRUE
47093	7.5	10	7	–3	7	0.35	TRUE
47098	8	7	15	8	7	0.24	TRUE
47100	8.4	7	11	4	7	0.26	TRUE
50430	7.3	ND	6	5	7	ND	TRUE
51111	7.1	ND	3	3	7	0.01	TRUE
56080	8.1	5	161	155	7	0.17	TRUE
53952	8	0	33	33	7	ND	TRUE
48760	8.5	0	319	319	7	0.04	TRUE

Table 6. Current Acid Base Accounting for Precambrian (Page 1 of 2)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
47747	7.6	48	9	–39	11	1.5	FALSE
48195	8.1	5	14	9	11	0.2	FALSE
48245	8.3	1	63	61	11	0.06	FALSE
48370	8.2	62	136	74	11	2.1	FALSE
48401	8.2	7	31	23	11	0.22	FALSE
48432	7.7	70	11	–59	11	2.2	FALSE
48513	7.4	47	47	0	11	1.4	FALSE
48573	8.3	5	16	11	11	0.15	FALSE
48600	7.9	3	17	14	11	0.1	FALSE
48629	7.8	8	19	12	11	0.31	FALSE
48848	8.0	0	13	12	11	0.06	FALSE
48952	7.5	61	12	0	11	1.9	FALSE
49047	7.6	2	7	4	11	0.1	FALSE
52866	6.5	16	19	3	11	0.59	FALSE
53445	8.3	0	6	5	11	0.02	FALSE
54102	7.7	3	14	11	11	0.09	FALSE
54143	7.4	4	6	2	11	0.14	FALSE
54781	7.3	1	22	21	11	0.04	FALSE
55429	6.7	0	4	3	11	0.04	FALSE
57198	7.6	8	7	0	11	0.27	FALSE
57468	7.8	11	9	–1	11	0.4	FALSE
57823	7.3	2	14	12	11	0.06	FALSE
60507	8.4	1	74	73	11	0.04	FALSE
60584	7.9	0	20	20	11	0.02	FALSE
60620	8.4	37	91	54	11	1.2	FALSE
60700	8.7	0	7	7	11	0.01	FALSE
60888	8	4	9	5	11	0.15	FALSE
61093	8.2	0	22	21	11	0.04	FALSE
61363	8	91	12	–79	11	5.1	FALSE
61433	7.5	12	209	197	11	0.38	FALSE
61634	8.5	0	12	12	11	0.02	FALSE
62513	8.6	ND	8	8	11	0.03	FALSE
62542	8.3	47	26	–21	11	1.6	FALSE
62565	8.1	14	11	–3	11	0.5	FALSE
62627	8.1	20	9	–11	11	0.74	FALSE
63298	9.7	ND	16	15	11	0.04	FALSE

Table 6. Current Acid Base Accounting for Precambrian (Page 2 of 2)

Sample I.D.	PH	AGP	ANP	NNP	Rock Type	Total S (%)	In Pit (T/F)
54217	6.9	51	26	–25	11	1.8	FALSE
54303	7	4	3	–0.8	11	0.18	FALSE
59583	8.6	ND	29	29	NS	0.02	FALSE

Table 7. Historic Acid Base Accounting for Upper Contact and Glauconitic Sandstone Deadwood Formation (Page 1 of 2)

Sample I.D.	ANP	ARD	AB POT	Rock Type	Total S (%)	In Pit (T/F)
20380	290	1	289	1	0.01	TRUE
34881	384	1	383	1	0.01	TRUE
37817	368	1	367	1	0.01	TRUE
45887	66	1	65	1	0.01	TRUE
45788	235	1	234	1	0.01	TRUE
45867	187	1	185	1	0.04	TRUE
63165	147	1	146	1	0.01	TRUE
66721	169	1	168	1	0.01	TRUE
69602	353	1	352	1	0.01	TRUE
69849	81	1	81	1	0.01	TRUE
70667	99	1	90	1	0.28	TRUE
57682	262	1	261	1	0.01	TRUE
45710	157	1	156	1	0.01	FALSE
62811	211	1	210	1	0.01	FALSE
63044	241	1	240	1	0.01	FALSE
63141	238	1	237	1	0.01	FALSE
63242	362	1	361	1	0.01	FALSE
51800	85	1	84	1	0.01	FALSE
53820	243	1	242	1	0.01	FALSE
53834	9	1	8	1	0.03	FALSE
53838	301	1	300	1	0.01	FALSE
53858	11	1	10	1	0.02	FALSE
53887	10	1	10	1	0.01	FALSE
54015	221	1	220	1	0.01	FALSE
54155	90	1	89	1	0.03	FALSE
54178	323	1	322	1	0.01	FALSE
68502	172	1	171	1	0.01	FALSE
69901	168	1	167	1	0.01	FALSE
69942	326	1	325	1	0.01	FALSE
70018	270	1	269	1	0.01	FALSE
56352	139	1	138	1	0.01	FALSE
56354	13	1	13	1	0.01	FALSE
120003	14	1	14	1	0.01	FALSE
120004	12	1	12	1	0.01	FALSE
120074	69	1	68	1	0.01	FALSE

Table 7. Historic Acid Base Accounting for Upper Contact and Glauconitic Sandstone Deadwood Formation (Page 1 of 2)

Sample I.D.	ANP	ARD	AB POT	Rock Type	Total S (%)	In Pit (T/F)
120115	72	1	71	1	0.01	FALSE
20113	4	1	3	1	0.01	FALSE
20516	222	1	221	1	0.01	FALSE
20504	228	1	227	1	0.01	FALSE
20490	219	1	218	1	0.01	FALSE
34492	198	1	197	2	0.01	TRUE
34845	463	1	462	2	0.01	TRUE
37775	101	1	98	2	0.07	TRUE
45842	335	1	334	2	0.01	TRUE
53508	410	1	409	2	0.01	TRUE
68553	145	1	144	2	0.01	TRUE
68612	11	2	1	2	0.31	TRUE
69495	250	1	249	2	0.01	TRUE
69534	306	1	305	2	0.01	TRUE
92350	1	2	–7	2	0.25	TRUE
92644	6	2	–7	2	0.42	TRUE
92681	1	2	–7	2	0.21	TRUE
95953	1	1	–2	2	0.09	TRUE
20258	19	1	18	2	0.03	FALSE
45707	37	1	36	2	0.03	FALSE
45822	411	1	410	2	0.01	FALSE
45906	332	1	331	2	0.01	FALSE
63008	429	1	428	2	0.01	FALSE
67029	211	1	210	2	0.01	FALSE
54099	46	1	43	2	0.1	FALSE
54125	4	1	3	2	0.01	FALSE
54174	1	3	–17	2	0.59	FALSE
54199	2	2	–4	2	0.19	FALSE
54202	193	1	192	2	0.01	FALSE
71189	185	1	184	2	0.01	FALSE
71190	116	1	113	2	0.07	FALSE

Table 8. Historic Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 1 of 4)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
14810	1	0	–2	3	0.1	TRUE
14816	6	0	–12	3	0.58	TRUE
14817	4	0	–17	3	0.66	TRUE
14846	0	0	–38	3	1.23	TRUE
14876	2	0	–19	3	0.68	TRUE
14899	0	0	–19	3	0.62	TRUE
14906	7	0	–13	3	0.63	TRUE
14935	8	0	8	3	0.01	TRUE
14961	4	0	–15	3	0.62	TRUE
14963	3	0	–27	3	0.95	TRUE
13322	8	0	–3	3	0.34	TRUE
13323	11	0	9	3	0.05	TRUE
13261	1	0	–36	3	1.17	TRUE
13297	1	0	–21	3	0.7	TRUE
14629	3	0	–2	3	0.17	TRUE
14693	1	0	–43	3	1.42	TRUE
14696	3	0	–3	3	0.2	TRUE
14728	2	0	–6	3	0.27	TRUE
14729	–1	0	–60	3	1.9	TRUE
14748	4	0	–5	3	0.29	FALSE
14879	2	0	–12	3	0.44	FALSE
14937	3	0	–12	3	0.49	FALSE
14938	1	0	–17	3	0.59	FALSE
14632	4	0	0	3	0.13	FALSE
14638	9	0	9	3	0.01	FALSE
14419	0	0	–14	3	0.44	FALSE
14460	0	0	–30	3	0.96	FALSE
14461	0	0	–8	3	0.25	FALSE
14464	1	0	–9	3	0.32	FALSE
14582	0	0	–2	3	0.07	FALSE
14585	7	0	–9	3	0.51	FALSE
14609	0	0	–28	3	0.89	FALSE
14613	1	0	–13	3	0.44	FALSE
50645	147	1	146	3	0.01	TRUE
51135	265	1	255	3	0.31	TRUE

Table 8. Historic Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 2 of 4)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
95357	11	1	10	3	0.01	TRUE
120097	58	1	58	3	0.01	TRUE
120858	55	1	54	3	0.01	TRUE
138173	12	1	11	3	0.01	TRUE
20442	10	1	9	3	0.01	TRUE
20539	10	1	9	3	0.01	TRUE
45146	166	1	165	3	0.01	FALSE
52136	203	1	202	3	0.01	FALSE
70053	356	1	355	3	0.01	FALSE
131285	449	1	440	3	0.28	FALSE
131286	315	1	302	3	0.41	FALSE
131287	274	1	264	3	0.33	FALSE
131288	474	1	467	3	0.22	FALSE
131289	349	1	340	3	0.3	FALSE
131290	408	1	400	3	0.24	FALSE
131291	151	1	144	3	0.21	FALSE
131292	54	1	48	3	0.19	FALSE
131293	85	1	77	3	0.26	FALSE
131360	362	1	353	3	0.3	FALSE
131361	299	1	287	3	0.37	FALSE
131362	309	1	300	3	0.3	FALSE
131363	306	1	296	3	0.33	FALSE
131364	421	1	410	3	0.35	FALSE
131365	208	1	201	3	0.24	FALSE
131366	110	1	99	3	0.33	FALSE
131367	63	1	51	3	0.39	FALSE
132192	96	1	96	3	0.01	FALSE
120378	1	1	1	3	0.03	FALSE
120452	15	1	14	3	0.03	FALSE
20043	12	1	11	3	0.01	FALSE
18076	173	1	172	3	0.01	FALSE
14745	NS	0	NS	4	0.55	TRUE
14746	6	0	–3	4	0.3	TRUE
14840	2	0	1	4	0.04	TRUE
14897	1	0	–18	4	0.61	TRUE
13258	1	0	–16	4	0.55	TRUE

Table 8. Historic Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 3 of 4)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
13260	1	0	–26	4	0.86	TRUE
13299	2	0	–12	4	0.44	TRUE
14692	0	0	–34	4	1.1	TRUE
14721	1	0	1	4	0.01	TRUE
14850	1	0	–25	4	0.82	FALSE
14880	0	0	–15	4	0.49	FALSE
13301	1	0	–17	4	0.57	FALSE
14407	1	0	–7	4	0.27	FALSE
14408	0	0	–9	4	0.28	FALSE
35252	17	1	16	4	0.01	TRUE
35253	5	1	4	4	0.01	TRUE
38705	20	1	19	4	0.01	TRUE
61712	61	1	60	4	0.01	TRUE
61752	64	1	64	4	0.01	TRUE
61938	19	1	18	4	0.02	TRUE
49606	10	1	9	4	0.01	TRUE
65487	28	1	27	4	0.01	TRUE
66231	9	1	9	4	0.01	TRUE
66380	10	1	9	4	0.01	TRUE
52704	190	1	189	4	0.04	TRUE
55577	4	1	3	4	0.01	TRUE
56961	11	1	11	4	0.01	TRUE
56996	6	1	5	4	0.01	TRUE
93780	5	1	1	4	0.12	TRUE
94008	1	1	0	4	0.04	TRUE
93983	2	2	–5	4	0.22	TRUE
130753	326	1	316	4	0.32	TRUE
130754	420	1	412	4	0.25	TRUE
130755	310	1	304	4	0.2	TRUE
130756	170	1	143	4	0.85	TRUE
130757	58	1	48	4	0.31	TRUE
132583	86	1	79	4	0.23	TRUE
132612	113	1	105	4	0.23	TRUE
132655	276	1	264	4	0.37	TRUE
82899	138	1	138	4	0.01	TRUE
34948	7	1	7	4	0.01	FALSE

Table 8. Historic Acid Base Accounting for Intermediate Unit Deadwood Formation (Page 4 of 4)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
38102	9	1	6	4	0.07	FALSE
38115	11	1	8	4	0.09	FALSE
38910	8	1	8	4	0.01	FALSE
65862	79	1	78	4	0.01	FALSE
65898	4	1	4	4	0.01	FALSE
66143	6	1	5	4	0.01	FALSE
130752	315	1	306	4	0.3	FALSE
132466	196	1	186	4	0.32	FALSE
132469	415	1	407	4	0.29	FALSE
132506	261	1	249	4	0.41	FALSE
132507	454	1	445	4	0.22	FALSE
132508	329	1	319	4	0.3	FALSE
132509	364	1	356	4	0.25	FALSE
132512	48	1	17	4	1	FALSE
132549	403	1	392	4	0.34	FALSE
132550	329	1	318	4	0.35	FALSE
132697	368	1	358	4	0.32	FALSE
120746	3	2	–5	4	0.01	FALSE
19148	2	1	1	4	0.01	FALSE

Table 9. Historic Acid Base Accounting for Lower Contact Unit Deadwood Formation (Page 1 of 6)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
26469	327	0	325	10	0.06	TRUE
25911	19	0	10	10	0.3	TRUE
35135	11	1	11	10	0.01	TRUE
44386	13	1	12	10	0.01	TRUE
61737	182	1	181	10	0.01	TRUE
61777	330	1	329	10	0.01	TRUE
61897	26	1	24	10	0.05	TRUE
61974	14	1	13	10	0.03	TRUE
62078	10	1	9	10	0.01	TRUE
49966	9	1	8	10	0.01	TRUE
51119	234	1	233	10	0.02	TRUE
51415	23	1	22	10	0.02	TRUE
66210	11	1	10	10	0.02	TRUE
66243	12	1	11	10	0.01	TRUE
66275	9	1	8	10	0.02	TRUE
66306	10	1	9	10	0.01	TRUE
66337	17	1	16	10	0.02	TRUE
66366	15	1	14	10	0.03	TRUE
66394	10	1	9	10	0.02	TRUE
66422	10	1	9	10	0.01	TRUE
66449	15	1	14	10	0.01	TRUE
51438	18	1	12	10	0.2	TRUE
51490	16	2	9	10	0.23	TRUE
51513	1	3	–67	10	2.19	TRUE
51534	0	3	–58	10	2.07	TRUE
52665	13	1	11	10	0.04	TRUE
55497	13	1	12	10	0.03	TRUE
55558	17	1	16	10	0.02	TRUE
56140	303	1	303	10	0.01	TRUE
72928	0	3	–17	10	0.55	TRUE
73024	20	1	19	10	0.02	TRUE
73026	31	1	29	10	0.06	TRUE
94033	7	3	–13	10	0.72	TRUE
130758	286	1	284	10	0.01	TRUE
90803	4	1	3	10	0.01	TRUE

Table 9. Historic Acid Base Accounting for Lower Contact Unit Deadwood Formation (Page 2 of 6)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
115834	29	1	28	10	0.03	TRUE
115835	31	1	30	10	0.03	TRUE
115836	21	1	20	10	0.02	TRUE
120206	16	1	15	10	0.02	TRUE
120207	13	1	12	10	0.01	TRUE
120208	9	1	8	10	0.02	TRUE
120209	21	1	20	10	0.03	TRUE
120210	32	1	29	10	0.29	TRUE
120211	18	1	15	10	0.12	TRUE
120212	52	1	46	10	0.2	TRUE
120383	4	2	–4	10	0.28	TRUE
20751	6	1	5	10	0.01	TRUE
25431	433	0	432	10	0.04	TRUE
25433	21	0	6	10	0.47	TRUE
25474	350	0	347	10	0.1	TRUE
25515	345	0	341	10	0.13	TRUE
25556	41	0	30	10	0.36	TRUE
25602	332	0	328	10	0.12	TRUE
25643	22	0	0	10	0.7	TRUE
25645	10	0	–11	10	0.67	TRUE
25773	214	0	213	10	0.03	TRUE
25816	463	0	462	10	0.03	TRUE
25683	200	0	199	10	0.02	TRUE
25685	124	0	112	10	0.39	TRUE
25687	31	0	29	10	0.07	TRUE
26420	304	0	290	10	0.46	TRUE
26422	333	0	326	10	0.21	TRUE
27484	22	0	18	10	0.13	TRUE
27317	21	0	4	10	0.55	TRUE
27444	20	0	8	10	0.37	TRUE
27097	204	0	201	10	0.1	TRUE
25726	269	0	266	10	0.09	TRUE
25862	355	0	354	10	0.03	TRUE
26898	29	0	17	10	0.39	TRUE
22061	78	1	77	10	0.01	FALSE
22085	12	1	11	10	0.04	FALSE

Table 9. Historic Acid Base Accounting for Lower Contact Unit Deadwood Formation (Page 3 of 6)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
22128	14	1	13	10	0.01	FALSE
22149	14	1	13	10	0.03	FALSE
35353	3	3	–55	10	1.85	FALSE
37955	16	1	9	10	0.02	FALSE
37956	3	2	–4	10	0.21	FALSE
37960	4	1	2	10	0.05	FALSE
37961	25	1	19	10	0.19	FALSE
45101	15	1	14	10	0.01	FALSE
45136	12	1	11	10	0.02	FALSE
61316	13	1	10	10	0.14	FALSE
61422	16	1	16	10	0.03	FALSE
61424	19	1	17	10	0.06	FALSE
61425	7	2	3	10	0.13	FALSE
61426	16	1	15	10	0.05	FALSE
61621	23	1	5	10	0.14	FALSE
49737	2	1	0	10	0.06	FALSE
49823	15	1	14	10	0.02	FALSE
49863	23	1	21	10	0.08	FALSE
49880	10	1	10	10	0.01	FALSE
50012	11	1	10	10	0.02	FALSE
50265	15	1	14	10	0.01	FALSE
50283	22	1	21	10	0.02	FALSE
50301	21	1	20	10	0.02	FALSE
50318	21	1	20	10	0.04	FALSE
50333	12	1	11	10	0.04	FALSE
50352	6	1	5	10	0.01	FALSE
50370	11	1	10	10	0.01	FALSE
51198	15	2	6	10	0.33	FALSE
65526	8	1	5	10	0.1	FALSE
65550	14	1	12	10	0.05	FALSE
65654	4	1	1	10	0.09	FALSE
65655	3	1	0	10	0.09	FALSE
65685	8	1	6	10	0.11	FALSE
65710	13	1	12	10	0.01	FALSE
65741	9	2	–2	10	0.5	FALSE
65768	21	1	18	10	0.13	FALSE

Table 9. Historic Acid Base Accounting for Lower Contact Unit Deadwood Formation (Page 4 of 6)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
65769	10	2	5	10	0.15	FALSE
65821	21	1	20	10	0.02	FALSE
65849	15	1	14	10	0.01	FALSE
65915	16	3	–30	10	1.55	FALSE
65943	13	1	12	10	0.02	FALSE
65979	9	2	5	10	0.15	FALSE
66177	7	1	6	10	0.01	FALSE
67331	19	1	19	10	0.02	FALSE
67332	22	1	19	10	0.17	FALSE
67453	8	2	4	10	0.13	FALSE
67513	22	3	–55	10	2.46	FALSE
52079	2	1	1	10	0.05	FALSE
54796	6	2	–1	10	0.25	FALSE
54839	6	1	3	10	0.14	FALSE
54923	9	2	0	10	0.4	FALSE
55007	410	1	409	10	0.07	FALSE
55046	10	2	5	10	0.21	FALSE
93868	3	3	–22	10	0.8	FALSE
94004	10	3	–13	10	0.76	FALSE
94005	3	3	–56	10	1.9	FALSE
94034	3	3	–76	10	2.54	FALSE
82846	5	3	–36	10	1.3	FALSE
82847	8	3	–29	10	1.19	FALSE
90957	21	1	20	10	0.02	FALSE
90963	4	3	–99	10	3.33	FALSE
115873	23	1	22	10	0.03	FALSE
115874	12	2	4	10	0.25	FALSE
115875	17	1	13	10	0.17	FALSE
115980	17	2	8	10	0.34	FALSE
115904	10	1	9	10	0.01	FALSE
115905	20	1	19	10	0.03	FALSE
115906	28	1	27	10	0.08	FALSE
115907	34	1	32	10	0.09	FALSE
115908	28	1	26	10	0.06	FALSE
120342	12	1	12	10	0.01	FALSE
120420	11	3	–23	10	1.08	FALSE

Table 9. Historic Acid Base Accounting for Lower Contact Unit Deadwood Formation (Page 5 of 6)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
120421	9	2	–10	10	0.6	FALSE
120422	11	3	–22	10	1.07	FALSE
120423	0	3	–21	10	0.72	FALSE
120453	9	1	8	10	0.02	FALSE
120454	12	1	11	10	0.04	FALSE
120455	3	1	1	10	0.08	FALSE
120456	2	1	1	10	0.04	FALSE
120478	1	3	–21	10	0.71	FALSE
120479	3	3	–56	10	1.95	FALSE
120480	5	3	–45	10	1.62	FALSE
120481	0	3	–15	10	0.56	FALSE
120555	4	2	2	10	0.08	FALSE
120556	16	1	15	10	0.04	FALSE
120558	8	1	6	10	0.1	FALSE
120637	11	1	10	10	0.02	FALSE
120638	17	1	12	10	0.17	FALSE
120639	10	2	3	10	0.28	FALSE
120640	2	2	–2	10	0.16	FALSE
120641	11	1	8	10	0.13	FALSE
120642	0	2	–1	10	0.06	FALSE
120748	8	1	7	10	0.04	FALSE
120749	11	1	8	10	0.1	FALSE
120750	19	1	18	10	0.05	FALSE
120751	3	3	–4	10	0.22	FALSE
120752	7	3	–2	10	0.42	FALSE
19214	9	1	8	10	0.02	FALSE
19151	79	1	78	10	0.01	FALSE
19291	4	1	3	10	0.04	FALSE
19241	10	1	9	10	0.01	FALSE
139990	9	1	8	10	0.03	FALSE
25158	4	0	–7	10	0.37	FALSE
25159	4	0	–7	10	0.37	FALSE
26671	92	0	87	10	0.15	FALSE
26711	182	0	181	10	0.02	FALSE
26336	28	0	20	10	0.27	FALSE
26809	378	0	374	10	0.13	FALSE

Table 9. Historic Acid Base Accounting for Lower Contact Unit Deadwood Formation (Page 6 of 6)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
26936	257	0	252	10	0.17	FALSE
27138	21	0	16	10	0.15	FALSE
27224	18	0	13	10	0.16	FALSE
27178	24	0	15	10	0.3	FALSE
27270	161	0	159	10	0.05	FALSE
26577	315	0	313	10	0.05	FALSE
27398	8	0	–4	10	0.39	FALSE

Table 10. Historic Acid Base Accounting for Porphyry (Page 1 of 4)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
14774	NS	0	NS	6	0.37	TRUE
14775	NS	0	NS	6	0.2	TRUE
14776	NS	0	NS	6	1.63	TRUE
14653	1	0	1	6	0.01	TRUE
14655	1	0	–5	6	0.19	TRUE
14658	0	0	–11	6	0.36	TRUE
14528	2	0	–1	6	0.08	TRUE
14529	1	0	–1	6	0.05	TRUE
14530	1	0	–1	6	0.05	TRUE
14558	0	0	–2	6	0.07	TRUE
40927	2	0	2	6	0.01	FALSE
40928	3	0	3	6	0.01	FALSE
44049	54	1	54	6	0.01	TRUE
44695	6	1	6	6	0.3	TRUE
61705	8	1	8	6	0.01	TRUE
61706	0	1	–8	6	0.08	TRUE
61707	9	1	9	6	0.01	TRUE
61708	23	1	23	6	0.01	TRUE
61942	7	1	7	6	0.01	TRUE
49600	4	2	–3	6	0.23	TRUE
50601	22	1	21	6	0.01	TRUE
50759	31	1	27	6	0.01	TRUE
66134	1	1	–1	6	0.05	TRUE
66151	11	1	11	6	0.01	TRUE
66171	5	1	4	6	0.02	TRUE
66330	2	2	–1	6	0.12	TRUE
66387	10	1	9	6	0.01	TRUE
66471	2	1	0	6	0.05	TRUE
51441	2	1	0	6	0.05	TRUE
52803	9	1	9	6	0.01	TRUE
52882	14	1	13	6	0.01	TRUE
52926	36	1	35	6	0.01	TRUE
53147	16	1	16	6	0.01	TRUE
69886	23	1	22	6	0.01	TRUE
70091	24	1	24	6	0.01	TRUE
55127	3	1	2	6	0.02	TRUE

Table 10. Historic Acid Base Accounting for Porphyry (Page 2 of 4)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
55676	5	2	–3	6	0.27	TRUE
57006	0	1	–2	6	0.05	TRUE
57616	19	1	18	6	0.01	TRUE
93963	0	2	–4	6	0.12	TRUE
94071	4	2	–1	6	0.17	TRUE
95363	7	1	4	6	0.1	TRUE
82986	2	1	–1	6	0.08	TRUE
120196	15	1	14	6	0.01	TRUE
120394	11	2	7	6	0.13	TRUE
20567	2	1	0	6	0.06	TRUE
20744	1	1	0	6	0.04	TRUE
20553	12	1	11	6	0.01	FALSE
23975	13	1	13	6	0.01	FALSE
25441	2	1	1	6	0.02	FALSE
25617	4	1	4	6	0.01	FALSE
38123	4	1	2	6	0.06	FALSE
38860	14	1	13	6	0.01	FALSE
38861	3	2	–4	6	0.23	FALSE
38891	4	1	3	6	0.04	FALSE
44279	44	1	44	6	0.01	FALSE
44228	21	1	21	6	0.01	FALSE
44806	4	1	3	6	0.3	FALSE
49817	11	1	9	6	0.08	FALSE
50312	4	1	3	6	0.04	FALSE
50379	11	1	11	6	0.01	FALSE
51059	11	1	9	6	0.06	FALSE
51083	9	1	8	6	0.02	FALSE
51237	1	1	0	6	0.01	FALSE
65566	4	1	2	6	0.06	FALSE
65640	4	1	3	6	0.02	FALSE
65732	4	1	3	6	0.01	FALSE
65869	8	1	7	6	0.02	FALSE
67311	7	1	6	6	0.04	FALSE
67427	3	1	2	6	0.03	FALSE
52035	5	1	4	6	0.02	FALSE
70058	9	1	8	6	0.02	FALSE
54794	7	1	6	6	0.05	FALSE

Table 10. Historic Acid Base Accounting for Porphyry (Page 3 of 4)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
55700	10	1	9	6	0.05	FALSE
55820	5	1	3	6	0.05	FALSE
93973	3	1	2	6	0.04	FALSE
130598	55	1	55	6	0.01	FALSE
130599	81	1	0	6	0.01	FALSE
130600	101	1	0	6	0.01	FALSE
132109	94	1	92	6	0.05	FALSE
132477	8	1	5	6	0.09	FALSE
82850	2	1	–1	6	0.1	FALSE
19208	1	1	0	6	0.04	FALSE
19178	2	1	1	6	0.03	FALSE
19146	1	1	0	6	0.02	FALSE
19283	2	2	–1	6	0.11	FALSE
19257	19	2	12	6	0.22	FALSE
19233	6	1	3	6	0.11	FALSE
139987	3	1	2	6	0.02	FALSE
138183	6	1	5	6	0.03	FALSE
44887	12	1	11	7	0.2	TRUE
63092	38	1	37	7	0.02	TRUE
53481	17	1	17	7	0.01	TRUE
55145	21	1	21	7	0.01	TRUE
55285	11	1	11	7	0.01	TRUE
55568	4	1	3	7	0.01	TRUE
56488	12	1	11	7	0.01	TRUE
92344	1	1	1	7	0.01	TRUE
92637	3	1	2	7	0.02	TRUE
95930	1	1	0	7	0.03	TRUE
95947	1	1	0	7	0.02	TRUE
120131	16	1	16	7	0.02	TRUE
120524	1	1	0	7	0.06	TRUE
120852	16	1	16	7	0.01	TRUE
19413	14	1	13	7	0.01	FALSE
19434	24	1	23	7	0.03	FALSE
20368	10	1	9	7	0.01	FALSE
20494	15	1	14	7	0.02	FALSE
38904	7	1	3	7	0.12	FALSE
44983	8	1	7	7	0.01	FALSE

Table 10. Historic Acid Base Accounting for Porphyry (Page 4 of 4)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
45072	24	1	23	7	0.01	FALSE
53961	33	1	33	7	0.01	FALSE
54147	20	1	20	7	0.01	FALSE
56398	36	1	36	7	0.01	FALSE
56442	45	1	44	7	0.01	FALSE
56474	83	1	82	7	0.01	FALSE
71156	189	1	188	7	0.01	FALSE
132267	5	2	–2	7	0.23	FALSE
132268	11	1	11	7	0.02	FALSE
132496	64	1	64	7	0.01	FALSE
132497	69	1	69	7	0.01	FALSE
132498	49	1	48	7	0.01	FALSE
132540	12	1	12	7	0.01	FALSE

Table 11. Historic Acid Base Accounting for Precambrian (Page 1 of 5)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
49651	0	3	–351	11	11.2	TRUE
51420	6	1	4	11	0.08	TRUE
66368	4	1	3	11	0.02	TRUE
52285	0	3	–169	11	5.41	TRUE
52286	0	3	–271	11	8.69	TRUE
57152	12	3	–14	11	0.87	TRUE
120213	93	1	91	11	0.12	TRUE
120214	14	2	6	11	0.29	TRUE
120215	0	3	–126	11	4.03	TRUE
25390	9	1	9	11	0.01	FALSE
25391	4	1	4	11	0.01	FALSE
35139	5	1	4	11	0.02	FALSE
35230	6	1	3	11	0.08	FALSE
35302	7	1	7	11	0.01	FALSE
35303	1	1	0	11	0.01	FALSE
35315	3	1	2	11	0.01	FALSE
35317	4	1	2	11	0.05	FALSE
35337	22	1	20	11	0.09	FALSE
35355	0	1	–2	11	0.05	FALSE
37952	1	1	0	11	0.03	FALSE
37958	0	1	–1	11	0.01	FALSE
38039	1	1	–1	11	0.05	FALSE
38082	0	3	–192	11	6.13	FALSE
38098	1	3	–146	11	4.73	FALSE
38099	3	3	–71	11	2.34	FALSE
38669	1	2	0	11	0.4	FALSE
38933	5	3	–22	11	0.93	FALSE
38961	155	1	147	11	0.26	FALSE
44500	2	1	2	11	0.01	FALSE
44574	0	3	–675	11	21.6	FALSE
44591	3	3	–171	11	5.57	FALSE
44613	1	1	0	11	0.2	FALSE
44775	2	1	1	11	0.2	FALSE
44789	2	1	1	11	0.3	FALSE
44790	1	1	1	11	0.01	FALSE

Table 11. Historic Acid Base Accounting for Precambrian (Page 2 of 5)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
44802	1	1	–1	11	0.06	FALSE
44814	1	1	0	11	0.01	FALSE
44914	4	1	2	11	0.11	FALSE
44948	1	1	1	11	0.01	FALSE
44979	14	3	–56	11	2.39	FALSE
45009	3	3	–20	11	0.85	FALSE
45104	3	2	–3	11	0.2	FALSE
45140	6	1	4	11	0.06	FALSE
61317	7	1	6	11	0.03	FALSE
61318	5	1	5	11	0.02	FALSE
61428	5	1	3	11	0.09	FALSE
61429	4	1	4	11	0.03	FALSE
61584	14	3	–53	11	2.18	FALSE
61585	44	3	–10	11	1.76	FALSE
61586	13	3	–39	11	1.68	FALSE
61623	3	2	–7	11	0.31	FALSE
49591	1	3	–78	11	2.57	FALSE
49598	6	3	–52	11	1.91	FALSE
49656	0	3	–230	11	7.36	FALSE
49827	0	1	–2	11	0.09	FALSE
49831	0	3	–16	11	0.54	FALSE
49838	3	3	–52	11	1.77	FALSE
49886	4	0	3	11	0.02	FALSE
49936	39	1	39	11	0.01	FALSE
49977	7	1	1	11	0.2	FALSE
49983	0	1	0	11	0.01	FALSE
50018	1	1	0	11	0.01	FALSE
51158	16	3	–59	11	2.53	FALSE
51159	8	2	–3	11	0.37	FALSE
51160	8	1	4	11	0.12	FALSE
51199	10	1	6	11	0.16	FALSE
51373	40	1	40	11	0.01	FALSE
51392	0	3	–49	11	1.54	FALSE
65503	5	1	5	11	0.01	FALSE
65527	6	0	5	11	0.01	FALSE
65687	8	1	7	11	0.02	FALSE

Table 11. Historic Acid Base Accounting for Precambrian (Page 3 of 5)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
65715	1	1	–3	11	0.09	FALSE
65743	3	2	–1	11	0.16	FALSE
65771	3	1	3	11	0.01	FALSE
65853	10	3	–34	11	1.41	FALSE
65885	3	1	3	11	0.01	FALSE
65916	8	3	–64	11	2.33	FALSE
65949	4	3	–91	11	3.13	FALSE
65981	5	1	4	11	0.05	FALSE
66015	21	1	20	11	0.07	FALSE
66049	2	1	0	11	0.05	FALSE
66081	6	1	3	11	0.15	FALSE
66114	6	1	5	11	0.05	FALSE
66482	2	1	2	11	0.01	FALSE
67336	4	1	4	11	0.01	FALSE
67443	9	2	0	11	0.26	FALSE
67470	1	1	1	11	0.01	FALSE
67491	4	2	–13	11	0.56	FALSE
51448	1	3	–589	11	18.9	FALSE
51468	5	2	–6	11	0.43	FALSE
51469	3	2	–16	11	0.63	FALSE
51514	0	1	0	11	0.03	FALSE
51537	0	2	–1	11	0.05	FALSE
51888	6	1	4	11	0.06	FALSE
52008	4	1	1	11	0.11	FALSE
52043	3	1	3	11	0.01	FALSE
52118	6	1	5	11	0.05	FALSE
52158	8	3	–43	11	1.77	FALSE
52159	8	2	4	11	0.12	FALSE
52197	12	3	–43	11	1.79	FALSE
52198	12	3	–35	11	1.53	FALSE
52259	4	3	–65	11	2.23	FALSE
52317	9	3	–3	11	0.37	FALSE
52345	0	3	–413	11	13.2	FALSE
54798	13	1	10	11	0.1	FALSE
54840	8	1	7	11	0.03	FALSE
55010	5	1	5	11	0.02	FALSE

Table 11. Historic Acid Base Accounting for Precambrian (Page 4 of 5)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
55596	10	1	10	11	0.01	FALSE
55597	17	1	17	11	0.01	FALSE
55710	0	1	0	11	0.01	FALSE
55731	6	1	4	11	0.04	FALSE
55754	0	3	–203	11	6.49	FALSE
55831	3	1	2	11	0.01	FALSE
72948	0	3	–390	11	12.5	FALSE
72970	0	3	–583	11	18.7	FALSE
72997	9	1	7	11	0.09	FALSE
73029	1	2	–4	11	0.15	FALSE
94006	1	3	–52	11	1.71	FALSE
94021	2	3	–45	11	1.52	FALSE
94036	1	3	–51	11	1.68	FALSE
95373	29	1	29	11	0.04	FALSE
82857	0	1	–1	11	0.01	FALSE
82858	1	1	–1	11	0.07	FALSE
82859	0	1	–1	11	0.06	FALSE
82860	1	3	–7	11	0.23	FALSE
115981	2	2	–4	11	0.21	FALSE
115982	2	3	–27	11	0.99	FALSE
115983	2	1	1	11	0.09	FALSE
115909	8	1	7	11	0.03	FALSE
115910	6	1	6	11	0.02	FALSE
115911	5	1	4	11	0.03	FALSE
115912	94	1	94	11	0.01	FALSE
115913	70	1	70	11	0.01	FALSE
115839	5	1	5	11	0.01	FALSE
115840	4	1	4	11	0.01	FALSE
115866	17	1	17	11	0.01	FALSE
115867	11	1	11	11	0.01	FALSE
115868	17	1	17	11	0.02	FALSE
120457	4	1	4	11	0.02	FALSE
120559	1	2	–2	11	0.1	FALSE
120560	3	1	2	11	0.03	FALSE
120483	1	3	–24	11	0.81	FALSE
120484	1	2	–5	11	0.23	FALSE

Table 11. Historic Acid Base Accounting for Precambrian (Page 5 of 5)

Sample I.D.	ANP	ARD	NNP	Rock Type	Total S (%)	In Pit (T/F)
120559	1	2	–2	11	0.1	FALSE
120560	3	1	2	11	0.03	FALSE
132264	52	1	39	12	0.45	FALSE
132265	4	3	–36	12	1.4	FALSE
132690	76	1	76	12	0.01	FALSE
65595	67	1	67	40	0.01	FALSE
120753	2	1	0	113	0.06	FALSE
120754	3	1	2	113	0.03	FALSE
120755	4	1	4	113	0.01	FALSE
120757	1	1	1	113	0.01	FALSE

Table 12. Current Whole Rock Analysis for Upper Contact and Glauconitic Sandstone Deadwood Formation (Page 1 of 2)

SAMPLE ID	47802	49118	49439	50208	50274	51714	50452	52090	52387	49657	52921	52208	52219	53834	55178	54322	59756	59935
HOLE-ID	FX3298	FX3344	FX3349	FX3360	FX3361	FX3385	FX3397	FX3398	FX3409	FX3406	FX3420	FX3441	FX3441	FX3447	FX3512	FX3461	FX3668	FX3672
FROM	60	120	80	120	130	30	260	290	360	160	200	70	110	30	20	110	50	40
TO	70	130	90	130	140	40	270	300	370	170	210	80	120	40	30	120	60	50
AL (%)	0.28	0.5	0.5	0.97	0.57	0.87	0.51	0.44	0.47	0.63	0.47	1.37	0.52	0.39	0.65	0.31	0.36	0.4
AS (PPM)	1430	10000	3120	1540	6320	1310	304	4650	572	264	5750	1895	1975	2050	638	1720	15	64.5
AU (OPT)	0.007	0.301	0.022	0.006	0.371	0	0	0	0	0	0	0.041	0.098	0.039	0.025	0.107	0	0
B (PPM)	<10	9	10	10	10	10	10	<10	<10	<10	5	10	5	5	<10	<10	<10	10
BA (PPM)	270	40	230	300	120	130	70	40	20	100	90	130	80	150	160	90	180	130
BE (PPM)	3.12	1.28	1.42	3.32	2.22	6.17	2.83	1.87	2.22	0.95	2.41	4.96	1.73	2.43	4.16	5	1.45	1.63
BI (PPM)	0.37	0.12	0.34	0.26	0.22	0.3	0.27	0.09	0.21	0.13	0.13	0.3	1.01	0.33	0.37	0.17	0.1	0.1
CA (%)	0.53	0.79	6.69	0.45	2.01	0.63	11	2.09	7.3	0.14	0.79	1.76	1.03	3.76	2.02	4.06	10.35	7.83
CD (PPM)	0.39	0.47	0.15	0.72	0.18	0.62	0.6	0.28	0.12	0.08	1.05	0.11	0.75	0.1	0.16	0.22	0.05	2.51
CE (PPM)	67.9	37.9	65.9	77.2	71.5	80.7	40.9	53.9	53.8	30	35.4	65.1	72.8	55.1	88.6	52.4	40.8	31.6
CO (PPM)	12.8	7.1	13.3	16.2	12.3	14.9	11.5	11.1	10.3	1.2	10.8	4	7.7	12.6	10	9.4	6.2	9.1
CR (PPM)	35	161	145	144	136	15	9	10	11	27	127	121	86	116	90	104	8	10
CS (PPM)	1.44	1.62	0.63	2.57	1.51	2.23	2.76	0.78	0.75	0.55	1.1	1.08	3.08	1.66	1.47	1.34	1.99	1.82
CU (PPM)	27.4	27.2	15.9	15.7	24.9	9	16.7	13.1	11.2	15.3	13.8	11.5	12.6	11.8	30.4	37.3	9.8	12.6
FE (%)	4.66	3.86	5.04	5.29	4.64	7.26	3.78	4.12	4.14	3.04	3.74	7.34	3.28	6.1	4.33	4.04	2.03	2.77
GA (PPM)	2.3	3.92	4.38	5.28	5.13	8.83	2.56	2.74	2.91	6.18	3.47	6.31	3.15	2.97	4.17	2.54	1.35	1.53
GE (PPM)	0.14	0.11	0.16	0.18	0.17	0.2	0.13	0.12	0.13	0.09	0.1	0.27	0.11	0.13	0.11	0.09	0.07	0.09
HF (PPM)	0.46	0.17	0.22	0.37	0.34	0.62	0.14	0.25	0.29	0.24	0.23	1.33	0.4	0.35	0.67	0.63	0.11	0.2
HG (PPM)	0.48	1.06	0.21	0.14	0.95	0.28	0.08	0.99	0.29	0.09	0.56	0.5	0.43	0.24	0.28	0.6	0.03	0.06
IN (PPM)	0.023	0.04	0.024	0.024	0.033	0.017	0.022	0.031	0.016	0.023	0.028	0.033	0.041	0.019	0.019	0.031	0.014	0.014
K (%)	0.15	0.3	0.35	0.56	0.54	0.53	0.4	0.29	0.33	0.3	0.24	0.8	0.24	0.27	0.42	0.22	0.23	0.28
LA (PPM)	26.2	13.8	24.8	33.9	26	28.3	13.7	19.6	19.8	12.9	13.1	20.9	33.2	19.6	50.2	23.6	15	10.4
LI (PPM)	11.3	7.6	13.1	25.1	12.5	25.3	1.6	8	11.7	1.7	8.5	15	2.3	16.5	30.2	9.9	1.4	3.2
MG (%)	0.1	0.15	0.14	0.21	0.11	0.26	2.21	0.63	2.39	0.08	0.07	0.29	0.18	0.18	0.3	2.15	1.07	2.67
MN (PPM)	1620	165	2050	1630	831	1050	1730	668	1600	79	745	301	1020	1520	1610	1680	1060	1200
MO (PPM)	4.72	14.4	15.05	12.9	11.9	3.93	1.01	1.14	1.37	1.34	11.95	18.3	7.99	11.75	6.5	9.66	0.94	1.08
NA (%)	0.01	0.01	0.01	0.12	0.01	0.01	0.01	0.02	0.01	0.01	0.03	0.02	0.02	0.01	0.05	0.02	0.01	0.01
NB (PPM)	0.85	0.33	0.35	0.42	0.7	0.82	0.18	0.72	0.46	0.51	0.67	4.33	0.64	0.79	0.9	0.86	0.12	0.34
NI (PPM)	22.8	12.8	16.2	30.5	14.3	14	9.7	11.7	11.1	4.5	16.5	10.1	14.1	13.8	13.9	14.1	7.1	8.8
P (PPM)	1700	1040	1280	1440	1100	1930	1060	930	1350	500	1130	890	1550	1270	1590	920	1160	880
PB (PPM)	9.3	31.2	8.6	15.6	11.3	8.7	13.7	17.3	7.9	34.2	53.6	12.7	27.8	11.3	23	15.2	4.2	30.8
RB (PPM)	11.4	17.7	26.5	38.2	27.1	40.2	21	12	16.6	13.5	15.1	26.6	16.5	21.4	23.8	11.1	11.3	14.1
RE (PPM)	0.001	0.001	0.001	0.001	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	0.001	0.001	0.001	0.001	0.001	<0.0010	<0.0010
ROCK TYPE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
S (%)	0.03	0.1	0.01	0.02	0.37	0.01	0.02	0.18	0.02	0.09	0.1	0.56	0.03	0.02	0.01	0.02	0.03	0.01

Table 12. Current Whole Rock Analysis for Upper Contact and Glauconitic Sandstone Deadwood Formation (Page 2 of 2)

SAMPLE ID	47802	49118	49439	50208	50274	51714	50452	52090	52387	49657	52921	52208	52219	53834	55178	54322	59756	59935
HOLE-ID	FX3298	FX3344	FX3349	FX3360	FX3361	FX3385	FX3397	FX3398	FX3409	FX3406	FX3420	FX3441	FX3441	FX3447	FX3512	FX3461	FX3668	FX3672
FROM	60	120	80	120	130	30	260	290	360	160	200	70	110	30	20	110	50	40
TO	70	130	90	130	140	40	270	300	370	170	210	80	120	40	30	120	60	50
SB (PPM)	27.9	80.8	33.8	15.25	60.8	27.4	3.45	53	11	9.52	98.3	96.7	32.8	23.6	12.1	30.2	0.57	2.46
SC (PPM)	5.2	2.2	4.6	4.7	3.7	2	3.8	2.5	4.1	1.8	2.1	2	4.5	3.9	4.1	3.7	3.9	3.2
SE (PPM)	1	3.8	1.1	0.3	2.8	0.5	0.6	1.3	1.5	0.3	1.6	0.7	0.9	0.7	1	0.6	0.4	0.2
SI (%)																		
SN (PPM)	0.5	0.6	0.5	0.5	0.7	0.4	0.3	0.3	0.3	0.5	0.5	3.3	0.7	0.4	0.7	1.7	0.2	0.2
SR (PPM)	51.4	216	52.2	151.5	133	54.5	122	216	54.4	720	298	442	180.5	50.5	72.8	72.5	126	147
TA (PPM)	<0.01	0.009	0.009	0.009	0.009	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0	0	0	<0.01000	<0.01000	<0.01	<0.01
TE (PPM)	0.13	0.54	0.04	0.06	3.75	0.28	0.01	0.14	0.12	0.04	0.3	0.79	0.64	0.7	1.6	18.65	<0.01000	0.01
TH (PPM)	10.2	4.8	5.5	9.1	5.9	6.6	4.9	5.8	5.4	3.5	4.4	7.9	7.6	5.2	19.4	5.1	4.2	4.3
TI (%)	0.008	0.005	0.008	0.013	0.006	0.007	0.005	0.005	0.008	0.005	0.004	0.008	0.007	0.008	0.009	0.008	<0.00500	<0.00500
TL (PPM)	15.25	2.68	10.95	12.8	20.2	51	8.22	16.5	2.07	1.15	47.4	3.58	3.47	5.76	6.87	7.27	0.14	1.07
U (PPM)	9.63	9.1	5.91	7.36	7.44	8.76	2.07	4.33	4.09	0.95	7.61	7.39	6.97	6.44	5.67	8.33	1.06	1.37
V (PPM)	145	13	80	179	20	298	14	14	14	59	94	49	28	22	23	30	8	9
W (PPM)	11.3	9.92	10.4	17.4	7.3	57.1	3.85	6.69	9.01	11.8	25.7	76.7	3	5.8	4.49	8.28	1.12	1.25
Y (PPM)	18.9	6.65	11.05	11.65	8.73	13.15	10.6	8.64	10.95	4.6	6.83	11.8	12.05	9.35	16.55	10.4	8.38	8.43
ZN (PPM)	90	65	34	104	43	33	73	45	30	10	107	27	84	42	43	63	109	172
ZR (PPM)	15.1	8.1	11.7	23.9	15.2	24.9	6.4	10.8	13.2	12.3	9.6	42.5	14.6	13.2	41.5	20.9	3.1	6.3
AU (FIREOPT)	0.007	0.2954	0.0192	0.0064	0.3728	0.013	0.002	0.133	NS	0.002	0.0726	0	0	0.0387	0.025	0.107	0.002	0.002
AG (FIREOPT)	0	0.416	0.128	0.128	0.448	<0.1000	<0.1000	0.2	NS	<0.1000	0.736	0	0	0.192	0.48	1.024	0.16	0.16
In Pit (T/F)	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE
Ore	-	Y	Y	-	Y	Y	-	Y	Y	-	Y	-	-	Y	Y	Y	-	-
Location	GR	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	GR	GR

Table 13. Current Whole Rock Analysis for Intermediate Unit Deadwood Formation (Page 1 of 7)

SAMPLE ID	47077	47709	49584	49585	49705	49513	49254	50361	50618	50620	50801	50865	51383	51518	51581	52037	52137	51277	50774
HOLE-ID	FX3280	FX3296	FX3351	FX3351	FX3353	FX3350	FX3346	FX3362	FX3366	FX3366	FX3369	FX3370	FX3378	FX3380	FX3382	FX3391	FX3393	FX3395	FX3398
FROM	360	30	230	240	140	170	180	350	320	340	200	190	170	220	200	260	260	310	170
TO	370	40	240	250	150	180	190	360	330	350	210	200	180	230	210	270	270	320	180
AL (%)	0.34	0.33	0.63	0.56	0.4	0.29	0.74	0.55	0.33	1	0.5	0.67	0.72	1.07	0.48	0.37	2.17	0.22	0.21
AS (PPM)	4830	2450	7530	3650	1905	734	3900	5420	2790	5330	408	1135	844	2120	5.6	241	4800	9460	244
AU (OPT)	0.318	0.195	0.346	0.182	0.23	0.016	0.15	0.272	0.32	0.15	0.01	0.051	0.029	0.093	0	0	0	0	0
B (PPM)	<10	<10	9	9	9	9	9	9	9	20	9	10	10	10	<10	<10	40	<10	<10
BA (PPM)	320	570	100	150	150	170	110	200	160	170	330	130	230	90	460	170	150	410	130
BE (PPM)	5.64	5.67	2.39	2.02	1.2	2.36	1	1.99	1.08	6.8	1.36	2.73	2.65	1.29	1.56	3.03	3.44	1.83	0.42
BI (PPM)	1.05	0.61	0.13	0.17	0.13	0.15	0.12	0.34	0.37	0.11	0.15	0.1	0.29	0.09	0.04	<0.01000	0.03	0.2	0.04
CA (%)	0.91	0.4	0.74	0.27	0.28	0.19	0.26	1.27	0.57	2.68	2.46	2.06	0.51	1.6	2.91	6.79	8.74	2.63	0.07
CD (PPM)	1.25	0.2	1.64	1.32	0.23	2.35	0.81	0.19	0.22	0.29	3.73	1.05	0.11	0.7	0.28	2.54	0.44	1.16	0.83
CE (PPM)	84.7	57.4	54	46.8	55.1	25.9	50.5	75	29.7	46	58.4	36.3	78	40.7	95.5	35.9	65.2	49.1	20.3
CO (PPM)	13	12.6	7.1	5.7	9.6	3.9	5.5	5.9	3.2	8.5	7.7	5.8	10.8	4.3	7.4	4.6	9.2	6.1	2.1
CR (PPM)	69	59	243	230	215	278	217	180	308	291	234	425	98	154	4	9	29	19	5
CS (PPM)	1.05	1.26	1.2	0.96	0.42	0.87	1.16	1.35	0.85	2.37	5.5	1.48	1.4	1.22	3.74	1.21	3.05	0.66	0.99
CU (PPM)	60	67	24.1	20.3	19.3	14.4	44.9	10.4	20	13.5	24.7	16.5	26.1	21.2	4.8	14.4	17.9	40.6	8
FE (%)	7.13	4.79	4.09	6.97	3.07	1.74	2.83	3.48	4.84	4.42	2.11	2.12	2.69	2.84	3.59	2.05	3.86	3.36	1.07
GA (PPM)	2.03	2.37	4.82	6.85	3.17	1.39	3.11	3.26	4.98	7.28	2.38	3.22	4.76	6.35	1.67	1.62	10.55	1.88	1.44
GE (PPM)	0.25	0.15	0.1	0.16	0.12	0.04	0.11	0.13	0.17	0.32	0.09	0.08	0.12	0.12	0.13	0.07	0.22	0.11	0.05
HF (PPM)	0.45	0.71	0.39	0.37	0.18	0.26	0.21	0.68	0.5	1.28	0.28	0.21	0.55	0.31	0.23	0.1	0.43	0.33	0.15
HG (PPM)	2.93	0.61	3.15	1.54	0.65	0.18	2.13	0.92	1.93	0.75	0.13	0.52	0.24	0.94	0.02	0.62	0.93	0.67	0.26
IN (PPM)	0.072	0.027	0.042	0.033	0.026	0.011	0.032	0.022	0.027	0.025	0.019	0.019	0.032	0.029	0.049	0.024	0.04	0.042	0.007
K (%)	0.15	0.14	0.45	1.02	0.35	0.15	0.28	0.31	0.59	0.68	0.23	0.35	0.45	0.64	0.27	0.21	1.43	0.18	0.1
LA (PPM)	31.3	21.6	21.8	19.6	20.9	14	19.3	37.4	11.6	14.3	30.9	17.7	42.2	14.5	49	15.9	24.8	18.8	10.9
LI (PPM)	15.9	10.9	5	13.2	3.3	2.1	2.8	8.1	11.8	37.6	6.4	4.7	5.2	4.7	0.9	1.4	18.4	2.1	0.8
MG (%)	0.08	0.11	0.07	0.07	0.04	0.04	0.05	0.09	0.07	0.19	0.79	0.12	0.1	0.08	0.66	0.09	2.13	0.07	0.03
MN (PPM)	1010	1240	295	366	291	591	92	801	138	641	665	548	519	132	1270	704	971	965	117
MO (PPM)	8.96	28	21.7	22	18.4	22.9	20	17.15	28	27.5	18.85	34.5	8.06	13.55	1.78	2.3	1.96	4.61	1.22
NA (%)	0.02	0.01	0.05	0.04	0.02	0.02	0.03	0.1	0.02	0.02	0.07	0.02	0.01	0.01	0.03	0.01	0.02	0.01	<0.01000
NB (PPM)	1.21	0.93	1.75	1.3	0.55	0.37	0.53	0.73	0.96	3.34	0.36	0.31	0.25	1.19	0.11	0.2	2.11	0.74	0.24
NI (PPM)	25.5	17.4	16.1	11.7	15.8	15.7	13.5	12.5	12.6	17.2	37.8	37.6	20.9	12.2	3.6	14.8	13.5	9.7	3.9
P (PPM)	3700	1390	1300	700	1100	160	1150	1010	830	1470	750	370	1320	890	1710	240	1340	1170	80
PB (PPM)	137	15.1	50.5	25.3	16.4	60.3	27.5	24.8	15.6	9.7	181.5	86.7	26.3	15.4	19.8	115.5	20.7	69.4	79.2
RB (PPM)	9.9	11.3	16.5	18.9	10.4	11.2	12.7	16.9	14.6	38.9	20.1	18.8	25.4	30.1	14	10.3	48.2	8.3	5.2
RE (PPM)	0.001	0.001	0.002	0.002	0.001	0.001	0.002	0.001	0.002	0.002	0.001	0.002	0.001	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
ROCK TYPE	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Table 13. Current Whole Rock Analysis for Intermediate Unit Deadwood Formation (Page 2 of 7)

SAMPLE ID	47077	47709	49584	49585	49705	49513	49254	50361	50618	50620	50801	50865	51383	51518	51581	52037	52137	51277	50774
HOLE-ID	FX3280	FX3296	FX3351	FX3351	FX3353	FX3350	FX3346	FX3362	FX3366	FX3366	FX3369	FX3370	FX3378	FX3380	FX3382	FX3391	FX3393	FX3395	FX3398
FROM	360	30	230	240	140	170	180	350	320	340	200	190	170	220	200	260	260	310	170
TO	370	40	240	250	150	180	190	360	330	350	210	200	180	230	210	270	270	320	180
S (%)	0.04	0.28	0.37	1.46	0.32	0.01	0.1	0.05	0.9	0.06	0.02	0.02	0.13	0.06	0.12	0.01	0.07	0.03	0.07
SB (PPM)	186	36.1	123	94.7	68.5	13.85	81	40.7	77.2	76.4	10.15	13.1	15.85	89.9	0.57	5.55	103.5	58.1	9.4
SC (PPM)	7.7	4	1.7	1.3	1.4	1.2	1.2	2.8	1	2.8	2.8	3	4.2	2.3	7.3	3.8	4.3	3.8	0.7
SE (PPM)	3.3	3.1	1.9	2.8	2	0.4	3.6	1	3.6	0.8	0.3	0.4	0.7	2	0.4	0.7	5.8	0.8	0.2
SI (%)																			
SN (PPM)	0.9	1.5	0.8	0.6	0.5	0.5	0.6	0.6	0.8	0.8	0.5	0.7	0.8	0.6	0.4	0.2	0.7	0.7	0.2
SR (PPM)	252	132	268	299	328	64.8	1430	86.5	348	136.5	176.5	85.7	183.5	289	373	40.4	656	70.6	98
TA (PPM)	0.01	0.01	0.009	0.009	0.009	0.009	0.02	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.01	<0.01	<0.01	<0.01	<0.01
TE (PPM)	0.46	14.15	1.22	0.84	1.8	0.12	0.55	0.76	4.01	1.93	0.25	3.33	0.28	0.34	<0.01000	0.02	0.05	1.45	0.95
TH (PPM)	77.1	21.6	6.6	6.2	4.8	12.1	5.8	17.8	3.5	4.5	8.6	4.4	22.3	3.4	10.4	3.6	5.6	5.2	6.7
TI (%)	0.009	0.013	0.005	0.005	0.005	0.005	0.005	0.007	0.005	0.009	0.03	0.01	0.007	0.006	0.005	0.005	0.011	0.005	<0.00500
TL (PPM)	7.55	9.21	21.7	37.9	3.86	3.11	2.74	9.31	11.15	6.91	2.19	5.65	5.35	2.91	0.33	1.66	16.35	4.25	1.33
U (PPM)	23.4	11.7	9.68	6.02	3.67	4.04	8.13	7.73	4.56	10.65	2.54	5.28	6.65	6.94	1.5	1.42	4.9	10.25	1.3
V (PPM)	132	38	29	34	124	33	53	21	21	42	20	24	70	24	23	9	23	18	29
W (PPM)	7.75	4.8	49.6	93.4	24	8.44	41.1	16.95	61.9	42.2	6.36	5.98	16.2	47.1	0.3	3.17	4.5	4.43	2.74
Y (PPM)	85.2	60.8	9.24	4.5	9.22	2.85	7.87	11.1	2.52	11.75	7.56	5.68	10.8	10	18.15	4.75	12.35	8.75	1.96
ZN (PPM)	186	40	126	106	31	236	69	58	32	66	334	105	42	69	107	174	72	99	34
ZR (PPM)	19.8	24.5	17.3	14.5	10.1	11	12	33.6	11.5	31.4	12.7	9.3	31.3	11.6	9.4	4	15	10.5	6.3
AU (FIREOPT)	0.32	0.196	0.3648	0.1792	0.2115	0.0384	0.1402	0.2598	0.32	0.1523	0.0096	0.0525	0.0314	0.0928	0.002	<0.0010	0.1	0.192	0.04
AG (FIREOPT)	0	1.12	0.256	0.224	0.16	0.128	0.288	0.256	0.512	0.192	0.128	0.288	0.128	0.256	0.16	<0.1000	<0.1000	0.3	<0.1000
In Pit (T/F)	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Ore	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	-	Y	Y	Y	Y
Location	GR	GR	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf

Table 13. Current Whole Rock Analysis for Intermediate Unit Deadwood Formation (Page 3 of 7)

SAMPLE ID	52376	52438	52447	49328	52526	53266	53368	53677	54049	54000	54294	52165	54644	55145	55611	55701	55762	56598	56521
HOLE-ID	FX3409	FX3410	FX3410	FX3399	FX3412	FX3435	FX3436	FX3439	FX3494	FX3456	FX3528	FX3495	FX3530	FX3511	FX3479	FX3473	FX3474	FX3564	FX3562
FROM	250	370	460	120	250	50	470	460	30	490	30	40	30	240	550	150	560	170	200
TO	260	380	470	130	260	60	480	470	40	500	40	50	40	250	560	160	570	180	210
AL (%)	0.64	0.4	0.39	0.57	1.5	0.77	0.56	1.38	0.4	1.19	0.94	0.44	0.69	0.99	0.67	0.54	0.93	0.41	0.27
AS (PPM)	1065	735	1390	3050	4550	882	507	1860	507	1715	161.5	1040	406	886	610	1120	750	404	1510
AU (OPT)	0	0	0	0	0	0.01	0	0	0.012	0.184	0	0.03	0	0.086	0.022	0.043	0.084	0	0
B (PPM)	<10	<10	<10	<10	30	10	10	10	5	20	<10	<10	<10	<10	10	<10	10	<10	<10
BA (PPM)	440	140	110	150	110	460	110	160	590	160	2060	360	350	160	340	100	110	150	290
BE (PPM)	1.9	3.27	5.11	3.12	3.26	3.09	7.94	2.55	5.83	1.88	2.61	3.21	1.15	4.2	2.88	5.96	7.25	2.54	3.78
BI (PPM)	0.23	0.07	0.08	0.04	0.12	0.26	0.53	0.83	0.22	0.5	1.59	1.28	1.04	0.14	0.63	0.16	0.36	0.09	0.22
CA (%)	0.3	8.62	2.32	4.93	7.21	9.42	0.47	2	0.43	4.57	0.08	0.55	0.09	1.78	12.6	2.43	0.9	0.65	0.63
CD (PPM)	1.39	0.1	0.29	0.83	0.43	1.06	0.54	0.15	5.31	0.04	0.31	8.44	0.63	1.15	0.24	0.15	0.09	0.21	0.29
CE (PPM)	106	41.8	69.3	48.8	58.4	82.3	36.8	80.7	78.4	69.5	294	81.7	48.4	60.3	61.2	58.7	70.7	57.7	71.3
CO (PPM)	12	11	10.7	6.6	11.4	8.8	6.3	15.6	17.7	15.3	2.4	17.6	2.5	8.2	25.1	8.6	14.8	8.6	9.1
CR (PPM)	19	14	18	9	67	66	128	98	96	70	50	68	41	102	28	113	78	18	39
CS (PPM)	3.82	0.64	1.13	0.99	2.8	2.21	1.51	1.66	1.38	2.72	0.48	1.09	0.28	1.57	2.38	1.11	2.71	1.44	0.66
CU (PPM)	21.9	15.7	19.6	13.5	18.9	19.3	21	38.6	15.6	30.2	29.5	25.3	30.9	20.2	38.7	15.4	24.1	15.9	17.9
FE (%)	2.81	3.1	3.04	2.44	3.86	2.41	3.35	3.49	4.02	3.19	2.93	3.83	2.35	2.33	6.28	4.8	2.75	2.62	2.54
GA (PPM)	3.23	3.09	3.52	3.03	7.61	4.19	2.51	9.57	2.71	6.42	6.58	2.52	4.36	5.26	4.63	3.65	6.6	3.56	2.37
GE (PPM)	0.14	0.1	0.12	0.09	0.22	0.09	0.07	0.18	0.13	0.18	0.36	0.13	0.11	0.11	0.22	0.14	0.18	0.12	0.12
HF (PPM)	0.21	0.68	0.45	0.15	0.41	0.71	0.48	1.35	0.29	0.85	0.47	0.67	0.65	1	0.43	1.09	1.57	0.23	0.36
HG (PPM)	0.81	0.1	0.19	0.39	0.89	0.37	0.42	1	0.07	0.66	0.03	0.08	0.01	0.24	0.26	0.39	0.27	0.33	0.27
IN (PPM)	0.026	0.018	0.027	0.033	0.047	0.021	0.018	0.026	0.025	0.026	0.047	0.055	0.029	0.03	0.058	0.021	0.031	0.021	0.023
K (%)	0.35	0.27	0.26	0.29	0.83	0.4	0.28	1.35	0.24	0.81	0.26	0.21	0.28	0.88	0.48	0.3	0.63	0.27	0.23
LA (PPM)	58.4	14.3	28.5	20.7	22.2	39.7	15	36.5	33.5	30.8	161.5	38.7	21.7	28.4	24.9	25	33.8	26.2	31.9
LI (PPM)	1.6	3.9	3	2.5	26	4.7	4.5	8.7	1.7	7.4	9.6	3.2	2.6	4.1	8.7	7.9	8.5	3.2	1.7
MG (%)	0.08	0.11	0.07	0.09	2.71	1.3	0.09	0.13	0.05	1.11	0.05	0.06	0.03	0.09	6.98	0.32	0.14	0.09	0.04
MN (PPM)	308	2000	1450	862	1040	1600	794	1520	3870	2060	64	3000	38	822	10200	1510	759	882	1560
MO (PPM)	1.79	2.11	2.45	1.54	5.68	6.11	12.35	8.59	9.48	6.36	25	8.01	7.67	6.45	7.23	9.83	5.32	2.42	3.33
NA (%)	0.03	0.01	0.02	0.07	0.04	0.03	0.02	0.02	0.03	0.04	0.01	0.01	0.01	0.02	0.04	0.02	0.01	0.01	0.01
NB (PPM)	0.3	1.08	1.19	0.31	1.17	1.98	1.29	4.84	0.83	3.7	3.51	1.29	0.11	3.92	0.85	2.48	4.15	1.01	2.28
NI (PPM)	61.8	12.2	13.8	11.5	15.6	15.6	19.4	18.1	21.6	18.9	3.6	14.7	5.4	18.9	25.1	15	23.6	15.8	13.6
P (PPM)	830	1530	1660	490	1270	1560	570	2700	1910	1710	1650	2070	920	1590	3070	1730	1430	1940	2260
PB (PPM)	102.5	6.4	17.9	27.2	19	56.8	12.5	40.8	48.9	12.2	284	331	29.5	33.4	20.2	19.2	7.9	9.7	11.7
RB (PPM)	18.8	13.5	12.6	13.8	40.3	25.3	18.4	50.2	13.5	32.4	9.6	11.2	7.6	34.2	23.3	14.2	34.1	12.2	9
RE (PPM)	<0.0010	<0.0010	<0.0010	<0.0010	0.0001	0.001	0.001	0.001	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.001	0.001	0.001	<0.0010	<0.0010	<0.0010
ROCK TYPE	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
S (%)	0.13	0.01	0.01	0.08	0.06	0.02	0.01	0.03	0.01	0.07	0.17	0.01	0.21	0.01	0.01	0.01	0.01	0.02	0.03

Table 13. Current Whole Rock Analysis for Intermediate Unit Deadwood Formation (Page 4 of 7)

SAMPLE ID	52376	52438	52447	49328	52526	53266	53368	53677	54049	54000	54294	52165	54644	55145	55611	55701	55762	56598	56521
HOLE-ID	**FX3409**	**FX3410**	**FX3410**	**FX3399**	**FX3412**	**FX3435**	**FX3436**	**FX3439**	**FX3494**	**FX3456**	**FX3528**	**FX3495**	**FX3530**	**FX3511**	**FX3479**	**FX3473**	**FX3474**	**FX3564**	**FX3562**
FROM	**250**	**370**	**460**	**120**	**250**	**50**	**470**	**460**	**30**	**490**	**30**	**40**	**30**	**240**	**550**	**150**	**560**	**170**	**200**
TO	**260**	**380**	**470**	**130**	**260**	**60**	**480**	**470**	**40**	**500**	**40**	**50**	**40**	**250**	**560**	**160**	**570**	**180**	**210**
SB (PPM)	18.95	10.15	16.15	46.5	153.5	11.05	10	35.7	7.97	24.1	4.76	12.5	3.56	13.5	16.15	37.6	27.3	10.25	52
SC (PPM)	3.3	5.1	6.7	3.6	4.4	4.6	3	6.2	6.5	5.4	9.4	6.6	6	6.7	6.6	4.3	8.4	3.5	5.4
SE (PPM)	1	0.5	0.5	1	3.5	0.4	0.4	1.2	0.9	1.1	3.5	1	2.9	1.2	1.2	0.4	1.8	0.5	0.6
SI (%)																			
SN (PPM)	0.6	0.4	0.5	0.4	0.6	0.8	0.6	3.8	0.6	2.4	1.1	1.1	1	1	0.7	1.1	1.9	0.4	0.9
SR (PPM)	344	56.2	59.4	151.5	529	99.3	42.6	67.2	41.4	89.6	301	83.9	274	76.2	130	65.5	78.8	40.7	91.6
TA (PPM)	<0.01	<0.01	<0.01	<0.01	0	0.01	0	0	0.01	0	0.01	0.01	0.01	<0.01000	0.01	<0.01000	<0.01000	<0.01	<0.01
TE (PPM)	1.12	0.07	0.64	<0.01000	0.53	0.17	3.04	20.6	0.7	8.18	0.72	1.75	4.2	2.99	0.17	0.98	0.23	0.05	0.13
TH (PPM)	17.6	5	9	5.7	5.1	16.8	4.8	12.9	29.4	11.5	43.7	27.6	16.3	13.3	11	6.2	24.4	8.4	14
TI (%)	0.005	0.007	0.008	0.005	0.009	0.007	0.007	0.014	0.011	0.012	0.011	0.011	0.012	0.012	0.016	0.01	0.012	0.006	0.01
TL (PPM)	7.31	13.45	4.13	18.35	24.1	6.72	1.74	11.7	3.31	7.36	1.39	3.33	0.84	3.53	15.35	12.1	6.45	2.83	20.2
U (PPM)	3.83	2.27	9.03	5.24	3.23	6.6	4.29	14.2	8.47	7.73	19.1	13.75	15.6	12.55	11.1	9.63	12.15	2.12	8
V (PPM)	31	39	39	15	19	17	65	296	51	134	93	48	58	64	46	37	110	33	180
W (PPM)	11.7	13.25	4.78	4.72	7.13	3.85	3.4	2.46	2.83	2.42	1.81	2.34	0.62	2.28	5.06	17.65	2.85	1.87	7.15
Y (PPM)	9.32	9.36	11.15	6.94	10.55	13.45	5.76	23.4	32.5	18.1	53.8	35.9	26	16.75	27	12.2	17.3	11.2	11.9
ZN (PPM)	128	38	58	121	64	155	46	57	588	29	40	650	45	167	43	36	48	55	106
ZR (PPM)	10.2	12.3	15.5	8.6	12.9	32.3	21.2	49.2	16.7	31.5	12.9	33.1	20.1	37	17.3	40	53.2	9.8	17.8
AU (FIREOPT)	0.041	0.008	0.037	0.053	0.0966	0.0102	0.0467	0	0.0154	0.2026	0	0.03	0.152	0.086	0.022	0.043	0.084	<0.0010	0.01
AG (FIREOPT)	<0.1000	<0.1000	<0.1000	<0.1000	0.512	0.672	0.448	0	0.224	0.768	0	0.48	0.2	0.512	0.32	0.512	0.384	<0.1000	<0.1000
In Pit (T/F)	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE
Ore	Y	-	Y	Y	Y	-	Y	-	Y	Y	-	Y	Y	Y	Y	Y	Y	Y	-
Location	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	GR	GR

Table 13. Current Whole Rock Analysis for Intermediate Unit Deadwood Formation (Page 5 of 7)

SAMPLE ID	59241	60669	60816	60987	60782	61274	61184	60339	53770	58521	62737	62438	64301	58590	61981	62835	50674	50755	51540
HOLE-ID	FX3567	FX3691	FX3714	FX3719	FX3711	FX3699	FX3702	FX3681	FX3442	FX3647	FX3751	FX3747	FX3802	FX3648	FX3738	FX3755	FX3367	FX3381	FX3516
FROM	350	180	250	210	160	150	230	30	600	50	360	270	150	240	300	240	230	180	40
TO	360	190	260	220	170	160	240	40	610	60	370	280	160	250	310	250	240	190	50
AL (%)	0.32	0.32	0.21	0.59	0.55	0.63	0.54	0.63	0.2	0.5	0.75	0.74	0.55	0.84	0.71	0.58	1.46	2.54	0.79
AS (PPM)	1080	787	1890	688	280	47.4	37	261	271	351	1350	64.8	78	19.5	25.5	19	2070	147	255
AU (OPT)	0	0	0	0	0	0	0	0	0.049	0.001	0.014	0.001	0.001	0.001	0	0	0.058	0.006	0.012
B (PPM)	<10	10	<10	10	10	<10	10	<10	5	10	10	<10	<10	10	<10	<10	20	50	<10
BA (PPM)	170	220	100	140	120	270	110	120	60	100	110	110	50	60	40	40	230	40	790
BE (PPM)	3.02	2.32	5.41	3.68	3.26	2.51	2.56	1.73	0.84	3.32	2.71	3.37	2.1	1.09	0.77	0.61	1.61	3.29	9.48
BI (PPM)	0.24	0.39	0.27	0.23	0.26	0.3	0.25	0.15	0.71	0.15	0.85	0.13	0.09	0.17	0.15	0.15	0.34	0.26	1.32
CA (%)	0.31	13.35	5.31	10.25	9.76	0.65	12.25	8.24	0.72	8.56	9.36	8.16	11.15	6.46	8.65	11.9	0.3	0.36	0.39
CD (PPM)	1.77	0.28	2.79	0.36	0.89	1.09	0.07	0.26	0.13	0.09	0.12	0.1	0.05	0.02	0.18	0.02	0.21	0.18	1.47
CE (PPM)	72.1	62.8	70.1	37.6	38.6	85.4	42.8	62.2	13.5	72.8	62.3	67.9	50.2	53.1	35.5	39.4	151.5	35.2	186.5
CO (PPM)	13.9	17	19	19.9	16.8	13.1	17.6	10.3	3.1	12.1	22.8	14.6	8.4	13.3	13.2	12.6	9.1	16	7.3
CR (PPM)	19	16	23	17	11	17	8	14	206	46	45	25	33	21	26	20	66	38	80
CS (PPM)	0.78	1.37	0.56	2.23	3.67	3.27	4.21	1.64	0.6	2.42	2.59	4.58	3.74	6.26	5.28	7	5.82	13.4	2.45
CU (PPM)	37.6	33.7	29.1	33.5	37.5	19.9	28.9	18.8	7.5	21.6	32.4	17	16	22.2	13.9	14.4	21.1	27.6	25.6
FE (%)	2.94	6	4.25	3.38	2.7	2.89	1.96	2.26	4.26	2.05	11.15	2.12	1.48	2.34	2.01	1.89	3.02	1.57	3.16
GA (PPM)	2.17	2.31	1.53	3.14	2.81	4.08	2.53	2.71	2.43	3.84	4.44	3.38	2.61	3.47	2.52	1.98	6.07	8.3	4.8
GE (PPM)	0.12	0.28	0.14	0.13	0.1	0.12	0.09	0.09	0.09	0.12	0.38	0.09	0.08	0.09	0.08	0.07	0.17	0.08	0.23
HF (PPM)	0.53	0.52	0.56	0.56	0.28	0.18	0.18	0.14	0.26	0.77	0.46	0.15	0.12	0.18	0.13	0.11	0.28	0.14	1.02
HG (PPM)	0.46	0.46	0.2	0.16	0.13	0.07	0.05	0.12	0.24	0.3	0.45	0.08	0.07	0.03	0.01	0.01	0.29	0.04	0.07
IN (PPM)	0.035	0.058	0.041	0.032	0.038	0.046	0.035	0.022	0.014	0.026	0.094	0.022	0.016	0.027	0.024	0.022	0.035	0.03	0.027
K (%)	0.24	0.22	0.15	0.38	0.36	0.35	0.34	0.27	0.09	0.39	0.5	0.45	0.36	0.57	0.48	0.4	0.65	1.32	0.36
LA (PPM)	35.2	22.8	30.7	14.7	12.7	42.8	15	26.8	6.8	32.3	20.9	30.4	19.7	26.5	14	15.8	82	14.8	88.5
LI (PPM)	2.8	10.8	1	3.8	2.4	2.5	2.1	2.8	1.1	5.1	30.6	2.6	1.8	1.6	2.2	1.6	4	3.3	7.8
MG (%)	0.03	5.77	2.45	3.32	0.68	0.1	0.65	0.14	0.06	0.12	4.94	0.41	0.47	1.58	0.9	1.04	0.12	0.25	0.1
MN (PPM)	1620	4930	3830	3840	2370	1170	2080	1000	1060	1160	6470	1140	970	1120	872	1080	111	67	1250
MO (PPM)	1.72	4.31	6.42	2.62	1.28	1.99	0.73	1.18	20.9	3.7	7.61	1.12	1.84	0.99	1.22	0.77	4.93	1.22	19.8
NA (%)	0.01	0.03	0.02	0.02	0.02	0.01	0.02	0.01	0.02	0.01	0.04	0.03	0.03	0.01	0.03	0.03	0.08	0.05	0.01
NB (PPM)	1.31	1.18	2.52	1.03	0.29	0.11	0.12	0.33	1.65	0.58	1.49	0.21	0.25	0.05	0.16	0.17	0.14	0.04	3.94
NI (PPM)	24.8	18	21.3	18.7	19	20.4	17	14.7	12.4	21	27.1	22.1	11.8	19.3	19.5	17.3	22.4	27.3	21.5
P (PPM)	1360	2400	1980	1780	1710	1560	1510	1620	2550	1430	4170	1630	1500	840	1220	1250	1010	1530	1040
PB (PPM)	2.5	15.8	31	5.9	7.3	86.1	7.9	13	30.1	5.4	18.3	13.5	5	5.1	10.3	4.3	26	12.7	115.5
RB (PPM)	8.5	15.4	6.6	18.8	20.2	22.2	21.9	14.2	4.7	21.3	26.6	22.4	18.4	26.5	24.9	23.8	32.1	73.1	20.9
RE (PPM)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	0.001	<0.0010	0.001	0.001	0.001	0.002	0.001	0.001	0.0009	0.004	0.001
ROCK TYPE	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4
S (%)	0.04	0.02	0.03	0.04	0.24	0.02	0.24	0.02	0.08	0.01	0.04	0.04	0.02	0.45	0.34	0.36	0.11	0.49	0.05

Table 13. Current Whole Rock Analysis for Intermediate Unit Deadwood Formation (Page 6 of 7)

SAMPLE ID	59241	60669	60816	60987	60782	61274	61184	60339	53770	58521	62737	62438	64301	58590	61981	62835	50674	50755	51540
HOLE-ID	FX3567	FX3691	FX3714	FX3719	FX3711	FX3699	FX3702	FX3681	FX3442	FX3647	FX3751	FX3747	FX3802	FX3648	FX3738	FX3755	FX3367	FX3381	FX3516
FROM	350	180	250	210	160	150	230	30	600	50	360	270	150	240	300	240	230	180	40
TO	360	190	260	220	170	160	240	40	610	60	370	280	160	250	310	250	240	190	50
SB (PPM)	30.7	11.05	102	23.6	12.6	1.42	1.95	9.98	35.9	5.8	19.15	1.15	1.09	0.29	0.27	0.2	13.45	1.33	16.8
SC (PPM)	5.9	5.9	7.2	5.5	6.7	7.1	6	5	2.5	7.9	5.7	6	4.8	7	6.8	5.7	3.2	7.3	6.6
SE (PPM)	1.2	5.7	1.3	0.9	0.7	1	0.9	0.5	0.5	1.1	2.3	0.9	0.8	0.3	0.5	0.4	1.2	0.7	1.9
SI (%)																			
SN (PPM)	1	0.6	1.2	1.2	0.9	0.5	0.5	0.3	1	0.7	0.8	0.3	0.3	0.4	0.2	0.2	0.7	0.8	1.8
SR (PPM)	248	146	228	237	122	38.7	125	98.5	59.6	78.6	147.5	84	96.5	51.8	93.2	119.5	741	85.8	170.5
TA (PPM)	0.01	0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01	0	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.009	0.009	0.01
TE (PPM)	0.03	0.88	0.65	0.08	0.06	0.01	0.17	0.03	1.24	0.04	0.93	0.01	0.04	0.03	0.01	0.01	0.9	0.04	0.99
TH (PPM)	39.1	23.7	18.6	11	12.3	9.1	8.3	7.2	4.3	16.6	9.6	7.9	6.8	7.5	6.5	5.9	20.8	10.4	49.1
TI (%)	0.007	0.013	0.012	0.007	0.005	0.007	<0.00500	0.006	0.009	0.009	0.014	0.006	0.006	<0.00500	0.007	0.007	0.007	0.005	0.01
TL (PPM)	43.9	7.28	18	15.35	5.73	1.28	1.1	1.46	3.42	4.38	6.87	2.14	0.84	0.34	0.22	0.2	1.29	1.57	5.87
U (PPM)	9.03	9.64	12.85	6.79	3.84	1.93	1.47	1.38	11.55	5.39	15.2	4.19	1.44	6.21	0.96	0.64	4.67	2.02	27.4
V (PPM)	125	41	64	44	29	27	12	22	17	26	65	16	11	10	12	9	22	22	55
W (PPM)	9.84	2.99	11.85	3.66	2.06	1.6	0.82	1.48	24.3	1.31	7.23	1.13	1.55	0.48	0.16	0.07	8.48	0.43	3.13
Y (PPM)	20.6	45.7	18	16.15	19.65	12	18.95	13.05	3.21	27.4	30.2	12.2	9.4	9.49	11.1	11.1	9.47	15.75	36.2
ZN (PPM)	267	44	688	148	98	113	35	66	26	26	47	44	21	39	46	23	31	203	426
ZR (PPM)	19.7	18	36.8	20.7	10.7	7.4	5.9	5.8	11.1	21	16.5	6.1	5.1	4.9	4.4	3.4	16.9	4.3	34.6
AU (FIREOPT)	0.034	0.01	0.014	0.014	0.011	0.002	0.002	0.002	0.0518	0.001	0.014	0.001	0.001	0.001	0	0	0	0.0032	0.012
AG (FIREOPT)	0.2	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.224	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	0	0.128	0.384
In Pit (T/F)	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE
Ore	Y	-	Y	Y	-	-	-	-	Y	-	Y	-	-	-	-	-	-	-	-
Location	GR	GR	GR	GR	GR	GR	GR	GR	Wharf	GR	Wharf	Wharf	Wharf	GR	Wharf	Wharf	Wharf	Wharf	Wharf

Table 13. Current Whole Rock Analysis for Intermediate Unit Deadwood Formation (Page 7 of 7)

SAMPLE ID	59855	60041	61351	SAMPLE ID	59855	60041	61351
HOLE-ID	FX3670	FX3674	FX3697	HOLE-ID	FX3670	FX3674	FX3697
FROM	140	200	250	FROM	140	200	250
TO	150	210	260	TO	150	210	260
AL (%)	0.69	0.6	0.39	P (PPM)	1010	970	1400
AS (PPM)	4.8	7	16	PB (PPM)	3.8	3.3	5.8
AU (OPT)	0	0	0	RB (PPM)	25	23.2	18.2
B (PPM)	10	10	10	RE (PPM)	<0.0010	<0.0010	<0.0010
BA (PPM)	20	20	20	ROCK TYPE	4	4	4
BE (PPM)	0.53	0.44	2.01	S (%)	0.34	0.33	0.32
BI (PPM)	0.18	0.15	0.23	SB (PPM)	0.05	0.05	0.38
CA (%)	7.65	10.3	11.65	SC (PPM)	5.8	5.7	4.1
CD (PPM)	0.01	0.01	0.03	SE (PPM)	0.3	0.3	0.5
CE (PPM)	29	25.1	36.6	SI (%)			
CO (PPM)	13.7	12.4	10.6	SN (PPM)	0.3	0.2	0.3
CR (PPM)	15	11	6	SR (PPM)	108.5	126	86.1
CS (PPM)	3.03	3.82	5.66	TA (PPM)	<0.01	<0.01	<0.01
CU (PPM)	21.3	21	34.5	TE (PPM)	<0.01000	0.01	0.01
FE (%)	1.82	1.75	1.87	TH (PPM)	5.3	4.9	6.3
GA (PPM)	2.5	2.15	1.62	TI (%)	0.012	0.007	<0.00500
GE (PPM)	0.07	0.07	0.08	TL (PPM)	0.13	0.11	0.24
HF (PPM)	0.16	0.13	0.19	U (PPM)	0.57	0.33	2.45
HG (PPM)	0.01	0.01	0.05	V (PPM)	13	11	8
IN (PPM)	0.022	0.022	0.026	W (PPM)	0.05	0.05	0.61
K (%)	0.45	0.41	0.28	Y (PPM)	9.34	8.94	15.15
LA (PPM)	10	9	12.9	ZN (PPM)	40	31	25
LI (PPM)	5.9	3.1	1.6	ZR (PPM)	3.8	3.2	6.3
MG (%)	0.84	0.81	1.96	AU (FIREOPT)	0.002	0.002	0.002
MN (PPM)	731	843	2110	AG (FIREOPT)	0.16	0.16	0.16
MO (PPM)	0.22	0.18	0.63	In Pit (T/F)	FALSE	FALSE	FALSE
NA (%)	0.01	0.02	0.02	Ore	-	-	-
NB (PPM)	0.09	0.09	0.08	Location	GR	GR	GR
NI (PPM)	21.6	18.6	11.3				

Table 14. Current Whole Rock Analysis for Lower Unit Deadwood Formation (Page 1 of 3)

SAMPLE ID	47258	47701	47740	48076	48242	48491	48392	53559	54072	54135	54528	54570	54632	54722	54181	58605	58778	63608	63539
HOLE-ID	FX3284	FX3295	FX3296	FX3306	FX3312	FX3320 B	FX3317	FX3437	FX3494	FX3497	FX3519	FX3525	FX3522	FX3531	FX3499	FX3648	FX3652	FX3775	FX3777
FROM	370	350	340	250	110	200	110	480	260	240	220	140	160	160	350	390	70	220	130
TO	380	360	350	260	120	210	120	490	270	250	230	150	170	170	360	400	80	230	140
AL (%)	0.29	0.45	0.11	0.11	0.42	0.53	0.29	0.18	0.49	0.15	2.21	2.26	1.22	0.56	0.44	0.16	0.53	0.27	0.45
AS (PPM)	1140	852	754	1510	2210	371	1580	1215	1085	234	508	1310	988	656	1430	770	1090	230	243
AU (OPT)	0.047	0.009	0.009	0.019	0.025	0	0.035	0	0.075	0.023	0.046	0	0	0	0.055	0.009	0.054	0.014	0.006
B (PPM)	10	10	<10	10	<10	<10	<10	5	10	<10	<10	<10	<10	<10	<10	<10.00000	<10.00000	<10.00000	<10.00000
BA (PPM)	50	590	1920	190	600	680	450	40	340	1450	570	150	2320	130	150	270	290	150	170
BE (PPM)	2.64	3.45	4.26	1.49	9.24	1.79	6.14	0.43	4.99	2.72	12.2	13.35	6.28	1.51	16.65	1.87	4.15	1.07	2.87
BI (PPM)	0.42	0.28	0.48	0.53	0.44	0.48	1.64	0.46	0.95	1.91	0.41	1.99	0.56	0.97	1.04	0.25	1.14	0.18	0.57
CA (%)	1.29	8.15	11.85	16.75	5.87	3.66	0.68	1.13	1.03	0.1	0.68	0.32	0.11	0.09	1.32	3.53	0.28	1.04	0.49
CD (PPM)	0.34	0.16	0.18	1.09	0.31	0.22	0.89	0.43	1.64	0.27	3.36	5.07	1.9	0.79	0.54	1.82	1.04	0.49	0.16
CE (PPM)	9.17	60.2	54.2	48.1	68.1	178.5	165.5	14.05	64.5	322	42.5	159	82.7	29.8	43.2	12.65	39	21.7	113.5
CO (PPM)	17.4	15	13.3	18.8	18.3	15.7	15.4	3.7	20.1	11.2	23.2	21.1	27.6	2.8	28.7	11.5	26.9	7	7.2
CR (PPM)	69	47	21	17	46	129	125	373	114	77	132	43	40	30	105	143	26	190	134
CS (PPM)	6.87	1.15	0.36	0.41	1.2	2.4	0.73	0.53	1.28	0.3	1.2	1.81	0.4	0.3	1.23	0.45	2.85	0.77	1.03
CU (PPM)	39.7	43.8	93	45.4	36.9	23.6	38.4	13.8	65	6.7	117	273	92.7	29.2	91.2	65.4	419	53.1	34.7
FE (%)	9.36	4.18	4.58	6.9	5	2.91	3.56	5.44	7.83	1.28	5.81	10.45	8.03	6.18	11.7	3.99	5.29	2.95	3.84
GA (PPM)	1.05	2.94	1.12	0.98	2.39	3.29	2.23	2.08	2.97	2.31	1.76	10.85	7.43	7.45	2.08	0.85	2.66	1.21	2.1
GE (PPM)	0.16	0.15	0.18	0.2	0.14	0.2	0.18	0.11	0.2	0.21	0.16	0.75	0.3	0.15	0.33	0.07	0.1	0.09	0.14
HF (PPM)	0.43	0.81	0.6	0.37	0.89	0.93	0.67	0.2	0.34	1.03	0.46	0.28	0.4	0.74	0.2	0.46	0.5	0.3	0.3
HG (PPM)	0.16	0.54	0.89	0.66	1.39	0.1	0.56	0.41	0.29	0.13	0.16	0.38	0.14	0.39	0.49	0.69	0.22	0.45	0.07
IN (PPM)	0.088	0.036	0.072	0.065	0.043	0.039	0.045	0.033	0.069	0.024	0.093	0.237	0.096	0.052	0.065	0.024	0.044	0.014	0.023
K (%)	0.18	0.37	0.1	0.08	0.3	0.41	0.29	0.31	0.32	0.13	0.22	1.15	0.25	0.9	0.16	0.11	0.29	0.11	0.22
LA (PPM)	4.5	26.7	21.6	15.6	27.7	91	91.5	5.7	24	161.5	21.6	39.1	32.4	12.3	17.4	4.8	22.7	12	86.9
LI (PPM)	13.4	10.2	15.4	6.7	12.5	18.6	10.4	3	7.3	0.8	24.1	121	8.1	3.1	4.8	1.8	14.4	1.5	1.8
MG (%)	0.1	0.2	5.24	8.19	0.27	1.62	0.09	0.28	0.06	0.01	0.18	0.55	0.05	0.03	0.07	0.1	0.14	0.09	0.04
MN (PPM)	322	3650	7290	8150	3610	968	1320	636	6220	2870	3800	364	263	60	906	1860	1040	593	657
MO (PPM)	6.59	8.25	31.5	3.72	7.42	3.11	8.09	33.6	32.8	13.75	22.4	89.6	52.7	24.9	42.4	15.8	4	12.1	14.3
NA (%)	0.01	0.03	0.04	0.03	0.02	0.07	0.02	0.04	0.02	0.04	0.02	0.03	0.02	0.01	0.02	0.01	0.01	0.02	0.02
NB (PPM)	0.41	0.82	3.2	1.88	1.79	1.3	1.36	0.64	1.66	6.98	1.15	5.97	2.61	2.09	4.2	0.94	0.6	0.67	1
NI (PPM)	73.7	20.9	13.5	16.3	27	95	69.1	12.3	36	10.5	67.3	40.6	14.7	5.5	94.8	27.8	31.8	19.9	20.5
P (PPM)	210	1790	1980	2470	2390	1630	1810	1110	4360	210	3620	7350	2730	1000	6040	1160	780	3550	2720
PB (PPM)	14	9.3	22.5	46.3	14.7	32.1	177.5	1655	58.1	336	85.3	725	293	304	126	348	116.5	54.4	73.7
RB (PPM)	15.9	18.9	6	4.4	14.3	28.2	14.1	9.4	16.3	5	13.8	36.6	8.3	7.1	8.5	4.7	19.1	5.4	7
RE (PPM)	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.002	0.001	<0.0010	<0.0010	0.001	<0.0010	<0.0010	0.001	0.001

Table 14. Current Whole Rock Analysis for Lower Unit Deadwood Formation (Page 2 of 3)

SAMPLE ID	47258	47701	47740	48076	48242	48491	48392	53559	54072	54135	54528	54570	54632	54722	54181	58605	58778	63608	63539
HOLE-ID	FX3284	FX3295	FX3296	FX3306	FX3312	FX3320 B	FX3317	FX3437	FX3494	FX3497	FX3519	FX3525	FX3522	FX3531	FX3499	FX3648	FX3652	FX3775	FX3777
FROM	370	350	340	250	110	200	110	480	260	240	220	140	160	160	350	390	70	220	130
TO	380	360	350	260	120	210	120	490	270	250	230	150	170	170	360	400	80	230	140
ROCK TYPE	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
S (%)	3.32	0.03	0.07	0.2	0.03	0.49	0.04	0.57	0.05	0.09	0.03	1.11	0.16	1.47	0.02	0.03	0.01	0.28	0.22
SB (PPM)	27.3	14.65	22.1	33.9	29.9	17.55	78.4	41.1	16.05	44.5	16.65	38.4	15.25	16.5	25	28.2	34.4	19.8	11.75
SC (PPM)	4.1	5.4	7.1	5.9	9.7	6.6	6.9	1.4	4.7	1.1	6	12.4	7.8	4.5	3.7	2.2	7.2	1.3	1.5
SE (PPM)	23.6	1.9	3.7	3.9	1.9	0.8	1.6	2.1	2.7	1.2	2.8	9.4	7.2	7.8	7.2	1.6	2.8	3.8	3.2
SI (%)																			
SN (PPM)	0.7	1.1	1.1	0.5	0.9	0.7	0.8	1.8	1	3.7	1.1	6.8	3.2	10.1	1.1	0.6	1.2	0.3	0.4
SR (PPM)	17.1	68.6	470	239	102.5	1210	318	117	83.3	148	1590	876	953	206	163.5	33.6	88.6	343	589
TA (PPM)	<0.01	0.01	0.02	0.01	0.01	0.01	0.01	0	0.01	0.01	0.03	0.03	0.01	0.01	0.01	0.01	0.01	<0.01	<0.01
TE (PPM)	0.18	0.4	7.53	0.3	0.84	0.13	0.95	2.42	3.38	0.24	2.7	9.63	7.21	10.15	4.59	2.63	1.72	1.18	0.19
TH (PPM)	13.2	21.9	50.3	37.1	59.7	29.4	44.4	2.4	30.5	198.5	44.6	38	28.2	10.7	19.5	16.5	66.1	8.7	11.2
TI (%)	<0.00500	0.014	0.009	0.007	0.015	0.041	0.008	0.004	0.009	0.009	0.006	0.023	0.017	0.018	0.013	<0.00500	0.011	<0.00500	<0.00500
TL (PPM)	11.3	15.4	6.76	11.45	20.4	9.96	24.3	2.23	9.68	16.05	14.9	4.69	6.32	2.26	1.81	5.71	8.93	1.21	2.54
U (PPM)	5.35	7.91	20.7	11.85	14.35	5.56	11	3.02	9.33	39.3	20.8	60.5	47.9	11.25	31.7	7.35	7.52	9.19	10.85
V (PPM)	66	63	97	61	137	64	128	27	74	22	116	474	207	67	54	53	88	30	28
W (PPM)	4.34	7.71	5.06	5.53	4.7	2.12	7.94	6.54	4.28	4.83	3.62	6.54	10.2	8.53	5.43	3.01	3.11	2.57	2.32
Y (PPM)	10.45	44.9	158	48	51.3	18.8	31.1	4.45	38.3	42	182	124	57.5	40.8	37.9	18.35	29.8	12.85	8.48
ZN (PPM)	79	56	32	90	86	88	146	67	275	180	1140	755	262	63	647	216	162	87	52
ZR (PPM)	15.9	25.5	21.9	15.7	36.3	33	37	8.1	15.5	36.7	25.4	12.2	13.3	24.7	20	20.5	18.2	12.5	13.8
AU (FIREOPT)	0.047	0.008	0	0.02	0.027	0	0.039	0.0518	0.0768	0.023	0.046	0.13	0.155	0.265	0.055	0.009	0.054	0.014	0.006
AG (FIREOPT)	0	0	0	0	0	0	0	1.248	0.608	0.352	0.64	0.4	0.5	0.6	0.48	0	0	0	0
In Pit (T/F)	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE
Ore	Y	-	-	Y	Y	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	Y	Y	-
Location	GR	GR	GR	GR	GR	GR	GR	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	GR	GR	Wharf	Wharf

Table 14. Current Whole Rock Analysis for Lower Unit Deadwood Formation (Page 3 of 3)

SAMPLE ID	64346	55060	55114	55349	60374	60921	61250	53760
HOLE-ID	FX3802	FX3500	FX3510	FX3476	FX3681	FX3717	FX3700	FX3441
FROM	600	340	480	530	380	250	260	600
TO	610	350	490	540	390	260	270	610
AL (%)	0.46	0.64	0.54	0.47	0.21	0.06	0.17	0.35
AS (PPM)	801	1130	1870	1030	644	1655	1170	208
AU (OPT)	0.038	0.049	0.071	0.033	0	0	0	0.018
B (PPM)	<10.00000	<10	<10	<10	<10	<10	<10	5
BA (PPM)	160	170	250	120	270	100	160	50
BE (PPM)	1.21	17.35	9.17	1.34	4.28	0.5	2.3	0.98
BI (PPM)	0.13	0.88	0.99	0.59	0.47	0.04	0.21	0.47
CA (%)	0.56	1.39	0.87	1.02	2.17	0.61	1.9	0.62
CD (PPM)	6.17	0.53	4.09	12.1	1.7	3.17	4.8	0.4
CE (PPM)	36.3	61.6	57.3	23.6	24.2	8.42	21.2	16.95
CO (PPM)	19.1	23	30.2	9.8	13.3	6.3	7.4	4.4
CR (PPM)	97	81	55	119	5	8	10	212
CS (PPM)	0.94	0.9	2.32	2.18	0.41	0.17	0.69	0.42
CU (PPM)	96.1	88.8	218	36.2	34.8	26.5	38.5	32.1
FE (%)	2.29	17.5	28.5	5.42	3.38	1.38	2.51	2.71
GA (PPM)	2.12	3.46	4.33	2.75	2.14	0.53	1.44	1.43
GE (PPM)	0.14	0.51	0.52	0.11	0.1	0.05	0.1	0.05
HF (PPM)	0.28	0.11	0.22	0.25	0.44	0.13	0.29	0.32
HG (PPM)	0.33	0.34	0.95	0.5	0.41	0.23	2	0.24
IN (PPM)	0.017	0.078	0.805	0.059	0.041	0.01	0.028	0.017
K (%)	0.14	0.09	0.18	0.26	0.06	0.05	0.11	0.16
LA (PPM)	12.4	31.9	21.2	8.7	7.8	2.7	7.7	7.5
LI (PPM)	4.6	5.4	7	2.8	1.5	1.1	2.9	2.3
MG (%)	0.03	0.08	0.16	0.31	0.2	0.14	0.04	0.08
MN (PPM)	3130	2150	6580	8190	1680	4460	1060	837
MO (PPM)	8.36	54.5	21.2	12.2	4.24	1.82	2.97	18
NA (%)	0.01	0.02	0.03	0.02	0.01	0.01	0.01	0.02
NB (PPM)	0.63	6.02	2.77	0.45	4.17	0.62	0.75	0.53
NI (PPM)	21.2	93.7	61.8	13.7	12.4	7.5	8.6	15.4

SAMPLE ID	64346	55060	55114	55349	60374	60921	61250	53760
HOLE-ID	FX3802	FX3500	FX3510	FX3476	FX3681	FX3717	FX3700	FX3441
FROM	600	340	480	530	380	250	260	600
TO	610	350	490	540	390	260	270	610
P (PPM)	4070	7940	6000	1850	2030	860	1770	730
PB (PPM)	463	791	1495	2170	92.8	231	110.5	114
RB (PPM)	8.2	4.5	10.5	12.6	4.7	1.5	7.4	7.4
RE (PPM)	0.004	0.001	0.001	0.001	0.001	<0.0010	<0.0010	0.001
ROCK TYPE	10	10	10	10	10	10	10	10
S (%)	1.01	0.04	0.09	0.49	0.02	0.07	0.07	0.15
SB (PPM)	44.5	44.2	54.4	123.5	175	68.3	41.2	16.6
SC (PPM)	2.2	5	8.2	2.9	1.5	0.7	2.3	1.4
SE (PPM)	1.8	4.9	3.3	2	2	1.1	1.5	0.8
SI (%)								
SN (PPM)	1.9	1.2	6.2	3.2	0.3	0.3	1	0.5
SR (PPM)	185.5	581	122.5	169	152.5	123	74	179
TA (PPM)	<0.01	0.01	0.01	<0.01000	<0.01	<0.01	<0.01	0
TE (PPM)	1.31	2.05	1.98	3.47	0.18	1.49	54.5	0.52
TH (PPM)	6.3	47.5	34.1	3.8	5.6	3.3	7.4	5.5
TI (%)	<0.00500	0.011	0.013	0.008	<0.00500	<0.00500	<0.00500	0.004
TL (PPM)	3.09	1.43	38.9	4.36	10.35	9.64	17.8	2.3
U (PPM)	11.4	68.3	76.9	9.18	3.99	5.83	6.81	7.22
V (PPM)	31	66	110	35	30	24	94	20
W (PPM)	1.56	7.56	3.91	4.85	125.5	7.4	3.91	5.01
Y (PPM)	19.9	43.6	38.3	12.9	12.25	4.94	12.75	5.45
ZN (PPM)	238	693	1640	1550	369	361	344	83
ZR (PPM)	12.9	17.9	19.6	9.1	21	5.7	11.6	12.1
AU (FIREOPT)	0.038	0.049	0.071	0.033	0.011	0.064	0.239	0.0189
AG (FIREOPT)	0	0.384	1.12	1.536	0.16	0.192	0.383	0.16
In Pit (T/F)	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Ore	Y	Y	Y	Y	-	Y	Y	Y
Location	Wharf	Wharf	Wharf	Wharf	GR	GR	GR	Wharf

Table 15. Current Whole Rock Analysis for Porphyry (Page 1 of 5)

SAMPLE ID	47061	47201	47333	47454	47969	48989	50415	50543	52750	53283	54192	53440	54224	54334	54466	54489	55288	54929	54984
HOLE-ID	FX3280	FX3283	FX3285	FX3290	FX3303	FX3340	FX3363	FX3365	FX3416	FX3435	FX3457	FX3454	FX3518	FX3461	FX3464	FX3464	FX3475	FX3508	FX3509
FROM	200	250	320	130	80	130	240	220	490	220	560	590	230	230	250	480	570	130	130
TO	210	260	330	140	90	140	250	230	500	230	570	600	240	240	260	490	580	140	140
AL (%)	0.26	0.51	0.19	0.67	0.27	0.18	0.6	1.52	0.35	0.66	0.26	0.22	0.57	0.46	0.47	1.02	0.28	0.45	0.55
AS (PPM)	450	639	275	1010	305	289	2780	58.3	386	212	218	218	800	1070	264	249	250	1240	936
AU (OPT)	0.012	0.041	0.018	0.067	0.008	0.007	0.125	0.006	0	0	0.035	0	0.054	0.047	0.036	0.062	0.08	0.056	0.042
B (PPM)	<10	<10	<10	<10	<10	<10	9	9	5	5	5	5	<10	<10	<10	<10	<10	<10	<10
BA (PPM)	500	610	650	180	200	830	710	860	620	150	550	540	1000	150	160	700	680	140	140
BE (PPM)	0.57	3.83	0.79	2.01	0.76	1.66	0.63	1.49	1.89	2.17	0.62	0.64	4.83	1.52	1.49	1.95	1.17	2.01	1.57
BI (PPM)	1.1	0.89	0.67	0.11	0.89	1.2	0.45	0.45	0.35	1.51	0.39	0.45	1.09	0.05	0.02	0.67	0.4	0.07	0.05
CA (%)	0.23	0.44	0.23	0.22	0.06	0.09	0.37	3.43	0.7	3.16	42.7	0.21	0.26	0.63	1.31	1.25	0.15	1.19	0.26
CD (PPM)	0.09	0.14	0.22	0.4	0.05	0.18	0.16	0.12	0.21	2.59	1.7	0.11	4.7	0.82	0.4	0.09	0.35	0.62	0.69
CE (PPM)	49.2	61.1	56.4	81.1	51.3	285	160.5	178.5	50.8	93.2	87	36.9	145.5	96.3	101	40.4	38.8	82.9	80.6
CO (PPM)	1.9	8.2	4	5.4	1.1	2.7	4.2	15.2	2.4	9.3	0.29	1.8	6	6.9	5.3	2.7	1.9	3.5	1.6
CR (PPM)	59	122	65	48	114	64	147	218	74	53	8.7	80	157	51	60	83	85	38	45
CS (PPM)	0.25	0.59	0.3	1.16	0.27	0.84	1.4	59.6	1.6	3.33	0.86	0.28	0.82	2.65	2.96	0.58	0.58	2.64	3.31
CU (PPM)	18.2	31.6	23.8	15.3	7.3	14.4	37.4	29.9	4.8	21.5	1.21	8.5	80.9	20.6	6.7	24.2	14.3	16.8	9.9
FE (%)	1.01	1.44	1.3	5.54	0.76	1.03	3.06	2.39	1.32	3.77	0.05	0.83	3.45	3.51	3.43	1.16	1.13	3.33	3.13
GA (PPM)	1.35	2.1	1.03	4.36	1.3	2.3	4.32	6.58	1.57	4.45	1.19	0.99	4.18	3.18	2.94	3.36	1.14	2.74	3.01
GE (PPM)	<0.05	0.1	0.06	0.19	0.07	0.24	0.22	0.22	0.07	0.13	0.11	0.05	0.17	0.09	0.11	0.08	0.05	0.1	0.08
HF (PPM)	2.06	1.11	0.56	0.63	1.21	2.35	0.35	0.62	0.62	0.38	0	1.23	0.88	0.46	0.61	2.4	1.19	0.48	0.36
HG (PPM)	0.14	0.14	0.19	1.31	0.21	0.1	0.79	0.03	0.07	0.25	0.32	0.05	0.72	0.22	0.08	0.12	0.08	0.3	0.05
IN (PPM)	0.016	0.037	0.025	0.071	0.009	0.011	0.037	0.025	0.007	0.044	24.9	0.008	0.039	0.047	0.044	0.011	0.01	0.039	0.039
K (%)	0.27	0.25	0.17	0.9	0.34	0.1	0.51	0.67	0.25	0.21	0.4	0.26	0.38	0.34	0.29	1.28	0.27	0.29	0.33
LA (PPM)	30.4	36.6	34.8	44.8	32.5	169.5	89	99.7	29.1	44.8	0.01	21	86.4	55.3	57.2	24.7	23.1	47.4	46.5
LI (PPM)	1.3	84.2	9.6	3.2	0.5	5.6	2.4	20.5	1.2	6.3	299	0.6	38.3	1.3	0.6	0.5	0.8	1.6	1.4
MG (%)	0.01	0.09	0.02	0.05	0.02	0.03	0.05	1.97	0.14	0.58	7.53	0.05	0.09	0.08	0.06	0.01	0.02	0.13	0.05
MN (PPM)	194	573	754	509	68	894	111	758	326	1060	0.02	508	234	936	808	581	392	785	349
MO (PPM)	4.83	11.65	6.41	7.49	9.28	5.38	8.73	4.77	6.79	5.78	0.66	7.25	31.5	6.51	7.33	9.04	8.02	5.73	5
NA (%)	0.03	0.04	0.03	0.01	0.01	0.04	0.02	0.38	0.03	0.04	5.3	0.02	0.02	0.01	0.04	0.03	0.01	0.01	0.02
NB (PPM)	1.55	3.09	1.26	2.77	1.16	15.85	0.92	0.72	0.3	0.34	130	0.54	1.99	0.29	0.4	1.64	0.56	0.42	0.12
NI (PPM)	5.9	20.5	9.9	8.7	6.3	9.7	34.3	106	8.6	9.8	24	5.8	38.2	6.1	5.3	8.4	6.6	7.1	3.5
P (PPM)	70	320	80	1130	90	90	1430	1840	150	1530	16.7	180	1660	1630	1850	120	130	1120	1030
PB (PPM)	62.4	64.2	82.5	35.9	41	164	25.2	21.5	21.3	85.1	0.001	29.9	43	20.8	22.7	33.4	46.6	22.6	43.5
RB (PPM)	12.4	13.1	7.6	10.4	15.2	5.5	23.9	39	14.1	17.5	0.04	14.1	13.9	16.2	15.4	56.5	11.1	15.7	15
RE (PPM)	0.001	0.001	0.001	0.001	<0.0010	0.003	0.001	0.001	0.001	0.001	4.58	0.001	0.001	<0.0010	<0.0010	0.001	0.001	0.001	<0.0010
ROCK TYPE	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
S (%)	0.19	0.06	0.24	1.3	0.05	0.24	0.19	0.15	0.04	0.1	1	0.03	0.22	<0.01	<0.01	0.04	0.02	<0.01	0.02

Table 15. Current Whole Rock Analysis for Porphyry (Page 2 of 5)

SAMPLE ID	47061	47201	47333	47454	47969	48989	50415	50543	52750	53283	54192	53440	54224	54334	54466	54489	55288	54929	54984
HOLE-ID	FX3280	FX3283	FX3285	FX3290	FX3303	FX3340	FX3363	FX3365	FX3416	FX3435	FX3457	FX3454	FX3518	FX3461	FX3464	FX3464	FX3475	FX3508	FX3509
FROM	200	250	320	130	80	130	240	220	490	220	560	590	230	230	250	480	570	130	130
TO	210	260	330	140	90	140	250	230	500	230	570	600	240	240	260	490	580	140	140
SB (PPM)	15	28.2	14.05	30	18.1	7.67	27.7	0.67	19.7	7.34	0.5	6.66	8.89	16	4.44	16.4	22.9	10.75	8.31
SC (PPM)	0.8	3.9	0.8	4.1	0.7	1.1	2.1	6.3	1	4.8	0.3	1	6.5	4.8	5.5	2.1	1.1	5.7	4.8
SE (PPM)	0.5	1.6	0.8	2	0.5	1.1	2.1	0.5	0.2	1.4	93.4	0.4	6.6	1.1	0.7	0.8	0.6	1.2	1.1
SI (%)																			
SN (PPM)	0.7	0.9	0.7	1.9	0.4	1.1	1.1	0.6	0.4	0.6	0.009	0.4	1	0.7	0.5	0.8	0.5	0.4	0.3
SR (PPM)	168.5	336	197	337	134	69.9	1130	1540	61	92.5	0.97	105	344	37.3	42.5	153.5	95.3	176	106
TA (PPM)	<0.01	0.01	<0.01	<0.01	<0.01	0.01	0.009	0.01	0.01	0.01	16.3	0	0.01	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000	<0.01000
TE (PPM)	0.11	0.46	0.06	0.62	0.07	0.11	4.89	0.04	0.94	2.96	0.0004	0.58	1.57	0.97	0.88	1.67	1.79	5.26	0.68
TH (PPM)	23.4	149.5	31.8	40	39.2	142	27.4	27.6	12.6	10	1.46	12.2	26.7	12.7	11.7	16.1	13	15.8	13.5
TI (%)	<0.00500	0.005	<0.00500	0.011	<0.00500	0.006	0.009	0.114	0.004	0.009	9.41	0.004	0.008	0.005	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
TL (PPM)	19.4	7.89	9.66	13.45	2.72	2.25	2.61	1.02	1.15	2.04	11	1.38	3.02	2.81	1.75	3.9	2.36	2.8	1.8
U (PPM)	16.2	15.65	10.05	12.2	7.59	27.7	6	6.03	3.52	3.62	2.41	7.31	18.35	8.25	3.57	10.9	7.74	7.31	5.59
V (PPM)	9	95	17	131	14	17	32	51	10	33	7.1	13	91	31	26	12	16	25	19
W (PPM)	7.21	10.05	11.3	17.75	3.75	1.58	24.4	1.38	5.32	1.86	46	2.06	2.28	3.25	2.68	2.29	2.27	2.36	2.3
Y (PPM)	10.45	81.8	12.4	25.2	16.65	36.1	10.15	17.85	4.7	14.7	47.8	5.14	48.3	15.5	14.75	12.4	5.53	16.2	10.35
ZN (PPM)	37	108	61	92	36	119	40	93	75	248	0	65	202	196	190	63	121	104	95
ZR (PPM)	77.2	47.8	23.9	26.5	48.9	99.8	20	27.8	25.1	16.9	0	41.7	43	16.1	22.4	85.7	44.3	19.5	13.3
AU (FIREOPT)	0.012	0.047	0.018	0.073	0.009	0.007	0.1136	0.0001	0.023	0.0096	0	0.0067	0.054	0.047	0.036	0.062	0.08	0.056	0.042
AG (FIREOPT)	0	0	0	0	0	0	0.128	0.128	0.608	0.224	0	0.16	0.64	0.384	0.224	0.352	0.512	0.32	0.608
In Pit (T/F)	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	FALSE	TRUE	TRUE
Ore	-	Y	Y	Y	-	-	Y	-	Y	-	-	-	Y	Y	Y	Y	Y	Y	Y
Location	GR	GR	GR	GR	GR	GR	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf

Table 15. Current Whole Rock Analysis for Porphyry (Page 3 of 5)

SAMPLE ID	52885	55680	58680	57697	57754	57800	58534	58773	61991	62904	63034	64107	59082	59185	59670	57360	57384	61400	52460
HOLE-ID	FX3535	FX3480	FX3650	FX3613	FX3615	FX3617	FX3647	FX3652	FX3738	FX3757	FX3763	FX3786	FX3555	FX3566	FX3683	FX3727	FX3729	FX3695	FX3411
FROM	140	590	140	160	230	190	180	20	400	380	30	260	360	190	340	40	30	40	90
TO	150	600	150	170	240	200	190	30	410	390	40	270	370	200	350	50	40	50	100
AL (%)	0.31	0.28	0.81	0.24	0.24	0.29	0.59	0.37	0.55	0.18	0.64	0.75	0.62	0.2	0.31	0.43	0.19	0.49	3.09
AS (PPM)	95.1	180.5	253	88.4	143.5	211	692	1560	326	174.5	723	28.9	33.6	506	560	26.9	31.4	2.2	25.1
AU (OPT)	0	0.053	0	0.004	0.006	0.002	0.008	0.027	0.037	0.011	0.033	0	0	0	0	0	0	0	0
B (PPM)	<10	<10	<10	<10.00000	<10.00000	<10.00000	<10.00000	<10.00000	<10.00000	<10.00000	<10.00000	<10.00000	<10	<10	<10	<10	<10	<10	10
BA (PPM)	2490	520	640	470	700	650	520	650	250	470	130	190	400	620	2120	670	380	790	170
BE (PPM)	0.92	0.74	18.6	0.71	0.65	1.17	4.08	5.33	2.3	0.7	1.91	1.58	1.72	1.34	1.06	2.79	2.99	1.83	6.71
BI (PPM)	1.32	0.44	<0.01000	0.62	0.78	1.49	0.3	0.8	1.58	0.32	0.34	0.08	0.12	0.68	2.95	0.06	0.97	0.1	0.98
CA (%)	0.04	0.18	0.52	0.12	0.16	0.07	0.54	0.49	2.11	0.12	1.04	1.98	2.59	0.12	0.21	3	0.11	2.83	0.42
CD (PPM)	<0.01000	0.04	1.14	0.04	0.05	0.08	1.68	0.36	0.06	0.04	0.4	1.95	0.33	0.12	0.14	0.22	0.18	1.98	0.19
CE (PPM)	108	35.3	117	50.4	52.4	60.4	85.6	213	58.6	37.7	69.9	95.4	92.8	63.3	101.5	89.3	460	95.9	236
CO (PPM)	0.8	1.4	24.1	1	1	3.2	8.3	9.8	8.1	1.6	8.6	8.3	9	5.9	2.1	7.2	3.8	9.5	0.4
CR (PPM)	13	79	5	2	2	6	37	20	61	59	61	18	5	9	11	3	6	5	29
CS (PPM)	0.19	0.39	6.04	0.37	0.56	0.97	2.98	1.24	1.64	0.42	2.94	5.34	7.91	0.85	0.36	3.75	0.33	5.45	28.8
CU (PPM)	7.7	17.7	7.7	11	20.8	21.4	60.6	49.8	14.3	5.8	14.7	9	8.5	14.3	75.5	6.7	10.8	13	4.1
FE (%)	1.4	0.9	5.15	1.1	1.18	1.29	4.62	3.33	2.33	0.72	3.04	3.46	4	1.47	1.46	3.57	1.6	4.28	0.47
GA (PPM)	1.85	1.12	4.42	1.27	1.43	1.7	3.31	3.11	3.18	0.96	3.95	4.71	3.16	1.79	1.43	1.36	2.69	2.72	9.02
GE (PPM)	0.19	<0.05	0.22	0.06	0.06	0.1	0.18	0.33	0.11	0.05	0.13	0.18	0.15	0.07	0.17	0.11	0.32	0.15	0.17
HF (PPM)	0.27	1.18	0.17	0.44	0.19	0.45	0.45	0.59	0.73	1.07	0.39	0.17	0.18	1.27	1.09	0.25	1.41	0.27	1.07
HG (PPM)	0.02	0.11	0.07	0.05	0.12	0.15	0.25	0.35	0.09	0.05	0.09	0.04	0.07	0.19	0.23	0.01	0.08	0.1	0.02
IN (PPM)	0.006	0.01	0.048	0.005	0.007	0.01	0.052	0.034	0.021	0.007	0.029	0.039	0.053	0.013	0.118	0.045	0.016	0.051	0.005
K (%)	0.21	0.3	0.28	0.23	0.22	0.15	0.33	0.22	0.38	0.18	0.22	0.2	0.25	0.21	0.16	0.26	0.12	0.25	0.24
LA (PPM)	45.4	21.7	61.2	32.2	32.8	39.9	41.6	107.5	28.8	22.8	34.2	50.6	44.6	38.9	66	46	260	49	148
LI (PPM)	10.3	0.9	3.4	0.9	1.1	1.7	3.9	13	2.2	0.4	6.1	5.2	2.1	0.8	27.9	0.6	1	3.2	21.1
MG (%)	0.02	0.02	0.1	0.01	0.01	0.03	0.09	0.11	0.9	0.01	0.19	0.22	0.42	0.01	0.03	0.55	0.02	0.77	0.09
MN (PPM)	53	82	3840	307	295	545	942	2280	1580	243	1230	762	1200	1400	169	1620	1180	1040	520
MO (PPM)	79.5	6.67	3.07	0.9	1	4.37	8.6	3.81	6.11	5.1	4.97	2.94	2.62	2.39	3.34	2.71	2.66	2.95	3.71
NA (%)	0.03	0.02	0.03	0.07	0.05	0.03	0.02	0.01	0.02	0.02	0.02	0.04	0.04	0.02	0.05	0.03	0.02	0.04	1.48
NB (PPM)	2.24	0.65	0.14	1	0.94	0.58	0.34	3.98	1.17	0.59	0.65	0.28	0.15	1.06	2.54	0.06	6.8	0.23	0.9
NI (PPM)	2.1	5.6	18.8	2.5	2.7	8.5	8.7	22.1	13.9	6.5	14.3	5.7	4.9	8.8	5.7	3.6	5.3	4.9	3.6
P (PPM)	220	110	1850	50	60	100	1400	1790	1190	110	1620	1780	1770	340	130	1630	340	1850	80
PB (PPM)	30.2	29.3	37.2	54.5	54.5	71.7	40.5	53.2	27.7	22.1	14.9	321	104.5	62.2	72.2	20.5	379	80.3	56.1
RB (PPM)	7.6	11.2	23.1	8.5	8.8	7.2	18.1	13.4	19.9	9.3	12.4	15.1	17.1	10	7.8	14.8	4.4	14.1	17.6
RE (PPM)	<0.0010	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0010	0.001	0.0001
ROCK TYPE	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	7
S (%)	0.1	0.02	0.03	0.31	0.2	0.09	0.02	0.01	0.04	0.02	0.02	0.01	0.05	0.02	0.14	0.31	0.01	0.08	0.04

Table 15. Current Whole Rock Analysis for Porphyry (Page 4 of 5)

SAMPLE ID	52885	55680	58680	57697	57754	57800	58534	58773	61991	62904	63034	64107	59082	59185	59670	57360	57384	61400	52460
HOLE-ID	FX3535	FX3480	FX3650	FX3613	FX3615	FX3617	FX3647	FX3652	FX3738	FX3757	FX3763	FX3786	FX3555	FX3566	FX3683	FX3727	FX3729	FX3695	FX3411
FROM	140	590	140	160	230	190	180	20	400	380	30	260	360	190	340	40	30	40	90
TO	150	600	150	170	240	200	190	30	410	390	40	270	370	200	350	50	40	50	100
SB (PPM)	2.86	7.34	4.37	4.09	4.23	11	8.94	24.1	15.05	4.69	8.1	2.48	2.95	29.6	25	1.08	1.92	0.43	0.5
SC (PPM)	1.2	1	6.7	0.5	0.6	1	6.7	6.8	3.6	0.8	5.4	5.2	6.6	1.2	1.9	7.4	1.4	8.2	0.4
SE (PPM)	0.9	0.4	1	0.2	<0.20000	0.3	1.6	2.4	0.8	0.4	0.7	0.9	0.8	0.5	0.9	0.6	0.9	0.5	0.5
SI (%)																			
SN (PPM)	0.3	0.5	0.6	0.8	0.8	1.1	1.3	1	0.6	0.3	0.7	0.8	0.4	0.7	5.3	<0.20000	3.5	0.3	0.4
SR (PPM)	139.5	91.6	63.8	157.5	131.5	143	318	88.9	67.7	90.7	92.1	91.8	97.4	132	136	242	94.7	243	495
TA (PPM)	<0.01	<0.01000	0.01	<0.01	<0.01	<0.01	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.02	0.01	0.01
TE (PPM)	0.21	1.15	0.05	<0.01000	0.01	1.16	4.34	0.95	0.59	0.31	12.75	0.02	0.02	0.05	16.55	0.01	0.01	0.01	0.02
TH (PPM)	29.1	12.9	15.7	21.5	16.3	85.8	20.6	72.8	9.9	11.9	13.3	10.6	9.4	22.9	138.5	9.7	260	10.1	65.9
TI (%)	<0.00500	<0.00500	0.013	<0.00500	<0.00500	<0.00500	0.01	0.016	0.008	<0.00500	0.008	0.012	0.012	<0.00500	<0.00500	<0.00500	0.009	0.013	0.008
TL (PPM)	1.24	1.14	6.04	2.46	2.75	2.91	6.87	12.7	4.27	0.96	3.14	0.43	0.44	8.15	4.74	0.3	0.51	0.22	1.29
U (PPM)	7.19	10.35	14.65	8.83	2.37	9.26	11.25	17.65	5.69	7.27	4.74	1.88	2.21	5.98	13	1.6	13.25	3.93	9.6
V (PPM)	31	12	40	4	7	21	48	139	29	8	36	26	21	56	40	17	27	26	8
W (PPM)	2.54	1.87	1.78	5.54	8.56	20.6	2.36	3.86	2.5	1.19	1.37	1	0.87	7.93	6.75	1.18	2.73	0.2	0.37
Y (PPM)	8.54	5.15	31.3	5.83	6.01	13.5	37.5	71.1	12.7	5.16	17.35	16.2	17	5.46	26.9	17.95	39.4	18.6	26.3
ZN (PPM)	15	36	517	45	61	67	328	119	58	21	79	613	118	63	75	156	197	237	91
ZR (PPM)	10.5	40.6	9.3	16.9	6.7	17.5	17.1	30.9	28	38.5	17.7	8.9	7.9	47.7	47.4	9.7	79.3	11.9	76.4
AU (FIREOPT)	0	0.053	<0.0010	0.004	0.006	0.002	0.008	0.027	0.037	0.011	0.033	0	<0.0010	0.003	0.017	0.002	0.002	0.002	0
AG (FIREOPT)	0	0.288	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	<0.1000	0.447	0.16	0.16	0.16	0
In Pit (T/F)	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE
Ore	-	Y	Y	-	-	-	-	Y	Y	-	Y	-	Y	-	Y	-	-	-	-
Location	Wharf	Wharf	GR	GR	GR	GR	GR	GR	Wharf	Wharf	Wharf	Wharf	GR	GR	GR	GR	GR	GR	Wharf

Table 15. Current Whole Rock Analysis for Porphyry (Page 5 of 5)

SAMPLE ID	52760	52909	53200	53952	SAMPLE ID	52760	52909	53200	53952
HOLE-ID	FX3417	FX3420	FX3467	FX3456	HOLE-ID	FX3417	FX3420	FX3467	FX3456
FROM	90	80	40	20	FROM	90	80	40	20
TO	100	90	50	30	TO	100	90	50	30
AL (%)	2.21	2.93	2.33	2.69	P (PPM)	50	50	140	100
AS (PPM)	46.4	30.8	31.2	22.2	PB (PPM)	47.7	44.7	101.5	106
AU (OPT)	0	0	0	0.003	RB (PPM)	20.2	20.4	8.2	9.2
B (PPM)	5	5	5	5	RE (PPM)	0.0001	0.001	0.001	0.0001
BA (PPM)	110	100	250	360	ROCK TYPE	7	7	7	7
BE (PPM)	5.58	6.02	11.25	13.3	S (%)	0.01	0.02	0.01	0.01
BI (PPM)	0.78	0.8	1.51	1.48	SB (PPM)	0.65	0.52	0.42	0.57
CA (%)	1.55	0.55	0.29	0.15	SC (PPM)	0.8	0.4	0.5	0.6
CD (PPM)	0.26	0.21	0.29	0.18	SE (PPM)	0.5	0.5	0.9	0.7
CE (PPM)	225	221	270	285	SI (%)				
CO (PPM)	0.6	0.4	0.7	0.7	SN (PPM)	0.4	1.5	0.4	0.3
CR (PPM)	19	15	40	28	SR (PPM)	271	381	275	350
CS (PPM)	35.2	10.2	17.2	9.98	TA (PPM)	0.01	0.01	0.02	0.02
CU (PPM)	3.8	126	7.4	3.6	TE (PPM)	0.02	0.01	0.09	0.02
FE (%)	0.6	0.56	0.35	0.3	TH (PPM)	56.4	54.1	118.5	111
GA (PPM)	6.03	8.85	8.29	8.87	TI (%)	0.004	0.004	0.004	0.005
GE (PPM)	0.15	0.14	0.19	0.2	TL (PPM)	0.79	0.64	1.21	1.53
HF (PPM)	0.56	0.7	0.56	1.34	U (PPM)	7.2	7.64	16.8	20.5
HG (PPM)	0.06	0.04	0.03	0.04	V (PPM)	7	9	5	5
IN (PPM)	0.008	0.009	0.005	<0.005	W (PPM)	0.49	0.36	0.39	0.3
K (%)	0.12	0.12	0.09	0.1	Y (PPM)	22.9	21.1	36.1	34.5
LA (PPM)	145	147.5	156.5	156.5	ZN (PPM)	76	159	132	148
LI (PPM)	11.6	10.9	7.7	9.5	ZR (PPM)	41.3	55.3	31.5	104
MG (%)	0.14	0.19	0.1	0.04	AU (FIREOPT)	0	0	0	0.0032
MN (PPM)	1020	687	1090	861	AG (FIREOPT)	0	0	0	0.16
MO (PPM)	2.46	1.93	3.59	2.6	In Pit (T/F)	FALSE	FALSE	TRUE	TRUE
NA (%)	0.96	1.43	1.24	1.34	Ore	-	-	-	-
NB (PPM)	0.63	0.53	0.93	1.83	Location	Wharf	Wharf	Wharf	Wharf
NI (PPM)	1.3	1.7	3.5	1.8					

Table 16. Current Whole Rock Analysis for Precambrian (Page 1 of 2)

SAMPLE ID	47747	48245	48600	48848	58615	58784	62542	62565	62513	63542	63808	54781	59696	59927	60584	60620	60700	60888	61634	61093
HOLE-ID	FX3296	FX3312	FX3324	FX3333	FX3648	FX3652	FX3765	FX3766	FX3748	FX3777	FX3778	FX3501	FX3684	FX3671	FX3688	FX3689	FX3712	FX3716	FX3723	FX3704
FROM	410	140	90	170	490	130	110	90	420	160	120	350	250	410	330	340	190	270	280	290
TO	420	150	100	180	500	140	120	100	430	170	130	360	260	420	340	350	200	280	290	300
AL (%)	0.53	0.42	0.57	0.43	0.41	1.08	0.86	0.52	0.2	0.4	1.15	0.29	0.44	0.35	0.75	0.46	0.23	0.19	0.18	0.33
AS (PPM)	77.6	1395	1390	130	189.5	1325	419	1695	234	35.1	839	576	1410	349	1405	1020	43.7	614	119	449
AU (OPT)	0	0.036	0.094	0.002	0.001	0.047	0.003	0.004	0.016	0	0.026	0.014	0	0	0	0	0	0	0	0
B (PPM)	<10	<10	10	<10	<10.00000	<10.00000	<10.00000	<10.00000	<10.00000	<10.00000	<10.00000	<10	<10	<10	20	<10	<10	<10	<10	<10
BA (PPM)	40	450	180	70	90	160	100	130	530	60	480	460	860	90	140	50	290	230	50	150
BE (PPM)	3.21	4.12	3.22	1.67	1.89	4.51	3.38	4.82	0.57	0.95	4.89	10.2	2.49	1.58	5.05	3.3	0.43	0.39	0.97	1.31
BI (PPM)	0.32	0.24	0.34	0.34	0.57	0.65	0.38	0.66	0.88	0.38	0.71	0.53	0.98	0.6	0.23	0.52	0.27	0.06	0.08	0.77
CA (%)	0.17	1.66	0.37	0.27	1.63	0.28	0.9	0.38	0.15	4.06	3.88	1.1	0.34	2.17	0.71	3.42	0.13	0.07	0.28	0.63
CD (PPM)	0.04	0.68	0.43	0.14	0.08	1.13	0.58	1.57	0.56	0.1	2.02	0.58	2.15	1.25	0.38	0.09	1.05	2.54	0.26	3.34
CE (PPM)	33.6	61.6	46.5	18.2	19.9	56.1	37.4	24.1	30	21.2	146	56.4	32.6	51.4	36.1	30.6	47.7	5.12	7.19	31.1
CO (PPM)	35.5	22.5	14.5	29	6.6	20.2	13.4	14.1	6.8	2.9	60.1	18.6	17.4	36	20.4	4.6	7.3	6.1	20.8	47.9
CR (PPM)	71	142	130	23	134	14	44	59	100	53	41	110	26	8	83	22	19	15	6	9
CS (PPM)	3.35	1.09	3.73	8.58	0.52	10.5	1.18	0.72	0.44	1.2	1.03	1.5	0.62	2.39	4.56	3.6	0.51	0.57	1.13	3.84
CU (PPM)	26	73.4	81.4	25.5	540	506	279	470	46.1	52.4	174.5	47	214	284	81.7	156.5	46.6	37.4	57.3	489
FE (%)	4.32	3.83	12.35	17.6	4.27	14.35	6	16.35	1.08	3.4	10.25	7.91	3.22	8.34	13.45	22.4	2.89	6.67	3.05	6.41
GA (PPM)	1.7	1.58	2.66	1.05	1.38	3.55	1.68	1.82	1.12	0.99	2.75	1.68	1.8	1.14	2.45	1.48	0.7	1.31	0.48	1.3
GE (PPM)	0.07	0.06	0.25	0.26	0.22	0.35	0.15	0.29	0.06	0.07	0.26	0.19	0.11	0.22	0.31	0.41	0.07	0.11	0.06	0.13
HF (PPM)	0.65	0.27	0.49	0.14	0.36	0.53	0.41	0.52	0.67	0.15	0.2	0.26	1.01	0.38	0.69	0.93	0.15	0.12	0.18	0.16
HG (PPM)	0.06	0.55	0.31	0.32	0.18	0.08	0.07	0.32	0.11	0.14	0.29	0.35	0.81	0.42	0.46	0.6	0.05	0.64	0.04	0.47
IN (PPM)	0.01	0.038	0.047	0.028	0.084	0.064	0.029	0.068	0.009	0.008	0.049	0.044	0.055	0.044	0.078	0.077	0.007	0.01	0.007	0.021
K (%)	0.28	0.27	0.31	0.19	0.28	0.6	0.3	0.27	0.19	0.28	0.2	0.14	0.36	0.22	0.44	0.24	0.23	0.08	0.12	0.17
LA (PPM)	18.3	38.1	24.6	9.4	10.4	25.5	22.1	13.5	17.1	14	90.6	29.6	16.7	59.6	19.8	17.5	24.7	2.5	3.5	13.9
LI (PPM)	21.1	10.2	6.1	3.6	6.8	25.2	7.4	1.8	0.6	1.3	6.3	2.5	15.8	4.3	37.3	4.5	1.2	0.6	1.1	2.9
MG (%)	0.17	0.26	0.11	0.11	0.71	0.34	0.09	0.06	0.02	0.09	0.14	0.04	0.06	0.11	0.22	0.29	0.03	0.03	0.05	0.09
MN (PPM)	104	1200	386	201	895	531	611	634	414	213	5200	9750	2640	769	323	690	83	1300	423	1200
MO (PPM)	6.34	15.25	18.3	7.88	14.1	5.04	18.4	17.7	9.19	6.36	25.8	25.7	11.9	6.68	6.56	13.45	1.57	4.05	1.06	4.56
NA (%)	0.01	0.01	0.01	0.01	<0.01000	0.02	0.06	0.02	0.02	0.02	0.03	0.02	0.03	0.01	0.02	0.01	0.01	0.01	<0.01000	0.01
NB (PPM)	0.18	0.31	0.72	0.16	0.14	0.23	0.43	0.5	0.46	0.13	1.7	1.78	1.58	0.15	0.89	0.66	0.14	0.29	0.42	0.32
NI (PPM)	163.5	32.8	103	110	37.3	101.5	50.1	72.9	10.1	23.7	110.5	63.1	35.9	105	87.8	44.6	19.9	29.3	23	50.1
P (PPM)	80	1610	570	540	280	980	290	440	460	90	2800	5310	940	770	200	1220	190	110	100	1800
PB (PPM)	13.3	74.8	20.1	22	98.6	87.2	22.7	17.3	103	10.6	222	67.3	48.5	14.5	23.3	19.5	6.3	29	5	220
RB (PPM)	23.7	13.4	20	13.1	11.5	55.9	12.9	7.3	10.2	12.3	9.2	6.4	14.4	11.4	31.7	22.9	8.9	3	5.3	12.2
RE (PPM)	0.008	0.001	0.002	0.002	0.004	0.001	0.002	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001	<0.0010	<0.0010	<0.0010	<0.0010
ROCK TYPE	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
S (%)	1.43	0.04	0.18	0.06	0.97	1.43	0.32	0.32	0.03	0.01	0.05	0.03	0.04	0.02	0.02	1.22	0.02	0.12	0.01	0.04

Table 16. Current Whole Rock Analysis for Precambrian (Page 2 of 2)

SAMPLE ID	47747	48245	48600	48848	58615	58784	62542	62565	62513	63542	63808	54781	59696	59927	60584	60620	60700	60888	61634	61093
HOLE-ID	FX3296	FX3312	FX3324	FX3333	FX3648	FX3652	FX3765	FX3766	FX3748	FX3777	FX3778	FX3501	FX3684	FX3671	FX3688	FX3689	FX3712	FX3716	FX3723	FX3704
FROM	410	140	90	170	490	130	110	90	420	160	120	350	250	410	330	340	190	270	280	290
TO	420	150	100	180	500	140	120	100	430	170	130	360	260	420	340	350	200	280	290	300
SB (PPM)	2.59	30.2	53	3.04	5.1	43.8	15.7	50.6	14.5	0.71	20.3	16.9	72.1	21.3	71.1	55.3	1.79	13.8	2.64	54.1
SC (PPM)	1.6	3.4	5.8	8.7	5.9	6.9	2.7	3.8	0.8	1.4	4.4	3.8	5.1	12.2	9	5.6	0.9	1.2	1.1	3.4
SE (PPM)	1.1	1.7	5.8	1.7	45.3	19.5	11.3	19.1	0.6	1.5	11.3	4.7	3.5	3.3	4.2	20.1	0.5	2.5	<0.20000	5
SI (%)																				
SN (PPM)	0.4	0.5	1.3	<0.20000	0.6	1.5	0.4	0.5	0.3	<0.20000	1.3	0.5	1.8	0.3	1.4	1.5	0.2	0.3	0.2	0.6
SR (PPM)	18.4	79	120	16.5	24.3	34.8	180.5	118	109.5	25.4	407	142.5	98.3	65.9	28	49.9	11.4	61.9	32.3	219
TA (PPM)	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01	0.02	<0.01000	0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01
TE (PPM)	0.29	0.77	3.82	0.32	0.49	0.47	0.48	0.77	0.65	0.05	3.05	0.57	0.21	0.59	1.71	150	0.27	0.08	0.02	0.3
TH (PPM)	12.1	18.2	38.4	5.5	6.6	49.8	11.6	8.2	8.4	6.2	94.6	11.6	35	6.6	20.7	16.7	9	1.2	1.5	5.3
TI (%)	0.013	0.005	0.012	<0.00500	<0.00500	0.013	0.008	0.009	<0.00500	<0.00500	0.01	0.006	0.01	<0.00500	0.031	0.06	<0.00500	0.005	<0.00500	0.005
TL (PPM)	1.06	7.66	11.2	1.39	0.94	7.74	0.79	2.2	1.44	0.54	18.2	5.12	31.4	1.37	3.09	9.24	0.19	1.9	5.58	7.67
U (PPM)	2.85	9.39	18.8	6.45	2.73	9.89	2.71	13.15	7.81	1.72	34.4	22.7	14.1	6.09	17.9	23.8	1.78	2.46	1.48	7.12
V (PPM)	14	55	112	75	67	88	112	74	15	13	96	41	168	46	193	250	10	15	8	46
W (PPM)	1.52	4.16	8.17	3.75	3.43	2.82	1.67	18.4	1.35	0.69	5.71	5.55	13.05	2.98	19.35	10.85	2.29	3.74	1.15	2.08
Y (PPM)	9.61	19.7	11	8.29	6.06	26.4	12.9	8.52	6.5	3.29	87.6	28.6	44.6	11.3	18.7	33	3.37	0.96	1.59	9.8
ZN (PPM)	106	83	55	125	25	149	91	372	84	23	447	454	163	201	108	67	270	678	214	440
ZR (PPM)	16.1	13.1	18.6	5.4	14.3	20.6	19.9	22.9	26.6	7.4	15.6	15.9	37.4	15.5	20.3	29.5	6.4	4.1	6.8	7.3
AU (FIREOPT)	0	0.039	0.104	0.002	0.001	0.047	0.003	0.004	0.016	0	0.026	0.014	0	0.002	0.074	0.067	0.002	0.003	0.002	0.011
AG (FIREOPT)	0	0	0	0	0	0	0	0	0	0	0	0.256	0	0.16	0.479	7.093	0.16	0.16	0.16	0.224
In Pit (T/F)	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Ore	-	Y	Y	-	-	Y	-	-	Y	-	Y	Y	-	-	Y	Y	-	-	-	-
Location	GR	GR	GR	GR	GR	GR	GR	GR	Wharf	Wharf	Wharf	Wharf	GR	GR	GR	GR	GR	GR	GR	GR

Table 17. Historic Whole Rock Analysis for Upper Contact and Glauconitic Sandstone Deadwood Formation (Page 1 of 2)

SAMPLE ID	11322	19157	19160	29117	29118	29119	31762	11305	11307	11309	11311	11313	31755
HOLE-ID	1185	FX1831	FX1831	FX1866	FX1866	FX1866	1357	1177	1178	1179	1180	1181	1357
FROM	40	0	30	30	40	50	100	40	50	50	60	70	30
TO	50	10	40	40	50	60	110	50	60	60	70	80	40
AL (%)	3.16	0.47	0.35	0.61	0.94	0.48	3.01	8.07	3	9.29	2.03	2.96	2.66
AS (PPM)	410	1135	332	448	340	344	1600	142	120	172	110	58	3250
AU (OPT)	0.002	0.5	0.008	0.019	0.016	0.011	0.028	0.001	0.007	0.002	0.003	0	0.048
B (PPM)	<10	<10	<10	<10	<10	<10	NS	<10	<10	<10	<10	<10	<10
BA (PPM)	300	123.8	297.8	365.8	369.2	272.6	230	740	400	200	120	240	190
BE (PPM)	1	2.2	2.5	3.45	4.5	3.5	0.5	5.5	1.5	3	0.5	0.5	1
BI (PPM)	4	0.3	0.25	0.32	0.64	0.47	2	2	2	2	2	2	NS
CA (%)	5.94	0.23	0.42	0.62	0.76	0.46	5.5	0.18	0.19	0.23	1.26	8.01	2.24
CD (PPM)	2	0.52	0.64	0.46	0.41	0.91	4	5	4	5	1	1	7.5
CE (PPM)	NS	71.7	85.3	75.8	126.5	180	NS	NS	NS	NS	NS	NS	NS
CO (PPM)	7	11.2	10.2	9.6	11.9	6.3	5	20	6	3	3	6	5
CR (PPM)	44	50	33	26	29	16	54	128	72	90	28	36	64
CS (PPM)	NS	0.8	1.3	2	3.4	1.9	NS	NS	NS	NS	NS	NS	NS
CU (PPM)	16	72.7	14.2	34.2	28.4	17.2	28	25	16	33	15	21	60
FE (%)	5.02	3.17	3.06	3.06	2.61	2.35	4.02	3.61	2.27	3.07	1.63	2.54	3.3
GA (PPM)	NS	2.2	1.95	2.7	3.95	2.8	NS	NS	NS	NS	NS	NS	NS
GE (PPM)	NS	0.05	0.1	0.1	0.15	0.15	NS	NS	NS	NS	NS	NS	NS
HF (PPM)	NS	0.14	0.36	0.8	1.94	1.7	NS	NS	NS	NS	NS	NS	NS
HG (PPM)	170	0.36	0.32	0.35	0.33	0.2	340	510	430	700	360	220	610
IN (PPM)	NS	0.03	0.05	0.025	0.015	0.005	NS	NS	NS	NS	NS	NS	NS
K (%)	3.08	0.12	0.12	0.18	0.29	0.15	2.74	6.44	2.26	3.81	1.27	2.01	2.57
LA (PPM)	NS	33.4	39.2	22	41.4	66.6	NS	NS	NS	NS	NS	NS	NS
LI (PPM)	NS	3.2	1.8	2.9	3.3	2.3	NS	NS	NS	NS	NS	NS	NS
MG (%)	0.45	0.09	0.07	0.09	0.13	0.07	2.24	0.3	0.2	0.76	0.15	0.71	0.98
MN (PPM)	1095	1025	2070	1750	1625	1245	1515	1515	525	110	385	980	900
MO (PPM)	2	5.2	5.35	3.8	2.8	7.15	2	2	3	1	2	1	3
NA (%)	0.08	0.02	<0.01	0.03	0.04	0.02	0.11	0.65	0.41	0.39	0.06	0.05	0.05
NB (PPM)	NS	1.05	0.45	0.75	2.15	0.95	NS	NS	NS	NS	NS	NS	NS
NI (PPM)	16	18	18.6	19	22.4	14	12	75	37	24	12	12	13
P (PPM)	950	700	1620	1960	1420	1210	970	970	590	760	200	230	1800
PB (PPM)	44	93	35.2	46.2	57.6	71.2	116	124	148	240	276	120	506
RB (PPM)	NS	6.9	7.4	11.9	19	8.7	NS	NS	NS	NS	NS	NS	0
RE (PPM)	NS	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NS	NS	NS	NS	NS	NS	NS
ROCK TYPE	1	1	1	1	1	1	1	2	2	2	2	2	2
S (%)	NS	0.03	<0.01	<0.01	<0.01	0.01	NS	NS	NS	NS	NS	NS	NS

Table 17. Historic Whole Rock Analysis for Upper Contact and Glauconitic Sandstone Deadwood Formation (Page 2 of 2)

SAMPLE ID	11322	19157	19160	29117	29118	29119	31762	11305	11307	11309	11311	11313	31755
HOLE-ID	1185	FX1831	FX1831	FX1866	FX1866	FX1866	1357	1177	1178	1179	1180	1181	1357
FROM	40	0	30	30	40	50	100	40	50	50	60	70	30
TO	50	10	40	40	50	60	110	50	60	60	70	80	40
SB (PPM)	8	13.85	10.45	19.55	15.3	11	21	8.6	5.8	9.2	5.8	5	35
SC (PPM)	NS	2.5	5	5.8	6.2	4.2	NS	NS	NS	NS	NS	NS	NS
SE (PPM)	<0.2	1.8	0.8	0.4	0.4	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SI (%)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SN (PPM)	NS	1	1	1	1.8	0.8	NS	NS	NS	NS	NS	NS	NS
SR (PPM)	55	114.6	43.8	45	49.2	64.8	59	1275	368	589	117	121	150
TA (PPM)	NS	<0.01	<0.01	0.02	0.03	0.03	NS	NS	NS	NS	NS	NS	NS
TE (PPM)	0.05	39.4	0.53	3.34	2.84	0.79	0.9	0.05	0.9	3.55	0.4	0.05	1.65
TH (PPM)	NS	10.2	17.8	10.8	14.2	8.6	NS	NS	NS	NS	NS	NS	NS
TI (%)	0.08	<0.01	<0.01	<0.01	0.01	<0.01	0.01	0.2	0.1	0.31	0.06	0.1	0.09
TL (PPM)	NS	2.18	3.32	4.04	3.74	2.68	NS	NS	NS	NS	NS	NS	NS
U (PPM)	NS	5.25	2.95	3.5	7.1	6.65	NS	NS	NS	NS	NS	NS	NS
V (PPM)	22	32	19	31	27	17	35	62	34	78	17	18	40
W (PPM)	20	2.15	1.75	1.65	1.95	1.45	10	20	20	10	10	10	30
Y (PPM)	NS	9.35	18.7	20.7	23	13.35	NS	NS	NS	NS	NS	NS	NS
ZN (PPM)	48	74	222	162	152	182	82	456	210	168	90	90	258
ZR (PPM)	NS	4.5	11.5	16.5	39	31.5	NS	NS	NS	NS	NS	NS	NS
In Pit (T/F)	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Location	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf

Table 18. Historic Whole Rock Analysis for Intermediate Unit Deadwood Formation (Page 1 of 2)

SAMPLE ID	19127	19128	19136	29123	29124	29125	11335	19148	38084	38728	38756	44013	44067	44071	44292
HOLE-ID	FX1832	FX1832	FX1832	FX1866	FX1866	FX1866	1195	FX1832	1515	1558	1559	1656	1657	1657	1661
FROM	20	30	110	90	100	110	130	230	10	40	80	270	320	360	170
TO	30	40	120	100	110	120	140	240	20	50	90	280	330	370	180
AL (%)	0.37	0.49	1.36	0.38	0.49	0.62	5.69	0.54	8.59	7.97	8.16	4.76	6.81	6.1	5.35
AS (PPM)	286	228	310	247	450	144	11	111	750	420	450	500	296	680	390
AU (OPT)	0.004	0.007	0.019	0.004	0.012	0.004	0.001	0.001	0.033	0.025	0.011	0.152	0.017	0.106	0.023
B (PPM)	<10	<10	<10	<10	<10	<10	<10	<10	NS	NS	NS	NS	NS	NS	NS
BA (PPM)	262.8	406.6	218.6	347	294.8	287.8	340	83.8	1020	760	1440	560	530	430	660
BE (PPM)	2.8	5.15	4.5	4.9	5.3	5.25	0.5	7.55	5	8	4.5	6.5	5.5	4	1
BI (PPM)	0.14	0.53	0.24	0.53	3.36	1.52	4	0.17	2	2	2	2	2	2	2
CA (%)	0.5	0.5	3.95	0.64	0.74	0.59	8.51	0.16	0.26	0.81	0.37	1.06	5.63	3.03	1.35
CD (PPM)	0.18	0.21	0.11	0.23	0.25	0.26	0.5	0.07	1.5	NS	NS	0.5	0.5	0.5	0.5
CE (PPM)	85.3	220	89.9	105.5	83.9	89	NS	87.9	NS	NS	NS	NS	NS	NS	NS
CO (PPM)	13.1	18.3	12.3	12.8	13.9	15.8	10	4.8	1	5	14	5	12	11	9
CR (PPM)	27	23	43	15	26	22	68	12	100	109	221	149	89	128	94
CS (PPM)	1.1	2.25	6.8	1.9	2.3	3	NS	6.05	NS	NS	NS	NS	NS	NS	NS
CU (PPM)	14.8	19.6	18.8	17.4	25	28.4	15	18.8	67	41	58	85	25	38	24
FE (%)	2.73	2.49	2.84	2.29	3.44	3.45	2.52	2.01	3.58	2.85	4.09	2.04	3.6	3.39	2.44
GA (PPM)	2.4	3.95	6.7	2.7	3.1	3.1	NS	2.3	NS	NS	NS	NS	NS	NS	NS
GE (PPM)	0.1	0.2	0.15	0.15	0.1	0.1	NS	0.05	NS	NS	NS	NS	NS	NS	NS
HF (PPM)	0.24	0.52	0.38	0.66	0.36	0.32	NS	0.1	NS	NS	NS	NS	NS	NS	NS
HG (PPM)	<0.01	<0.01	0.03	0.07	0.08	0.05	90	<0.01	80	100	90	770	320	350	180
IN (PPM)	0.02	0.015	0.025	<0.005	0.025	0.02	NS	0.01	NS	NS	NS	NS	NS	NS	NS
K (%)	0.15	0.25	0.82	0.27	0.34	0.41	3.19	0.35	9.78	8.45	8.18	5.4	6.58	5.98	5.85
LA (PPM)	35	99.6	40.4	34.4	24.8	26.6	NS	44.8	NS	NS	NS	NS	NS	NS	NS
LI (PPM)	2.1	3.9	3.4	1.4	5	3.7	NS	1.4	NS	NS	NS	NS	NS	NS	NS
MG (%)	0.07	0.1	0.27	0.06	0.16	0.17	1.17	0.1	0.18	0.32	0.27	0.1	0.42	0.36	0.24
MN (PPM)	1745	2570	1335	2710	2790	1550	875	120	75	200	1350	305	1290	1090	1735
MO (PPM)	4.35	4.05	4.4	2.9	4.05	2.4	1	1.1	41	9	4	8	3	6	5
NA (%)	<0.01	<0.01	<0.01	0.03	0.03	0.02	0.13	<0.01	0.34	0.62	0.66	0.21	0.22	0.17	0.13
NB (PPM)	0.5	2.2	0.8	0.75	0.35	0.15	NS	0.1	NS	NS	NS	NS	NS	NS	NS
NI (PPM)	19.8	25.6	26.8	24.6	25	34.4	23	17.2	11	14	24	15	22	21	18
P (PPM)	1930	1580	2170	2540	2890	2340	1460	200	1830	970	1860	1160	2560	1210	1400
PB (PPM)	13.8	111.6	9.4	43.8	80.2	43	28	7	200	130	164	50	138	20	90
RB (PPM)	9.1	15.8	52.5	12.4	19.9	25.9	NS	21	NS	NS	NS	NS	NS	NS	NS
RE (PPM)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NS	<0.001	NS	NS	NS	NS	NS	NS	NS
ROCK TYPE	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
S (%)	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	NS	<0.01	NS	NS	NS	NS	NS	NS	NS

Table 18. Historic Whole Rock Analysis for Intermediate Unit Deadwood Formation (Page 2 of 2)

SAMPLE ID	19127	19128	19136	29123	29124	29125	11335	19148	38084	38728	38756	44013	44067	44071	44292
HOLE-ID	FX1832	FX1832	FX1832	FX1866	FX1866	FX1866	1195	FX1832	1515	1558	1559	1656	1657	1657	1661
FROM	20	30	110	90	100	110	130	230	10	40	80	270	320	360	170
TO	30	40	120	100	110	120	140	240	20	50	90	280	330	370	180
SB (PPM)	5.05	4.2	9.8	5.45	13	4.55	0.6	2.3	8.2	8.6	16	39	20	32	9.2
SC (PPM)	5.9	6.6	8	7.2	6.1	6.3	NS	4.1	NS	NS	NS	NS	NS	NS	NS
SE (PPM)	0.4	0.4	0.8	0.6	0.2	0.2	<0.2	<0.2	0.8	<0.2	1.4	<0.2	0.4	0.2	<0.2
SI (%)	0	0	0	0	0	0	NS	0	NS	NS	NS	NS	NS	NS	NS
SN (PPM)	0.4	1.4	1.2	0.8	0.8	0.4	NS	0.4	NS	NS	NS	NS	NS	NS	NS
SR (PPM)	34.2	47.8	58.7	76.2	70.2	48.6	113	29.4	319	226	849	112	133	239	93
TA (PPM)	<0.01	0.01	0.01	0.06	0.01	0.01	NS	<0.01	NS	NS	NS	NS	NS	NS	NS
TE (PPM)	0.25	0.99	0.11	0.34	0.73	0.29	0.05	0.06	2.5	0.8	2	14.5	0.1	0.4	1.85
TH (PPM)	8.8	36.4	19.4	5.8	10.2	9	NS	8.8	NS	NS	NS	NS	NS	NS	NS
TI (%)	<0.01	<0.01	0.01	<0.01	0.01	0.01	0.19	<0.01	0.28	0.29	0.29	0.18	0.23	0.23	0.2
TL (PPM)	2.54	5.5	4.7	6.66	5.64	3.52	NS	0.48	NS	NS	NS	NS	NS	NS	NS
U (PPM)	2.15	4.65	3.3	3.7	5.1	2.55	NS	3.6	NS	NS	NS	NS	NS	NS	NS
V (PPM)	22	17	32	22	33	20	37	12	158	129	166	110	55	168	39
W (PPM)	3.1	2.35	1.9	3.35	3.1	2.5	10	1.1	10	20	20	10	10	10	10
Y (PPM)	19.75	22.2	21.45	15.3	22	20.9	NS	4.65	NS	NS	NS	NS	NS	NS	NS
ZN (PPM)	90	122	40	112	98	98	44	68	142	150	164	92	74	46	136
ZR (PPM)	5	8.5	5.5	12	10.5	10.5	NS	2.5	NS	NS	NS	NS	NS	NS	NS
In Pit (T/F)	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Location	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf

Table 19. Historic Whole Rock Analysis for Lower Unit Deadwood Formation (Page 1 of 2)

SAMPLE ID	19149	19150	19151	19152	19153	19154	35136	38020	38038	38060	38696	38767	44031	82783
HOLE-ID	FX1832	FX1832	FX1832	FX1832	FX1832	FX1832	1401	1511	1512	1513	1556	1559	1656	FR-44
FROM	240	250	260	270	280	290	180	110	130	190	260	190	450	390.3
TO	250	260	270	280	290	300	190	120	140	200	270	200	460	395.1
AL (%)	1.7	1.68	0.59	0.69	0.3	0.13	0.92	8.91	4.83	6.74	3.36	2.4	0.7	1.26
AS (PPM)	101	322	182	1260	684	692	1340	580	650	180	470	930	780	0
AU (OPT)	0.003	0.017	0.001	0.076	0.019	0.043	0.054	0.015	0.03	0.017	0.032	0.02	0.038	0.054
B (PPM)	<10	30	<10	<10	<10	<10	NS	NS	NS	NS	NS	NS	NS	NS
BA (PPM)	112.4	146.4	208.8	292.8	293.4	119.2	250	740	120	6820	300	250	100	420
BE (PPM)	8.95	10.5	4.2	6.45	3.95	1.5	12	6.5	28	4	0.5	0.5	6.5	1.5
BI (PPM)	0.25	0.17	0.23	0.42	0.6	0.23	2	2	2	2	2	2	2	2
CA (%)	1.24	9.72	3.55	6.12	1.23	1.02	5.6	0.76	1.15	0.09	0.55	0.7	4.7	0.42
CD (PPM)	0.12	0.37	0.69	4.79	16.35	8.82	4	3	11.5	1.5	0.5	0.5	0.5	1.5
CE (PPM)	83.7	71.9	73.8	80.2	35.5	14.5	NS	NS	NS	NS	NS	NS	NS	0
CO (PPM)	15.1	11.4	24	29.7	25.9	6.1	3	2	7	3	6	24	1	13
CR (PPM)	28	34	24	31	63	64	106	68	188	104	126	82	198	109
CS (PPM)	10.45	4.35	4.25	2.35	1.4	0.35	NS	NS	NS	NS	NS	NS	NS	NS
CU (PPM)	27.8	17.6	23.4	34.2	55.9	63.6	56	109	272	109	77	94	11	167
FE (%)	2.84	3.03	2.5	6.5	10.5	7.47	8.09	3.3	9.73	1.1	3.3	21.9	9.59	4.87
GA (PPM)	6	6.55	3.65	4.65	1.5	1.05	NS	NS	NS	NS	NS	NS	NS	0
GE (PPM)	0.1	0.3	0.1	0.3	0.15	0.1	NS	NS	NS	NS	NS	NS	NS	0
HF (PPM)	0.24	0.68	0.42	0.76	0.22	0.14	NS	NS	NS	NS	NS	NS	NS	0
HG (PPM)	<0.01	<0.01	<0.01	0.18	0.55	0.24	300	140	650	230	60	180	120	0.12
IN (PPM)	0.025	0.02	0.02	0.035	0.13	0.1	NS	NS	NS	NS	NS	NS	NS	0
K (%)	0.99	1.5	0.39	0.48	0.1	0.12	0.64	7.84	3.08	8.05	2.89	1.71	0.58	0.6
LA (PPM)	40.8	30	28.4	29.6	10.2	5	NS	NS	NS	NS	NS	NS	NS	0
LI (PPM)	2.5	5.6	2	12.2	2.9	2.2	NS	NS	NS	NS	NS	NS	NS	0
MG (%)	0.25	0.24	0.12	1.78	0.18	0.09	0.07	0.33	0.95	0.07	0.14	0.22	0.07	0.08
MN (PPM)	1480	2300	5010	8580	9700	2290	1980	135	655	55	1110	4990	170	1450
MO (PPM)	1.65	4.05	3.8	9.45	12.65	12.05	19	6	32	69	7	16	23	19
NA (%)	<0.01	0.01	<0.01	0.01	0.01	0.01	0.02	0.44	0.2	0.42	0.12	0.04	0.04	0.04
NB (PPM)	0.25	6	1.55	6.85	1.35	0.75	NS	NS	NS	NS	NS	NS	NS	0
NI (PPM)	32	22.2	24.8	36.6	36.6	11.4	31	15	40	7	13	96	9	27
P (PPM)	550	2230	2010	3170	3660	3780	2700	3660	3210	660	570	4440	1070	1020
PB (PPM)	10.2	20.8	9.6	62.6	3000	6260	220	56	750	84	334	280	198	500
RB (PPM)	53	52	20.4	23	5.1	3.7	NS	NS	NS	NS	NS	NS	NS	NS
RE (PPM)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NS	NS	NS	NS	NS	NS	NS	NS
ROCK TYPE	10	10	10	10	10	10	10	10	10	10	10	10	10	10
S (%)	<0.01	0.03	0.01	0.02	0.07	0.26	NS	NS	NS	NS	NS	NS	NS	NS

Table 19. Historic Whole Rock Analysis for Lower Unit Deadwood Formation (Page 2 of 2)

SAMPLE ID	19149	19150	19151	19152	19153	19154	35136	38020	38038	38060	38696	38767	44031	82783
HOLE-ID	FX1832	FX1832	FX1832	FX1832	FX1832	FX1832	1401	1511	1512	1513	1556	1559	1656	FR-44
FROM	240	250	260	270	280	290	180	110	130	190	260	190	450	390.3
TO	250	260	270	280	290	300	190	120	140	200	270	200	460	395.1
SB (PPM)	4.05	23.95	5.9	45.7	19.05	30.75	24	6.8	15	3.2	10	14	45	13.5
SC (PPM)	8.3	8.5	5.8	7	4.1	1.9	NS	NS	NS	NS	NS	NS	NS	NS
SE (PPM)	0.2	0.4	0.2	1	0.8	0.8	10.6	0.4	2.6	0.8	<0.2	1.2	0.8	NS
SI (%)	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	NS	83.92
SN (PPM)	0.8	1.4	0.8	2.6	2	4	NS	NS	NS	NS	NS	NS	NS	NS
SR (PPM)	52.8	204.3	87.4	189.7	117.1	215	2670	311	577	355	236	291	1475	302
TA (PPM)	0.02	0.2	0.02	0.04	0.03	<0.01	NS	NS	NS	NS	NS	NS	NS	NS
TE (PPM)	0.03	0.05	<0.01	0.34	0.7	2.15	2.15	2.85	4.6	3.6	1.55	0.8	2.75	NS
TH (PPM)	24.4	102	7	24.8	7	6	NS	NS	NS	NS	NS	NS	NS	NS
TI (%)	<0.01	0.01	<0.01	0.01	<0.01	<0.01	0.05	0.25	0.14	0.07	0.1	0.08	0.07	0.05
TL (PPM)	4.04	8.18	18.45	22.7	4.1	2.32	NS	NS	NS	NS	NS	NS	NS	NS
U (PPM)	2.75	6.7	6.05	16.65	19.9	14.95	NS	NS	NS	NS	NS	NS	NS	NS
V (PPM)	27	55	25	82	44	21	63	81	169	24	64	79	43	56
W (PPM)	1.5	1.85	1.55	4.15	4.25	1.7	10	10	10	10	10	30	60	30
Y (PPM)	9.55	20.75	17.5	28.05	22.95	8.75	NS	NS	NS	NS	NS	NS	NS	NS
ZN (PPM)	58	66	126	694	2350	752	342	516	1130	44	260	872	28	272
ZR (PPM)	4.5	14	8	18	6	4	NS	NS	NS	NS	NS	NS	NS	NS
In Pit (T/F)	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE
Location	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf

Table 20. Historic Whole Rock Analysis for Porphyry (Page 1 of 6)

SAMPLE ID	10995	11294	11295	11296	11297	11324	11326	11329	11331	11334	19137	19137	19138	19139	19140	19141	19142	19143	19144
HOLE-ID	FR-11	1171	1172	1173	1174	1186	1187	1188	1189	1194	1163	FX1832	FX1832	FX1832	FX1832	FX1832	FX1832	FX1832	FX1832
FROM	421.3	40	20	80	30	80	60	50	70	40	250	120	130	140	150	160	170	180	190
TO	429	50	30	90	40	90	70	60	80	50	260	130	140	150	160	170	180	190	200
AL (%)	7.69	8.74	8.17	7.69	8.07	7.97	7.58	7.91	6.02	6.02	0.25	0.73	0.14	0.11	0.09	0.13	0.1	0.13	0.14
AS (PPM)	NS	15	280	24	3	22	116	20	220	392	358	137	87.5	98.9	81.9	117.5	116.5	118	145
AU (OPT)	0	0.001	0.005	0.001	0.002	0	0.001	0.001	0.006	0.019	0.005	0.001	0.002	0.005	0.003	0.01	0.017	0.009	0.022
B (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10	<10	<10	<10	<10	<10	<10	<10
BA (PPM)	1460	510	730	660	590	860	780	1100	490	490	320	220.8	378.4	420.2	369.6	317.6	315.2	391.6	403
BE (PPM)	3	1	1	0.5	0.5	1.5	1	1	2	2	NS	2.8	0.75	0.6	0.45	0.35	0.45	0.45	0.4
BI (PPM)	2	2	2	2	2	2	2	2	2	2	3	0.51	0.19	0.18	0.15	0.28	0.34	0.3	0.33
CA (%)	0.1	1.2	0.5	3.73	3.38	0.14	0.24	0.19	0.34	0.34	0.01	1.86	0.16	0.09	0.03	0.03	0.05	0.06	0.04
CD (PPM)	0.5	1	3	3	0.5	0.5	1	0.5	1	1	0.5	0.07	0.11	0.08	0.05	0.04	0.08	0.09	0.08
CE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	85.1	44.3	36.8	29.5	38.6	40.4	42	41
CO (PPM)	6	9	8	7	8	2	4	3	6	6	3	12	1.6	1.4	0.8	1.2	1.2	2.8	1.3
CR (PPM)	37	20	15	24	15	28	32	27	44	44	48	25	36	31	35	36	44	39	42
CS (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.2	0.65	0.35	0.25	1.7	0.45	0.4	0.4
CU (PPM)	3	10	14	15	21	12	13	10	20	20	13	19.4	3.2	3.8	3.2	9	18.6	5.2	6.2
FE (%)	0.92	4.79	4.43	4.35	4.19	1.74	2.37	1.7	3.9	3.9	0.87	3.01	0.95	0.8	0.78	0.92	0.79	0.74	0.8
GA (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.15	1.1	0.75	0.6	0.9	0.75	0.8	0.85
GE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.1	0.05	0.05	<0.05	0.05	0.05	0.05	<0.05
HF (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.18	0.54	0.48	0.3	0.24	0.38	0.34	0.3
HG (PPM)	NS	60	110	90	40	50	130	70	90	470	NS	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
IN (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.025	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.005
K (%)	4.7	2.67	4.4	4.07	3.35	3.75	4.1	3.59	3.09	3.09	0.03	0.47	0.12	0.1	0.09	0.13	0.1	0.14	0.15
LA (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	40.8	23	19.4	15	19.8	21.2	22.2	22
LI (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.3	0.6	0.5	0.3	0.7	0.3	0.5	0.4
MG (%)	0.07	0.29	0.24	0.21	0.22	0.07	0.23	0.09	0.31	0.31	0.01	0.21	0.01	0.01	<0.01	0.02	<0.01	<0.01	<0.01
MN (PPM)	1275	1700	1030	1040	1165	280	475	380	1125	1125	72	755	140	90	85	175	190	380	315
MO (PPM)	1	1	3	2	2	1	1	1	5	5	1	2.35	4.05	3.45	3.85	4.1	7	5.25	8.3
NA (%)	1.54	1.68	0.89	1.88	1.42	3.24	2.44	3.56	1.71	1.71	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NB (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.2	0.65	0.55	0.35	0.35	0.45	0.5	0.45
NI (PPM)	5	7	7	8	5	7	11	8	15	15	6	29.4	6.4	4.6	4.4	4.8	5.6	5.2	5.2
P (PPM)	30	1660	1580	1420	1460	300	310	290	560	560	100	1380	170	100	60	80	100	80	80
PB (PPM)	36	50	68	444	180	36	36	36	50	50	43	11.8	22.8	20.4	16.8	22.8	27.8	26.6	25.8
RB (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	33.9	6.2	4.8	3.8	6.9	4.4	5.7	6.1
RE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ROCK TYPE	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
S (%)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.01	0.04	0.07	0.01	0.01	0.01	0.02	0.02

Table 20. Historic Whole Rock Analysis for Porphyry (Page 2 of 6)

SAMPLE ID	10995	11294	11295	11296	11297	11324	11326	11329	11331	11334	19137	19137	19138	19139	19140	19141	19142	19143	19144
HOLE-ID	FR-11	1171	1172	1173	1174	1186	1187	1188	1189	1194	1163	FX1832	FX1832	FX1832	FX1832	FX1832	FX1832	FX1832	FX1832
FROM	421.3	40	20	80	30	80	60	50	70	40	250	120	130	140	150	160	170	180	190
TO	429	50	30	90	40	90	70	60	80	50	260	130	140	150	160	170	180	190	200
SB (PPM)	0	0.6	3.8	0.8	0.4	0.6	2.8	1.2	4	11.4	2	3.3	2.15	2.15	1.9	2.85	6.4	2.45	2.6
SC (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.4	1.6	0.9	0.6	1.3	0.8	0.8	0.7
SE (PPM)	NS	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NS	0.6	0.2	0.2	0.2	0.2	0.4	0.2	0.4
SI (%)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0	0	0	0	0	0	0	0
SN (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2	0.6	0.2	0.2	0.2	0.6	0.8	0.2	0.2
SR (PPM)	225	125	158	436	237	430	522	737	392	392	81	35.2	60	84.6	58	57.9	54.4	75.6	79.9
TA (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
TE (PPM)	0.25	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5	NS	0.17	0.24	0.3	0.44	1.5	2.51	0.64	1.16
TH (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.6	7.4	6.2	4.4	5	5.8	5.8	5.6
TI (%)	0.06	0.3	0.22	0.17	0.21	0.07	0.1	0.07	0.09	0.09	NS	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
TL (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.44	0.5	0.46	0.38	0.78	0.76	1.48	1.54
U (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5	1.95	3.5	3.7	2.95	3.9	5	4.45	5.3
V (PPM)	7	62	59	50	55	21	32	21	72	72	NS	18	7	6	5	8	6	6	6
W (PPM)	10	20	10	20	10	10	10	10	10	10	10	1.1	1	1.3	1.05	1.45	1.45	2.45	1.5
Y (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	16.65	4.8	3.85	2.7	3.3	3.55	3.4	3.2
ZN (PPM)	104	298	178	716	316	44	54	50	84	84	64	46	32	28	22	30	32	38	36
ZR (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.5	9	8.5	5	5	8	7	6
In Pit (T/F)	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Location	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf

Table 20. Historic Whole Rock Analysis for Porphyry (Page 3 of 6)

SAMPLE ID	19145	19146	19147	19161	19162	20040	20055	34118	34128	34135	39171	39181	40042	40050	44173	44182	44262	44305	44325	19125
HOLE-ID	FX1832	FX1832	FX1832	FX1831	FX1831	1168	1168	1373	1373	1373	FX0430	FX0430	FX0452	FX0452	1659	1660	1660	1662	1663	FX1832
FROM	200	210	220	40	50	260	410	200	300	370	420	520	410	490	440	50	350	350	90	0
TO	210	220	230	50	60	270	420	210	310	380	430	530	420	500	450	60	360	360	100	10
AL (%)	0.12	0.13	0.27	0.38	0.4	0.17	0.18	7.45	7.39	7.59	7.58	7.81	7.6	7.54	5.2	5.81	7.34	6.79	6.84	0.32
AS (PPM)	152	169	196	406	215	535	313	336	400	236	250	180	162	156	1100	1570	156	176	650	389
AU (OPT)	0.017	0.009	0.012	0.015	0.004	0.017	0.012	0.017	0.011	0.003	0.057	0.012	0.015	0.004	0.039	0.142	0.017	0.02	0.021	0.007
B (PPM)	<10	<10	<10	<10	<10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10
BA (PPM)	450.8	271.4	348.8	282.2	134.6	492	178	980	800	890	940	690	890	520	2270	420	1020	1060	290	436
BE (PPM)	0.6	0.75	1.1	3	3.65	NS	NS	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8	1	1.5	0.5	0.5	2.75
BI (PPM)	0.3	0.43	0.58	0.18	0.6	3	3	2	2	2	2	2	2	2	2	2	2	2	4	0.18
CA (%)	0.04	0.05	0.24	0.41	0.27	0.01	0.01	0.04	0.03	0.06	0.2	0.06	0.08	0.07	0.63	0.51	0.61	0.22	0.46	0.33
CD (PPM)	0.08	0.09	0.12	0.91	0.37	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	1.5	0.5	0.41
CE (PPM)	39.5	42	38	83.1	201	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	117.5
CO (PPM)	1.1	1.3	2.7	9	4.6	1	3	3	3	5	3	3	3	2	36	7	4	6	3	11.2
CR (PPM)	40	39	45	30	9	50	54	73	67	66	56	77	48	60	54	81	56	57	34	21
CS (PPM)	0.4	0.4	0.85	1.2	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.45
CU (PPM)	5.4	8.6	6	111	14.2	9	2	11	10	6	29	15	12	8	59	129	36	24	58	12.2
FE (%)	0.78	0.85	0.92	2.2	1.86	0.84	0.6	0.82	0.92	0.76	0.87	0.71	0.78	0.74	13.6	3.59	1.33	0.91	3.94	3.98
GA (PPM)	0.8	0.85	1.15	2.05	3.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.2
GE (PPM)	<0.05	0.05	0.05	0.1	0.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.15
HF (PPM)	0.4	0.42	0.64	0.52	0.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.2
HG (PPM)	<0.01	<0.01	<0.01	0.39	0.04	NS	NS	120	50	60	80	40	60	40	360	360	60	120	460	<0.01
IN (PPM)	<0.005	0.005	<0.005	0.03	0.015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.04
K (%)	0.13	0.13	0.19	0.11	0.14	0.03	0.02	8.24	8.43	8.52	8.83	9.46	8.86	9.26	6.24	4.54	8.42	8.07	5.55	0.15
LA (PPM)	21.2	20	20.4	39	168.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	56.2
LI (PPM)	0.4	0.4	1.4	2.1	1.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3
MG (%)	<0.01	<0.01	0.03	0.07	0.07	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.13	0.17	0.1	0.06	0.2	0.05
MN (PPM)	190	225	315	1720	725	36	161	90	145	325	440	210	485	820	10000	1615	490	7110	460	1730
MO (PPM)	8.2	5.9	6	5.25	3.1	1	2	2	7	2	3	2	2	3	27	10	6	12	7	8.25
NA (%)	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	0.7	0.58	0.73	0.55	0.38	0.53	0.28	0.18	0.2	0.48	0.4	0.18	<0.01
NB (PPM)	0.6	0.6	1	0.65	0.45	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.35
NI (PPM)	4.8	5.6	8	17	9	4	4	3	3	4	5	1	2	5	102	7	7	6	3	9.4
P (PPM)	80	90	120	1500	410	100	100	120	130	160	170	160	130	130	2800	1150	280	170	1420	1350
PB (PPM)	23.4	26.4	23	128	77.2	58	42	336	338	162	126	44	110	62	88	318	50	172	84	84.4
RB (PPM)	5.3	5.5	9.1	6.4	9	NS	NS	460	460	440	440	480	440	500	NS	NS	NS	NS	NS	10.3
RE (PPM)	<0.001	<0.001	<0.001	<0.001	<0.001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.001
ROCK TYPE	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
S (%)	0.02	0.01	0.18	<0.01	<0.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.01

Table 20. Historic Whole Rock Analysis for Porphyry (Page 4 of 6)

SAMPLE ID	19145	19146	19147	19161	19162	20040	20055	34118	34128	34135	39171	39181	40042	40050	44173	44182	44262	44305	44325	19125
HOLE-ID	FX1832	FX1832	FX1832	FX1831	FX1831	1168	1168	1373	1373	1373	FX0430	FX0430	FX0452	FX0452	1659	1660	1660	1662	1663	FX1832
FROM	200	210	220	40	50	260	410	200	300	370	420	520	410	490	440	50	350	350	90	0
TO	210	220	230	50	60	270	420	210	310	380	430	530	420	500	450	60	360	360	100	10
SB (PPM)	2.65	2.65	3.3	25.3	5.55	2	2	7.6	8	4	5.6	4.4	2.8	2.4	51	41	5.4	4.8	37	9.45
SC (PPM)	0.6	0.6	1.2	3.9	2.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.8
SE (PPM)	0.2	0.2	0.2	0.4	0.2	NS	NS	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	0.6
SI (%)	0	0	0	0	0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0
SN (PPM)	0.2	0.2	0.2	0.8	0.8	2	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.6
SR (PPM)	73.2	82.4	108.1	61.4	33.6	74	48	346	184	248	243	106	199	64	335	315	308	280	97	66.8
TA (PPM)	<0.01	<0.01	<0.01	<0.01	<0.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.01
TE (PPM)	0.96	0.52	0.5	1.88	0.32	NS	NS	0.35	0.3	0.4	1.8	0.45	0.3	0.05	6	29.5	0.35	0.75	1.9	1.25
TH (PPM)	6.2	6.6	15.2	16	34.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.2
TI (%)	<0.01	<0.01	<0.01	<0.01	<0.01	NS	NS	0.04	0.05	0.05	0.06	0.06	0.05	0.05	0.08	0.21	0.07	0.05	0.28	<0.01
TL (PPM)	0.98	1.08	1.24	2.84	2.26	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.24
U (PPM)	5.5	5.45	9.25	3.9	4.5	5	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.5
V (PPM)	6	7	10	25	10	NS	NS	6	6	3	13	3	4	4	65	109	12	10	62	24
W (PPM)	1.5	1.6	1.8	1.6	1.4	10	10	8	13	18	7	7	7	6	30	20	10	10	20	5.75
Y (PPM)	3.7	3.95	5.3	17	13.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	16.8
ZN (PPM)	34	36	40	256	120	40	52	64	64	76	210	132	144	324	936	156	76	640	188	256
ZR (PPM)	8.5	9.5	15	9	7.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5
In Pit (T/F)	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Location	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf

Table 20. Historic Whole Rock Analysis for Porphyry (Page 5 of 6)

SAMPLE ID	19126	19129	19130	19131	19133	19134	19135	19158	19159	29114	29115	29116	29120	29121	29122	11315	11317	11333	44172	44181	44189	44271
HOLE-ID	FX1832	FX1832	FX1832	FX1832	FX1832	FX1832	FX1832	FX1831	FX1831	FX1866	FX1866	FX1866	FX1866	FX1866	FX1866	1182	1183	1192	1659	1660	1660	1660
FROM	10	40	50	60	80	90	100	10	20	0	10	20	60	70	80	40	30	10	430	40	120	440
TO	20	50	60	70	90	100	110	20	30	10	20	30	70	80	90	50	40	20	440	50	130	450
AL (%)	0.31	0.88	0.97	0.47	0.81	0.24	1.2	1.76	0.92	0.81	0.56	0.32	0.5	0.25	0.32	10.55	10.55	9.26	7.53	7.42	7.32	3.6
AS (PPM)	421	254	247	214	452	534	474	158	216	245	149.5	536	496	435	302	14	15	36	120	1060	36	2230
AU (OPT)	0.005	0.007	0.005	0.003	0.018	0.014	0.014	0.006	0.012	0.005	0.005	0.024	0.019	0.021	0.007	0	0	0.003	0.008	0.048	0	0.146
B (PPM)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS	NS	NS	NS	NS	NS	NS
BA (PPM)	279.6	241	349.2	388	499.8	389.8	162.4	232.4	243.8	293	330.6	393.6	311	643.7	326	690	600	760	1030	670	1080	1060
BE (PPM)	3.35	6.2	6.35	6.85	5.8	2.75	5.15	7.65	4.1	3.25	3.55	2.65	4.9	4.55	4.4	8	8	4	1.5	5	4	6
BI (PPM)	0.18	0.83	0.43	0.31	0.77	0.68	0.27	0.69	0.42	0.57	0.29	0.47	0.32	0.76	0.7	2	2	2	2	2	2	2
CA (%)	0.42	0.62	0.93	0.51	1.19	0.61	1.54	0.19	0.28	0.3	0.48	0.47	0.74	0.46	0.51	0.52	0.47	0.43	0.14	0.52	2.54	0.95
CD (PPM)	0.29	0.18	0.26	0.34	0.54	4.08	0.46	0.26	0.29	0.3	0.37	0.59	1.78	1.62	0.62	0.5	0.5	1	0.5	0.5	0.5	3.5
CE (PPM)	89.4	324	179.5	128.5	250	195.5	83.6	166	132	93.5	89.8	73.5	95.7	165	90	NS	NS	NS	NS	NS	NS	NS
CO (PPM)	11.2	12.2	8.1	18.5	11.9	19.2	12.8	6.2	8.1	9.4	10.8	6.9	10.4	15.1	15.9	4	2	6	3	10	10	31
CR (PPM)	45	33	31	19	47	56	49	29	29	17	6	18	25	29	25	8	6	25	57	49	22	93
CS (PPM)	1.1	3.1	2.7	2.5	2.7	1.4	3.5	3.4	1.7	1	3.2	2.05	1.75	2.05	1.7	NS	NS	NS	NS	NS	NS	NS
CU (PPM)	19.4	20.8	18.6	30	44.2	35.4	23.6	18.6	22.8	14.2	12.4	37	46.2	113.5	36.2	15	16	38	54	44	27	123
FE (%)	3.2	2.18	2.3	2.53	2.4	3.62	2.9	1.68	2.45	2.73	4.09	3.66	2.81	2.55	2.75	2.29	1.85	2.6	0.94	4.31	3.82	14.2
GA (PPM)	2.4	6.55	5.5	3.25	7.1	2.95	7	5.95	3.65	2.7	2.35	1.8	2.6	2.15	2.1	NS	NS	NS	NS	NS	NS	NS
GE (PPM)	0.1	0.25	0.15	0.15	0.25	0.2	0.15	0.15	0.15	0.05	0.15	0.1	0.1	0.15	0.1	NS	NS	NS	NS	NS	NS	NS
HF (PPM)	0.26	1.5	1.36	0.52	1.68	0.48	0.7	1.06	0.52	0.18	0.22	0.28	1.4	0.64	0.48	NS	NS	NS	NS	NS	NS	NS
HG (PPM)	<0.01	<0.01	<0.01	0.02	0.05	<0.01	<0.01	0.07	0.15	0.07	0.16	0.33	0.27	0.16	0.07	100	70	100	80	170	80	940
IN (PPM)	0.03	0.015	0.015	0.015	0.02	0.04	0.025	0.02	0.03	0.015	0.035	0.04	0.015	0.02	0.02	NS	NS	NS	NS	NS	NS	NS
K (%)	0.16	0.48	0.53	0.29	0.53	0.18	0.78	0.17	0.12	0.13	0.2	0.17	0.17	0.12	0.2	4.16	3.95	3.36	9.32	5.51	4.67	3.67
LA (PPM)	40.4	147.8	95.6	66.6	130.6	101.8	38.4	87.6	75.2	28.4	29.6	23.2	34	55.4	30.6	NS	NS	NS	NS	NS	NS	NS
LI (PPM)	1.8	7	5.2	2.3	11.1	3.2	5	6	4.9	4.1	1.7	1.4	3	1.8	1.3	NS	NS	NS	NS	NS	NS	NS
MG (%)	0.06	0.15	0.13	0.08	0.14	0.08	0.2	0.08	0.13	0.11	0.08	0.06	0.08	0.09	0.07	0.12	0.22	0.3	0.01	0.22	0.3	0.18
MN (PPM)	1500	1620	705	2430	2360	1945	1110	1105	1285	1640	1810	1255	1700	3500	2320	1115	1010	990	305	1790	1745	10000
MO (PPM)	7	8.9	3.4	3.4	10.25	7	5.95	3.5	3.55	2.2	3.6	4.5	8.55	9.9	4.15	1	1	1	2	2	1	22
NA (%)	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01	0.87	0.14	0.07	0.03	0.03	0.03	0.03	0.03	5.3	3.93	2.44	0.43	0.54	0.72	0.13
NB (PPM)	0.45	6.15	4.2	1	12.35	1.75	3.9	2.85	0.5	0.75	0.25	0.35	1.05	1.35	0.5	NS	NS	NS	NS	NS	NS	NS
NI (PPM)	17.4	19.8	19	30.4	24.8	111.7	35.8	12.2	15.4	14	11	9.8	22.8	35.4	44	13	7	15	6	12	6	55
P (PPM)	1560	920	950	1510	1400	2010	2070	270	400	920	1760	1940	2560	1740	1910	100	100	330	150	1590	1540	4850
PB (PPM)	24.2	130	50.2	39.8	120.9	110.2	23.4	70.6	52.8	59.6	67.2	52	90.2	105.5	60.6	72	116	336	144	206	94	1340
RB (PPM)	9.7	28.1	27.2	16.4	27.4	10.7	42.4	9.3	8.7	8.6	13.4	10.3	9.6	6	9.5	NS	NS	NS	400	248	200	120
RE (PPM)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NS	NS	NS	NS	NS	NS	NS
ROCK TYPE	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
S (%)	<0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NS	NS	NS	NS	NS	NS	NS

Table 20. Historic Whole Rock Analysis for Porphyry (Page 6 of 6)

SAMPLE ID	19126	19129	19130	19131	19133	19134	19135	19158	19159	29114	29115	29116	29120	29121	29122	11315	11317	11333	44172	44181	44189	44271
HOLE-ID	FX1832	FX1832	FX1832	FX1832	FX1832	FX1832	FX1832	FX1831	FX1831	FX1866	FX1866	FX1866	FX1866	FX1866	FX1866	1182	1183	1192	1659	1660	1660	1660
FROM	10	40	50	60	80	90	100	10	20	0	10	20	60	70	80	40	30	10	430	40	120	440
TO	20	50	60	70	90	100	110	20	30	10	20	30	70	80	90	50	40	20	440	50	130	450
SB (PPM)	9.85	6.4	6.25	4.75	11.05	13.45	16.3	3.65	4.7	4.55	8	18.45	17.2	46.1	10.3	0.6	1.2	1.8	2	12	1.4	83
SC (PPM)	6.1	6.6	5.1	6.6	7.7	8.1	9.2	3.1	3.7	3.6	5.3	5.1	6.3	4.5	6.2	NS	NS	NS	NS	NS	NS	NS
SE (PPM)	0.2	0.6	0.6	0.6	0.8	0.8	0.6	0.4	0.8	0.2	0.4	0.6	0.2	0.2	<0.2	<0.2	<0.2	<0.2	0.4	0.4	0.2	1.8
SI (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	NS	NS	NS	NS	NS	NS
SN (PPM)	0.6	2.4	1.2	0.6	2.8	1.2	1.6	0.6	0.8	0.6	0.6	0.6	1.2	1.6	0.6	NS	NS	NS	NS	NS	NS	NS
SR (PPM)	32.6	49.7	190.9	73.1	64.9	301	65.9	318	53.6	47.2	53.5	52.2	72.8	111.7	117.1	1205	963	594	287	362	102	603
TA (PPM)	<0.01	<0.01	0.01	0.01	0.02	<0.01	0.02	0.03	0.01	0.01	0.01	0.01	0.05	0.04	0.01	NS	NS	NS	NS	NS	NS	NS
TE (PPM)	0.56	0.37	0.34	0.1	1.24	2.3	0.42	1.27	0.81	0.71	0.2	3.54	2.59	5.61	0.86	0.05	0.05	0.05	0.2	6.9	0.05	12
TH (PPM)	9.8	76.4	73.6	25.6	99.8	33.4	47.8	29.4	22.6	6.4	6.4	5.8	11.2	9	8	NS	NS	NS	NS	NS	NS	NS
TI (%)	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.08	0.07	0.13	0.06	0.26	0.29	0.1
TL (PPM)	2.54	3.46	1.2	8.68	5.2	2.1	4.94	2.16	2.1	2.54	5.28	3.14	2.9	3.76	4.58	NS	NS	NS	NS	NS	NS	NS
U (PPM)	2.5	8.45	7.9	5.85	10.35	5.4	4.25	13.7	4.05	3.9	2.6	2.9	6.8	6.35	4.3	NS	NS	NS	NS	NS	NS	NS
V (PPM)	25	22	28	20	55	50	43	10	17	17	19	28	29	57	25	33	33	50	4	64	47	120
W (PPM)	3.7	3.1	2.15	2.25	2.85	2.3	2.2	1.5	1.35	1.25	1.75	1.65	1.85	2.65	2.05	10	10	10	11	9	16	21
Y (PPM)	22.05	27.4	22.9	16.25	26.6	15.95	18.4	24.65	24.3	12.7	23.4	20.25	15.9	16.8	13.7	NS	NS	NS	NS	NS	NS	NS
ZN (PPM)	148	142	158	206	206	454	82	106	128	110	394	330	284	284	176	174	180	204	68	178	192	1465
ZR (PPM)	6	25	27	11.5	29	9	9.5	38.5	15	7.5	7	7.5	16.5	16.5	12	NS	NS	NS	NS	NS	NS	NS
In Pit (T/F)	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
Location	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf

Table 21. Historic Whole Rock Analysis for Precambrian (Page 1 of 8)

SAMPLE ID	19155	19156	82792	82797	82799	82801	82802	82803	82804	82806	82808	82809	82810	82811	82812	82813	82814	82815	82816
HOLE-ID	FX1832	FX1832	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44
FROM	300	310	450.5	482	500	517	527	533	542	559	577	586	595	604	614	622.6	639.2	648	657
TO	310	320	460	491.9	510	527	533	542	550	568	586	595	604	614	622.6	631	648	657	667
AL (%)	0.12	0.23	1.85	3.21	6.17	5.78	6.48	3	4.32	5.61	6.85	9	3.74	2.39	3.87	6.09	5.05	6.03	4.94
AS (PPM)	488	126.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
AU (OPT)	0.027	0.008	0.014	0.011	0.014	0.01	0.01	0.012	0.012	0.01	0.008	0.004	0.005	0.011	0.004	0.001	NS	NS	NS
B (PPM)	<10	<10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BA (PPM)	53.6	67.4	40	310	370	300	340	170	300	360	370	520	250	200	310	360	280	310	250
BE (PPM)	0.8	1	<0.5	0.5	1.5	1	1.5	0.5	1	<0.5	2	3	1.5	1.5	1.5	1.5	1	1.5	1
BI (PPM)	0.15	0.12	<2	2	<2	2	2	4	<2	<2	2	2	<2	<2	4	2	4	4	2
CA (%)	0.13	0.12	0.08	0.05	0.1	0.01	0.33	0.53	0.43	0.06	0.88	0.82	0.17	0.49	0.63	0.04	0.02	0.01	0.01
CD (PPM)	5.45	1.58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CE (PPM)	17.8	80	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CO (PPM)	2.2	9.5	28	10	16	9	25	8	50	23	11	6	10	7	20	6	42	53	42
CR (PPM)	92	38	71	103	116	124	164	95	131	143	160	209	119	163	121	154	128	163	150
CS (PPM)	0.25	0.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CU (PPM)	68.6	76.5	273	56	167	87	100	59	125	156	75	78	91	41	102	71	258	236	149
FE (%)	3.13	3.4	22.3	1.6	2.05	2.11	2.83	1.97	2.08	8.14	4.44	4.62	3.24	2.07	2.95	3.22	2.25	2.82	2.96
GA (PPM)	0.85	1.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GE (PPM)	0.05	0.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HF (PPM)	0.12	0.14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HG (PPM)	0.01	<0.01	0.22	0.05	0.03	0.03	0.03	0.02	0.03	0.11	0.02	0.03	0.08	0.14	0.2	0.01	0.01	0.01	0.01
IN (PPM)	0.035	0.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
K (%)	0.13	0.12	0.95	1.75	2.99	2.58	2.88	1.53	1.88	2.21	3.2	4.36	1.91	1.45	2.02	2.65	2.05	2.38	1.93
LA (PPM)	7.8	30.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
LI (PPM)	0.6	0.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MG (%)	0.01	0.02	0.17	0.17	0.41	0.33	0.41	0.2	0.28	0.34	0.37	0.51	0.18	0.12	0.2	0.35	0.29	0.33	0.25
MN (PPM)	190	220	40	55	10	5	35	15	50	20	660	165	210	2180	4000	30	30	10	15
MO (PPM)	8.4	3.95	44	6	10	10	9	6	7	23	6	4	6	8	7	7	9	13	10
NA (%)	<0.01	<0.01	0.04	0.1	0.14	0.12	0.16	0.12	0.1	0.15	0.18	0.22	0.1	0.05	0.16	0.16	0.12	0.18	0.18
NB (PPM)	0.45	0.65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NI (PPM)	11	17.2	141	31	29	22	50	19	72	92	36	32	37	33	73	26	63	81	78
P (PPM)	570	500	120	90	80	50	50	190	80	150	190	120	100	110	150	120	90	150	160
PB (PPM)	466	46.6	64	4	12	4	30	16	14	40	16	18	16	4	38	8	10	8	6
RB (PPM)	2.4	6.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
RE (PPM)	<0.001	<0.001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
ROCK TYPE	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
S (%)	0.15	0.04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 21. Historic Whole Rock Analysis for Precambrian (Page 2 of 8)

SAMPLE ID	19155	19156	82792	82797	82799	82801	82802	82803	82804	82806	82808	82809	82810	82811	82812	82813	82814	82815	82816
HOLE-ID	FX1832	FX1832	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44
FROM	300	310	450.5	482	500	517	527	533	542	559	577	586	595	604	614	622.6	639.2	648	657
TO	310	320	460	491.9	510	527	533	542	550	568	586	595	604	614	622.6	631	648	657	667
SB (PPM)	24.65	5.9	8.6	6	4.4	2.2	3.2	2.8	3	3.6	1.8	1.8	2.6	2.6	4.6	3.4	2.8	2.8	1.8
SC (PPM)	1.1	1.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SE (PPM)	1	0.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SI (%)	NS	NS	37.02	86.4	70.17	76.17	72.86	85.69	81.47	59.98	67.33	60.65	79.74	86.7	82.31	72.1	78.69	73	77.2
SN (PPM)	1.2	0.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SR (PPM)	99.2	178.2	80	65	48	43	43	42	34	129	34	46	36	48	55	75	44	80	50
TA (PPM)	<0.01	<0.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TE (PPM)	1.1	0.22	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TH (PPM)	1.8	3.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TI (%)	<0.01	<0.01	0.09	0.07	0.1	0.1	0.12	0.05	0.09	0.11	0.12	0.18	0.07	0.06	0.08	0.13	0.12	0.12	0.08
TL (PPM)	0.42	0.48	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
U (PPM)	6.45	4.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
V (PPM)	16	14	185	39	140	100	129	62	102	270	122	130	51	34	44	106	95	132	89
W (PPM)	1.5	4.2	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Y (PPM)	3.3	6.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
ZN (PPM)	166	114	46	14	12	12	18	12	12	14	66	46	48	68	128	22	12	14	14
ZR (PPM)	3	3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
In Pit (T/F)	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Location	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf

Table 21. Historic Whole Rock Analysis for Precambrian (Page 3 of 8)

SAMPLE ID	82817	82818	82819	82820	82821	82822	82823	82824	82825	82826	82827	82828	82829	82830	82831	82832	82833	82834	82835	105871
HOLE-ID	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-63
FROM	667	676.37	680.9	690	700	710	719.4	724.5	733	743	748	758	760.7	631	766	771	776	786	796	243.5
TO	676.3	680.9	690	700	710	719.4	724.5	733	743	748	758	760.7	766	639.2	771	776	786	796	800	245
AL (%)	7.19	1.43	5.51	7.3	8.05	5.91	5.52	8.29	8.46	6.94	8.31	6.14	7.79	6.33	8.66	4.78	8.56	7.48	8.07	0.67
AS (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	16	NS	36	NS	NS	NS	NS	NS	205
AU (OPT)	NS	NS	0.002	0.001	0.001	0.001	NS	NS	NS	NS	NS	NS	NS	0.001	0.002	NS	NS	NS	0.002	0.008
B (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BA (PPM)	410	70	310	410	400	310	310	480	500	340	440	350	420	350	410	240	480	380	410	113
BE (PPM)	2	<0.5	2	2	1.5	1.5	1.5	1.5	1	2	1.5	1.5	2	1.5	3.5	1	1.5	1.5	1.5	<1
BI (PPM)	2	<2	2	4	2	4	<2	2	4	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<5
CA (%)	0.03	0.02	0.62	0.79	0.02	0.19	1.11	0.37	0.15	0.13	0.18	0.5	0.37	0.01	0.19	0.08	0.13	0.06	0.05	0.04
CD (PPM)	<0.5	1.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5	1	1.5	0.5	0.5	<0.5	<0.5	1	0.5	0.5	0.5	<0.5	<0.4
CE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CO (PPM)	33	16	21	17	15	22	17	30	28	22	27	42	25	16	21	17	46	30	23	3
CR (PPM)	222	167	202	208	182	205	243	157	154	216	151	204	213	201	219	253	176	213	148	231
CS (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CU (PPM)	107	51	49	67	66	113	76	69	71	87	68	82	110	186	131	64	104	81	60	81
FE (%)	3.5	0.99	3.27	3.52	4.77	4.58	3.67	4.6	5.64	5.08	4.89	2.89	3.78	2.3	4.66	2.2	4.52	3.72	5.8	2.69
GA (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HF (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HG (PPM)	0.4	0.08	0.04	0.02	0.01	0.02	0.01	0.05	0.03	0.01	0.01	0.01	0.02	0.03	0.01	0.01	<0.01000	0.01	0.03	NS
IN (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
K (%)	3.22	0.73	2.67	3.15	3.1	2.4	2.36	3.19	3.24	2.58	3.17	2.46	3.4	2.66	3.54	1.93	3.26	2.97	3.72	0.26
LA (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9
LI (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MG (%)	0.33	0.06	0.25	0.32	0.34	0.3	0.26	0.84	0.81	0.71	1.02	0.45	0.49	0.35	0.43	0.25	0.76	0.46	0.39	0.05
MN (PPM)	15	25	95	30	5	40	180	250	275	170	380	200	115	15	15	35	195	740	105	112
MO (PPM)	10	13	6	7	7	8	10	5	<1	7	3	9	7	14	7	11	3	7	7	16
NA (%)	0.2	0.17	0.116	0.23	0.25	0.17	0.15	0.22	0.27	0.21	0.22	0.15	0.26	0.2	0.23	0.12	0.24	0.23	0.23	0.02
NB (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NI (PPM)	77	43	58	56	46	57	63	70	71	69	69	88	65	44	77	53	114	68	61	20
P (PPM)	150	70	350	240	200	260	150	220	290	230	240	230	170	120	290	190	210	260	210	0.01
PB (PPM)	8	6	8	12	16	14	8	10	4	4	6	8	28	10	20	12	12	12	24	89
RB (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
RE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
ROCK TYPE	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
S (%)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 21. Historic Whole Rock Analysis for Precambrian (Page 4 of 8)

SAMPLE ID	82817	82818	82819	82820	82821	82822	82823	82824	82825	82826	82827	82828	82829	82830	82831	82832	82833	82834	82835	105871
HOLE-ID	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-63
FROM	667	676.37	680.9	690	700	710	719.4	724.5	733	743	748	758	760.7	631	766	771	776	786	796	243.5
TO	676.3	680.9	690	700	710	719.4	724.5	733	743	748	758	760.7	766	639.2	771	776	786	796	800	245
SB (PPM)	1.8	1	2.4	1.2	1.4	1.2	1.2	1	0.4	0.8	0.6	0.8	1.4	3.2	2.6	1.2	1.2	1.4	1.8	15
SC (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SI (%)	71.01	91.8	73.5	67	63.4	73.21	73.75	65.36	62.12	68.5	63.99	74.2	67.5	74.1	63	80.7	65	70	62.19	NS
SN (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0	<2
SR (PPM)	70	21	85	77	58	85	43	47	40	39	39	38	43	58	82	36	54	47	46	13
TA (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TH (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4
TI (%)	0.11	0.01	0.1	0.14	0.14	0.11	0.09	0.17	0.16	0.1	0.12	0.1	0.15	0.18	0.18	0.1	0.16	0.16	0.15	0.04
TL (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
U (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	13
V (PPM)	111	15	63	99	133	74	76	93	94	72	90	63	88	136	145	63	101	76	93	40
W (PPM)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<4
Y (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
ZN (PPM)	18	236	40	40	18	30	54	108	132	104	92	146	80	12	42	56	130	88	60	29
ZR (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
In Pit (T/F)	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Location	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf

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SAMPLE ID	105883	105896	115537	115548	115558	115574	115626	115631	115670	115711	115919	115923	115936	115944	115949	115950	115974	82784	82785	82786
HOLE-ID	FR-63	FR-63	FR-61	FR-61	FR-62	FR-62	FR-62	FR-63	FR-63	FR-63	FR-62	FR-62	FR-62	FR-62	FR-62	FR-62	FR-62	FR-44	FR-44	FR-44
FROM	300	345	643	695	600	655	885	557	723	898.1	251	272	335	375	400	405	525	395.1	401	404.5
TO	305	349.5	648	700	605	660	888.5	560	725	900	253	276	340	380	405	410	530	401	404.5	410.7
AL (%)	6.09	8.77	4.5	6.62	3.94	2.03	7.03	7.58	4.32	9.66	8.57	8.53	7.49	7.63	9.41	9.36	7.55	3.3	6.05	5.99
AS (PPM)	150	161	68	12	49	<5	11	38	20	28	62	131	29	5	20	98	11	NS	NS	NS
AU (OPT)	0.014	0.004	0.006	0.002	0.002	0.001	NS	NS	0.002	0.002	0.004	0.003	NS	0.005	NS	NS	0.003	0.023	0.029	0.021
B (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BA (PPM)	311	512	326	302	125	221	404	425	113	569	435	385	502	387	449	390	435	630	1830	590
BE (PPM)	2	<1	2	1	2	<1	1	2	<1	2	2	2	1	<1	1	1	1	2.5	6.5	3
BI (PPM)	<5	<5	<5	6	<5	<5	6	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	4	2	<2
CA (%)	0.02	0.02	0.02	0.08	0.07	0.05	0.06	0.04	0.09	0.07	0.34	0.3	0.03	0.01	0.02	0.02	0.05	1	1.86	2.12
CD (PPM)	<0.4	<0.4	<0.4	<0.4	<0.4	0.8	0.6	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.5	8.5	2
CE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CO (PPM)	2	2	14	19	36	4	15	62	51	30	3	14	15	6	28	6	15	191	73	14
CR (PPM)	140	215	172	119	136	161	221	160	83	187	207	166	198	135	140	134	197	148	100	109
CS (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CU (PPM)	17	47	63	45	232	7	75	79	171	46	258	364	183	78	86	55	56	79	70	64
FE (%)	8.85	1.66	14.17	9.06	24.47	1.28	4.01	7.01	22.51	6.2	3.49	8.07	2.18	1.28	1.39	2.32	4.58	2.22	5.78	3.49
GA (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HF (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HG (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.05	0.12	0.07
IN (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
K (%)	2.97	3.88	2.19	3.14	2.05	1.03	4.01	2.99	2.04	5.22	4.05	3.79	3.46	3.39	4.24	4.09	3.79	1.82	3.27	2.68
LA (PPM)	25	44	21	25	18	9	33	34	45	42	33	38	42	32	41	36	35	NS	NS	NS
LI (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MG (%)	0.28	0.41	0.21	1.43	0.43	0.14	0.56	0.23	0.24	1.01	0.61	0.52	0.43	0.39	0.43	0.33	0.71	0.22	0.41	0.43
MN (PPM)	105	7	127	851	704	650	1927	2124	5	1115	30	5	8	11	5	5	1176	2290	10000	1975
MO (PPM)	5	6	11	<2	39	12	10	3	25	3	3	7	5	3	<2	4	7	11	18	10
NA (%)	0.06	0.12	0.05	0.08	0.03	0.25	0.07	0.17	0.06	0.09	0.07	0.07	0.05	0.06	0.08	0.07	0.07	0.06	0.13	0.12
NB (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NI (PPM)	18	15	44	47	271	16	67	128	205	94	32	68	36	22	60	42	69	37	209	44
P (PPM)	0.018	0.02	0.026	0.021	0.029	0.009	0.021	0.02	0.045	0.023	0.007	0.009	0.01	0.008	0.026	0.032	0.019	800	800	330
PB (PPM)	28	27	6	5	100	34	31	8	53	13	27	30	15	6	14	9	13	180	94	112
RB (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
RE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
ROCK TYPE	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
S (%)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 21. Historic Whole Rock Analysis for Precambrian (Page 6 of 8)

SAMPLE ID	105883	105896	115537	115548	115558	115574	115626	115631	115670	115711	115919	115923	115936	115944	115949	115950	115974	82784	82785	82786
HOLE-ID	FR-63	FR-63	FR-61	FR-61	FR-62	FR-62	FR-62	FR-63	FR-63	FR-63	FR-62	FR-62	FR-62	FR-62	FR-62	FR-62	FR-62	FR-44	FR-44	FR-44
FROM	300	345	643	695	600	655	885	557	723	898.1	251	272	335	375	400	405	525	395.1	401	404.5
TO	305	349.5	648	700	605	660	888.5	560	725	900	253	276	340	380	405	410	530	401	404.5	410.7
SB (PPM)	8	10	<5	8	41	<5	5	<5	24	21	7	7	<5	<5	5	6	7	7.4	8.6	7.8
SC (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SI (%)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	81.26	62.08	67.34
SN (PPM)	<2	2	3	3	3	<2	2	<2	3	2	<2	<2	<2	<2	2	2	2	NS	NS	NS
SR (PPM)	48	215	20	36	20	13	26	94	27	28	22	24	31	27	126	94	34	160	241	98
TA (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TH (PPM)	13	17	10	11	9	6	16	13	10	19	17	19	13	11	13	14	16	NS	NS	NS
TI (%)	0.13	0.14	0.09	0.12	0.11	0.03	0.17	0.09	0.11	0.21	0.18	0.17	0.13	0.13	0.18	0.21	0.16	0.08	0.12	0.13
TL (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
U (PPM)	<10	12	12	65	<10	<10	<10	<10	<10	<10	<10	13	10	<10	<10	<10	<10	NS	NS	NS
V (PPM)	99	166	NS	85	470	14	129	84	211	115	239	249	135	106	180	268	105	60	144	105
W (PPM)	4	<4	<4	<4	6	<4	4	<4	<4	9	12	13	<4	4	4	5	<4	1380	10	<10
Y (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
ZN (PPM)	42	14	87	156	61	71	197	190	51	27	19	23	18	19	22	21	31	232	1770	360
ZR (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
In Pit (T/F)	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Location	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf

Table 21. Historic Whole Rock Analysis for Precambrian (Page 7 of 8)

SAMPLE ID	82787	82788	82789	82790	82791	82793	82794	82795	82796	82798	82800	82805	82807	115914
HOLE-ID	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-62
FROM	410.7	418	428	438	443	460	463	469	476	491.9	510	550	568	226
TO	418	428	438	443	450.5	463	469	476	482	500	517	559	577	232
AL (%)	6.82	7.66	6.47	6.21	6.47	2.96	7.35	7.07	6.05	5.92	5.02	5.56	4.72	6.8
AS (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	496
AU (OPT)	0.016	0.027	0.016	0.016	0.018	0.016	0.02	0.022	0.019	0.016	0.016	0.016	0.018	0.035
B (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
BA (PPM)	430	580	380	370	350	140	460	440	450	370	270	340	170	433
BE (PPM)	2.5	3.5	3	3.5	2.5	<0.5	2	2	2	1.5	1.5	1.5	<0.5	7
BI (PPM)	2	<2	2	4	4	<2	2	<2	<2	<2	<2	2	2	<5
CA (%)	1.14	1.96	1.84	2.35	1.35	0.04	0.29	0.03	0.04	0.52	0.23	0.02	0.01	5.05
CD (PPM)	2.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.3
CE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CO (PPM)	9	10	7	19	21	24	17	6	18	16	20	20	26	11
CR (PPM)	121	134	124	127	130	94	125	122	113	137	142	118	122	103
CS (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CU (PPM)	64	49	57	74	143	238	92	103	61	92	148	105	174	60
FE (%)	3.25	2.08	2.33	2.37	4.31	18.15	2.03	2.33	1.98	1.9	3.09	1.66	13.8	5.09
GA (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HF (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HG (PPM)	0.02	0.01	0.03	0.04	0.04	0.24	0.05	0.06	0.04	0.05	0.04	0.01	0.16	NS
IN (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
K (%)	3.26	3.75	3.46	3.65	3.18	1.54	3.01	2.77	2.98	2.7	2.3	2.26	2.12	3.6
LA (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	33
LI (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MG (%)	0.49	0.51	0.91	1.25	0.61	0.26	0.5	0.39	0.37	0.39	0.29	0.33	0.29	0.39
MN (PPM)	1800	2300	2480	7290	4850	20	25	40	15	20	25	15	10	4307
MO (PPM)	11	7	3	8	6	42	4	<1	4	10	10	6	31	3
NA (%)	0.15	0.17	0.13	0.16	0.16	0.07	0.18	0.18	0.15	0.15	0.13	0.14	0.12	0.08
NB (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NI (PPM)	31	27	27	42	54	157	43	18	41	32	47	27	107	54
P (PPM)	200	270	270	190	210	110	80	250	110	70	70	90	130	0.009
PB (PPM)	60	56	20	28	30	68	4	4	4	16	10	10	52	11
RB (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
RE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
ROCK TYPE	11	11	11	11	11	11	11	11	11	11	11	11	11	11
S (%)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 21. Historic Whole Rock Analysis for Precambrian (Page 8 of 8)

SAMPLE ID	82787	82788	82789	82790	82791	82793	82794	82795	82796	82798	82800	82805	82807	115914
HOLE-ID	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-44	FR-62
FROM	410.7	418	428	438	443	460	463	469	476	491.9	510	550	568	226
TO	418	428	438	443	450.5	463	469	476	482	500	517	559	577	232
SB (PPM)	5.6	11	7.4	6.4	4.8	6.2	6	4.4	7.8	9.2	5.2	4.4	3.8	7
SC (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SI (%)	68.2	65.13	66.45	63.43	64.03	42.09	71.5	71.3	75.44	74.4	77.08	78.89	49.33	NS
SN (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<2
SR (PPM)	86	96	102	146	168	112	63	293	92	42	38	76	108	34
TA (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TE (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TH (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	13
TI (%)	0.17	0.26	0.26	0.17	0.16	0.12	0.16	0.2	0.16	0.12	0.09	0.1	0.08	0.13
TL (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
U (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10
V (PPM)	111	122	118	120	221	327	132	267	91	128	79	97	282	116
W (PPM)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	7
Y (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
ZN (PPM)	232	244	262	382	268	30	16	18	16	14	24	12	30	244
ZR (PPM)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
In Pit (T/F)	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Location	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf	Wharf

Table 22. Meteoric Water Mobility Test (MWMT) Results (Page 1 of 2)

SAMPLE_ID	In Pit (T/F)	ROCK_TYPE	Ag	Al	As	B	Ba	Be	Cd	Cr	Cu	Fe	Hg	Mn	Ni	Pb	Sb	Se	Tl	Zn	pH	TDS	Alkalinity (T)	WAD	Bicarb	Cl	Fl	N	Sulfur	Ca	Mg	K	Na	Cations	Anions
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L
Upper Deadwood																																			
50274	FALSE	1	<0.01	<0.02	*0.223*	0.21	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	0.003	<0.005	<0.001	<0.01	8.3	160	74	<0.01	90	2	5.3	<0.10	21	22	3	23	7	2.23	2.23
50686	TRUE	1	<0.01	<0.02	*0.038*	0.15	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.2	90	58	<0.01	71	2	2	<0.10	10	14	2	9	10	1.54	1.52
52579	TRUE	1	<0.01	<0.02	*0.066*	1.07	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	0.006	<0.001	<0.01	8.6	390	165	<0.01	182	21	5.3	0.1	84	18	25	39	43	5.79	5.91
53268	FALSE	1	<0.01	2.15	*0.012*	0.27	<0.10	<0.002	<0.0020	<0.01	<0.01	0.56	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.4	120	70	<0.01	82	1	2.2	<0.10	7	16	3	7	12	1.72	1.67
53583	FALSE	1	<0.01	<0.02	*0.034*	0.27	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.5	100	67	<0.01	77	1	2.4	<0.10	5	19	2	9	6	1.61	1.61
60159	TRUE	1	<0.01	0.08	0.007	0.15	0.1	<0.002	<0.0020	<0.01	<0.01	0.09	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8	110	67	<0.01	82	<1.00	1.1	<0.10	20	22	2	4	8	1.68	1.81
62308	TRUE	1	<0.01	<0.02	*0.036*	0.49	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.6	170	125	<0.01	137	4	4.8	<0.10	11	16	14	23	9	2.95	3.08
56956	FALSE	2	<0.01	<0.02	*0.016*	0.17	0.1	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.15	<0.01	<0.002	0.004	<0.005	*0.005*	<0.01	7.8	200	25	<0.01	30	5	9.9	<0.10	66	14	3	32	19	2.62	2.51
53771	FALSE	2	<0.01	0.16	*0.027*	0.11	<0.10	<0.002	<0.0020	<0.01	<0.01	0.1	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.2	90	69	<0.01	85	3	1.9	<0.10	10	13	7	7	6	1.73	1.77
Intermediate Deadwood																																			
49583	TRUE	3	<0.01	<0.02	*0.091*	0.19	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.03	<0.01	<0.002	0.005	0.006	*0.002*	<0.01	7.7	240	87	<0.01	106	2	6.5	<0.10	56	29	4	12	24	3.1	3.29
52814	TRUE	3	<0.01	0.11	*0.006*	0.22	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.64	0.1	<0.002	<0.003	0.007	<0.001	0.06	6.8	590	<5.00	<0.01	5	1	0.5	<0.10	369	96	19	14	21	7.65	7.74
54515	TRUE	3	<0.01	0.14	<0.005	0.17	<0.10	<0.002	<0.0020	<0.01	<0.01	0.04	<0.001	0.08	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	7.8	60	24	<0.01	29	<1.00	1	<0.10	20	7	2	4	8	0.93	0.93
57935	TRUE	3	<0.01	<0.02	*0.225*	0.22	0.1	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.3	130	65	<0.01	79	2	4.7	<0.10	17	20	3	14	8	1.93	1.93
58847	FALSE	3	<0.01	<0.02	*0.103*	0.1	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	*0.002*	<0.01	7.7	130	21	<0.01	26	<1.00	1	<0.10	66	21	5	14	3	1.88	1.85
59674	TRUE	3	<0.01	<0.02	*0.251*	0.09	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.01	<0.01	<0.002	0.004	<0.005	*0.002*	<0.01	7.4	60	11	<0.01	14	1	7.4	<0.10	9	5	1	12	3	0.84	0.82
59812	TRUE	3	<0.01	<0.02	<0.005	0.7	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.03	<0.01	<0.002	<0.003	0.032	<0.001	<0.01	8.1	1700	87	<0.01	106	27	2.1	0.4	976	187	123	87	33	23.1	22.94
59305	FALSE	3	<0.01	0.04	*0.04*	0.09	<0.10	<0.002	<0.0020	<0.01	<0.01	0.07	<0.001	0.04	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	7.5	100	12	<0.01	15	<1.00	4.3	<0.10	36	13	2	13	4	1.31	1.21
59420	FALSE	3	<0.01	<0.02	*0.182*	0.15	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.02	<0.01	<0.002	0.005	<0.005	*0.002*	<0.01	7.5	140	14	<0.01	18	<1.00	9.4	<0.10	47	16	4	19	7	1.84	1.77
61145	FALSE	3	<0.01	5.04	*0.01*	1.14	0.1	<0.002	<0.0020	<0.01	<0.01	2.24	<0.001	0.11	<0.01	<0.002	<0.003	0.03	<0.001	<0.01	8.2	450	75	<0.01	92	10	1.7	0.3	140	51	14	18	26	5.26	4.8
63655	FALSE	3	<0.01	0.06	*0.007*	0.45	<0.10	<0.002	<0.0020	<0.01	<0.01	0.02	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	7.8	110	34	<0.01	41	1	0.5	0.6	54	17	6	2	8	1.75	1.85
53168	FALSE	4	<0.01	<0.02	<0.005	0.09	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	0.006	<0.001	<0.01	8.1	260	47	<0.01	58	1	1.1	0.3	142	29	22	15	9	4.04	4.01
58382	FALSE	4	<0.01	0.05	<0.005	0.11	<0.10	<0.002	<0.0020	<0.01	<0.01	0.03	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	7.7	40	16	<0.01	19	<1.00	0.1	0.1	14	9	1	2	2	0.68	0.62
56562	FALSE	4	<0.01	<0.02	*0.009*	0.9	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.04	<0.01	<0.002	0.004	<0.005	0.001	<0.01	8.1	910	115	<0.01	140	47	1.4	0.3	383	124	48	58	27	12.77	11.69
59995	FALSE	4	<0.01	<0.02	<0.005	0.48	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	0.007	<0.001	<0.01	8.2	350	119	<0.01	145	<1.00	3.2	0.2	129	34	21	43	21	5.41	5.25
60719	FALSE	4	<0.01	0.05	<0.005	0.43	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.01	<0.01	<0.002	<0.003	0.012	<0.001	<0.01	8	380	81	<0.01	99	6	2.7	<0.10	139	46	17	34	13	5.13	4.84
60979	FALSE	4	<0.01	<0.02	<0.005	1.14	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	*0.117*	<0.001	<0.01	8.1	760	75	<0.01	92	28	2.3	0.4	360	88	42	47	28	10.32	9.92
61017	FALSE	4	<0.01	<0.02	*0.007*	0.32	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.03	<0.01	<0.002	<0.003	0.012	<0.001	<0.01	8.3	500	133	<0.01	163	10	1.3	0.1	186	64	30	35	14	7.17	6.9
57396	FALSE	4	<0.01	<0.02	<0.005	0.84	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.04	<0.01	<0.002	<0.003	0.035	<0.001	<0.01	8.1	1180	105	<0.01	128	74	1.9	0.3	511	108	96	68	34	16.48	14.93
62731	FALSE	4	<0.01	0.05	<0.005	0.11	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.4	70	29	<0.01	33	2	1.5	0.9	29	9	5	7	6	1.34	1.29
62896	TRUE	4	<0.01	0.04	<0.005	0.12	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.1	80	46	<0.01	57	2	1.9	2.7	20	11	6	6	9	1.57	1.5
63724	FALSE	4	<0.01	0.04	<0.005	0.13	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8	90	29	<0.01	36	2	1	0.3	51	15	8	4	4	1.66	1.73
Lower Deadwood																																			
52186	FALSE	10	<0.01	0.1	0.008	0.08	0.1	<0.002	<0.0020	<0.01	<0.01	0.05	<0.001	0.1	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	7.8	90	27	<0.01	33	<1.00	1.7	<0.10	17	10	2	7	5	1.06	0.96
60884	FALSE	10	<0.01	<0.02	*0.054*	0.18	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.02	<0.01	<0.002	*0.014*	<0.005	<0.001	<0.01	8.3	150	99	<0.01	118	2	3.9	<0.10	22	18	14	14	3	2.51	2.69

Table 22. Meteoric Water Mobility Test (MWMT) Results (Page 2 of 2)

SAMPLE_ID	In Pit (T/F)	ROCK_TYPE	Ag	Al	As	B	Ba	Be	Cd	Cr	Cu	Fe	Hg	Mn	Ni	Pb	Sb	Se	Tl	Zn	pH	TDS	Alkalinity (T)	WAD	Bicarb	Cl	Fl	N	Sulfur	Ca	Mg	K	Na	Cations	Anions
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L
Porphyry																																			
47327	FALSE	6	<0.01	<0.02	*0.011*	0.34	0.1	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	1.1	<0.01	<0.002	*0.006*	0.007	*0.003*	<0.01	7.5	380	21	<0.01	26	12	15.2	<0.10	137	21	3	84	23	4.45	4.42
50350	FALSE	6	<0.01	<0.02	*0.406*	0.14	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	0.003	<0.005	<0.001	<0.01	8.4	160	63	<0.01	75	1	2.3	<0.10	33	16	5	9	22	2.36	2.1
50944	TRUE	6	<0.01	<0.02	*0.036*	0.1	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.4	110	80	<0.01	95	<1.00	4.4	0.1	8	9	5	8	23	2.1	1.99
51635	FALSE	6	<0.01	<0.02	<0.005	1.29	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.57	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.1	350	50	<0.01	61	5	20.5	0.2	131	20	6	23	72	5.13	4.95
52320	TRUE	6	<0.01	0.13	*0.025*	0.26	<0.10	<0.002	<0.0020	<0.01	<0.01	0.14	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.2	140	44	<0.01	54	2	5.6	0.6	42	16	3	11	19	2.17	2.13
53500	FALSE	6	<0.01	0.09	*0.014*	0.18	0.1	<0.002	<0.0020	<0.01	<0.01	0.03	<0.001	0.02	<0.01	<0.002	<0.003	<0.005	0.001	<0.01	8	140	57	<0.01	70	2	2.6	0.4	36	13	5	23	13	2.2	2.11
53846	TRUE	6	<0.01	0.06	*0.02*	0.14	<0.10	<0.002	<0.0020	<0.01	<0.01	0.07	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.2	60	45	<0.01	54	<1.00	1.7	<0.10	6	8	3	4	9	1.11	1.1
54738	TRUE	6	<0.01	<0.02	<0.005	0.09	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.01	<0.01	<0.002	<0.003	<0.005	*0.002*	<0.01	7	40	<5.00	<0.01	5	<1.00	0.3	0.4	12	2	<1.00	4	6	0.42	0.3
54749	TRUE	6	<0.01	2.63	<0.005	0.06	<0.10	<0.002	<0.0020	<0.01	<0.01	1.94	<0.001	0.09	<0.01	0.003	<0.003	<0.005	<0.001	0.02	7.7	50	24	<0.01	29	<1.00	0.4	<0.10	3	5	1	3	4	0.63	0.56
55712	FALSE	6	<0.01	0.04	*0.025*	0.12	<0.10	<0.002	<0.0020	<0.01	<0.01	0.05	<0.001	0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.3	100	64	<0.01	78	1	1.6	0.9	11	12	5	5	15	1.8	1.67
55676	TRUE	6	<0.01	<0.02	*0.022*	0.1	0.1	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.1	<0.01	<0.002	<0.003	<0.005	0.001	<0.01	8.2	150	74	<0.01	90	2	3.5	0.5	30	14	9	19	11	2.4	2.37
56228	TRUE	6	<0.01	0.05	*0.022*	0.11	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.19	<0.01	<0.002	<0.003	<0.005	*0.003*	<0.01	7.9	150	45	<0.01	54	<1.00	0.8	<0.10	65	23	5	14	3	2.07	2.28
56788	FALSE	6	<0.01	<0.02	*0.088*	0.35	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.01	<0.01	<0.002	*0.008*	<0.005	*0.006*	<0.01	8.1	230	37	<0.01	46	6	13.9	<0.10	70	16	3	39	18	2.85	3.1
58222	FALSE	6	<0.01	<0.02	*0.041*	0.33	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.03	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	7.8	120	28	<0.01	34	<1.00	0.6	<0.10	64	22	4	5	8	1.88	1.91
58400	FALSE	6	<0.01	0.23	*0.012*	0.19	<0.10	<0.002	<0.0020	<0.01	<0.01	0.15	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.1	100	58	<0.01	71	<1.00	0.7	<0.10	20	15	4	4	10	1.66	1.61
58639	TRUE	6	<0.01	0.1	*0.018*	0.09	<0.10	<0.002	<0.0020	<0.01	<0.01	0.17	<0.001	0.05	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	7.5	40	11	<0.01	13	<1.00	0.5	<0.10	12	3	<1.00	9	3	0.5	0.48
58895	TRUE	6	<0.01	<0.02	0.007	0.19	0.2	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.13	<0.01	<0.002	<0.003	<0.005	*0.003*	<0.01	7.5	190	23	<0.01	29	7	9.4	<0.10	72	14	2	38	21	2.76	2.64
58934	FALSE	6	<0.01	0.03	*0.035*	0.21	0.1	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.03	<0.01	<0.002	*0.009*	<0.005	*0.005*	<0.01	7.6	200	23	<0.01	28	8	6.9	<0.10	68	10	2	34	19	2.32	2.45
59055	TRUE	6	<0.01	<0.02	*0.064*	0.32	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	0.004	<0.005	<0.001	<0.01	8.3	180	94	<0.01	115	1	4.7	0.3	33	24	8	21	9	2.74	2.88
59558	FALSE	6	<0.01	<0.02	<0.005	0.23	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.01	<0.01	<0.002	*0.006*	<0.005	<0.001	<0.01	8.4	210	122	<0.01	141	2	2.5	<0.10	43	22	10	19	25	3.52	3.52
59503	FALSE	6	<0.01	<0.02	*0.323*	0.17	<0.10	<0.002	*0.009*	<0.01	0.02	<0.02	<0.001	<0.01	0.01	0.008	*0.017*	0.013	*0.007*	0.03	7.6	160	23	<0.01	28	3	4.4	<0.10	54	14	3	26	7	1.96	1.92
60324	FALSE	6	<0.01	<0.02	<0.005	0.1	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.24	<0.01	<0.002	<0.003	0.005	<0.001	<0.01	8	210	56	<0.01	69	<1.00	3.3	<0.10	80	23	6	21	18	2.94	2.97
57337	FALSE	6	<0.01	<0.02	<0.005	0.6	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.01	<0.01	<0.002	<0.003	0.008	<0.001	<0.01	8.4	270	171	<0.01	200	7	2	0.2	30	22	7	28	47	4.46	4.37
60769	FALSE	6	<0.01	<0.02	<0.005	0.5	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.04	<0.01	<0.002	<0.003	0.044	<0.001	<0.01	8.4	590	185	<0.01	215	5	1.5	0.2	196	63	22	49	57	8.67	8
61227	FALSE	6	<0.01	<0.02	<0.005	0.25	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.01	<0.01	<0.002	<0.003	0.005	<0.001	<0.01	8.4	220	148	<0.01	173	1	2	<0.10	37	24	14	23	24	3.97	3.86
62880	FALSE	6	<0.01	0.05	<0.005	0.09	<0.10	<0.002	<0.0020	<0.01	<0.01	0.02	<0.001	0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	7.9	40	32	<0.01	39	1	0.4	0.9	6	6	3	2	5	0.8	0.82
62491	FALSE	6	<0.01	0.06	*0.014*	0.13	<0.10	<0.002	<0.0020	<0.01	<0.01	0.03	<0.001	0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.2	70	43	<0.01	53	<1.00	0.8	0.8	10	10	3	4	6	1.11	1.1
63595	TRUE	6	<0.01	0.04	*0.027*	0.18	0.1	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.04	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8	160	42	<0.01	51	2	1	2	59	25	5	10	8	2.21	2.16
63803	TRUE	6	<0.01	0.46	*0.025*	0.17	0.1	<0.002	<0.0020	<0.01	<0.01	0.19	<0.001	0.07	<0.01	<0.002	0.004	<0.005	<0.001	<0.01	8.1	180	45	<0.01	54	6	5	<0.10	55	8	2	40	9	1.94	2.46
52711	TRUE	7	<0.01	0.05	*0.009*	0.17	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.02	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8	290	74	<0.01	90	5	5.9	0.1	91	32	5	5	40	3.88	3.84
54955	FALSE	7	<0.01	0.11	*0.013*	0.13	0.1	<0.002	<0.0020	<0.01	<0.01	0.06	<0.001	0.12	<0.01	<0.002	<0.003	<0.005	0.001	<0.01	8	150	45	<0.01	55	2	2.4	<0.10	29	12	3	17	11	1.74	1.69
49567	TRUE	7	<0.01	<0.02	<0.005	0.11	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	0.05	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.1	270	54	<0.01	66	2	6.7	<0.10	114	31	3	4	47	4	3.85
61909	FALSE	7	<0.01	0.08	0.007	0.17	<0.10	<0.002	<0.0020	<0.01	<0.01	0.07	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.3	40	26	<0.01	30	<1.00	0.3	<0.10	4	4	1	2	5	0.54	0.61
Precambrian																																			
61542	FALSE	11	<0.01	<0.02	<0.005	0.72	<0.10	<0.002	<0.0020	<0.01	<0.01	<0.02	<0.001	<0.01	<0.01	<0.002	<0.003	<0.005	<0.001	<0.01	8.5	380	171	<0.01	191	6	2.1	<0.10	68	23	15	30	54	5.49	5.11

Equal to or exceeds EPA or State drinking water standards

Table 23. Humidity Cell Results for Sample 47122 (Hole I.D. FX3281)

RESULTS OF ANALYSIS	GR																							
Sample ID	47122-0	47122-1	47122-2	47122-3	47122-4	47122-5	47122-6	47122-7	47122-8	47122-9	47122-10	47122-11	47122-12	47122-13	47122-14	47122-15	47122-16	47122-17	47122-18	47122-19	47122-20	47122-21	47122-22	47122-23
Date Sampled	03-AUG-10	10-AUG-10	17-AUG-10	24-AUG-10	31-AUG-10	07-SEP-10	14-SEP-10	21-SEP-10	28-SEP-10	05-OCT-10	12-OCT-10	19-OCT-10	26-OCT-10	02-NOV-10	09-NOV-10	16-NOV-10	23-NOV-10	30-NOV-10	07-DEC-10	14-DEC-10	21-DEC-10	28-DEC-10	04-JAN-11	11-JAN-11
Sample Preparation																								
Total Volume In	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	475	480	480	460	500	500	490	475	485	480	480	470	490	475	490	480	490	480	495	470	470	465	500	460
Physical Tests																								
Conductivity	142	107	81.2	64.0	55.5	37.6	39.2	33.8	33.2	31.7	31.5	27.1	26.1	22.9	24.0	23.5	22.9	27.8	21.7	24.7	23.2	22.6	17.0	20.0
pH	8.04	7.86	7.86	7.70	7.65	7.49	7.49	7.34	7.31	7.49	7.36	7.63	7.35	7.53	7.56	7.59	7.40	7.48	7.30	7.24	7.24	7.27	6.53	7.20
Anions and Nutrients																								
Acidity (as CaCO3)	3.2	2.0	5.5	2.4	3.6	3.6	3.1	2.5	3.3	3.0	2.8	<1.0	2.4	1.9	1.5	2.2	1.8	2.0	2.7	2.2	2.7	2.3	2.3	2.3
Alkalinity, Total (as CaCO3)	30.4	30.7	26.5	20.5	16.5	10.6	10.8	8.0	7.7	6.9	7.0	6.6	5.6	4.5	5.2	4.9	4.5	5.0	4.1	3.9	5.3	4.4	2.5	3.7
Sulfate (SO4)	25.0	14.4	8.22	6.08	5.84	4.01	4.07	3.27	2.83	2.79	2.35	2.39	2.54	2.04	2.06	2.08	1.85	2.74	1.87	2.45	1.85	2.04	1.10	1.67
Dissolved Metals																								
Aluminum (Al)-Dissolved	0.090	0.251	0.078	0.095	0.106	0.070	0.382	0.085	0.185	0.059	0.091	0.035	0.108	0.062	0.090	0.151	0.108	0.168	0.084	0.151	0.116	0.143	0.117	0.095
Antimony (Sb)-Dissolved	0.0015	0.0014	0.0012	0.0012	0.0013	0.0011	0.0014	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic (As)-Dissolved	*0.127*	*0.129*	*0.115*	*0.108*	*0.0918*	*0.0862*	*0.0820*	*0.0742*	*0.0729*	*0.0620*	*0.0617*	*0.0593*	*0.0578*	*0.0564*	*0.0527*	*0.0521*	*0.0483*	*0.0475*	*0.0454*	*0.0396*	*0.0428*	*0.0403*	*0.0247*	*0.0370*
Barium (Ba)-Dissolved	0.0990	0.124	0.127	0.136	0.139	0.0825	0.125	0.109	0.113	0.111	0.117	0.0896	0.0938	0.0973	0.0908	0.105	0.102	0.135	0.106	0.130	0.126	0.134	0.0759	0.114
Beryllium (Be)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bismuth (Bi)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Boron (B)-Dissolved	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium (Cd)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Calcium (Ca)-Dissolved	14.1	12.2	9.86	7.83	6.90	4.43	4.67	3.92	3.90	2.92	3.67	3.16	3.06	2.69	2.81	2.73	2.59	3.17	2.47	2.89	2.66	2.61	1.54	2.19
Chromium (Cr)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt (Co)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper (Cu)-Dissolved	0.0019	0.0021	<0.0010	0.0010	0.0015	<0.0010	0.0029	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron (Fe)-Dissolved	0.087	0.194	0.075	0.081	0.092	0.061	0.072	0.076	0.173	<0.030	0.061	<0.030	0.054	0.035	0.042	0.094	0.065	0.134	0.076	0.103	0.069	0.109	0.085	0.076
Lead (Pb)-Dissolved	<0.00050	0.00077	<0.00050	<0.00050	<0.00050	<0.00050	0.00089	<0.00050	0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Lithium (Li)-Dissolved	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Magnesium (Mg)-Dissolved	2.39	1.93	1.47	1.31	1.12	0.746	0.811	0.648	0.617	0.618	0.615	0.470	0.481	0.461	0.434	0.462	0.430	0.549	0.438	0.478	0.464	0.430	0.274	0.375
Manganese (Mn)-Dissolved	0.00729	0.0108	0.00592	0.00638	0.00712	0.00460	0.0103	0.00606	0.00758	0.00566	0.00621	0.00374	0.00515	0.00389	0.00403	0.00489	0.00437	0.00761	0.00465	0.00707	0.00646	0.00707	0.00411	0.00579
Mercury (Hg)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Molybdenum (Mo)-Dissolved	0.00827	0.00879	0.00646	0.00625	0.00526	0.00421	0.00429	0.00344	0.00326	0.00292	0.00263	0.00239	0.00249	0.00195	0.00183	0.00181	0.00169	0.00192	0.00153	0.00149	0.00161	0.00142	0.00076	0.00114
Nickel (Ni)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus (P)-Dissolved	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium (K)-Dissolved	4.62	3.33	2.55	2.38	2.15	1.64	1.81	1.49	1.45	1.41	1.30	1.11	1.11	1.03	0.91	1.02	0.98	1.17	0.93	0.98	1.02	0.94	0.67	0.87
Selenium (Se)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Silicon (Si)-Dissolved	3.35	3.80	2.82	2.76	3.03	2.16	2.73	2.28	2.67	2.05	2.20	1.90	2.01	1.73	1.90	2.01	1.89	2.59	1.79	2.28	2.08	2.16	1.24	1.78
Silver (Ag)-Dissolved	<0.00010	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	0.00019	<0.00010	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved	9.13	4.71	2.66	1.78	1.30	0.76	0.63	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)-Dissolved	0.118	0.0995	0.0858	0.0755	0.0688	0.0484	0.0551	0.0451	0.0444	0.0459	0.0461	0.0371	0.0397	0.0341	0.0341	0.0355	0.0349	0.0448	0.0334	0.0376	0.0377	0.0388	0.0223	0.0317
Thallium (Tl)-Dissolved	*0.0027*	*0.0023*	*0.0020*	0.0019	0.0018	0.0014	0.0018	0.0015	0.0016	0.0014	0.0014	0.0012	0.0013	0.0012	0.0011	0.0012	0.0012	0.0015	0.0012	0.0014	0.0013	0.0013	<0.0010	0.0012
Tin (Sn)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.00201	0.00126	0.00058	0.00026	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc (Zn)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Table 24. Humidity Cell Results for Sample 48359 (Hole I.D. FX3316)

RESULTS OF ANALYSIS	GR																							
Sample ID	**48359-0**	**48359-1**	**48359-2**	**48359-3**	**48359-4**	**48359-5**	**48359-6**	**48359-7**	**48359-8**	**48359-9**	**48359-10**	**48359-11**	**48359-12**	**48359-13**	**48359-14**	**48359-15**	**48359-16**	**48359-17**	**48359-18**	**48359-19**	**48359-20**	**48359-21**	**48359-22**	**48359-23**
Date Sampled	**03-AUG-10**	**10-AUG-10**	**17-AUG-10**	**24-AUG-10**	**31-AUG-10**	**07-SEP-10**	**14-SEP-10**	**21-SEP-10**	**28-SEP-10**	**05-OCT-10**	**12-OCT-10**	**19-OCT-10**	**26-OCT-10**	**02-NOV-10**	**09-NOV-10**	**16-NOV-10**	**23-NOV-10**	**30-NOV-10**	**07-DEC-10**	**14-DEC-10**	**21-DEC-10**	**28-DEC-10**	**04-JAN-11**	**11-JAN-11**
Sample Preparation																								
Total Volume In	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	460	475	450	500	495	450	500	470	500	460	485	460	450	480	470	475	490	500	500	470	470	460	475	465
Physical Tests																								
Conductivity	1080	671	375	278	235	191	181	176	159	154	143	138	137	127	129	128	130	142	126	136	133	130	123	132
pH	7.83	7.85	8.00	8.03	8.04	8.16	8.11	8.11	8.13	8.10	8.13	8.12	8.10	8.14	8.11	8.12	8.15	8.20	8.11	8.14	8.16	8.14	8.15	8.15
Anions and Nutrients																								
Acidity (as CaCO3)	3.9	2.9	5.3	2.7	4.6	3.9	3.1	2.3	2.5	2.2	2.8	5.6	3.1	1.7	1.3	1.8	1.8	1.5	2.9	2.2	4.9	2.0	2.7	2.2
Alkalinity, Total (as CaCO3)	35.9	41.8	41.0	40.8	44.5	37.4	45.5	44.2	43.6	44.7	43.8	45.7	42.2	40.9	43.4	43.4	43.0	48.3	44.1	46.2	43.3	46.3	39.1	46.1
Sulfate (SO4)	542	304	152	93.2	67.3	50.5	39.8	38.6	30.7	33.9	27.0	27.2	25.3	22.8	21.7	21.3	19.2	21.1	18.3	19.6	18.7	18.1	16.6	18.3
Dissolved Metals																								
Aluminum (Al)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Antimony (Sb)-Dissolved	0.0029	0.0025	0.0023	0.0025	0.0027	0.0023	0.0025	0.0025	0.0025	0.0023	0.0022	0.0022	0.0022	0.0021	0.0021	0.0021	0.0021	0.0022	0.0020	0.0020	0.0021	0.0020	0.0021	0.0020
Arsenic (As)-Dissolved	*0.0366*	*0.0347*	*0.0387*	*0.0479*	*0.0533*	*0.0537*	*0.0606*	*0.0655*	*0.0673*	*0.0663*	*0.0633*	*0.0674*	*0.0682*	*0.0692*	*0.0678*	*0.0678*	*0.0670*	*0.0737*	*0.0654*	*0.0680*	*0.0678*	*0.0684*	*0.0650*	*0.0667*
Barium (Ba)-Dissolved	0.0454	0.0327	0.0401	0.0510	0.0568	0.0479	0.0694	0.0685	0.0677	0.0738	0.0723	0.0704	0.0662	0.0784	0.0707	0.0803	0.0820	0.0936	0.0862	0.0929	0.0947	0.0983	0.0938	0.101
Beryllium (Be)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bismuth (Bi)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Boron (B)-Dissolved	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium (Cd)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Calcium (Ca)-Dissolved	252	146	77.2	55.0	47.3	38.0	34.6	35.6	31.7	29.2	26.8	29.4	26.2	24.5	24.9	24.5	24.1	26.7	24.0	26.0	25.5	24.9	23.1	24.9
Chromium (Cr)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt (Co)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper (Cu)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Lithium (Li)-Dissolved	0.017	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Magnesium (Mg)-Dissolved	18.2	8.33	4.00	3.25	2.37	1.74	1.75	1.56	1.28	1.35	1.21	1.03	0.954	1.12	0.946	0.951	0.909	1.00	0.896	0.950	0.929	0.879	0.853	0.868
Manganese (Mn)-Dissolved	0.594	0.192	0.0695	0.0480	0.0196	0.00967	0.00854	0.00704	0.00479	0.00453	0.00335	0.00291	0.00250	0.00207	0.00163	0.00163	0.00149	0.00117	0.00110	0.00145	0.00094	0.00102	0.00082	0.00085
Mercury (Hg)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Molybdenum (Mo)-Dissolved	0.00315	0.00357	0.00342	0.00441	0.00488	0.00438	0.00478	0.00533	0.00505	0.00501	0.00429	0.00413	0.00426	0.00389	0.00354	0.00379	0.00352	0.00420	0.00335	0.00382	0.00391	0.00396	0.00342	0.00367
Nickel (Ni)-Dissolved	0.0074	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus (P)-Dissolved	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium (K)-Dissolved	8.23	5.32	3.14	2.94	2.41	1.85	1.86	1.62	1.45	1.40	1.18	1.07	1.00	0.95	0.81	0.86	0.82	0.87	0.76	0.76	0.77	0.72	0.72	0.68
Selenium (Se)-Dissolved	*0.058*	0.030	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Silicon (Si)-Dissolved	3.06	3.40	2.61	2.54	2.76	2.21	2.58	2.54	2.54	2.31	2.10	2.19	2.08	1.90	2.00	1.97	1.90	2.24	1.76	2.04	1.98	1.92	1.73	1.90
Silver (Ag)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved	2.71	1.22	0.54	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)-Dissolved	0.306	0.168	0.108	0.101	0.0867	0.0716	0.0781	0.0749	0.0698	0.0714	0.0682	0.0618	0.0625	0.0602	0.0572	0.0604	0.0593	0.0677	0.0563	0.0604	0.0609	0.0627	0.0568	0.0596
Thallium (Tl)-Dissolved	*0.0050*	*0.0031*	*0.0020*	0.0019	0.0016	0.0014	0.0014	0.0013	0.0013	0.0012	0.0011	0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin (Sn)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Dissolved	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	*0.0617*	*0.0342*	0.0171	0.0127	0.00916	0.00637	0.00614	0.00570	0.00483	0.00428	0.00365	0.00341	0.00330	0.00268	0.00272	0.00265	0.00237	0.00306	0.00230	0.00254	0.00250	0.00238	0.00223	0.00240
Vanadium (V)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc (Zn)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Table 25. Humidity Cell Results for Sample 48389 (Hole I.D. FX3317)

RESULTS OF ANALYSIS	GR																							
Sample ID	**48389-0**	**48389-1**	**48389-2**	**48389-3**	**48389-4**	**48389-5**	**48389-6**	**48389-7**	**48389-8**	**48389-9**	**48389-10**	**48389-11**	**48389-12**	**48389-13**	**48389-14**	**48389-15**	**48389-16**	**48389-17**	**48389-18**	**48389-19**	**48389-20**	**48389-21**	**48389-22**	**48389-23**
Date Sampled	**03-AUG-10**	**10-AUG-10**	**17-AUG-10**	**24-AUG-10**	**31-AUG-10**	**07-SEP-10**	**14-SEP-10**	**21-SEP-10**	**28-SEP-10**	**05-OCT-10**	**12-OCT-10**	**19-OCT-10**	**26-OCT-10**	**02-NOV-10**	**09-NOV-10**	**16-NOV-10**	**23-NOV-10**	**30-NOV-10**	**07-DEC-10**	**14-DEC-10**	**21-DEC-10**	**28-DEC-10**	**04-JAN-11**	**11-JAN-11**
Sample Preparation																								
Total Volume In	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	450	475	485	495	500	475	490	440	485	460	500	450	470	485	475	475	475	495	500	500	480	475	475	485
Physical Tests																								
Conductivity	411	290	200	162	149	118	129	130	119	114	107	113	101	98.1	97.6	98.7	101	110	96.0	106	104	101	91.2	102
pH	8.10	8.05	8.15	8.18	8.10	8.34	8.16	8.18	8.23	8.15	8.19	8.16	8.20	8.25	8.22	8.20	8.24	8.26	8.21	8.25	8.25	8.25	8.20	8.28
Anions and Nutrients																								
Acidity (as CaCO3)	2.6	2.0	3.9	1.7	3.4	3.1	2.1	1.8	2.5	1.8	2.1	4.0	2.1	1.3	1.2	1.7	1.8	1.3	2.3	1.8	3.5	1.5	2.1	1.4
Alkalinity, Total (as CaCO3)	33.0	45.4	44.9	44.0	47.8	39.5	47.8	48.3	46.9	45.7	45.7	48.2	43.6	43.6	43.6	44.5	44.0	49.8	44.0	48.2	48.2	46.8	38.7	46.6
Sulfate (SO4)	165	94.6	42.1	33.2	25.0	18.9	16.0	14.4	11.9	9.65	8.12	7.72	6.99	6.01	5.35	5.26	4.71	5.38	4.17	4.49	4.04	3.86	3.49	3.62
Dissolved Metals																								
Aluminum (Al)-Dissolved	0.011	0.011	0.016	0.019	0.018	0.038	0.022	0.023	<0.030	<0.030	<0.030	<0.030	0.032	0.032	<0.030	0.032	0.031	<0.030	0.033	<0.030	0.032	0.037	0.046	0.035
Antimony (Sb)-Dissolved	0.0043	0.0049	0.0047	0.0051	0.0054	0.0048	0.0052	0.0052	0.0050	0.0044	0.0042	0.0044	0.0042	0.0041	0.0037	0.0038	0.0037	0.0040	0.0034	0.0037	0.0037	0.0038	0.0036	0.0037
Arsenic (As)-Dissolved	*0.0486*	*0.0554*	*0.0608*	*0.0738*	*0.0777*	*0.0862*	*0.0864*	*0.0940*	*0.0967*	*0.0918*	*0.0908*	*0.0955*	*0.0983*	*0.101*	*0.0980*	*0.0978*	*0.0929*	*0.102*	*0.0958*	*0.0939*	*0.0986*	*0.101*	*0.0936*	*0.0940*
Barium (Ba)-Dissolved	0.0704	0.0548	0.0683	0.0816	0.0885	0.0646	0.0965	0.112	0.105	0.109	0.104	0.112	0.102	0.120	0.105	0.123	0.120	0.139	0.121	0.140	0.143	0.153	0.133	0.146
Beryllium (Be)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bismuth (Bi)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Boron (B)-Dissolved	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium (Cd)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Calcium (Ca)-Dissolved	61.2	44.3	31.2	23.9	22.7	17.6	20.3	21.2	19.2	16.2	17.3	18.8	16.9	16.7	16.6	16.6	16.4	18.5	16.0	18.3	17.8	17.5	15.2	17.7
Chromium (Cr)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt (Co)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper (Cu)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	0.057	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Lithium (Li)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Magnesium (Mg)-Dissolved	8.37	5.75	3.60	3.38	2.85	2.19	2.43	2.40	2.08	2.10	1.96	1.79	1.63	2.01	1.58	1.75	1.65	1.90	1.70	1.77	1.76	1.73	1.66	1.68
Manganese (Mn)-Dissolved	0.0208	0.0189	0.0130	0.0114	0.0101	0.0104	0.00645	0.00623	0.00435	0.00485	0.00439	0.00383	0.00338	0.00325	0.00254	0.00316	0.00308	0.00354	0.00300	0.00321	0.00288	0.00328	0.00324	0.00336
Mercury (Hg)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Molybdenum (Mo)-Dissolved	0.00486	0.00629	0.00588	0.00704	0.00692	0.00634	0.00672	0.00696	0.00610	0.00545	0.00498	0.00496	0.00463	0.00436	0.00397	0.00392	0.00362	0.00422	0.00329	0.00369	0.00363	0.00360	0.00312	0.00304
Nickel (Ni)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus (P)-Dissolved	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium (K)-Dissolved	15.7	11.4	7.56	7.03	5.81	4.47	4.51	4.02	3.50	3.23	2.78	2.65	2.37	2.32	1.84	2.03	1.92	2.01	1.75	1.76	1.77	1.64	1.61	1.57
Selenium (Se)-Dissolved	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Silicon (Si)-Dissolved	3.36	3.95	3.46	3.38	3.68	3.00	3.55	3.62	3.58	3.06	2.94	3.12	2.90	2.78	2.78	2.78	2.68	3.08	2.48	2.91	2.81	2.78	2.35	2.69
Silver (Ag)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved	3.12	1.83	0.94	0.68	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)-Dissolved	0.427	0.306	0.229	0.221	0.201	0.159	0.190	0.193	0.176	0.173	0.167	0.160	0.145	0.159	0.138	0.155	0.149	0.168	0.144	0.154	0.156	0.156	0.143	0.151
Thallium (Tl)-Dissolved	*0.0052*	*0.0044*	*0.0033*	*0.0030*	*0.0028*	*0.0024*	*0.0025*	*0.0023*	*0.0023*	*0.0020*	0.0018	0.0018	0.0017	0.0016	0.0014	0.0016	0.0014	0.0016	0.0014	0.0015	0.0015	0.0014	0.0014	0.0014
Tin (Sn)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.0192	0.0151	0.00760	0.00517	0.00364	0.00261	0.00258	0.00267	0.00215	0.00178	0.00156	0.00158	0.00147	0.00131	0.00121	0.00119	0.00110	0.00131	0.00104	0.00123	0.00118	0.00120	0.00105	0.00108
Vanadium (V)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc (Zn)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Table 26. Humidity Cell Results for Sample 54588 (Hole I.D. FX3527)

RESULTS OF ANALYSIS	WR																							
Sample ID	**54588-0**	**54588-1**	**54588-2**	**54588-3**	**54588-4**	**54588-5**	**54588-6**	**54588-7**	**54588-8**	**54588-9**	**54588-10**	**54588-11**	**54588-12**	**54588-13**	**54588-14**	**54588-15**	**54588-16**	**54588-17**	**54588-18**	**54588-19**	**54588-20**	**54588-21**	**54588-22**	**54588-23**
Date Sampled	**03-AUG-10**	**10-AUG-10**	**17-AUG-10**	**24-AUG-10**	**31-AUG-10**	**07-SEP-10**	**14-SEP-10**	**21-SEP-10**	**28-SEP-10**	**05-OCT-10**	**12-OCT-10**	**19-OCT-10**	**26-OCT-10**	**02-NOV-10**	**09-NOV-10**	**16-NOV-10**	**23-NOV-10**	**30-NOV-10**	**07-DEC-10**	**14-DEC-10**	**21-DEC-10**	**28-DEC-10**	**04-JAN-11**	**11-JAN-11**
Sample Preparation																								
Total Volume In	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	480	500	500	465	480	450	500	475	495	500	455	500	485	470	485	495	485	470	490	475	485	460	435	500
Physical Tests																								
Conductivity	191	151	112	104	87.0	77.0	77.2	80.1	82.5	84.2	90.7	73.6	67.8	65.3	63.1	51.5	59.7	57.3	53.0	52.3	51.2	52.4	47.5	49.4
pH	7.42	7.05	6.81	6.92	6.86	6.60	6.64	6.26	6.00	5.76	5.71	5.57	5.60	5.61	5.53	5.70	5.56	5.56	5.56	5.58	5.53	5.46	5.43	5.50
Anions and Nutrients																								
Acidity (as CaCO3)	2.8	2.5	4.4	3.5	7.0	3.9	3.5	3.0	4.1	3.8	3.8	5.4	3.1	2.7	2.3	2.8	2.8	2.8	3.5	3.4	5.5	3.6	3.6	4.2
Alkalinity, Total (as CaCO3)	12.0	8.3	5.7	4.3	4.0	2.2	2.4	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Sulfate (SO4)	60.3	50.9	29.3	35.4	32.3	28.4	28.1	29.3	25.5	34.1	31.0	28.2	25.7	25.6	23.8	19.5	21.7	21.2	19.7	19.6	18.5	19.0	16.8	19.1
Dissolved Metals																								
Aluminum (Al)-Dissolved	0.019	0.021	0.134	0.055	0.282	0.186	0.182	0.060	0.046	<0.030	<0.030	<0.030	0.056	0.037	0.052	0.065	0.040	0.097	0.035	0.075	0.105	0.030	0.054	0.033
Antimony (Sb)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic (As)-Dissolved	*0.0075*	*0.0070*	*0.0061*	*0.0053*	*0.0067*	0.0051	*0.0048*	*0.0032*	0.0028	0.0022	0.0021	0.0017	0.0021	0.0017	0.0017	0.0019	0.0017	0.0019	0.0016	0.0017	0.0019	0.0015	0.0015	0.0015
Barium (Ba)-Dissolved	0.0647	0.0440	0.0472	0.0563	0.0551	0.0477	0.0541	0.0546	0.0526	0.0537	0.0525	0.0521	0.0548	0.0570	0.0526	0.0611	0.0605	0.0601	0.0626	0.0616	0.0643	0.0643	0.0632	0.0696
Beryllium (Be)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bismuth (Bi)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Boron (B)-Dissolved	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium (Cd)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Calcium (Ca)-Dissolved	17.8	13.5	9.47	9.41	7.96	6.94	7.16	7.55	8.17	7.50	9.27	7.33	6.80	6.52	6.30	4.94	5.61	5.52	5.04	5.13	4.95	5.08	4.49	4.66
Chromium (Cr)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt (Co)-Dissolved	0.0028	0.0028	0.0026	0.0042	0.0036	0.0035	0.0044	0.0051	0.0063	0.0072	0.0093	0.0067	0.0064	0.0065	0.0062	0.0052	0.0061	0.0062	0.0056	0.0057	0.0058	0.0064	0.0056	0.0059
Copper (Cu)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron (Fe)-Dissolved	0.057	0.033	0.154	0.052	0.259	0.134	0.111	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Lithium (Li)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Magnesium (Mg)-Dissolved	3.32	2.69	1.78	2.14	1.67	1.45	1.56	1.58	1.56	1.75	1.82	1.32	1.21	1.45	1.16	0.988	1.08	1.07	0.994	1.01	1.00	1.02	0.915	0.926
Manganese (Mn)-Dissolved	0.111	0.0981	0.0784	0.107	0.0868	0.0810	0.0988	0.109	0.123	0.142	0.165	0.121	0.107	0.123	0.112	0.0994	0.114	0.104	0.102	0.107	0.108	0.119	0.106	0.107
Mercury (Hg)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Molybdenum (Mo)-Dissolved	0.00698	0.00601	0.00365	0.00324	0.00219	0.00137	0.00104	0.00063	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Nickel (Ni)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0061	0.0051	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus (P)-Dissolved	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium (K)-Dissolved	6.97	6.43	4.79	5.49	4.60	4.05	4.14	3.87	3.75	3.82	3.70	3.13	2.90	2.86	2.40	2.33	2.39	2.29	2.14	2.01	2.06	1.98	1.91	1.81
Selenium (Se)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Silicon (Si)-Dissolved	10.8	13.1	11.5	13.7	12.8	9.47	10.7	10.5	11.5	10.9	12.7	10.3	10.0	9.49	9.71	7.27	8.45	8.62	7.54	7.91	7.60	7.95	6.59	7.34
Silver (Ag)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved	7.46	5.76	3.26	3.01	1.90	1.31	1.04	0.83	0.68	0.57	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)-Dissolved	0.0850	0.0650	0.0466	0.0556	0.0450	0.0405	0.0437	0.0431	0.0457	0.0488	0.0566	0.0416	0.0416	0.0404	0.0367	0.0319	0.0363	0.0358	0.0327	0.0325	0.0323	0.0355	0.0306	0.0325
Thallium (Tl)-Dissolved	*0.0022*	*0.0023*	0.0019	*0.0021*	0.0019	0.0019	0.0019	0.0019	*0.0021*	*0.0021*	*0.0023*	0.0019	0.0019	0.0017	0.0015	0.0014	0.0014	0.0014	0.0014	0.0013	0.0013	0.0014	0.0013	0.0013
Tin (Sn)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Dissolved	<0.010	<0.010	0.012	<0.010	0.021	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.00043	0.00034	0.00032	0.00029	0.00034	0.00034	0.00027	0.00018	0.00021	0.00023	0.00031	0.00032	0.00028	0.00027	0.00031	0.00021	0.00028	0.00031	0.00029	0.00028	0.00030	0.00035	0.00032	0.00033
Vanadium (V)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc (Zn)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	0.0059	<0.0050	0.0070	0.0087	0.0100	0.0128	0.0199	0.0159	0.0139	0.0138	0.0132	0.0101	0.0120	0.0125	0.0103	0.0120	0.0120	0.0123	0.0112	0.0111

Table 27. Humidity Cell Results for Sample 55347 (Hole I.D. FX3476)

RESULTS OF ANALYSIS	WR																							
Sample ID	**55347-0**	**55347-1**	**55347-2**	**55347-3**	**55347-4**	**55347-5**	**55347-6**	**55347-7**	**55347-8**	**55347-9**	**55347-10**	**55347-11**	**55347-12**	**55347-13**	**55347-14**	**55347-15**	**55347-16**	**55347-17**	**55347-18**	**55347-19**	**55347-20**	**55347-21**	**55347-22**	**55347-23**
Date Sampled	**03-AUG-10**	**10-AUG-10**	**17-AUG-10**	**24-AUG-10**	**31-AUG-10**	**07-SEP-10**	**14-SEP-10**	**21-SEP-10**	**28-SEP-10**	**05-OCT-10**	**12-OCT-10**	**19-OCT-10**	**26-OCT-10**	**02-NOV-10**	**09-NOV-10**	**16-NOV-10**	**23-NOV-10**	**30-NOV-10**	**07-DEC-10**	**14-DEC-10**	**21-DEC-10**	**28-DEC-10**	**04-JAN-11**	**11-JAN-11**
Sample Preparation																								
Total Volume In	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	455	475	500	500	470	425	500	465	480	485	500	465	475	475	475	480	495	500	495	460	470	470	475	475
Physical Tests																								
Conductivity	309	281	206	181	163	133	142	136	135	137	128	138	127	124	127	129	128	142	143	145	143	139	129	140
pH	8.26	8.16	8.15	8.20	8.20	8.36	8.22	8.20	8.20	8.15	8.15	8.13	8.12	8.15	8.11	8.09	8.11	8.15	8.10	8.13	8.18	8.13	8.13	8.15
Anions and Nutrients																								
Acidity (as CaCO3)	1.9	1.6	3.8	1.9	4.4	3.3	2.0	1.8	1.9	2.0	3.3	4.7	2.3	1.4	1.3	1.7	1.7	1.4	2.5	2.0	4.4	1.8	2.7	2.1
Alkalinity, Total (as CaCO3)	47.0	65.2	62.0	60.3	58.1	46.7	54.7	54.7	54.4	61.2	55.6	59.0	58.4	50.6	50.6	49.4	47.6	54.4	57.8	63.3	53.4	57.3	62.4	57.8
Sulfate (SO4)	89.9	72.5	34.3	31.4	24.3	18.7	15.7	13.0	13.3	12.4	11.5	12.8	11.0	11.7	12.8	14.0	14.0	15.2	13.8	14.2	12.3	11.4	9.61	11.6
Dissolved Metals																								
Aluminum (Al)-Dissolved	<0.010	<0.010	<0.010	0.014	0.012	0.034	0.026	0.021	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	<0.030	<0.030	<0.030	<0.030	0.031	<0.030
Antimony (Sb)-Dissolved	0.0028	0.0034	0.0034	0.0040	0.0044	0.0037	0.0039	0.0038	0.0041	0.0039	0.0038	0.0042	0.0040	0.0038	0.0039	0.0040	0.0040	0.0045	0.0044	0.0043	0.0044	0.0046	0.0045	0.0044
Arsenic (As)-Dissolved	*0.0151*	*0.0142*	*0.0137*	*0.0147*	*0.0151*	*0.0185*	*0.0160*	*0.0161*	*0.0161*	*0.0144*	*0.0144*	*0.0135*	*0.0148*	*0.0140*	*0.0136*	*0.0136*	*0.0135*	*0.0135*	*0.0123*	*0.0131*	*0.0129*	*0.0129*	*0.0122*	*0.0120*
Barium (Ba)-Dissolved	0.0126	0.0122	0.00833	0.00876	0.00833	0.00617	0.00714	0.00709	0.00729	0.00726	0.00653	0.00735	0.00679	0.00643	0.00599	0.00670	0.00618	0.00746	0.00723	0.00731	0.00724	0.00731	0.00693	0.00725
Beryllium (Be)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bismuth (Bi)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Boron (B)-Dissolved	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium (Cd)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Calcium (Ca)-Dissolved	25.6	24.6	19.3	18.2	17.2	13.6	15.5	15.3	15.4	13.8	14.5	16.8	15.4	15.3	15.7	15.8	15.1	17.4	18.0	18.7	18.2	17.8	16.4	18.1
Chromium (Cr)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt (Co)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper (Cu)-Dissolved	0.0049	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Lithium (Li)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Magnesium (Mg)-Dissolved	15.5	15.1	9.81	9.98	8.50	6.87	7.34	6.82	6.41	6.94	6.21	6.17	5.53	6.71	5.88	6.20	5.59	6.47	6.69	6.80	6.68	6.48	6.20	6.26
Manganese (Mn)-Dissolved	0.00277	0.00519	0.00440	0.00468	0.00484	0.00371	0.00415	0.00365	0.00301	0.00346	0.00375	0.00262	0.00297	0.00226	0.00198	0.00317	0.00261	0.00281	0.00240	0.00168	0.00182	0.00173	0.00271	0.00120
Mercury (Hg)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Molybdenum (Mo)-Dissolved	0.0152	0.0190	0.0175	0.0235	0.0229	0.0174	0.0185	0.0172	0.0175	0.0166	0.0129	0.0139	0.0125	0.0116	0.00994	0.00990	0.00871	0.0108	0.00974	0.0103	0.00998	0.00984	0.00799	0.00780
Nickel (Ni)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus (P)-Dissolved	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium (K)-Dissolved	9.27	8.58	5.80	5.73	5.02	4.02	3.98	3.47	3.34	3.25	2.73	2.79	2.53	2.40	2.06	2.16	2.01	2.08	2.01	1.92	1.94	1.75	1.75	1.61
Selenium (Se)-Dissolved	0.021	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Silicon (Si)-Dissolved	2.54	3.08	2.56	2.65	2.82	2.28	2.63	2.46	2.64	2.51	2.31	2.46	2.32	2.15	2.17	2.14	2.09	2.39	2.33	2.46	2.42	2.37	2.12	2.26
Silver (Ag)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved	7.04	5.40	2.55	1.69	1.09	0.64	0.51	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)-Dissolved	0.294	0.269	0.189	0.190	0.163	0.134	0.147	0.137	0.133	0.140	0.128	0.133	0.119	0.126	0.114	0.127	0.118	0.134	0.135	0.132	0.136	0.138	0.124	0.127
Thallium (Tl)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin (Sn)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.00423	0.00450	0.00283	0.00269	0.00231	0.00212	0.00202	0.00196	0.00203	0.00203	0.00186	0.00210	0.00193	0.00176	0.00177	0.00183	0.00167	0.00214	0.00218	0.00224	0.00223	0.00220	0.00193	0.00222
Vanadium (V)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc (Zn)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Table 28. Humidity Cell Results for Sample 56064 (Hole I.D. FX3551)

RESULTS OF ANALYSIS																								
Sample ID	**56064-0**	**56064-1**	**56064-2**	**56064-3**	**56064-4**	**56064-5**	**56064-6**	**56064-7**	**56064-8**	**56064-9**	**56064-10**	**56064-11**	**56064-12**	**56064-13**	**56064-14**	**56064-15**	**56064-16**	**56064-17**	**56064-18**	**56064-19**	**56064-20**	**56064-21**	**56064-22**	**56064-23**
Date Sampled	**03-AUG-10**	**10-AUG-10**	**17-AUG-10**	**24-AUG-10**	**31-AUG-10**	**07-SEP-10**	**14-SEP-10**	**21-SEP-10**	**28-SEP-10**	**05-OCT-10**	**12-OCT-10**	**19-OCT-10**	**26-OCT-10**	**02-NOV-10**	**09-NOV-10**	**16-NOV-10**	**23-NOV-10**	**30-NOV-10**	**07-DEC-10**	**14-DEC-10**	**21-DEC-10**	**28-DEC-10**	**04-JAN-11**	**11-JAN-11**
Sample Preparation																								
Total Volume In	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	475	470	475	460	450	485	495	475	490	480	475	485	475	495	495	475	500	455	495	450	465	465	500	470
Physical Tests																								
Conductivity	293	217	141	118	107	85.0	89.6	73.3	64.4	59.3	59.0	50.8	47.0	42.7	42.5	46.3	41.2	48.0	38.9	42.4	40.8	36.1	35.2	34.8
pH	7.90	7.83	7.84	7.86	7.84	7.90	7.81	7.69	7.71	7.65	7.60	7.67	7.62	7.63	7.74	7.64	7.65	7.65	7.51	7.55	7.56	7.57	7.14	7.57
Anions and Nutrients																								
Acidity (as CaCO3)	2.4	2.0	3.7	2.2	4.0	3.3	2.8	2.3	3.4	2.6	2.8	<1.0	1.7	1.6	1.4	2.0	1.8	1.7	2.7	2.2	7.2	2.2	2.4	2.3
Alkalinity, Total (as CaCO3)	28.3	33.8	23.8	23.6	24.8	18.5	23.2	17.8	15.1	14.1	15.2	13.7	12.0	11.1	11.6	11.7	11.4	12.9	11.1	12.5	11.3	10.2	8.7	9.5
Sulfate (SO4)	115	68.2	31.4	26.1	25.0	18.7	16.4	12.5	10.4	8.79	7.64	6.57	6.19	5.04	4.58	4.22	4.07	4.47	3.44	3.41	3.07	3.00	2.71	2.68
Dissolved Metals																								
Aluminum (Al)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Antimony (Sb)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic (As)-Dissolved	*0.0106*	0.0098	*0.0099*	*0.0117*	*0.0124*	*0.0112*	*0.0115*	*0.0120*	*0.0114*	*0.0114*	*0.0111*	*0.0110*	*0.0119*	*0.0116*	*0.0113*	*0.0103*	*0.0111*	*0.0118*	*0.0116*	*0.0118*	*0.0120*	*0.0130*	*0.0130*	*0.0125*
Barium (Ba)-Dissolved	0.0568	0.0578	0.0559	0.0522	0.0456	0.0313	0.0362	0.0293	0.0252	0.0232	0.0236	0.0204	0.0199	0.0182	0.0155	0.0201	0.0161	0.0197	0.0159	0.0170	0.0161	0.0148	0.0148	0.0144
Beryllium (Be)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Bismuth (Bi)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Boron (B)-Dissolved	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cadmium (Cd)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Calcium (Ca)-Dissolved	45.1	36.0	21.2	18.2	16.5	12.6	14.0	11.2	9.63	8.10	8.79	7.75	7.15	6.53	6.38	6.90	5.92	7.11	5.74	6.41	6.04	5.27	5.01	5.05
Chromium (Cr)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cobalt (Co)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Copper (Cu)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Iron (Fe)-Dissolved	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Lead (Pb)-Dissolved	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Lithium (Li)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Magnesium (Mg)-Dissolved	5.96	4.26	2.33	2.17	1.81	1.34	1.49	1.13	0.911	0.863	0.873	0.716	0.666	0.672	0.628	0.676	0.596	0.735	0.601	0.645	0.628	0.545	0.555	0.522
Manganese (Mn)-Dissolved	0.00443	0.00580	0.00248	0.00266	0.00240	0.00205	0.00225	0.00246	0.00167	0.00232	0.00236	0.00184	0.00257	0.00220	0.00181	0.00263	0.00236	0.00241	0.00253	0.00276	0.00231	0.00261	0.00390	0.00225
Mercury (Hg)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Molybdenum (Mo)-Dissolved	0.00175	0.00183	0.00172	0.00203	0.00201	0.00154	0.00164	0.00161	0.00134	0.00136	0.00126	0.00116	0.00121	0.00108	0.00099	0.00111	0.00094	0.00102	0.00090	0.00098	0.00096	0.00095	0.00090	0.00078
Nickel (Ni)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus (P)-Dissolved	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium (K)-Dissolved	5.06	3.76	2.28	2.27	2.02	1.61	1.73	1.36	1.20	1.17	1.05	0.93	0.87	0.81	0.66	0.78	0.67	0.80	0.65	0.70	0.68	0.67	0.68	0.62
Selenium (Se)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Silicon (Si)-Dissolved	2.68	2.91	2.18	2.28	2.52	1.96	2.53	2.23	2.13	2.04	2.06	1.81	1.88	1.68	1.74	1.72	1.78	2.19	1.70	2.02	1.97	1.83	1.61	1.82
Silver (Ag)-Dissolved	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved	2.47	1.41	0.68	0.56	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)-Dissolved	0.228	0.185	0.124	0.121	0.104	0.0794	0.0901	0.0702	0.0622	0.0596	0.0598	0.0499	0.0490	0.0447	0.0393	0.0459	0.0389	0.0479	0.0376	0.0405	0.0395	0.0366	0.0341	0.0339
Thallium (Tl)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Tin (Sn)-Dissolved	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Dissolved	0.00976	0.00715	0.00237	0.00182	0.00131	0.00082	0.00077	0.00041	0.00029	0.00025	0.00023	0.00018	0.00017	0.00014	0.00012	0.00011	0.00010	0.00011	<0.00010	<0.00010	0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Dissolved	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc (Zn)-Dissolved	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Table 29. Nitrate Data (Page 1 of 2)

Sample I.D.	Rock Type	PH	NO3 (mg/L)	AA Value	In Pit (T/F)	Location
Upper Deadwood						
52921	1	8	2.8	0.075	FALSE	Wharf
56742	1	8	0	0.023	TRUE	GR
57094	1	8.1	0	0.025	TRUE	GR
58198	1	8.4	0.7	0.001	TRUE	GR
63252	1	9	2	0.003	FALSE	Wharf
52958	2	8.7	1.5	0.009	TRUE	Wharf
Intermediate Deadwood						
47109	3	6.9	0.7	0.036	TRUE	GR
47223	3	7.7	0.7	0.019	TRUE	GR
48152	3	8	3.4	0.000	FALSE	GR
51518	3	8	1	0.066	FALSE	Wharf
54020	3	7.9	1.3	0.038	TRUE	Wharf
54125	3	7.6	1	0.006	TRUE	Wharf
54940	3	8.1	1	0.028	TRUE	Wharf
56213	3	8.2	0.7	0.001	TRUE	GR
59866	3	7.6	1.1	0.000	FALSE	GR
60296	3	8.2	0.7	0.000	FALSE	GR
60654	3	8.4	0	0.005	TRUE	GR
60669	3	8.7	0	0.010	FALSE	GR
55603	4	8.1	1.9	0.007	TRUE	Wharf
58589	4	7.7	0.6	0.001	TRUE	GR
60664	4	7.7	0	0.001	FALSE	GR
61741	4	8.2	1.9	0.003	FALSE	GR
Lower Deadwood						
47377	10	7.8	1.8	0.003	FALSE	GR
51558	10	6.7	1.7	0.021	FALSE	Wharf
51838	10	6.8	1.4	0.008	TRUE	Wharf
53052	10	8.5	1	0.032	FALSE	Wharf
53760	10	8	0.5	0.018	FALSE	Wharf
Porphyry						
47044	6	7.1	0	0.009	TRUE	GR
47179	6	8.2	0.7	0.002	TRUE	GR
47969	6	8.7	0	0.006	FALSE	GR
49389	6	8.9	0.9	0.001	FALSE	Wharf
52231	6	8.1	2.3	0.016	FALSE	Wharf

Table 29. Nitrate Data (Page 2 of 2)

Sample I.D.	Rock Type	PH	NO3 (mg/L)	AA Value	In Pit (T/F)	Location
53652	6	8.5	1.2	0.001	TRUE	Wharf
53817	6	8.9	1.5	0.029	TRUE	Wharf
54334	6	8.5	1.5	0.041	TRUE	Wharf
54466	6	8.7	0.6	0.027	TRUE	Wharf
54748	6	8.1	0.9	0.006	TRUE	Wharf
55189	6	8.5	1.2	0.009	TRUE	Wharf
55288	6	8.5	0	0.057	FALSE	Wharf
55995	6	8.3	1	0.003	TRUE	GR
56384	6	8.3	0.8	0.001	TRUE	GR
57893	6	7.9	0.6	0.002	TRUE	GR
58004	6	7.8	0.6	0.001	TRUE	GR
58339	6	8	0	0.001	FALSE	GR
59946	6	8.2	0.8	0.003	FALSE	GR
61340	6	8.3	1.1	0.001	FALSE	GR
50722	7	8.3	0.7	0.001	FALSE	Wharf
50984	7	8.5	0	0.000	FALSE	Wharf
52460	7	8.1	0.7	0.003	FALSE	Wharf
54788	7	7.9	1	0.008	TRUE	Wharf
62055	7	7.8	2.3	0.001	FALSE	Wharf
Precambrian						
48952	11	7.5	1.1	0.004	TRUE	GR
60888	11	8	0	0.005	FALSE	GR