

**Anvil Range Mine – 2004
Groundwater Sampling Field
Summary Report**



prepared for:
Deloitte and Touche

prepared by:
Gartner Lee Limited

reference: GLL 40-692 **date:** March 2005

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1 Gartner Lee Limited

March 31, 2005

Valerie Chort
Deloitte and Touche Inc.
Via email: *vchort@deloitte.ca*

privileged and confidential
draft for discussion

Dear Ms. Chort:

**Re: 40-692 – Anvil Range Mine, Rose Creek Tailings Facility, 2004 Groundwater Field
Summary–Draft Report**

We are pleased to present you with a copy of our draft report. Please review at your earliest convenience and contact me to discuss your comments and revisions. Data from the recent 2004 sampling related to the leakage assessment of certain wells at the site have not been included in this report as they are currently under review. These data could be included at your request once they have been fully reviewed by the project group.

Please do not hesitate to contact me at ext. 24 should you have any questions. We thank you for the opportunity to work on this project and look forward to the upcoming 2005 season.

Yours very truly,
GARTNER LEE LIMITED

(via e-mail)

Martin Guilbeault, M.Sc., P.Eng
Hydrogeologist

MG:mg

March 31, 2005

Valerie Chort
Deloitte and Touche Inc.
Via email: *vchort@deloitte.ca*

privileged and confidential
draft for discussion

Dear Ms. Chort:

Re: 40-692 – Issuance of Draft Reports

A DRAFT is a rough copy of a report. The intent in issuing it is to allow other knowledgeable people associated with the project an opportunity to review the style and content prior to final issuance.

Since the FINAL report may differ from the draft, we think it only prudent to collect all of the DRAFT reports prior to issuance of the FINAL report.

We would appreciate it if you would see that all copies of the DRAFT are returned to us and then we will issue our FINAL report.

We thank you in advance for your cooperation.

Yours very truly,
GARTNER LEE LIMITED



E. Grant Anderson, P.Eng.
President

EGA:mm
Attach.

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E x e c u t i v e S u m m a r y

The Rose Creek Tailings Facility of the Anvil Range Mine contains approximately 54 million tonnes of acid generating tailings that overly a natural aquifer comprised primarily of glaciofluvial sands and gravels. Tailings were deposited into the facility from 1969 to 1992 in three impoundment areas, which contain both unsaturated and saturated tailings.

The network of groundwater quality monitoring wells in place dates back to 1981 and has been expanded on several occasions, including during the 2001 and 2003 hydrogeological investigations carried out by the Interim Receiver.

Groundwater monitoring at the site has occurred since 1981, with routine, bi-annual data collection since 1996. Extensive geochemical testing of the tailings for acid rock drainage assessments was carried out in 1988, 2001 and 2003. A physical hydrogeological analyses model was developed in 2001, and contaminant transport has been assessed by Environment Canada and others. It has been established that the tailings represent a substantial environmental risk and that leaching of metals into the native aquifer beneath the tailings is ongoing.

In 2003, a hydrogeological investigation consisting of sonic coring and multi-level bundle well installation was completed to obtain detailed stratigraphic information, collect additional samples of tailings and native soils for physical and geochemical testing and to provide additional groundwater quality monitoring in the tailings and aquifer. In 2004 routine groundwater sampling of the expanded well network was conducted to identify temporal trends and spatial distribution of contaminants in the groundwater at the site.

In 2004, a separate study examining the integrity of certain monitoring wells at the site was also undertaken. This study is on-going and data are currently under review and are not included in this report. A total of three projects related to groundwater monitoring of the Rose Creek Tailings Impoundment were completed by Gartner Lee:

1. Routine Bi-Annual Groundwater Sampling
2. Adaptive Management Plan (AMP) Sampling
3. Leakage Assessment of the P01 Series Wells (on-going)

The following report summarizes the groundwater monitoring field activities associated with the routine sampling and additional sampling performed as part of the adaptive management plan.

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1. Introduction

The Anvil Range mine, located in the central Yukon approximately 200 km NNE of the City of Whitehorse, was an open pit lead and zinc mine that produced lead and zinc mineral concentrates. Mining and milling activities were suspended in January 1998 and the owner, Anvil Range Mining Corporation, entered into receivership in April 1998.

Mill tailings were deposited into the Rose Creek Tailings Facility from mine start up in 1969 to 1992 when tailings deposition into the mined-out Faro main pit began. The Rose Creek Tailings Facility includes three tailings impoundments as illustrated in Figure 1 and described as follows:

1. The Original Impoundment contains tailings that were deposited between 1969 and 1975;
2. Tailings were deposited in the Second Impoundment from 1975 until 1982 and for approximately 5 months in 1986. Mine production was suspended from 1982 to 1986 and, therefore, no tailings were deposited; and
3. The Intermediate Impoundment contains tailings that were deposited between 1986 and 1992. From 1992 until mine closure in 1998, tailings were deposited under water in the mined-out Faro Pit and not in the surface impoundments.

In total, the surface impoundments hold an estimated 54.4 million tonnes of tailings. Based on field observations, the tailings are at least 25 m thick and overlie native soils comprised largely of sand and gravel of glacial outwash origin with some glaciolacustrine sediments. Cores collected in 2003 show that native soils may extend to more than 195 ft below the tailings surface (i.e. bedrock depth). A basal silt till unit overlies bedrock beneath the sand and gravel. (GLL, 2003)

The primary concern regarding the chemical stability of the tailings solids is that progressive oxidation and flushing of contaminants from the tailings into the native soils may progress to the level where the downgradient environment including Rose Creek will be impacted.

In 2001, a comprehensive hydrogeological and geochemical investigation of the Rose Creek Tailings facility was conducted for the purpose of updating the characterization of the hydrogeological system and geochemical state of the tailings (GLL, 2002). As part of this investigation, twenty-two groundwater monitoring wells were installed at eleven locations in and downstream of the tailings impoundments. In 2003, a follow up drilling and coring investigation was undertaken using sonic drilling technology to obtain detailed stratigraphic information from ground surface down to bedrock. As part of this program, 76 additional groundwater sampling points were installed at nine locations within and downgradient of

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the tailings impoundments. The locations of all monitoring wells at the site are shown on Figure 1, Figure 2, Figure 3 and Figure 4.

In 2004, conventional wells and multilevel wells were sampled during two field visits: one from June 7 to 11 and the other from September 21 to September 30. Wells X24 and X25 and P03-04, P03-08, and P03-09 also included in the spring and fall sampling, have been targeted for additional sampling as part of an Adaptive Management Plan (AMP). These wells were sampled four times in 2004: June, August, September and November. The summer trip took place from August 3 – 4 and the winter trip took place on November 17 and 18. Data from the AMP sampling are presented in this report. A summary of field activities and sampled wells is included in Table 1. Well construction details are available in Table 2.

Findings in 2003 by GLL and Environment Canada suggested that data from some of the P01 series wells, may not be representative of in-situ conditions within the formation at the well screens. As a result, all P01 series wells were sampled as part of a more detailed study. The assessment included additional samples collected at the P01 wells over the spring, summer, and fall of 2004. Due to the goal of the study, sampling was done using different sampling methods and procedures and therefore results need special interpretation. The results of the leakage assessment are presented in the draft report 2004 Leakage Assessment of P01 Series Wells, prepared by Gartner Lee Ltd. for Deloitte & Touche. The results from the leakage assessment are currently under review and are presented under separate cover. All of the available groundwater quality data are maintained in an electronic database.

This report is a factual report which provides a summary of the data collected in 2004. It is not intended to be a comprehensive review of data and site conditions but a brief summary of 2004 field activities and data. These data continue to undergo QA/QC review and some data are the subject of other studies. In addition, some wells are the subject of discussion regarding possible decommissioning in 2005.

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2. Quality Assurance and Quality Control

2.1 General QA/QC Measures

The following quality assurance and quality control (QA/QC) procedures were incorporated into the 2004 sampling events:

1. Wells were purged to remove standing water from the well prior to sampling and to ensure sampling of fresh formation water. This consisted of either pumping the well dry or removing approximately three well volumes (including sand-pack) from conventional wells and at least one well volume from small diameter multi-level bundle wells. In most cases, field parameters were monitored as the well was purged. A comparison of samples collected from multi-level wells (either by Env. Canada or GLL) after one to three well volumes revealed that one well volume was sufficient purge volume for the multi-levels. Consequently, field sampling time could be significantly reduced.
2. To reduce the risk of cross contamination, samples were collected in order of least potentially contaminated to most potentially contaminated, as practical. In areas of nested monitors, deeper monitors screened in the aquifer were purged and sampled prior to monitors in tailings.
3. Samples collected for dissolved metals analyses were filtered and preserved in the field, usually within one minute of sampling. New, sterile disposable 0.45-micron filters were used for each sample immediately after collection to reduce the potential for change in metal concentrations in the sample between the time of sample collection and analysis.
4. Field measurements of pH, conductivity and temperature were recorded. The pH and conductivity probes were calibrated daily. Calibration was verified periodically in the field.
5. Extreme caution was exercised when handling sampling equipment and working at sites with exposed tailings at surface to help prevent possible contamination from tailings during sample collection and handling.
6. Internal laboratory QA/QC procedures were also maintained by ALS Laboratories (as reported in the laboratory reports provided in Appendices. These include the use of laboratory blank samples, matrix spike samples and laboratory surrogate standard samples.
7. A series of equipment blanks were collected. These samples were collected by first cleaning and decontaminating tubing used for sampling using a distilled water rinse. A sample of clean distilled water was then collected through tubing and/or sampling equipment and sent for analysis.
8. A series of field duplicates and replicates were collected. Replicates were collected by using the same sampling procedures in addition to clean and new sampling equipment such as filters and bottles. Duplicates are collected to verify laboratory repeatability by splitting a sample in the field by simultaneously filling two sample bottles and using the same filtering equipment for both samples.

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9. Following sample collection, all samples were kept cool in a cooler with ice packs and transported by courier to the laboratory within the allotted transport periods. ALS Environmental of Vancouver, BC (ALS), a member of the Canadian Association for Environmental Analytical Laboratories (CAEAL), conducted all water analyses.

2.2 Equipment Blanks, Replicates and Duplicates

A series of field replicates were collected to assess field variability. Duplicates were collected to examine laboratory repeatability and equipment blanks were collected to examine biases introduced by sampling equipment or procedures.

All equipment blanks collected during 2004 field work showed values below detection limit for all parameters.

During the June (Spring) 2004 groundwater sampling event, 123 samples including 11 replicate samples (12%) were collected from 110 monitors. The entire sample set, in this case, included samples from the Rose Creek Tailings Facility, including the multilevel wells installed in 2003 and all conventional wells in the Rose Creek Tailings, and groundwater monitoring wells across the remainder of the property.

During the fall 2004 groundwater sampling event, 120 monitors were sampled and 8 replicate samples were collected, which represented approximately 8% of the sample set. The sample set during the fall 2004 sampling event included all conventional wells constructed prior to 2001 and the multilevel wells constructed in 2003. As outlined previously, the P01 series wells, constructed in 2001, are not included in this sample set.

2.3 Relative Percent Differences on Replicates

To assess analytical variability, a set of laboratory replicates was used to calculate the relative percent difference (RPD) on a laboratory replicate. RPD is defined as the following:

$$\% R P D = \frac{2(X_1 - X_2)}{(X_1 + X_2)} * 100$$

Where: X_1 = The concentration of the first sample;
 X_2 = The concentration of the second sample (i.e., the replicates).

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The Relative Percent Difference (“RPD”) is the difference between the sample result and replicate result, divided by the average of the sample result and replicate result. This number is then multiplied by 100 (to make the number a percentage) and the outcome is the RPD. The RPD is not useful where one or both of the results being compared are less than the practical quantitation limit (PQL). The PQL is 5 times the Method Detection Limit (MDL). An RPD of <50% can be used as a benchmark whereby an RPD of greater than 50% warrants further comment or consideration.

Laboratory variability was also calculated in lab duplicates and found to have RPD values of less than 5% (calculated only for parameters that had concentrations greater than two times the method detection limit).

Of the nineteen QA/QC samples only three reported a parameter with RPD results greater than 50%. However, in all cases the concentrations under consideration were less than the PQL, therefore no further investigation is considered warranted at this time.

2.4 Purge Volumes for Multi-level Wells

Approximately one well volume was purged from the multi-level sampling points prior to sample collection. Environment Canada collected samples from many of the same locations and within a few days of GLL by purging more than one well volume and up to three well volumes and found that results did not differ significantly. Another important consideration is that the inner sampling tube often extends deep to above or within the well screen further promoting sampling of fresh formation water. Monitoring of field parameters over time while sampling showed that parameters quickly stabilized suggesting fresh formation water. This suggests that purging one well volume with sampling tubing as deep as possible within the well provides fresh groundwater when sampling the multi-level points. As a result, the sampling process was optimized and sampling time was significantly reduced.

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3. 2004 Water Levels

The 2004 water levels measured during routine sampling as wells as during other sampling events are presented in Table 3 and Table 4.

4. 2004 Groundwater Quality

Analytical results, including all general field parameters for 2004 groundwater sampling are presented in Table 5. The 2001 wells were also sampled during this field event and the results are presented in the Leakage Assessment report prepared by Gartner Lee Ltd. for Deloitte and Touche. Environment Canada also conducted a project involving monitoring of a conservative bromide tracer at location P01-09. As part of this study, EC collected samples from surrounding multi-level wells throughout 2004. These data are not included in this report. Any samples collected by GLL from wells other than P01 wells as part of the tracer study are presented in this report. Interpretation and review of data is on-going and presented in other reports.

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5. Field Logistics and Sampling Issues

The following provides a summary of major observations and/or issues identified during sampling.

5.1 Original Tailings Impoundment

The wells located in the original tailings impoundment are P01-08, P01-10 and P03-07. As shown in Table 1, the P01-08 monitors (A, B, C) were not sampled in 2004. An ice lens was encountered in 2001 during installation of well P01-08C. Conditions in 2005 were as follows:

- **P01-08A** had sampling tubing stuck or frozen and could not be sampled.
- **P01-08B** is deformed near surface and not accessible with probes and samplers
- **P01-08C** was frozen
- **Well P01-10 B and C** were sampled by GLL for D&T as part of a separate study involving P01 Series Wells. The data collected at this site is under review and therefore not included in Table 5 or discussed in this review.
- **P03-07:** The multi-level bundle installed at location P03-07 was possibly affected by smearing of bentonite along some of the well screens during installation. Furthermore, permafrost was encountered within the tailings during installation and points 5, 6 and 7 are suspected to be frozen. This well was not sampled during the Fall 2004 sampling round.

5.2 Second Impoundment Southeast Corner

The wells located in the second impoundment in the southeast corner are located in an area of elevated contaminant concentrations which was first detected in a now inoperable 1988 well. Multi-level wells P03-01, P03-02 and P03-03 are situated up-gradient, cross-gradient and down-gradient respectively from the wells at P01-09. Location P01-09 is now the subject of mitigation measures related to monitoring well integrity. Consequently, preliminary review of data from P03-03 suggests that some of the sampling points may be impacted by tailings porewater having entered the aquifer up-gradient at P01-09 (to be confirmed by other supporting data). These data are currently under review as part of a separate study. Wells P03-01, P03-02 and P03-03 were sampled in June and September of 2004. However some of the points screened in the tailings recharged too slowly to be sampled efficiently. The P01 wells in the Second Impoundment Southeast Corner are. Data from wells P01-09 A/B/C/D are compromised and therefore not included in Table 5.

P01-09B: well was rehabilitated in May to remove a bulge in the top metre of casing. The top metre of casing was replaced and cut as the same elevation as the old casing

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P01-09D: sampling tubing stuck down the well a few metres below ground surface was removed.

5.3 Second Impoundment – Northern Section

The monitoring wells in the northern section of the Second Impoundment are multi-levels P03-04 (on the secondary dam), P03-05, P03-06 (down-gradient of the original impoundment) and conventional wells P01-07 A/B/C/D/E. (P01 series well data are currently under review and not included in this report).

- **P03-06-07:** dry in June and September
- **P03-06-06:** dry in June and September
- **P03-04-09:** dry in June and August

5.4 Intermediate Impoundment

The monitoring wells in the Intermediate Impoundment are P01-05 A/B, P01-06, X21 A/B/C and multi-level well P03-08. Data from P01 series wells under review and not included in this report.

- **X21C:** According to notes from field staff, the foot valve in the sampling tube and a section of approximately 2.5m within the sampling tube was filled with dark grey tailings. This well is screened within the aquifer and should not contain tailings. This issue should be confirmed and examined in more detail during the 2005 season.

5.5 Toe of Intermediate Dam

- The monitoring wells at the toe of the Intermediate Dam (up-gradient of the Cross-Valley Pond) are X24 A/B/C/D, X25 A/B, P01-03 and P01-04. P01 series wells were sampled once during 2004 for a separate study and data are not included in this report.
- **X24 B:** well was blocked or frozen at 3.75m in June
- **X24 B:** well could not be sampled due to slow recharge and insufficient volume in September and November

5.6 Down Gradient of the Cross Valley Dam

The following wells are located downgradient of the Cross-Valley dam (down-gradient of the entire tailings impoundment). P01-02A/B, P03-09, P01-11, X17A/B, X18 A/B, P01-01 A/B, X16 A/B. P01 series wells were sampled as part of a separate study. The following issues were encountered:

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- **P01-01A:** top of well casing and protective steel casing were destroyed by snow removal equipment in early 2004. The well casing was replaced and cut to the same elevation as the previous one, however, sampling tubing remains sandlocked in the well.
- **P01-01B:** top of well casing and protective steel casing were destroyed by snow removal equipment in early 2004. The well casing was replaced and cut to the same elevation as the previous one. The well is now operational.
- **P01-02A:** well is damaged (casing is possibly bulged) and was not sampled in 2004
- **P01-02B:** well is artesian and was frozen in June

5.7 Faro Rock Dump Area

The wells located at the base of the Faro Rock Dumps (Figure 2) are P96-8A/B, P96-7, S1 A/B, S2 A/B, S3, P96-6, BH1, BH2, BH4, BH12 A/B, BH13 A/B and BH14 A/B. Several new wells were installed by SRK in 2004 to supplement the monitoring network associated with the Faro Rock Dump area. These include SRK04-2 A/B, SRK 04-3 and SRK 04-4. These wells were installed as part of a study involving the preliminary design of waste rock dump seepage collection systems.

A summary of field logistics and issues is presented below:

- **BH1** was frozen in June and dry in September.
- **BH4** was frozen in June
- **BH13B** was dry in June.
- **BH13A** was blocked at 1.9m in September.
- **BH12B** clogging of sampling tubing due to sand in well in September
- **SRK04-2B:** well was dry in September
- **SRK04-2A:** well not functional, issues associated with installation are discussed in a separate report by SRK.
- **SRK04-04:** well was used as a pumping well for testing activities completed by SRK and was sampled by GLL in September

5.8 Vangorda Rock Dump Area

The wells located near the Vangorda Rock Dump (Figure 4) are V37, V36, P01-51, P01-52 A/B, V35, and V34. These were all sampled twice (June and September) during 2004.

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6. Closure

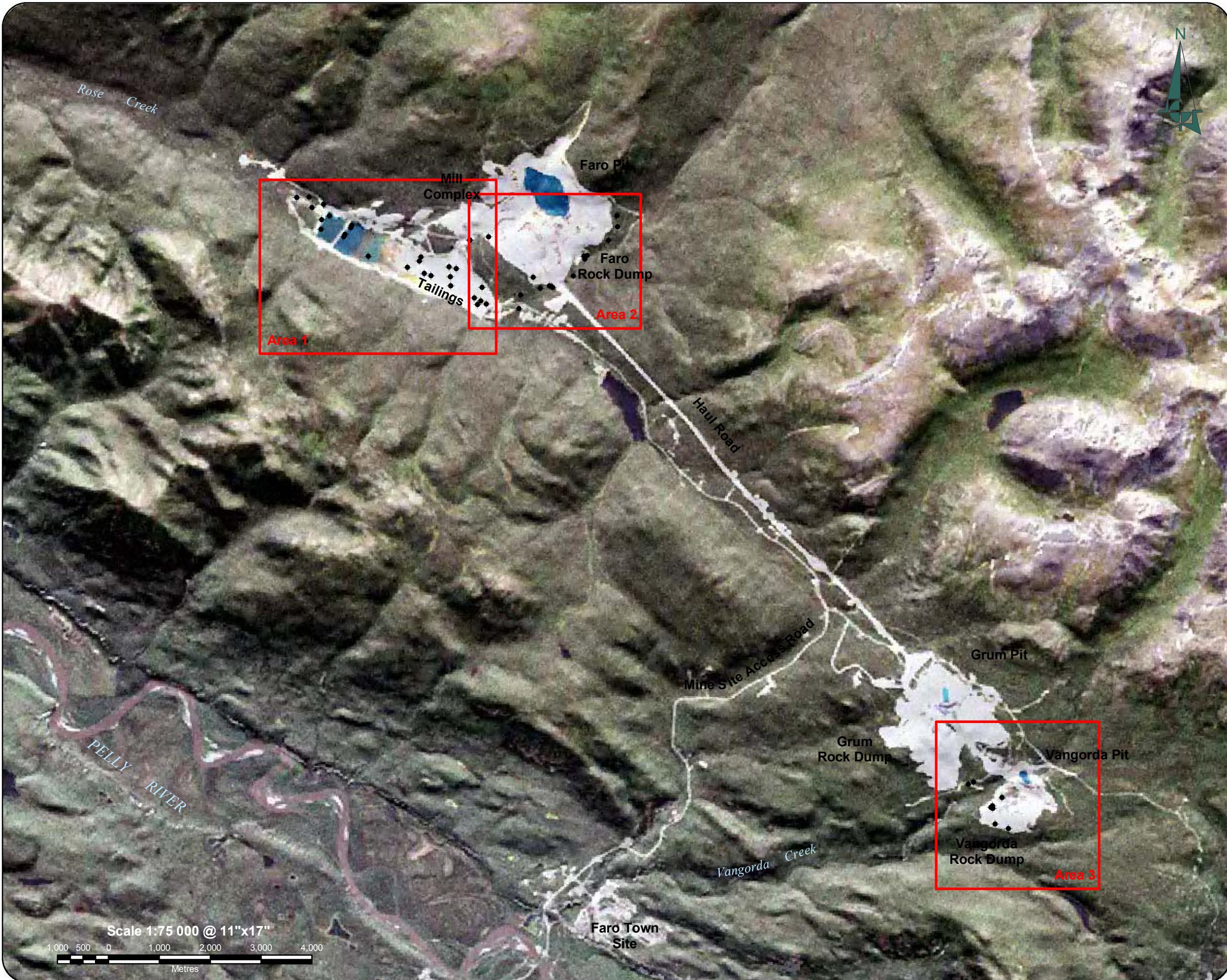
Data presented in this report are the subject of on-going review and quality assurance. The report is meant to provide a summary of 2004 field activities associated with the routine groundwater sampling at the Faro Mine. Groundwater data collected as part of other studies at the site may not be presented here and may be presented under separate cover.

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F i g u r e s



Legend

- Monitoring Well

DATA SOURCES AND DISCLAIMERS:

Basemap: Orthoshop, Calgary, AB, November 2003. Prepared for SRK Consulting. Based on August 2003 aerial photography.

Shaded relief colour orthorectified image at 15m resolution compiled by Yukon Territorial Government, Dept. of Infrastructure, Yukon Geomatics, from Landsat 7 image 59-16, bands 3, 2, & 1.

Projection: UTM Zone 8 NAD27

Created By: AS

Reviewed By: MG

Date Issued: March 2005

Project Number: 40692

File Name: Faro_groundwater_sampling_plan_figure_1.mxd

Revision: 0

Deloitte & Touche Inc.
2004 Groundwater Sampling

Faro Mine Site
Faro, Yukon





Legend

- Monitoring Well
- Index Contours (5m)
- Intermediate Contours (1m)

DATA SOURCES AND DISCLAIMERS:

Basemap: Orthoshop, Calgary, AB, November 2003. Prepared for SRK Consulting. Based on August 2003 aerial photography.

Projection: UTM Zone 8 NAD27

Created By: AS

Reviewed By: MG

Date Issued: March 2005

Project Number: 40692

File Name: Faro_groundwater_sampling_plan_figure_3.mxd

Revision: 0

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2004 Groundwater Sampling

Area 2 - Faro Rock Dump Area
Faro, Yukon



Gartner Lee

Figure No.

3



Legend

- Monitoring Well
- Index Contours (5m)
- Intermediate Contours (1m)

DATA SOURCES AND DISCLAIMERS:

Basemap: Orthoshop, Calgary, AB, November 2003. Prepared for SRK Consulting. Based on August 2003 aerial photography.

Projection: UTM Zone 8 NAD27

Created By: AS

Reviewed By: MG

Date Issued: March 2005

Project Number: 40692

File Name: Faro_groundwater_sampling_plan_figure_4.mxd

Revision: 0

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Area 3 - Grum and Vangorda Area
Faro, Yukon

Figure No.

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T a b l e s

Table 1. Summary of 2004 Sampling Activities

Well ID	May	June	August*	September	November*
	May 8 - 12	June 7 -11	Aug 3 - 4	Sept 21-30	Nov 17 - 18
P01-01A	S	n/s	X	Tubing blocked in well	
P01-01B		X		S	
P01-02A		n/s		Tubing blocked in well	
P01-02B		n/s			
P01-03		X		S	
P01-04A		n/s		S	
P01-04B		n/s		S	
P01-05A		n/s		S	
P01-05B		S		S	
P01-06		S		S	
P01-07A		n/s		S	
P01-07B		n/s		S	
P01-07C		S		S	
P01-07D		S		S	
P01-07E		S		S	
P01-08A			Tubing stuck in well possibly frozen or broken		
P01-08B			Tubing stuck in well possibly frozen or broken		
P01-08C			Tubing stuck in well possibly frozen or broken		
P01-09A		n/s		S	
P01-09B		n/s		S	
P01-09C	S	n/s		S	
P01-09D	S	n/s		S	
P01-10A		n/s		S	
P01-10B		X		S	
P01-11		n/s		S	
P01-51		X		X	
P01-52A		X		X	
P01-52B		X		X	
X16A		X		X	
X16B		X		X	
X17A		X		X	
X17B		X		X	
X18A		X		X	
X18B		X		X	
X24A-96		X	X	X	X
X24B-96		Well blocked	X	Dry	
X24C-96		X	X	X	X
X24D-96		X	X	X	X
X25A-96		X	X	X	X
X25B-96		X	X	X	X
X21A-96				X	
X21B-96		X		X	
X21C-96		X		X	
BH1		Frozen		Dry	
BH2		X		X	
BH4		Frozen		X	
BH12A		X		X	
BH12B		X		Sand clogged tubing	
BH13A		X		Well blocked	
BH13B		Dry		X	
BH14A		X		X	

Table 1. Summary of 2004 Sampling Activities

Well ID	May	June	August*	September	November*
	May 8 - 12	June 7 - 11	Aug 3 - 4	Sept 21-30	Nov 17 - 18
BH14B		X		X	
P96-6		X		X	
P96-7		X		X	
P96-8A		X		X	
P96-8B		X		X	
P96-9A		X		X	
V34		X		X	
V35		X		X	
V36		X		X	
V37		X		X	
S1A		X		X	
S1B		X		X	
S2A		X		X	
S2B		X		X	
S3		X		X	
TH86-17		X		X	
P03-01-01		X		X	
P03-01-02		X		X	
P03-01-03		X		X	
P03-01-04		X		X	
P03-01-05		X		X	
P03-01-06		X		X	
P03-01-07		X		X	
P03-01-08		Gen chem only		X	
P03-01-09		X		X	
P03-02-01		X		X	
P03-02-02		X		X	
P03-02-03		X		X	
P03-02-04		X		X	
P03-02-05		X		X	
P03-02-06		X		X	
P03-02-07		n/s		n/s	
P03-02-08		n/s		n/s	
P03-02-09		Dry		n/s	
P03-03-01		X		X	
P03-03-02		X		X	
P03-03-03		X		X	
P03-03-04		X		X	
P03-03-05		X		X	
P03-03-06		X		X	
P03-03-07		X		n/s	
P03-03-08		X		n/s	
P03-03-09		X		n/s	
P03-04-01		X	X	X	
P03-04-02		X	X	X	X
P03-04-03		X	X	X	
P03-04-04		X	X	X	X
P03-04-05		X	X	X	
P03-04-06		X	X	X	
P03-04-07		X	X	X	
P03-04-08		X	X	X	
P03-04-09		n/s	Dry	X	

Table 1. Summary of 2004 Sampling Activities

Well ID	May	June	August*	September	November*
	May 8 - 12	June 7 - 11	Aug 3 - 4	Sept 21-30	Nov 17 - 18
P03-05-01		X		X	
P03-05-02		X		X	
P03-05-03		X		X	
P03-05-04		X		X	
P03-05-05		X		X	
P03-05-06		X		X	
P03-05-07		X		X	
P03-05-08		X		X	
P03-06-01		X		X	
P03-06-02		X		X	
P03-06-03		X		X	
P03-06-04		X		X	
P03-06-05		X		X	
P03-06-06		Dry		n/s	
P03-06-07		Dry		Dry	
P03-07-01		n/s		n/s	
P03-07-02		X		n/s	
P03-07-03		X		n/s	
P03-07-04		X		n/s	
P03-07-05		Well blocked		n/s	
P03-07-06		Frozen/blocked		n/s	
P03-07-07		Frozen/blocked		n/s	
P03-07-08		Frozen/blocked		n/s	
P03-08-01		X	X	X	
P03-08-02		X	X	X	
P03-08-03		X	X	X	
P03-08-04		X	Dry	X	
P03-08-05		X	X	X	
P03-08-06		X	X	X	
fv		X	X	X	
P03-08-08		X	X	X	
P03-09-01		X	X	X	
P03-09-02		X	X	X	X
P03-09-03		X	X	X	
P03-09-04		X	X	X	X
P03-09-05		X	X	X	
P03-09-06		X	X	X	X
P03-09-07		X	X	X	X
P03-09-08		Dry		X	
P03-09-09		X	X	X	X

* sampling done as part of adaptive management plan (AMP).

X = well was sampled as part of routine sampling.

S = well was sampled as part of separate study, results not included in this report and presented under separate cover.

Table 2. Summary of Well Construction Details and Information

Well ID	Northing	Easting	Material	Stickup (m)	Ground Elevation (m asl)	Depth From Ground To Top of Screen (m)	Depth From Ground To Bottom of Screen (m)	Elevation of Top of Screen (m.a.s.l.)	Elevation of Bottom of Screen (m.a.s.l.)	Formation	Location
P01-01A	6914675.00	579819.30	2" PVC	0.48	1015.38	19.8	21.36	995.576	994.016	A	DVTI
P01-01B	6914675.00	579819.30	2" PVC	0.48	1015.38	33.78	35.3	981.596	980.076	A	DVTI
P01-02A	6914044.00	580050.70	2" PVC	0.70	1019.03	12.54	14.06	1006.487	1004.967	A	DVTI
P01-02B	6914044.00	580050.70	2" PVC	0.68	1019.03	26.88	28.4	992.147	990.627	A	DVTI
P01-03	6914071.00	580638.70	2" PVC	0.56	1031.65	7.78	9.3	1023.872	1022.352	A	DVTI
P01-04A	6913893.00	580495.80	2" PVC	0.51	1031.39	32.53	34.05	998.86	997.34	A	DVTI
P01-04B	6913893.00	580495.80	2" PVC	0.50	1031.39	51.89	53.41	979.5	977.98	T	DVTI
P01-05A	6913299.00	581752.80	2" PVC	0.45	1050.17	9.02	10.54	1041.146	1039.626	T	DVTI
P01-05B	6913299.00	581752.80	2" PVC	0.52	1050.09	14.86	16.38	1035.228	1033.708	A	DVTI
P01-06	6913504.00	582020.00	2" PVC	0.49	1052.13	9.15	10.67	1042.981	1041.461	A	DVTI
P01-07A	6913139.00	582217.00	2" PVC	0.49	1060.27	16.46	17.98	1043.807	1042.287	T	DVTI
P01-07B	6913139.00	582217.00	2" PVC	0.44	1060.22	21.96	23.48	1038.262	1036.742	T	DVTI
P01-07C	6913139.00	582217.00	2" PVC	0.44	1060.28	26.24	27.76	1034.039	1032.519	A	DVTI
P01-07D	6913139.00	582217.00	2" PVC	0.49	1060.49	32.65	34.15	1027.842	1026.342	A	DVTI
P01-07E	6913139.00	582217.00	2" PVC	0.39	1060.49	38.89	40.41	1021.602	1020.082	A	DVTI
P01-08A	6913119.00	582596.00	2" PVC	0.39	1063.70	14.02	15.54	1049.677	1048.157	T	DVTI
P01-08B	6913119.00	582596.00	2" PVC	0.76	1063.74	24.1	25.6	1039.635	1038.135	A	DVTI
P01-08C	6913119.00	582596.00	2" PVC	0.67	1063.75	28.8	29.7	1034.945	1034.045	A	DVTI
P01-09A	6912642.00	583196.00	2" PVC	0.44	1060.76	10.2	11.72	1050.563	1049.043	T	DVTI
P01-09B	6912642.00	583196.00	2" PVC	0.37	1060.73	14.95	16.47	1045.778	1044.258	T	DVTI
P01-09C	6912642.00	583196.00	2" PVC	0.38	1060.80	20.61	22.13	1040.194	1038.674	A	DVTI
P01-09D	6912642.00	583196.00	2" PVC	0.33	1060.80	26.92	28.44	1033.884	1032.364	A	DVTI
P01-10A	6912908.00	583221.00	2" PVC	0.49	1064.58	13.67	15.19	1050.91	1049.39	T	DVTI
P01-10B	6912908.00	583221.00	2" PVC	0.45	1064.50	19.51	21.03	1044.992	1043.472	A	DVTI
P01-11	6914306.00	580214.40	2" PVC	0.55	1017.28	9.15	10.67	1008.128	1006.608	A	DVTI
P03-01-01	6912580.29	583301.28	1/2" id 5/8" od hdpe	0.53	1060.58	46.48	46.79	1014.099	1013.7942	A	DVTI
P03-01-02	6912580.29	583301.28	1/2" id 5/8" od hdpe	0.53	1060.59	38.56	38.86	1022.03	1021.82	A	DVTI
P03-01-03	6912580.29	583301.28	1/2" id 5/8" od hdpe	0.53	1060.58	30.33	30.63	1030.2534	1029.9486	A	DVTI
P03-01-04	6912580.29	583301.28	1/2" id 5/8" od hdpe	0.53	1060.58	24.23	24.54	1036.3494	1036.0446	A	DVTI
P03-01-05	6912580.29	583301.28	1/2" id 5/8" od hdpe	0.53	1060.58	18.14	18.44	1042.4454	1042.1406	A	DVTI
P03-01-06	6912580.29	583301.28	1/2" id 5/8" od hdpe	0.53	1060.58	12.95	13.26	1047.627	1047.3222	A	DVTI
P03-01-07	6912580.29	583301.28	1/2" id 5/8" od hdpe	0.53	1060.58	10.52	10.82	1050.0654	1049.7606	A	DVTI
P03-01-08	6912580.29	583301.28	1/2" id 5/8" od hdpe	0.53	1060.58	8.99	9.30	1051.5894	1051.2846	T	DVTI
P03-01-09	6912580.29	583301.28	1/2" id 5/8" od hdpe	0.53	1060.58	7.47	7.77	1053.1134	1052.8086	T	DVTI
P03-02-01	6912572.26	583134.72	1/2" id 5/8" od hdpe	0.69	1059.91	33.53	33.83	1026.377	1026.0722	A	DVTI
P03-02-02	6912572.26	583134.72	1/2" id 5/8" od hdpe	0.69	1059.91	30.18	30.48	1029.7298	1029.425	A	DVTI
P03-02-03	6912572.26	583134.72	1/2" id 5/8" od hdpe	0.69	1059.91	22.56	22.86	1037.3498	1037.045	A	DVTI
P03-02-04	6912572.26	583134.72	1/2" id 5/8" od hdpe	0.69	1059.91	16.46	16.76	1043.4458	1043.141	A	DVTI
P03-02-05	6912572.26	583134.72	1/2" id 5/8" od hdpe	0.69	1059.91	13.41	13.72	1046.4938	1046.189	A	DVTI
P03-02-06	6912572.26	583134.72	1/2" id 5/8" od hdpe	0.69	1059.91	12.50	12.80	1047.4082	1047.1034	A	DVTI
P03-02-07	6912572.26	583134.72	1/2" id 5/8" od hdpe	0.69	1059.91	11.58	11.89	1048.3226	1048.0178	T	DVTI
P03-02-08	6912572.26	583134.72	1/2" id 5/8" od hdpe	0.69	1059.91	8.53	8.84	1051.3706	1051.0658	T	DVTI
P03-02-09	6912572.26	583134.72	1/2" id 5/8" od hdpe	0.69	1059.91	7.32	7.62	1052.5898	1052.285	T	DVTI
P03-03-01	6912698.18	583068.11	1/2" id 5/8" od hdpe	0.82	1060.67	42.67	42.98	1018	1017.6952	A	DVTI
P03-03-02	6912698.18	583068.11	1/2" id 5/8" od hdpe	0.82	1060.67	32.92	33.22	1027.7536	1027.4488	A	DVTI
P03-03-03	6912698.18	583068.11	1/2" id 5/8" od hdpe	0.82	1060.67	26.82	27.13	1033.8496	1033.5448	A	DVTI
P03-03-04	6912698.18	583068.11	1/2" id 5/8" od hdpe	0.82	1060.67	21.95	22.25	1038.7264	1038.4216	A	DVTI
P03-03-05	6912698.18	583068.11	1/2" id 5/8" od hdpe	0.82	1060.67	18.29	18.59	1042.384	1042.0792	A	DVTI
P03-03-06	6912698.18	583068.11	1/2" id 5/8" od hdpe	0.82	1060.67	16.76	17.07	1043.908	1043.6032	A	DVTI
P03-03-07	6912698.18	583068.11	1/2" id 5/8" od hdpe	0.82	1060.67	14.94	15.24	1045.7368	1045.432	T	DVTI
P03-03-08	6912698.18	583068.11	1/2" id 5/8" od hdpe	0.82	1060.67	11.89	12.19	1048.7848	1048.48	T	DVTI
P03-03-09	6912698.18	583068.11	1/2" id 5/8" od hdpe	0.82	1060.67	8.84	9.14	1051.8328	1051.528	T	DVTI
P03-04-01	6913185.77	582084.65	1/2" id 5/8" od hdpe	0.78	1060.43	57.91	58.22				

Table 2. Summary of Well Construction Details and Information

Well ID	Northing	Easting	Material	Stickup (m)	Ground Elevation (m asl)	Depth From Ground To Top of Screen (m)	Depth From Ground To Bottom of Screen (m)	Elevation of Top of Screen (m.a.s.l)	Elevation of Bottom of Screen (m.a.s.l)	Formation	Location
X17B	6914474.54	579874.27	4" dia.	0.59	1014.30	17	25	997.3	989.3	A	DVTI
X18A	6914539.11	580105.49	ABS riser	0.62	1018.97	8.8	10.6	1010.17	1008.37	A	DVTI
X18B	6914539.11	580105.49	ABS riser	0.68	1018.97	16.6	22.8	1002.37	996.17	A	DVTI
X19A			ABS riser	0.99	1020.44	10	24	1010.44	996.44	A	DVTI
X19B			ABS riser	1.45	1020.44	25	28.7	995.44	991.74	A	DVTI
TH86-17	6912488.55	583943.22	1.5" well, screen length assumed	1.04	1065.90			1052	1053.53	A	DVTI
X25A	6913945.40	580519.30		0.68	1031.40	7.44	8.97	1023.96	1022.43	A	DVTI
X25B	6913945.40	580519.30		0.63	1031.40	17.7	19.17	1013.7	1012.23	A	DVTI
X24A	6914123.80	580654.80	no screen	0.80	1032.30	6.42	6.48	1025.88	1025.82	A	DVTI
X24B	6914123.80	580654.80	1" dia. well	0.75	1032.30	9.8	11.3	1022.5	1021	A	DVTI
X24C	6914123.80	580654.80		0.70	1032.30	14.97	16.47	1017.33	1015.83	A	DVTI
X24D	6914123.80	580654.80		0.70	1032.30	26.84	28.34	1005.46	1003.96	A	DVTI
X21A	6913416.70	581989.30	1" dia. well	0.69	1051.40	2.43	8.53	1048.97	1042.87	T	DVTI
X21B	6913416.70	581989.30		0.74	1051.40	11.64	14.69	1039.76	1036.71	A	DVTI
X21C	6913416.70	581989.30		0.81	1051.40	27.86	29.37	1023.54	1022.03	A	DVTI
P96-6	6913130.00	585014.00			1111					A	FRD
P96-7	6913110.00	584226.00								A	DVTI
P96-8 A	6913894.00	583347.00			1134					A	DVTI
P96-8 B	6913894.00	583347.00			1134.00					A	DVTI
P96-9 A	6903159.00	592771.00			1139					A	GV
BH1	6913527.00	585285.00			1132.00					A	FRD
BH2	6913512.00	585221.00			1134.00					A	FRD
BH4	6913456.00	585241.00								A	FRD
BH12 A	6914090.00	585881.00			1193.00					A	FRD
BH12 B	6914090.00	585881.00			1193.00					A	FRD
BH13 A	6914308.00	585867.00			1221.00					A	FRD
BH13 B	6914308.00	585867.00			1221.00					A	FRD
BH14 A	6913823.00	585703.00			1187.00					A	FRD
BH14 B	6913823.00	585703.00			1187.00					A	FRD
V34	6902288.00	593555.00			1139.00					A	GV
V35	6902374.00	593298.00			1145.00					A	GV
V36	6902735.00	593250.00			1129.00					A	GV
V37	6902897.00	593433.00			1146.00					A	GV
P01-52 A	6902680.00	593251.00			1136.00					A	GV
P01-52 B	6902680.00	593251.00			1136.00					A	GV
P01-51	6902698.00	593218.00			1156.00					A	GV
S1 A	6912941.00	584540.00								A	FRD
S1 B	6912941.00	584540.00								A	FRD
S2 A	6912932.00	584580.00			1127.00					A	FRD
S2 B	6912932.00	584580.00			1127.00					A	FRD
S3	6912912.00	584605.00			1127.00					A	FRD

*for multi-level wells (P03 series), this corresponds to the elevation of the PVC centre stalk.

b (A = aquifer or natural soil, T = tailings).

c DVTI = Down Valley and Tailings Impoundment Area.

c FRD = Faro Rock Dump Area.

c GV = Grum and Vangorda Areas.

Table 3. 2004 Water Level Elevation for Multi-Level Wells, Faro Mine, Yukon

Well ID	Stickup (m)	Ground Elevation (masl)	Date	Time	Water Level Below top of Casing (m)	Water Level Elevation (m asl)
P03-01-01	0.53	1060.581	2/11/2004		6.19	1054.92
P03-01-01	0.53	1060.581	5/12/2004		6.39	1054.72
P03-01-01	0.53	1060.581	6/8/2004	17:10	5.45	1055.66
P03-01-01	0.53	1060.581	9/21/2004		6.22	1054.89
P03-01-02	0.53	1060.5872	2/11/2004		6.2	1054.91
P03-01-02	0.53	1060.5872	5/12/2004		6.37	1054.74
P03-01-02	0.53	1060.5872	6/8/2004	17:14	5.44	1055.67
P03-01-02	0.53	1060.5872	9/21/2004		6.27	1054.84
P03-01-03	0.53	1060.581	2/11/2004		6.4	1054.71
P03-01-03	0.53	1060.581	5/12/2004		6.36	1054.75
P03-01-03	0.53	1060.581	6/8/2004	17:15	5.43	1055.68
P03-01-03	0.53	1060.581	9/21/2004		6.25	1054.86
P03-01-04	0.53	1060.581	2/11/2004		6.49	1054.62
P03-01-04	0.53	1060.581	5/12/2004		6.37	1054.74
P03-01-04	0.53	1060.581	6/8/2004	17:16	5.45	1055.66
P03-01-04	0.53	1060.581	9/21/2004		6.27	1054.84
P03-01-05	0.53	1060.581	2/11/2004		6.5	1054.61
P03-01-05	0.53	1060.581	5/12/2004		6.38	1054.73
P03-01-05	0.53	1060.581	6/8/2004	17:16	5.45	1055.66
P03-01-05	0.53	1060.581	9/21/2004		6.28	1054.83
P03-01-06	0.53	1060.581	2/11/2004		6.5	1054.61
P03-01-06	0.53	1060.581	5/12/2004		6.37	1054.74
P03-01-06	0.53	1060.581	6/8/2004	17:17	5.44	1055.67
P03-01-06	0.53	1060.581	9/21/2004		6.26	1054.85
P03-01-07	0.53	1060.581	2/11/2004		6.48	1054.63
P03-01-07	0.53	1060.581	5/12/2004		6.345	1054.76
P03-01-07	0.53	1060.581	6/8/2004	17:18	5.48	1055.63
P03-01-07	0.53	1060.581	9/21/2004		6.21	1054.90
P03-01-08	0.53	1060.581	2/11/2004		6.49	1054.62
P03-01-08	0.53	1060.581	5/12/2004		6.315	1054.79
P03-01-08	0.53	1060.581	6/8/2004	17:20	5.64	1055.47
P03-01-08	0.53	1060.581	9/21/2004		5.95	1055.16
P03-01-09	0.53	1060.581	2/11/2004		6.49	1054.62
P03-01-09	0.53	1060.581	5/13/2004		6.38	1054.73
P03-01-09	0.53	1060.581	6/8/2004	17:20	5.84	1055.27
P03-01-09	0.53	1060.581	9/21/2004		6	1055.11
P03-02-01	0.69	1059.905	2/11/2004		6.48	1054.12
P03-02-01	0.69	1059.905	5/12/2004		6.175	1054.42
P03-02-01	0.69	1059.905	6/10/2004	12:41	5.73	1054.87
P03-02-01	0.69	1059.905	9/22/2004		6.3	1054.30
P03-02-02	0.69	1059.905	2/11/2004		6.47	1054.13
P03-02-02	0.69	1059.905	5/12/2004		6.2	1054.40
P03-02-02	0.69	1059.905	6/10/2004	12:41	5.73	1054.87
P03-02-02	0.69	1059.905	9/22/2004		6.3	1054.30
P03-02-03	0.69	1059.905	2/11/2004		6.46	1054.14
P03-02-03	0.69	1059.905	5/12/2004		6.38	1054.22
P03-02-03	0.69	1059.905	6/10/2004	12:42	5.735	1054.86
P03-02-03	0.69	1059.905	9/22/2004		6.3	1054.30
P03-02-04	0.69	1059.905	2/11/2004		6.465	1054.13
P03-02-04	0.69	1059.905	5/12/2004		6.26	1054.34
P03-02-04	0.69	1059.905	6/10/2004	12:43	5.72	1054.88

Table 3. 2004 Water Level Elevation for Multi-Level Wells, Faro Mine, Yukon

Well ID	Stickup (m)	Ground Elevation (masl)	Date	Time	Water Level Below top of Casing (m)	Water Level Elevation (m asl)
P03-02-04	0.69	1059.905	9/22/2004		6.29	1054.31
P03-02-05	0.69	1059.905	2/11/2004		6.47	1054.13
P03-02-05	0.69	1059.905	5/11/2004		6.4	1054.20
P03-02-05	0.69	1059.905	6/10/2004	12:44	5.73	1054.87
P03-02-05	0.69	1059.905	9/22/2004		6.3	1054.30
P03-02-06	0.69	1059.905	2/11/2004		6.45	1054.15
P03-02-06	0.69	1059.905	5/12/2004		6.38	1054.22
P03-02-06	0.69	1059.905	6/10/2004	12:44	5.75	1054.85
P03-02-06	0.69	1059.905	9/22/2004		6.29	1054.31
P03-02-07	0.69	1059.905	2/11/2004		5.895	1054.70
P03-02-07	0.69	1059.905	5/12/2004		6.03	1054.57
P03-02-07	0.69	1059.905	6/10/2004	12:45	5.56	1055.04
P03-02-07	0.69	1059.905	9/22/2004		5.78	1054.82
P03-02-08	0.69	1059.905	2/11/2004		5.75	1054.85
P03-02-08	0.69	1059.905	5/12/2004		5.93	1054.67
P03-02-08	0.69	1059.905	6/10/2004	12:46	5.53	1055.07
P03-02-08	0.69	1059.905	9/22/2004		5.64	1054.96
P03-02-09	0.69	1059.905	2/11/2004		5.7	1054.90
P03-02-09	0.69	1059.905	5/12/2004		5.87	1054.73
P03-02-09	0.69	1059.905	6/10/2004	12:47	5.52	1055.08
P03-02-09	0.69	1059.905	9/22/2004		5.59	1055.01
P03-03-01	0.82	1060.672	2/11/2004		7.61	1053.88
P03-03-01	0.82	1060.672	5/12/2004		7.6	1053.89
P03-03-01	0.82	1060.672	6/10/2004	10:36	6.82	1054.67
P03-03-01	0.82	1060.672	9/25/2004		7.342	1054.15
P03-03-02	0.82	1060.672	2/11/2004		7.65	1053.84
P03-03-02	0.82	1060.672	5/12/2004		7.625	1053.86
P03-03-02	0.82	1060.672	6/10/2004	10:37	6.89	1054.60
P03-03-02	0.82	1060.672	9/25/2004		7.38	1054.11
P03-03-03	0.82	1060.672	2/11/2004		7.66	1053.83
P03-03-03	0.82	1060.672	5/12/2004		7.59	1053.90
P03-03-03	0.82	1060.672	6/10/2004	10:38	6.865	1054.62
P03-03-03	0.82	1060.672	9/25/2004		7.357	1054.13
P03-03-04	0.82	1060.672	2/11/2004		7.65	1053.84
P03-03-04	0.82	1060.672	5/12/2004		7.59	1053.90
P03-03-04	0.82	1060.672	6/10/2004	10:39	6.865	1054.62
P03-03-04	0.82	1060.672	9/25/2004		7.38	1054.11
P03-03-05	0.82	1060.672	2/11/2004		7.66	1053.83
P03-03-05	0.82	1060.672	5/12/2004		7.6	1053.89
P03-03-05	0.82	1060.672	6/10/2004	10:40	6.865	1054.62
P03-03-05	0.82	1060.672	9/25/2004		7.408	1054.08
P03-03-06	0.82	1060.672	2/11/2004		7.65	1053.84
P03-03-06	0.82	1060.672	5/12/2004		7.585	1053.90
P03-03-06	0.82	1060.672	6/10/2004	10:41	6.86	1054.63
P03-03-06	0.82	1060.672	9/25/2004		7.408	1054.08
P03-03-07	0.82	1060.672	2/11/2004		7.55	1053.94
P03-03-07	0.82	1060.672	5/12/2004		7.53	1053.96
P03-03-07	0.82	1060.672	6/10/2004	10:41	6.865	1054.62
P03-03-07	0.82	1060.672	9/25/2004		7.392	1054.10
P03-03-08	0.82	1060.672	2/11/2004		7.16	1054.33
P03-03-08	0.82	1060.672	5/12/2004		7.315	1054.17

Table 3. 2004 Water Level Elevation for Multi-Level Wells, Faro Mine, Yukon

Well ID	Stickup (m)	Ground Elevation (masl)	Date	Time	Water Level Below top of Casing (m)	Water Level Elevation (m asl)
P03-03-08	0.82	1060.672	6/10/2004	10:42	6.92	1054.57
P03-03-08	0.82	1060.672	9/25/2004		7.46	1054.03
P03-03-09	0.82	1060.672	2/11/2004		7.24	1054.25
P03-03-09	0.82	1060.672	5/12/2004		dry	#VALUE!
P03-03-09	0.82	1060.672	6/10/2004	10:43	6.98	1054.51
P03-03-09	0.82	1060.672	9/25/2004		7.07	1054.42
P03-04-01	0.78	1060.429	5/11/2004		12.54	1048.67
P03-04-01	0.78	1060.429	6/9/2004	13:31	12.23	1048.98
P03-04-01	0.78	1060.429	8/3/2004	14:27	12.2	1049.01
P03-04-01	0.78	1060.429	9/24/2004		12.44	1048.77
P03-04-02	0.78	1060.429	5/11/2004		12.54	1048.67
P03-04-02	0.78	1060.429	6/9/2004	13:33	12.245	1048.96
P03-04-02	0.78	1060.429	8/3/2004	14:32	12.2	1049.01
P03-04-02	0.78	1060.429	9/24/2004		12.41	1048.80
P03-04-03	0.78	1060.429	5/11/2004		12.455	1048.75
P03-04-03	0.78	1060.429	6/9/2004	13:34	12.15	1049.06
P03-04-03	0.78	1060.429	8/3/2004	14:33	12.16	1049.05
P03-04-03	0.78	1060.429	9/24/2004		12.35	1048.86
P03-04-04	0.78	1060.429	5/11/2004		12.84	1048.37
P03-04-04	0.78	1060.429	6/9/2004	13:37	12.44	1048.77
P03-04-04	0.78	1060.429	8/3/2004	14:34	12.5	1048.71
P03-04-04	0.78	1060.429	9/24/2004		12.7	1048.51
P03-04-05	0.78	1060.429	5/12/2004		13.065	1048.14
P03-04-05	0.78	1060.429	6/9/2004	13:38	12.5	1048.71
P03-04-05	0.78	1060.429	8/3/2004	14:36	12.5	1048.71
P03-04-05	0.78	1060.429	9/24/2004		12.7	1048.51
P03-04-06	0.78	1060.429	5/11/2004		12.86	1048.35
P03-04-06	0.78	1060.429	6/9/2004	13:39	12.58	1048.63
P03-04-06	0.78	1060.429	8/3/2004	14:37	12.53	1048.68
P03-04-06	0.78	1060.429	9/24/2004		12.605	1048.60
P03-04-07	0.78	1060.429	5/11/2004		12.52	1048.69
P03-04-07	0.78	1060.429	6/9/2004	13:40	12.61	1048.60
P03-04-07	0.78	1060.429	8/3/2004	14:42	12.44	1048.77
P03-04-07	0.78	1060.429	9/24/2004		12.605	1048.60
P03-04-08	0.78	1060.429	5/11/2004		12.87	1048.34
P03-04-08	0.78	1060.429	6/9/2004	13:42	12.61	1048.60
P03-04-08	0.78	1060.429	8/3/2004	14:40	12.47	1048.74
P03-04-08	0.78	1060.429	9/24/2004		12.6	1048.61
P03-04-09	0.78	1060.429	5/11/2004		12.89	1048.32
P03-04-09	0.78	1060.429	6/9/2004	13:44	12.62	1048.59
P03-04-09	0.78	1060.429	8/3/2004	14:44	12.49	1048.72
P03-04-09	0.78	1060.429	9/24/2004		12.6	1048.61
P03-05-01	0.84	1059.588	6/9/2004	9:26	8.36	1052.07
P03-05-01	0.84	1059.588	9/22/2004		8.78	1051.65
P03-05-02	0.84	1059.588	6/9/2004	9:26	8.36	1052.07
P03-05-02	0.84	1059.588	9/22/2004		8.78	1051.65
P03-05-03	0.84	1059.588	6/9/2004	9:27	8.405	1052.03
P03-05-03	0.84	1059.588	9/22/2004		8.84	1051.59
P03-05-04	0.84	1059.588	6/9/2004	9:28	8.55	1051.88
P03-05-04	0.84	1059.588	9/22/2004		8.95	1051.48
P03-05-05	0.84	1059.588	6/9/2004	9:29	8.56	1051.87

Table 3. 2004 Water Level Elevation for Multi-Level Wells, Faro Mine, Yukon

Well ID	Stickup (m)	Ground Elevation (masl)	Date	Time	Water Level Below top of Casing (m)	Water Level Elevation (m asl)
P03-05-05	0.84	1059.588	9/22/2004		8.95	1051.48
P03-05-06	0.84	1059.588	6/9/2004	9:29	8.475	1051.96
P03-05-06	0.84	1059.588	9/22/2004		8.81	1051.62
P03-05-07	0.84	1059.588	6/9/2004	9:30	8.5	1051.93
P03-05-07	0.84	1059.588	9/22/2004		8.83	1051.60
P03-05-08	0.84	1059.588	6/9/2004	9:31	8.43	1052.00
P03-05-08	0.84	1059.588	9/22/2004		8.71	1051.72
P03-06-01	0.87	1061.925	6/10/2004	15:48	12.24	1050.55
P03-06-01	0.87	1061.925	9/22/2004		12.51	1050.28
P03-06-02	0.87	1061.925	6/10/2004	15:51	12.23	1050.56
P03-06-02	0.87	1061.925	9/22/2004		12.51	1050.28
P03-06-03	0.87	1061.925	6/10/2004	15:52	12.23	1050.56
P03-06-03	0.87	1061.925	9/22/2004		12.51	1050.28
P03-06-04	0.87	1061.925	6/10/2004	15:54	12.24	1050.55
P03-06-04	0.87	1061.925	9/22/2004		12.52	1050.27
P03-06-05	0.87	1061.925	6/10/2004	15:55	1223	-160.21
P03-06-05	0.87	1061.925	9/22/2004		12.51	1050.28
P03-06-06	0.87	1061.925	6/10/2004	15:56	12.32	1050.47
P03-06-06	0.87	1061.925	9/22/2004		12.49	1050.30
P03-06-07	0.87	1061.925	9/22/2004		dry	#VALUE!
P03-07-01	0.78	1064.207	6/10/2004	17:42	13.02	1051.96
P03-07-02	0.78	1064.207	6/10/2004	17:44	13.07	1051.91
P03-07-03	0.78	1064.207	6/10/2004	17:45	13.1	1051.88
P03-07-04	0.78	1064.207	6/10/2004	17:47	13.11	1051.87
P03-07-08	0.78	1064.207	6/10/2004	17:50	12.71	1052.27
P03-08-01	0.88	1047.474	5/11/2004		8.225	1040.13
P03-08-01	0.88	1047.474	6/8/2004	13:20	7.135	1041.22
P03-08-01	0.88	1047.474	8/4/2004	8:10	7.46	1040.89
P03-08-01	0.88	1047.474	9/24/2004		8	1040.35
P03-08-02	0.88	1047.474	5/11/2004		8.215	1040.14
P03-08-02	0.88	1047.474	6/8/2004	13:21	7.13	1041.22
P03-08-02	0.88	1047.474	8/4/2004	8:11	7.46	1040.89
P03-08-02	0.88	1047.474	9/24/2004		7.98	1040.37
P03-08-03	0.88	1047.474	5/11/2004		8.005	1040.35
P03-08-03	0.88	1047.474	6/8/2004	13:22	6.95	1041.40
P03-08-03	0.88	1047.474	8/4/2004	8:12	7.29	1041.06
P03-08-03	0.88	1047.474	9/24/2004		7.78	1040.57
P03-08-04	0.88	1047.474	5/11/2004		8	1040.35
P03-08-04	0.88	1047.474	6/8/2004	13:23	6.95	1041.40
P03-08-04	0.88	1047.474	8/4/2004	8:13	7.31	1041.04
P03-08-04	0.88	1047.474	9/24/2004		7.78	1040.57
P03-08-05	0.88	1047.474	5/11/2004		7.91	1040.44
P03-08-05	0.88	1047.474	6/8/2004	13:32	6.83	1041.52
P03-08-05	0.88	1047.474	8/4/2004	8:14	7.23	1041.12
P03-08-05	0.88	1047.474	9/24/2004		7.63	1040.72
P03-08-06	0.88	1047.474	5/11/2004		7.49	1040.86
P03-08-06	0.88	1047.474	6/8/2004	13:33	6.41	1041.94
P03-08-06	0.88	1047.474	8/4/2004	8:15	6.87	1041.48
P03-08-06	0.88	1047.474	9/24/2004		7.21	1041.14
P03-08-07	0.88	1047.474	5/11/2004		5.645	1042.71
P03-08-07	0.88	1047.474	6/8/2004	13:34	4.81	1043.54

Table 3. 2004 Water Level Elevation for Multi-Level Wells, Faro Mine, Yukon

Well ID	Stickup (m)	Ground Elevation (masl)	Date	Time	Water Level Below top of Casing (m)	Water Level Elevation (m asl)
P03-08-07	0.88	1047.474	8/4/2004	8:16	5.36	1042.99
P03-08-07	0.88	1047.474	9/24/2004		5.37	1042.98
P03-08-08	0.88	1047.474	5/11/2004		5.575	1042.78
P03-08-08	0.88	1047.474	6/8/2004	13:35	4.69	1043.66
P03-08-08	0.88	1047.474	8/4/2004	8:17	5.36	1042.99
P03-08-08	0.88	1047.474	9/24/2004		5.23	1043.12
P03-09-01	0.69	1017.822	2/11/2004		2.41	1016.10
P03-09-01	0.69	1017.822	5/11/2004		2.4	1016.11
P03-09-01	0.69	1017.822	6/8/2004	9:23	2.26	1016.25
P03-09-01	0.69	1017.822	8/4/2004	10:20	2.19	1016.32
P03-09-01	0.69	1017.822	9/21/2004		2.53	1015.98
P03-09-02	0.69	1017.822	2/11/2004		2.64	1015.87
P03-09-02	0.69	1017.822	5/11/2004		2.72	1015.79
P03-09-02	0.69	1017.822	6/8/2004	9:24	2.52	1015.99
P03-09-02	0.69	1017.822	8/4/2004	10:21	3.15	1015.36
P03-09-02	0.69	1017.822	9/21/2004		2.77	1015.74
P03-09-03	0.69	1017.822	2/11/2004		2.84	1015.67
P03-09-03	0.69	1017.822	5/11/2004		2.895	1015.62
P03-09-03	0.69	1017.822	6/8/2004	9:25	3.12	1015.39
P03-09-03	0.69	1017.822	8/4/2004	10:22	2.67	1015.84
P03-09-03	0.69	1017.822	9/21/2004		2.92	1015.59
P03-09-04	0.69	1017.822	2/11/2004		3.18	1015.33
P03-09-04	0.69	1017.822	5/11/2004		3.215	1015.30
P03-09-04	0.69	1017.822	6/8/2004	9:26	271	747.51
P03-09-04	0.69	1017.822	8/4/2004	10:23	3.05	1015.46
P03-09-04	0.69	1017.822	9/21/2004		3.23	1015.28
P03-09-05	0.69	1017.822	2/11/2004		3.23	1015.28
P03-09-05	0.69	1017.822	5/11/2004		3.265	1015.25
P03-09-05	0.69	1017.822	6/8/2004	9:26	3.06	1015.45
P03-09-05	0.69	1017.822	8/4/2004	10:24	3.1	1015.41
P03-09-05	0.69	1017.822	9/21/2004		3.27	1015.24
P03-09-06	0.69	1017.822	2/11/2004		3.25	1015.26
P03-09-06	0.69	1017.822	5/11/2004		3.285	1015.23
P03-09-06	0.69	1017.822	6/8/2004	9:27	3.14	1015.37
P03-09-06	0.69	1017.822	8/4/2004	10:25	2.48	1016.03
P03-09-06	0.69	1017.822	9/21/2004		3.3	1015.21
P03-09-07	0.69	1017.822	2/11/2004		3.4	1015.11
P03-09-07	0.69	1017.822	5/11/2004		3.435	1015.08
P03-09-07	0.69	1017.822	6/8/2004	9:27	3.295	1015.22
P03-09-07	0.69	1017.822	8/4/2004	10:26	3.33	1015.18
P03-09-07	0.69	1017.822	9/21/2004		3.45	1015.06
P03-09-08	0.69	1017.822	2/11/2004		3.45	1015.06
P03-09-08	0.69	1017.822	5/11/2004		3.485	1015.03
P03-09-08	0.69	1017.822	6/8/2004	9:28	3.345	1015.17
P03-09-08	0.69	1017.822	8/4/2004	10:27	3.39	1015.12
P03-09-08	0.69	1017.822	9/21/2004		3.49	1015.02
P03-09-09	0.69	1017.822	2/11/2004		3.64	1014.87
P03-09-09	0.69	1017.822	5/12/2004		3.66	1014.85
P03-09-09	0.69	1017.822	6/8/2004	9:29	3.525	1014.99
P03-09-09	0.69	1017.822	8/4/2004	10:28	3.58	1014.93
P03-09-09	0.69	1017.822	9/21/2004		3.66	1014.85

Table 4. 2004 Water Level Elevation for Conventional Wells, Faro Mine, Yukon

Well ID	Stickup (m)	Ground Elevation (masl)	Date	Time	Water Level Below Top of Casing (m)	Water Level Elevation (masl)
BH12 A *		1193.00	6/10/2004	11:21	2.57	1190.43
BH12 A *		1193.00	9/29/2004	11:20	2.53	1190.47
BH12 B *		1193.00	6/10/2004	11:45	2.62	1190.38
BH12 B *		1193.00	9/29/2004	11:20	2.09	1190.91
BH13 A *		1221.00	6/10/2004	10:55	1.39	1219.61
BH13 B *		1221.00	9/29/2004	11:35	3.615	1217.39
BH14 A *		1187.00	9/29/2004	12:48	3.83	1183.17
BH14 B *		1187.00	9/29/2004	12:48	4.47	1182.53
BH2 *		1134.00	6/9/2004	11:40	4.47	1129.53
BH2 *		1134.00	9/23/2004	10:00	4.95	1129.05
BH4			9/23/2004	0:00	2.55	
P01-01B	0.48	1015.38	9/27/2004	10:55	3.913	1011.94
P01-02B	0.68	1019.03	9/26/2004	14:02	0.342	1019.37
P01-03	0.56	1031.65	6/16/2004	19:09	1.88	1030.33
P01-04	0.56	1031.65	9/27/2004	9:37	2.611	1029.60
P01-04A	0.51	1031.39	9/26/2004	17:42	1.975	1029.92
P01-04B	0.50	1031.39	9/26/2004	17:02	1.539	1030.35
P01-05A	0.45	1050.17	9/26/2004	12:31	3.37	1047.25
P01-05B	0.52	1050.09	6/16/2004	17:25	3.32	1047.29
P01-06	0.49	1052.13	6/16/2004	15:55	4.83	1047.79
P01-07	0.49	1052.13	9/26/2004	11:07	5.21	1047.41
P01-07A	0.49	1060.27	9/26/2004	11:07	11.585	1049.17
P01-07B	0.44	1060.22	9/26/2004	11:07	11.505	1049.16
P01-07C	0.44	1060.28	6/16/2004	20:31	11.315	1049.40
P01-07C	0.44	1060.28	9/25/2004	16:42	11.45	1049.27
P01-07D	0.49	1060.49	6/16/2004	10:47	11.682	1049.30
P01-07D	0.49	1060.49	9/26/2004	15:49	11.815	1049.17
P01-07E	0.39	1060.49	6/17/2004	11:01	11.575	1049.31
P01-07E	0.39	1060.49	9/26/2004	15:14	11.698	1049.18
P01-08B	0.76	1063.74	5/13/2004	0:00	13.295	1051.20
P01-09A	0.44	1060.76	5/12/2004	0:00	6.93	1054.27
P01-09A	0.44	1060.76	9/25/2004	14:35	6.66	1054.54
P01-09B	0.37	1060.73	5/12/2004	0:00	6.803	1054.30
P01-09B	0.37	1060.73	9/25/2004	14:20	6.59	1054.51
P01-09C	0.38	1060.80	9/25/2004	13:50	6.77	1054.41
P01-09D	0.33	1060.80	9/25/2004	13:20	7.5	1053.63
P01-10A	0.49	1064.58	9/25/2004	15:46	10.38	1054.69
P01-10B	0.45	1064.50	5/13/2004	0:00	10.85	1054.10
P01-10B	0.45	1064.50	6/17/2004	14:12	10.246	1054.71
P01-10B	0.45	1064.50	9/25/2004	15:25	10.735	1054.22
P01-11	0.55	1017.28	6/8/2004	15:12	0.445	1017.38
P01-12	0.55	1017.28	9/27/2004	10:17	0.665	1017.16
P96-6		1078.70	6/9/2004	12:38	9	1069.70
P96-7			6/10/2004	12:54	5.84	
P96-8			9/29/2004	15:22	5.75	
P96-8 A		1101.70	6/9/2004	13:43	2.25	1099.45
P96-8 A		1101.70	9/24/2004	8:57	2.91	1098.79
P96-8 B		1101.70	6/9/2004	14:02	2.17	1099.53
P96-8 B		1101.70	9/24/2004	8:58	2.82	1098.88
S1 A			6/10/2004	14:35	3.56	
S1 A			9/23/2004	12:06	4.35	
S1 B			6/10/2004	14:41	2	
S1 B			9/23/2004	12:08	3.95	
S2 A		1127.00	6/10/2004	14:05	4.11	1122.89
S2 A		1127.00	9/23/2004	12:12	4.69	1122.31

Table 4. 2004 Water Level Elevation for Conventional Wells, Faro Mine, Yukon

Well ID	Stickup (m)	Ground Elevation (masl)	Date	Time	Water Level Below Top of Casing (m)	Water Level Elevation (masl)
S2 B		1127.00	6/10/2004	14:21	4.175	1122.83
S2 B		1127.00	9/23/2004	12:10	4.85	1122.15
S3		1127.00	6/10/2004	13:39	2.427	1124.57
S3		1127.00	9/23/2004	12:20	3.63	1123.37
TH86-17	1.04	1065.90	6/9/2004	14:50	5.73	1061.21
TH86-17	1.04	1065.90	9/21/2004	16:11	8.95	1057.99
X16A	0.50	1015.91	6/8/2004	13:20	2.867	1013.54
X16A	0.50	1015.91	9/21/2004	9:37	3.695	1012.72
X16B	0.10	1015.91	6/8/2004	0:00	3.265	1012.75
X16B	0.10	1015.91	9/21/2004	9:39	4.05	1011.96
X17A	1.15	1014.30	6/8/2004	0:00	2.073	1013.38
X17A	1.15	1014.30	9/22/2004	15:55	2.795	1012.65
X17B	0.59	1014.30	6/8/2004	0:00	2.615	1012.27
X17B	0.59	1014.30	9/22/2004	15:57	2.24	1012.65
X18A	0.62	1018.97	6/8/2004	0:00	4.005	1015.59
X18A	0.62	1018.97	9/21/2004	12:00	4.55	1015.04
X18B	0.68	1018.97	9/21/2004	12:00	4.16	1015.49
X21A	0.69	1051.40	9/23/2004	15:14	4.77	1047.32
X21B	0.74	1051.40	6/17/2004	10:30	4.483	1047.66
X21B	0.74	1051.40	9/23/2004	15:09	4.75	1047.39
X21C	0.81	1051.40	6/17/2004	10:07	4.483	1047.73
X21C	0.81	1051.40	9/23/2004	15:12	4.82	1047.39
X24A	0.80	1032.30	6/10/2004	17:45	2.87	1030.23
X24A	0.80	1032.30	8/4/2004	14:16	2.985	1030.12
X24A	0.80	1032.30	9/21/2004	14:00	3.82	1029.28
X24B	0.75	1032.30	6/10/2004	0:00	2.79	1030.26
X24B	0.75	1032.30	8/4/2004	14:15	2.895	1030.16
X24C	0.70	1032.30	6/10/2004	18:10	2.88	1030.12
X24C	0.70	1032.30	9/23/2004	14:23	3.7	1029.30
X24D	0.70	1032.30	6/10/2004	17:35	2.69	1030.31
X24D	0.70	1032.30	8/4/2004	14:12	2.807	1030.19
X24D	0.70	1032.30	9/21/2004	14:00	3.64	1029.36
X25A	0.68	1031.40	6/10/2004	16:30	2.103	1029.98
X25A	0.68	1031.40	8/4/2004	13:26	2.21	1029.87
X25B	0.63	1031.40	9/21/2004	13:00	3.3	1028.73
X25B	0.63	1031.40	6/10/2004	16:50	1.958	1030.07
X25B	0.63	1031.40	8/4/2004	13:24	2.79	1029.24
X25B	0.63	1031.40	9/21/2004	13:00	2.89	1029.14
V34		1139.00	6/9/2004	16:38	6.91	1132.09
V34		1139.00	9/22/2004	14:07	6.79	1132.21
V35		1145.00	6/9/2004	16:38	8.35	1136.65
V35		1145.00	9/22/2004	13:44	7.49	1137.51
V36		1129.00	6/9/2004	19:26	8.51	1120.49
V36		1129.00	9/22/2004	10:46	8.91	1120.09
V37		1146.00	6/9/2004	9:15	8.97	1137.03
V37		1146.00	9/22/2004	10:46	8.91	1137.09
P01-52A			6/8/2004	18:46	4.64	
P01-52A			9/22/2004	11:39	4.78	
P01-52B			6/8/2004	18:24	4.62	
P01-52B			9/22/2004	11:39	5.05	
P96-9A *		1106.7	6/9/2004	10:55	5.3	1101.40
P96-9A *		1106.7	9/24/2004	12:48	5.7	1101

* in mine datum.

Table 5. Summary of 2004 Water Quality Data, Faro Mine, Yukon

Well ID	Date Sampled	Temp. (field) (C)	Alkalinity (Total) as CaCO ₃	Hardness (CaCO ₃)	Sp. Cond. (field) (μS/cm)	Sp. Cond. (lab) (μS/cm)	pH (field)	pH (lab)	Aluminium	Arsenic	Barium	Beryllium	Boron	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Silver	Sodium	Antimony	Selenium	Sulfate	Titanium	Thallium	Uranium	Vanadium	Zinc	
BH12A	6/10/2004	2.7	200	729	692	1260	6.45	7.79	<0.020	<0.0020	0.047	<0.0050	<0.10	165	0.00024	<0.0010	<0.0030	<0.0020	<0.050	77	<0.010	<0.0020	<0.0020	<0.010	<0.0010	7	<0.010	0.0039	461	<0.050	<0.00040	0.00649	<0.030	0.121			
BH12A	9/29/2004	1.58		491	985	982	6.65	7.72	<0.020	<0.0020	0.028	0.0073	<0.10	108	0.00021	<0.0010	<0.0010	0.0022	0.034	<0.0020	53.7	<0.010	<0.0020	<0.0020	<0.010	<0.0010	5.5	<0.010	<0.0020	333	<0.050	<0.00040	0.00504	<0.030	0.122		
BH12B	6/10/2004	4.2	198	672	684	1230	6.47	7.77	<0.020	<0.0020	0.042	<0.0050	<0.10	150	0.00022	<0.0010	<0.0010	0.0024	<0.0030	<0.0020	72.3	<0.010	<0.0020	<0.0020	<0.010	<0.0010	7	<0.010	0.0037	437	<0.050	<0.00040	0.00687	<0.030	0.117		
BH13A	6/10/2004			58					0.012	<0.0010	<0.020	<0.0050	<0.10	14.5	0.000216	<0.00050	<0.00050	0.0027	<0.030	<0.0038	<0.050	5.27	0.012	<0.0020	<0.0010	<0.0050	<0.00050	<2.0	<0.0050	<0.00050	<0.010	<0.0020	<0.00020	<0.030	0.0533		
BH13B	9/29/2004	1.2		552	1110	1100	7.36	7.71	<0.020	<0.0020	0.023	<0.0050	<0.10	147	0.00010	<0.0010	<0.0010	0.0054	<0.030	<0.0020	45.1	<0.010	<0.0020	<0.0046	<0.010	<0.0010	5.7	<0.010	0.0054	474	<0.050	<0.00040	0.00101	<0.030	0.095		
BH14A	6/10/2004	1.9	372	2260	1686	3430	6.74	7.8	<0.10	<0.010	<0.020	<0.0050	<0.10	572	0.00050	<0.0050	<0.0050	<0.010	<0.030	<0.010	201	<0.010	<0.0020	<0.010	<0.050	<0.00050	19.6	<0.0050	<0.010	1620	<0.050	<0.0020	0.114	<0.030	0.0151		
BH14A	9/29/2004	2.8		2020	3512	3470	7.24	7.78	<0.10	<0.010	<0.020	<0.0059	<0.10	509	<0.00050	<0.0050	<0.0050	<0.010	<0.030	0.012	183	<0.010	<0.0020	<0.010	<0.050	<0.00050	14.4	<0.0050	<0.00050	1790	<0.050	<0.0020	0.119	<0.030	0.0395		
BH14B	6/10/2004	3.1	368	2030	1705	3250	6.79	7.87	<0.10	<0.010	<0.020	<0.0050	<0.10	499	<0.00050	<0.00050	<0.00050	<0.010	<0.030	<0.010	190	<0.010	<0.0020	<0.010	<0.050	<0.00050	13.3	<0.0050	<0.010	1500	<0.050	<0.0020	0.131	<0.030	0.0219		
BH14B	9/29/2004	2.22		1740	3168	3140	7.17	7.95	<0.050	<0.0050	<0.020	<0.0050	<0.10	431	<0.00025	<0.0025	<0.0050	<0.030	<0.0050	<0.050	163	<0.010	<0.0020	<0.0050	<0.025	<0.00025	12.5	<0.0025	<0.0050	1570	<0.050	<0.0010	0.109	<0.030	0.0244		
BH2	6/9/2004	3.2	35.4	488	735	1160	5.39	6.88	<0.010	<0.010	0.042	<0.0050	<0.10	124	0.0704	0.022	<0.0050	<0.010	<0.030	<0.050	43.4	1.56	<0.0020	<0.010	<0.050	<0.025	<0.0050	7.6	<0.0050	<0.010	599	<0.050	<0.0020	<0.020	<0.030	45.5	
BH2	9/23/2004	110	173		393		7.66	0.077	<0.020	0.042	<0.0050	<0.10	47.4	0.0141	0.0012	<0.0010	0.0020	0.009	0.0038	<0.050	13.4	0.026	<0.0020	<0.0020	0.038	<0.0010	4	<0.010	<0.0020	87.6	<0.050	<0.00040	0.00649	<0.030	9.52		
BH4	9/23/2004	5	108	209	261	444	6.01	7.64	0.042	<0.0010	<0.020	<0.0050	<0.10	58	0.00236	0.00769	<0.00050	0.0043	<0.030	<0.010	15.5	0.095	<0.0020	<0.010	0.0154	<0.00050	4.8	<0.0050	<0.00050	122	<0.050	<0.00020	<0.00020	<0.030	1.39		
P03-01-01	6/8/2004	4.8	217		420		7.97	7.94	<0.10	<0.010	0.032	0.131	<0.050	63.1	<0.00050	<0.00050	<0.00050	<0.010	0.020	5.08	<0.010	<0.0020	<0.010	0.031	<0.00050	7.8	<0.0050	<0.00050	24.3	<0.050	<0.00020	<0.00020	<0.030	0.0058			
P03-01-01	9/21/2004	3.92	220	216	440	263	7.54	8.2	<0.10	<0.010	0.023	0.117	<0.050	63.8	<0.00050	<0.00050	<0.00050	<0.010	0.010	4.93	<0.010	<0.0020	<0.008	0.028	<0.00050	7.6	<0.0050	<0.00050	18.7	<0.050	<0.00020	<0.00020	<0.030	0.0050			
P03-01-02	6/8/2004	4.8	178	295		580	8.15	8.01	<0.10	0.0012	0.188	<0.0050	<0.10	91.7	<0.00050	<0.00050	<0.00050	<0.010	0.0327	<0.010	0.050	15.9	1.36	<0.0020	<0.00020	0.009	<0.0050	<0.00050	5.4	<0.0050	<0.00050	148	<0.050	<0.00020	0.0291	<0.030	0.0050
P03-01-02	9/21/2004	4.29	179	301	595	359	7.41	8.19	<0.10	0.0012	0.193	<0.0050	<0.10	93	<0.00050	<0.00050	<0.00050	<0.010	0.0313	<0.010	0.050	16.8	2.95	<0.0020	<0.00020	0.0047	<0.0050	<0.00050	6.5	<0.0050	<0.00050	96.3	<0.050	<0.00020	0.0239	<0.030	0.005
P03-01-03	6/8/2004	5.3	114	346		717	7.5	7.72	<0.10	<0.0010	0.213	<0.0050	<0.10	109	0.000123	<0.00050	<0.00050	<0.010	0.044	<0.010	0.050	17.8	0.133	<0.0020	<0.00020	0.0013	<0.0050	<0.00050	3.5	<0.0050	<0.00050	280	<0.050	<0.00020	0.00637	<0.030	0.0067
P03-01-03	9/21/2004	4.2	124	162	343	207	7.48	8.																													

Table 5. Summary of 2004 Water Quality Data, Faro Mine, Yukon

Well ID	Date Sampled	Temp. (field) (C)	Alkalinity (Total) as CaCO ₃	Hardness (CaCO ₃)	Sp. Cond. (field) (μS/cm)	Sp. Cond. (lab) (μS/cm)	pH (field)	pH (lab)	Aluminium	Arsenic	Barium	Beryllium	Boron	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Silver	Sodium	Antimony	Selenium	Sulfate	Titanium	Thallium	Uranium	Vanadium	Zinc
P03-05-04	6/9/2004	4.8	150	395		896	6.62	7.73	<0.050	<0.0050	0.167	<0.0050	<0.10	121	<0.0025	0.0045	<0.0025	0.103	<0.0050	<0.050	22.5	11.9	<0.0020	<0.050	<0.025	<0.00025	9.8	<0.0025	<0.0050	343	<0.050	<0.0010	0.0059	<0.030	<0.0050	
P03-05-04	9/22/2004	4.32	153	419		866	524	6.91	7.93	<0.020	<0.0020	0.172	<0.0050	<0.10	128	<0.0010	0.0041	<0.0010	0.494	<0.0024	<0.050	24.1	12.2	<0.0020	<0.0020	<0.10	<0.0010	11.2	<0.0010	<0.0020	336	<0.050	<0.0040	0.00571	<0.030	0.0469
P03-05-05	6/9/2004	5	13.9	539		1430	6.55	5.71	<0.10	0.017	0.023	<0.0050	<0.10	136	<0.00050	0.0065	<0.0050	<0.010	142	<0.010	<0.050	48.2	16.5	<0.00020	<0.010	<0.050	<0.00050	33.5	<0.0050	<0.010	866	<0.050	<0.0020	<0.020	<0.030	<0.0050
P03-05-05	9/22/2004	5.1	48.6	694	1846	1660	6.34	6.43	<0.050	0.0111	0.024	<0.0050	<0.10	173	<0.0025	0.0069	<0.0025	<0.0050	178	<0.0050	<0.050	63.5	20.2	<0.00020	<0.0050	<0.025	<0.00025	45.3	<0.0025	<0.0050	1050	<0.050	<0.0010	0.0013	<0.030	0.0289
P03-05-06	6/9/2004	5.6	83.4	896		2610	6.94	7.26	<0.050	<0.0050	<0.020	<0.0050	<0.10	140	<0.0025	<0.0025	<0.0025	<0.0050	21.7	<0.0050	<0.050	133	0.401	<0.0020	<0.0050	<0.025	<0.00025	229	<0.0025	<0.0050	1550	<0.050	<0.0010	<0.010	<0.030	0.0104
P03-05-06	9/22/2004	4.81	115	1040	2684	2860	5.83	7.82	<0.050	<0.0050	<0.020	<0.0050	<0.10	157	<0.00025	<0.0025	<0.0025	<0.0050	10.8	<0.0050	<0.050	158	0.12	<0.00020	<0.0063	<0.025	<0.00025	283	<0.0025	<0.0050	1720	<0.050	<0.0010	<0.010	<0.030	0.02
P03-05-07	6/9/2004	25	5.6	1990		7190	5.98	3.91	<0.50	<0.050	<0.060	<0.015	<0.30	246	<0.0025	0.025	<0.0025	<0.050	2000	<0.066	<0.15	333	28.7	<0.00020	<0.050	<0.025	<0.0025	247	<0.025	<0.050	6300	<0.15	<0.010	<0.010	<0.086	
P03-05-07	9/22/2004	4.78	13.7	2340	7176	7320	6.22	4.28	<0.20	<0.020	<0.060	<0.015	<0.30	282	<0.0010	<0.010	<0.020	2270	0.055	<0.15	397	30	<0.00020	<0.020	<0.10	<0.0010	272	<0.010	<0.020	6750	<0.15	<0.0040	<0.040	<0.090	0.849	
P03-05-08	6/9/2004	10.3	1530		5500	4.07	<0.50	<0.050	<0.040	<0.010	<0.20	195	<0.0025	<0.025	<0.050	<0.0050	1090	0.101	0.11	254	15.1	<0.00020	<0.050	<0.25	<0.0025	292	<0.025	<0.050	4330	<0.10	<0.010	<0.010	<0.060	0.146		
P03-05-08	9/22/2004	4.85	14.5	1840	5680	6230	5.98	4.36	<0.20	<0.020	<0.040	<0.010	<0.20	236	<0.0010	<0.010	<0.020	1530	0.17	<0.10	303	19.9	<0.00020	<0.020	<0.10	<0.0010	287	<0.010	<0.020	5440	<0.10	<0.0040	<0.040	<0.060	0.266	
P03-06-01	6/10/2004	5	174	697	400	1420	6.26	7.51	<0.050	<0.0050	0.073	<0.0050	<0.10	197	<0.00025	0.012	<0.0050	0.213	<0.0050	<0.050	50	12.7	<0.00020	<0.0020	<0.050	<0.00025	41.9	<0.0025	<0.0050	705	<0.050	<0.0010	0.0188	<0.030	0.103	
P03-06-01	9/22/2004	4.95	176	798	1519	937	6.89	7.85	<0.050	<0.0050	0.082	<0.0050	<0.10	221	<0.00025	0.016	<0.0025	0.315	<0.0050	<0.050	59.5	15.7	<0.00020	<0.050	<0.025	<0.00025	40.9	<0.0025	<0.0050	746	<0.050	<0.0010	0.0143	<0.030	0.137	
P03-06-02	6/10/2004	3.7	175	762	430	1490	6.38	7.57	<0.050	<0.0050	0.084	<0.0050	<0.10	212	<0.00025	0.0156	<0.0025	0.050	<0.0050	<0.050	56.3	14.9	<0.00020	<0.050	<0.025	<0.00025	37	<0.0025	<0.0050	763	<0.050	<0.0010	0.0157	<0.030	0.179	
P03-06-02	9/22/2004	4.81	162	784	1499	921	6.76	7.83	<0.050	<0.0050	0.082	<0.0050	<0.10	216	<0.00025	0.0239	<0.0025	0.050	<0.0050	<0.050	59.6	16.5	<0.00020	<0.050	<0.025	<0.00025	38.6	<0.0025	<0.0050	780	<0.050	<0.0010	0.0117	<0.030	0.2	
P03-06-03	6/10/2004	3.7	138	862	660	1650	6.2	7.19	<0.050	<0.0050	0.041	<0.0050	<0.10	237	<0.0032	0.178	<0.0025	0.050	<0.0050	<0.050	65.9	29.9	<0.00020	<0.050	<0.025	<0.00025	26	<0.0025	<0.050	907	<0.050	<0.0010	0.0063	<0.030	0.436	
P03-06-03	9/22/2004	4.05	151	471	983	590	6.82	7.81	<0.020	<0.0020	0.049	<0.0050	<0.10	131	<0.00010	0.0074	<0.0010	0.0200	<0.050	<0.0050	34.8	10.5	<0.00020	<0.050	<0.020	<0.00040	0.0228	<0.0050	<0.030	1.24						
P03-06-04	6/10/2004	4.3	134	380	242	875	6.44	7.45	<0.020	<0.0020	0.042	<0.0050	<0.10	105	<0.00010	0.0066	<0.0010	0.0200	<0.050	<0.0020	21.8	<0.00020	<0.046	0.012	<0.00010	18.6	<0.0010	<0.020	336	<0.050	<0.00040	0.0209	<0.030	1.49		
P03-06-04	9/22/2004	4.06	150	476	986	591	6.65	7.84	<0.020	<0.0020</																										

Table 5. Summary of 2004 Water Quality Data, Faro Mine, Yukon

Well ID	Date Sampled	Temp. (field) (C)	Alkalinity (Total) as CaCO ₃	Hardness (CaCO ₃)	Sp. Cond. (field) (μS/cm)	Sp. Cond. (lab) (μS/cm)	pH (field)	pH (lab)	Aluminium	Arsenic	Barium	Beryllium	Boron	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Silver	Sodium	Antimony	Selenium	Sulfate	Titanium	Thallium	Uranium	Vanadium	Zinc
S1B	6/10/2004	2.5	24.2	521	606	1080	6.07	7.39	<0.020	<0.020	<0.0050	<0.10	136	0.00021	<0.0010	0.0029	0.09	<0.020	<0.050	44.2	0.01	<0.0020	<0.020	<0.010	<0.0010	31.5	<0.010	<0.0020	551	<0.050	<0.00040	<0.00040	<0.030	0.0274		
S1B	9/23/2004	4.8	114	733	666	1400	6.4	7.86	<0.050	<0.050	0.025	<0.10	197	0.00032	<0.0025	<0.0050	0.033	<0.0050	<0.050	58.6	0.125	<0.0020	<0.0050	<0.025	<0.0025	41.2	<0.025	<0.0050	760	<0.050	<0.010	<0.010	<0.030	0.109		
S2A	6/10/2004	2.6	193	4160	2026	5440	6.1	7.27	<0.20	<0.020	<0.0050	<0.10	533	0.0143	<0.010	<0.020	0.489	<0.020	0.122	688	54.5	<0.0020	<0.020	1.11	<0.010	24.4	<0.010	<0.020	4340	<0.050	<0.0040	0.059	<0.030	113		
S2A	9/23/2004	3.8	178	4280	1345	5500	6.07	7.34	<0.50	<0.050	<0.020	<0.10	518	0.0166	<0.025	<0.025	<0.050	1.72	<0.050	0.134	726	58.1	<0.0020	<0.050	1.45	<0.025	31.6	<0.025	<0.050	4610	<0.050	<0.010	<0.010	<0.030	124	
S2B	6/10/2004	3.6	33.7	1290	1408	2130	6.03	7.19	<0.050	<0.0050	0.022	<0.10	317	0.00079	<0.0025	<0.0025	<0.050	13.4	<0.0050	<0.050	121	1.9	<0.0020	<0.0050	<0.025	<0.0025	8	<0.025	<0.0050	1380	<0.050	<0.010	<0.010	<0.030	0.112	
S2B	9/23/2004	3.8	75.6	2750	1134	3270	6.43	7.18	<0.10	<0.010	0.045	<0.050	<0.10	602	0.00262	0.014	<0.0050	<0.010	97.2	<0.010	<0.050	304	20	<0.0020	<0.010	0.235	<0.0050	19.9	<0.050	<0.010	2370	<0.050	<0.0020	<0.0020	<0.030	29.6
S3	6/10/2004	2.8	144	4550	2553	5930	6.08	7.24	<0.20	<0.020	<0.0050	<0.10	456	<0.0010	0.039	<0.010	<0.020	8.62	<0.020	0.126	768	59.8	<0.0020	<0.020	0.7	<0.010	22.7	<0.010	<0.020	4790	<0.050	<0.0040	<0.0040	<0.030	101	
S3	9/23/2004	6.1	170	3990	1390	5360	7.31	<0.20	<0.020	<0.0050	0.023	<0.10	455	<0.0010	0.036	<0.010	<0.020	2.06	<0.020	0.135	692	47	<0.0020	<0.020	0.71	<0.010	29.7	<0.010	<0.020	4560	<0.050	<0.0040	<0.0040	<0.030	86.7	
TH86-17	6/9/2004	51.4	61		138	8	<0.010	<0.0010	0.035	<0.0050	<0.10	18	<0.00050	<0.00050	<0.00050	0.0015	0.109	<0.010	<0.050	3.93	<0.010	<0.0020	<0.010	<0.0050	<0.00050	<2.0	<0.0050	<0.00020	0.00051	<0.030	0.0073					
TH86-17	9/21/2004	8.1	86.2	98.2	208	211	7.3	8.06	<0.010	<0.010	0.059	<0.0050	<0.10	28.9	<0.00050	<0.00050	<0.00050	<0.010	0.236	<0.010	<0.050	6.31	<0.010	<0.0020	<0.010	<0.0050	<0.00050	2.4	<0.0050	<0.00020	0.0087	<0.030	0.0148			
X16A	6/8/2004	2.6	140	311	330	6.85	8.07	<0.010	<0.010	0.08	<0.0050	<0.10	47.8	0.00061	<0.00050	<0.00050	<0.010	<0.030	<0.010	<0.050	11.3	<0.010	<0.0020	0.023	<0.0050	<0.00050	<2.0	<0.0050	<0.00020	0.00179	<0.030	<0.0050				
X16A	9/21/2004	4.9	154	168	324	333	7.47	8.23	<0.010	<0.010	0.09	<0.0050	<0.10	48.1	0.00059	<0.00050	<0.00050	<0.010	<0.030	<0.010	<0.050	11.6	<0.010	<0.0020	0.022	<0.0050	<0.00050	<2.0	<0.0050	<0.00020	0.00161	<0.030	0.0099			
X16B	6/8/2004	4.4	191	206	372	395	7.05	8.08	<0.010	<0.010	0.133	<0.0050	<0.10	57.7	<0.00050	<0.00050	<0.00050	<0.010	<0.030	<0.010	<0.050	15.1	<0.010	<0.0020	0.018	<0.0050	<0.00050	<2.0	<0.0050	<0.00020	0.00211	<0.030	<0.0050			
X16B	9/21/2004	5.1	200		211	380	7.7	8.32	<0.010	<0.010	0.133	<0.0050	<0.10	58.1	<0.00050	<0.00050	<0.00050	<0.010	<0.030	<0.010	<0.050	16	<0.010	<0.0020	0.017	<0.0050	<0.00050	<2.0	<0.0050	<0.00020	0.00194	<0.030	0.0058			
X17A	6/8/2004	3.6	233	252	466	478	6.67	8.13	<0.010	<0.010	0.154	<0.0050	<0.10	68.9	<0.00050	<0.00050	<0.00050	<0.010	<0.030	<0.010	<0.050	19.4	<0.010	<0.0020	0.010	<0.0050	<0.00050	<2.0	<0.0050	<0.00020	0.00296	<0.030	<0.0050			
X17A	9/22/2004	3.7	218	244	985	441	7.46	8.23	<0.010	<0.010	0.145	<0.0050	<0.10	66.1	<0.00050	<0.00050	<0.00050	<0.010	<0.030	<0.010	<0.050	19.3	<0.010	<0.0020	0.010	<0.0050	<0.00050	<2.0	<0.0050	<0.00020	0.00235	<0.030	<0.0050			
X17B	6/8/2004	4.3	256	393	757	527	6.68	8.06	<0.020	<0.020	0.437	<0.0050	<0.10	107	<0.00010	<0.00010	<0.00010	<0.020	<0.030	<0.010	<0.050	30.6	0.321	<0.0020	<0.020	<0.010	<0.0010	27.5	<0.010	<0.0020	39.1	<0.050	<0.0040	<0.0141	<0.030	<0.0050
X17B	9/22/2004	3.3	400	408	569	761	7.01	7.8	<0.020	<0.020	0.326	<0.0050	<0.10	110	<0.00010	<0.00010	<0.00010	<0.020	<0.030	<0.010	<0.050	32.4	0.358	<0.0020	<0.020	<0.010	<0.0010	16	<0.010	<0.0020	50.9	<0.050				

A n v i l R a n g e M i n e , R o s e C r e e k T a i l i n g s F a c i l i t y

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- D r a f t R e p o r t -

Appendices

A n v i l R a n g e M i n e , R o s e C r e e k T a i l i n g s F a c i l i t y

2 0 0 4 G r o u n d w a t e r F i e l d S u m m a r y

- D r a f t R e p o r t -

Appendix A

ALS Analytical Reports

(Available in Hard Copy Only)