MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
TAILINGS STORAGE FACILITY

REPORT ON 1999 CONSTRUCTION
(REF. NO. 11162/13-5)

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SECTION 1.0 - INTRODUCTION

1.1 PROJECT DESCRIPTION

The Mount Polley gold and copper mine is owned and operated by Mount Polley Mining Corporation (MPMC). It is located in central British Columbia, 56 kilometres northeast of Williams Lake, as shown on Figure 1.1. The Mount Polley mine has been in production since June 13, 1997. Ore is crushed and processed by selective flotation to produce a copper-gold concentrate. The current mill throughput rate is approximately 20,000 tonnes per day (7.3 million tonnes per year). An overall site plan of the Mount Polley Mine is shown on Drawing 11162-10-100.

Mill tailings are discharged as a slurry into the Tailings Storage Facility, which has been designed to provide environmentally secure storage of the solid waste. As the solids settle out of the slurry, process fluids are collected and recycled back to the mill for re-use in the milling process. There is no surface discharge of any process solution from the Tailings Storage Facility.

Knight Piésold Ltd. were originally engaged by Imperial Metals Corporation to provide engineering services for the design of the Open Pit, Waste Dumps and Tailings Storage Facility in 1989. In the period since, Knight Piésold Ltd. has provided the following services:

- Detailed design of all stages of the Tailings Storage Facility and Ancillary Works completed to date.

- Prepare contract documents and technical specifications for all stages of the Tailings Storage Facility construction to date.

- Construction supervision and quality assurance/quality control (QA/QC) for all stages of the Tailings Storage Facility completed to date.

- Conduction and evaluation of investigations for engineering design and construction materials suitability.

- Consulting services provided to the mine on all aspects of the operation and monitoring of the Tailings Storage Facility.

The tailings embankments were raised to Stage 2C (El. 941 m). Work started in April 1999 and finished in February 2000. Knight Piésold Ltd. provided design, construction supervision and quality assurance/quality control (QA/QC) services for the embankment raise. Cycloned sand deposition was also carried out in 1999, including upstream fill zones in the Main and Perimeter embankments and a downstream trial berm at the Perimeter Embankment. Knight Piésold Ltd. also conducted on-going reviews of all instrumentation and monitoring records for the year and completed an annual inspection of the facility. The annual inspection is documented in a separate report.

1.2 TAILINGS STORAGE FACILITY

The Tailings Storage Facility is comprised of the following:

- A pipeline system which conveys the tailings slurry via gravity from the Millsite to the Tailings Storage Facility. The system includes a movable discharge section with spigot offtakes to distribute the tailings along the embankment crest.

- A make-up water supply system to direct extra water into the Tailings Storage Facility. The system comprises an intake and pump at Polley Lake and a pipeline to convey the water to the Tailings Storage Facility. The water is discharged into the Tailings Storage Facility near the west abutment of the Perimeter Embankment.

- The Millsite Sump and Southeast Sediment Pond that provide additional make-up water to the system. Millsite runoff is directed from the Millsite Sump into the tailings line near the mill. Flows from the Southeast Sediment Pond enter the system at the reclaim booster pump station or at the T2 Tailings Drop Box.

- Earthfill embankments, which retain the tailings solids within the Tailings Storage Facility. The Main Embankment has a vertical chimney drain, with a collector (longitudinal) drain and three outlet drains.

- A low permeability basin liner (natural and constructed), which provides containment of process fluids within the facility and minimizes the potential for seepage through the tailings basin soils.

- A foundation drain and pressure relief well system located downstream of the Stage 1B Main Embankment to prevent the build-up of pressure in foundation materials and to collect seepage from the base of the Tailings Storage Facility. An engineered rockfill haul road located downstream of the embankment covers the foundation drains and the trenches that connect pressure relief wells to the foundation drains.

- Seepage collection ponds located downstream of the Main and Perimeter Embankments. The seepage collection ponds are excavated in low permeability soils and store water collected from embankment drains and local runoff. Water is pumped back into the Tailings Storage Facility.

- Instrumentation in the tailings and embankment foundations, fill and drains (including vibrating wire piezometers, survey monuments and the measurement of drain flows) used to monitor the performance of the Tailings Storage Facility.

- A reclaim water system comprised of a barge mounted pump station in an excavated channel, a booster pump station and a pipeline that provides process water to the mill.

- A system of monitoring wells installed around the Tailings Storage Facility for groundwater quality monitoring.

This description of the Tailings Storage Facility components has been included for information purposes. Work was not undertaken on all of the components during the Stage 2C construction program.

1.3 SCOPE OF REPORT

This report presents the scope of the work encompassing Stage 2C construction. This includes a discussion of the construction methods used to complete the work, the results of quality assurance tests carried out during construction and a review of new instrumentation and monitoring results from the construction program. Summaries and recommendations are included.

SECTION 2.0 - STAGE 2C CONSTRUCTION

2.1 GENERAL

The Stage 2C raise of the Mount Polley Mine Tailings Storage Facility embankments was constructed in 1999 and early 2000. Stage 2C construction included raising the Main and Perimeter Embankments from El. 937 to El. 941 m. The Stage 2C Main Embankment Plan is shown on Drawing No. 11162-10-130 with the Stage 2C Perimeter Embankment Plan shown on Drawing No. 11162-10-131. Main Embankment sections are shown on Drawing No. 11162-10-132 with Perimeter Embankment sections shown on Drawing No. 11162-10-133. Stage 2C provides storage capacity for approximately one year of operations, including impounding additional site runoff and make-up water from Polley Lake.

The original design of Stage 2C included a raise to El. 940 m, as detailed in the Knight Piésold Ltd. document "Tailings Storage Facility, Report on On-going Construction Requirements" (Ref. No. 10162/9-3), December 2, 1997. However, operational records indicated that a crest elevation of 941 m would provide storage until 2001.

Knight Piésold Ltd. designed the Tailings Storage Facility and developed the Technical Specifications for the work. Knight Piésold Ltd. also provided supervision and technical assistance during the construction program and reviewed all laboratory quality assurance testwork. Knight Piésold Ltd. worked under the overall management and administration of MPMC. The earthworks were completed by MPMC and Peterson Contracting Ltd. (PCL), of Williams Lake.

2.2 SCOPE OF WORK

2.2.1 General

The Stage 2C construction program comprised work on the following main areas:

- Tailings Embankments.
- Basin Liner.

- Tailings Discharge System.
- Investigations.

A description of each of the main components of the Stage 2C construction program is presented in the following sub-sections.

2.2.2 Tailings Embankments

The Stage 2C construction program included raising the Main and Perimeter Embankments to El. 941 m. The Stage 2C Main and Perimeter Embankments are approximately 1,260 and 1,680 metres long, with maximum heights of about 29 and 12 metres, respectively.

The scope of work for construction of the embankments included the following:

- Survey control of embankment construction.
- Foundation preparation to ensure a tie-in with dense natural ground.
- Placement and compaction of the fill materials in their respective zones in accordance with the Technical Specifications.
- Installation of the upstream toe drain at the Main Embankment and a redundant conveyance pipe from 28+00 to 32+00 at the Perimeter Embankment.
- Installation and monitoring of vibrating wire piezometers.
- Evaluation of embankment materials through detailed lab testing. The material testing was completed in the site soils laboratory and at an independent laboratory.

As-built construction details for the embankments are shown on the drawings included with this report.

2.2.3 Basin Liner

The basin liner was expanded on the southwest side of the tailings impoundment in two locations shown on Drawing No. 11162-10-100.

A trench was inadvertently dug through the basin liner during installation of the upstream toe drain. The trench, located near the right abutment of the Main Embankment, was backfilled with glacial till to reinstate the liner in this area.

2.2.4 Tailings Discharge System

The scope of work for the tailings discharge system during Stage 2C construction included upstream and downstream cycloned sand deposition, as described in "Report on Cycloned Sand Construction of Stage 3 and On-going Stages of the Tailings Storage Facility" (Ref. No. 11162/12-2). Other work included relocating the pipeline and discharge locations in order to minimize interference with embankment construction.

2.2.5 Investigations

Investigations were completed in 1999 to support construction and design of the Tailings Storage Facility.

The tailings basin was investigated in February to evaluate the requirements for basin liner. The investigation included 44 boreholes (DH99-1 to 44). The results of the investigation were presented in "Report on 1998 Construction and Annual Inspection" (Ref. No. 11162/10-1, June 1999).

An additional 91 shallow boreholes (DH99-45 to 135) were drilled around the perimeter of the tailings impoundment to evaluate the potential for seepage infiltration into foundation materials during hydraulic placement of cycloned sand. A summary of these boreholes is presented in Appendix A.

Borrow Area No. 2, located downstream of the Main Embankment left abutment, was investigated to determine the availability and suitability of core zone material. A total of 24 boreholes (DH99-136 to 159) were drilled in August and September. The results of the borrow area investigations are presented in Appendix A.

2.3 CONSTRUCTION SCHEDULE

Construction of the Stage 2C embankment raises commenced in April 1999. MPMC was responsible for:

- Foundation preparation
- Fill surface preparation
- Borrow area development
- Cycloned sand placement
- Relocation of tailings pipelines and appurtenances
- Installation of the upstream toe drain

Peterson Contracting Ltd. (PCL), of Williams Lake, British Columbia, was responsible for fill placement.

The work began with the placement of cyclone underflow (Zone CS) upstream of the Main and Perimeter Embankment crests. Basin liner was constructed in June. MPMC commenced embankment fill placement in early September.

The upstream toe drain and outlets were installed in October. PCL was awarded the construction contract at this time and assumed responsibility for fill placement. Cyclone operations terminated on October 19, and tailings were discharged from the upper dump valve at the northwest corner of the tailings facility for the duration of construction.

Snow and cold conditions hindered fill placement in December and January. The Stage 2C Perimeter Embankment was completed on February 12, 2000. The Stage 2C Main Embankment was completed on March 6, 2000.

2.4 CONSTRUCTION SUPERVISION AND QUALITY ASSURANCE

Knight Piésold Ltd. provided construction monitoring and quality assurance (QA) services for Stage 2C construction of the Tailings Storage Facility. Mount Polley Mining Corporation (MPMC) provided technicians for night shift construction monitoring supervision and QA services. MTS Testing Services Ltd., of Prince George, British Columbia conducted most of the QA testing. Key QA items addressed by Knight Piésold Ltd. included:

- Foundation inspection and approval prior to fill placement.
- Assessment of borrow material suitability.
- Inspection of fill placement procedures.
- In-situ testing of the placed and compacted fill for moisture content and density.
- Collection of control and record samples at the required frequencies.
- Installation and monitoring of instrumentation.

QA/QC procedures were similar to previous construction programs. A significant portion of the work was completed in winter conditions and required intensive monitoring. The Stage 1B raise was also constructed in winter conditions, and similar techniques were used for Stage 2C. Technical Specifications were developed for the Work and are included in the "Contract Documents for Stage 2A Tailings Facility Construction, Ref. No. 10162/9-4" (Ref. No. 10162/9-4, January 29, 1998). The Technical Specifications developed for Stage 2A were also used for Stage 2C.

Control (prior to compaction) and Record (after compaction) samples of fill materials were collected for laboratory testing. Laboratory testing required for the CQA program included the following:

- Moisture Content (ASTM D2216)
- Particle Size Distribution, including hydrometer (ASTM D422)
- Laboratory Compaction (ASTM D698)
- Specific Gravity (ASTM D854)

- Atterberg Limits (ASTM D4318)
- Field Density by Nuclear Methods (ASTM D2922)
- Moisture Content by Nuclear Methods (ASTM D3017)

The required testing frequencies and schedules are summarized on Table 2.1. Control test results are summarized in Appendix B. Record test results are summarized in Appendix C.

The QA/QC program confirmed that construction was completed in accordance with the Technical Specifications. In addition, the field and laboratory test results indicate that the design objectives were achieved, as discussed in Section 2.5.

2.5 EARTHWORKS

2.5.1 General

Earthworks for the Stage 2C Tailings Storage Facility construction comprised the following zones and materials:

- Zone S - The core zone of the Main and Perimeter Embankments was constructed using locally borrowed fine grained glacial till. Borrow Area Nos. 2 and 4 were utilized for the construction of the core zone.

- Zone B - The upstream zones of the Main and Perimeter Embankments, and downstream fill from CH. 26+50 to CH. 32+50 were also constructed using glacial till taken from Borrow Area Nos. 2 and 4.

- Zone CBL - Zone CBL (Coarse Bearing Layer) was placed as the first lift of the upstream zone along portions of the Perimeter Embankment. It was placed directly on spigotted tailings or natural ground to provide a firm bearing layer for fill placement. This material was drilled, blasted and hauled from the Rock Borrow, located north-west of the Tailings Storage Facility.

- Zone CS - Zone CS (cyclone underflow) was used in the upstream fill zones at the Main and Perimeter Embankments. This material was placed directly with cyclones and moved to within the lines and grades shown on the drawings by conventional earthfill methods.

- Basin Liner - Basin liner was constructed on the southwest side of the tailings impoundment, where investigations indicated a natural liner thickness of less than 1 m. This material consisted of locally borrowed glacial till.

The gradation requirements for the above materials are shown on Drawing 11162-10-104.

The requirements of the QA/QC program and the Technical Specifications were that each material type be subjected to detailed field and laboratory testing to verify that the design objectives were met. Both Control and Record tests were conducted for the QA/QC program. Control tests were typically carried out on materials in borrow pits or from source locations to determine their suitability for use in the work. Record tests were typically carried out on materials after placement and compaction to document the level of workmanship achieved and to ensure that the design objectives were met. Both Control and Record tests were used as a basis for modifying the construction procedures as and when necessary. Estimated quantities are also summarized on Table 2.1 with the Control and Record testing requirements and frequencies.

Stripping and preparatory work was completed on all foundations and abutments to ensure a good tie-in with dense, natural ground and with the Stage 2B embankment. Foundation approval by the Engineer was required prior to the placement of any fill material. Organic debris and topsoil were removed and stockpiled according to the Technical Specifications.

All fill materials were hauled to the embankment and placed according to the material and lift thickness specifications for each zone. Compaction was achieved from a 10-ton smooth drum vibratory roller and a pad-foot static

compactor. Additional compaction was obtained by routing the 30 to 40 tonne articulated haul trucks along the fill surfaces in Zones S and B.

The moisture content and density of placed and compacted fill materials was continuously monitored using a nuclear densometer. The Contractor was given approval to place fill on a completed lift if test results indicated that the fill density and moisture content were acceptable. The Contractor was directed to apply additional compaction effort to the placed material if the average measured dry density of the lift was below the acceptable limit.

Approximately 2,400 density and moisture content results for Zones S, B and CS were recorded using the nuclear densometer during the Stage 2C construction program. Detailed results of the QA/QC testwork are presented on the Record and Control test summary sheets in Appendices B and C respectively. Details of the testwork for each material type are presented below.

2.5.2 Zone S

Zone S forms the low permeability core and abutment seal zones for the Main and Perimeter Embankments. The material used in Zone S was fine grained glacial till. Borrow Area No. 2 was the source of Zone S material for most of the Perimeter Embankment and the entire Main Embankment. Borrow Area No. 2 is located downstream of the left (East) abutment of the Main Embankment. Some of the Zone S material used at the Perimeter Embankment was obtained from Borrow Area No. 4, situated within the tailings impoundment.

The Specifications for Zone S material required placement and compaction in maximum 300 mm thick lifts. The design compaction specification was 95 percent of the Standard Proctor maximum dry density.

Record tests on the compacted Zone S fill included the following:

- Moisture Content (ASTM D2216)

- Particle Size Distribution (ASTM D422)
- Laboratory Compaction (ASTM D698)
- Specific Gravity (ASTM D854)
- Atterberg Limits (ASTM D4318)
- Field Density by Nuclear Methods (ASTM D2922)
- Moisture Content by Nuclear Methods (ASTM D3017)

In addition to the above, field density and moisture content testing with the nuclear densometer was conducted on each lift of material.

A total of eleven (11) samples were taken for record testing of Zone S material. Particle size analyses show that Zone S glacial till is a well-graded sandy silt with some clay and gravel. The gradation curves of the Zone S Record samples are shown on Figure 2.1.

The plastic limit of the samples ranged from 13 to 18, with a median of 15. The liquid limit ranged from 20 to 29, with a median of 24. The plasticity index ranged from 7 to 12, with a median of 9. The material is classified as CL in the Unified Soil Classification System (inorganic clay of low to medium plasticity).

The median field moisture content was 11.8 percent, while the median optimum moisture content was 9.6 percent. The median deviation from the optimum moisture content was 2.2 percent wet of optimum. Moisture conditioning was impractical due to freezing temperatures. Material too wet for direct placement in the Zone S fill was typically avoided in the borrow areas.

The median field dry density, as measured with a nuclear densometer, was 2084 kg/m^3, while the median Standard Proctor maximum dry density was 2080 kg/m^3. The median percent compaction was 98.7 percent, indicating that the compaction objective of 95 percent was achieved.

Histograms were generated to illustrate the results of the Field Density and Moisture Content testing. The field moisture content, Standard Proctor optimum moisture content and deviation from optimum for the Zone S Record samples are shown on Figure 2.2, while Figure 2.3 shows the measured field dry density, the Standard Proctor maximum dry density and the corresponding percent compaction. Figure 2.4 shows the results of 1472 Field Density and Moisture Content tests conducted in Zone S during Stage 2C construction.

Specific gravity was determined for one sample. The result was 2.70, which is consistent with values measured on similar materials during previous construction programs.

2.5.3 Zone B

Zone B forms the upstream zones of the Main and Perimeter Embankments. The material used for Zone B was glacial till from Borrow Area Nos. 2 and 4. The specification for Zone B allowed the use of glacial till which was slightly coarser and wetter than that required for Zone S.

The specification for Zone B material required placement and compaction in maximum 1000 mm thick lifts. However, as for Zone S, the material was typically placed and compacted in 300 mm lifts due to the narrow working surface. Field density and moisture content testing with the nuclear densometer was typically carried on each 300 mm lift. Record samples collected from Zone B were grouped together with Zone S, due to the small number of required samples and identical method of placement.

The design compaction specification for Zone B material was 92 percent of the Standard Proctor maximum dry density.

Oversize cobbles and boulders were segregated from the advancing fill and were pushed to the face of the embankment.

Histograms were generated to illustrate the results of the 931 Field Density and Moisture Content tests conducted in Zone B during Stage 2C construction. The histograms are shown on Figure 2.5.

2.5.4 Zone CBL

Zone CBL (Coarse Bearing Layer) was placed directly on spigotted tailings and natural ground on the upstream side of the Perimeter Embankment to provide a firm bearing layer for fill placement. Zone CBL material assisted in the consolidation of the tailings mass and provided a working surface to place Zone B. The material used for Zone CBL was rockfill that was drilled, blasted and hauled from the Rock Quarry, located northwest of the Tailings Storage Facility.

The specification for Zone CBL material required end dumping and spreading with a bulldozer until the Zone CBL was approximately 1000 mm thick.

No record testing was carried out on Zone CBL material. Frequent on site inspections were carried out by QA personnel to ensure that no fine grained material was placed in this zone.

2.5.5 Zone CS

Zone CS consisted of cyclone underflow placed in the upstream zone of the Main and Perimeter Embankments by hydraulic and mechanical methods. Hydraulic placement consisted of direct placement with the cyclones. Mechanical placement consisted of moving material into place by conventional earthfill methods and spreading it in lifts up to 1000 mm thick. Mechanically placed Zone CS was compacted with a 10-ton vibratory roller.

Record tests on Zone CS consisted of:

- Moisture Content (ASTM D2216)
- Particle Size Distribution (ASTM D422)
- Laboratory Compaction (ASTM D698)

- Field Density by Nuclear Methods (ASTM D2922)
- Moisture Content by Nuclear Methods (ASTM D3017)

A total of fourteen (14) samples were taken for record testing of Zone CS. Particle size analyses were conducted on all samples. Moisture content, laboratory compaction and field density tests were conducted on two (2) samples of hydraulically placed Zone CS and one (1) sample of mechanically placed Zone CS.

Particle size analyses show that Zone CS is a uniform silty sand. Gradation curves for Zone CS record samples are shown on Figure 2.6.

The median field moisture content, as measured with a nuclear densometer, was 11.6 percent, while the median optimum moisture content was 17.0 percent. The median deviation from optimum moisture content was 5.4 percent wet of optimum. There was no significant difference in the moisture contents of hydraulically and mechanically placed Zone CS.

The median Standard Proctor maximum dry density of Zone CS samples was 1720 kg/m^3. The median dry density of hydraulically placed Zone CS, as measured with a nuclear densometer, was 1620 kg/m^3. The median percent compaction was 95.5 percent. The dry density of the mechanically placed Zone CS sample was 1704 kg/m^3 or 98.5 percent of the maximum dry density. The compaction specification of 95 percent was achieved for both methods of placement.

Histograms for moisture content and density from the nuclear densometer were generated. These are shown on Figures 2.7 and 2.8.

2.5.6 Basin Liner

Basin liner consisted of locally borrowed glacial till placed in 150 mm thick lifts to a total thickness of 450 mm. Basin liner material is compacted to greater than 92 percent of the Standard Proctor maximum dry density. A 300 mm layer of till, nominally compacted, was placed as frost protection.

No laboratory testwork was conducted on basin liner material. A total of ten (10) field density and moisture content tests were conducted with a nuclear densometer. The median dry density of basin liner material was 1958 kg/m^3 and the median field moisture content was 13.2 percent.

Histograms for moisture content and density are shown on Figure 2.9.

2.6 EMBANKMENT DRAIN SYSTEMS

The first toe drain was installed at the Main Embankment using perforated CPT pipe, placed within a prism of Zone F filter sand, which is in turn in direct contact with coarse cycloned sand underflow. An adequate filter relationship exists between the cycloned sand, the filter sand and the CPT perforations to prevent any migration of fines into the drain system. The Main Embankment toe drain has been connected to concrete-encased outlet drains at the abutments. Concrete test results are summarized in Table 2.2. The outlet drains were installed in competent native till.

The installation of the Perimeter Embankment upstream toe drain was deferred until Stage 3 construction. The first of two Perimeter Embankment outlet drains was installed at approximately CH. 32+00 during Stage 2C construction. A section of solid CPT pipe connects this outlet drain to the Main Embankment upstream toe drain to provide redundancy in the system. The solid CPT pipe was installed in competent native till. Material excavated from the trench was used as backfill.

A second section of solid CPT pipe was connected to the upstream end of the Perimeter Embankment outlet drain. It was extended to the upstream face and capped. The Perimeter Embankment upstream toe drain will be connected to this pipe during Stage 3 construction.

Details of the upstream toe drain and outlet drains are shown on Drawing 11162-10-125.

The Zone F filter sand used to backfill the upstream toe drain at the Main Embankment had been previously drilled, blasted, processed and screened and was stockpiled near the corner of the Main and Perimeter Embankments.

Record tests on Zone F fill consisted of Particle Size Distribution (ASTM D422) only.

A total of three (3) samples were taken for record testing of Zone F material. Particle size analyses show that Zone F material is comprised of gravel and sand with a trace of silt. Zone F material is classified as GW in the Unified Soil Classification System. The gradation curves for Zone F material are shown on Figure 2.10.

2.7 PIPEWORKS

2.7.1 General

The tailings and reclaim pipelines are the main components of the pipeworks for the Tailings Storage Facility. The tailings pipeline system conveys the tailings slurry via gravity from the Millsite to the Tailings Storage Facility. The reclaim pipeline system pumps process water from the Tailings Storage Facility to the mill for re-use in processing the ore.

2.7.2 Tailings Pipeline System

The tailings pipeline system includes a single HDPE pipeline approximately 7,000 metres in length. The pipeline runs from the Millsite to the west end of the Perimeter Embankment. The tailing stream can be routed through cyclones to separate coarse particles for embankment construction, or discharged from single points on the embankment crest. The tailings pipeline system is described in greater detail in Section 3.6.2

Construction activities for the tailings pipeline system included the following:

- Operation of Krebs 20" cyclones to construct upstream embankment fills and the Downstream Trial Berm.

- Dismantling the cyclone system and discharging from the M1 dump valve during Stage 2C construction.

- Extension of the 24" tailings line to CH. 33+00 following completion of the Stage 2C Perimeter Embankment to develop the tailings beach at the southeast corner of the impoundment.

- Installation of the cyclones in Borrow Area No. 4 to stockpile material for Stage 3 construction.

2.7.3 Reclaim Pipeline System

The reclaim pipeline system is comprised of a single 5,400 m long HDPE pipe that extends from the Reclaim Pump Barge to the Millsite. Nominal 24 inch (610 mm) HDPE pipe with varying pressure ratings was installed to provide the required water transfer capacity. A section of steel pipe originally located between the HDPE pipe and the barge was removed during barge moves. Only one length of steel pipe is now used.

MPMC moved the reclaim barge approximately 40 m upstream during Stage 2C construction. The barge access road was widened with rockfill as part of the work.

2.8 INSTRUMENTATION AND MONITORING

2.8.1 General

Instrumentation and monitoring systems include the following:

- Vibrating wire piezometers.
- Survey monuments.
- Foundation Drains.

Details of these items are presented in the following sub-sections.

2.8.2 Vibrating Wire Piezometers

A total of ten (10) vibrating wire piezometers were scheduled for installation during the Stage 2C construction program. Seven (7) were installed, as summarized below and on Table 2.3.

- Three piezometers were installed in Zone S (one each at Planes A, B and C) to monitor pore pressures in the core zone.

- Three piezometers were installed in Zone CS (one each at Planes A, B and C). These piezometers will monitor the phreatic surface in the cycloned sand at the Main Embankment.

- One piezometer was installed in the upstream toe drain (Plane A) to monitor the performance of the drain.

- Three piezometers were to be installed on Plane D, including one in Zone S, one in Zone CS and one in the upstream toe drain. These will be installed during Stage 3 construction.

No unexpected or anomalous pore pressures were observed while monitoring the vibrating wire piezometers during construction. The pore pressures in the tailings reflected the pond level. Some of the piezometers in the glacial till fill responded to the increased load from the additional material placed on the embankments. The increases were approximately 1.0 to 2.0 m and did not result in any delays in construction. To date a total of 52 vibrating wire piezometers have been installed at the Tailings Storage Facility. Of these, 47 remain in operation. The results of all piezometer monitoring are discussed in the annual inspection report. Details of the as-built piezometer locations are shown on Drawing Nos. 11162-10-150 to 153 with instrumentation details shown on Drawing 11162-10-154.

2.8.3 Survey Monuments

Four (4) survey monuments were installed on the crests of the Main and Perimeter Embankments on April 26, 2000. The monuments were destroyed shortly after installation. Settlement will be calculated from as-built surveys conducted following Stage 2C construction and prior to Stage 3 construction.

2.8.4 Foundation Drains

No new foundation drains were installed during Stage 2C construction.

Selected photographs from the Stage 2C construction program are included in Appendix D.

2.9 DESIGN MODIFICATIONS

Knight Piésold Ltd. employs a strict procedure for design modifications (changes or substitutions). All design change requests from site are submitted by the Site Engineer to the Knight Piésold Ltd. Vancouver Office for review and evaluation. The design change request is then provided to the Owner and Contractor in a formal, written decision. If acceptable, approval for a modification is granted by the Project Principal.

Some modifications to the design and Technical Specifications were implemented during the Stage 2C construction program in order to meet site conditions. All modifications were approved on a technical basis by Knight Piésold Ltd. and on a permitting basis by the appropriate regulatory agencies. All modifications were also accepted and approved by Mount Polley Mining Corporation prior to their implementation. The design modifications implemented during the Stage 2C construction program are discussed below.

- Zone B fill placement was approved to replace Zone T between CH. 26+50 and CH. 32+50 between the embankment Zone S and the existing Stage 2B Zone T haul road.

- The location of the upstream toe drain was moved slightly downstream so it could be constructed on the existing Stage 2B upstream bench. A minimum thickness of 150 mm of Filter Sand was placed under the pipe, followed by a minimum of 1000 mm over the pipe. In addition, a minimum 1000 mm thick layer of cycloned sand was placed over the Filter Sand.

- A shortfall in cycloned sand in the upstream zone of the Perimeter Embankment resulted in a modification to the embankment cross section. Zone CBL was placed on the tailings beach as needed to provide a trafficable base. The remainder of the upstream fill was constructed using Zone B material.

- The Perimeter Embankment upstream toe drain was not installed from CH. 32+00 to CH. 44+00 due to the shortfall of cycloned sand. The drain will be installed during Stage 3 construction.

- The final elevation of Stage 2C construction was changed from El. 940 m to El. 941 m to provide freeboard through 2000.

- The slope of the contact between Zone CS and Zone S at the Main Embankment was flattened to a minimum of 1.875H:1V from 1.375H:1V in order to accommodate construction techniques.

- The contractor was permitted to place Zone B material in the upstream zone of the Main Embankment above El. 939 m in order to make up for a shortfall in cycloned sand.

The design modifications implemented during Stage 2C construction are presented in Appendix E. It should be noted that other minor modifications were incorporated during the construction program. Minor modifications in response to developments at the site that have no significant impact on the design and operation of the facility are treated as "field fit" solutions that are not required to go through the formal design modification process. Field fits and approved design changes are typically shown on the "as-built" drawings.

SECTION 3.0 - CONCLUSIONS AND RECOMMENDATIONS

Stage 2C of the Mount Polley Mine Tailings Storage Facility was constructed from April 1999 to March 2000. The construction program included the completion of the Main and Perimeter Embankments to El. 941m. This will enable the impoundment of runoff water, additional make-up water from Polley Lake and tailings from approximately one year of mining. The Stage 2C Tailings Storage Facility was designed by Knight Piésold Ltd., who provided supervision and technical assistance during the construction program.

Data obtained during the Construction Quality Assurance (CQA) program, results from instrumentation and observations during Stage 2C confirm that the embankments were completed in compliance with the design, Technical Specifications and construction drawings for the work.

Knight Piésold Ltd. has the following recommendations, based on the results of the construction program and observations from impounding water and tailings at the Tailings Storage Facility:

1) Geotechnical instrumentation and other monitoring results have shown that the Tailings Storage Facility is operating within design tolerances.

2) MPMC has constructed small weirs at the Main Embankment Outlet Drains to monitor Chimney Drain flows. These flows should regularly be monitored for flow volume and water quality.

3) The pond level in the Tailings Storage Facility must be closely monitored to ensure that the water level does not encroach on the required freeboard. The next expansion must be designed and scheduled to meet these requirements.

The operating performance of the Tailings Storage Facility in 1999 has been evaluated and results are presented in "Report on 1999 Annual Inspection" (Ref. No. 11162/13-9). This report is to be issued in early September, 2000.

SECTION 4.0 - REFERENCES

A complete listing of all Knight Piésold Ltd. reports prepared for the Mount Polley Mine Project is shown below. These reports are available for review.

1) Imperial Metals Corp. Mt. Polley Project, Report on Geotechnical Investigations and Design of Open Pit, Waste Dumps and Tailings Storage Facility, Ref. No. 1621/1, February 19, 1990.

2) Imperial Metals Corp. Mt. Polley Project, Report on Project Water Management, Ref. No. 1624/1, February 6, 1995.

3) Imperial Metals Corp. Mt. Polley Project, Report on 1995 Geotechnical Investigations for Mill Site and Tailings Storage Facility, Ref. No. 1623/1, March 14, 1995.

4) Imperial Metals Corp. Mt. Polley Project, Tailings Storage Facility and Ancillary Works, Part 10 - Technical Specifications, Ref. No. 1625/3, March 25, 1995.

5) Imperial Metals Corp. Mt. Polley Project, Tailings Access Road and Tailings/ Reclaim Pipelines, Part 6 - Technical Specifications, Ref. No. 1625/4, May 17, 1995.

6) Imperial Metals Corp. Mt. Polley Project, Manual on Sampling and Handling Guidelines for Determination of Groundwater Quality, Ref. No. 1625/5, May 19, 1995.

7) Imperial Metals Corp. Mt. Polley Project, Tailings Storage Facility, Design Report, Ref. No. 1625/1, May 26, 1995.

8) Imperial Metals Corp. Mt. Polley Project, Tailings Storage Facility, Site Inspection Manual, Ref. No. 1625/2, May 26, 1995.

9) Imperial Metals Corp. Mt. Polley Project, Response to Review Comments on Tailings Embankment Design, Ref. No. 1625/6, January 25, 1996.

10) Imperial Metals Corp. Mt. Polley Project, Groundwater Monitoring Program, Ref. No. 1624/2, June 3, 1996.

11) Imperial Metals Corp. Mt. Polley Project, Report on Geotechnical Investigations and Design of Open Pits and Waste Dumps, Ref. No. 1628/1, July 5, 1996.

12) Imperial Metals Corp. Mt. Polley Project, Response to Review Comments on Groundwater Monitoring Program, Ref. No. 1625/7, September 12, 1996.

13) Imperial Metals Corp. Mt. Polley Project, Requirements and Specifications for the 1996 Groundwater Monitoring Program, Ref. No. 1625/8, September 12, 1996.

14) Imperial Metals Corp. Mt. Polley Project, Specification for Drilling, Monitoring Well Installations and Related Services, Ref. No. 1628/3, September 18, 1996.

15) Mount Polley Mining Corporation, Mount Polley Project, 1996 Groundwater Monitoring Well Installation Program, Ref. No. 1628/4, February 17, 1997.

16) Mount Polley Mining Corporation, Mount Polley Project, Polley Lake Pumping System, Ref. No. 1628/5, February 19, 1997.

17) Mount Polley Mining Corporation, Mount Polley Project, Tailings Storage Facility, Operation, Maintenance and Surveillance Manual for Stage Ia Embankment (El. 927 m), Ref. No. 1627/1, March 11, 1997.

18) Mount Polley Mining Corporation, Mount Polley Project, Tailings Storage Facility and Ancillary Features, May 1, 1997 Site Inspection, Ref. No. 1627/4, June 3, 1997.

19) Mount Polley Mining Corporation, Mount Polley Project, Tailings Storage Facility, Updated Design Report, Ref. No. 1627/2, June 4, 1997.

20) Mount Polley Mining Corporation, Mount Polley Project, Tailings Storage Facility, Operation, Maintenance and Surveillance Manual for Stage Ib Embankment (El. 934 m), Ref. No. 10162/7-3, June 18, 1997.

21) Mount Polley Mining Corporation, Mount Polley Mine, Tailings Storage Facility and Ancillary Features, May 1, 1997 Site Inspection, Ref. No. 10162/7-4, June 3, 1997.

22) Mount Polley Mining Corporation, Mount Polley Mine, Report on Stage Ia/Ib Construction, Ref. No. 10162/7-5, August 14, 1997.

23) Mount Polley Mining Corporation, Mount Polley Mine, Tender Documents for Stage 2A Tailings Facility Construction, Ref. No. 10162/9-1, October 9, 1997.

24) Mount Polley Mining Corporation, Mount Polley Mine, Stage 2A Tailings Facility Construction, Selected Excerpts from Reference Information, Ref. No. 10162/9-2, November 11, 1997.

25) Mount Polley Mining Corporation, Mount Polley Mine, Report on On-going Construction Requirements, Ref. No. 10162/9-3, January 29, 1998.

26) Mount Polley Mining Corporation, Mount Polley Mine, Contract Documents for Stage 2A Tailings Facility Construction, Ref. No. 10162/9-4, June 26, 1998.

27) Mount Polley Mining Corporation, Mount Polley Mine, 1998 Annual Inspection Report, Ref. No. 10162/9-5, June 26, 1998.

28) Mount Polley Mining Corporation, Mount Polley Mine, 1998 Construction and Annual Inspection, Ref. No. 11162/10-1, June 16, 1999.

29) Mount Polley Mining Corporation, Mount Polley Mine, Report on Cycloned Sand Construction of Stage 3 and On-going Stages of the Tailings Storage Facility, Ref. No. 11162/12-2, December 13, 1999.

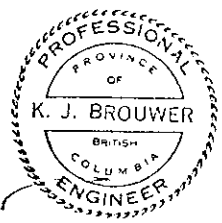
SECTION 5.0 - CERTIFICATION

This report was prepared and approved by the undersigned.

Prepared by: _____

Jeremy R. Kinch, E.I.T.
Project Manager

Approved by: _____



Ken J. Brouwer, P.Eng.
Principal

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Knight Piésold
CONSULTING

TABLE 2.1

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
TAILINGS STORAGE FACILITY
STAGE 2C (EL 941) CONSTRUCTION

QA/QC TESTING SCHEDULE

M:\1162\13\Report\5\[5-tbl2-1.xls]Schedule 25-08-00

ZONE (Material)	QUANTITY (m^3)	CONTROL TESTS										RECORD TESTS									
		C1		C2		C3		C4		C6		R1		R2		R3		R4		R7	
		1 per	No.	1 per	No.	1 per	No.	1 per	No.	1 per	No.	1 per	No.	1 per	No.	1 per	No.	1 per	No.	1 per	No.
Zone S and Zone B- Main and Perimeter Embankments (Glacial Till)	126,000	10,000	13	10,000	13	10,000	13	10,000	13	10,000	13	10,000	13	10,000	13	10,000	13	10,000	13	400	315
Zone F - Upstream Toe Drains (Filter Sand)	2,300	--	--	--	--	1,000	2	--	--	--	--	--	--	--	--	1,000	2	--	--	--	--
Zone CS - Main and Perimeter Embankments (Hydraulically Placed Cycloned Sand)	190,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	50,000	4	50,000	4	10,000	19
Zone CS - Main and Perimeter Embankments (Mechanically Placed Cycloned Sand)	30,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	50,000	1	50,000	1	10,000	3
Totals	348,300		13		13		15		13		13		13		13		20		18		337
											67										401

Control Tests:

C1	Atterberg Limits (ASTM D4318)
C2	Moisture Content (ASTM D2216)
C3	Particle Size Distribution (ASTM D422)
C4	Laboratory Compaction (ASTM D698)
C6	Specific Gravity (ASTM C127)

Record Tests:

R1	Atterberg Limits (ASTM D4318)
R2	Moisture Content (ASTM D2216)
R3	Particle Size Distribution (ASTM D422)
R4	Laboratory Compaction (ASTM D698)
R7	Density by Nuclear Methods (ASTM D2922)

Knight Piésold
CONSULTING

TABLE 2.2

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE

STAGE 2C CONSTRUCTION
CONCRETE TESTING SUMMARY

M:\11162\13\Report\5\[5-tbl2-2.xls]Table 2.2 Date Printed: 25-Aug-00

Sample	Date Sampled	Location	Age at Test	Compressive Strength (MPa)
1	09-Oct-99	Main Embankment - Right Abutment - Second Pour	3	15.1
2	08-Oct-99	Main Embankment - Left Abutment - First Pour	4	16.0
3	08-Oct-99	Main Embankment - Left Abutment - First Pour	7	22.6
4	27-Oct-99	Perimeter Embankment	7	24.8
5	09-Oct-99	Main Embankment - Left Abutment - Second Pour	9	27.8
6	08-Oct-99	Main Embankment - Left Abutment - First Pour	28	28.5
7	08-Oct-99	Main Embankment - Right Abutment - First Pour	28	31.5
8	08-Oct-99	Main Embankment - Right Abutment - First Pour	28	30.7
9	08-Oct-99	Main Embankment - Right Abutment - First Pour	28	29.3
10	09-Oct-99	Main Embankment - Left Abutment - Second Pour	30	31.5
11	09-Oct-99	Main Embankment - Right Abutment - Second Pour	30	32.2
12	27-Oct-99	Perimeter Embankment	28	35.7
13	27-Oct-99	Perimeter Embankment	28	36.2

Notes: 1. Specified 28 Day Compressive Strength: 25 MPa
2. Samples testes by Materials Testing Services in Prince George, BC.

TABLE 2.3

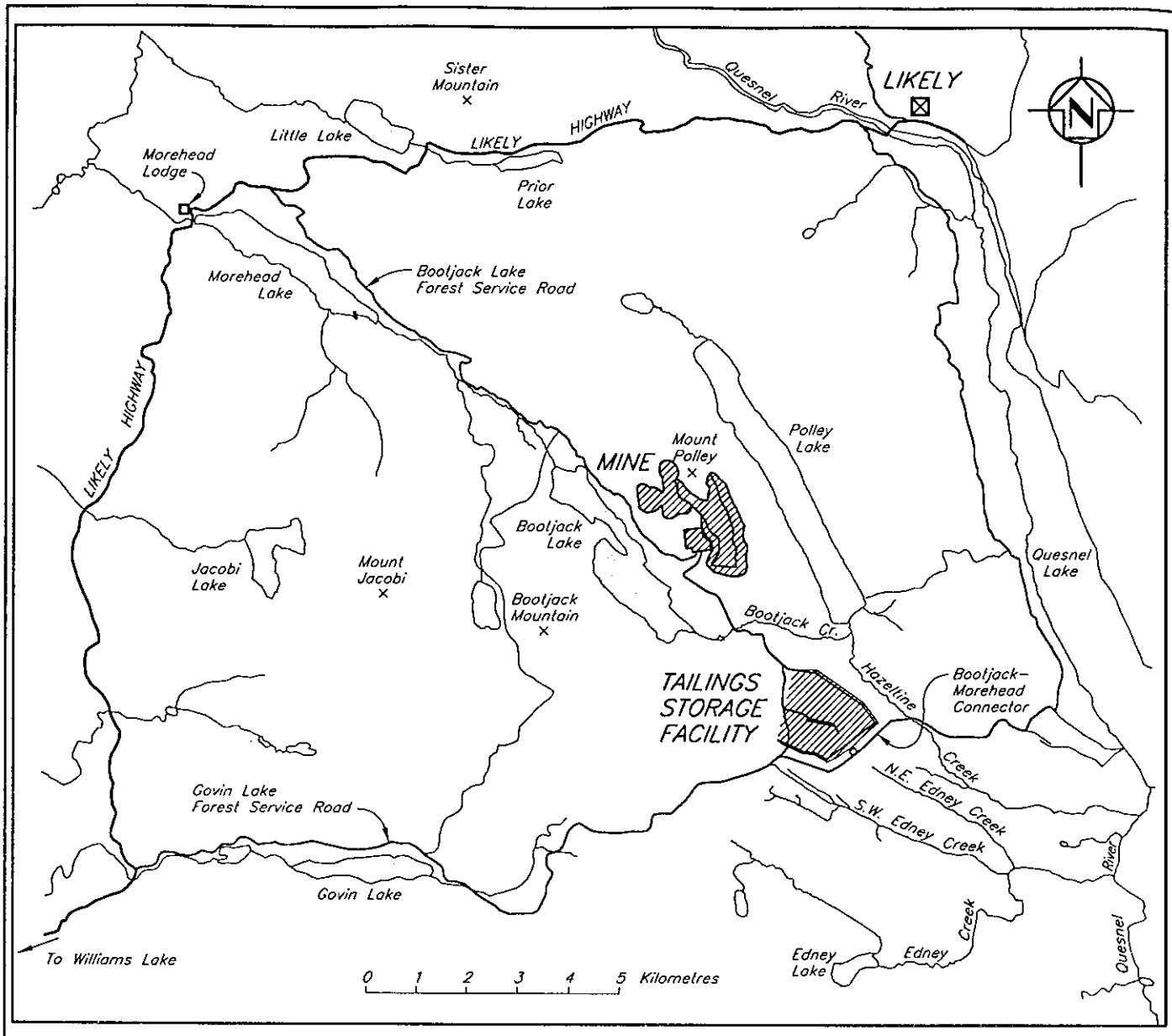
MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
STAGE 2C PIEZOMETER INSTALLATION DATA

Piezometer Identification Number	Serial Number	Tip El. (m)	Ground El. (m)	Zone Monitored	Reading Taken on 31-May-00		Trigger Level	
					Pressure (m H_2O)	El. (m)	Pressure (m H_2O)	Elevation (m)
A0-PE1-01	69689	938.5	-	Zone CS	-0.7	937.9	-	-
A1-PE1-04	43649	936.3	-	Upstream Toe Drain	0.3	936.6	-	-
A2-PE1-02	69690	938.5	-	Zone S	1.0	939.5	-	-
B0-PE1-01	69692	939.1	-	Zone CS	-0.7	938.4	-	-
B2-PE1-02	69693	939.4	-	Zone S	1.7	941.1	-	-
C0-PE1-01	69694	939.3	-	Zone CS	-0.6	938.7	-	-
C2-PE1-02	69695	939.3	-	Zone S	1.3	940.6	-	-

Notes:

1. Fill piezometers have no set trigger level, but must be closely monitored for pressure increases.
2. Piezometers installed in the Downstream Trial Berm are described in "Report on Cycloned Sand Construction of Stage 3 and On-going Stages of the Tailings Storage Facility" (Ref. No. 11162/12-2, December 1999)
3. The trigger level for drain piezometers is approx. 2 metres of head.
4. Tailings piezometers (denoted as A0, B0 or C0) have no set trigger level.



LOCATION MAP

KEY MAP

REV.	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	24AUG'00	ISSUED FOR CONSTRUCTION REPORT	JRK	NSD		

REVISIONS

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

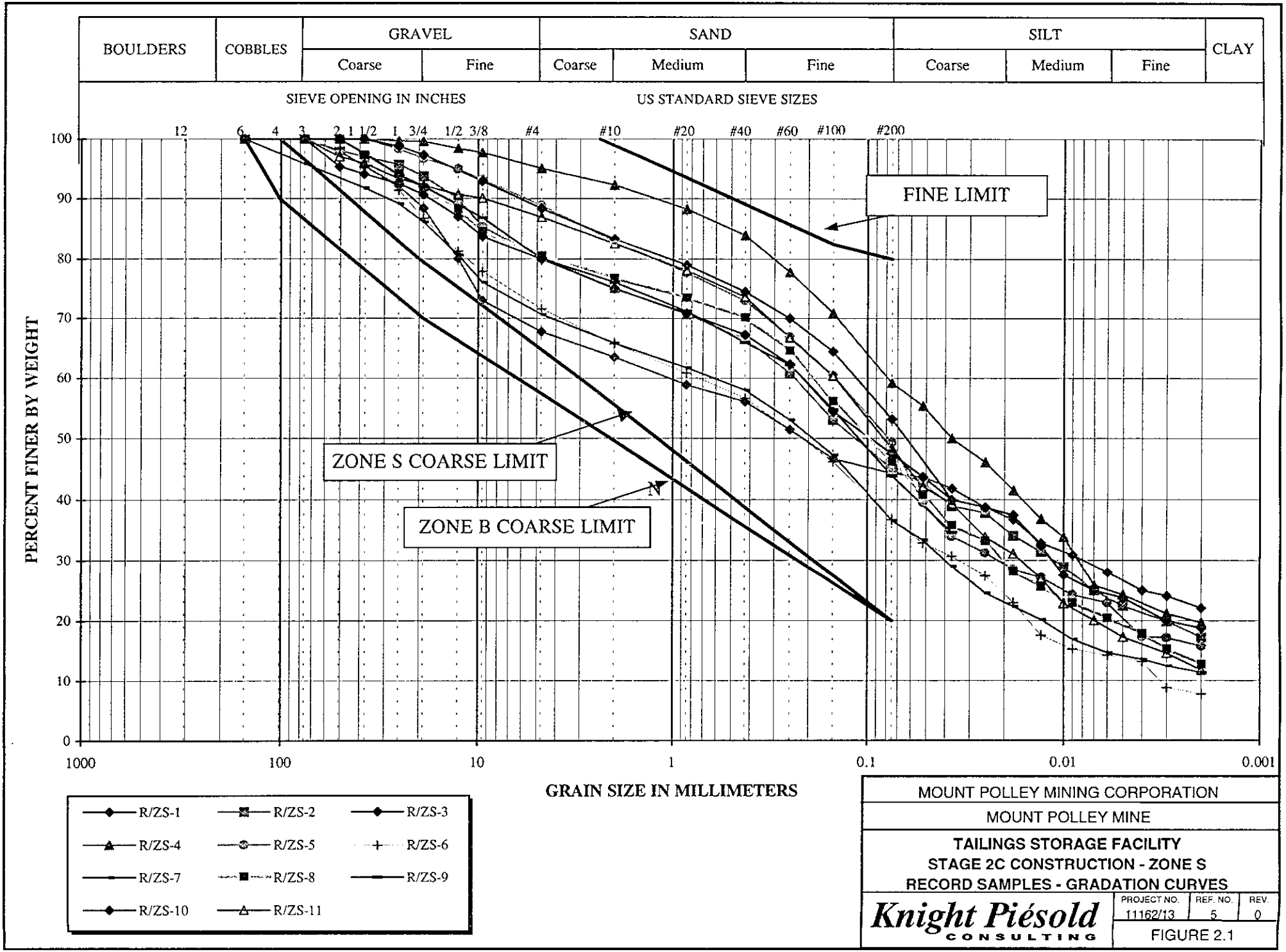
PROJECT LOCATION AND ACCESS PLAN

Knight Piésold CONSULTING

PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE 1.1

VANCOUVER B.C. CAD FILE: \\A\11162\13\ACAD\FIGS\A08.dwg 1:125000 PLOT 1:1(PS) Aug. 24, 2000 rad
XREF FILE : -



MOUNT POLLEY MINING CORPORATION

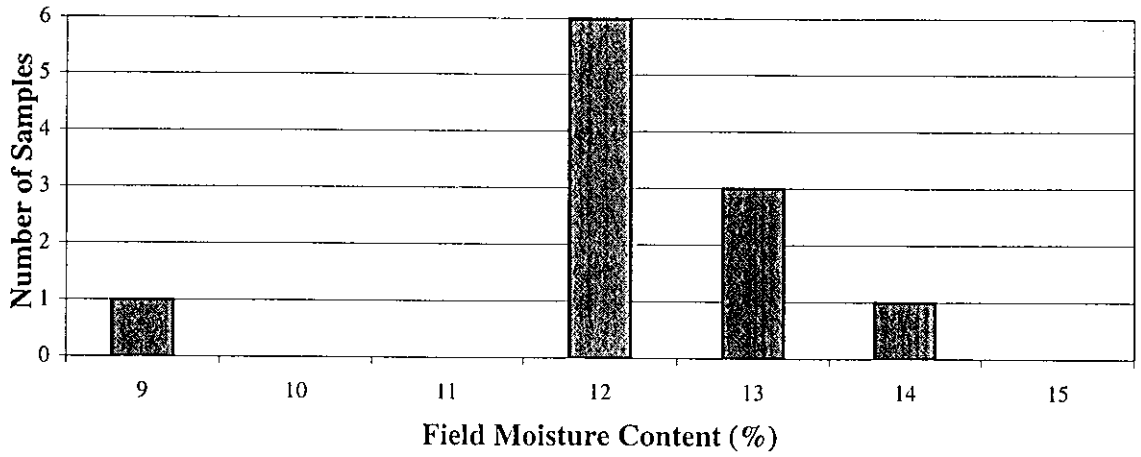
MOUNT POLLEY MINE

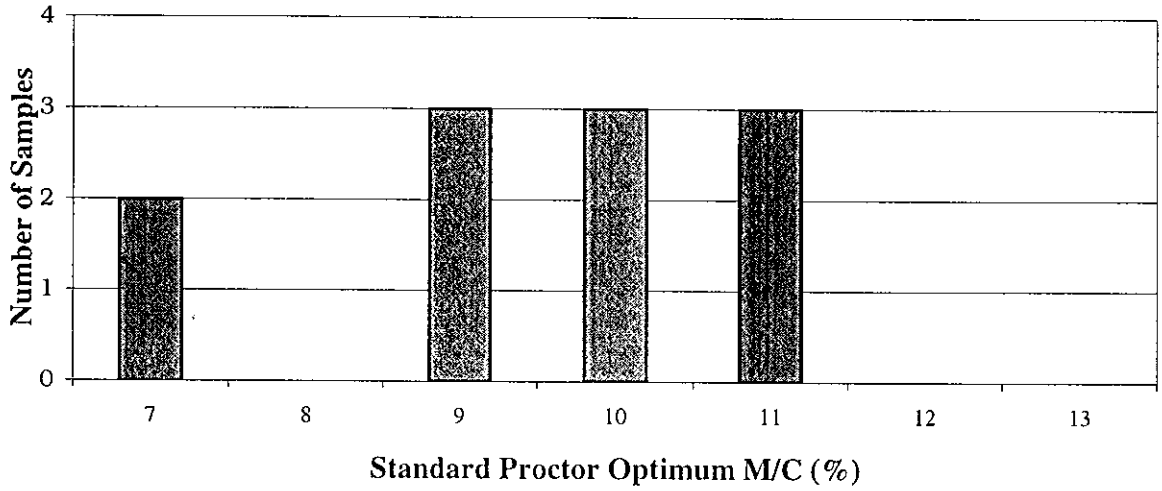
TAILINGS STORAGE FACILITY
STAGE 2C CONSTRUCTION - ZONE S
RECORD SAMPLES - GRADATION CURVES

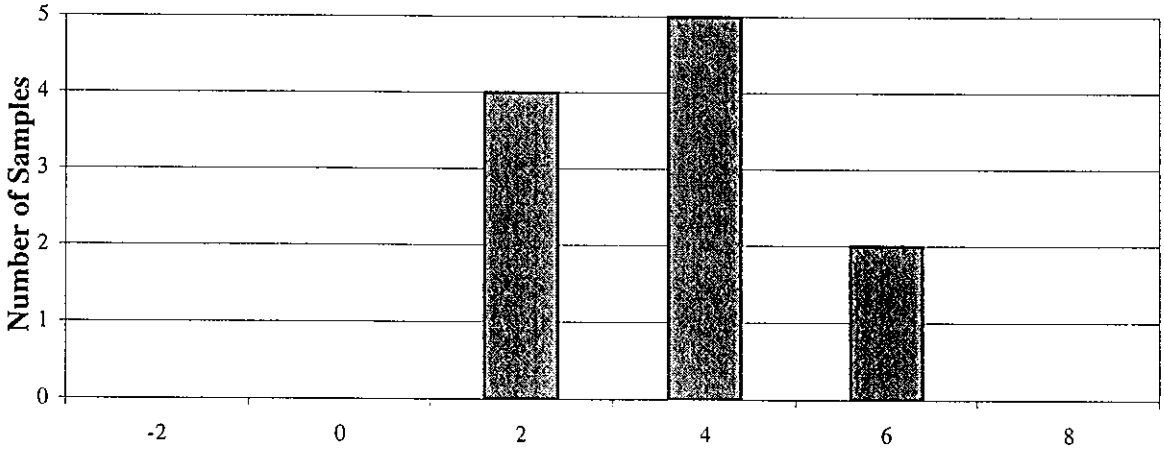
Knight Piésold CONSULTING

PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE 2.1







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MOUNT POLLEY MINING CORPORATION

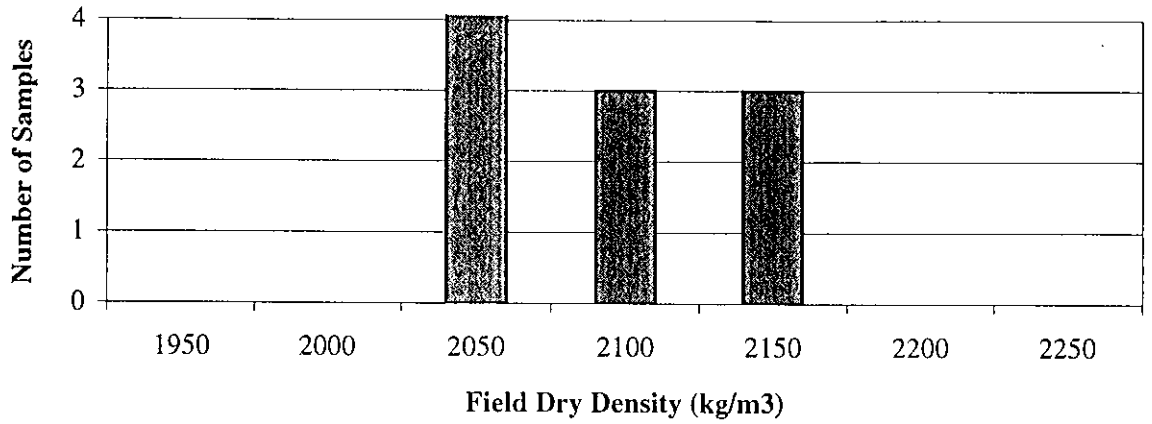
MOUNT POLLEY MINE

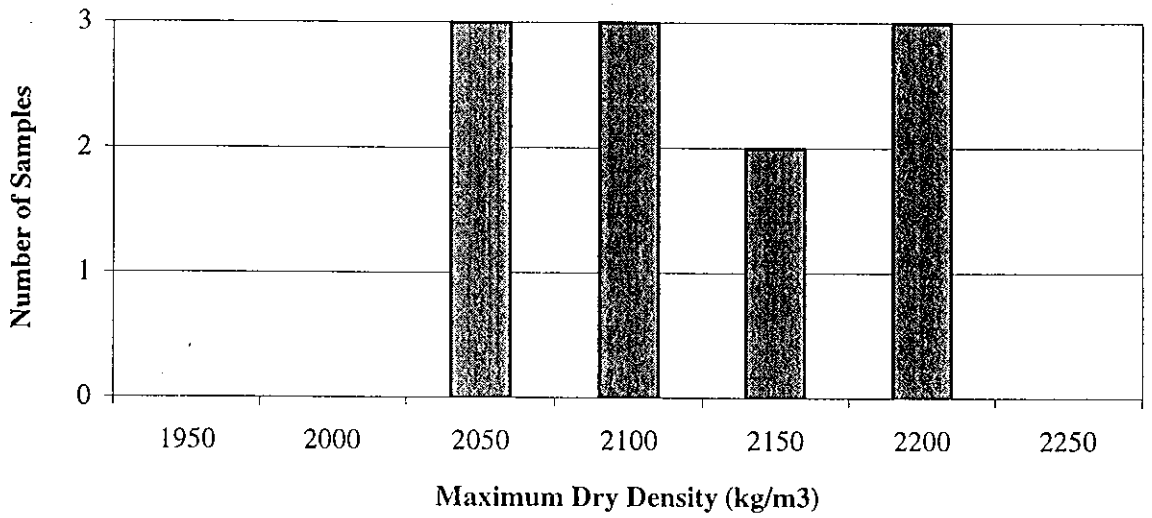
STAGE 2C CONSTRUCTION
ZONE S RECORD SAMPLES
MOISTURE CONTENT HISTOGRAMS

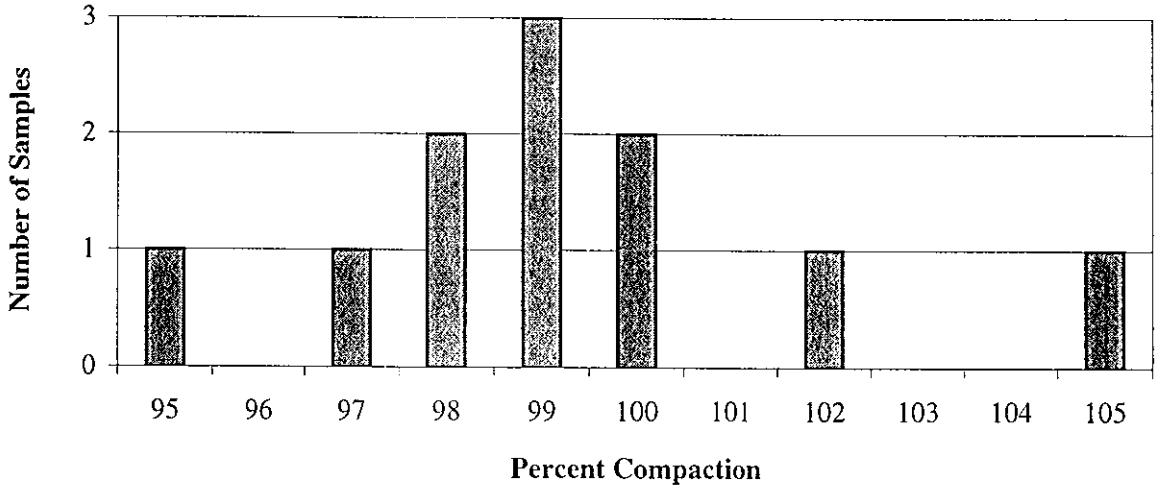
Knight Piésold CONSULTING

PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE 2.2

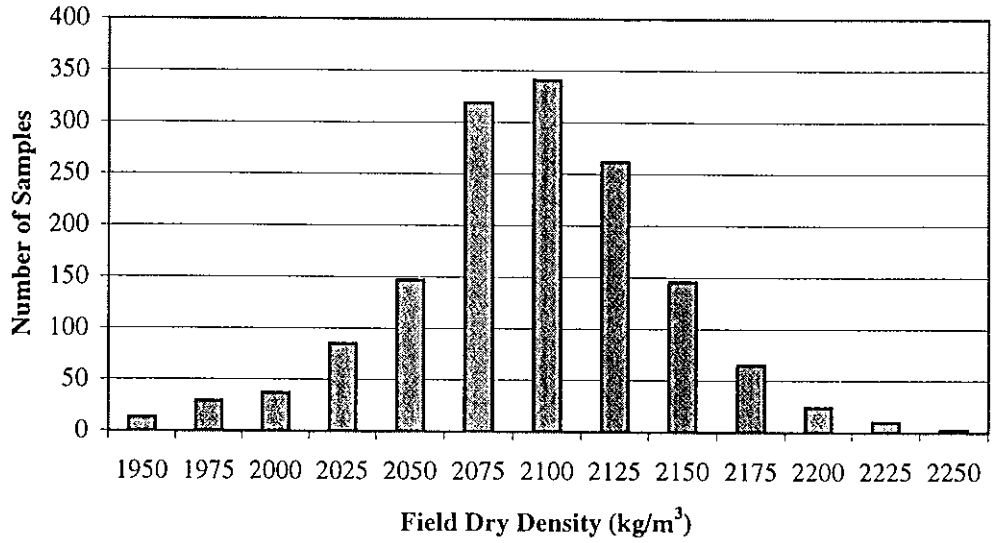


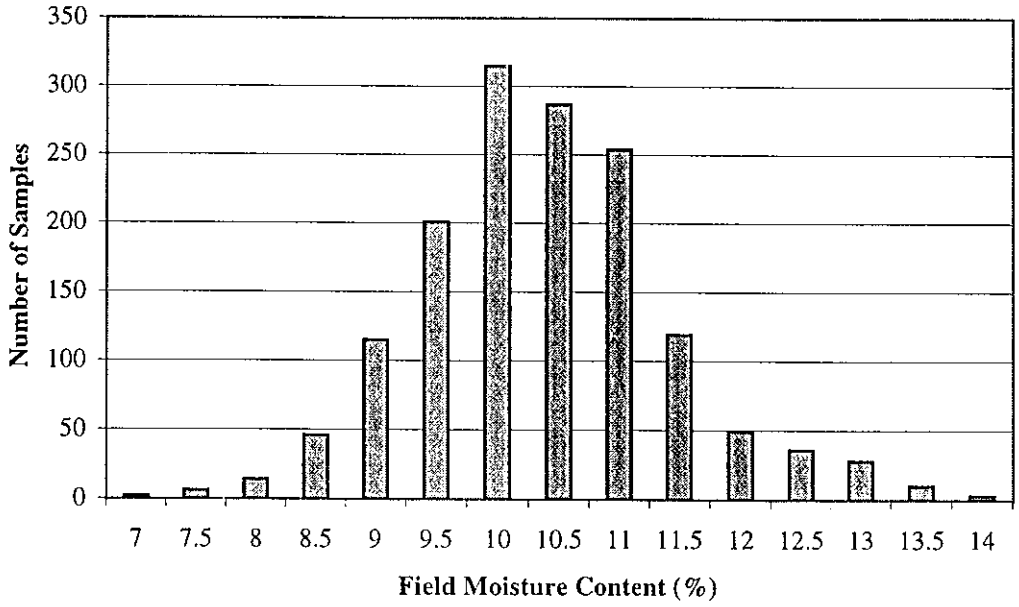




N=11

MOUNT POLLEY MINING CORPORATION			
MOUNT POLLEY MINE			
STAGE 2C CONSTRUCTION ZONE S RECORD SAMPLES DENSITY AND COMPACTION HISTOGRAMS			
Knight Piésold CONSULTING	PROJECT NO. 11162/13	REF. NO. 5	REV. 0
	FIGURE 2.3		





Notes:
1. N=1472
2. Dry density and moisture content measured by nuclear densometer.

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

STAGE 2C CONSTRUCTION
ZONE S - FIELD DENSITY AND MOISTURE CONTENT HISTOGRAMS

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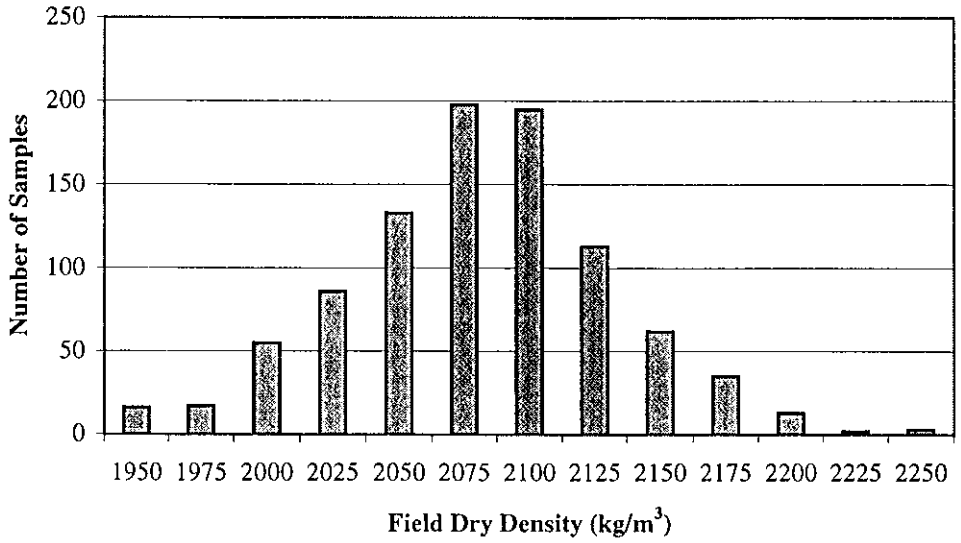
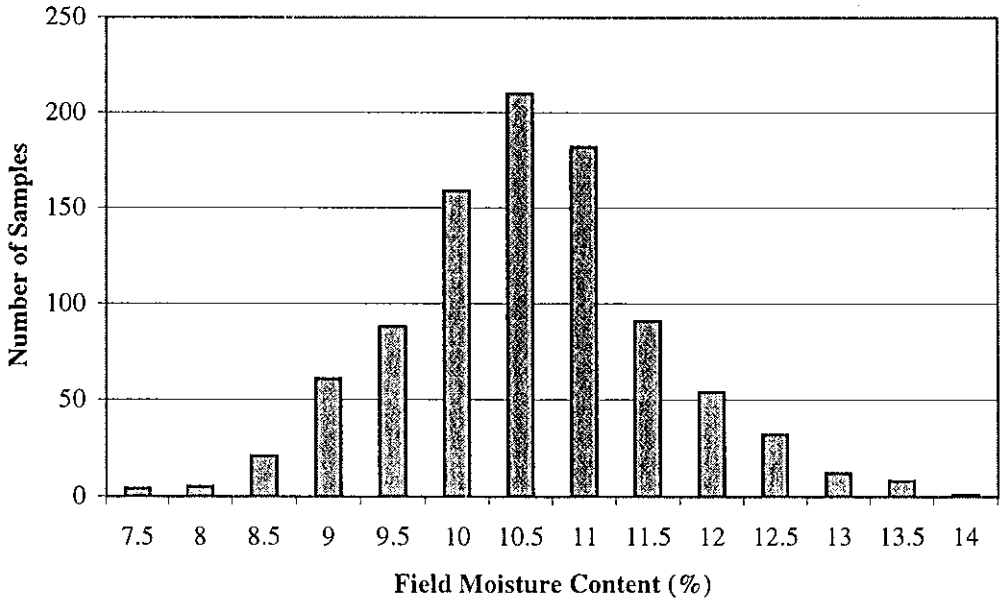
PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE 2.4





Notes:
1. N=931
2. Dry density and moisture content measured by nuclear densometer.

MOUNT POLLEY MINING CORPORATION

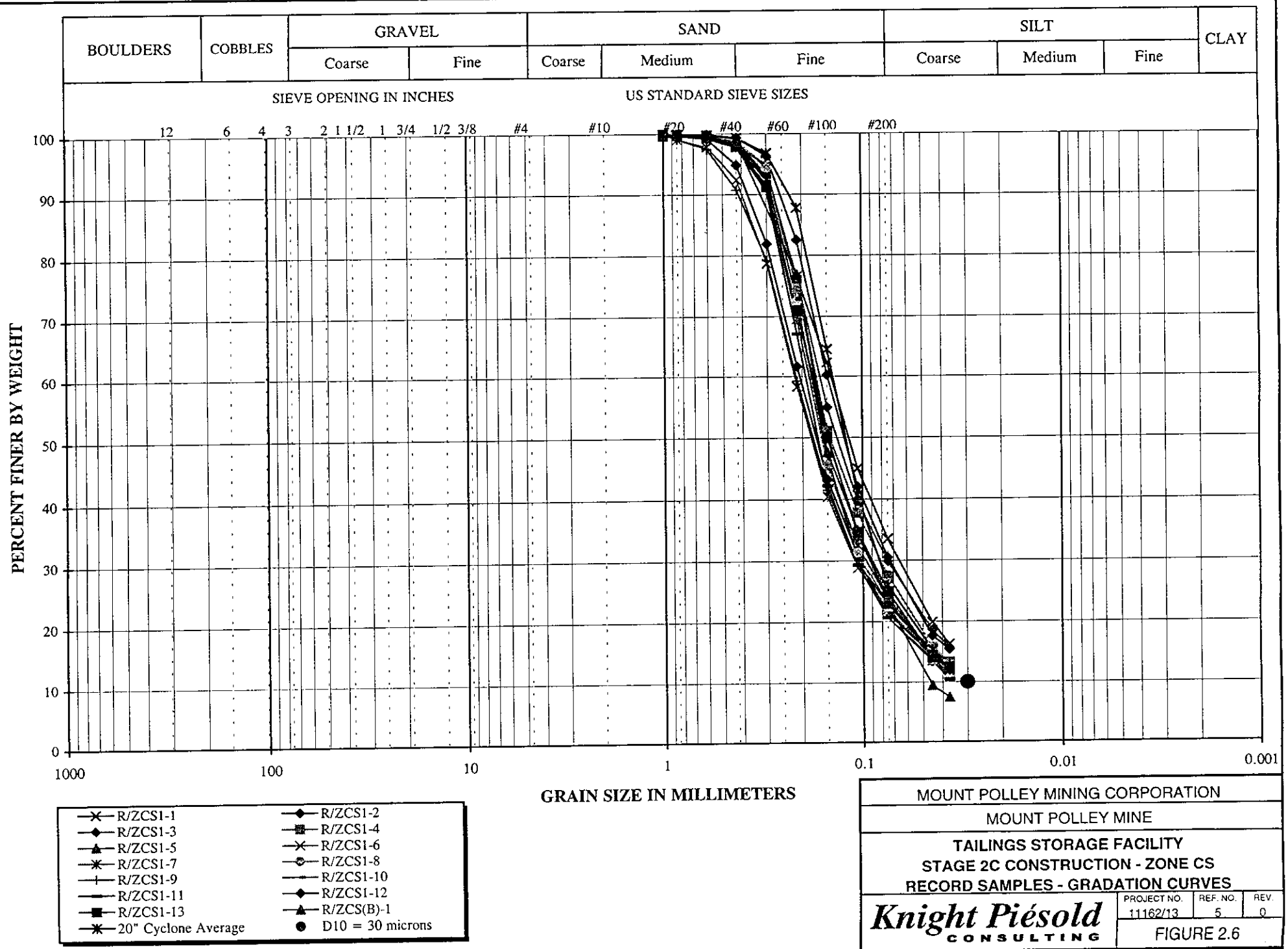
MOUNT POLLEY MINE

STAGE 2C CONSTRUCTION
ZONE B - FIELD DENSITY AND MOISTURE CONTENT HISTOGRAMS

Knight Piésold CONSULTING

PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE 2.5



MOUNT POLLEY MINING CORPORATION

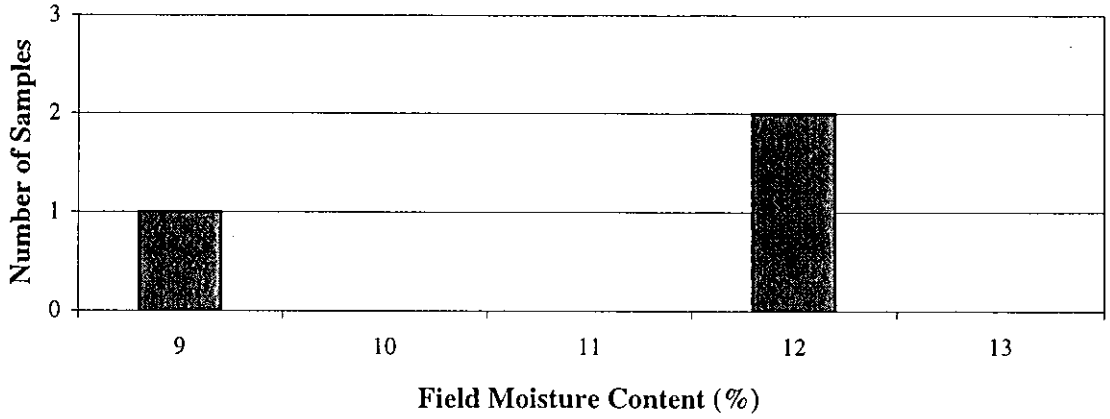
MOUNT POLLEY MINE

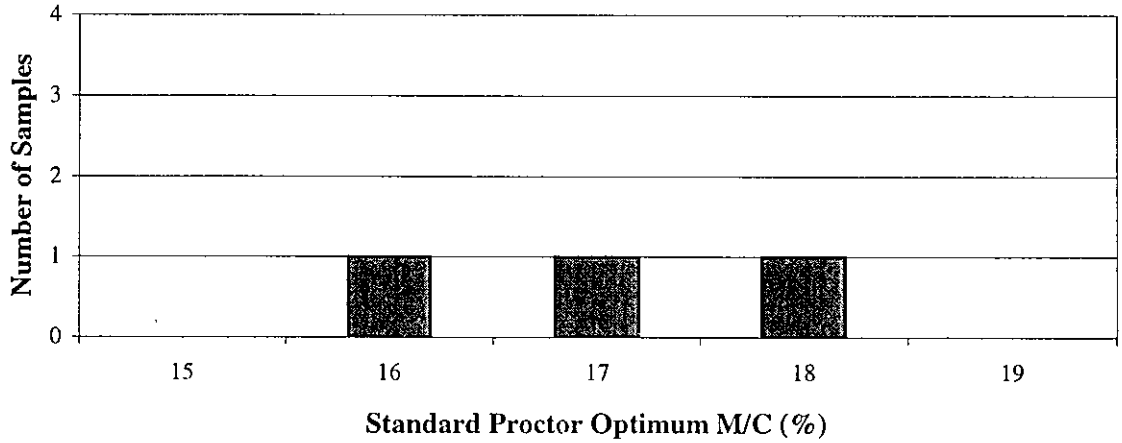
TAILINGS STORAGE FACILITY
STAGE 2C CONSTRUCTION - ZONE CS
RECORD SAMPLES - GRADATION CURVES

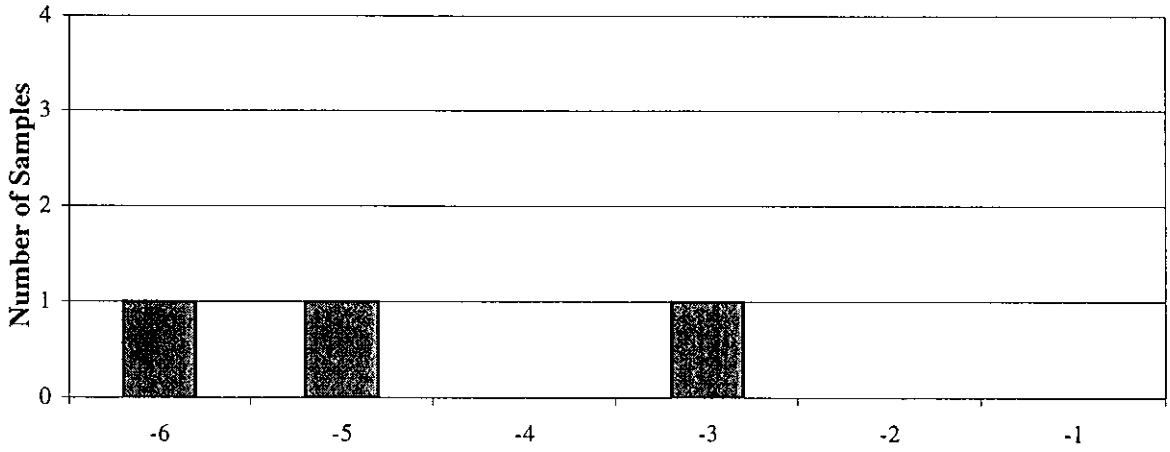
Knight Piésold CONSULTING

PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE 2.6







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MOUNT POLLEY MINING CORPORATION

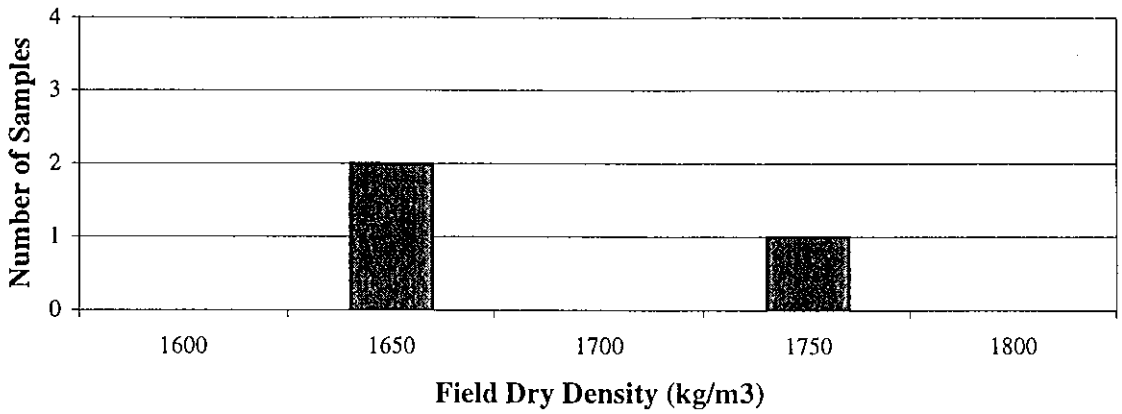
MOUNT POLLEY MINE

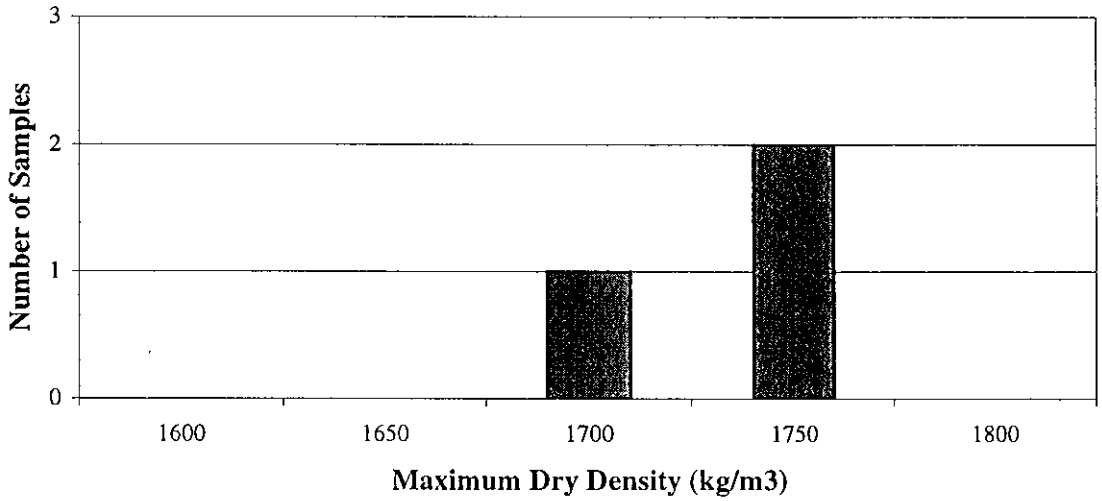
STAGE 2C CONSTRUCTION
ZONE CS RECORD SAMPLES
MOISTURE CONTENT HISTOGRAMS

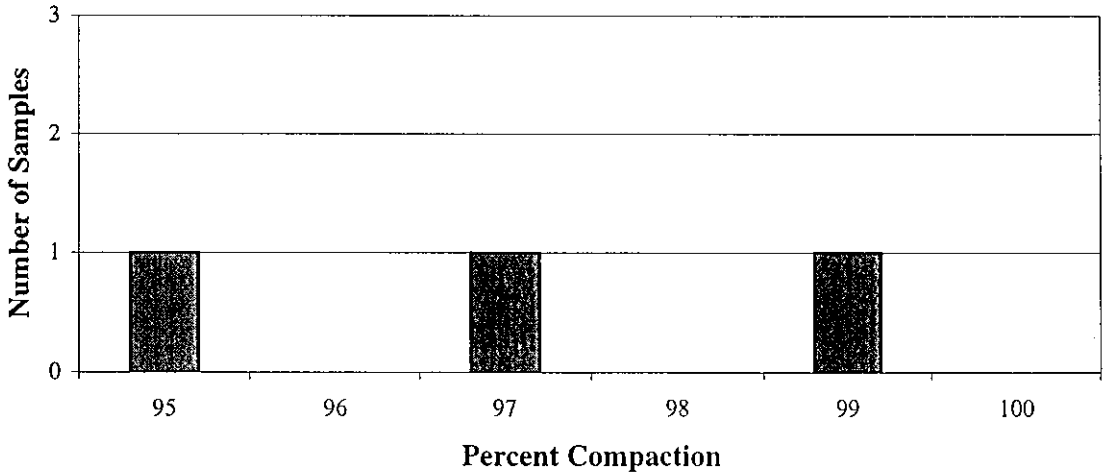
Knight Piésold CONSULTING

PROJECT NO.	REF. NO.	REV.
11162/13	1	0

FIGURE 2.7







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MOUNT POLLEY MINING CORPORATION

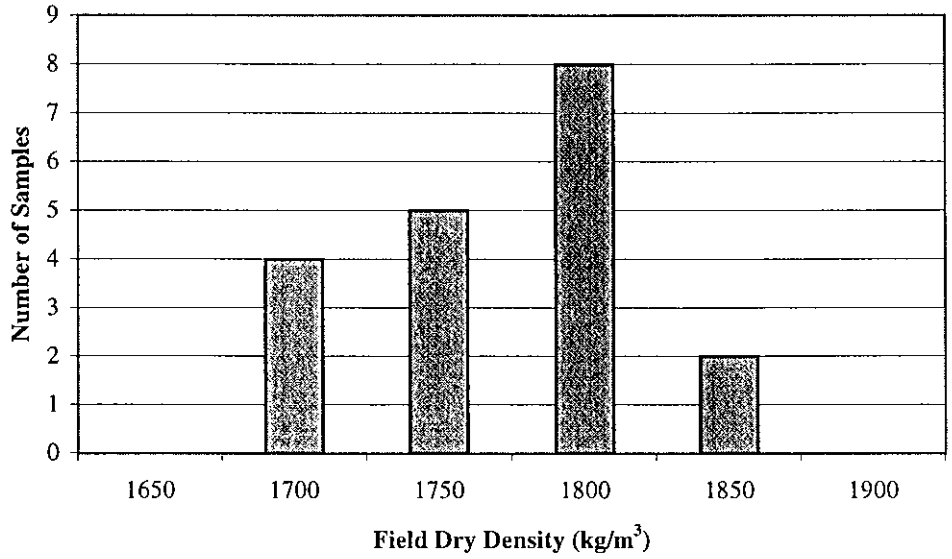
MOUNT POLLEY MINE

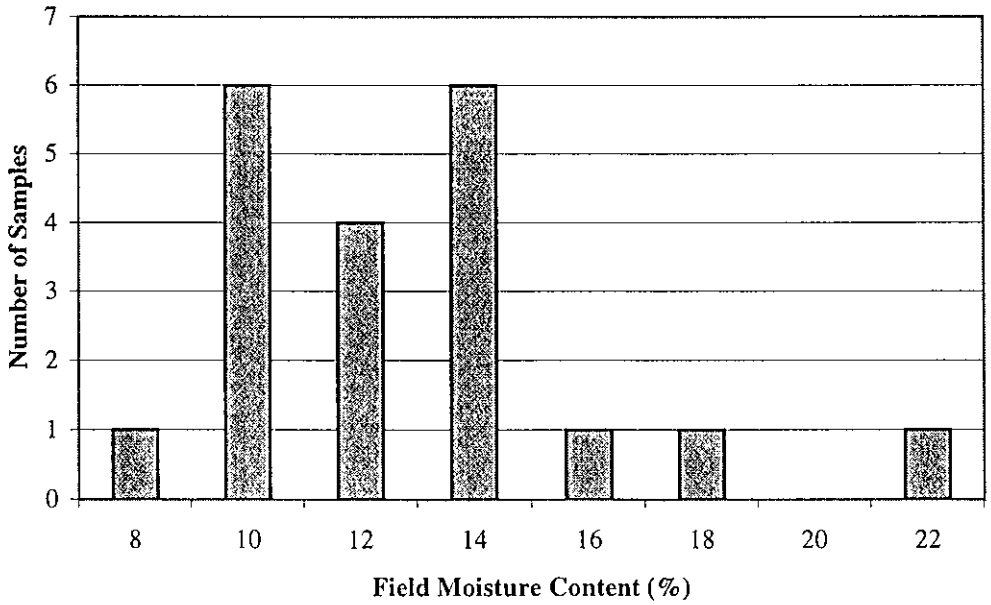
STAGE 2C CONSTRUCTION
ZONE CS RECORD SAMPLES
DENSITY AND COMPACTION HISTOGRAMS

Knight Piésold CONSULTING

PROJECT NO.	REF. NO.	REV.
11162/13	1	A

FIGURE 2.8





Notes:
1. N=20
2. Dry density and moisture content measured by nuclear densometer.

MOUNT POLLEY MINING CORPORATION

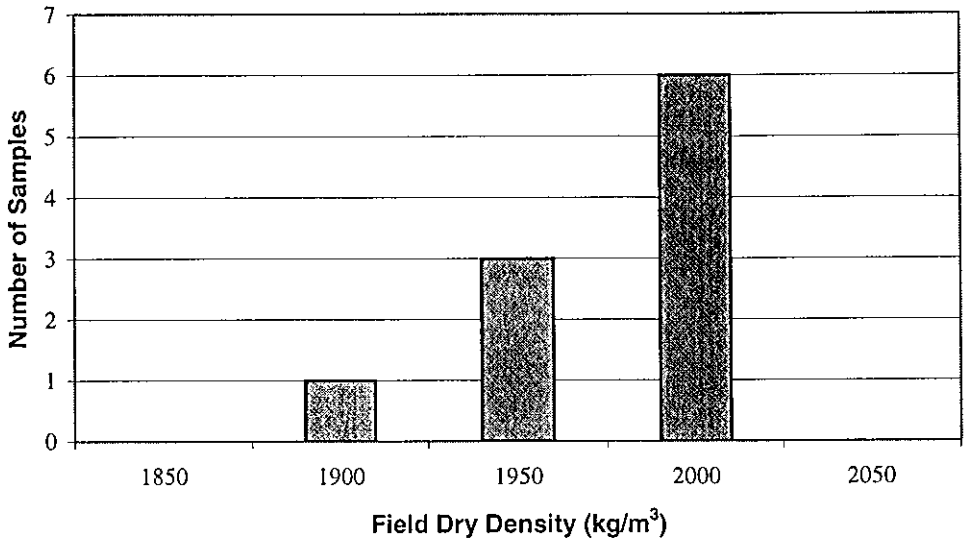
MOUNT POLLEY MINE

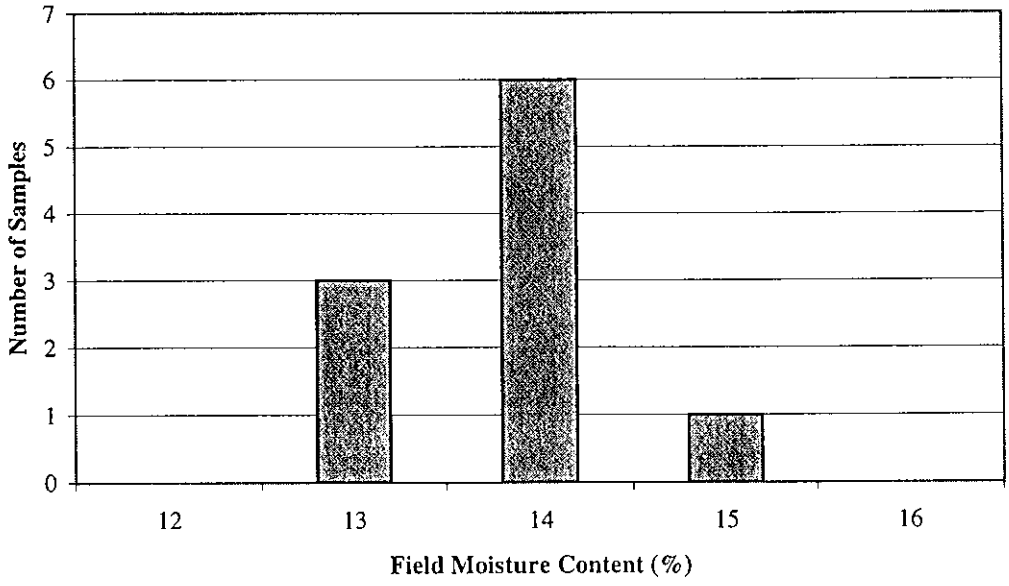
STAGE 2C CONSTRUCTION
ZONE CS - FIELD DENSITY AND MOISTURE CONTENT HISTOGRAMS

Knight Piésold CONSULTING

PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE 2.9





Notes:
1. N=10
2. Dry density and moisture content measured by nuclear densometer.

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STAGE 2C CONSTRUCTION
BASIN LINER - FIELD DENSITY AND MOISTURE CONTENT HISTOGRAMS

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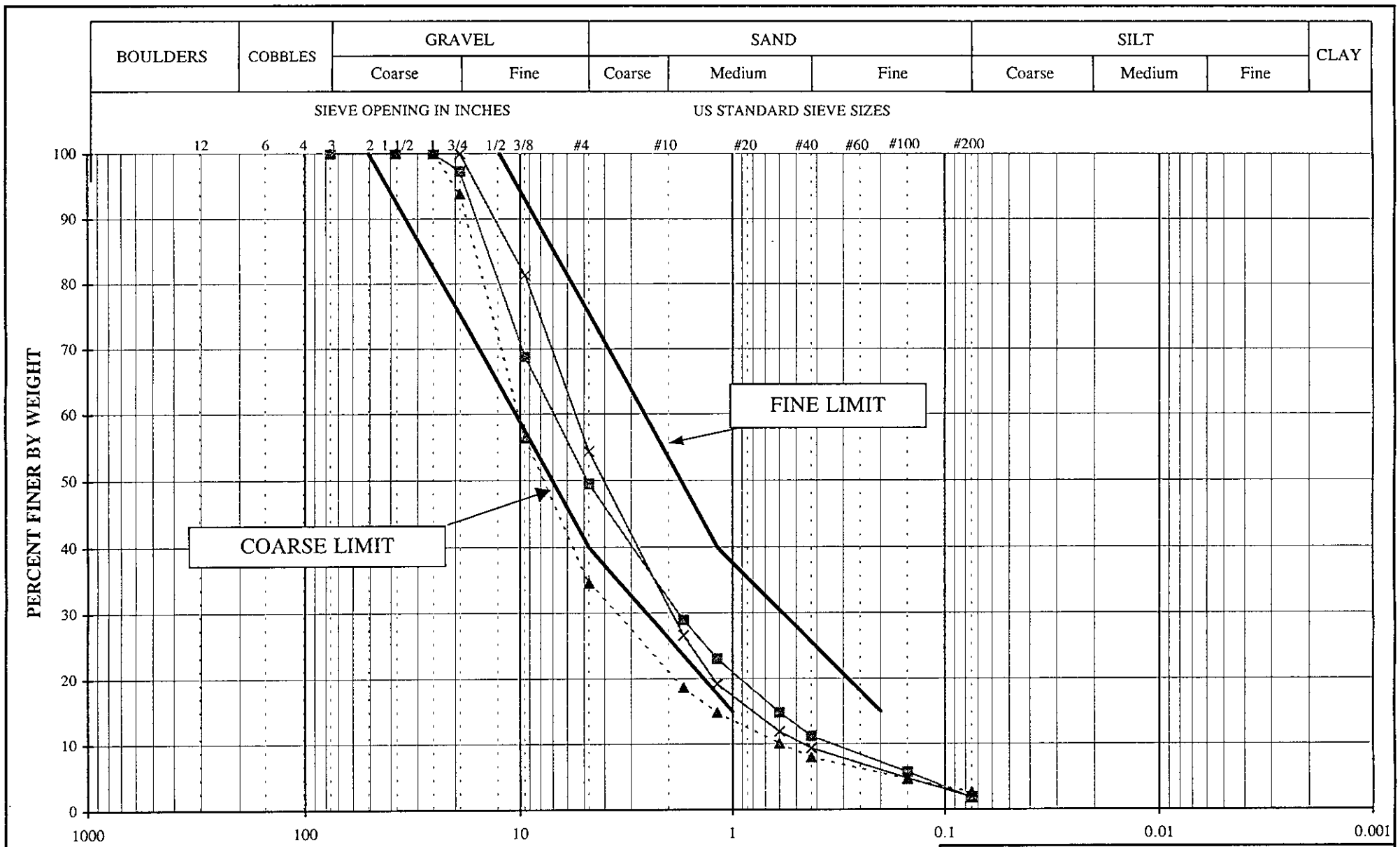
PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE 2.10



Note: Sample R/ZF-2 slightly exceeds coarse limit, but still satisfies filter relationship with surrounding materials.

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MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
STAGE 2C CONSTRUCTION - ZONE F
RECORD SAMPLES - GRADATION CURVES

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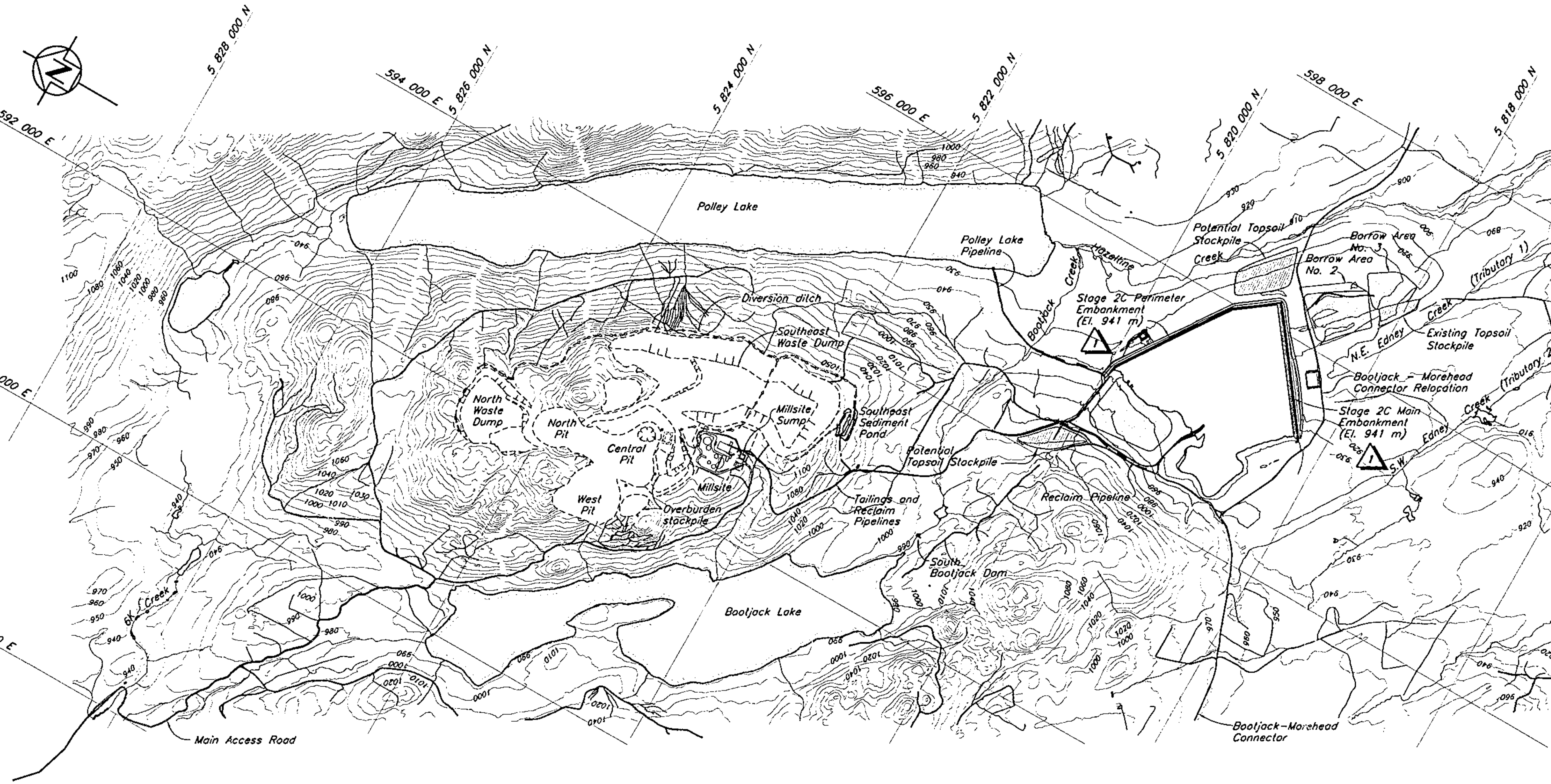
PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE 2.11



NOTES

1. Open Pits and Waste Dumps are shown in their final configurations.
2. Topography at TSF generated from points and break lines from MPMC in July 1999. The topography outside the TSF area is from 1997 flyover.

Scale 1000 500 0 1000 2000 m

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
1	17AUG'00	STAGE 2C AS-BUILT	JRK	TAW		KJB
0	26AUG99	ISSUED FOR CONSTRUCTION	JMTW	DSR	KJB	KJB

REVISIONS

DRG. NO.	DESCRIPTION

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D

REVISIONS

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — K. J. BROUWER

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

OVERALL SITE PLAN
SHOWING STAGE 2C TAILINGS EMBANKMENT

DESIGNED	CHECKED	DRAWN	APPROVED
JMTW	KJB	DSR	KJB

Knight Piésold CONSULTING

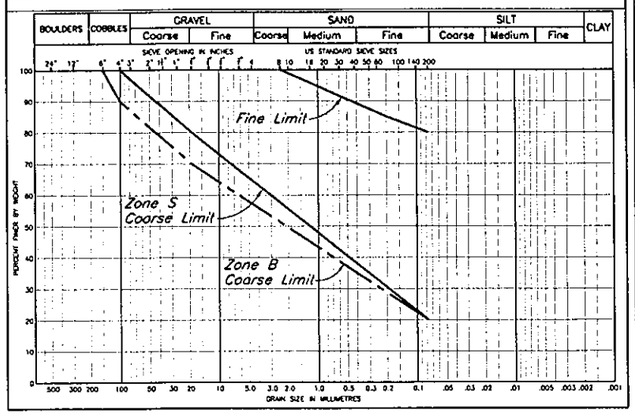
SCALE: AS SHOWN
REVISION: 1
DRAWING NO. 11162-10-100

XREF FILE : 10/TOPO99

VANCOUVER B.C. CAD FILE: M:\1\11162\10\ACAD\dwgs\015\015 1=20000 Plot 1=20 08/08/00 tam

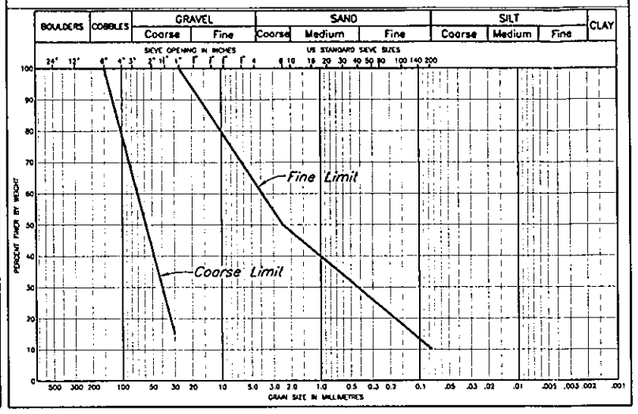
UNIFIED SOIL CLASSIFICATION SYSTEM

ZONE S and ZONE B



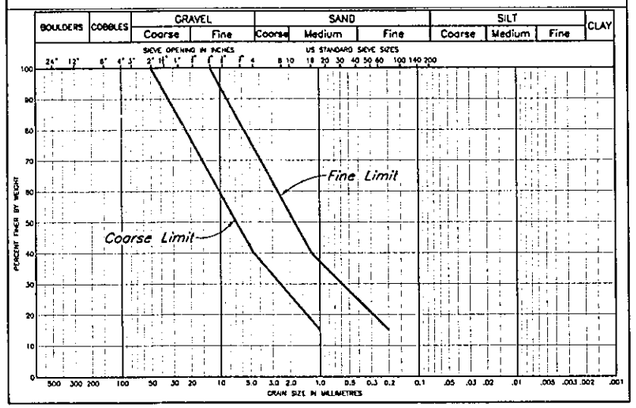
UNIFIED SOIL CLASSIFICATION SYSTEM

ZONE T



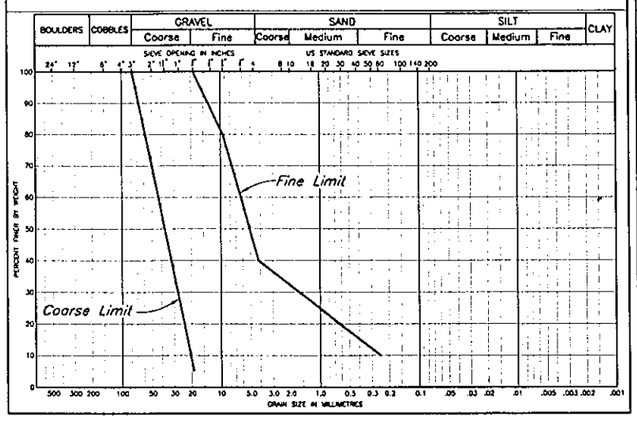
UNIFIED SOIL CLASSIFICATION SYSTEM

ZONE F



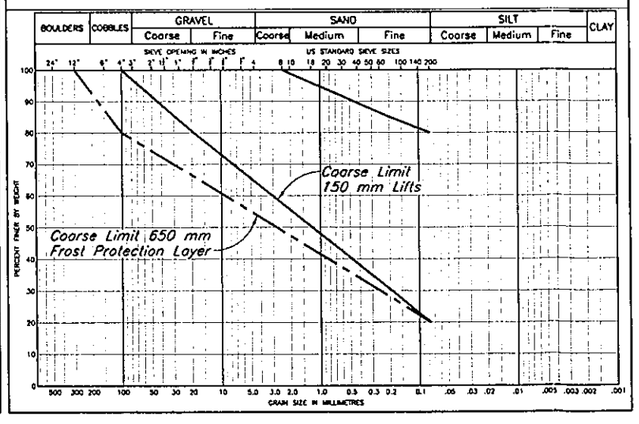
UNIFIED SOIL CLASSIFICATION SYSTEM

ZONE G



UNIFIED SOIL CLASSIFICATION SYSTEM

BASIN LINER



ZONE	LOCATION	MATERIAL TYPE	PLACEMENT AND COMPACTION REQUIREMENTS
S	Core Zone	Glacial till	Placed, moisture conditioned and spread in maximum 300 mm thick layers (after compaction). Vibratory compaction to 95% of Standard Proctor maximum dry density or as approved by the Engineer.
B	Fill Zone	Glacial till, glaciolacustrine or granular material	Placed, moisture conditioned and spread in maximum 1000 mm thick layers (after compaction). Vibratory compaction to 92% of Standard Proctor maximum dry density or as approved by the Engineer.
T	Transition Zone	Select Rockfill	Placed and spread in maximum 600 mm thick layers. Compaction as directed by the Engineer.
F	Chimney Drain	Filter sand	Placed and spread in maximum 600 mm thick lifts. Compaction as directed by the Engineer.
F	Longitudinal/ Outlet Drain	Filter Sand	Placed and spread carefully around filter fabric/drain gravel. Compaction as directed by the Engineer.
G	Foundation/ Longitudinal/ Outlet Drain	Drain Gravel	Placed and spread carefully around seepage collection pipes. Compaction as directed by the Engineer.
BL	Coarse Bearing Layer	Random Rockfill	End dumped and spread as required for trafficability and fill placement.
–	Basin Liner	Glacial till, glaciolacustrine material	Placed and spread in maximum 150 mm thick lifts. Compacted to 92% of the Standard Proctor Maximum Dry Density, or as approved by the Engineer.
–	Basin Liner Frost Protection	Glacial till, glaciolacustrine or granular material	Placed and spread in maximum 300 mm thick lift. Compaction as directed by the Engineer.

VANCOUVER B.C. DAD FILE: W:\11162\10\ACAD\dwgs\010\016 1=1000 Plot 1=1.0 17\08\00 tam

XREF FILE:

DRG. NO.	DESCRIPTION
REFERENCE DRAWINGS	

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
REVISIONS						

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
1	17AUG'00	STAGE 2C AS-BUILT	JRK	TAM	KJB	KJB
0	26AUG99	ISSUED FOR CONSTRUCTION	JMTW	DSR	KJB	KJB
REVISIONS						

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — K. DE ROUWER

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
STAGE 2C EXPANSION
MATERIALS SPECIFICATIONS

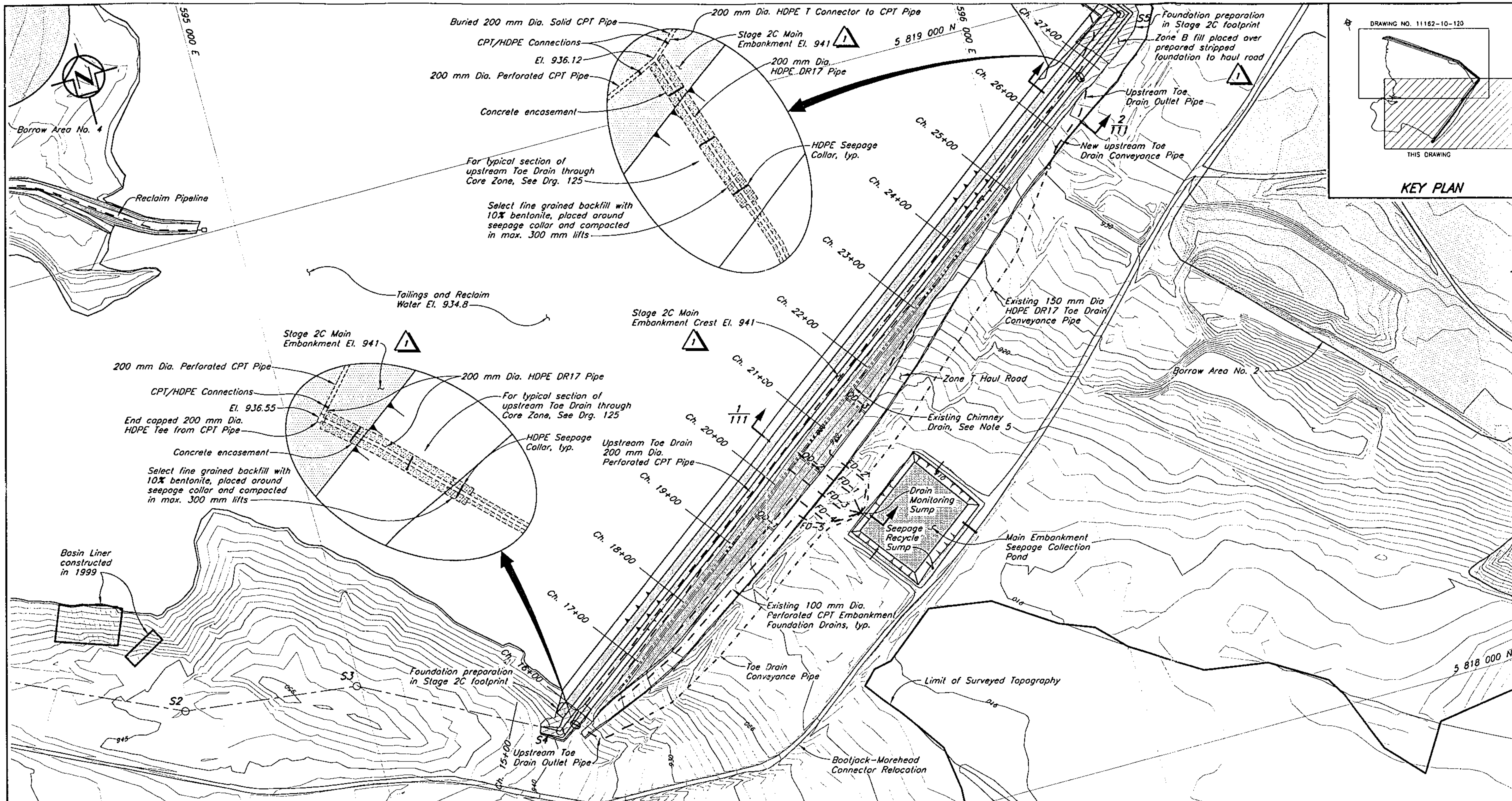
DESIGNED	CHECKED
JMTW	KJB
DRAWN	APPROVED
DSR	KJB

Knight Piésold CONSULTING

SCALE: AS SHOWN

REVISION: 1

DRAWING NO.: 11162-10-104



Scale 50 0 50 100 150 200 250 m

EMBANKMENT SETTING OUT POINTS			
Point	Northing	Easting	Chainage
S1	5 818 622.590	594 258.688	5+00.00
S2	5 818 392.402	594 765.778	10+56.89
S3	5 818 365.375	594 995.246	12+87.94
S4	5 818 238.539	595 240.350	15+63.92
S5	5 818 966.983	596 208.866	27+75.80
S6	5 819 304.035	595 955.881	31+97.23
S7	5 819 939.748	595 010.249	43+36.69
S8	5 820 053.034	594 396.471	49+60.83

NOTES

1. Chainage defined by Setting Out Point S1 at Ch. 5+00.
2. Stripping and clearing to 5 m beyond toe of embankments.
3. Topography generated from points and break lines provided by MPMC on July 20, 1999.
4. Tailings pipeline on embankment crest not shown for clarity.
5. Longitudinal (collector) Drain for Chimney Drain installed to invert El. 929 (Stage 1b)

DRG. NO.	DESCRIPTION
111	TSF – STAGE 2C MAIN EMBANKMENT – SECTIONS

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
1	17AUG'00	STAGE 2C AS-BUILT	JRK	TAM		KJB
0	26AUG99	ISSUED FOR CONSTRUCTION	JMTW	DSR	KJB	KJB

REVISIONS

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — K.J. BROUWER

DESIGNED JMTW · CHECKED KJB · DRAWN DSR · APPROVED KJB

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

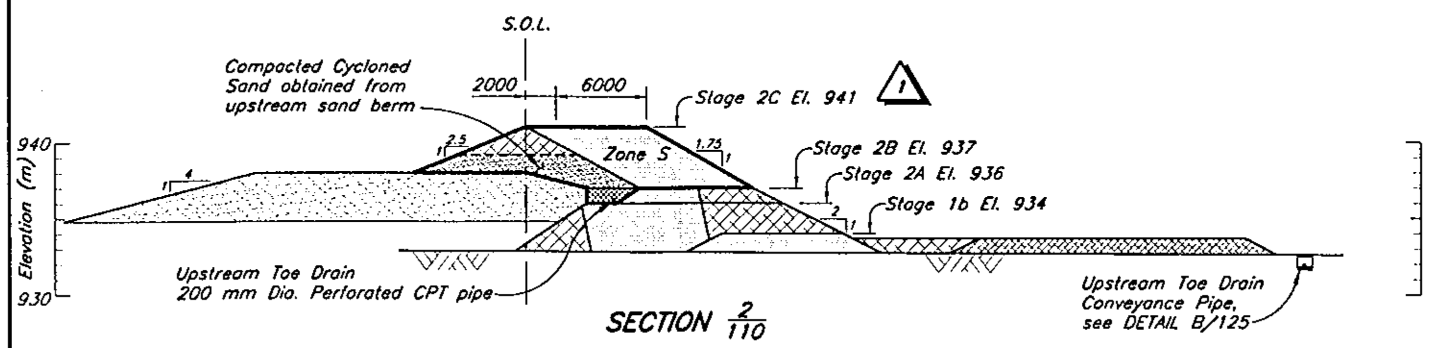
TAILINGS STORAGE FACILITY
STAGE 2C MAIN EMBANKMENT
PLAN

Knight Piésold CONSULTING

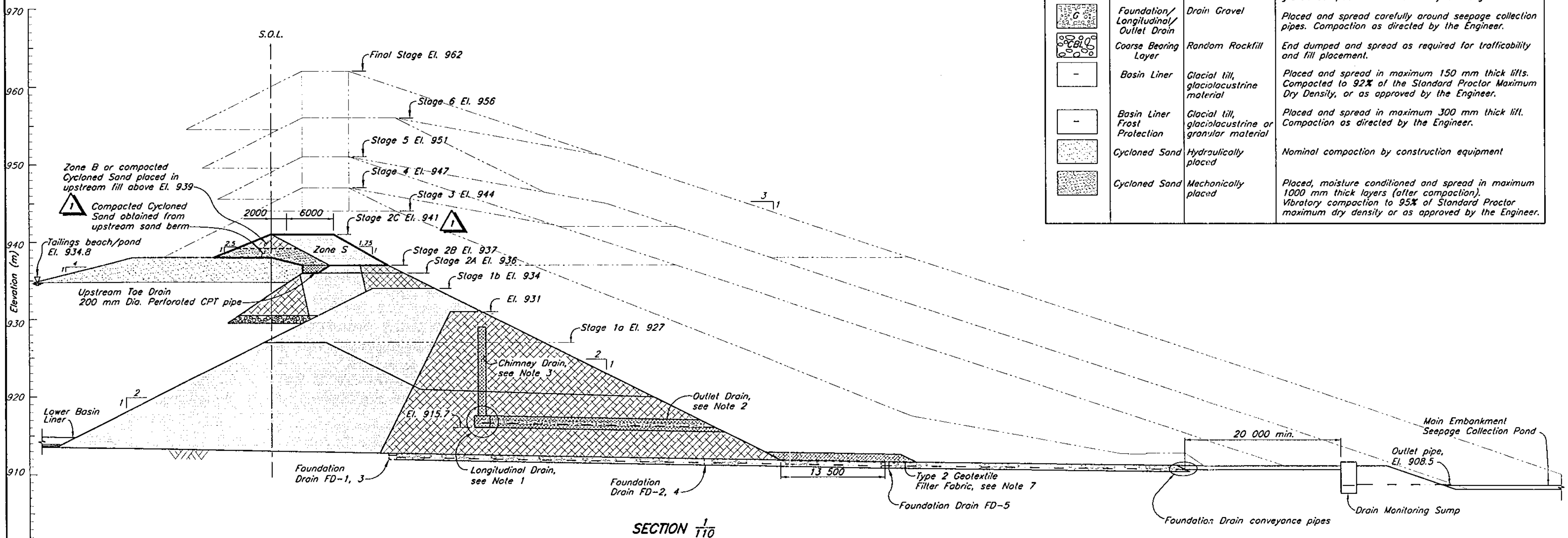
SCALE AS SHOWN · REVISION 1 · DRAWING NO. 11162-10-110

XREF FILE: TOPO99,STOCK99

VANCOUVER B.C. CAD FILE: M:\11162\10\ACAD\dwgs\10110\011 1=2500 Plot 1=1(PS) 07/06/00 9am



SECTION 2/110



SECTION 1/110

ZONE	LOCATION	MATERIAL TYPE	PLACEMENT AND COMPACTION REQUIREMENTS
S	Core Zone	Glacial till	Placed, moisture conditioned and spread in maximum 300 mm thick layers (after compaction). Vibratory compaction to 95% of Standard Proctor maximum dry density or as approved by the Engineer.
B	Fill Zone	Glacial till, glaciolacustrine or granular material	Placed, moisture conditioned and spread in maximum 1000 mm thick layers (after compaction). Vibratory compaction to 92% of Standard Proctor maximum dry density or as approved by the Engineer.
T	Transition Zone	Select Rockfill	Placed and spread in maximum 600 mm thick layers. Compaction as directed by the Engineer.
F	Chimney Drain	Filter sand	Placed and spread in maximum 600 mm thick lifts. Compaction as directed by the Engineer.
F	Longitudinal/ Outlet Drain	Filter Sand	Placed and spread carefully around filter fabric/drain gravel. Compaction as directed by the Engineer.
G	Foundation/ Longitudinal/ Outlet Drain	Drain Gravel	Placed and spread carefully around seepage collection pipes. Compaction as directed by the Engineer.
CBL	Coarse Bearing Layer	Random Rockfill	End dumped and spread as required for trafficability and fill placement.
–	Basin Liner	Glacial till, glaciolacustrine material	Placed and spread in maximum 150 mm thick lifts. Compacted to 92% of the Standard Proctor Maximum Dry Density, or as approved by the Engineer.
–	Basin Liner Frost Protection	Glacial till, glaciolacustrine or granular material	Placed and spread in maximum 300 mm thick lift. Compaction as directed by the Engineer.
	Cycloned Sand	Hydraulically placed	Nominal compaction by construction equipment
	Cycloned Sand	Mechanically placed	Placed, moisture conditioned and spread in maximum 1000 mm thick layers (after compaction). Vibratory compaction to 95% of Standard Proctor maximum dry density or as approved by the Engineer.

NOTES

1. Longitudinal Drain constructed to invert El. 929 (Stage 1b)
2. Outlet Drains to be extended to Drain Monitoring Sump during Stage 3, if required.
3. Chimney drain to be extended during Stage 3, if required.
4. Fill placement rates monitored by the Engineer. Placement rates modified if excess pore pressures observed in fill or foundation piezometers.
5. All dimensions in millimetres and elevations in metres, unless noted otherwise.
6. Type 1 (12 oz./sq.yd.) Geotextile Filter Fabric placed on tailings as required.
7. Type 2 (8 oz./sq.yd.) Geotextile Filter Fabric placed from the right abutment (approx. Ch. 15+75) to El. 920.0 m on the left abutment (approx. Ch. 23+00).
8. Not all Foundation Drains are intersected on this cross section.
9. Crest elevations and details of ongoing embankment raises are preliminary only and will be modified during future design stages.
10. Foundation drains are offset from section. For drain alignment see Drg. 110.

Scale 5 0 5 10 15 20 25 Metres

VANCOUVER B.C. CAD FILE: M:\11162\10\ACAD\Drgs\012\013 1=250 Plot 1=0.25 08/08/00 tem

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MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
STAGE 2C MAIN EMBANKMENT
SECTIONS

DRG. NO.	DESCRIPTION
110	TSF - STAGE 2C MAIN EMBANKMENT - PLAN

REFERENCE DRAWINGS

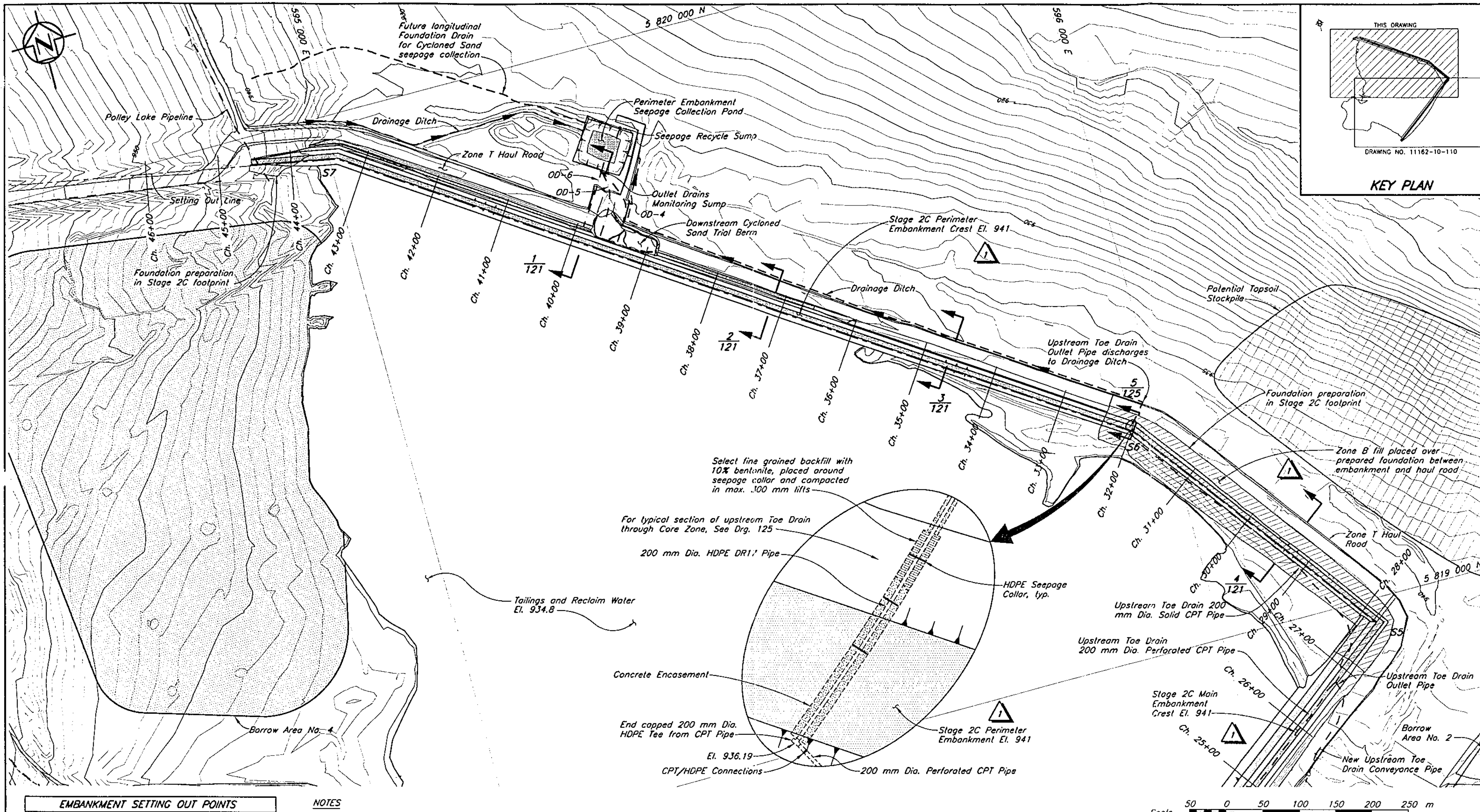
REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
1	17AUG'00	STAGE 2C AS-BUILT	JRK	TAM		
0	26AUG99	ISSUED FOR CONSTRUCTION	JMTW	DSR	KJB	KJB

REVISIONS

DESIGNED	CHECKED	DRAWN	APPROVED
JMTW	KJB	DSR	KJB

Knight Piésold CONSULTING

SCALE: AS SHOWN — REVISION: 1 — DRAWING NO. 11162-10-111



EMBANKMENT SETTING OUT POINTS			
Point	Northing	Easting	Chainage
S1	5 818 622.590	594 258.688	5+00.00
S2	5 818 392.402	594 765.778	10+56.89
S3	5 818 365.375	594 995.246	12+87.94
S4	5 818 238.539	595 240.350	15+63.92
S5	5 818 966.983	596 208.866	27+75.80
S6	5 819 304.035	595 955.881	31+97.23
S7	5 819 939.748	595 010.249	43+36.69
S8	5 820 053.034	594 396.471	49+60.83

NOTES

1. Chainage defined by Setting Out Point S1 at Ch. 5+00.
2. Stripping and clearing to 5 m beyond toe of embankments.
3. Topography generated from points and break lines provided by MPMC on July 20, 1999.
4. Tailings pipeline on embankment crest not shown for clarity.
5. Perimeter Embankment Upstream Toe Drain not installed. Solid CPT end capped and extended through upstream face of embankment at Ch. 32+00.

DRG. NO.	DESCRIPTION
125	TSF - STAGE 2C EXPANSION - EMBANKMENT DRAIN SYSTEMS - SECTIONS AND DETAILS
121	TSF - STAGE 2C PERIMETER EMBANKMENT - SECTIONS
111	TSF - STAGE 2C MAIN EMBANKMENT - SECTIONS

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
1	17AUG'00	STAGE 2C AS-BUILT	JRK	TAF	KJB	KJB
0	26AUG99	ISSUED FOR CONSTRUCTION	JMTW	DSR	KJB	KJB

REVISIONS

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MOUNT POLLEY MINE

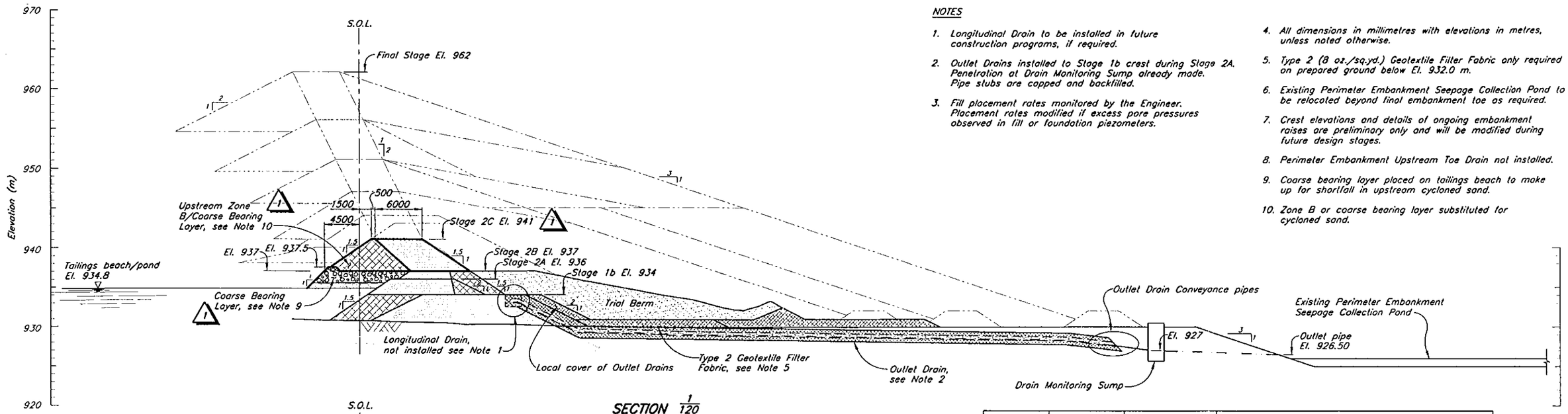
TAILINGS STORAGE FACILITY
STAGE 2C PERIMETER EMBANKMENT
PLAN

DESIGNED	CHECKED	DRAWN	APPROVED
JMTW	KJB	DSR	KJB

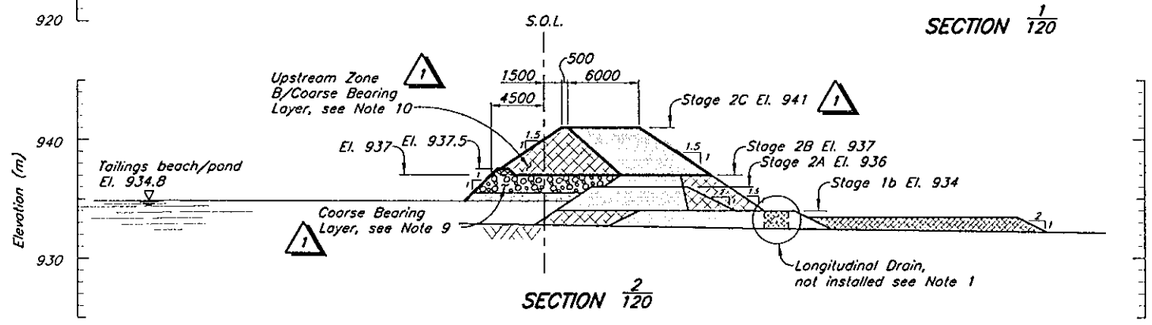
Knight Piésold CONSULTING

SCALE: AS SHOWN — REVISION: 1

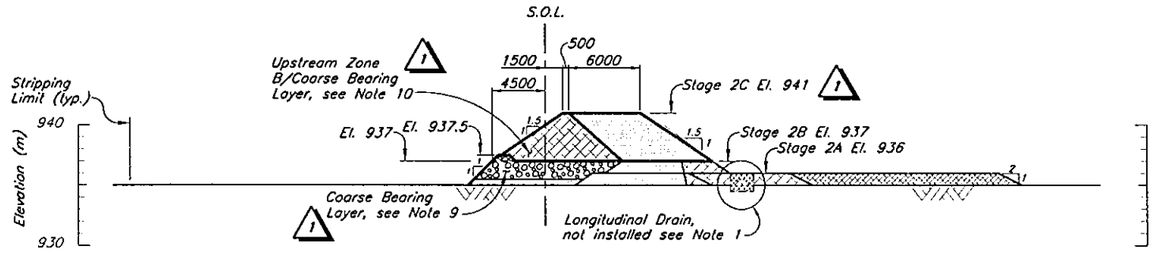
DRAWING NO. 11162-10-120



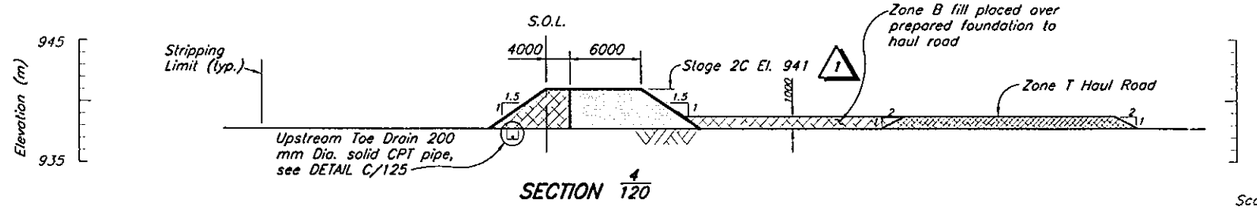
SECTION 1/120



SECTION 2/120



SECTION 3/120



SECTION 4/120

Scale 5 0 5 10 15 20 25 Metres

NOTES

1. Longitudinal Drain to be installed in future construction programs, if required.
2. Outlet Drains installed to Stage 1b crest during Stage 2A. Penetration at Drain Monitoring Sump already made. Pipe stubs are capped and backfilled.
3. Fill placement rates monitored by the Engineer. Placement rates modified if excess pore pressures observed in fill or foundation piezometers.
4. All dimensions in millimetres with elevations in metres, unless noted otherwise.
5. Type 2 (8 oz./sq.yd.) Geotextile Filter Fabric only required on prepared ground below El. 932.0 m.
6. Existing Perimeter Embankment Seepage Collection Pond to be relocated beyond final embankment toe as required.
7. Crest elevations and details of ongoing embankment raises are preliminary only and will be modified during future design stages.
8. Perimeter Embankment Upstream Toe Drain not installed.
9. Coarse bearing layer placed on tailings beach to make up for shortfall in upstream cycloned sand.
10. Zone B or coarse bearing layer substituted for cycloned sand.

ZONE	LOCATION	MATERIAL TYPE	PLACEMENT AND COMPACTION REQUIREMENTS
S	Core Zone	Glacial till	Placed, moisture conditioned and spread in maximum 300 mm thick layers (after compaction). Vibratory compaction to 95% of Standard Proctor maximum dry density or as approved by the Engineer.
B	Fill Zone	Glacial till, glaciolacustrine or granular material	Placed, moisture conditioned and spread in maximum 1000 mm thick layers (after compaction). Vibratory compaction to 92% of Standard Proctor maximum dry density or as approved by the Engineer.
T	Transition Zone	Select Rockfill	Placed and spread in maximum 600 mm thick layers. Compaction as directed by the Engineer.
F	Chimney Drain	Filter sand	Placed and spread in maximum 600 mm thick lifts. Compaction as directed by the Engineer.
F	Longitudinal/ Outlet Drain	Filter Sand	Placed and spread carefully around filter fabric/drain gravel. Compaction as directed by the Engineer.
G	Foundation/ Longitudinal/ Outlet Drain	Drain Gravel	Placed and spread carefully around seepage collection pipes. Compaction as directed by the Engineer.
CBL	Coarse Bearing Layer	Random Rockfill	End dumped and spread as required for trafficability and fill placement.
–	Basin Liner	Glacial till, glaciolacustrine material	Placed and spread in maximum 150 mm thick lifts. Compacted to 92% of the Standard Proctor Maximum Dry Density, or as approved by the Engineer.
–	Basin Liner Frost Protection	Glacial till, glaciolacustrine or granular material	Placed and spread in maximum 300 mm thick lift. Compaction as directed by the Engineer.
	Cycloned Sand	Hydraulically placed	Nominal compaction by construction equipment
	Cycloned Sand	Mechanically placed	Placed, moisture conditioned and spread in maximum 1000 mm thick layers (after compaction). Vibratory compaction to 95% of Standard Proctor maximum dry density or as approved by the Engineer.

ORG. NO.	DESCRIPTION
125	TSF – STAGE 2C EXPANSION – EMBANKMENT DRAINS SYSTEMS – SECTIONS AND DETAILS
120	TSF – STAGE 2C PERIMETER EMBANKMENT – PLAN

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D

REVISIONS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
1	17AUG'00	STAGE 2C AS-BUILT	JRK	TAM	JMTW	KJB
0	26AUG99	ISSUED FOR CONSTRUCTION	JMTW	DSR	KJB	KJB

REVISIONS

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA K. J. BROUWER

MOUNT POLLEY MINE CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
STAGE 2C PERIMETER EMBANKMENT
SECTIONS

DESIGNED	CHECKED
JMTW	KJB
DRAWN	APPROVED
DSR	KJB

Knight Piésold CONSULTING

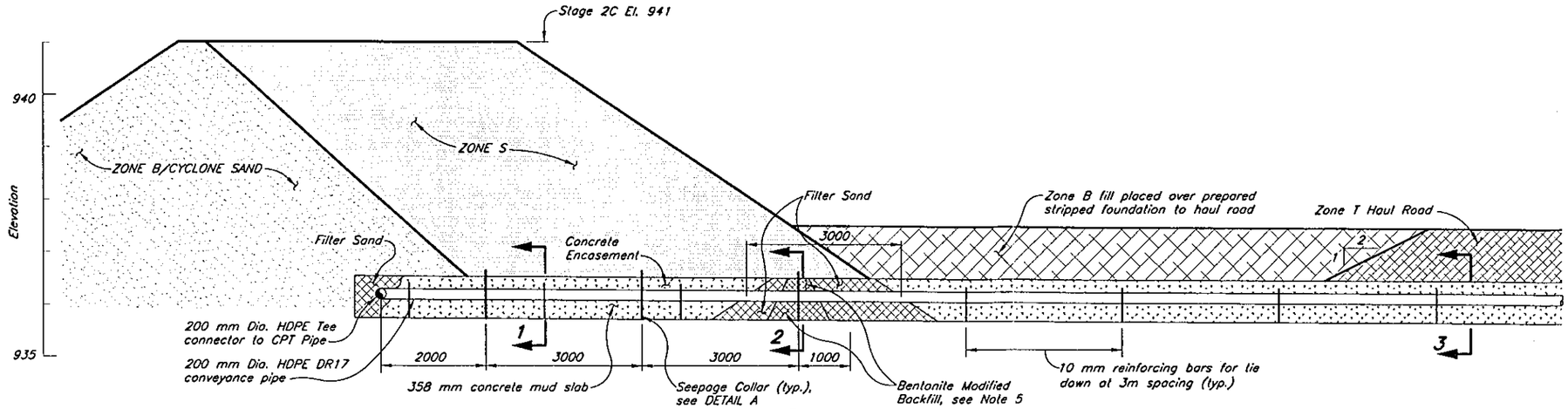
SCALE AS SHOWN | REVISION 1

DRAWING NO. 11162-10-121

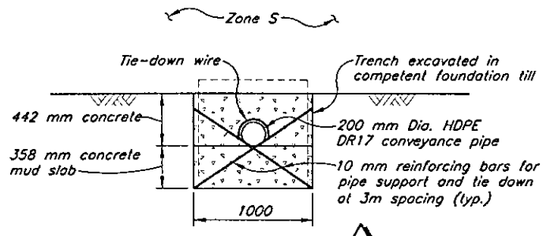
XREF FILE:

CAD FILE: M:\11162\10\ACAD\dwgs\D14\D14 1=250 Plot 1=0.25 08/08/00 tam

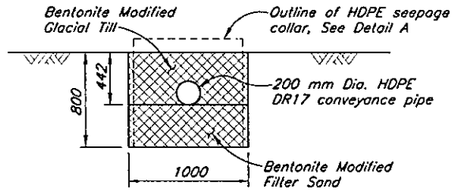
VANCOUVER B.C.



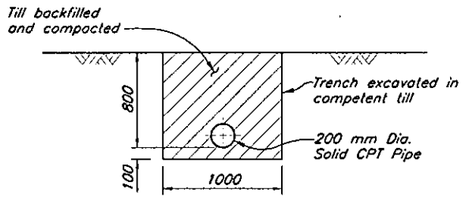
SECTION 5/120
TYPICAL SECTION OF UPSTREAM TOE DRAIN THROUGH CORE ZONE
Scale A



SECTION 1
Scale B



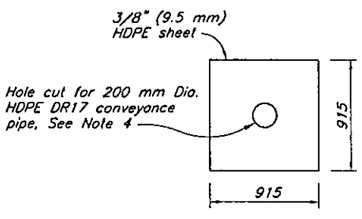
SECTION 2
Scale B



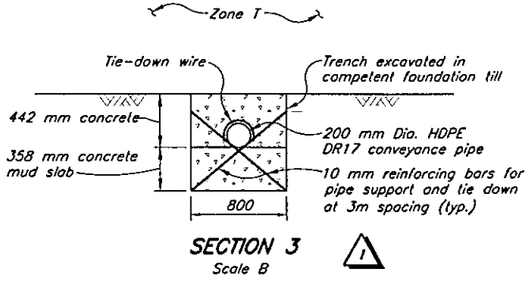
DETAIL C/121
Scale B

NOTES

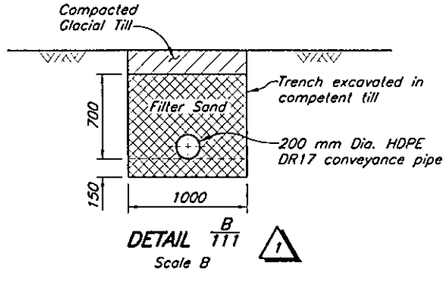
1. Subgrade preparation comprised stripping of topsoil and organics and removing saturated materials to establish a competent bearing surface for fill placement as directed by the Engineer.
2. All downstream pipeworks have a minimum of 1 m of cover for frost protection.
3. All HDPE pipe penetrations to be water tight.
4. HDPE seepage collar fabricated and welded to pipe prior to delivery to site.
5. Select fine grained backfill and filter sand below with 10% bentonite, placed and compacted in max. 300 mm lifts.



DETAIL A
HDPE Seepage Collar
Scale B



SECTION 3
Scale B



DETAIL B/111
Scale B

Scale B 0.5 0 0.5 1 1.5 2 2.5 m
Scale A 1 0 1 2 3 4 5 m

CAD FILE: M:\11162\10\ACAD\dwgs\017\017 1=50 Plot 1=1(PS) 18/08/00 lam
VANCOUVER B.C.

DRG. NO.	DESCRIPTION
121	TSF - STAGE 2C PERIMETER EMBANKMENT - SECTION
120	TSF - STAGE 2C PERIMETER EMBANKMENT - PLAN

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D

REVISIONS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
1	17AUG'00	STAGE 2C AS-BUILT	IBM	DSR	[illegible]	KJB
0	26AUG99	ISSUED FOR CONSTRUCTION	JMTW	DSR	KJB	KJB

REVISIONS

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA K. J. BROUWER

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
STAGE 2C EXPANSION
EMBANKMENT DRAIN SYSTEMS
SECTIONS AND DETAILS

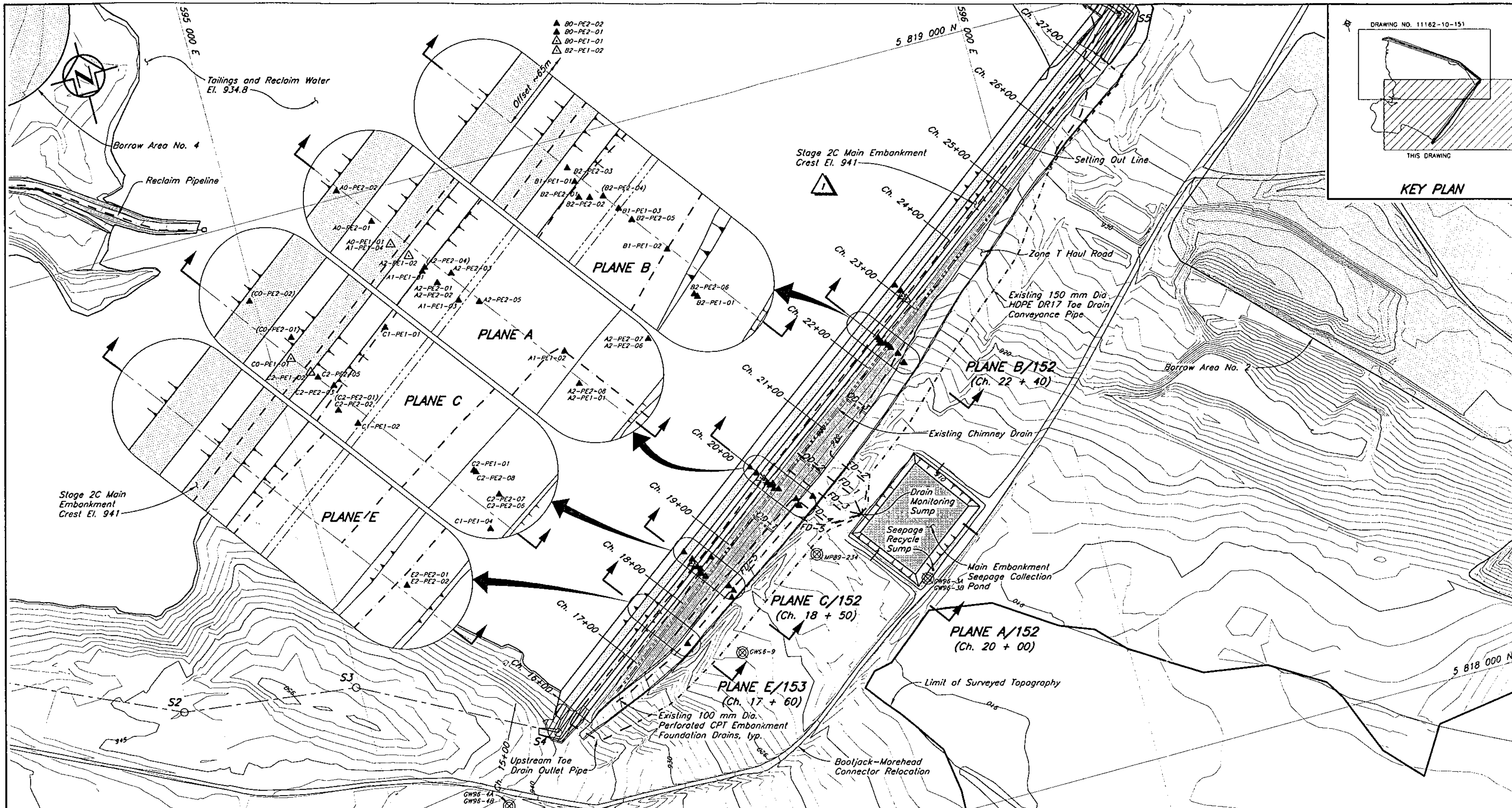
DESIGNED	CHECKED
JMTW	KJB
DRAWN	APPROVED
DSR	KJB

Knight Piésold CONSULTING

SCALE AS SHOWN | REVISION 1

DRAWING NO. 11162-10-125

XREF FILE:



LEGEND

⊗	Groundwater Monitoring Well
▲ A1-PE1-01	Previously installed Piezometer
△ A2-PE2-06	New Stage 2C Piezometer
◇ A2-SM-01	New Embankment Survey Monument

NOTES

1. Chainage defined by Setting Out Point S1 at Ch. 5+00.
2. Topography generated from points and break lines sent from MPMC on July 20, 1999.
3. Stage 2 survey monuments destroyed immediately after installation.
4. See Drg. No. 11162-10-152 for Summary of Instrumentation Installations.

Scale 50 0 50 100 150 200 250 m

REFERENCE DRAWINGS

ORG. NO.	DESCRIPTION
153	TSF - STAGE 2C EXPANSION - INSTRUMENTATION SECTIONS - SHEET 2 OF 2
152	TSF - STAGE 2C EXPANSION - INSTRUMENTATION SECTIONS - SHEET 1 OF 2

REVISIONS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
1	17AUG'00	STAGE 2C AS-BUILT	JRK	TAM		KJB
0	31AUG99	ISSUED FOR CONSTRUCTION	JMTW	DSR	KJB	KJB

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — K. J. BROUWER

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

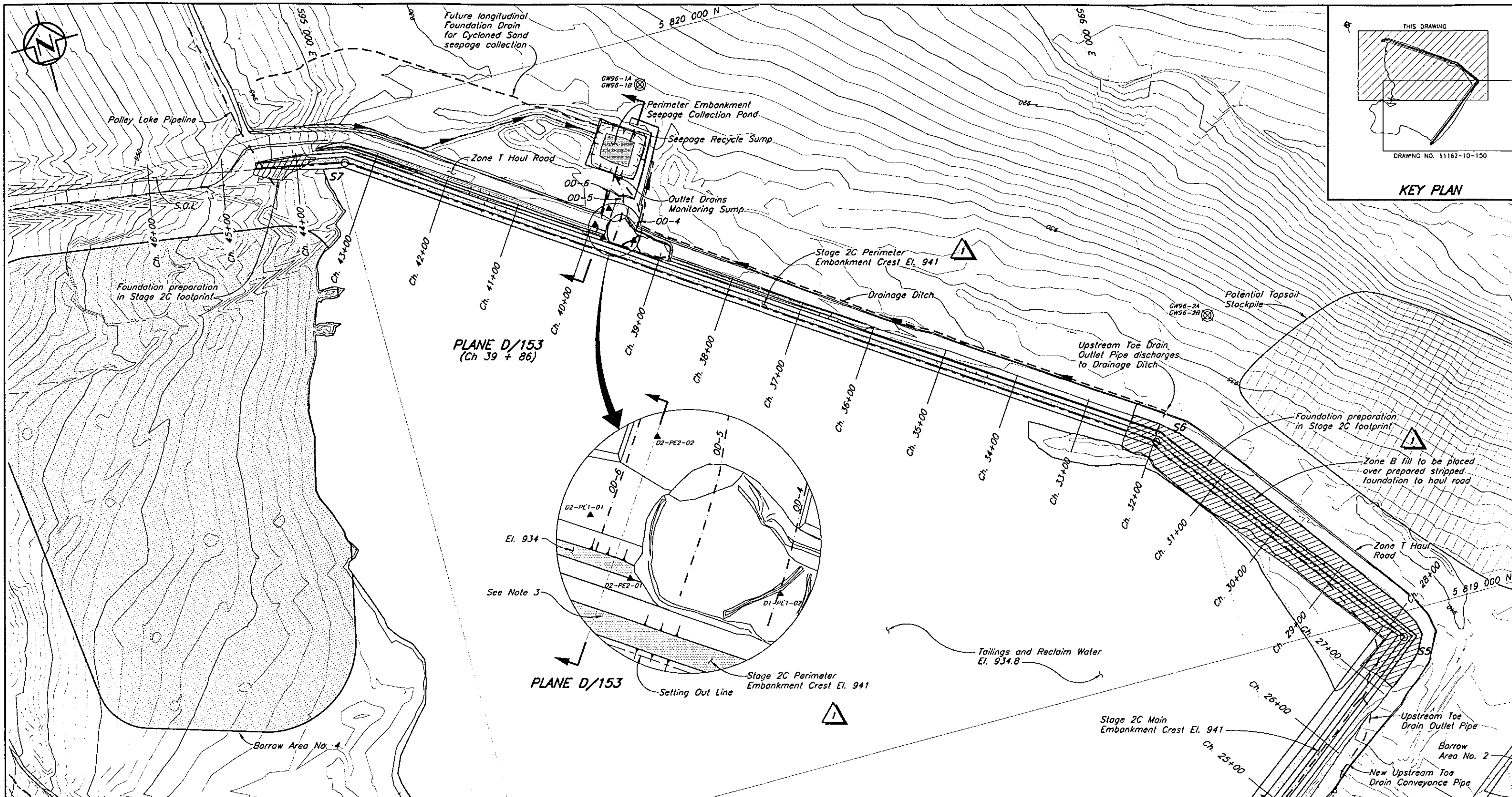
TAILINGS STORAGE FACILITY
STAGE 2C EXPANSION
MAIN EMBANKMENT INSTRUMENTATION
PLAN

DESIGNED	CHECKED	DRAWN	APPROVED
JMTW	KJB	DSR	KJB

Knight Piésold CONSULTING

SCALE: AS SHOWN — REVISION: 1

DRAWING NO. 11162-10-150



LEGEND

- Groundwater Monitoring Well
- A1-PE1-01 Previously installed Piezometer
- A2-PE2-06 New Stage 2C Piezometer
- A2-SM-01 New Embankment Survey Monument

NOTES

1. Chainage defined by Setting Out Point S1 at Ch. 5+00.
2. Topography generated from points and break lines provided by MPMC on July 20, 1999.
3. Stage 2 survey monuments destroyed immediately after installation.
4. See Drg. No. 11162-10-152 for Summary of Instrumentation Installations.

Scale 50 0 50 100 150 200 250 m

DRG. NO.	DESCRIPTION
153	TSF - STAGE 2C EXPANSION - INSTRUMENTATION SECTIONS - SHEET 2 OF 2
152	TSF - STAGE 2C EXPANSION - INSTRUMENTATION SECTIONS - SHEET 1 OF 2

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D

REVISIONS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
1	14AUG'00	STAGE 2C AS-BUILT	JRK	TAM		
0	31AUG99	ISSUED FOR CONSTRUCTION	JMTW	DSR	KJB	KJB

REVISIONS

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — K. J. BROUWER

MOUNT POLLEY MINING CORPORATIOON

MOUNT POLLEY MINE

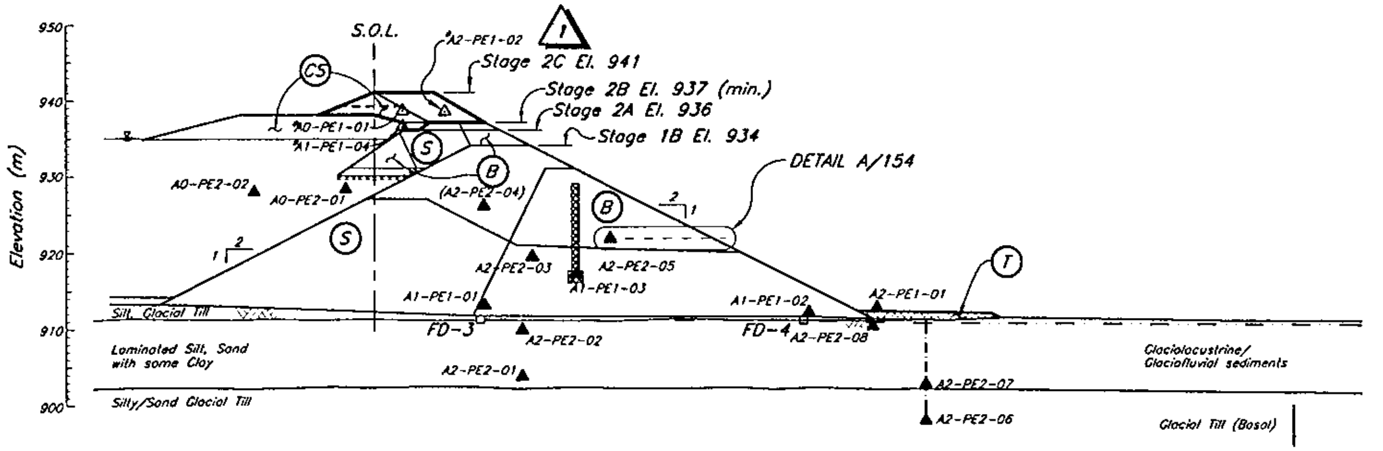
TAILINGS STORAGE FACILITY
STAGE 2C EXPANSION
PERIMETER EMBANKMENT INSTRUMENTATION PLAN

DESIGNED	CHECKED	DRAWN	APPROVED
JMTW	KJB	DSR	KJB

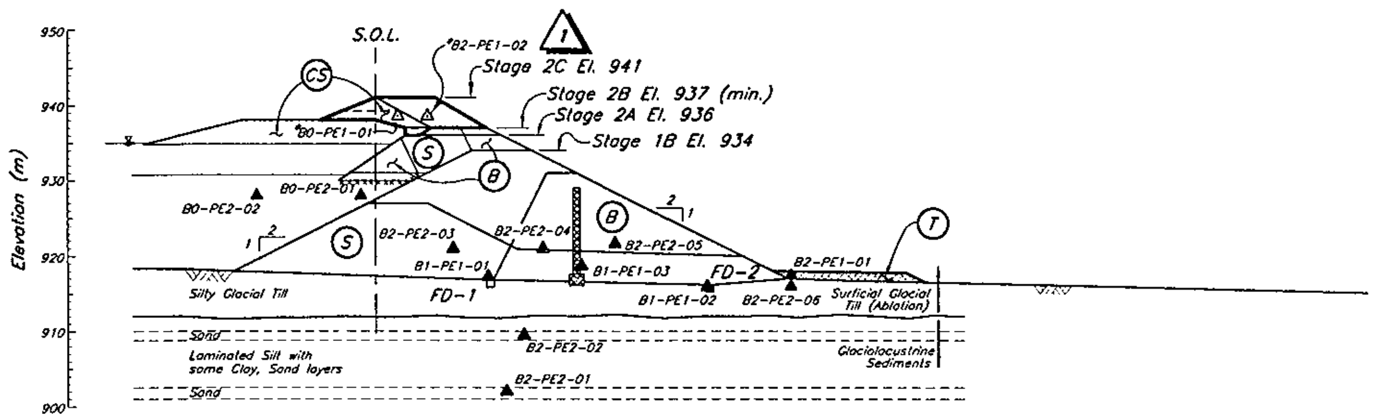
Knight Piésold CONSULTING

SCALE: AS SHOWN — REVISION: 1

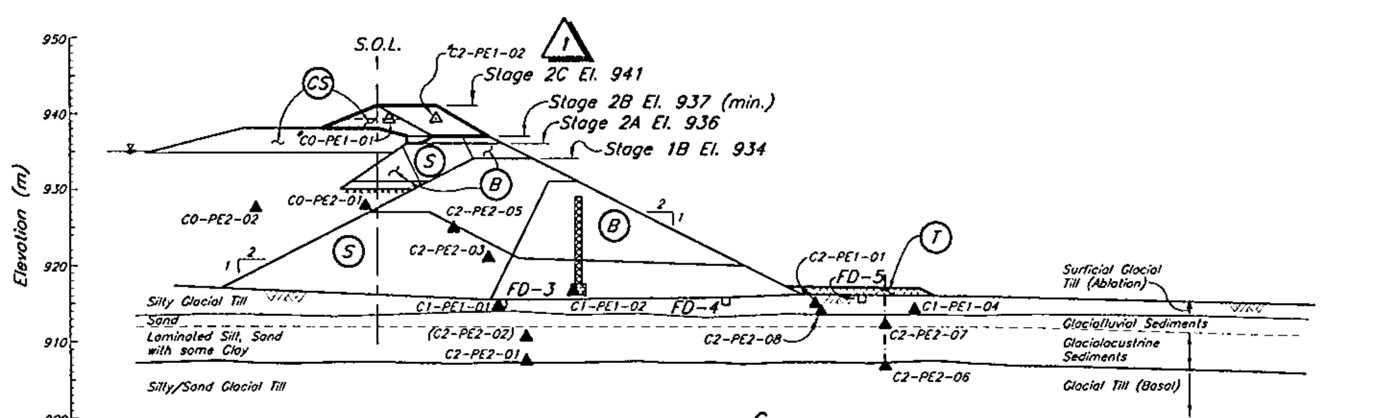
DRAWING NO. 11162-10-151



PLANE A/150
CH. 20+00



PLANE B/150
CH. 22+40



PLANE C/150
CH. 18+50

SUMMARY OF INSTRUMENTATION INSTALLATIONS

PIEZOMETER ID	NORTHING	EASTING	ELEV.	DATE INSTALLED
*A0-PE1-01	5 818 495.773	595 588.746	938.542	
A0-PE2-01	5 818 502.850	595 585.398	928.03	10/03/98
A0-PE2-02	5 818 513.092	595 578.418	927.87	10/03/98
A1-PE1-01	5 818 486.650	595 595.060	912.99	27/08/96
A1-PE1-02	5 818 456.420	595 626.250	912.14	27/08/96
A1-PE1-03	5 818 476.822	595 602.380	917.17	22/10/96
*A1-PE1-04			936.5	
A2-PE1-01	5 818 446.550	595 628.010	912.89	26/08/98
*A2-PE1-02	5 818 491.574	595 592.678	938.474	
A2-PE2-01	5 818 482.710	595 598.140	903.7	25/07/96
A2-PE2-02	5 818 482.710	595 598.140	909.8	25/07/96
A2-PE2-03	5 818 484.196	595 602.354	919.43	12/02/97
(A2-PE2-04)	5 818 487.510	595 595.995	926.07	22/02/97
A2-PE2-05	5 818 475.061	595 607.560	921.87	22/02/97
A2-PE2-06	5 818 453.926	595 648.458	898.03	21/06/98
A2-PE2-07	5 818 453.926	595 648.458	902.83	21/06/98
A2-PE2-08	5 818 447.045	595 627.758	907.57	23/06/98
*B0-PE1-01			938.5	
B0-PE2-01	5 818 688.130	595 833.040	927.30	06/03/98
B0-PE2-02	5 818 697.980	595 326.160	927.18	06/03/98
B1-PE1-01	5 818 632.550	595 787.910	917.27	10/09/96
B1-PE1-02	5 818 609.040	595 806.770	915.95	10/09/96
B1-PE1-03	5 818 622.780	595 797.260	918.69	22/10/96
B2-PE1-01	5 818 594.940	595 811.260	916.272	26/08/98
*B2-PE1-02			938.5	
B2-PE2-01	5 818 628.270	595 787.880	902.00	25/07/96
B2-PE2-02	5 818 627.470	595 790.660	909.50	25/07/96
B2-PE2-03	5 818 636.530	595 786.970	921.00	22/10/96
(B2-PE2-04)	5 818 626.940	595 794.190	921.00	22/10/96
B2-PE2-05	5 818 619.014	595 799.804	921.70	14/03/97
B2-PE2-06	5 818 595.767	595 810.605	914.59	23/06/98
*C0-PE1-01	5 818 408.969	595 469.750	939.267	
(C0-PE2-01)	5 818 414.319	595 471.099	927.80	10/03/98
(C0-PE2-02)	5 818 426.495	595 463.101	927.48	10/03/98
C1-PE1-01	5 818 410.500	595 496.070	914.70	28/09/96
C1-PE1-02	5 818 387.690	595 482.400	916.60	22/10/96
C1-PE1-04	5 818 351.420	595 509.060	914.31	02/04/98
C2-PE1-01	5 818 367.670	595 508.900	915.016	26/08/98
*C2-PE1-02	5 818 404.117	595 473.754	939.260	
(C2-PE2-01)	5 818 392.410	595 478.240	907.50	25/07/96
C2-PE2-02	5 818 392.410	595 478.240	910.50	25/07/96
C2-PE2-03	5 818 399.106	595 478.824	920.97	12/02/97
C2-PE2-05	5 818 402.343	595 475.326	924.84	12/02/97
C2-PE2-06	5 818 359.734	595 513.663	906.84	18/06/98
C2-PE2-07	5 818 359.734	595 513.663	912.28	18/06/98
C2-PE2-08	5 818 367.087	595 509.351	914.03	19/06/98
–			–	
D1-PE1-02	5 819 742.03	595 353.980	928.76	30/01/98
–			–	
D2-PE1-01	5 819 775.449	595 310.522	930.423	26/08/98
–			–	
D2-PE2-01	5 819 756.360	595 316.210	931.00	15/12/96
D2-PE2-02	5 819 791.103	595 333.275	922	22/06/98
E2-PE2-01	5 818 307.454	595 435.983	914.19	17/06/98
E2-PE2-02	5 818 307.454	595 435.983	909.67	17/06/98

( ) Piezometer no longer functioning.
* Installed during Stage 2C construction.

NOTES

1. Piezometers are vibrating wire type, SINCA Model 52611030 and RST Model 45005-0100 with a pressure rating of 100 psi or equivalent, connected to a readout panel via standard non-vented direct burial cable.
2. Piezometer leads extended as directed by the Engineer.

LEGEND

A0-PE1-01
- Plane I.D. (A, B etc.)
- Area (0-Tailings, 1-Drain, 2-Embankment)
- Number I.D.
- Pressure Rating (1-Low, 2-High)
- Type of Instrumentation (PE-Piezometer electric, SM-Survey Monument)

- A1-PE1-01 ▲ Previously installed Piezometer
- A2-PE2-06 △ New Stage 2C Piezometer
- A2-SM-01 ◇ New Embankment Survey Monument
- (B) Zone B
- (C) Zone C
- (S) Zone S
- (T) Zone T
- (CS) Cycloned Sand

Scale 10 0 10 20 30 40 50 m

REFERENCE DRAWINGS

DRG. NO.	DESCRIPTION
154	TSF - STAGE 2C EXPANSION - INSTRUMENTATION - DETAILS
153	TSF - STAGE 2C EXPANSION - INSTRUMENTATION SECTIONS - SHEET 2 OF 2
151	TSF - STAGE 2C EXPANSION - PERIMETER EMBANKMENT INSTRUMENTATION - PLAN
150	TSF - STAGE 2C EXPANSION - MAIN EMBANKMENT INSTRUMENTATION - PLAN

REVISIONS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
1	14AUG'00	STAGE 2C AS BUILT	JRK	TAM		
0	31AUG99	ISSUED FOR CONSTRUCTION	JMTW	DSR	KJB	KJB

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — K. J. BROUWER

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
STAGE 2C EXPANSION
INSTRUMENTATION SECTIONS
SHEET 1 OF 2

DESIGNED	CHECKED	DRAWN	APPROVED	SCALE	REVISION	DRAWING NO.
JMTW	KJB	DSR	KJB	AS SHOWN	1	11162-10-152

Knight Piésold CONSULTING

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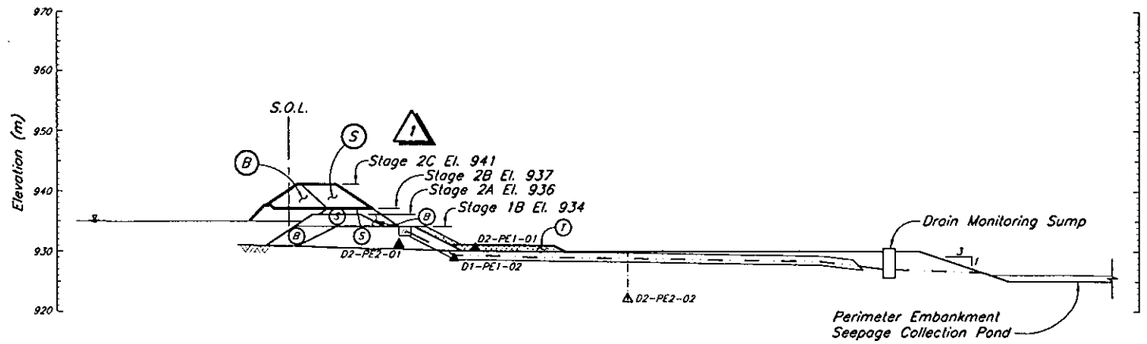
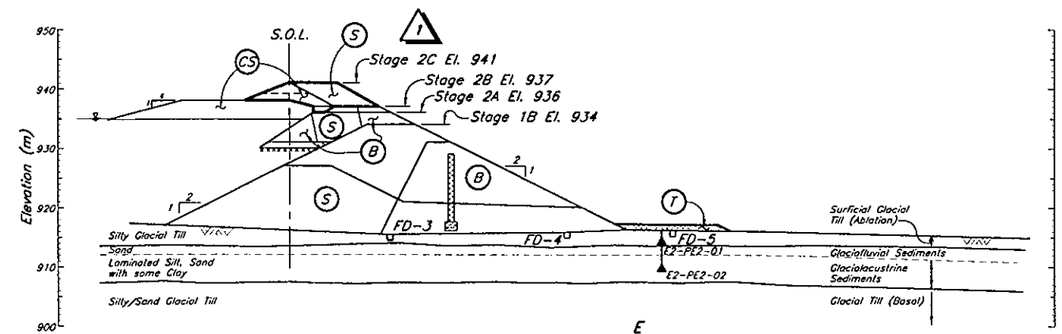


PLANE D/151
CH. 39+86



PLANE E/150
CH. 17+60

NOTES

1. Piezometers are vibrating wire type, SINCA Model 52611030 and RST Model 45005-0100 with a pressure rating of 100 psi or equivalent, connected to a readout panel via standard non-vented Model 50613524 direct burial cable.
2. Piezometer leads extended as directed by the Engineer.
3. See Drg. No. 11162-10-152 for Summary of Instrumentation Installations.

LEGEND

D0-PE1-01
- Plane I.D. (A, B etc.)
- Area (0-Tailings, 1-Drain, 2-Embankment)
- Number I.D.
- Pressure Rating (1-Low, 2-High)
- Type of Instrumentation (PE-Piezometer electric, SM-Survey Monument)

D1-PE1-01 ▲ Previously installed Piezometer

D2-PE2-02 △ New Stage 2C Piezometer

D2-SM-07 ◇ New Embankment Survey Monument

(B) Zone B

(C) Zone C

(S) Zone S

(T) Zone T

(CS) Cycloned Sand

Scale 10 0 10 20 30 40 50 m

REFERENCE DRAWINGS	
152	TSF - STAGE 2C EXPANSION - INSTRUMENTATION SECTIONS - SHEET 1 OF 2
151	TSF - STAGE 2C EXPANSION - PERIMETER EMBANKMENT INSTRUMENTATION - PLAN
150	TSF - STAGE 2C EXPANSION - MAIN EMBANKMENT INSTRUMENTATION - PLAN
ORG. NO.	DESCRIPTION

REVISIONS						
REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D

REVISIONS						
REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
1	14AUG'00	STAGE 2C AS BUILT	JRK	TAM	JMTW	KJB
0	31AUG99	ISSUED FOR CONSTRUCTION	JMTW	DSR	KJB	KJB

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA K.J. BROUWER

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
STAGE 2C EXPANSION
INSTRUMENTATION SECTIONS
SHEET 2 OF 2

DESIGNED	CHECKED
JMTW	KJB
DRAWN	APPROVED
DSR	KJB

Knight Piésold CONSULTING

SCALE AS SHOWN | REVISION 1

DRAWING NO. 11162-10-153

XREF FILE:

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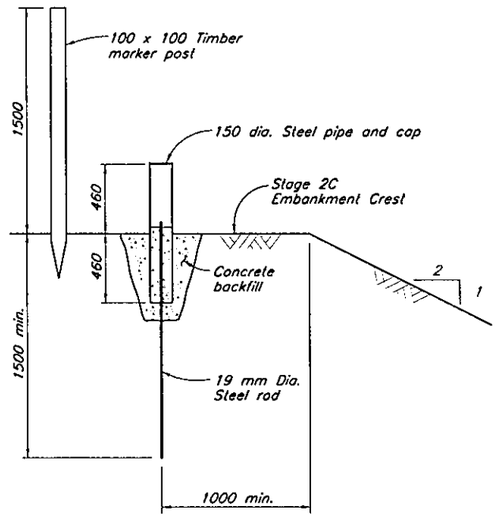
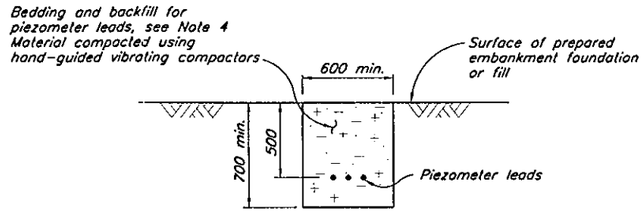
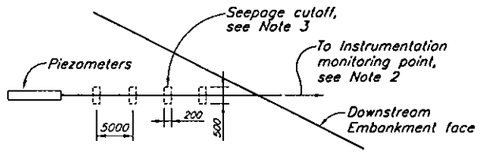
VANCOUVER B.C.



DETAIL OF
SURFACE MOVEMENT MONUMENT



TYPICAL SECTION THROUGH PIEZOMETER LEAD TRENCH
IN PREPARED EMBANKMENT FOUNDATION OR FILL



DETAIL A/152
TYPICAL DETAIL OF SEEPAGE CUTOFF FOR
PIEZOMETER LEADS IN GLACIAL TILL
NTS

NOTES

1. Dimensions are in millimeters unless otherwise noted.
2. Piezometer leads extended as directed by the Engineer.
3. Seepage cutoffs placed at 5 m intervals with 10% bentonite added to fine grained till backfill.
4. Fine grained till backfill must have all particles exceeding 25 mm removed.

Scale 1000 500 0 1000 2000 mm

VANCOUVER B.C. CAD FILE: M:\11162\10\ACAD\dwgs\022\022 1:20 Plot 1=0.02 17/08/00 tam

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA BROUWER

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
STAGE 2C EXPANSION INSTRUMENTATION
DETAILS

ORG. NO.	DESCRIPTION
152	TSF – STAGE 2C EXPANSION – INSTRUMENTATION SECTIONS – SHEET 1 OF 2

REFERENCE DRAWINGS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D

REVISIONS

REV.	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
1	14AUG'00	STAGE 2C AS BUILT	JDC	DSR	JMTW	KJB
0	31AUG99	ISSUED FOR CONSTRUCTION	JMTW	DSR	KJB	KJB

REVISIONS

DESIGNED	CHECKED
JMTW	KJB
DRAWN	APPROVED
DSR	KJB

Knight Piésold CONSULTING

SCALE	REVISION
AS SHOWN	1
DRAWING NO.	
11162-10-154	

VAULT FILE:

APPENDIX A

INVESTIGATIONS

APPENDIX A

INVESTIGATIONS

TABLE OF CONTENTS

TABLES

FIGURES

* Previously issued with "Selected Excerpts from Reference Information", Ref. No. 11162/13-6

Knight Piésold CONSULTING

TABLE A1

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE

SUMMARY OF 1999 FOUNDATION DRILLHOLES

M:\1162\13\Report\[DH-SUM.XLS]Data — Date Printed: 21-Aug-00

Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
DH99-45	0	ORGANICS	-		
	0.15	SILT (TILL), light brown, mottled, trace to some gravel, some sand (20%) and some clay, med plasticity, very moist to wet (3-5% > Optimum), low permeability, moisture content > optimum; becomes stiffer with depth from 0.75 m, light to med brown color, moist to very moist, some gravel, low permeability; high moisture content at 2.1 m, about 4% > optimum	-		
	4.2	SILT/CLAY, GLACIOLACUSTRINE, firm to stiff and varved to layered, med to high plasticity	-		
	4.5	End of Hole.			Backfilled with 4 bags of bentonite
DH99-46	0	ORGANICS	-		
	.2	SILT (TILL), light brown, massive, firm, very moist to wet, some sand and gravel with some clay - low to med plasticity; becomes stiffer with depth, very moist, sandy with some gravel, clasts are subrounded, no red-brown clasts in till	-		
	3	End of Hole.			Backfilled with 2 bags of bentonite
DH99-47	0	SILT (TILL), light brown, firm with some sand and some clay, med plasticity, wet, low permeability	-		
	0.45	SAND (TILL), some silt to silty, gravelly and trace clay, moist to very moist and med to low plasticity, low permeability	0.5 to 1.5		
	1.5	End of Hole.			Backfilled with 1 bag of bentonite
DH99-48	0	SILT (TILL), light brown, stiff, moist, some sand and gravel, low permeability	-		
	0.6	SAND (TILL) - red-brown, silt (30%) and gravel (20%) with trace to some clay, stiff to very stiff, moist and low permeability	0.6 to 1.0		
	1.17	BEDROCK	-		
	1.17	End of Hole.			Backfilled with 1 bag of bentonite
DH99-49	0	ORGANICS, already stripped (about 0.2 m removed)	-		
	0	SILT (TILL), light brown, firm and wet, sandy to some sand and fine gravel, low permeability	-		
	0.3	SAND (TILL), red-brown, stiff to very stiff and moist to very moist, silty to gravelly, well graded, low permeabiliy, moisture content about optimum, medium plasticity; becomes moist and very stiff with depth, well graded and very low permeability	0.9 to 1.4		
	1.8	Refusal but no coarse gravel	-		
	1.8	End of Hole.			Backfilled with 1 bag bentonite
DH99-50	0	SAND (TILL), red-brown, stiff to very stiff, silty with some gravel and trace clay, low permeability	-		
	0.6	End of Hole.	-		Backfilled with 1/2 bag of bentonite
DH99-51	0	SILT (TILL), light brown mottled and weathered, fine grained sand to trace gravel and clay, firm, very moist and low permeability; becomes very moist and stiff with depth, light brown and massive, some gravel and very low permeability	-		On road, topsoil removed
	3.0	End of Hole.			Backfilled with 2 1/2 bags of bentonite
DH99-52	0	ORGANICS	-		
	0.15	SAND, compact and fine grained, trace gravel and trace to some fines, medium permeability	-		
	0.4	SILT AND SAND (TILL), firm to stiff, very moist to wet, medium plasticity, massive, low permeability, some gravel and trace clay, light brown; becomes stiff and very moist with depth, moisture content > optimum - about 4 to 5% above; at 2 m depth, soil is very moist and too wet for fill, drilled till to bottom	-		
	3	End of Hole.			Backfilled with 2 bags
DH99-53	0	ORGANICS	-		
	0.1	SILT (TILL), light brown, firm to stiff, very moist and low permeability, sand with trace fines, gravel and clay, low plasticity; becomes stiffer with depth, gravel (20%), some clay, very moist and moisture content > optimum of 4 to 5%	-		
	1.75	BEDROCK	-		
	1.75	End of Hole.			Backfilled with 2 bags of bentonite
DH99-54	0	ORGANICS	-		
	0.1	SILT (TILL), light brown, fine grained, some sand (20%) and trace gravel, low permeability	-		
	0.6	BEDROCK, red-brown	-		

TABLE A1

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE

SUMMARY OF 1999 FOUNDATION DRILLHOLES

M:\1162\13\R\report\5\[DH-SUM.XLS]Data — Date Printed: 21-Aug-00

Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
DH99-54 cont'd	0.6	End of Hole.			
DH99-55	0	SILT (TILL), brown, sandy to silt and sand, some clay and gravel (10%), very moist; some clay and less sand at 0.6 m, stiff and better graded gravel; moist stiff sand and very low permeability at 2.0 m depth	-		
	3.0	End of Hole.			Backfilled with 2 bags of bentonite
DH99-56	0	ORGANICS	-		
	0.3	SILT (TILL), light brown stiff and damp to moist, sandy (25%) with trace gravel and clay; becoming very stiff at 0.8 m depth, higher moisture content but still ok for fill placement; 2.2 m down is very moist to wet and too high for fill, sandy silt some gravel, grey-brown and low permeability			Water seepage around 2.5 m
	4.5	End of Hole.			Backfilled with 2 bags of bentonite
DH99-57	0	SILT (TILL) light brown, sandy to trace gravel (10%), higher moisture content with depth, gravelly with depth, suitable for fill	-		Surface removed, minor organics
	1.5	SILT AND SAND (TILL), some clay and gravel - becomes coarser with depth, very stiff, moist and becomes very moist with depth - borderline too wet for fill			
	4.5	End of Hole.			Backfilled with 2 bags of bentonite
DH99-58	0	SILT (TILL), sandy with trace clay (10%) and some fine gravel, becomes gravelly and better graded with depth, med plasticity and moisture content > optimum, borderline compaction @ 92%	-		Top 1 m could be slightly wet but likely useable for fill
	3.5	End of Hole.			Refusal due to cobble. Backfilled with 2 bags of bentonite chips
DH99-59	0	SILT (TILL), light brown to brown, sandy with some gravel and trace clay, low to med plasticity, moist to very moist, till is wet near the bottom of hole	-		
	6	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-60	0	SILT (TILL), light brown and stiff to very stiff, trace clay and gravel, very moist to wet, moderate plasticity, low permeability	-		
	3	End of Hole.			
DH99-61	0	ORGANICS	-		
	0.15	SILT (TILL), light brown, firm to stiff sand, trace gravel and clay	-		
	0.6	BEDROCK	-		
	0.6	End of Hole.			Backfilled with 1/2 bag of bentonite chips
DH99-62	0	SILT (TILL), light brown, stiff to very stiff, sandy with some to trace gravel, low permeability	-		
	0.6	Bedrock	-		
	0.6	End of Hole.			Backfilled with 1/2 bag of bentonite chips
DH99-63	0	ORGANICS	-		
	0.05	SILT (TILL), stiff, sandy with trace gravel and clay, light brown to brown, very moist to wet, low permeability	-		
	1.1	BEDROCK, red-brown	-		
	1.1	End of Hole.			Backfilled with 1 bag of bentonite chips
DH99-64	0	ORGANICS	-		
	0.15	SILT (TILL), light brown, stiff to very stiff and moist to very moist, sandy with trace gravel and clay, low permeability, moderate plasticity	-		
	1	SAND (TILL), stiff, silty, moist to very moist, trace gravel and clay, red-brown	-		
	1.3	BEDROCK	-		
	1.3	End of Hole.			Backfilled with 1 bag of bentonite chips
DH99-65	0	SAND (FILL), remoulded till, silty, some gravel	-		Surface remoulded slightly with fill from logging activities
	0.3	SAND (TILL), brown, stiff, silty with some gravel (20%), trace clay, grades to red-brown color with depth, grain size medium to slightly coarser	-		
	0.6	BEDROCK	-		
	0.6	End of Hole.			Backfilled with 1/2 bag of bentonite chips
DH99-66	0	SILT (TILL), stiff to very stiff sand with trace clay and gravel, moist to very moist, med plasticity	-		
	0.9	BEDROCK - refusal	-		
	0.9	End of Hole.			Backfilled with 1/2 bag ofbag of bentonite chips

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Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
DH99-67	0	SILT (TILL), light brown, some sand with trace clay and gravel, moist to very moist, low permeability, low to medium plasticity and moisture content around plastic limit; transition at 2.1 m depth to till with bedrock clasts, slightly coarser grained silty sand with some gravel	-		
	2.7	BEDROCK, red-brown	-		
	2.7	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-68	0	SILT (TILL), light brown to brown and stiff, sandy with trace clay and gravel, more gravel and clay with depth, moist to very moist deeper down, moisture content > plastic limit	-		
	3	End of Hole.			Backfilled with 2 bags of till
DH99-69	0	ORGANICS	-		
	0.15	SILT (TILL), brown, stiff to very stiff, sand with some clay and gravel, mottled, red-brown gravel clasts and sand a little deeper	-		
	1	BEDROCK - refusal	-		
	1	End of Hole.			Backfilled with 1 bag
DH99-70	0	ORGANICS	-		
	0.15	SILT (TILL), stiff till at top becoming very stiff and moist with depth, gravelly silty sand, low permeability, moisture content < plastic limit, gravel clasts incorporated into till near bottom of hole, low permeability	-		
	1.5	End of Hole.			Backfilled with 1 bag
DH99-71	0	TOPSOIL, roots extend into silt layer below	-		
	0.15	SILT (TILL), brown, stiff, sandy with trace gravel and clay, low permeability, moisture content < plastic limit, some gravel at 0.5 m, slightly higher moisture content at 1.4 m	-		
	3	End of Hole.			Backfilled with 2 bags
DH99-72	0	ROOTS	-		No topsoil, just roots down to 0.15 m
	0.15	SILT (TILL), firm to slightly stiff, some sand and clay with trace gravel, moist and moisture content > plastic limit, low permeability	0.4 to 0.7		
	0.85	BEDROCK - refusal	-		
	0.85	End of Hole.			Backfilled with 1/2 bag
DH99-73	0	ORGANICS	-		
	0.1	SILT (TILL), brown, stiff, moist to very moist, sandy with some clay and trace gravel, moisture content < plastic limit, low to medium plasticity, low permeability, some gravel at 0.5 m depth and becomes finer grained and wetter after 2.1 m	-		
	2.4	SILT (GLACIAL/ ABLATION TILL), massive, gradational trace for gravel; very fine - trace sand and non-plastic, very moist to wet, appears firm but likely firm to stiff in-situ	-		
	3.2	SAND (TILL), brown and compact, some silt and fine to med grained gravel, less fines, poor recovery when tried to sample	-		
	3.9	End of Hole.			Backfilled with 2 bags
DH99-74	0	SILT (FILL) firm to stiff reworked till, sandy, grey-brown, moist, wood fragments, roots trace gravel and clay	-		
	0.5	SILT (TILL), light brown to brown, slightly dessicated, sandy with some gravel, low permeability; becomes very stiff and moist with depth, some gravel and clay at 0.8 m depth, medium plasticity and moisture content < plastic limit	-		
	3	End of Hole.			Backfilled with 3 bags
DH99-75	0	SILT (FILL), reworked till below	-		
	0.15	SILT (TILL), stiff to very stiff, sandy, moist to damp, mottled, trace gravel and clay	-		
	0.5	SILT AND SAND (TILL), very stiff, moist brown, low to med plasticity, gravelly, low permeability	-		
	2.2	SILT (GLACIOLACUSTRINE), very stiff to hard, laminated irregular beds, typically 1 to 5 mm thick, clay zones silty, med plasticity, highly consolidated	-		
	3	End of Hole.			Backfilled with 3 bags
DH99-76	0	SILT and SAND (TILL), brown, very stiff, gravelly with some clay, low permeability and moist, moisture content < plastic limit	-		

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Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
DH99-76 cont'd	1.6	SILT (GLACIOLACUSTRINE), very stiff, difficult to drill, irregular thin clay laminations, mostly silt with some clay	-		
	3	End of Hole.			Backfilled with 3 bags
DH99-77	0	Reworked, loose till	-		
	0.25	SILT (TILL), light brown, stiff, damp dessicated cap, mottled, moist, some sand and trace gravel and clay, low permeability; becomes gravelly and stiffer with depth	-		
	1.8	Hit Cobble, refusal	-		
	1.8	End of Hole.			Backfilled with 1 bag
DH99-78	0	FILL, wet, silty, loose, sandy to gravelly	-		
	1.9	ORGANICS	-		
	2.1	SILT (Weathered TILL), soft to firm, wet, organics mixed in	-		
	2.5	SILT, brown, stiff, mottled, desicated cap, becomes firm to very stiff with depth, very moist, some gravel and sand	-		
	4.5	End of Hole.			Backfilled with 3 bags of bentonite
DH99-79	0	REWORKED TILL/FILL, sandy silt, soft to firm, very moist to wet	-		
	0.75	Brown silt and sand with some gravel, becomes stiffer with depth, low permeability, low to medium plasticity, very moist	-	21	70% recovery - length of run is 24"
	1.5	Very stiff to hard, moist to very moist	-	115	100% recovery - length of run is 24"
	3	End of Hole.			
DH99-80	0	SILT (TILL), light brown, stiff, sandy with trace clay and gravel, low permeability and low plasticity; becomes very stiff and moist with depth, more gravel present at depth	-		
	3	End of Hole.			Backfilled with 1 bag bentonite
DH99-81	0	ORGANICS (TOPSOIL)	-		
	0.25	SAND (TILL), brown, soft and wet, some silt and gravel, low permeability			
	0.8	SILT (TILL), light brown, some sand, gravel and clay, firm and very moist to wet, med plasticity, becomes very stiff and moist with depth	-		
	2.5	SILT and SAND, very stiff to hard, moist	-		
	3	End of Hole.			Backfilled with 3 bags of bentonite
DH99-82	0	SILT (TILL), stiff, sandy with trace gravel and clay, dessicated cap, mottled and moist to damp; becomes stiffer to firm with depth, very moist, some clay; moisture content > plastic limit at 0.11 m; moisture content < plastic limit at 0.8 m; moisture content < plastic limit at 1.2 m	-		DH99-82 at St 24+00, 8 m upstream of 3:1 Toe
	3	End of Hole.			Backfilled with 1 bag
DH99-83	0	SILT and SAND (FILL), soft to firm	-		DH99-83 at St 24+00, 20 m downstream of 3:1
	0.2	SILT (TILL), silt with some sand and gravel, becomes firm to stiff and moist to very moist with depth, medium plasticity, some clay and gravel; moisture content > plastic limit at 0.45 m; moisture content = plastic limit at 1.1 m; low permeability and moisture content < plastic limit at 1.4 m depth	-		
	3	End of Hole.			Backfilled with 2 bags
DH99-84	0	SILT (TILL), light brown, stiff and mottled, dessicated cap, some sand with trace clay and gravel, damp to moist; stiffness and moisture increases with depth, moisture content > plastic limit at 0.45 m depth	-		DH99-84 at St 23+50, 8 m upstream of toe
	0.45	SPT done to 1.05 m	-	14	Spt done 1 m away from drillhole, 100% recovery - 24" run
	1.2	SPT done to 1.8 m	-	57	
	3	End of Hole.			Backfilled with 1 bag bentonite in each hole
DH99-85	0	ORGANICS	-		DH99-85 at St 23+30, 10 downstream
	0.2	SILT (TILL), light brown, stiff, sandy with trace clay and gravel, damp to moist with a dessicated cap; becomes firm to stiff and gravelly with with increasing depth, also moist to very moist with depth, moisture content > plastic limit and low to medium plasticity at 0.7 m depth	-		
	3	End of Hole.			Backfilled with 2 bags
DH99-86	0	FILL, reworked silt till and organics, woody debris	-		DH99-86 at St 22+80, 8 m downstream of toe. Surface newly grassed

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Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
DH99-86 cont'd	0.45	ORGANICS, topsoil	-		
	0.7	SILT (TILL), light brown and mottled, stiff, some sand and trace gravel, damp to moist, dessicated cap, low permeability; becomes firmer with depth, moisture content ~ plastic limit at 0.9 m	-		
	0.85	SPT	-	21	Test 1.5 m away from drillhole, 100% recovery - 24" run
	1.3	SILT and SAND, moist to very moist, some gravel, med plasticity, moist to very moist, stiffness increases with depth, moisture content < plastic limit at 3 m	-		
	1.45	SPT	-	70?	High blowcount may be due to gravel
	4.5	End of Hole.			Backfilled with 2 bags bentonite and rest with drill cuttings
DH99-87	0	Minor grass, reworked till for first 100 mm	-		At Ch 22+70, 10 m upstream of toe
	0.1	SILT (TILL), light brown and mottled, trace to some clay and fine gravel, stiff, damp to moist and low permeability; becomes stiff to very stiff with depth, moist to very moist; moisture content ~ plastic limit at 0.4 m; moisture content < plastic limit at 0.9 m	-		
	3	End of Hole.			Backfilled with 1 bag
DH99-88	0	ORGANICS, reworked topsoil, wood and debris	-		At Ch 22+00, 10 m downstream of toe
	0.5	ORGANICS and SILT, transition from topsoil to till, moist, some sand with trace gravel	-		Remove till mixed with topsoil for foundation prep
	0.9	SILT (TILL), orange-brown to light brown, mottled, stiff, low permeability, some clay and trace gravel, low plasticity; moisture and stiffness increases with depth	-		
	2.3	SAND (TILL), light brown, very dense, silty with trace to some clay, low permeability, moist, moisture content < plastic limit	-		
	3.2	SILT (GLACIOLACUSTRINE), light grey, very stiff to hard and difficult to drill, highly over-consolidated, typically non-plastic, rare stratification; 4.5 to 6 m still very stiff to hard, non-stratified, trace clay, low permeability	-		Water seeped into hole near 5.5 m
	6	End of Hole.			Backfilled with 3 bags and drill cuttings
DH99-89	0	ORGANICS	-		At Ch 21+85, 15 m upstream
	0.15	SILT (TILL), light to med brown, mottled, stiff, sandy with trace clay and gravel, damp to moist; becomes stiff to very stiff with depth; gravelly silt and sand at 1.1 m, very stiff and moisture content < plastic limit	-		
	3?	End of Hole.			
DH99-90	0	SILT and SAND (FILL/TILL), stiff, moist, sandy, some gravel, low permeability	-		At Ch 21+50, 8 m downstream of toe
	0.75	SILT (GLACIOLACUSTRINE), dense to very dense and stiff to very stiff, moist, trace clay, low permeability and plastic to non-plastic, irregular stratification, difficult to drill, grades from fine silt with some clay to slightly coarser silt (non-plastic); continues to be highly consolidated with depth, fine grained silty sand with trace gine gravel at 2.7 m	-		
	3	End of Hole.			Backfilled with 2 bags of bentonite
DH99-91	0	SILT (TILL), sandy, trace gravel, massive but irregular with intermixed fine and coarse fill?, no dessicated cap; harder at 1.2 m and diffucult to drill; random silt with variable sand, trace gravel and clay from 1.5 to 2.2 m; very stiff weakly stratified sandy silt at 2.2 m	-		At Ch 21+20, 20 m upstream of toe
	2.4	CLAY and SILT (GLACIOLACUSTRINE), light grey, very stiff to hard, highly over-consolidated and very low permeability	-		
	2.8	End of Hole.			
DH99-92	0	SILT (FILL), light brown, mix of sandy silt till and some clay, med plasticity and GLACIOLACUSTRINE silt, appears compact	-		At Ch 21+00, 8 m downstream of toe
	0.45	SILT (GLACIOLACUSTRINE), light brown, very stiff to hard, trace fine sand and some clay	-		
	0.9	CLAY (GLACIOLACUSTRINE), silty, med plasticity, very stiff to hard; very difficult to drill from 1.5 to 3 m, very low permeability, trace sand and gravel			
	3	End of Hole.			Backfilled with 1 bag of bentonite
DH99-93	0	FILL, generally silty till, moist	-		At Ch 20+00, 20 m downstream of toe
	0.15	SILT (TILL), moist, firm	-		

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Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
DH99-93 cont'd	0.4	SPT	-	26	Test 1.5 m from drillhole, 100% recovery - 24" run
	0.55	SILT (TILL-LIKE), light brown, very stiff, some clay to clayey with trace sand and fine gravel, low permeability, low to med plasticity	-		
	1	SILTY (TILL-LIKE), some sand to sandy, stiff to very stiff, trace fine gravel, low permeability	-	28	
	1.05	CLAY (GLACIOLACUSTRINE), very stiff to hard, grey-brown, silty with trace fine sand, poorly stratified, moist, highly consolidated, med to high plasticity; grades to stiff silty sand with trace clay at 1.6 m, sand is grey and fine grained	-		Grey-brown silty clay could be fine grained till-like unit
	2.1	SAND (GLACIOFLUVIAL - low energy), drills easily, saturated, trace silt (10%), predominantly fine grained sand, well sorted; interbedded fine sand and clay lenses from 3.1 m to 4.5 m, clay has med to high plasticity, light brown and very stiff; fine grained sand at 4.1 m with trace to some silt	2.5 to 3		
	4.4	SAND only, poor recovery	-		
	4.5	SILT (GLACIOLACUSTRINE), grey, poorly stratified, coarse silt with trace and some fine sand with trace clay (5 to 10%), non-plastic, saturated, occasional discontinous clayey silt lenses, overall low permeability	-		Between 4.5 and 6 m measure water level 1.7 m below ground
	5.8	CLAY (GLACIOLACUSTRINE), some silt to silty, med plasticity, very low permeability, below 5.8 m clay is very stiff, it has med to high plasticity, some silt and trace fine sand in irregular layers (1 to 3 mm thick)	-		
	7.5	End of Hole.			Backfilled with 3 bags of bentonite
DH99-94	0	DISTURBED/ REWORKED TILL, some gravel, organics mixed in, moist to very moist	-		At Ch 19+90, 15 m upstream of 3:1 toe
	0.5	SILT and SAND (TILL), mottled brown in oxidated pockets, massive, low permeability, low to med plasticity, moisture content < plastic limit, some gravel and clay, stiffness increases with depth	-		
	1.6	SAND (TILL), grey, very dense, gravelly, silty (25%), trace clay, very low plasticity, moist, low permeability	-		
	3.1	SILT (GLACIOLACUSTRINE), grey, stiff, some clay and fine sand, poorly stratified to irregular, low to med plasticity, moisture content < plastic limit, generally low permeability	-		same unit as 93
	5.2	CLAY (GLACIOLACUSTRINE), very stiff, trace silt, med to high plasticity, highly consolidated, very low permeability, rare discontinous fine sand lenses	-		
	6	End of Hole.			Backfilled with 4 bags of bentonite
DH99-95	0	ORGANICS	-		At Ch 18+50, 10 m upstream of convey pipe
	0.15	SILT (TILL), mottled grey-brown, some sand to sandy, moist, trace to some gravel and clay, low to med plasticity, moisture content < plastic limit; stiffness increases with depth	-		
	0.3	SPT	-	22	Test 1.5 m from drillhole, 75% recovery - 24" run
	0.9	SPT	-	19	100% recovery - 24" run
	1.6	SAND (TILL), silty, very stiff, moist, moisture content < plastic limit, low permeability, well graded, basal till; becomes firm to stiff and moist to very moist with depth, moisture content < plastic limit at 3.2 m	-		
	1.7	SPT	-	33	
	3.6	SPT	-	17	40% recovery - 24" run
	4.6	CLAY (GLACIOLACUSTRINE), light brown, firm to stiff, interbedded with irregular thin lenses of fine sand and/or silt, lower permeability due to irregular bedding; at 5.2 m is predominantly clay with silt and rare sand lenses, very stiff	-		
	6	End of Hole.			Backfilled with 4 bags of bentonite
DH99-96	0	ORGANICS	-		At Ch 18+65, 10 m downstream of conveyance pipe

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SUMMARY OF 1999 FOUNDATION DRILLHOLES

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Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
	0.3	SPT	-	21	75% recovery - 24" run
DH99-96 cont'd	0.34	SILT (TILL), mottled light brown, dessicated cap, stiff, some sand, gravelly, moist to very moist; becomes firm to stiff with depth, at 0.6 m moisture content is < plastic limit and plasticity is low to med	-		
	0.9	SPT	-	21	May have hit cobble at 1.5 m so N could be as low as 15, 60% recovery - 24" run
	2.1	SILT (GLACIOLACUSTRINE), light brown, stiff to very stiff, well sorted, trace fine sand (5%) and clay (< 5%), non-plastic, moist and low permeability	-		
	2.6	SAND (TILL-LIKE), very stiff, some silt to silty, gravelly, low permeability, moist trace clay, weakly cohesive, very difficult to drill	-		
	3	End of Hole.			Backfilled with 2 bags of bentonite
DH99-97	0	ORGANICS	-		8 m west of GV?96-9, 6 m downstream of toedrain
	0.3	SILT (TILL), light brown, mottled with orange oxidized pockets, firm, some sand and gravel with trace to some clay, wet to very moist, moisture conent > plastic limit, low permeability; at 0.8 m silt is becoming wet on auger, moisture content may be > plastic limit; silt becomes stiffer with depth; wet sandy silt with gravel and clay at 1.5 m, med plasticity, moisture content > plastic limit	-	12	Could easily stick thumb into auger at 1.5 m depth. SPT done 2.5 m from drillhole; 92% recovery - 24" run
	0.9	SPT	-	19	42% recovery - 24" run
	1.5	SPT	-	13	55% recovery - 24" run
	2.7	CLAY (GLACIOLACUSTRINE), firm, trace gravel, sandy silt, still wet; poorly cohesive at 2.9 m, appears loose on flights	-		
	3	SAND (GLACIOFLUVIAL), poor recovery, trace to some fines (10%), higher permeability, density unknown but drilled through easily; interbedded sand in silty clay at 3.3 m; stratified sand seams up to 15 cm thick between 3.6 to 4.5 m, lower permeability, silty sand-clay lenses; glacial fluvial sand interbedded with thin clay to silt layers between 4.5 to 5.4 m	-		
	5.4	SAND (TILL-LIKE), gravelly, some fines (15%), low to med permeability, very dense	-		
	5.8	CLAY (GLACIOLACUSTRINE), very stiff, some silt, difficult to drill, low permeability	-		
	6.1	End of Hole.			Backfilled with 2 bags of bentonite
DH99-98	0	SILT (TILL), stiff, sandy, some clay and gravel, mottled brown to light brown, moist, massive, low permeability, med plasticity; becomes very stiff with depth	-		At Ch 18+00, 10 m downstream of convey pipe
	1.7	SAND (TILL), very stiff, moist, gravelly, silty (20 to 25%) to some silt, trace clay, low plasticity, low permeability, well graded, grey; becomes slightly siltier with depth and moisture content increases	-		
	4.5	End of Hole.			
DH99-99	0	SILT and SAND (FILL), reworked till, very moist, firm, grey-brown, some gravel	-		CH 19+25, 10 m upstream of pipe
	0.3	SILT (TILL), firm to stiff, moist, moisture content < plastic limit, med plasticity, sandy to some sand and gravel, low permeability, contains irregular dark brown to black fine grained organic lenses 1mm to 10mm thick	-	16	SPT done 10 m upstream of pipe; 54% recovery - 24" run
	0.9	SPT	-	13	45% recovery - 24" run
	1.1	SILT (HIGHLY WEATHERED TILL?), brown, firm to stiff, some sand, low permeability, med plasticity, some clay are mottled	-		
	1.5	ORGANIC and SILT rich zone	-	43	100% recovery - 24" run
	1.55	SILT (TILL), some sand to sandy, some clay, grey-brown, some gravel, moist to very moist, stiff	-		
	2	SILT (GLACIOLACUSTRINE), very stiff , some clay, med plasticity, trace sand, brown, no discernable stratification	-		
	2.3	CLAY (GLACIOLACUSTRINE), very stiff, some silt to silty, med to high plasticity, light brown, moist, very low permeability	-		
	3	End of Hole.			Backfilled with 2 bags of bentonite

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Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
DH99-100	0	SILT (TILL), stiff, sandy, trace gravel, some clay, moist, mottled light brown, low permeability; becomes very moist with depth; moisture content = plastic limit at 0.6 m, < plastic limit at 1.1 m and = plastic limit at 2.2 m	-		20 m west of Plane E?, 5 m upstream of convey pipe
	0.3	SPT	-	13 (24?)	25% recovery - 24" run. N=24 (67% recovery) because sampler pushed rock so value not realistic, test carried out 1 m from drillhole
	0.9	SPT	-	16	100% recovery - 24" run
	1.5	SPT	-	33	
	2.9	SAND (GLACIOFLUVIAL), brown, fine to med grained, saturated, trace fines, well sorted, no stratification observed, high permeability; some interbedded brown clay at 4 m, med to high plasticity, 5 to 15mm wide grains	-		
	4.8	SILT (GLACIOFLUVIAL), very stiff but highly sensitive to vibration, grey, saturated, coarse to med silt, very well sorted, non-plastic	-		
	5.5	SAND (TILL), basal till, very dense, gravelly with some silt (20%), trace clay (<5%), low plasticity to non-plastic, well graded, low permeability	-		
	6	End of Hole.			Backfilled with 4 bags of bentonite chips and drill cuttings
DH99-101	0	SILT (TILL), firm to stiff, moist, mottled, light brown, dessicated cap, low permeability, trace gravel and some clay; becomes stiff with depth	-		
	0.3	SPT	-	22	100% recovery - 24" run
	0.9	SPT	-	42	100% recovery - 24" run
	1.5	SPT	-	16	80% recovery - 24" run
	1.5	SAND (GLACIOFLUVIAL), saturated, some gravel, trace fines (5 to 10%); increased gravel around 2m, very high permeability	-		
	3.45	SAND (TILL), very dense, some silt, trace clay, gravelly, low permeability, moist, basal till	-		Water level raised to 0.6 m below ground level during logging
	4.5	End of Hole.			Backfilled with 3 bags of bentonite chips
DH99-102	0	SILT (TILL), some sand to some clay, trace gravel, very moist, low permeability, massive, brown	-		Downstream of waste pile on access road
	0.3	SILT (GLACIOLACUSTRINE), stiff to very stiff, alternating layers of non-plastic silt with lesser silt, some clay, 1 to 2 mm fine sand partings; 50 mm fine sand seam at 0.9 m, med permeability, dense	-		
	1.5	SAND (GLACIOFLUVIAL), dense, fine to med grained, some gravel, brown, med to high permeability, brown; becomes finer grained sand with trace to some silt (1- to 15%) at 2.2 m and med permeability; becomes coarser and denser again at 2.5 m with trace fines	-		
	4	SAND (TILL), very dense, some silt and clay, gravelly, red-brown	-		
	4.5	End of Hole.			Backfilled with 3 bags of bentonite chips
DH99-103	0	SILT (TILL), stiff to very stiff, some sand to sandy, low permeability, massive, trace gravel, dessicated cap, damp to moist; becomes stiffer with depth, moisture content > plastic limit at 0.7 m	-		
	1.5	SILT (GLACIOLACUSTRINE), stiff, wet well sorted, low permeability, some fine sand, trace to no clay	-		
	1.65	SAND (TILL), silty, gravelly, trace clay, low plasticity, dense to very dense, massive, low permeability	-		
	2.15	SILT (GLACIOLACUSTRINE) with SAND (GLACIOFLUVIAL), irregular lenses of fine sand (dense) and silt (stiff), rare clay layers, sand is generally lower vertical permeability	-		
	2.5	SAND (TILL), very dense, gravelly, some silt, clasts are red-brown and grades to red with depth, low permeability - 10^{-6} to 10^{-7} cm/s, massive	-		
	2.9	BEDROCK, refusal	-		
	2.9	End of Hole.			Backfilled with 2 bags of bentonite
DH99-104	0	TILL, reworked stripping waste	-		Downstream of stripping waste
	0.2	SILT (TILL), stiff to very stiff, sandy to some sand, some clay and trace gravel, damp to moist, mottled light brown, low permeability; becomes moist to very moist with depth and stiffness increases with depth	-		

TABLE A1

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE

SUMMARY OF 1999 FOUNDATION DRILLHOLES

MA1116\13\Report\[DH-SUM.XLS]Data — Date Printed: 21-Aug-00

Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
DH99-104 cont'd	1.6	SAND (TILL), silty (25 to 30%), very stiff to hard, basal till, brown, moist, low permeability	-		
	2.2	BEDROCK, refusal	-		
	2.2	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-105	0	Reworked material	-		
	0.15	SILT (TILL), stiff to very stiff, some sand to sandy, trace gravel and clay, low permeability, mottled light brown, damp to moist; more gravelly at 0.3 m, trace clay; red-brown at 1.25 m, some silt and moisture content about optimum	-		
	1.7	End of Hole.			Backfilled with 1 1/2 bags of bentonite chips
DH99-106	0	SILT (TILL), brown, sandy, stiff to very stiff, very moist, trace gravel and some clay, moisture content < plastic limit, low to med plasticity; stiffness increases with depth, higher gravel % at 0.45 m	-		
	3.3	SAND (TILL), silty (25 to 30%), red-brown, trace clay, low permeability, very dense, some gravel and trace clay	-		
	3.4	BEDROCK, refusal	-		
	3.4	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-107	0	ORGANICS, poorly developed	-		
	0.1	SAND (TILL), some silt, some gravel to gravelly, trace clay, red-brown, moist, organics (roots) to 0.2 m; becomes very moist to silty with some clay at 0.3 m, med plasticity, low permeability, moisture content < plastic limit; stiffness and moisture increases with depth	-		
	2.7	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-108	0	ORGANICS, topsoil	-		
	0.1	SILT (TILL), stiff to very stiff, sandy, trace clay with some gravel, low permeability, becomes firm and very moist with depth: med plasticity and moisture content > plastic limit at 0.3 m; moisture content < plastic limit at 0.9 m, stiff to very stiff; very stiff to glacial till at 1.5 to 4.2 m, some clay and gravel (25%), med plasticity and moisture content < plastic limit; 15% clay and fine gravel at 5 m	-		
	6	SAND (TILL), basal till, silty to some silt with trace clay low plasticity, some gravel (20%), mosit, grey, low permeability, very dense	-		
	7.5	End of Hole.			Backfilled with 3 bags of bentonite chips
DH99-109	0	FILL, organic waste	-		
	2.1	SILT (TILL), firm to stiff, mottled, grey-brown, sandy, some gravel and clay, med plasticity, low permeability; at 2.3 m becomes very moist to wet, moisture content > plastic limit, firm to stiff, brown, finer gravel; moisture content at 2.6 m < plastic limit	-		
	3	SILT (TILL), stiff to very stiff, difficult to drill, finer till with trace gravel and some sand and clay, low permeability, low to med plasticity, light green to brown	-		Water pouring in at fill / native soil contact
	4.5	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-110	0	ORGANICS	-		Organics partially scraped off
	0.2	SAND (TILL), weathered red-brown, gravelly, some silt (20%), trace clay, low permeability and low plasticity	-		
	0.4	SILT (TILL), firm to stiff, very moist, med plasticity, sandy, some clay and gravel, low permeability, brown	-		
	0.85	SAND (TILL), silty, very stiff, red-brown, moist, low permeability, some gravel, low plasticity	-		
	1.7	BEDROCK, close to bedrock because of refusal	-		
	1.7	End of Hole.			Backfilled with 1 bag of bentonite chips
DH99-111	0	FILL, reworked till, composed till	-		
	0.15	ORGANICS	-		
	0.3	SAND (TILL), stiff to very stiff, gravelly, brown, low permeability, well graded, low plasticity, trace clay, moist; becomes firm to stiff with depth, some gravel	-		
	0.6	SPT	-	13	Test done 1.5 m from drillhole, 33% recovery - 24" run

TABLE A1

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE

SUMMARY OF 1999 FOUNDATION DRILLHOLES

M:\1116\1\D\Report\S\[DH-SUM.XLS]Data — Date Printed: 21-Aug-00

Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
DH99-111 cont'd	1.2	SPT	-	14	hit cobble at 18" in hole; 75 % recovery - 24" run
	1.8	SPT	-	50	75% recovery - 24" run
	2.3	COBBLE?, refusal	-		
	2.3	End of Hole.			Backfilled with 1 bag of bentonite
DH99-112	0	FILL / NON DISTURBED	-		At St 43+90, 5 m upstream of toe
	0.1	ORGANICS	-		
	0.45	SILT and SAND (TILL), frim to stiff, moist, some gravel, light brown lower permeability, trace clay	-		
	0.7	very moist, brown, grey mottled, low permeability	-	13	100% recovery - 24" run
	1.35	very moist, silt (sediments?) sandy to some sand, mottled grey brown, moisture content > plastic limit	-	9	100% recovery - 24" run
	1.95	SILT (TILL), stiff to very stiff, sandy, some gravel to gravelly, brown, trace to some clay, low to med plasticity, low permeability, moisture content < plastic limit; slightly silty sand, gravel	-	29	100% recovery - 24" run
	3	End of Hole.			Backfilled with 2 bags of bentonite
DH99-113	0	FILL, predominantly organics with some reworked till, soft waste	-		At 43+65. 8 m downstream of toe
	0.8	ORGANICS, intermixed with sand, fine grain, some silt (10 to 15%)	-		
	1.2	SILT, highly weathered, stiff, moist to very moist, mottled light brown/grey, lower permeability, trace clay, low plasticity; becomes wet at 1.35 m, some clay with trace gravel, high to med plasticity, moisture content > plastic limit	-		
	1.5	Wet till, moisture content > plastic limit, some clay, med to high plasticity; becomes stiff and very moist at 2 m, med plasticity, sand and silt to sandy silt, some gravel	-	9	100% recovery - 24" run
	2.4	silty sand (till), gravelly with trace clay, dense to very dense, low permeability	-	31	100% recovery - 24" run
	3	End of Hole.			Backfilled with 2 bags of bentonite
DH99-114	0	FILL, waste, organics and peat	-		
	0.7	SILT (GLACIOLACUSTRINE?), trace fine sand, soft to firm clay, grey, saturated	-		
	1.5	SILT (TILL), weathered, firm and very moist to wet, grey, mottled brown, some gravel, trace organic debris (top of till), trace to some clay, low permeability; stiffness increases with depth, silt and sand till at 3 m, gravelly (25%) some clay (10%), low to med plasticity	-	27	100% recovery - 24" run
	4.5	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-115	0	ORGANICS, peat, woody debris	-		
	0.5	SILT (GLACIOLACUSTRINE?), clayey, firm, med to high plasticity, grey to light brown - mottled, low permeability	-		
	0.8	SILTY SAND (TILL), wet, firm, some gravel, low permeability, well graded; becomes firm to very stiff with depth	-	15	100% recovery - 24" run
	3	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-116	0	ORGANICS, wood waste, peat	-		Downstream 15 m from 3:1 toe
	0.75	CLAY (GLACIOLACUSTRINE), soft to firm, grey, silty to some silt, high plasticity, low permeability, wet, moisture content >> plastic limit	-		
	1.2	SILT (GLACIAL TILL), clayey to some clay, weathered till, grey, wet, soft to firm, trace gravel, some gravel, med to high plasticity, low permeability	-	13	100% recovery - 24" run
	1.8	SAND (TILL), silty (20 to 25%), trace clay, gravelly, low permeability, brown, moist to very moist, low to med plasticity, well graded	-		
	3	End of Hole.	-		Backfilled with 2 bags of bentonite chips
DH99-117	0	ORGANICS, peat and waste	-		
	0.6	CLAY (GLACIOLACUSTRINE?), maybe weathered till - soft to firm, grey, some silt, high plasticity, low permeability, wet	-		
	0.7	Silty sand (weathered till), soft and wet, grey, med to high plasticity, low permeability; stiff to frim at 1.25 m, very moist, sand and silt with some gravel	-	7	100% recovery - 24" run
	3	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-118	0	ORGANICS, peat	-		

TABLE A1

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE

SUMMARY OF 1999 FOUNDATION DRILLHOLES

M:\1116\2\J\Report\S\[DH-SUM.XLS]Data

Date Printed: 21-Aug-00

Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
DH99-118 cont'd	0.25	SILT (GLACIOLACUSTRINE), may be weathered till - firm, clayey, light brown, low permeability, high plasticity, very moist to wet, trace organics; becomes soft to firm and wet at 0.35 m, weathered till with trace gravel	-		
	0.95	firm, wet sandy silt, some clay; becomes firmer with depth; very stiff to hard at 1.4 m, low to med plasticity	-	30	100% recovery - 24" run
	1.6	SAND (TILL), as above except silty, trace clay (10%), gravelly, low plasticity, low permeability, moist to very moist	-		
	3	End of Hole.	-		Backfilled with 2 bags of bentonite chips
DH99-119	0	FILL, organics and clay, peat, waste	-		
	0.5	CLAY (GLACIOLACUSTRINE), soft to firm, some silt, grey, mottled, high plasticity, low permeability, very moist, moisture content > plastic limit	-		
	0.65	SILT (GLACIOLACUSTRINE), some fine sand, brown; predominantly fine sand and silt with some gravel at 0.75 m, soft to firm; becomes very stiff to hard with depth	-		
	1.7	SAND (TILL), very stiff to hard, silty, gravelly with some clay (10 to 15%), low permeability, low to med plasticity, moist to very moist brown, moisture content < plastic limit	-		
	3	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-120	0	ORGANICS, peat	-		
	0.2	SILT (TILL), stiff, sandy with trace gravel and clay, mottled light brown, moist; stiffens with depth, some clay, med plasticity; silty sand at 1.6 m, very stiff to hard, low permeability	-		
	0.45	SPT	-	8	test in hole1 m away from drillhole
	3	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-121	0	FILL, till and organics	-		
	0.3	SILT (TILL), stiff, sandy with some clay, very moist mottled, light brown and orange, some gravel, low permeability; becomes very stiff at 1 m, moist to very moist, 30% gravel, low to med plasticity	-		
	3	End of Hole.			Backfilled with 2 bags of bentonite
DH99-122	0	FILL, stripping waste	-		
	0.45	SPT	-	10	test 1 m away from drillhole, 75 % recovery - 24" run
	1.05	SPT	-	34	
	0.3	SILT (TILL), firm to stiff, sandy with trace gravel, low permeability, moist to very moist, light brown; med plasticity and some clay (10%) at 0.45 m, some gravel, silt and sand at 1.1 m;	-		
	3	End of Hole.			Backfilled wih 2 bags of bentonite
DH99-123	0	ORGANICS, stripped off but 0.2 to 0.3 m of reworked till, saturated, if allowed to dry out, not necessary to remove	-		At Ch 40+45, 7 m upstream of toe
	0.25	SILT (TILL), sandy with some gravel (20%), very moist, moisture content < plastic limit, low permeability well graded, firm to stiff, becomes stiff to very stiff and moist with depth	-		
	0.3	Stiff, to very stiff from 0.3 to 0.64 m	-	27	
	3	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-124	0	Reworked till, loose, very moist to wet, silt and sand (till), some clay and gravel (10 to 15%)	-		
	0.35	SILT and SAND (TILL), firm, very moist, moisture content slightly < plastic limit - about 3 to 4% > optimum, some gravel, mottled light brown, low permeability; Silty sand at 1 m, stiff to very stiff with low to med plasticity and some clay (10%), gravelly (30%), moist to very moist	-		
	3	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-125	0	FILL / ORGANICS, peat, woody debris, 0.5 to 0.6 m thick	-		
	0.6	SILT (TILL), firm to stiff, sandy, some clay, med plasticity, light brown, mottled, low permeability	-	17	75% recovery - 24" run
	0.95	cont'd silt, some gravel (20%), moist	-		
	3	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-126	0	REWORKED TILL, loosened up and higher moisture content, SANDY SILT, very moist to wet, some gravel and clay, brown, low permeability, low to med plasticity	-		

TABLE A1

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE

SUMMARY OF 1999 FOUNDATION DRILLHOLES

M:\1162\13\Report\S\[DH-SUM.XLS]Data — Date Printed: 21-Aug-00

Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
DH99-126 cont'd	0.3	Water flow into hole	-		water flowing into hole at native soil / fill contact
	0.45	sandy silt becoming stiffer with depth, very moist	-		
	3	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-127	0	ORGANICS	-		sub excavation 0.2 to 0.3 m
	0.15	SILT (TILL), firm to stiff, very moist, moisture content < plastic limit, sandy, some gravel with trace clay and low permeability; becoming very moist to wet at 0.55 m, moisture content about plastic limit, more clay, med plasticity, less gravel, lightly cohesive, stiffens with depth	-		
	0.35	SPT	-	15	100% recovery - 24" run
	3	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-128	0	SILT (TILL), reworked, see description below	-		
	0.2	SILT (TILL), sandy, some gravel and clay, moist, stiff, med plasticity, low permeability; becomes stiff to very stiff and moist with depth to 1 m	-		
	3	End of Hole.	-		Backfilled with 2 bags of bentonite chips
DH99-129	0	ORGANICS	-		
	0.1	SILT and SAND (TILL), stiff to very stiff, light brown, grey, damp to moist, some gravel, trace to some clay, low permeability; becomes firm to stiff and mottled brown at 0.6 m	-		0.25 m removed for sub excavation
	0.8	SAND (TILL), silty, gravelly, stiff to very stiff, trace clay, very moist, low plasticity, low permeability; becomes moist to very moist and very stiff with depth	-		
	3	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-130	0	ORGANICS.	-		
	0.1	SAND (TILL), silty with gravel (25%), trace clay, stiff to very stiff, light brown, damp to moist, low permeability	-		
	0.3	stiff to very stiff, moist to very moist, mottled grey and brown, low permeability, silty sand, gravelly to some gravel, low to med plasticity; very stiff at depth		30	100% recovery - 24" run
	3	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-131	0	FILL, stripping waste			
	0.45	SILT (TILL), weathered, sandy with some gravel, stiff, med plasticity, mottled orange-brown, low permeability, moisture content < plastic limit, very moist; moisture content = plastic limit at 0.7 m, med plasticity, very moist to wet, firm; stiffness increases with depth; till continued to bottom			water level at 0.45 m at fill / native soil contact
	0.55	Firm to stiff 1st 6", rest stiff to very stiff		17	100% recovery - 24" run
	3	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-132	0	SILT (TILL), sandy, some gravel to gravelly, stiff to very stiff, low permeability, damp to moist; becomes very moist at 0.2 m, med plasticity, moisture content = plastic limit, mottled orange-brown; silty sand with gravel and trace clay (10%) at 3 m, low plasticity; grey-green slightly finer grained with some gravel from 4.5 to 6 m			
	7.5	End of Hole.			Backfilled with 2 bags of bentonite chips
DH99-133	0	FILL, wet, silt till			
	1.1	ORGANICS, peat, saturated			
	1.5	SILT (GLACIOLACUSTRINE), soft, mixture of organics, some clay, med to high plasticity, low permeability, dark brown to black			
	1.7	CLAY (GLACIOLACUSTRINE to WEATHERED TILL), soft to firm, wet, moisture content > plastic limit, grey to light brown, mottled			
	2	SILT (WEATHERED TILL), soft to frint, light grey brown, wet clayey with trace to some sand and gravel; becomes firm at 2.5 m			
	2.65	SAND (TILL), silty, gravelly, brown, moist to very moist, low permeability, low to med plasticity, well graded; stiff to very stiff between 4.5 and 6 m; alternating layers of irregular silt and clay laminations at 6.2 m, fine grained till and silt, some sand to sandy, some clay with trace gravel, very moist			

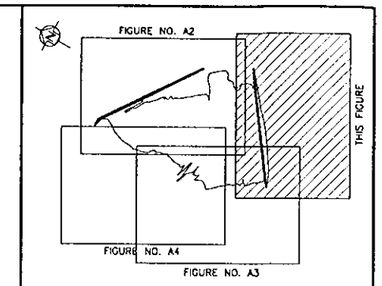
TABLE A1

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE

SUMMARY OF 1999 FOUNDATION DRILLHOLES

M:\1162\13\Report\S\[DH-SUM.XLS]Data Date Printed: 21-Aug-00

Drillhole	Depth (m)	Description	Samples (m)	SPT Value (N)	Comments
DH99-133 cont'd	6.7	SILT (GLACIOLACUSTRINE), stiff, predominantly non-plastic, low permeability, trace fine sand and clay layers, highly consolidated; becomes more clay-rich at 7.1 m, poor recovery, low permeability, grey, very moist and low permeability			recovery poor - could not pull augers out without pulling drill into fill on surface
	7.3	End of Hole.			Backfilled with 4 bags of drill cuttings. Terminate hole because drill off-centre and sinking
DH99-134	0	SILT (TILL), stiff to very stiff, damp to moist, sandy, some gravel, low permeability, trace clay, light brown, dessicated cap; very moist to end of hole, becomes stiff with depth; grey-green at 2.2 m			Left abutment PE stage 3
	3	End of Hole.			Backfilled with 3 bags of bentonite chips
DH99-135	0	REWORKED TILL, wet, silt and sand, some gravel, brown			At South Embankment seepage collection pond. Organics stripped off due to road construction
	0.2	SILT (TILL), stiff, sandy, some gravel, trace clay, low permeability, moisture content < plastic limit, low plasticity, light brown; moist to very moist at 0.5 m depth, firm to stiff, some clay, moisture content < plastic limit; darker brown and moist to very moist at 1.6 m, low permeability, med plasticity, well graded			
	3.9	SAND (GLACIOFLUVIAL), dense, saturated, trace fines (10 to 12%), trace gravel, med to high permeability			
	5	SAND (TILL), dense to very dense, some silt and trace clay, gravelly red-brown, very moist, well graded, low plasticity	-		
	6	End of Hole.	-		Backfilled with 3 bags of bentonite chips



KEY PLAN

LEGEND

- Borrow Area No. 4 Test pits (TP97-BA4-___)
- 1997 Borrow Area Drillhole
- 96-86 — 1996/1997 Test Pits
- CPT96-2 — CPT/PRW Investigation
- GW96-28 — 1996 Groundwater Monitoring Well
- TP95-28 — 1995 Test Pit
- TP81 — 1989 Test Pit
- MP89-229 — Condemnation Drillhole
- MP89-231 — Condemnation Drillhole with pneumatic and standpipe piezometer
- MP89-232 — Condemnation Drillhole with standpipe piezometer
- 99-22 — 1999 Basin Liner Investigations
- DH98 B4-5 — 1998 Borrow Area Drillhole
- TP98-BA2-1 — 1998 Borrow Area No. 2 Test Pits Investigation
- DH98 BL-1 — 1998 Basin Liner Investigation
- DH99-134 — 1999 Borrow Area No. 2 Investigation

NOTES

1. Basin liner limits finalized from exploration trenches.
2. All drillholes in tailings basin grouted as per technical specifications.
3. As-built information provided by Mount Polley Mining Corporation.
4. Topography generated from points and break lines sent from MPMC on July 20, 1999.
5. Results of previous investigations are available in previously issued reports.

Scale 50 0 50 100 150 200 250 m

REV.	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	22AUG'00	ISSUED FOR CONSTRUCTION REPORT	JRK	NSD		

REVISIONS

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
GEOLOGICAL INVESTIGATIONS
LOCATION PLAN – SHEET 1 OF 4

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PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE A1

VANCOUVER B.C. CAD FILE: M:\11162\13\Acad\Figs\DWG 1=5000 Plot 1=1(PS) 21/08/00 mjd

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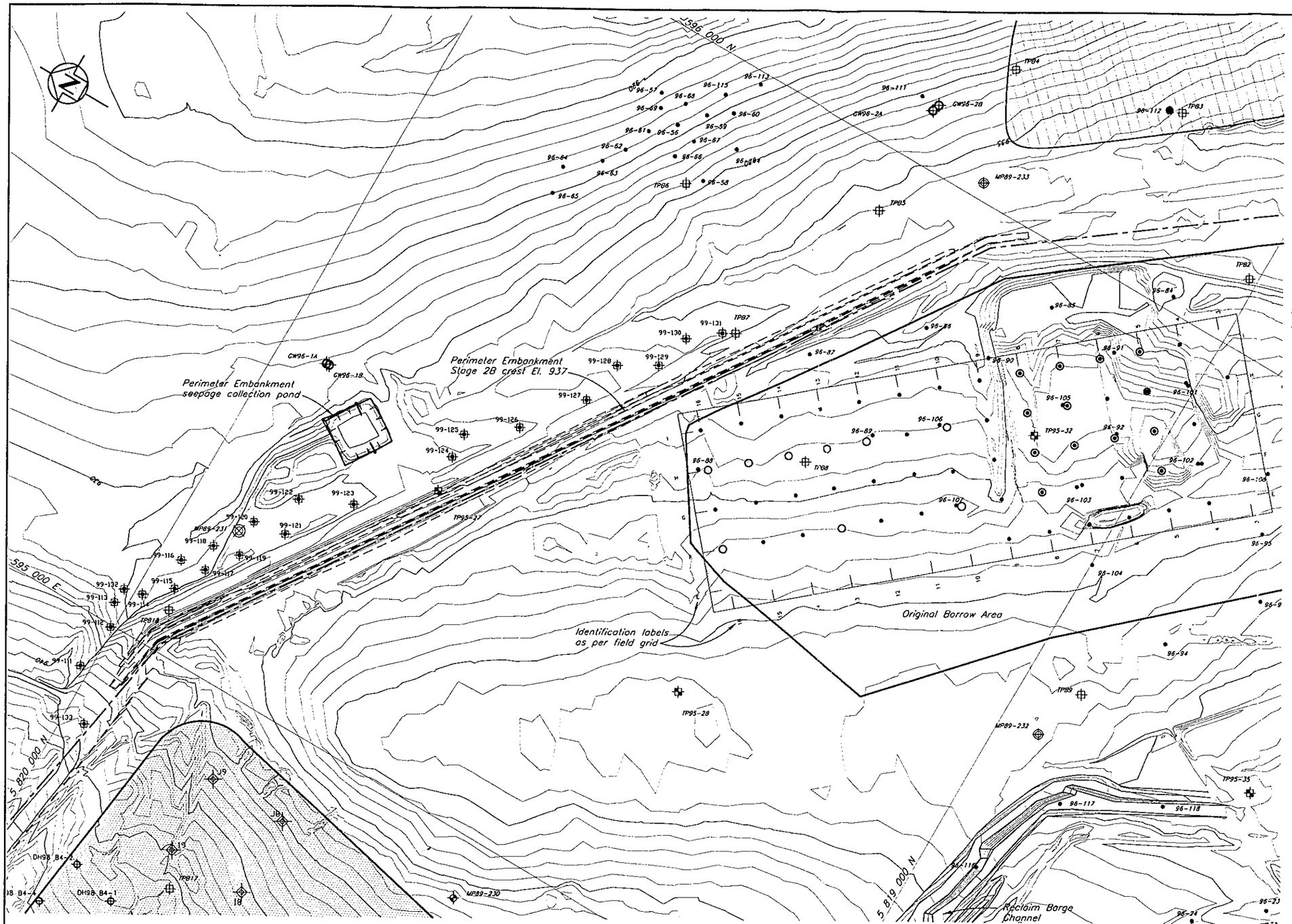

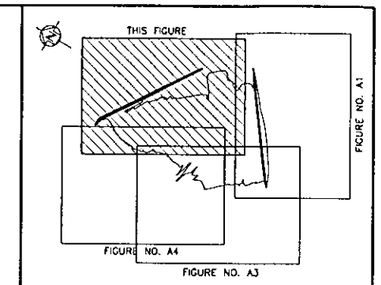

KEY PLAN

LEGEND

- J9 — Borrow Area No. 4 Test pits (TP97-BA4-__)
- 1997 Borrow Area Drillhole
- 96-86 — 1996/1997 Test Pits
- CP196-2 — CPT/PRW Investigation
- GW96-2B — 1996 Groundwater Monitoring Well
- TP95-28 — 1995 Test Pit
- TP81 — 1989 Test Pit
- MP89-229 — Condemnation Drillhole
- MP89-231 — Condemnation Drillhole with pneumatic and standpipe piezometer
- MP89-232 — Condemnation Drillhole with standpipe piezometer
- 99-22 — 1999 Basin Liner Investigations
- DH98 B4-5 — 1998 Borrow Area Drillhole
- TP98-BA2-1 — 1998 Borrow Area No. 2 Test Pits Investigation
- DH98 BL-1 — 1998 Basin Liner Investigation
- DH99-134 — 1999 Borrow Area No. 2 Investigation

NOTES

1. Basin liner limits finalized from exploration trenches.
2. All drillholes in tailings basin grouted as per technical specifications.
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4. Topography generated from points and break lines sent from MPMC on July 20, 1999.
5. Results of previous investigations are available in previously issued reports.

Scale 50 0 50 100 150 200 250 m

REV.	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	22AUG'00	ISSUED FOR CONSTRUCTION REPORT	JRK	NSD		

REVISIONS

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
GEOLOGICAL INVESTIGATIONS
LOCATION PLAN – SHEET 2 OF 4

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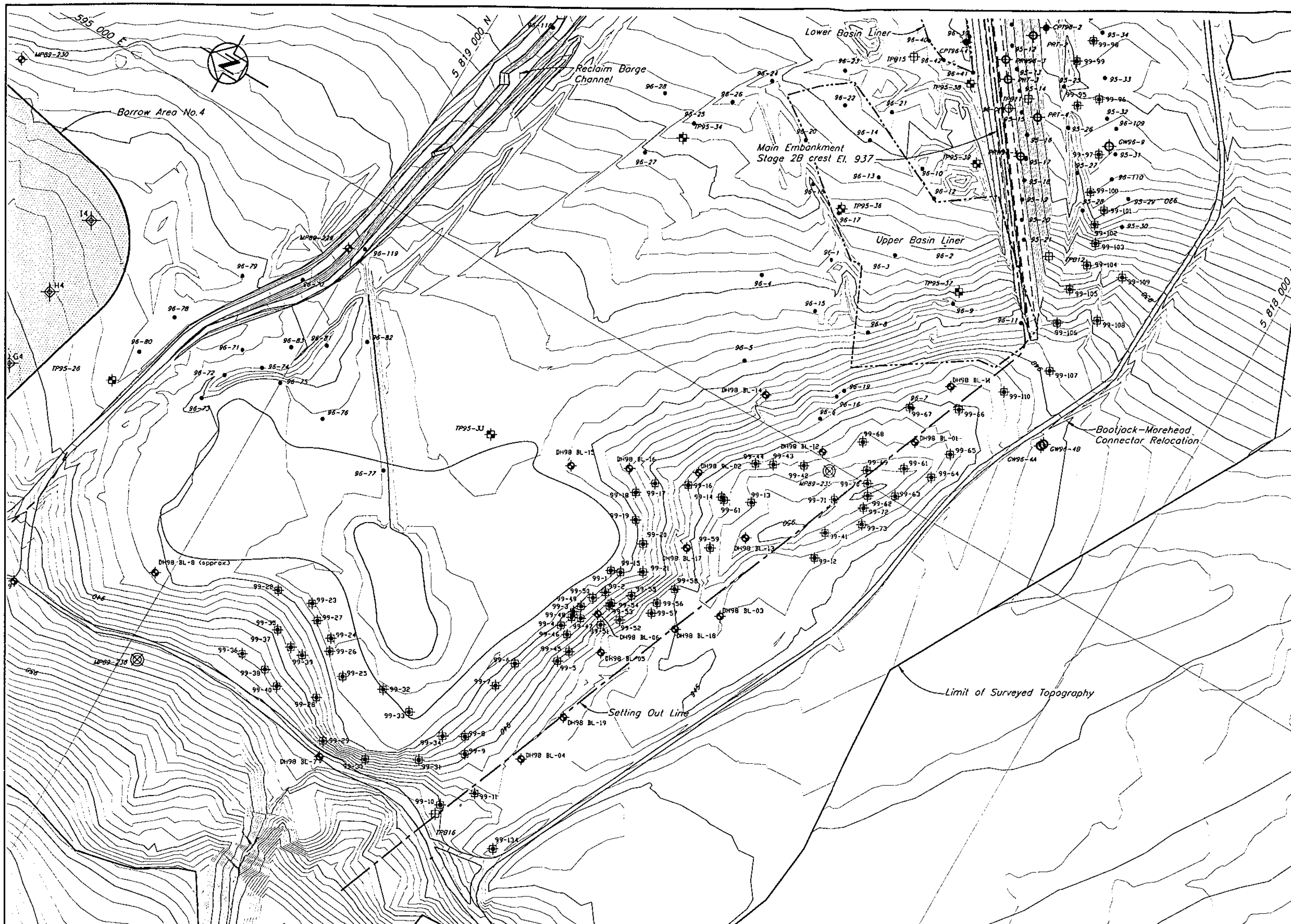
PROJECT NO.	REF. NO.	REV.
11162/13	5	0

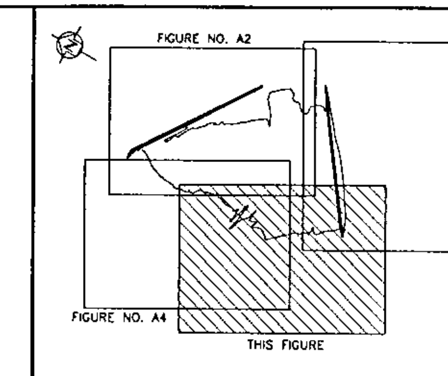
FIGURE A2

XREF FILE : TOPO99_STOCK.dwg

CAD FILE: M:\11162\13\Acad\Fig\099 1=5000 Plot 1=1(PS) 21/08/00 mdd

VANCOUVER B.C.





KEY PLAN

LEGEND

Symbol label	Description
J9	Borrow Area No. 4 Test pits (TP97–BA4–__)
	1997 Borrow Area Drillhole
96-86	1996/1997 Test Pits
CPT96-2	CPT/PRW Investigation
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MP89-232	Condemnation Drillhole with standpipe piezometer
99-22	1999 Basin Liner Investigations
DH98 B4-5	1998 Borrow Area Drillhole
TP98-BA2-1	1998 Borrow Area No. 2 Test Pits Investigation
DH98 BL-1	1998 Basin Liner Investigation
DH99-134	1999 Borrow Area No. 2 Investigation

NOTES

1. Basin liner limits finalized from exploration trenches.
2. All drillholes in tailings basin grouted as per technical specifications.
3. As–built information provided by Mount Polley Mining Corporation.
4. Topography generated from points and break lines sent from MPMC on July 20, 1999.
5. Results of previous investigations are available in previously issued reports.

Scale 50 0 50 100 150 200 250 m

REV.	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	22AUG'00	ISSUED FOR CONSTRUCTION REPORT	JRK	NSD		

REVISIONS

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
GEOLOGICAL INVESTIGATIONS
LOCATION PLAN – SHEET 3 OF 4

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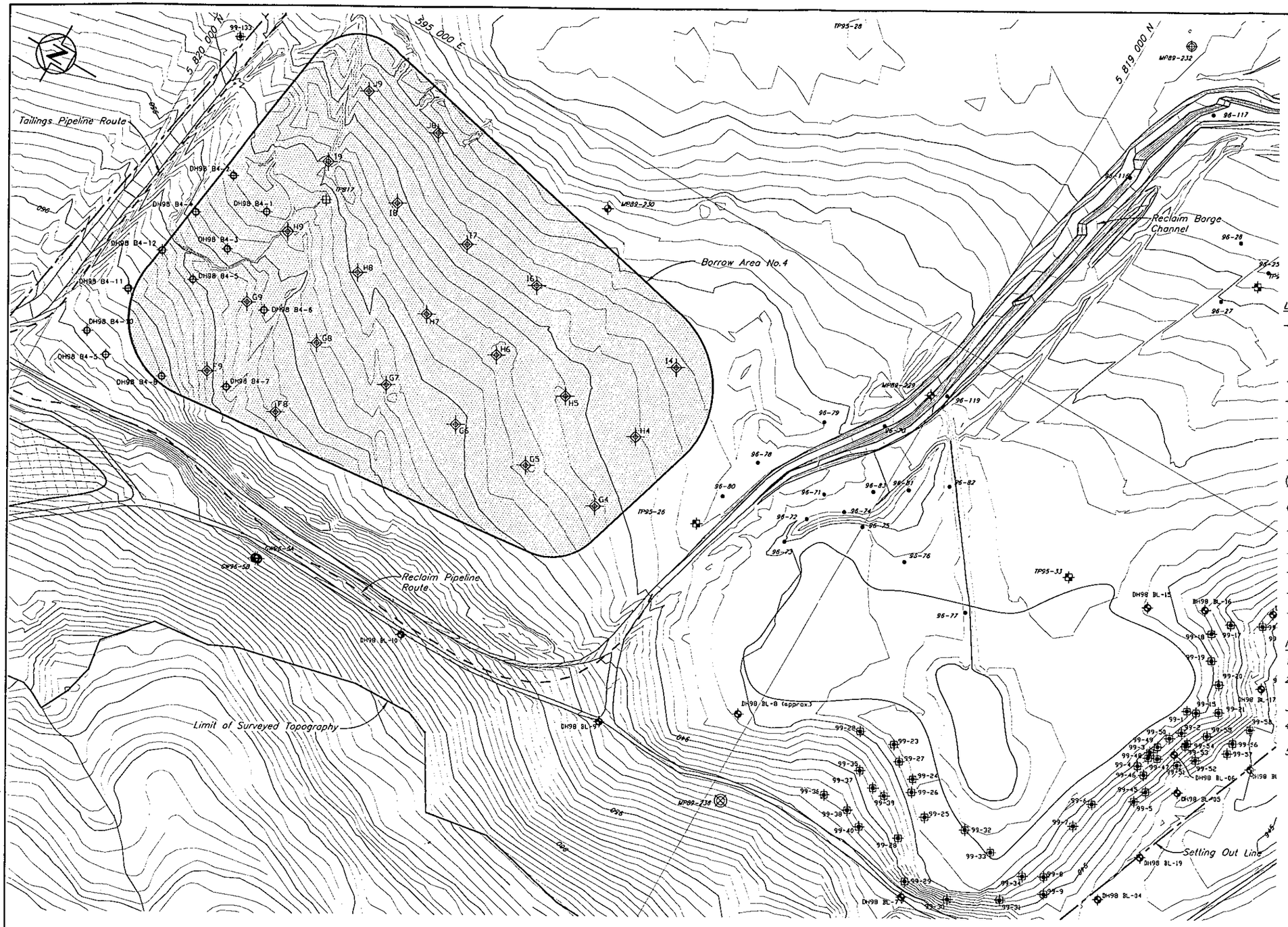
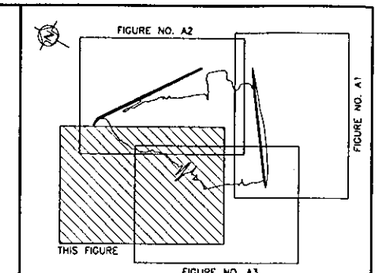
PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE A3

XREF FILE : TOPO99, STOCK.

VANCOUVER B.C. CAD FILE: M:\11162\13\Acad\Figs\B10 1=5000 Plot 1=1(PS) 21/08/00 nsd





KEY PLAN

LEGEND

J9	Borrow Area No. 4 Test pits (TP97-BA4-__)
	1997 Borrow Area Drillhole
96-86	1996/1997 Test Pits
CP196-2	CPT/PRW Investigation
GW96-2B	1996 Groundwater Monitoring Well
TP95-28	1995 Test Pit
TP81	1989 Test Pit
MP89-229	Condemnation Drillhole
MP89-231	Condemnation Drillhole with pneumatic and standpipe piezometer
MP89-232	Condemnation Drillhole with standpipe piezometer
99-22	1999 Basin Liner Investigations
DH98 B4-5	1998 Borrow Area Drillhole
TP98-BA2-1	1998 Borrow Area No. 2 Test Pits Investigation
DH98 BL-1	1998 Basin Liner Investigation
DH99-134	1999 Borrow Area No. 2 Investigation

NOTES

1. Basin liner limits finalized from exploration trenches.
2. All drillholes in tailings basin grouted as per technical specifications.
3. As-built information provided by Mount Polley Mining Corporation.
4. Topography generated from points and break lines sent from MPMC on July 20, 1999.
5. Results of previous investigations are available in previously issued reports.

Scale 50 0 50 100 150 200 250 m

REV.	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	22AUG'00	ISSUED FOR CONSTRUCTION REPORT	JRK	NSD		

REVISIONS

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
GEOLOGICAL INVESTIGATIONS
LOCATION PLAN – SHEET 4 OF 4

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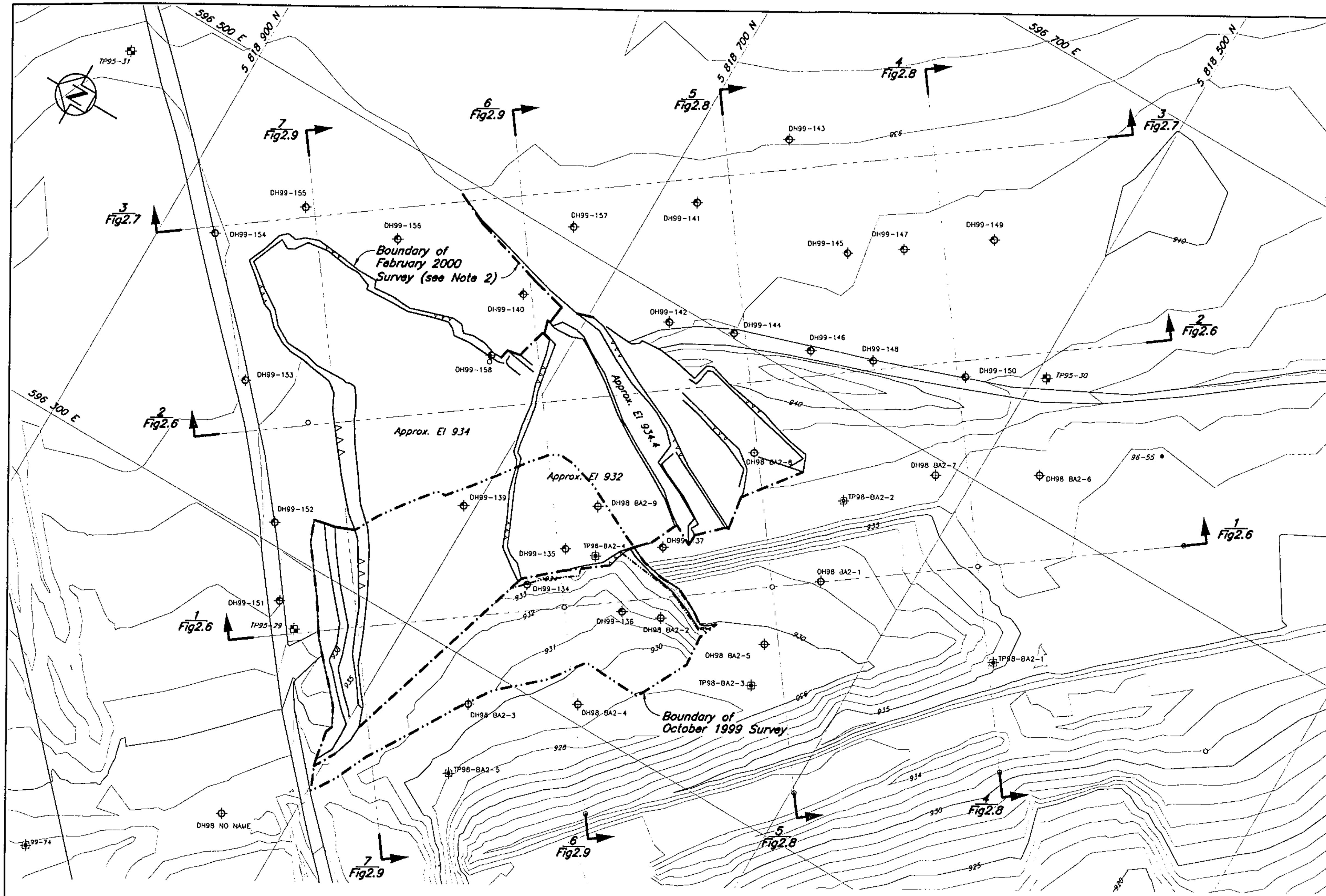
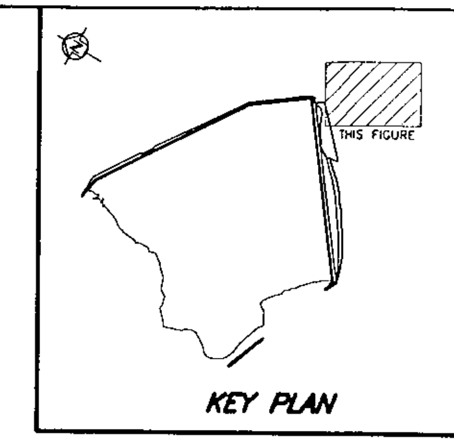
111162/13	5	0

FIGURE A4

VANCOUVER B.C. CAD FILE: M:\111162\13\Acad\Figs\811 1=3000 Pat 1-1(PS) 21/08/00 md

XREF FILE : TOPOPA, STOCK.





LEGEND

- 96-86 — 1996/1997 Test Pits
- TP95-28 — 1995 Test Pit
- 99-22 — 1999 Basin Liner Investigations
- TP98-BA2-1 — 1998 Borrow Area No. 2 Test Pits Investigation
- DH98 BL-1 — 1998 Basin Liner Investigation
- DH99-134 — 1999 Borrow Area No. 2 Investigation

NOTES

1. Topography generated from points and break lines sent from MPMC on July 20, 1999. Topography for the October survey of borrow area generated from points and break lines sent by MPMC on October 12, 1999. Topography for the February 2000 survey was generated from points and break lines sent by MPMC on March 16, 2000.
2. Additional material may have been removed from Borrow Area 2 since the Feb. 2000 survey. Current status of Borrow Areas can be confirmed by MPMC.

Scale 20 0 20 40 60 80 100 m

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
SITE INVESTIGATION
BORROW AREA No. 2 – PLAN

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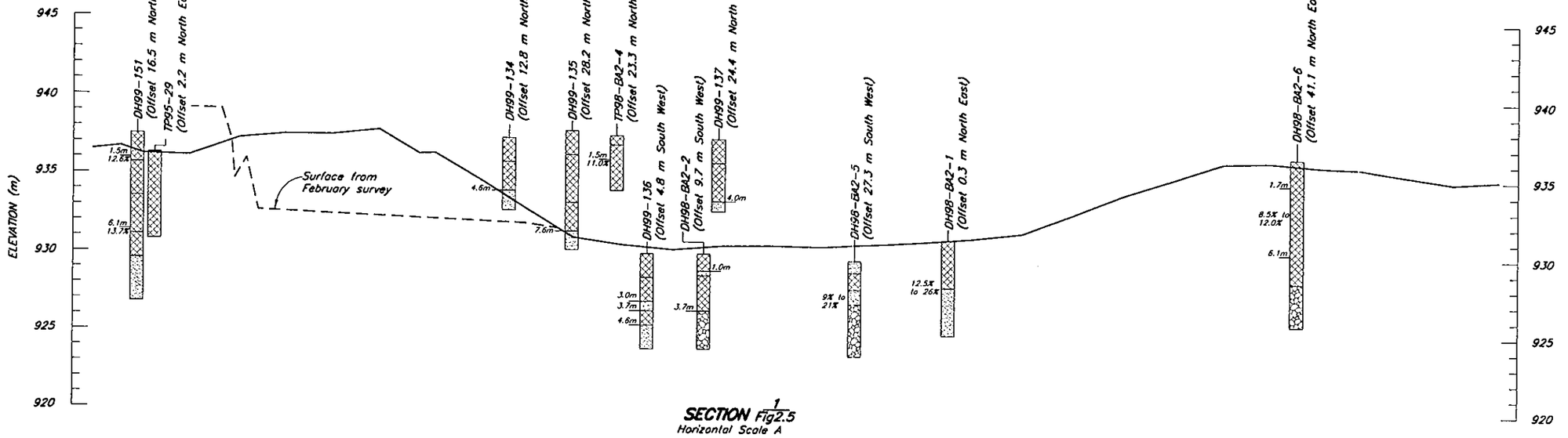
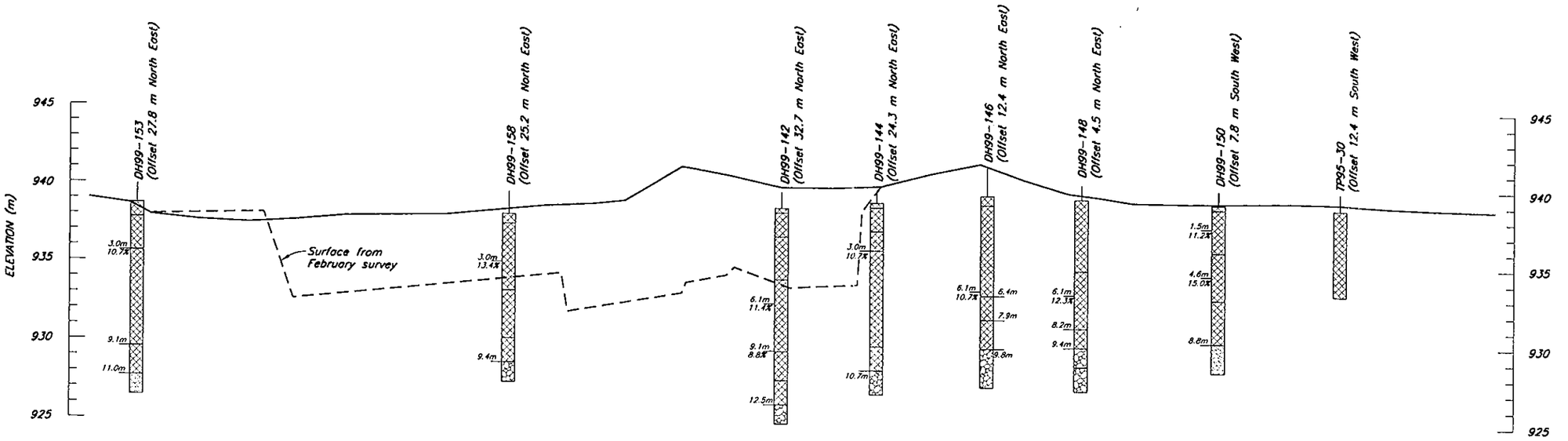
FIGURE 2.5

REV.	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	18APR'00	ISSUED FOR REFERENCE INFORMATION	JRK	TAM		

REVISIONS



SECTION 1 Fig2.5
Horizontal Scale A



SECTION 2 Fig2.5
Horizontal Scale A

LEGEND

- Silty Sand to Sandy Silt, trace to some Gravel, Glacial Till. May contain isolated layers of coarser or finer material.
- Gravelly Sand to Sand, trace to some Silt. Glacial Till or Glaciofluvial.
- Silty Sand to Silt, Glaciolacustrine
- 9.1m — Depth of Sample
- 8.8% — Moisture Content of Sample

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Scale A 15 0 15 30 45 60 75 m

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REVISIONS

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
SITE INVESTIGATION – BORROW AREA No. 2
GEOLOGIC CROSS SECTIONS – SHEET 1 OF 4

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PROJECT NO.	REF. NO.	REV.
11162/13	6	0

FIGURE 2.6

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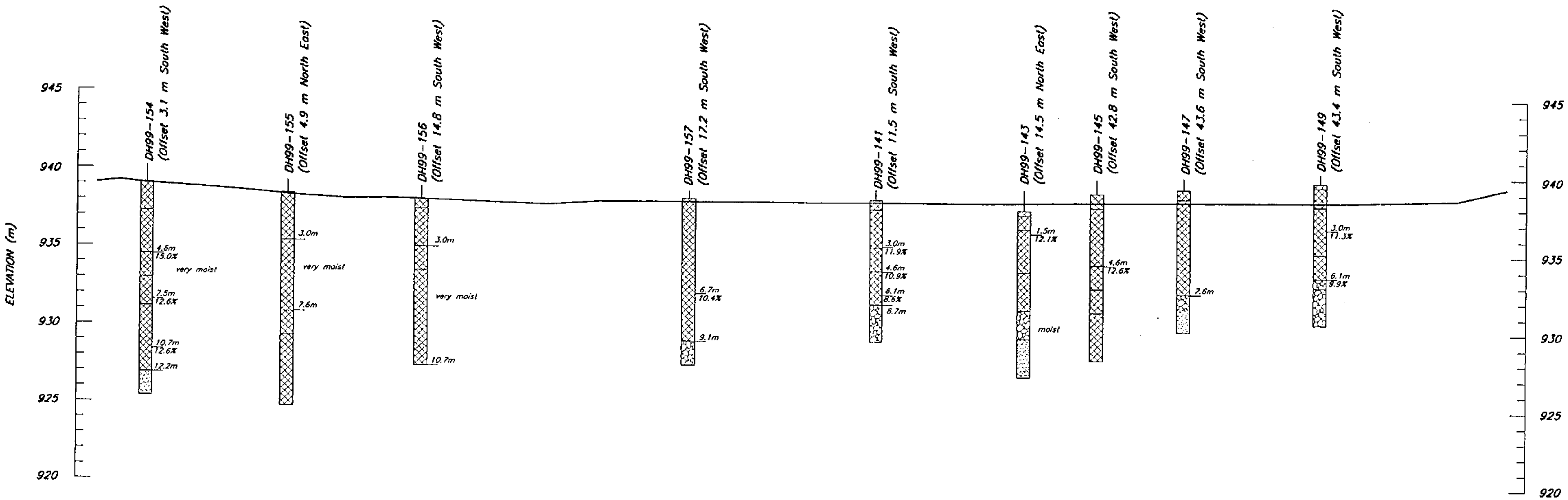
VANCOUVER B.C.
XREF FILE : -



SECTION $\frac{3}{Fig2.5}$

Horizontal Scale A

Scale A 15 0 15 30 45 60 75 m

LEGEND

- *Silty Sand to Sandy Silt, trace to some Gravel, Glacial Till. May contain isolated layers of coarser or finer material.*
- *Gravelly Sand to Sand, trace to some Silt. Glacial Till or Glaciofluvial.*
- *Silty Sand to Silt, Glaciolacustrine*
- 9.1m — *Depth of Sample*
- 8.8% — *Moisture Content of Sample*

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MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
SITE INVESTIGATION – BORROW AREA No. 2
GEOLOGIC CROSS SECTIONS – SHEET 2 OF 4

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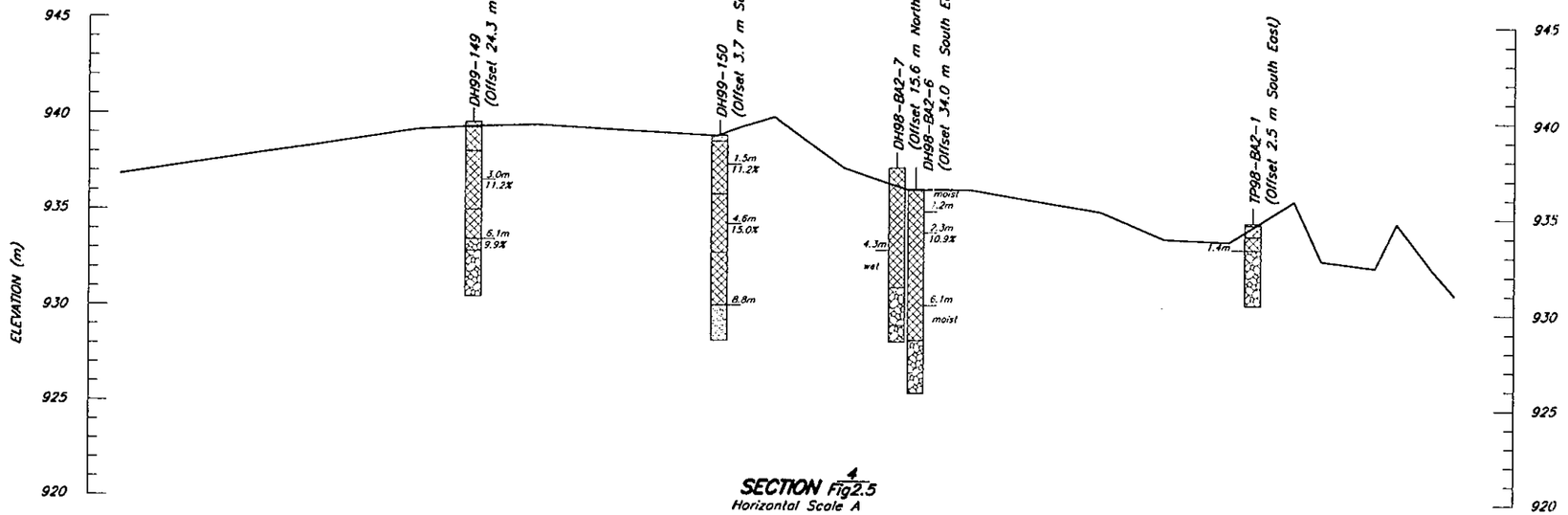
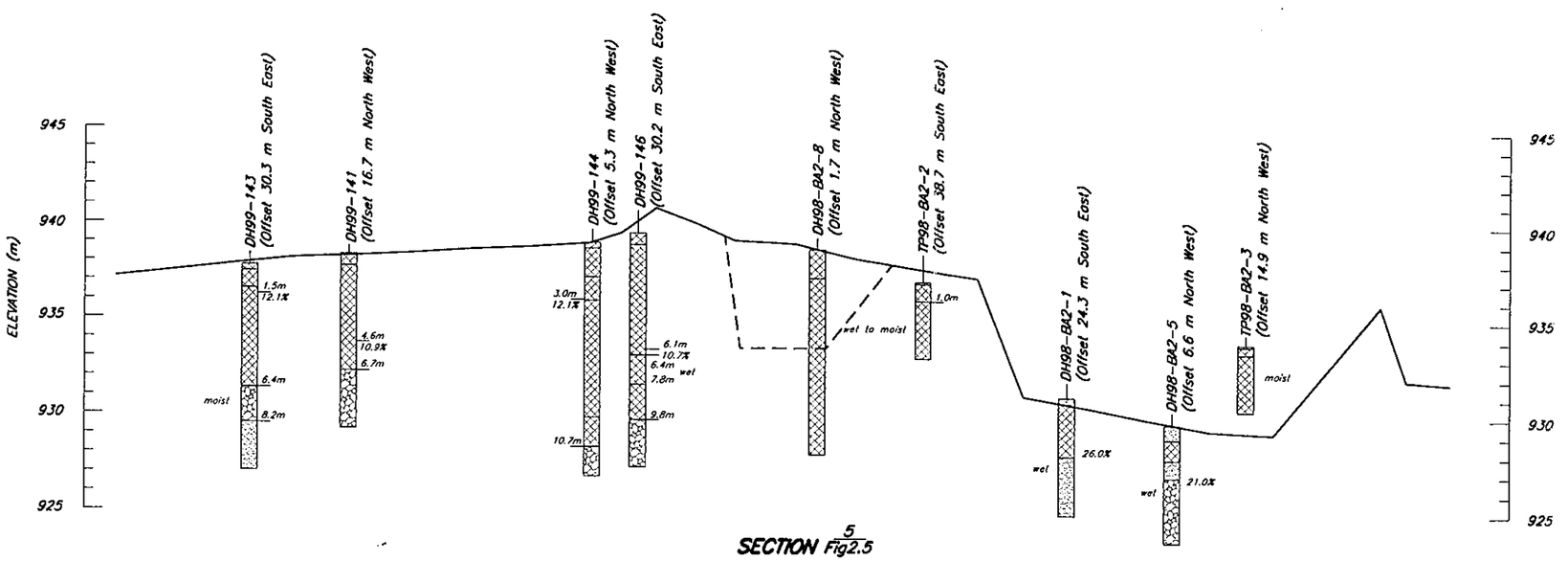
PROJECT NO.	REF. NO.	REV.
11162/13	6	0

FIGURE 2.7



SECTION 4 Fig2.5
Horizontal Scale A



SECTION 5 Fig2.5
Horizontal Scale A

LEGEND

- Silty Sand to Sandy Silt, trace to some Gravel, Glacial Till. May contain isolated layers of coarser or finer material.
- Gravelly Sand to Sand, trace to some Silt. Glacial Till or Glaciofluvial.
- Silty Sand to Silt, Glaciolacustrine
- 9.1m — Depth of Sample
- 8.8% — Moisture Content of Sample

Scale A 15 0 15 30 45 60 75 m

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MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
SITE INVESTIGATION – BORROW AREA No. 2
GEOLOGIC CROSS SECTIONS – SHEET 3 OF 4

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11162/13	6	0

FIGURE 2.8

CAD FILE: H:\11162\13\ACAD\dwgs\804 1:1500 Plot 1=1(PS) 20/04/00 tam
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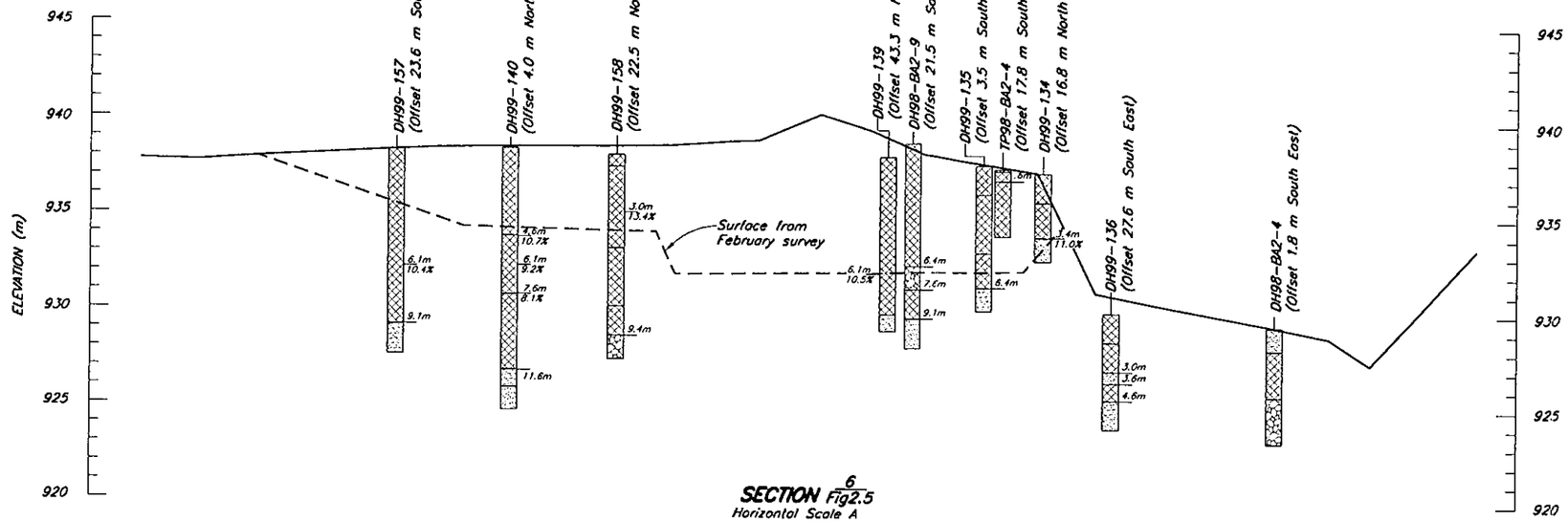
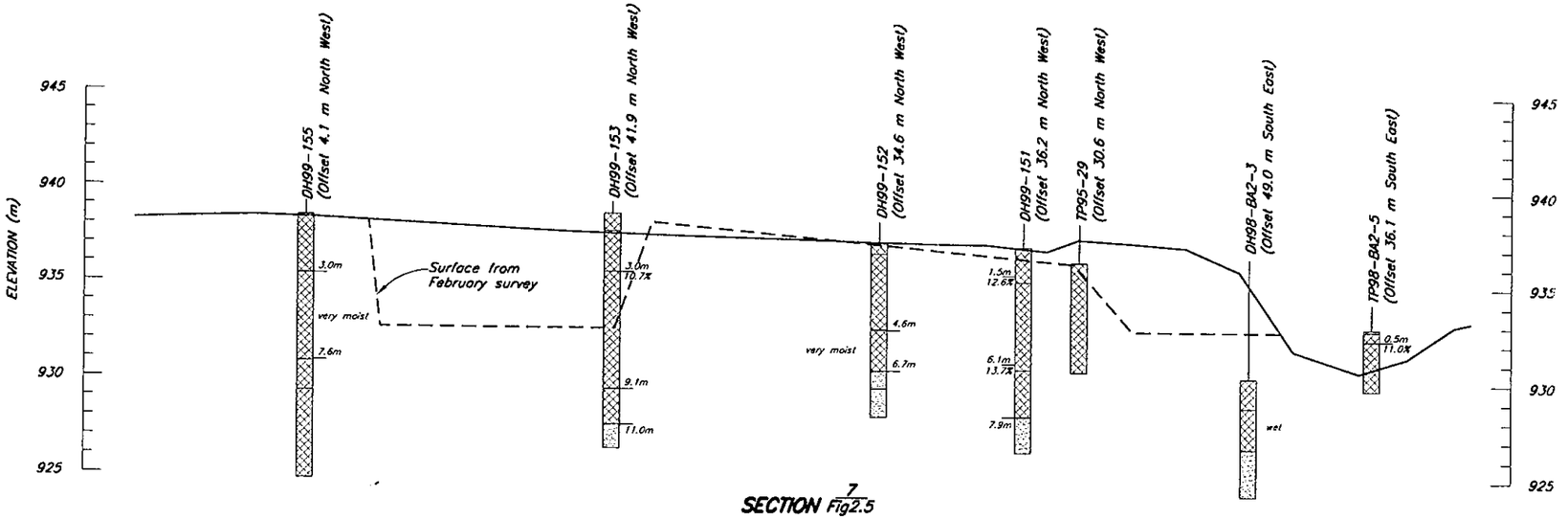
XREF FILE : -



SECTION 6 Fig2.5
Horizontal Scale A



SECTION 7 Fig2.5
Horizontal Scale A

LEGEND

- Silty Sand to Sandy Silt, trace to some Gravel, Glacial Till. May contain isolated layers of coarser or finer material.
- Gravelly Sand to Sand, trace to some Silt. Glacial Till or Glaciofluvial.
- Silty Sand to Silt, Glaciolacustrine
- 9.1m — Depth of Sample
- 8.8% — Moisture Content of Sample

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Scale A 15 0 15 30 45 60 75 m

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REVISIONS

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
SITE INVESTIGATION – BORROW AREA No. 2
GEOLOGIC CROSS SECTIONS – SHEET 4 OF 4

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PROJECT NO.	REF. NO.	REV.
11162/13	6	0

FIGURE 2.9

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VANCOUVER B.C.
XREF FILE : -

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APPENDIX B

CONSTRUCTION QUALITY ASSURANCE CONTROL TEST SUMMARY SHEETS AND GRADATION PLOTS

APPENDIX B

CONSTRUCTION QUALITY ASSURANCE CONTROL TEST SUMMARY SHEETS AND GRADATION PLOTS

TABLE OF CONTENTS

TABLES

FIGURES

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TABLE B-1

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
TAILINGS STORAGE FACILITY

STAGE 2C CONSTRUCTION
ZONE S CONTROL TEST SUMMARY SHEET

M:\11162\13\Data\Stage 2C Lab\Zone S\summary\[C-ZS-SUM.xls]Summary Table 21-Aug-00

Date Sampled	Sample No.	Location	Elev. (m)	C1 Atterberg Limits PL %	LL %	PI %	C2 Lab m/c %	C3 (Particle Size Distribution) 152.4 6	76.2 3	50.8 2	38.1 1.5	25.4 1	19.05 0.750	12.7 0.500	9.525 0.375	4.75 #4	3.353 0.132	2 #10	1.191 0.047	0.85 #20	0.594 0.023	0.425 #40	0.25 #60	0.15 #100	0.075 #200 Clay	C4 Standard Proctor Max Dry Density kg/m³	Optimum m/c %	C6 Specific Gravity
								6	3	2	1 1/2	1	3/4	1/2	3/8	#4	#6	#10	#16	#20	#30	#40	#60	#100				
03-Sep-99	C/ZS-1	Borrow Area 2, Exc. Face	-	18	26	8	-	100.0	100.0	100.0	100.0	100.0	98.7	-	93.0	86.1	83.8	-	78.2	-	74.1	71.4	66.0	61.1	52.8	2015	11.2	-
22-Sep-99	C/ZS-2	Borrow Area 2, Exc. Face	-	17	27	10	11.6	100.0	100.0	100.0	94.8	92.1	91.0	-	85.6	79.5	77.2	-	71.5	-	67.4	64.6	-	54.3	45.8	2042	10.6	-
29-Nov-99	C/ZS-3	Borrow Area 2, Exc. Face	-	15	24	10	12.1	100.0	100.0	100.0	98.5	94.2	93.2	85.7	80.1	75.2	-	70.7	-	66.8	-	63.3	58.3	50.7	42.1	2180	7.6	2.649
08-Dec-99	C/ZS-4	Borrow Area 2, Exc. Face	-	15	25	10	11.7	100.0	94.6	-	90.9	86.5	82.8	78.6	75.9	71.9	-	67.1	-	62.5	-	58.5	53.4	48.0	39.8	2205	7.4	2.674
17-Dec-99	C/ZS-5	Borrow Area 4, Exc. Face	-	15	25	10	15.7	100.0	100.0	100.0	100.0	99.6	99.2	98.2	97.7	96.0	-	93.1	-	88.9	-	84.3	77.8	70.7	58.8	1982	11.6	2.624
09-Jan-00	C/ZS-6	Borrow Area 2, Exc. Face	-	15	24	8	11.7	100.0	100.0	94.3	92.7	90.7	88.4	85.3	83.4	79.6	-	74.9	-	69.5	-	64.2	57.8	51.2	41.1	2103	7.7	2.651
26-Jan-00	C/ZS-7	Borrow Area 2, Exc. Face	-	15	22	7	10.7	100.0	100.0	98.8	97.7	95.7	91.9	87.6	83.5	77.2	-	72.3	-	67.6	-	63.2	57.5	51.4	40.3	2136	7.5	2.627
04-Feb-00	C/ZS-8	Borrow Area 2, Exc. Face	-	14	23	9	13.5	100.0	100.0	97.4		95.8	94.9	92.4	90.4	87.0	-	82.4	-	77.9	-	73.5	67.6	60.7	47.6	2045	10.0	
19-Feb-00	C?ZS-9	Borrow Area 2, Exc. Face		16	23	8	10.6	100.0	100.0	100.0	100.0	98.1	96.6	92.6	90.1	83.4		77.7		73.1		69.1	64.1	58.8	46.7	2095	9.8	2.638
21-Feb-00	C/ZS-10	Borrow Area 2, Exc. Face		-	-	-	10.7	100.0	100.0	100.0	100.0	97.1	95.4		90.5	83.9	82.4		77.7		74.5	71.3	67.4	59.3	48.8	2040	9.5	-
		MEAN		15	24	9	12.0	100.0	99.5		97.2	95.0	93.0	88.6	87.0	82.0		76.9		72.3		68.3	63.3	56.6	46.4	2084	9.3	2.64
		MEDIAN		15	24	9	11.7	100.0	100.0		98.5	95.8	93.4	87.6	87.8	81.5		74.9		69.5		66.8	64.1	56.5	46.3	2070	9.7	2.64
		MAXIMUM		18	27	10	15.7	100.0	100.0		100.0	100.0	99.2	98.2	97.7	96.0		93.1		88.9		84.3	77.8	70.7	58.8	2205	11.6	2.67
		MINIMUM		14	22	7	10.6	100.0	94.6		90.9	86.5	82.8	78.6	75.9	71.9		67.1		62.5		58.5	53.4	48.0	39.8	1982	7.4	2.62

Notes:

1. Values for Standard Proctor maximum dry density and optimum moisture content include oversize correction.

C1 Atterberg Limits (ASTM D4318)
C2 Moisture Content (ASTM D2216)
C3 Particle Size Distribution (ASTM D422)
C4 Laboratory Compaction (ASTM D698)
C6 Bulk Specific Gravity (ASTM C127)

Revised on: 07-Jul-00
Revision 0

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CONSULTING

TABLE B-2

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
TAILINGS STORAGE FACILITY

STAGE 2C CONSTRUCTION
ZONE T CONTROL TEST SUMMARY SHEET

M:\11162\13\Data\Stage 2C Lab\Zone T\summary\[C-ZT-SUM.xls]summ table 21-Aug-00

Date Sampled	Sample No.	Location	Elev. (m)	C2 Field m/c %	C3 (Particle Size Distribution) 152.4	76.2	38.1	25.4	19.1	9.5	4.75	3.35	1.180	0.600	0.425	0.150	0.075
					Sieve Sizes												
					6	3	1 1/2	1	3/4	3/8	#4	#6	#16	#30	#40	#100	#200
03-Sep-99	C/ZT-1	Rock Borrow	-	-	100.0	85.0	68.3	59.9	52.0	40.9	30.9	26.6	15.4	9.0	6.3	2.1	1.1
03-Sep-99	C/ZT-2	Rock Borrow	-	-	100.0	85.0	79.6	74.2	70.9	57.2	42.5	36.0	19.4	12.0	9.1	4.5	1.9
03-Sep-99	C/ZT-3	Rock Borrow	-	-	100.0	85.0	59.1	49.1	41.4	28.2	19.1	15.8	8.3	5.0	3.5	1.4	0.7
		MEAN		-	100.0	85.0	69.0	61.1	54.8	42.1	30.8	26.1	14.4	8.7	6.3	2.7	1.2
		MEDIAN		-	100.0	85.0	68.3	59.9	52.0	40.9	30.9	26.6	15.4	9.0	6.3	2.1	1.1
		MAXIMUM		-	100.0	85.0	79.6	74.2	70.9	57.2	42.5	36.0	19.4	12.0	9.1	4.5	1.9
		MINIMUM		-	100.0	85.0	59.1	49.1	41.4	28.2	19.1	15.8	8.3	5.0	3.5	1.4	0.7

Notes:

C2 Moisture Content (ASTM D2216)

C3 Particle Size Distribution (ASTM D422)

Revised on: 07-Jul-00
Revision 0

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CONSULTING

TABLE B-3

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
TAILINGS STORAGE FACILITY

STAGE 2C CONSTRUCTION
ZONE F CONTROL TEST SUMMARY SHEET

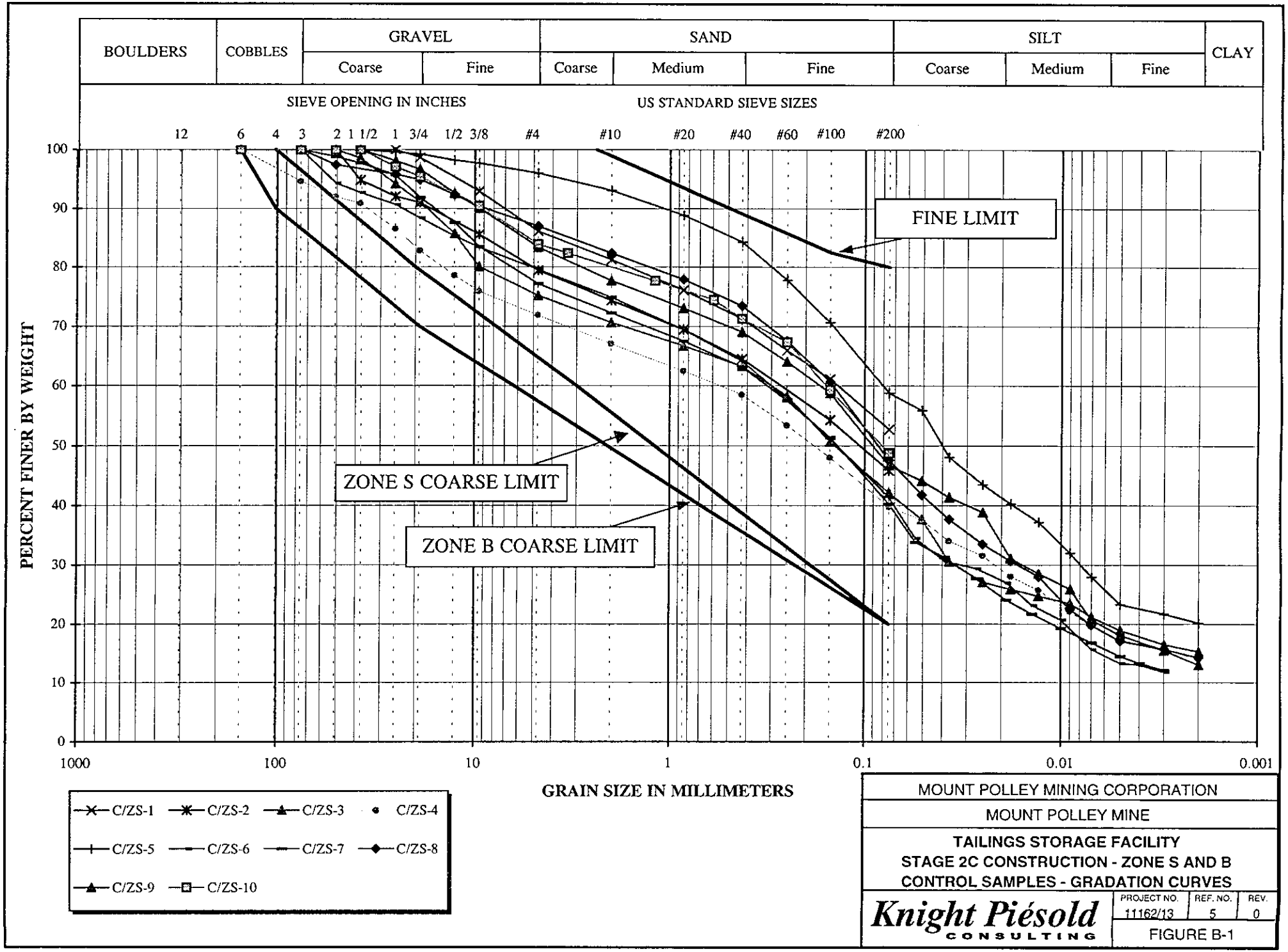
M:\11162\13\Data\Stage 2C Lab\Zone F\summary\[C-ZF-SUM.XLS]summ table 21-Aug-00

Date Sampled	Sample No.	Location	Elev. (m)	R2 Field m/c %	R3 (Particle Size Distribution) Sieve Sizes 76.2	38.1	25.4	19.1	9.5	4.75	1.7	1.180	0.600	0.425	0.150	0.075
					3	1 1/2	1	3/4	3/8	#4	#12	#16	#30	#40	#100	#200
-	C/ZFS-1	Main Embankment Stockpile	-	-	100.0	100.0	100.0	94.2	74.0	44.0	25.4	25.0	19.7	17.4	12.4	9.9
-	C/ZFS-2	Main Embankment Stockpile	-	-	100.0	100.0	100.0	92.9	70.7	37.8	22.4	19.3	15.7	14.1	10.6	8.7
-	C/ZFS-3	Main Embankment Stockpile	-	-	100.0	100.0	100.0	93.6	77.5	48.4	28.9	24.3	18.2	15.6	10.1	7.5
-	C/ZFS-4	Main Embankment Stockpile	-	-	100.0	100.0	100.0	91.5	71.3	40.3	23.1	19.3	14.5	12.4	7.9	5.8
-	C/ZFS-5	Main Embankment Stockpile	-	-	100.0	100.0	98.9	92.9	74.4	41.5	24.3	20.3	15.2	13.0	8.5	6.1
22-Oct-99	C/ZFS-6	Fine Ore Stockpile	-	-	100.0	100.0	100.0	98.2	71.4	41.2	15.3	11.5	7.9	6.4	3.7	1.8
		MEAN		-	100.0	100.0	99.8	93.9	73.2	42.2	23.2	19.9	15.2	13.2	8.9	6.6
		MEDIAN		-	100.0	100.0	100.0	93.3	72.7	41.4	23.7	19.8	15.5	13.6	9.3	6.8
		MAXIMUM		0.0	100.0	100.0	100.0	98.2	77.5	48.4	28.9	25.0	19.7	17.4	12.4	9.9
		MINIMUM		0.0	100.0	100.0	98.9	91.5	70.7	37.8	15.3	11.5	7.9	6.4	3.7	1.8

Notes:

R2 Moisture Content (ASTM D2216)

R3 Particle Size Distribution (ASTM D422)



MOUNT POLLEY MINING CORPORATION

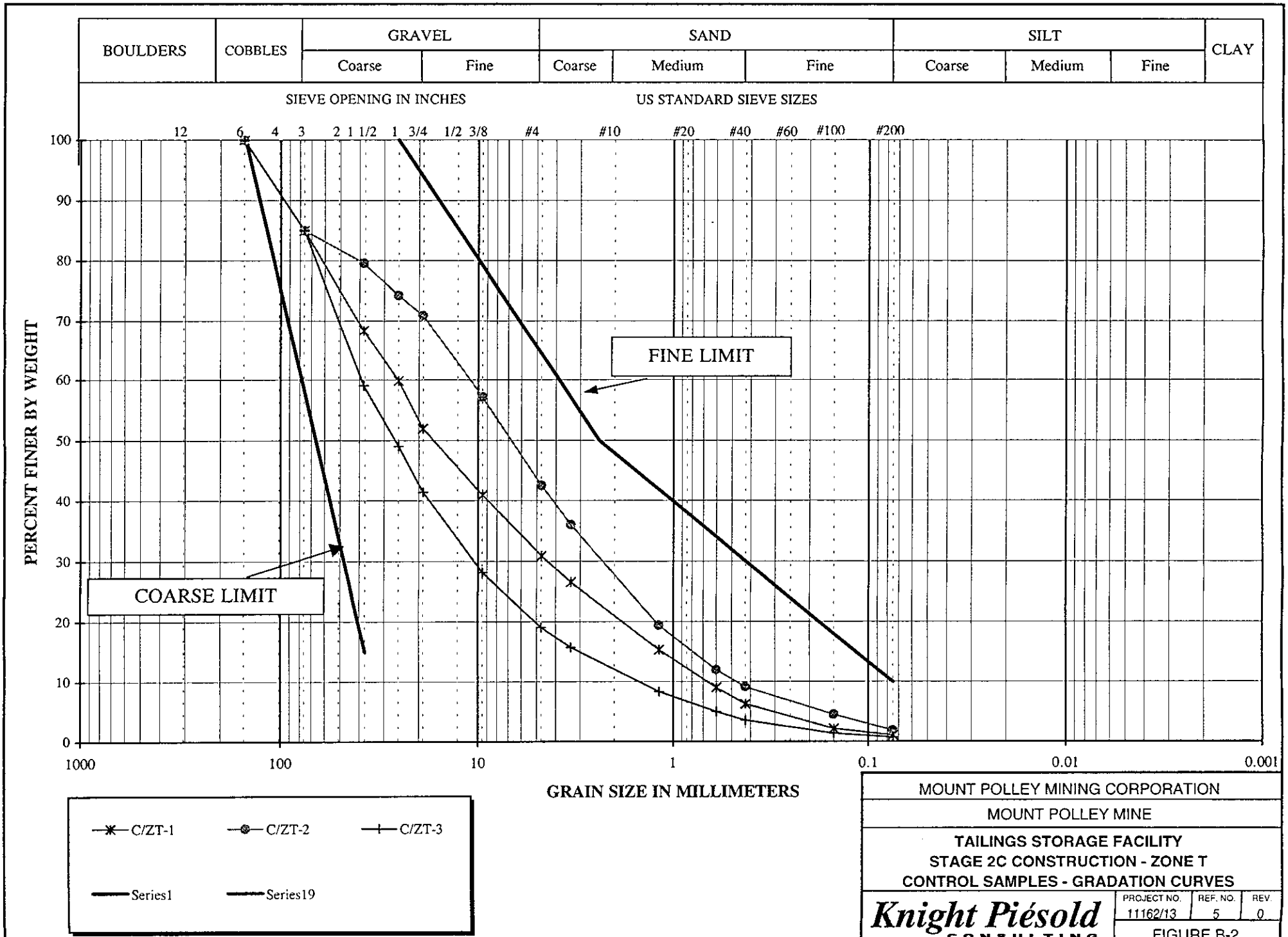
MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
STAGE 2C CONSTRUCTION - ZONE S AND B
CONTROL SAMPLES - GRADATION CURVES

Knight Piésold CONSULTING

PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE B-1



MOUNT POLLEY MINING CORPORATION

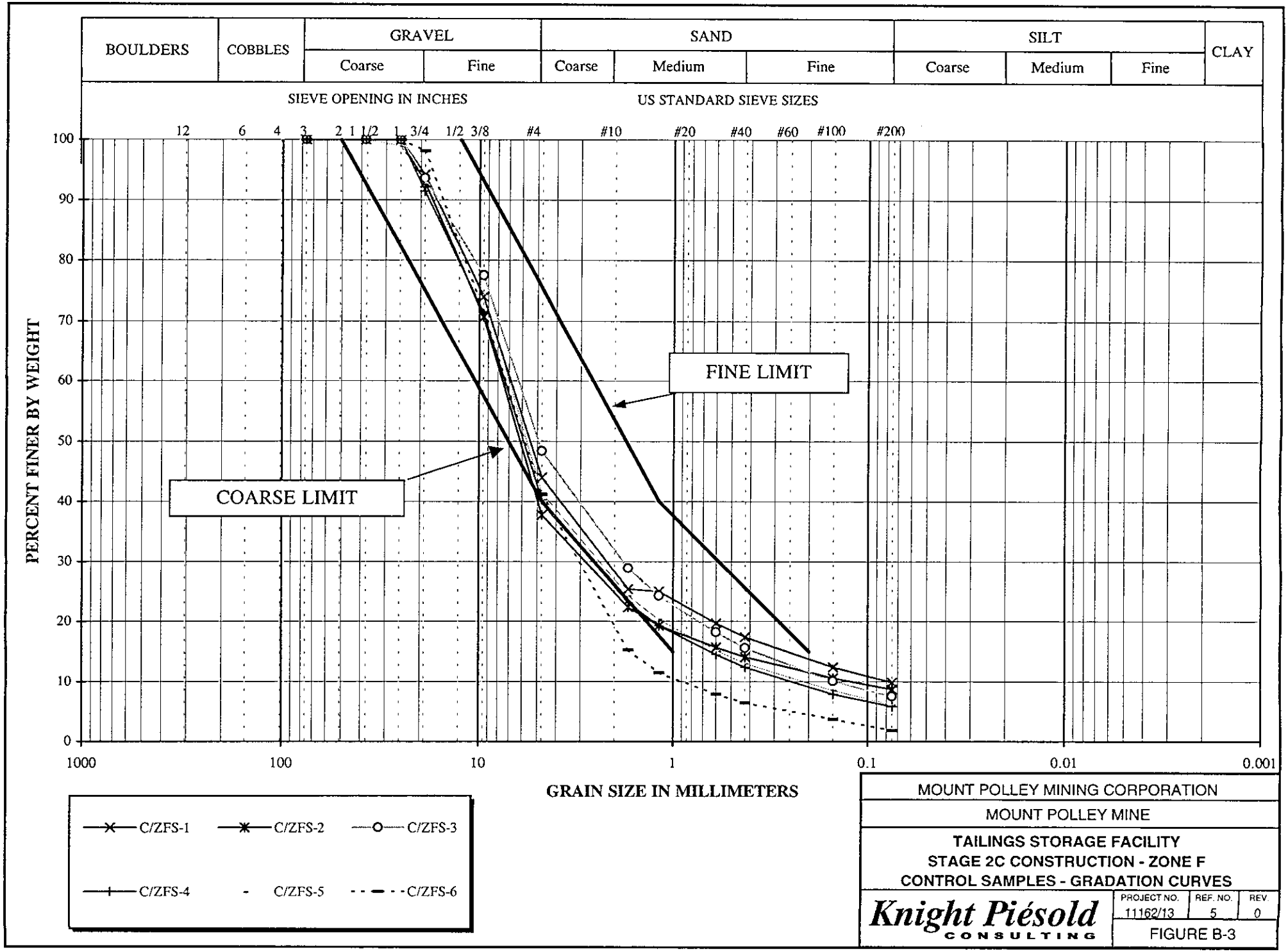
MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
STAGE 2C CONSTRUCTION - ZONE T
CONTROL SAMPLES - GRADATION CURVES

Knight Piésold CONSULTING

PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE B-2



MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
STAGE 2C CONSTRUCTION - ZONE F
CONTROL SAMPLES - GRADATION CURVES

Knight Piésold CONSULTING

PROJECT NO.	REF. NO.	REV.
11162/13	5	0

FIGURE B-3

APPENDIX C

CONSTRUCTION QUALITY ASSURANCE
RECORD TEST SUMMARY SHEETS

APPENDIX C

CONSTRUCTION QUALITY ASSURANCE RECORD TEST SUMMARY SHEETS

TABLE OF CONTENTS

TABLES

Knight Piésold
CONSULTING

TABLE C-1

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
TAILINGS STORAGE FACILITY

STAGE 2C CONSTRUCTION
ZONE S RECORD TEST SUMMARY SHEET

M:\1\1162\13\Data\Stage 2C Lab\Zone S\summary\[R-ZS-SUM.xls]Summary Table 21-Aug-00

Date Sampled	Sample No.	Location	Elev. (m)	R1 Atterberg Limits PL %	LL %	PI %	R2 Field m/c %	R3 (Particle Size Distribution) 152.4 6 6	76.2 3 3	50.8 2 2	38.1 1.5 1 1/2	25.4 1.000 1	19.05 0.750 3/4	12.7 0.500 1/2	9.525 0.375 3/8	4.75 #4 #4	2 #10 #10	0.85 #20 #20	0.425 #40 #40	0.25 #60 #60	0.15 #100 #100	0.075 #200 Clay	R4 Standard Proctor Max Dry Density kg/m³	Optimum m/c %	R6 Specific Gravity	R7 Field Density Dry Density kg/m³	Compaction %
05-Oct-99	R-ZS-1	Zone S fill - lift #2, CH 30+13	-	18	29	11	11.1	100.0	100.0	97.9	95.4	92.1	88.5	80.1	73.0	67.8	63.6	58.9	56.1	51.5	46.7	44.3	2165	8.8	-	2111	97.5
01-Nov-99	R-ZS-2	Zone S fill - lift #4, CH 31+38	-	16	28	11	11.5	100.0	100.0	98.0	97.0	95.7	93.7	90.0	85.4	80.3	75.1	70.7	66.6	60.9	53.1	45.0	2110	8.4	2.701	2084	98.8
27-Nov-99	R-ZS-3	Zone B fill - lift #4, CH 29+79	-	16	27	12	13.1	100.0	100.0	95.3	94.1	92.5	90.7	87.1	83.8	80.0	75.0	70.9	67.3	62.4	54.5	47.5	2075	9.0	-	2047	98.7
17-Dec-99	R-ZS-4	Zone S fill - Lift #2, CH 39+31	936.9	15	24	9	13.0	100.0	100.0	100.0	99.7	99.6	98.4	97.7	95.0	92.3	88.3	84.0	77.8	70.9	59.2	55.4	2030	10.8	-	2029	100.0
09-Jan-00	R-ZS-5	Zone S fill - Lift #4, CH 40+80	938.3	17	26	9	12.1	100.0	100.0	100.0	100.0	98.3	96.7	94.9	93.2	88.9	83.0	77.7	73.0	66.9	60.5	49.4	2006	10.4	-	2094	104.4
27-Jan-00	R-ZS-6[2]	Zone S fill - CH 29+69	940.7	15	22	7	11.8	100.0	100.0	98.4	96.7	91.4	86.8	81.3	77.9	71.6	65.8	60.9	56.7	51.5	46.2	36.8	2185	7.0	-	2048	93.7
04-Feb-00	R-ZS-7	Zone S fill - CH 38+62	939.5	13	20	7	9.0	100.0	95.8	-	91.8	89.2	86.2	80.7	76.1	70.7	65.9	61.8	58.0	53.1	47.3	36.7	2195	6.9	-	2110	96.1
17-Feb-00	R-ZS-8	Zone S fill - CH 27+60	940.6	15	22	7	12.1	100.0	100.0	100.0	97.4	94.1	91.9	88.4	84.6	80.6	76.8	73.5	70.2	64.7	56.2	46.3	2115	9.6		2084	98.5
25-Feb-00	R-ZS-9[3]	Zone S fill - CH 17+44	937.6	-	-	-	11.2	100.0	100.0	100.0	97.6	93.9	92.1	-	86.9	80.1	76.1	71.2	66.0	62.3	54.8	43.9	2080	9.8	-	2114	101.6
28-Feb-00	R-ZS-10[3]	Zone S fill - CH 15+70	939.0	-	-	-	11.7	100.0	100.0	100.0	100.0	98.8	97.3	-	92.9	88.4	83.4	79.0	74.5	70.0	64.5	53.2	2020	10.8	-	2010	99.5
06-Mar-00	R-ZS-11	Zone B fill - CH 17+50	941.0	15	23	8	12.0	100.0	100.0	97.0	95.9	93.3	92.2	90.7	90.1	87.0	82.6	78.1	73.6	66.8	60.4	48.3	2070	10.0	-	2027	97.9
		MEAN		16	25	9	11.7	100.0	99.6	98.7	96.9	94.4	92.2	87.9	85.4	80.7	76.0	71.5	67.3	61.9	54.9	46.1	2096	9.2	2.70	2069	98.8
		MEDIAN		15	24	9	11.8	100.0	100.0	99.2	97.0	93.9	92.1	88.4	85.4	80.3	76.1	71.2	67.3	62.4	54.8	46.3	2080	9.6	2.70	2084	98.7
		MAXIMUM		18	29	12	13.1	100.0	100.0	100.0	100.0	99.6	98.4	97.7	95.0	92.3	88.3	84.0	77.8	70.9	64.5	55.4	2195	10.8	2.70	2114	104.4
		MINIMUM		13	20	7	9.0	100.0	95.8	95.3	91.8	89.2	86.2	80.1	73.0	67.8	63.6	58.9	56.1	51.5	46.2	36.7	2006	6.9	2.70	2010	93.7

Notes:

1. Values for Standard Proctor maximum dry density and optimum moisture content include oversize correction.

R1 Atterberg Limits (ASTM D4318)
R2 Moisture Content (ASTM D2216)
R3 Particle Size Distribution (ASTM D422)
R4 Laboratory Compaction (ASTM D1557)
R6 Bulk Specific Gravity (ASTM C127)
R7 Field Density by Nuclear Methods (ASTM D2922)

2. Field dry density of R-ZS-6 is 2048 kg/m³ or 93.7% of the Standard Proctor Maximum. The average of 16 field density tests taken in the same lift is 2094 kg/m³ or 95.9%. The lift was approved on the basis of these results.

3. Samples tested by KP personnel in MPMC soils lab.

Revised on: 07-Jul-00
Revision 0

Knight Piésold
CONSULTING

TABLE C-2

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
TAILINGS STORAGE FACILITY

STAGE 2C CONSTRUCTION
ZONE CS RECORD TEST SUMMARY SHEET

M:\1116213\Data\Stage 2C Lab\Zone CS\summary\[R-ZCS-SUM.xls]sum table

21-Aug-00

Date Sampled	Sample No.	Location on Embankment	Elev. (m)	R1 Atterberg Limits PL %	LL %	PI %	R2 Field m/c %	R3 (Particle Size Distribution) Grain Size in mm 1.00	0.85	0.60	0.43	0.30	0.212	0.150	0.106	0.075	0.045	0.037
								U.S. Standard Seive Sizes #16	#20	#28	#35	#48	#65	#100	#150	#200	#325	#400
-	R/ZCS1-1	17+00 TOP	-	-	-	-	-	100.0	99.94	99.79	98.06	92.41	76.65	62.35	45.06	33.59	19.92	16.32
-	R/ZCS1-2	18+75 TOP	-	-	-	-	-	100.0	99.80	99.18	94.85	81.95	61.73	43.20	30.95	22.85	14.8	12.3
-	R/ZCS1-3	20+75 TOP	-	-	-	-	-	100.0	99.9	99.8	98.7	93.4	76.7	54.9	39.7	29.9	18.7	15.8
-	R/ZCS1-4	17+00 MID	-	-	-	-	-	100.0	100.0	99.8	98.9	94.8	74.7	51.1	37.9	27.6	15.9	13.4
-	R/ZCS1-5	24+00 MID	-	-	-	-	-	100.0	99.8	99.5	98.7	94.5	76.3	50.5	34.1	24.1	14.5	11.6
-	R/ZCS1-6	18+75 MID	-	-	-	-	-	100.0	99.1	97.9	92.4	78.8	58.3	40.5	28.9	22.0	14.3	12.2
-	R/ZCS1-7	20+75 MID	-	-	-	-	-	100.0	99.9	99.6	97.8	91.3	69.6	45.7	32.6	23.6	13.6	11.9
-	R/ZCS1-8	17+00 BTM	-	-	-	-	-	100.0	100.0	99.9	99.1	94.4	72.5	45.5	31.3	21.9	13.5	11.1
-	R/ZCS1-9	18+75 BTM	-	-	-	-	-	100.0	99.2	97.5	90.8	79.3	59.3	41.5	29.5	23.0	15.3	13.3
-	R/ZCS1-10	20+75 BTM	-	-	-	-	-	100.0	99.9	99.6	98.5	92.9	72.9	47.0	30.1	21.4	14.6	10.6
-	R/ZCS1-11	24+00 BTM	-	-	-	-	-	100.0	99.7	99.3	97.8	90.6	67.1	42.2	29.3	20.7	13.6	10.5
19-Aug-99	R/ZCS1-12	22+40, 15m U/S SoL	939.0	-	-	-	11.6	100.0	100.0	99.9	99.4	96.4	82.6	60.3	42.1	30.6	17.7	15.5
19-Aug-99	R/ZCS1-13	20+00, 10m U/S SoL	940.0	-	-	-	3.3	100.0	99.9	99.6	98.0	91.5	71.0	50.0	34.7	25.0	14.2	12.3
01-Mar-00	R/ZCS(B)-1	17+90	939.5	-	-	-	11.8	99.7		99.4	98.7		77.0	47.7	35.0	23.0	9.5	7.5
	20" Cyclone Average	-	-	-	-	-	-	100.0	99.9	99.8	99.4	96.8	87.8	64.6	40.7	26.0	15.4	12.1
		MEAN		-	-	-	8.9	100.0	99.8	99.4	97.4	90.6	72.3	49.8	34.8	25.0	15.0	12.4
		MEDIAN		-	-	-	11.6	100.0	99.9	99.6	98.5	92.6	72.9	47.7	34.1	23.6	14.6	12.2
		MAXIMUM		0.0	0.0	0.0	11.8	100.0	100.0	99.9	99.4	96.8	87.8	64.6	45.1	33.6	19.9	16.3
		MINIMUM		0.0	0.0	0.0	3.3	99.7	99.1	97.5	90.8	78.8	58.3	40.5	28.9	20.7	9.5	7.5

Date Sampled	Sample No.	Location on Embankment	Elev. (m)	R4 Standard Proctor Max Dry Density kg/m³	Optimum m/c %	R6 Specific Gravity	R7 Field Density Dry Density kg/m³	m/c %	Compaction %
-	R/ZCS1-1	17+00 TOP	-	-	-	-	-	-	-
-	R/ZCS1-2	18+75 TOP	-	-	-	-	-	-	-
-	R/ZCS1-3	20+75 TOP	-	-	-	-	-	-	-
-	R/ZCS1-4	17+00 MID	-	-	-	-	-	-	-
-	R/ZCS1-5	24+00 MID	-	-	-	-	-	-	-
-	R/ZCS1-6	18+75 MID	-	-	-	-	-	-	-
-	R/ZCS1-7	20+75 MID	-	-	-	-	-	-	-
-	R/ZCS1-8	17+00 BTM	-	-	-	-	-	-	-
-	R/ZCS1-9	18+75 BTM	-	-	-	-	-	-	-
-	R/ZCS1-10	20+75 BTM	-	-	-	-	-	-	-
-	R/ZCS1-11	24+00 BTM	-	-	-	-	-	-	-
19-Aug-99	R/ZCS1-12	22+40, 15m U/S SoL	939.0	1675	17.3	-	1621	11.6	96.8
19-Aug-99	R/ZCS1-13	20+00, 10m U/S SoL	940.0	1720	17.0	-	1619	3.3	94.1
01-Mar-00	R/ZCS(B)-1	17+90	939.5	1730	15.5		1704	11.8	98.5
	20" Cyclone Average	-	-	-	-	-	-	-	-
		MEAN		1708	16.6	#DIV/0!	1648	8.9	96.5
		MEDIAN		1720	17.0	#NUM!	1621	11.6	96.8
		MAXIMUM		1730	17.3	0.00	1704	11.8	98.5
		MINIMUM		1675	15.5	0.00	1619	3.3	94.1

Notes:

1. Values for Standard Proctor maximum dry density and optimum moisture content include oversize correction.

R1 Atterberg Limits (ASTM D4318)
R2 Moisture Content (ASTM D2216)
R3 Particle Size Distribution (ASTM D422)
R4 Laboratory Compaction (ASTM D1557)
R6 Specific Gravity (ASTM D854)
R7 Density by Nuclear Methods (ASTM D2922)

Revised on: 01-Jul-00
Revision 0

Knight Piésold
CONSULTING

TABLE C-3

MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
TAILINGS STORAGE FACILITY

STAGE 2C CONSTRUCTION
ZONE F RECORD TEST SUMMARY SHEET

M:\11162\13\Data\Stage 2C Lab\Zone F\summary\[R-ZF-SUM.xls]summ table 25-Aug-00

Date Sampled	Sample No.	Location	Elev. (m)	R2 Field m/c %	R3 (Particle Size Distribution) Sieve Sizes 76.2 / 3	38.1 / 1 1/2	25.4 / 1	19.1 / 3/4	9.5 / 3/8	4.75 / #4	1.7 / #12	1.180 / #16	0.600 / #30	0.425 / #40	0.150 / #100	0.075 / #200
26-Oct-99	R/ZF-1	M.E. u/s toe drain CH 25+00	-	-	100.0	100.0	100.0	97.3	68.8	49.5	28.9	23.0	14.9	11.2	5.7	1.8
26-Oct-99	R/ZF-2	M.E. u/s toe drain CH 21+50	-	-	100.0	100.0	100.0	93.8	56.4	34.6	18.6	14.8	10.1	8.0	4.6	2.6
26-Oct-99	R/ZF-3	M.E. u/s toe drain CH 18+00	-	-	100.0	100.0	100.0	100.0	81.4	54.4	26.6	19.2	11.9	9.4	4.7	1.9
		MEAN		-	100.0	100.0	100.0	97.0	68.9	46.2	24.7	19.0	12.3	9.5	5.0	2.1
		MEDIAN		-	100.0	100.0	100.0	97.3	68.8	49.5	26.6	19.2	11.9	9.4	4.7	1.9
		MAXIMUM		-	100.0	100.0	100.0	100.0	81.4	54.4	28.9	23.0	14.9	11.2	5.7	2.6
		MINIMUM		-	100.0	100.0	100.0	93.8	56.4	34.6	18.6	14.8	10.1	8.0	4.6	1.8

Notes:

1. R2 Moisture Content (ASTM D2216) R3 Particle Size Distribution (ASTM D422)
2. R/ZFS-2 slightly exceeds coarse limit for Zone FS. Material satisfies filter relationship with adjacent materials and was approved as discussed in Progress Report No. 5.

APPENDIX D

STAGE 2C CONSTRUCTION PHOTOS

Photo No. 1: Fill placement at the Perimeter Embankment.

Photo No. 2: Upstream cycloned sand fill at the Main Embankment.

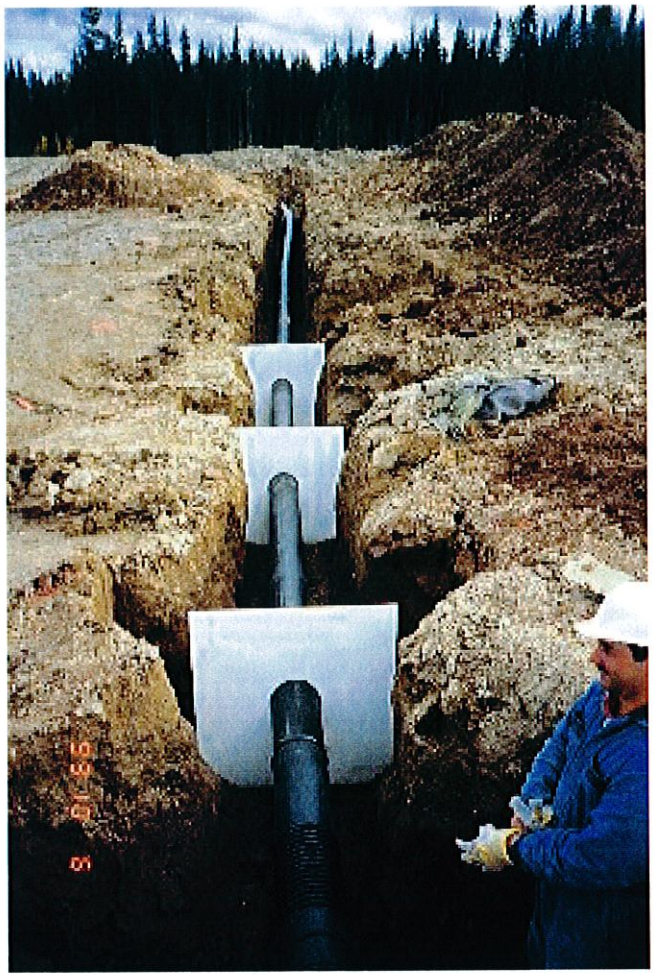


Photo No. 3: Upstream toe drain outlet with prefabricated seepage collars.

Photo No. 4: Upstream toe drain outlet. Backfill around the downstream seepage collars consisted of bentonite-modified till and filter sand.

Photo No. 5: Upstream cycloned sand fill at the Perimeter Embankment.

Photo No. 6: Perimeter Embankment upstream toe drain (to be installed later) will tie into the exposed pipe.

Photo No. 7: Upstream toe drain outlet pipe.

Photo No. 8: Density testing of Zone S fill.

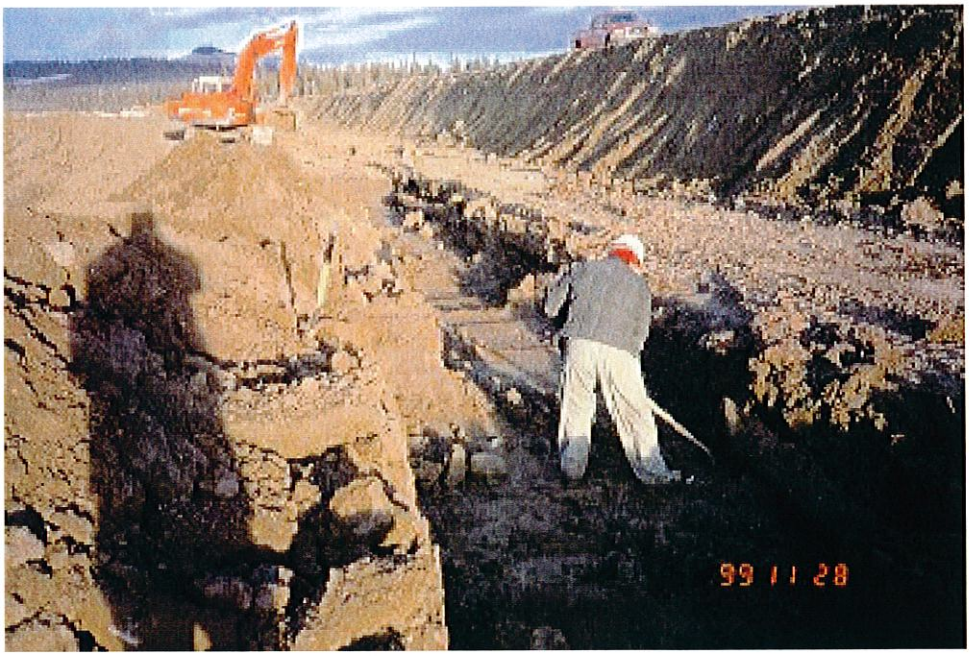


Photo No. 9: Trench for blank CPT pipe connecting Main and Perimeter Embankment upstream toe drains.

Photo No. 10: Borrow Area No. 2.

Photo No. 11: Removing snow and ice in preparation for fill placement.

Photo No. 12: Backfilling basin liner trench.

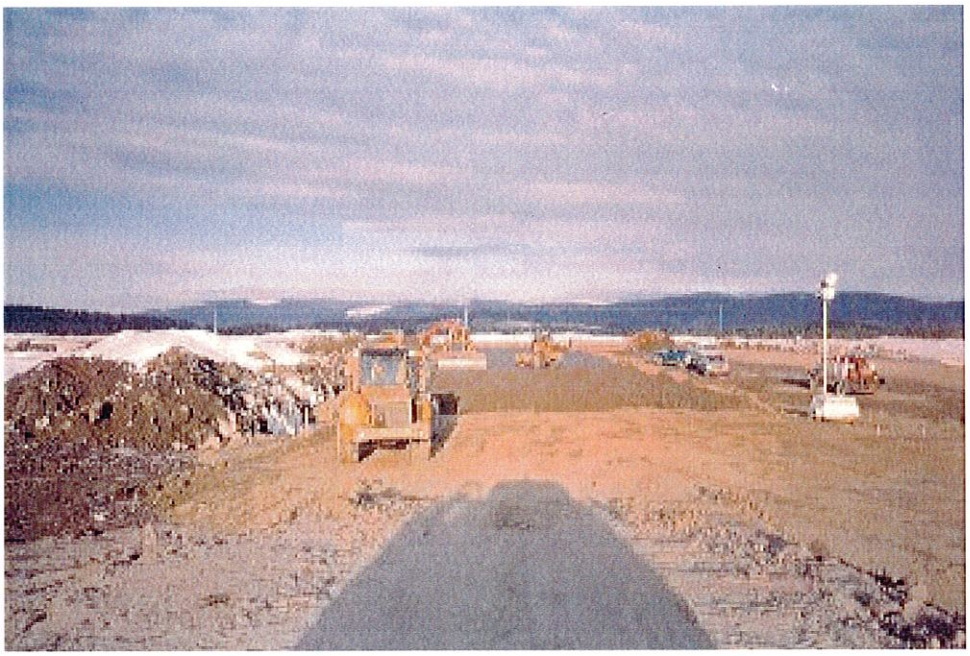


Photo No. 13: Fill placement at the Main Embankment.

Photo No. 14: Mechanical placement of cycloned sand in the upstream fill of the Main Embankment.

Photo No. 15: Tailings line reinstated on the crest of the Perimeter Embankment.

APPENDIX E

STAGE 2C DESIGN MODIFICATIONS

Knight Piésold
CONSULTING

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Fax: +1 (604) 687-2203

DATE:	24 September, 1999	FILE NO.:	11162/10.06
TIME:		REF NO.:	9/2393
OPERATOR:		PAGES:	1 of 5
SENDER:	Leon Gous	APPROVED:	KB

TO:	Mount Polley Mine	FAX :	
ATTN:	Ian Manning - Knight Piésold Site Engineer		
SUBJECT:	Design Change Requests		

Dear Ian,

The attached three design changes have been approved with one amendment. The vertical risers that were proposed for the upstream toe drain outlets introduce too much rigidity in the system and the pipe could shear under differential settlement. Instead, a "sweeping bend" could be used to accommodate elevation differences. The sweeping bend or horizontal elbow are flexible in the plane of expected forces and would accommodate settling without damage to the pipe. This need for making up an elevation difference between the toe drain and the outlet should not be required any more as the toe drain is going to be installed first at a known elevation (936 m) and the outlet should, therefore, be installed accordingly. You should send in a design change request for the revised upstream toe drain installation as I discussed with Eric yesterday.

If you need clarification, please contact me.

Best Regards,

Leon Gous, P.Eng.

The content of this communication is confidential. If you are not the intended recipient, please notify us immediately. Unauthorized use or disclosure of this communication or its content is unlawful.

FILE NO.: 11162/10.F01/F05

DATE: 17-Sept-99

REQUEST FOR APPROVAL BY DESIGN OFFICE OF CHANGE / SUBSTITUTION

PROJECT: Mt. Polley - Stage 2C Construction PROJECT NO.: 11162/10

AREA OF WORK: South-East end of Perimeter & Main Embankments

GENERAL DESCRIPTION OF PROPOSED WORK:

Zone B specification compacted till to be placed between embankment Zones S and Zone T haul road (approx CH 26+50 to CH 32+50) instead of specified Zone T, and also placed within u/s Zone originally specified as mechanically placed Zone CS cycloned sand (approx. CH 26+50 to CH 33+00

Please review the proposed change / substitution as per the attached sheets.

No. of Sheets: 2

Reference Drawings / Clauses: KP Drgs. 11162-10-120 (Rev.0)
11162-10-121 (Section 4) (Rev.0)

Signed: Originator: Ian Manning

FOR VANCOUVER OFFICE USE ONLY

Date Received: 21 September 99

Proposed change / substitution not approved: ____

approved as submitted: ✓

approved as amended: ____

No. of sheets attached: ____ (amendments only)

Signed: Engineer: Leon Bens Director: K Brown

Date Returned: Sept 24, 1999

Knight Piesold Ltd.
1400 - 750 West Pender Street
Vancouver, B.C. V6C 2T8
Phone: (604) 685-0543
Fax: (604) 685-0147

Notes:
1. Originator to keep a copy of all submissions and attachments.
2. Vancouver office to keep a file copy of completed request form with attachments, marked up as described above.

FILE NO.: 11162/12.F01/F05 DATE: 17-Sept.-99

REQUEST FOR APPROVAL BY DESIGN OFFICE OF CHANGE / SUBSTITUTION

PROJECT: Mt. Polley - Stage 3 Design PROJECT NO.: 11162/12

AREA OF WORK: D/S Trial Berm

GENERAL DESCRIPTION OF PROPOSED WORK:

- Re-orientation of the trial cycloned sand berm to the southeast. Shape of berm modified, as shown on attached sketch. Undrained piezo plane (F) to remain zero right of drained plane (D), as per original design. This design change supercedes previous design change request submitted on 17-Aug-99.

Please review the proposed change / substitution as per the attached sheets.

No. of Sheets: 1

Reference Drawings / Clauses: Figure 2, ref. 11162/12.01, 9/1883 July 7/99

Signed: Originator: Ian Mannyng

FOR VANCOUVER OFFICE USE

Date Received: 21 September 99

Proposed change / substitution not approved: ____

approved as submitted: ✓

approved as amended: ____

No. of sheets attached: ____ (amendments only)

Signed: Engineer: L A Davis Director:

Date Returned: Sep 24, 1999

Knight Piesold Ltd.
1400 - 750 West Pender Street
Vancouver, B.C. V6C 2T8
Phone: (604) 685-0543
Fax: (604) 685-0147

Notes:
1. Originator to keep a copy of all submissions and attachments.
2. Vancouver office to keep a file copy of completed request form with attachments, marked up as described above.

FILE NO.: 11162/10.F01/F05 DATE: 20-Sept-99

REQUEST FOR APPROVAL BY DESIGN OFFICE OF CHANGE / SUBSTITUTION

PROJECT: Mt. Polley - Stage 2c Construction PROJECT NO.: 11162/10

AREA OF WORK: Upstream toe drain outlet pipes (4), at Main & Perimeter Embankments

GENERAL DESCRIPTION OF PROPOSED WORK:

Outlet pipe trenches to be excavated to 600mm x 600mm, and to 800mm depth x 1200mm width in areas of filter sand backfill. Upstream end of outlet pipes to incorporate a vertical riser section, which connects to U/S toe drains. Concrete backfill to be incorporated around two U/S seepage collars. Polyvalvet corrugated pipe to be incorporated in upstream sections of pipe between seepage collars. HDPE pipe to be used 500mm on either side of seepage collars, and downstream of Zone S fill area.

Please review the proposed change / substitution as per the attached sheets.

No. of Sheets: 1

Reference Drawings / Clauses: 11162-10-125

Signed: Originator: Ian Manning

FOR ENGINEER'S USE

Date Received: 21 September 99

Proposed change / substitution not approved: _____

approved as submitted: _____

approved as amended: Note 8 not approved - no vertical riser - connect with flexible connection such as horizontal elbow

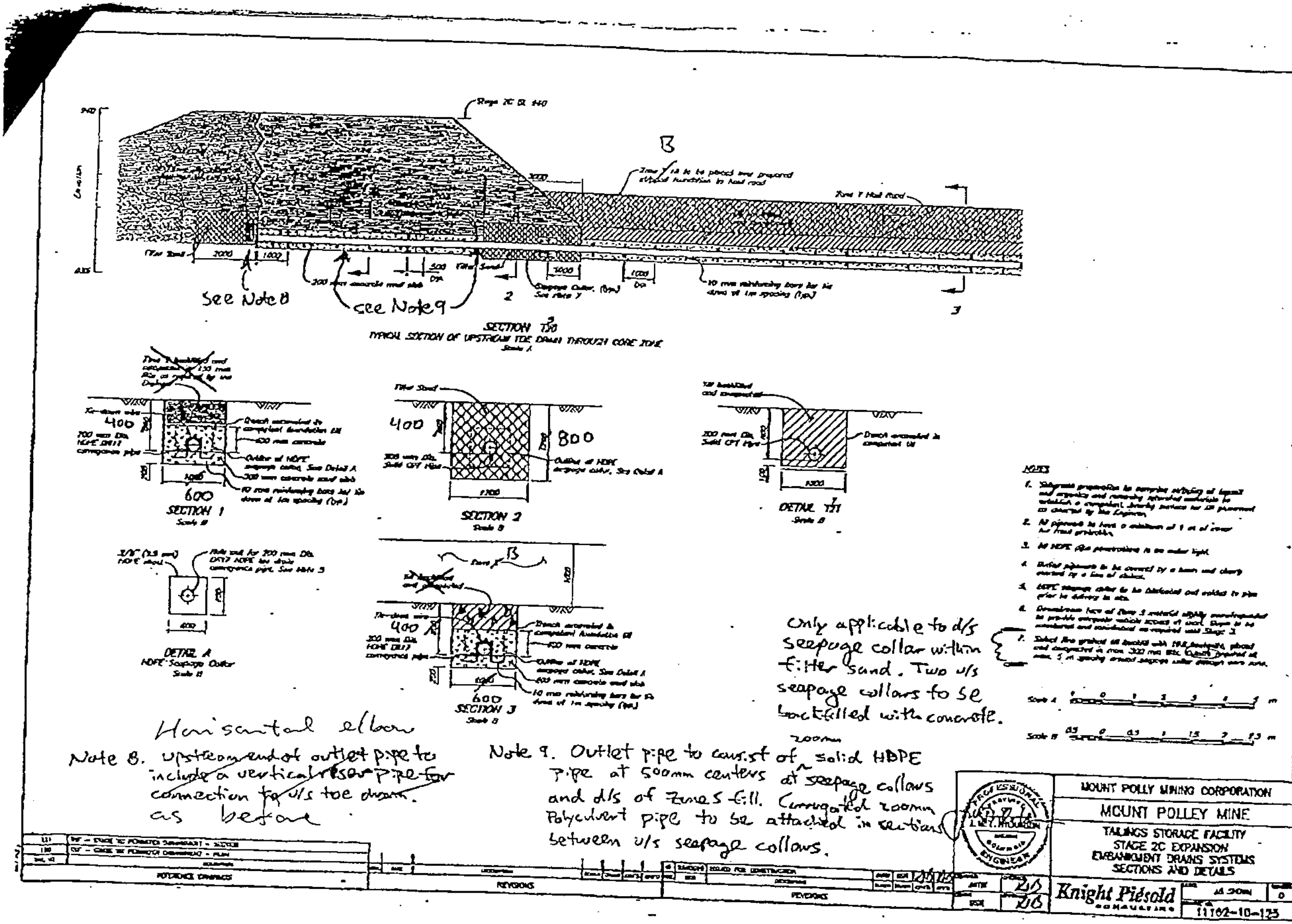
No. of sheets attached: 1 (amendments only)

Signed: Engineer: L.A. Gons Director: J. Brown

Date Returned: Sep 24, 1999

Knight Piesold Ltd.
1400 - 750 West Pender Street
Vancouver, B.C. V6C 2T8
Phone: (604) 685-0543
Fax: (604) 685-0147

Notes:
1. Originator to keep a copy of all submissions and attachments.
2. Vancouver office to keep a file copy of completed request form with attachments, marked up as described above.


B
See Note 8
see Note 9
SECTION 1/30
TYPICAL SECTION OF UPSTREAM TOE DRAIN THROUGH CORE ZONE
400
600
SECTION 1
400
800
SECTION 2
DETAIL 1/31
DETAIL A
HDPE Seepage Collar
B
400
600
SECTION 3
NOTES
Only applicable to d/s seepage collar within filter sand. Two u/s seepage collars to be backfilled with concrete.
Horizontal elbow
Note 8. Upstream end of outlet pipe to include a vertical riser pipe for connection to u/s toe drain. as before
Note 9. Outlet pipe to consist of 200mm solid HDPE pipe at 500mm centers at seepage collars and d/s of Zone S fill. Corrugated 200mm Polyculvert pipe to be attached in sections between u/s seepage collars.
MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
TAILINGS STORAGE FACILITY
STAGE 2C EXPANSION
EMBANKMENT DRAINS SYSTEMS
SECTIONS AND DETAILS
Knight Piésold
CONSULTING
AS SHOWN
11162-10-125

Knight Piésold
CONSULTING

Knight Piésold Ltd.
1400 - 750 West Pender St. Tel: +1 (604) 685-0543
Vancouver, BC V6C 2T8 Fax: +1 (604) 685-0147
CANADA Fax: +1 (604) 687-2203

DATE:	October 7, 1999	FILE NO:	11162/10.01
TIME:	14:05	REF. NO.:	9/2448
OPERATOR:		PAGES:	1 of 3
SENDER:	John Wilkinson, P.Eng.	APPROVED:	

TO:	Mt. Polley Mining Corporation	FAX:	250.790.2268.
ATTN:	Leon Gous (Knight Piésold)	cc:	
SUBJECT:	Design Change Request		

Leon,

Attached is a design change request originally submitted by Ian. Hope all's well.

Best regards,

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FILE NO.: 11162/10.F01/F05

DATE: 27-Sept.-99

REQUEST FOR APPROVAL BY DESIGN OFFICE OF CHANGE / SUBSTITUTION

PROJECT: Mt. Polley Stage 2C Construction

PROJECT NO.: 11162/10

AREA OF WORK: Upstream Toe Drain

GENERAL DESCRIPTION OF PROPOSED WORK:

Request for design change re: location of upstream toe drain along Main and Perimeter Embankments. Toe drain to be relocated downstream of original design location, above Stage 2A U/S bench. Toe drain pipe to be bedded above 150mm layer of Zone FS filter sand, with a minimum 1000mm of Zone FS filter sand above pipe. Nominal ~~hand~~ compaction to be carried out ~~around~~ with vibratory roller following placement of 1000mm Zone FS above pipe. The Zone CS cycloned sand / Zone S core contact to initially slope upstream such that approximate 1000mm of Zone CS exists above pipe. This contact will then extend vertically upward to allow for the designed 6m wide Stage 2C crest @ El. 940m.

Please review the proposed change / substitution as per the attached sheets.

No. of Sheets: 1

Reference Drawings / Clauses: KP Drg. No. 11162-10-111 (also applies to 11162-10-121)

Signed: [signature]

Originator: Ian Manning

FOR VANCOUVER OFFICE USE

Date Received: Oct. 1. 1999.

Proposed change / substitution not approved: ______

approved as submitted: JMTW. Recognized that Zone 'A' compacted till material has similar permeability as Zone 'S' core zone

approved as amended: ______

No. of sheets attached: ______ (amendments only)

Signed: Engineer: [signature] Director: [signature]

Date Returned: Oct. 7. 99

Knight Piesold Ltd.
1400 - 750 West Pender Street
Vancouver, B.C. V6C 2T8
Phone: (604) 685-0543
Fax: (604) 685-0147

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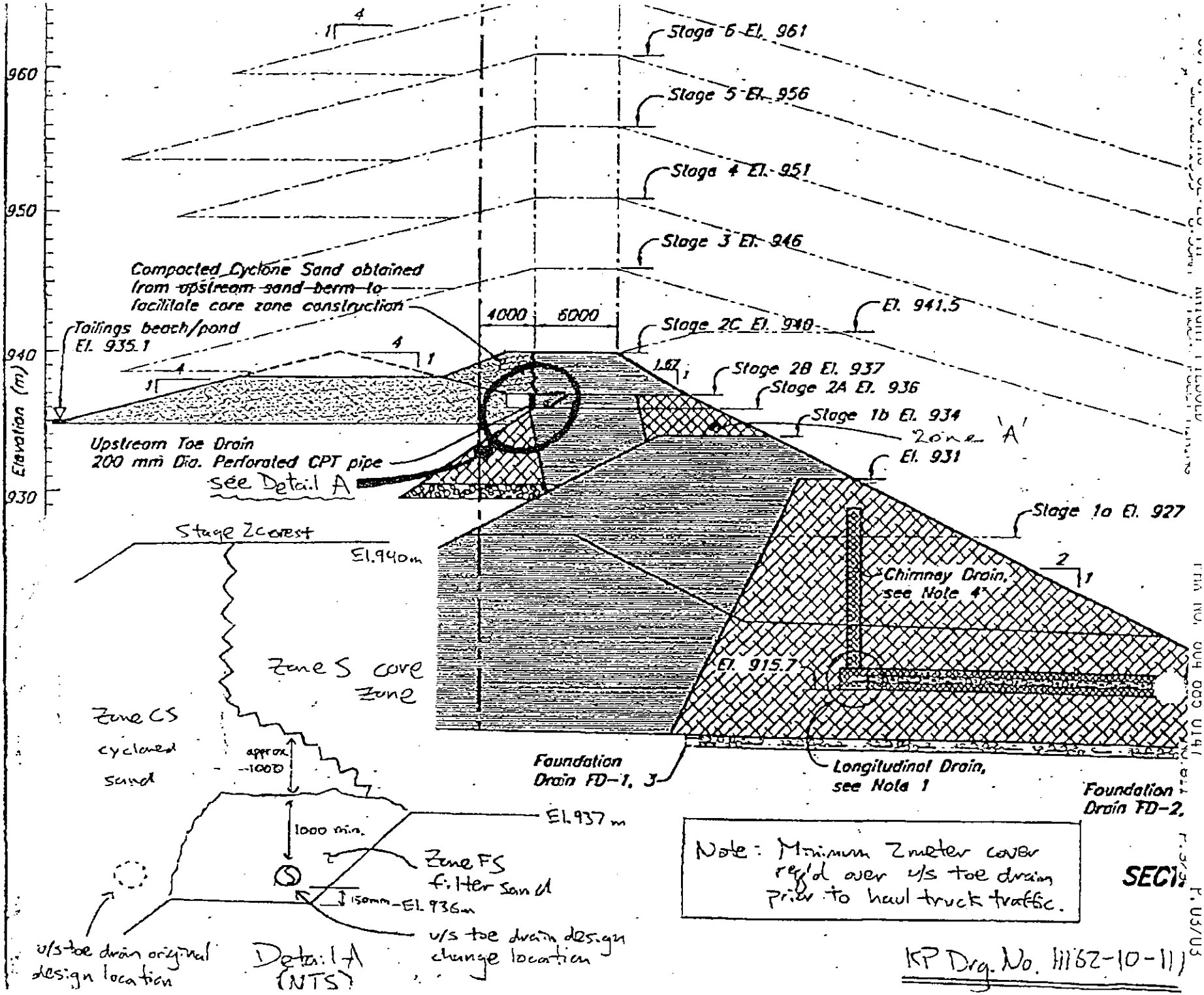

RECEIVED TIME OCT. 7. 2:18PM PRINT TIME OCT. 7. 2:20PM

Knight Piésold
CONSULTING

Knight Piésold Ltd.
1400 - 750 West Pender St. Tel: +1 (604) 685-0543
Vancouver, BC V6C 2T8 Fax: +1 (604) 685-0147
CANADA Fax: +1 (604) 687-2203

DATE:	October 15, 1999	FILE NO:	11162/10.01
TIME:	9:00	REF. NO.:	9/2485
OPERATOR:		PAGES:	1 of 6
SENDER:	Ian Manning	APPROVED:	DB.

TO:	Mt. Polley Mining Corporation	FAX:	
ATTN:	Leon Gous (Knight Piésold)	cc:	
SUBJECT:	Design Change Request		

Leon,

Attached is your submitted design change request, which has been approved as amended. The approved design change is described as follows:

- Doze existing cycloned sand piles along u/s Perimeter embankment, to maximum sand El. 937m.
- From Perimeter embankment left abutment to approximate CH 33+00, place u/s Zone T rockfill coarse bearing layer to El. 937m, filling in all locations along u/s edge in which no cycloned sand has been discharged, as well as creating a trafficable driving surface in locations of dozed sand. There may be locations along the cycloned sand portions of this length in which no coarse bearing layer material is required.
- As shown on the attached sketch, the coarse bearing layer is to extend 4.5 metres upstream of the setting-out line, which will allow for an approximate 2 metre Zone T bench u/s of the Stage 2C Zone B toe. The coarse bearing layer will be placed d/s to meet the existing Stage 2B u/s crest.
- As shown on your design change request, Zone B material will be placed and compacted to replace the u/s cycloned sand fill for Stage 2C Perimeter embankment construction. The Zone B crest will extend 2 metres u/s of the Zone B/S contact, and will be constructed with a 1.5H:1V u/s face slope.
- A section of the perforated upstream toe drain has been temporarily removed from the design, along the length from the Perimeter embankment left abutment to approximate CH 33+00. As shown on the original design, this perforated drain is to be located between the Perimeter embankment u/s toe drain outlet pipe locations, as shown on KP Drawing No. 11162-10-120. During future construction, this section of u/s toe drain will be reinstated adjacent to u/s cycloned sand materials.
- For Stage 2C construction, the u/s perforated toe drain along the Main embankment, and the u/s solid toe drain between the Main and Perimeter embankments will be constructed as per the current design. The u/s toe drain outlet pipes along the left and right abutments of the Main embankment, as well as the right abutment of the Perimeter embankment will also be installed. The outlet pipe at the left Perimeter

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embankment abutment will not be required until the Perimeter embankment u/s perforated toe drain is installed.

- Regarding the Perimeter embankment right abutment outlet pipe, this installation should be made prior to additional Stage 2C fill placement. At the upstream end of this pipe, the T-fitting will connect to the solid toe drain pipe on the Main embankment side. The other side of this fitting will be used to connect the Perimeter embankment u/s toe drain at a later date. In order to maintain access to this outlet pipe with on-going construction, a flexible section of non-perforated drain pipe should be extended upstream of this outlet pipe T-connection. This flexible pipe will be routed upwards through the Zone B fill material, and will be end-capped and clearly marked to avoid damage to the pipe. During future embankment construction, this flexible pipe will be attached to the Perimeter embankment u/s toe drain.

Please also find attached Table summarizing revised Stage 2C embankment fill quantities. Please call if you require additional information.

Best regards,

FILE NO.: 11162/10-12.F01 DATE: 13 Oct 99

REQUEST FOR APPROVAL BY DESIGN OFFICE
OF CHANGE / SUBSTITUTION

PROJECT: Mount Polley Mine PROJECT NO.: 11162/10

AREA OF WORK: Perimeter Embankment TSF

GENERAL DESCRIPTION OF PROPOSED WORK:
Placement of a course bearing layer (Zone T) on u/s Tailings Beach
Replacement of the u/s cycloned sand Zone with Zone B.
Relocation of the u/s toe drain.

Please review the proposed change / substitution as per the attached sheets.

No. of Sheets: 1

Reference Drawings / Clauses: Drg. No. 11162-10-121 (Rev 0)

Signed: Originator: L A Goms

FOR KNIGHT PIÉSOLD USE

Date Received: Oct. 14. 1999

Proposed change / substitution not approved: _____

approved as submitted: _____

approved as amended: ✓

- U/S toe drain removed from section, to be installed during future construction

No. of sheets attached: _____ (amendments only)

Signed: Engineer: Director: K Brown

Date Returned: Oct. 14. 1999

Knight Piésold Ltd.
1400 - 750 West Pender Street
Vancouver, B.C. V6C 2T8
Phone: (604) 685-0543
Fax: (604) 685-0147

Notes:
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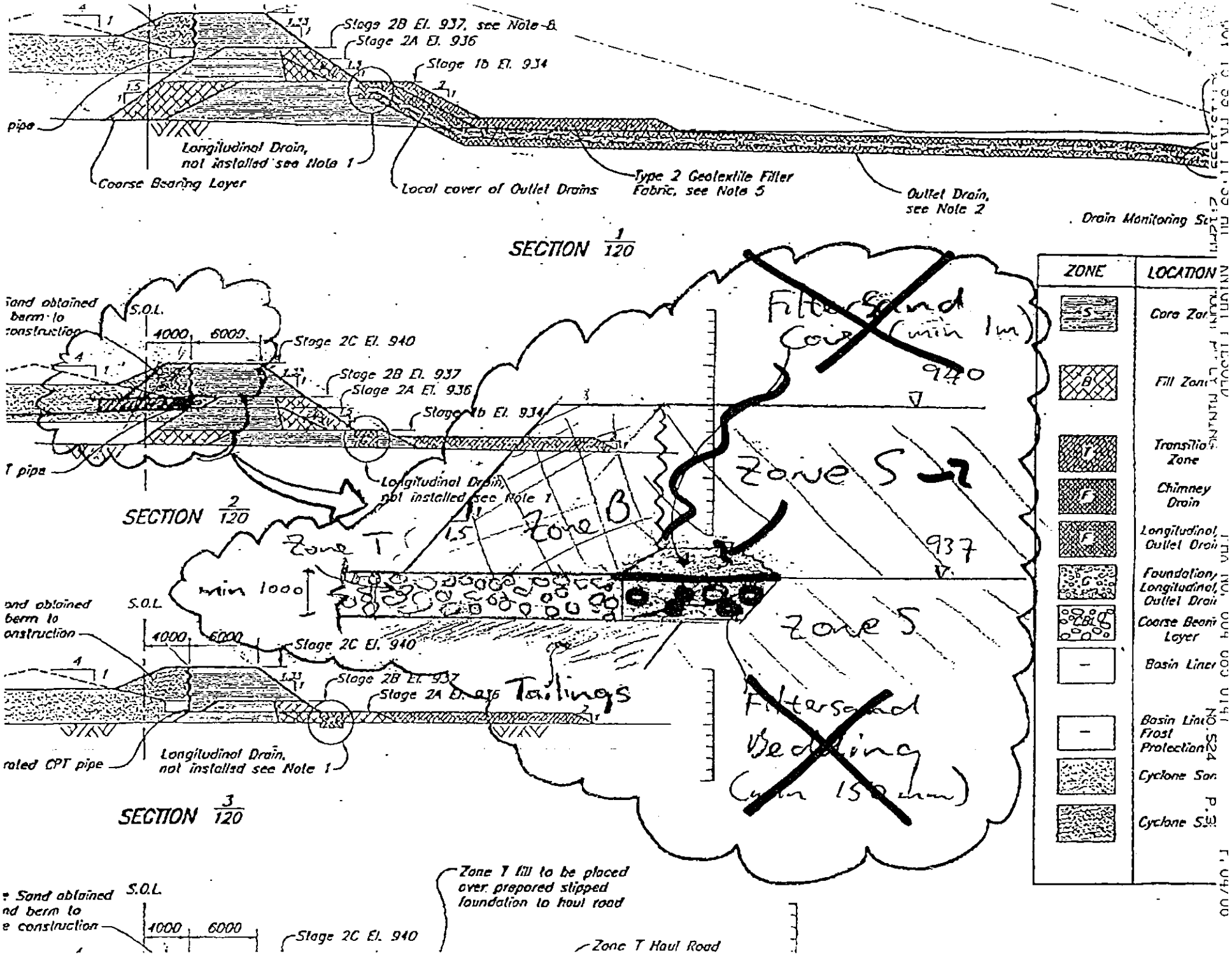
2. Vancouver office to keep a file copy of completed request form with attachments, marked up as described above.

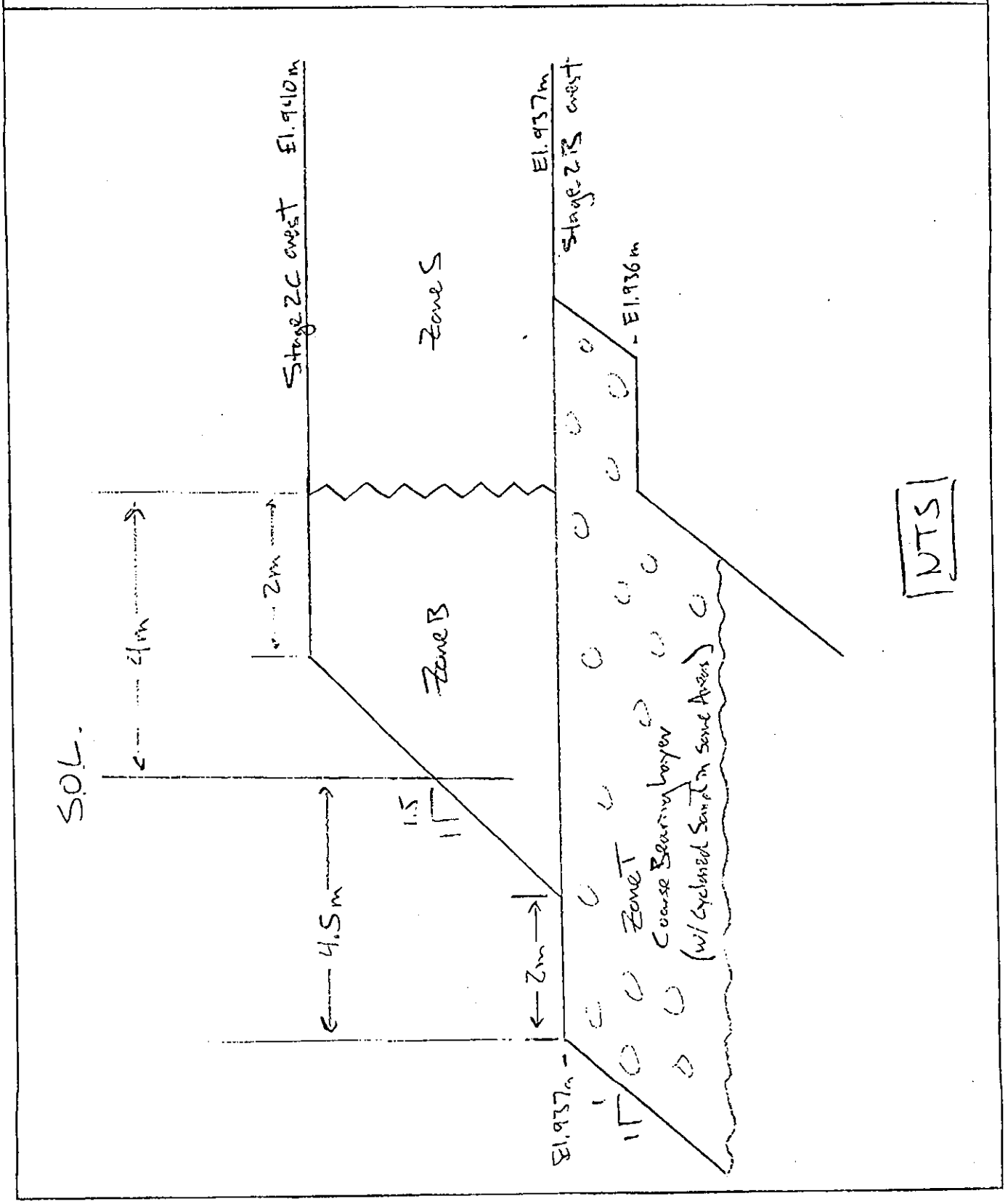


RECEIVED TIME OCT.15. 11:28AM PRINT TIME OCT.15. 11:31AM

Knight Piésold Ltd.
CONSULTING ENGINEERS

Project: Mt. Polley
Calculations for: Stage 2C Design Change
Calculations by: IBM (ref no. 99-027)
Checked by: Date:

Project No.: 1162/10
Date: 14-Oct-99
Sheet 1 of 1



15-Oct-99
M:\11162\10\ACAD\qs_emxs\dsr\stage2c\[polley2c2.xls]Sheet1

Quantities for Stage 2C (to Elev. 940, not 941).		Volume (m^3)
Main Embankment Between Stations 15+50 and 26+50		
Zone S		26,400
Zone FS	Between Stations 16+15 and 27+15 (Drg. 110) For U/S Toe Drain - Area 2 m^2	2,200
Zone FS	Right Abutment Main Dam (Drg. 125) For U/S Toe Drain Outlet Pipe	17
Main Embankment Between Stations 26+50 and 27+76		
Zone S		2,960
U/S Zone B		1,400
Zone FS	Left Abutment Main Dam (Drg. 125) For U/S Toe Drain Outlet Pipe	17
D/S Zone B	Between D/S Toe and Zone T Haul Road	2,670
Perimeter Embankment Between Stations 27+76 and 33+00		
Zone S		8,300
U/S Zone B		3,700
D/S Zone B	Between D/S Toe and Zone T Haul Road	8,750
Zone FS	Right Abutment Perimeter Dam (Drg. 125) For U/S Toe Drain Outlet Pipe	17
Perimeter Embankment Between Stations 33+00 and 44+35		
Zone S		27,300
U/S Zone B		14,800
Zone T U/S Coarse Bearing Layer		18,586

Leon, I haven't checked these volumes against the ~~table~~ original table that you refer to in your e-mail. Please let us know if there are any discrepancies. John.

RECEIVED TIME OCT.15. 11:28AM PRINT TIME OCT.15. 11:31AM

Knight Piésold CONSULTING

Knight Piésold Ltd.
1400 - 750 West Pender St. Tel: +1 (604) 685-0543
Vancouver, BC V6C 2T8 Fax: +1 (604) 685-0147
CANADA Fax: +1 (604) 687-2203

DATE:	November 26, 1999	FILE NO:	11162/10.01
TIME:	11:32	REF. NO.:	9/2771
OPERATOR:		PAGES:	1 of 5
SENDER:	John Wilkinson, P.Eng.	APPROVED:	KJB

TO:	Mount Polley Mining Corp.	FAX:	
ATTN:	Jan Manning, Knight Piésold Ltd. (engineering dep't)	cc:	
SUBJECT:	Stage 2C TSF Design Change		

Ian,

As discussed, attached please find the Stage 2C TSF Design Change with 3 attached figures.

Best regards,

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1 2 No: 11162/10.01

Date: November 24, 1999

REQUEST FOR APPROVAL BY DESIGN OFFICE OF CHANGE/SUBSTITUTION

PROJECT: Mt. Polley Mine PROJECT NO: 11162/10

AREA OF WORK: Stage 2C TSF Construction

GENERAL DESCRIPTION OF CHANGE: Design change for tailings facility embankments from crest El. 940m to El. 941m

Please review the proposed change/substitution as per the attached sheets. (To be submitted in duplicate).

No. of sheets: 3 Signed: (originator)

Reference Drawings/Clauses: Figure 1 - Main Embankment (≈CH15+60 to 26+80)
Figure 2 - Main & Perimeter Embankments (≈CH26+80 to 32+00)
Figure 3 - Perimeter Embankment (≈CH32+00 to 44+35)

FOR VANCOUVER OFFICE USE

Date received: Nov. 24. 1999

Proposed change/substitution not approved: _____

approved as submitted: _____

approved as ammended: See attached Figures 1, 2, 3.

No. of sheets attached: 3 (ammendments only)

Signed: Engineer: Director:

Date returned: Nov. 26. '99.

KNIGHT & PIESOLD LTD.
1350 - 409 Granville Street
Vancouver, B.C.
V6C 1T2
(604) 685-0543

Notes:
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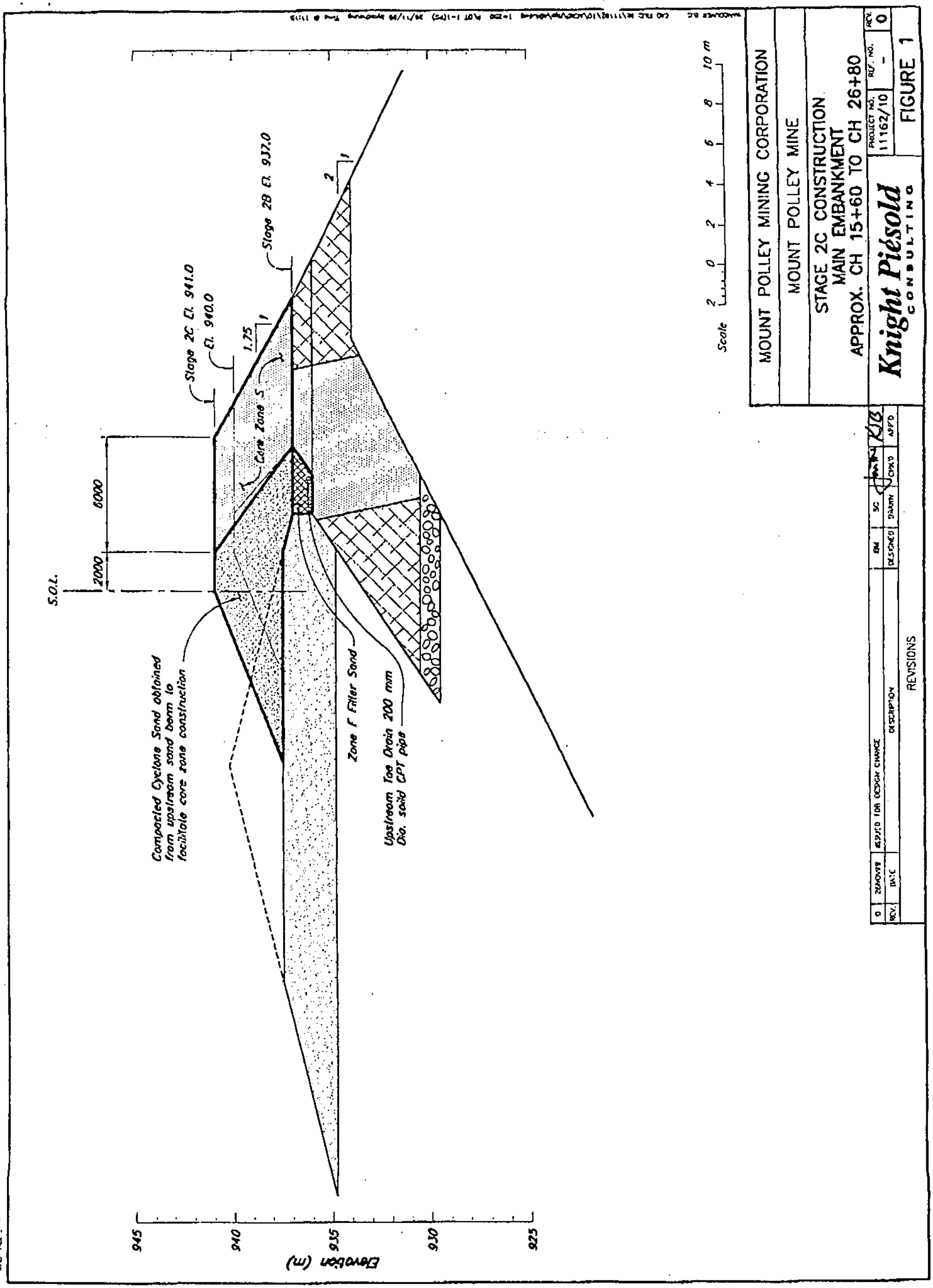
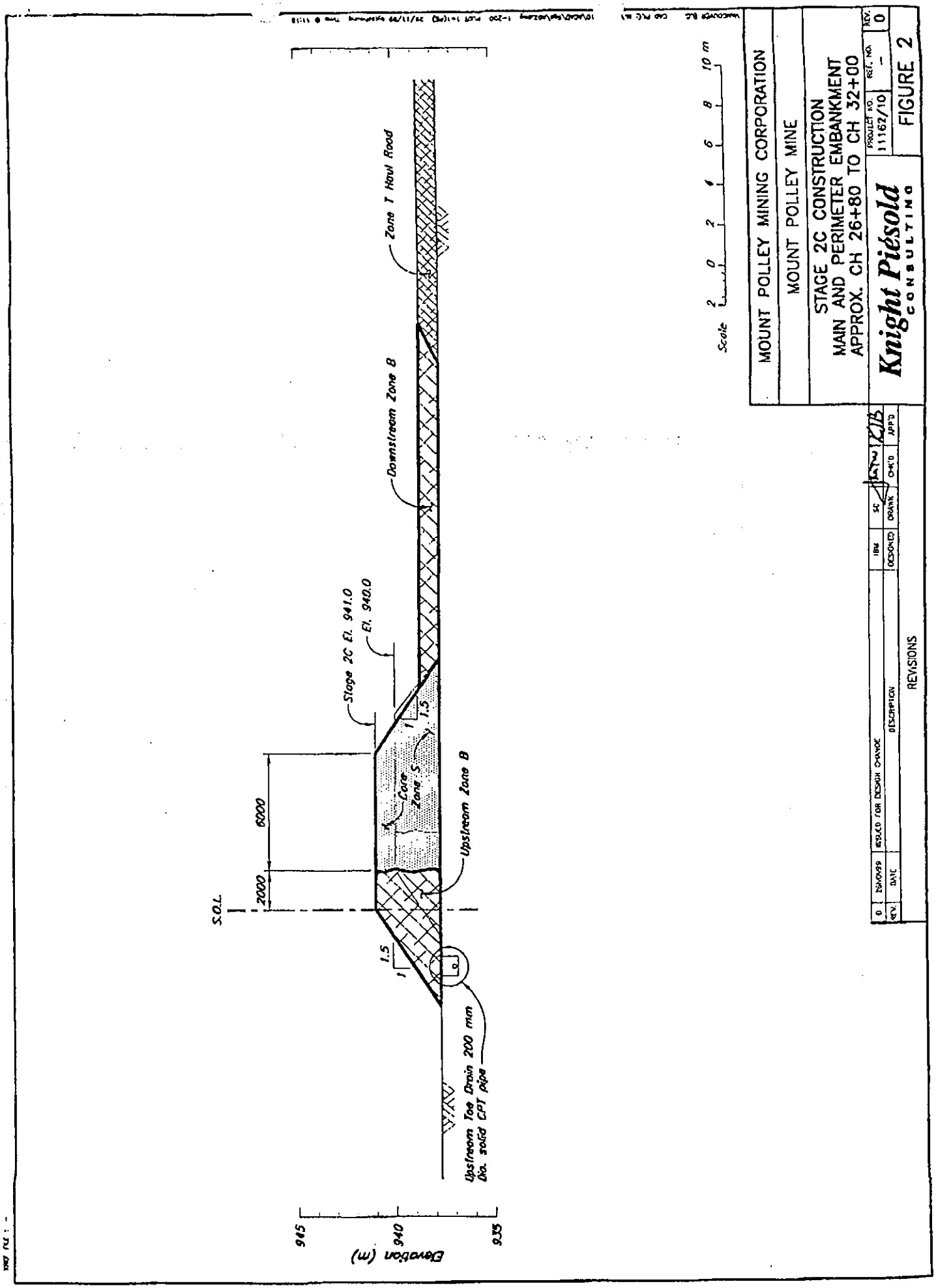
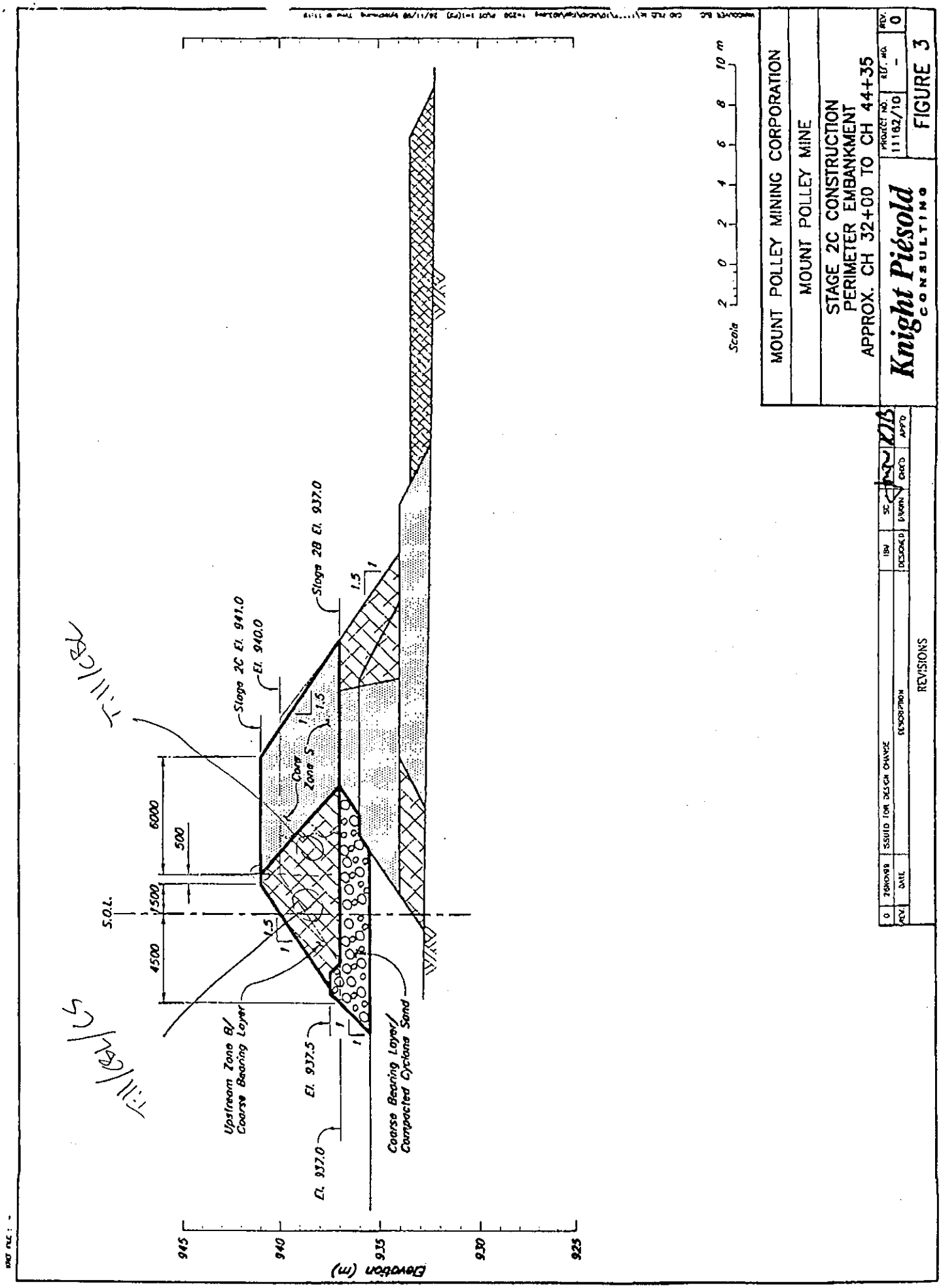
2. Vancouver office to keep a file copy of completed request form with attachments, marked up as required or ammended.


MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
STAGE 2C CONSTRUCTION
MAIN EMBANKMENT
APPROX. CH 15+60 TO CH 26+80
Knight Piésold
CONSULTING
PROJECT NO. 11162/10
REF. NO. -
REV. 0
FIGURE 1
REVISIONS
Scale
2 0 2 4 6 8 10 m
Stage 2C El. 941.0
El. 940.0
Stage 2B El. 937.0
1.75
1
2
1
Core Zone S
6000
2000
S.O.L.
Compacted Cyclone Sand obtained from upstream sand berm to facilitate core zone construction
Zone F Filter Sand
Upstream Toe Drain 200 mm Dia. solid CPT pipe
945
940
935
930
925
Elevation (m)


Zone T Haul Road
Downstream Zone B
Stage 2C El. 941.0
El. 940.0
1.5
1
Core Zone S
Upstream Zone B
6000
2000
S.O.L
1.5
1
Upstream Toe Drain 200 mm Dia. solid CPT pipe
945
940
935
Elevation (m)
0
2
4
6
8
10 m
Scale
MOUNT POLLEY MINING CORPORATION
MOUNT POLLEY MINE
STAGE 2C CONSTRUCTION
MAIN AND PERIMETER EMBANKMENT
APPROX. CH 26+80 TO CH 32+00
PROJECT NO. 111162/10
REF. NO. -
REV. 0
Knight Piésold CONSULTING
FIGURE 2
REVISIONS
REV. DATE DESCRIPTION ORIGINATED DRAWN CHK'D APP'D
0 19/NOV/99 ISSUED FOR DESIGN CHANGE IBM SC KB



MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

STAGE 2C CONSTRUCTION
PERIMETER EMBANKMENT
APPROX. CH 32+00 TO CH 44+35

Knight Piésold CONSULTING

PROJECT NO. 11162/10 | REF. NO. - | REV. 0

FIGURE 3

REVISIONS

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHKD	APP'D
0	28NOV99	ISSUED FOR DESIGN CHANGE	IBV	SC	DRB	

Knight Piésold
CONSULTING

Knight Piésold Ltd.
1400 - 750 West Pender St. Tel: +1 (604) 685-0543
Vancouver, BC V6C 2T8 Fax: +1 (604) 685-0147
CANADA Fax: +1 (604) 687-2203

DATE:	February 14, 2000	FILE NO:	11162/13.01
TIME:	2:00 PM	REF. NO.:	0/ 0393
OPERATOR:	ibm	PAGES:	1 of 3
SENDER:	Ian Manning	APPROVED:	KJB

TO: Knight Piésold Ltd., c/o Mount Polley Mining Corporation FAX: 250-790-2268

ATTN: Jeremy Kinch

Cc:

SUBJECT: Main Embankment Stage 2C Design Change

Jeremy,

Please find attached Design Change for Stage 2C Main Embankment construction, approved as per attached sketch.

Regards,

Ian Manning

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FILE NO.: 00/009 DATE: 7-Feb-2000

REQUEST FOR APPROVAL BY DESIGN OFFICE OF CHANGE / SUBSTITUTION

PROJECT: Mt. Polley - Stage 2C Construction PROJECT NO.: 11162/13

AREA OF WORK: Main Embankment Core Zone 5/Cycloned Sand Interface

GENERAL DESCRIPTION OF PROPOSED WORK:
Design modification to allow for till/sand interface slope to range from 1.875H:1V to original design 1.375H:1V. Design change allows for a stepped till/sand interface, provided it remains contained within these slope limits. In addition, top 2-300mm Zone 5 lifts may be constructed horizontally to U/S face.

Please review the proposed change / substitution as per the attached sheets.

No. of Sheets: 1

Reference Drawings / Clauses: Figure 1, Rev. 0 of Design Change issued by KP Vancouver (Nov 26/99, Ref. No. 9/2771)

Signed: Originator: Ian Manning

FOR VANCOUVER OFFICE USE

Date Received: Feb. 7/2000

Proposed change / substitution not approved: _____

approved as submitted: _____

approved as amended: ✓

No. of sheets attached: 1 (amendments only)

Signed: Engineer: Director:

Date Returned: _____

Knight Piesold Ltd.
1400 - 750 West Pender Street
Vancouver, B.C. V6C 2T8
Phone: (604) 685-0543
Fax: (604) 685-0147

Notes:
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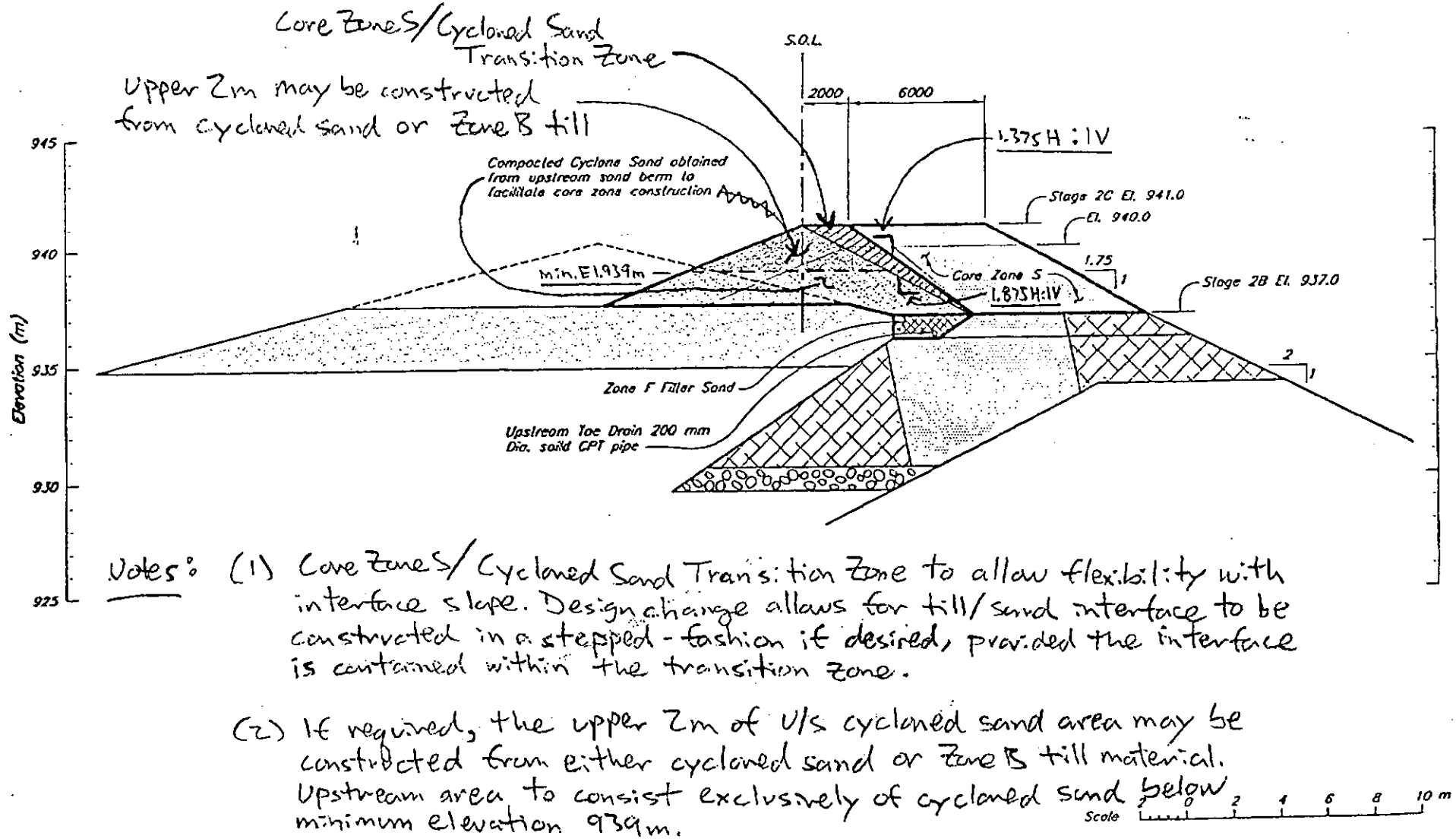
RECEIVED TIME FEB.14. 3:15PM PRINT TIME FEB.14. 3:17PM
FEB-14-00 MON 04:33 PM KNIGHT PIESOLD FAX NO. 604 685 0147 P.03/03



Notes: (1) Core Zone S/Cycloned Sand Transition Zone to allow flexibility with interface slope. Design change allows for till/sand interface to be constructed in a stepped-fashion if desired, provided the interface is contained within the transition zone.

(2) If required, the upper 2m of U/S cycloned sand area may be constructed from either cycloned sand or Zone B till material. Upstream area to consist exclusively of cycloned sand below minimum elevation 939m.

REV.	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	28NOV00	ISSUED FOR DESIGN CHANGE	KBW	SC	KJB	KJB

REVISIONS

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

STAGE 2C CONSTRUCTION
MAIN EMBANKMENT
APPROX. CH 15+60 TO CH 26+80

Knight Piésold CONSULTING

PROJECT NO.	REF. NO.	REV.
11162/10	-	0

FIGURE 1