

IMPERIAL METALS CORPORATION

MP00084

14945-40/MP0101

September 5, 1996

Mr. George Headley, P.Eng.
Ministry of Employment and Investment
4th Floor, 1810 Blanshard Street
Victoria, BC
V8V 1X4

Dear Mr. Headley:

Re: Mt. Polley Tailings Embankment
- Amendment to Systems Work Application

We are pleased to submit the following revised drawings in support of our proposed amendment to the Work Systems Plan for the Tailings Impoundment:

1625.207	Rev 0 (new drawing)
1625.211	Rev 6
1625.220	Rev 6
1625.111	Rev 4

These drawings illustrate the following modifications:


- A minimum Stage Ia crest elevation of 927.0 m which is the minimum construction objective for the 1996 season. This will allow impoundment of the 1997 spring freshet to about 924.0 m.
- A "final" stage Ib crest elevation of 934.0 m to be completed in 1997 prior to tailings deposition. It is still the intent to construct as much of the Stage Ib work as possible during the 1996.
- Revised compaction specification to accommodate available fill materials.
- Inclusion of a vertical filter ^{Drainage} blanket in the embankment to control the phreatic surface.
- Inclusion of a concrete saddle for the HDPE outlet pipeworks for upstream toe drains.
- Revised piezometer locations to provide information on the performance of the filter blanket.

Knight Piésold Ltd. are also following up with the additional preliminary recommendations made by Mr. Matich, but will await receipt of his final report before outlining the time frame for completion of an appropriate written response. Please note that the above changes are currently in the process of being implemented and your prompt approvals will be greatly appreciated.

Please feel free to contact us or Mr. Ken Brouwer of Knight Piésold Ltd. if you have any questions or require any further assistance.

Yours very truly,

IMPERIAL METALS CORPORATION



Brian Kynloch, P.Eng.
Senior Vice President

encl.

cc: Ken Brouwer, P.Eng. - Knight Piésold

BK:sc

TO: G. Headley, MEI
cc. Ken Embree, Brian Kynoch

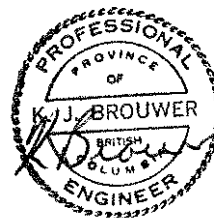
DATE: September 5, 1996
REFERENCE: 6/3022
FILE: 1627.01

FROM: Ken Brouwer

MT POLLEY PROJECT
PLACEMENT OF FILTER MATERIALS

The filter drainage blanket for the tailings embankment will be constructed as follows:

1. The longitudinal drain will be constructed by excavating a channel into the compacted Zone B fill and backfilling with approximately 0.5m of filter sand. The specified filter fabric will be placed in the trench along with the perforated CPT and the surrounding drain rock. The filter fabric will be overlapped and the additional filter sand will then be carefully placed all around the sides and top of the filter fabric. Please note that the filter sand has a filter relationship with both the glacial till and with the drain rock inside the filter fabric.
2. On-going placement of the filter sand will be accomplished by placing the sand along the length of the filter zone and then bringing up the fill on either side, taking special care to ensure that vehicle traffic does not travel on the filter materials. Nominal compaction with 2 passes of a smooth drum vibratory roller is required for the filter zone, with the adjacent fill zones compacted to meet the specified density requirements (98% of standard proctor). In general, the filter sand placement must always precede fill placement, but the Engineer may permit the Contractor to place the fill materials one lift ahead of the filter sand placement if it can be demonstrated that no contamination of the filter zone with Zone B fill materials will occur.



TRANSMITTAL

Suite 1400 - 750 West Pender Street
Vancouver, B.C. V6C 2T8
Telephone: (604) 685-0543
Fax: (604) 685-0147

TO: Ministry of Employment and Investment

DATE: September 5, 1996

NO: 6/3031

FILE NO: 1627.01

RE: Mt. Polley Project

ATTENTION: Mr. George Headley

WE ARE SENDING YOU Attached Under separate cover via _____
the following items:

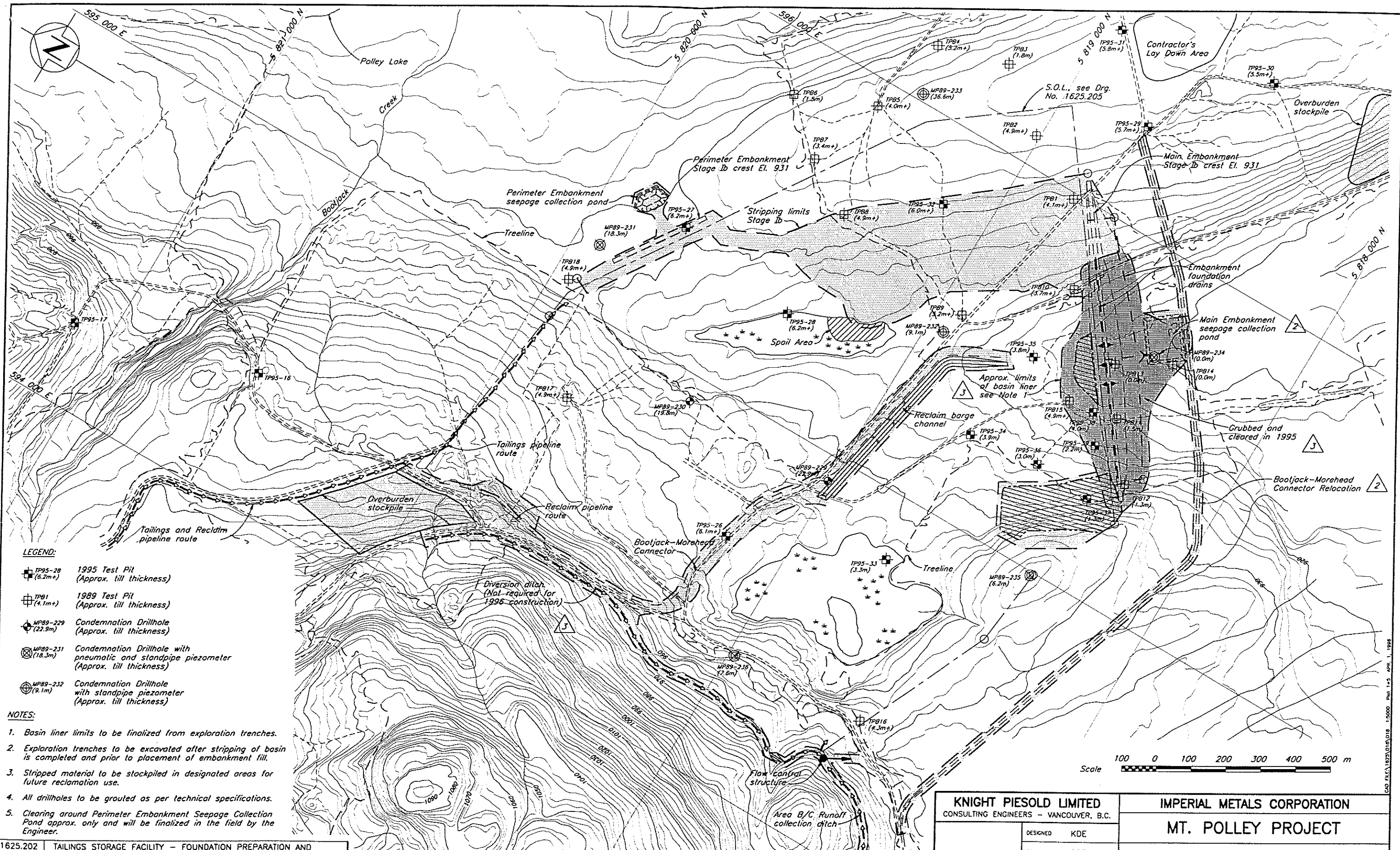
- Print(s) Reproducibles Letter(s) Specifications Disk(s)
 Report(s) Shop Drawings Other _____

NO.	DESCRIPTION
1 Copy	Letter from Imperial Metals dated September 5, 1996
1 Copy	Knight Piésold Memo Ref. No. 6/3022, dated September 5, 1996

REMARKS:

Copy To: Henry Ewanchuk, Mt. Polley Mining Corp. Signed: *J. Brown*
Don Parsons, Mt. Polley Mine Site (+3 copies of Drawings)
Ken Embree, Knight Piésold Ltd., Mt. Polley Mine Site





- LEGEND:**
- TPB 1995 Test Pit (Approx. till thickness)
 - TPB 1989 Test Pit (Approx. till thickness)
 - MPB9-229 Condemnation Drillhole (Approx. till thickness)
 - MPB9-231 Condemnation Drillhole with pneumatic and standpipe piezometer (Approx. till thickness)
 - MPB9-232 Condemnation Drillhole with standpipe piezometer (Approx. till thickness)
- NOTES:**
1. Basin liner limits to be finalized from exploration trenches.
 2. Exploration trenches to be excavated after stripping of basin is completed and prior to placement of embankment fill.
 3. Stripped material to be stockpiled in designated areas for future reclamation use.
 4. All drillholes to be grouted as per technical specifications.
 5. Clearing around Perimeter Embankment Seepage Collection Pond approx. only and will be finalized in the field by the Engineer.

1625.202	TAILINGS STORAGE FACILITY - FOUNDATION PREPARATION AND BASIN LINER - SECTIONS AND DETAILS
1625.205	TAILINGS STORAGE FACILITY - STAGE 1b IMPOUNDMENT - GENERAL ARRANGEMENT
DRG. NO.	DESCRIPTION
REFERENCE DRAWINGS	

3	APRIL 1/96	NOTE 4 AND STRIPPING LIMITS
REV.	DATE	DESCRIPTION
REVISIONS		

2	MAR 25/96	UPDATE ROADS & DRAINAGE
1	JULY 27/95	NOTE 4 AND STRIPPING LIMITS
0	JUNE 2/95	ISSUED FOR TENDER
REV.	DATE	DESCRIPTION
REVISIONS		

KNIGHT PIESOLD LIMITED
CONSULTING ENGINEERS - VANCOUVER, B.C.

DESIGNED	KDE
DRAWN	RDT
CHECKED	
APPROVED	

DATE: JUNE 2 1995

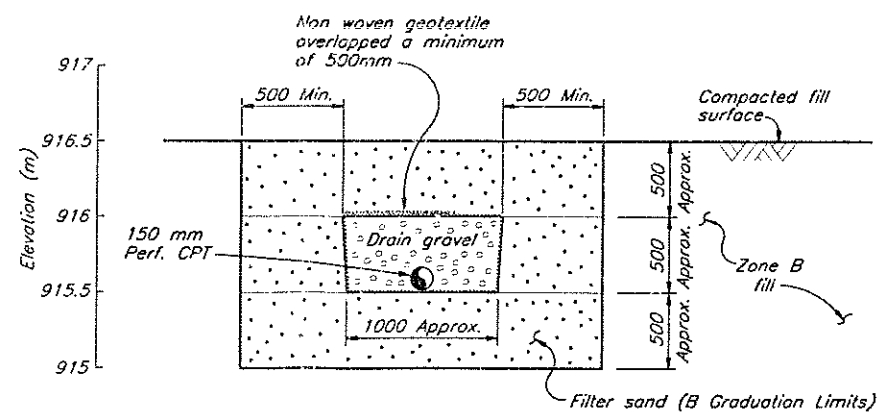
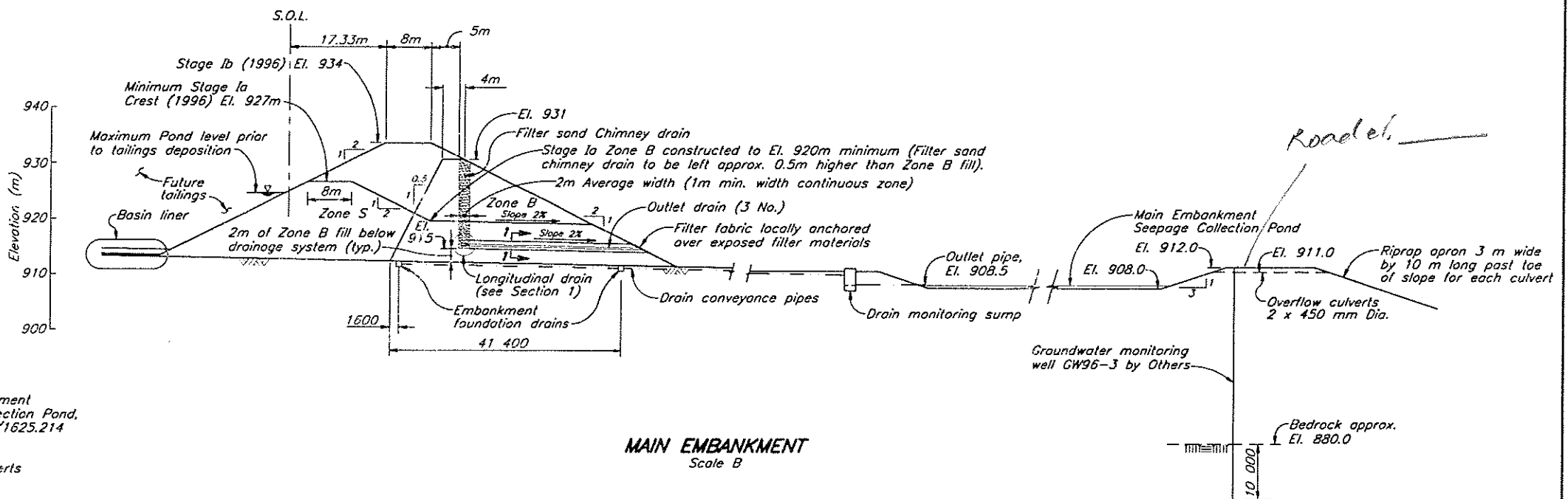
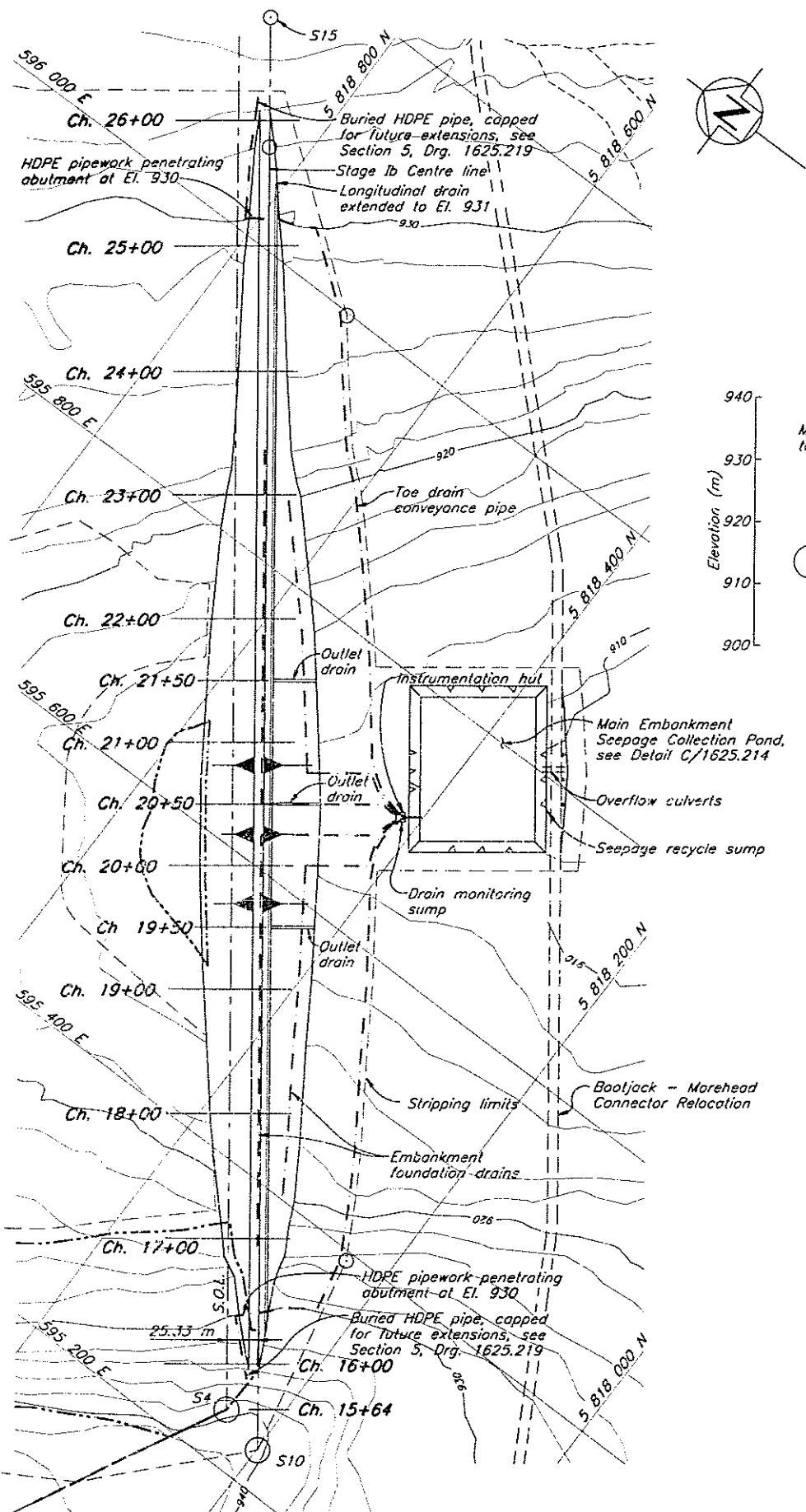
IMPERIAL METALS CORPORATION

MT. POLLEY PROJECT

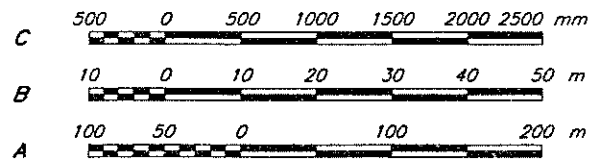
**TAILINGS STORAGE FACILITY
BASIN PREPARATION
AND BASIN LINER**

SCALE AS SHOWN

CAD FILE: 1625.015.DWG 1:5000 PLOT 1-5 APR. 1, 1996



SECTION 1 - OPTION 2
LONGITUDINAL DRAIN/OUTLET DRAIN DETAIL
Scale C



MAIN EMBANKMENT
Scale A

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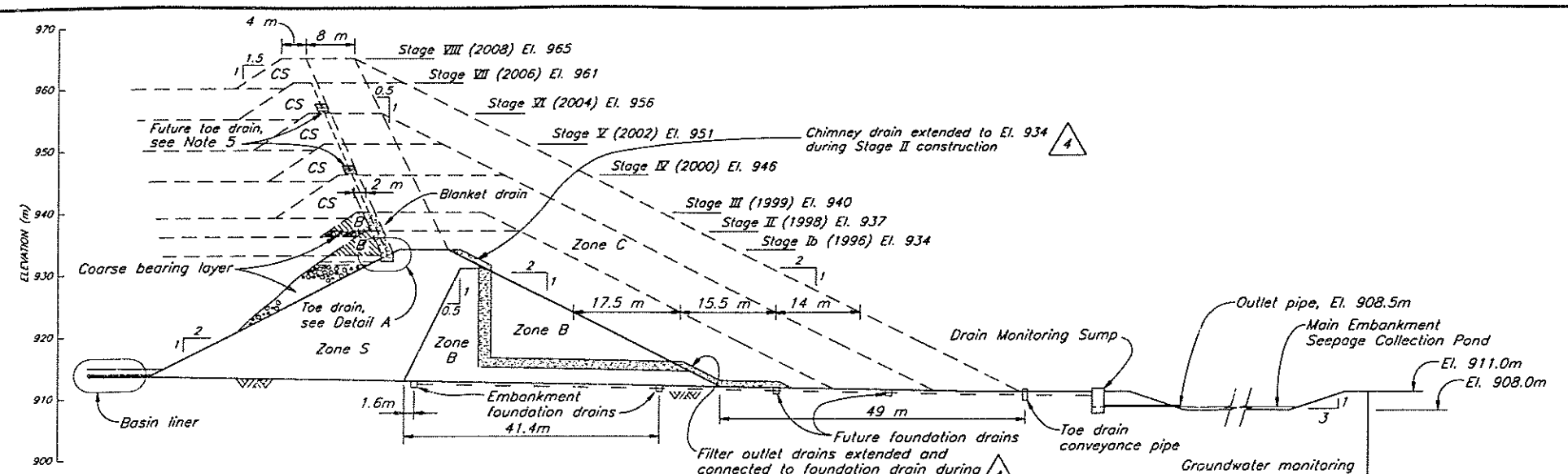
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CHECKED KJB
APPROVED KJB

K. S. BROUWER
REGISTERED PROFESSIONAL ENGINEER
COLUMBIA ENGINEER

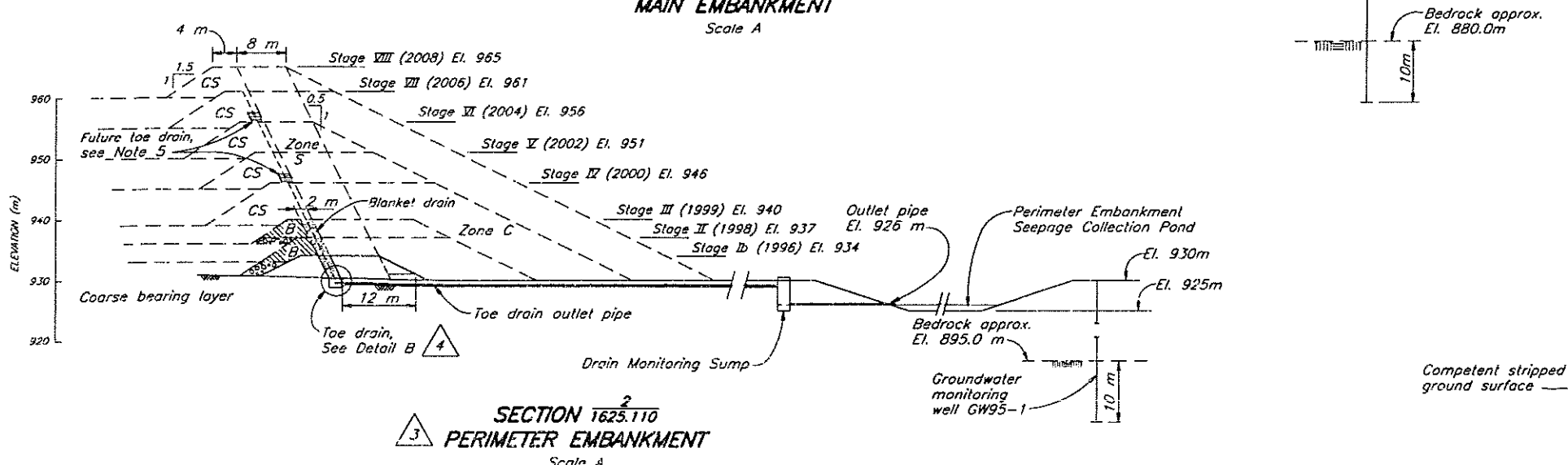
IMPERIAL METALS CORPORATION
MT. POLLEY PROJECT
TAILINGS STORAGE FACILITY
TAILINGS DAM CHIMNEY DRAIN

DRG. NO.	DESCRIPTION	REV.	DATE	DESCRIPTION	APPROVED
	REFERENCE DRAWINGS				
	REVISIONS				
0	SEP 4/96			ISSUED FOR CONSTRUCTION	KJB
				REVISIONS	

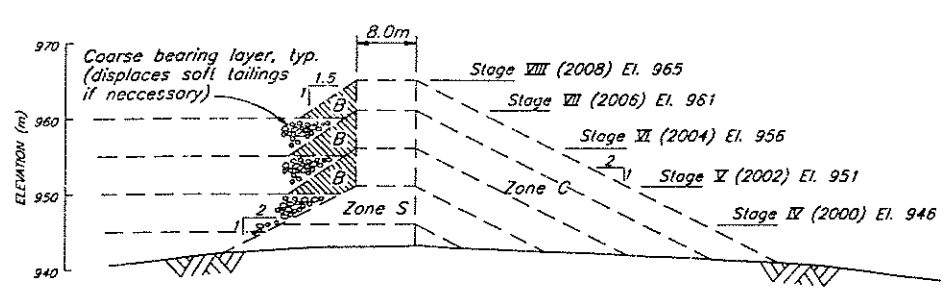
DATE **SEPT. 4, 1996** SCALE AS SHOWN DRG. NO. **1625.207** REV. **0**



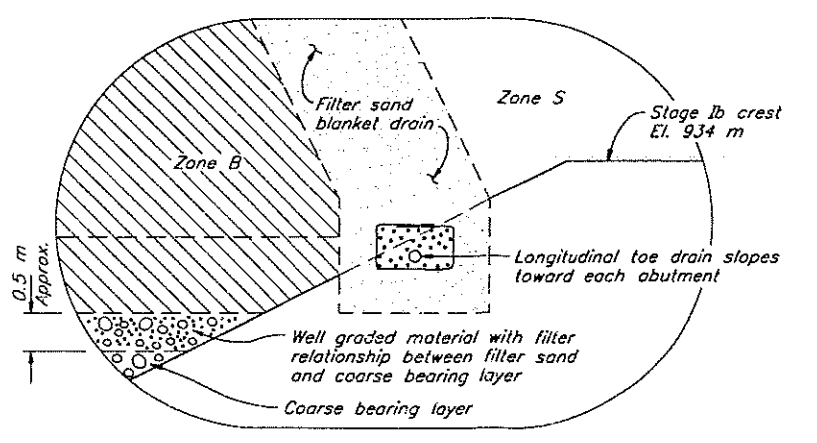
SECTION 1625.110
MAIN EMBANKMENT
Scale A



SECTION 1625.110
PERIMETER EMBANKMENT
Scale A



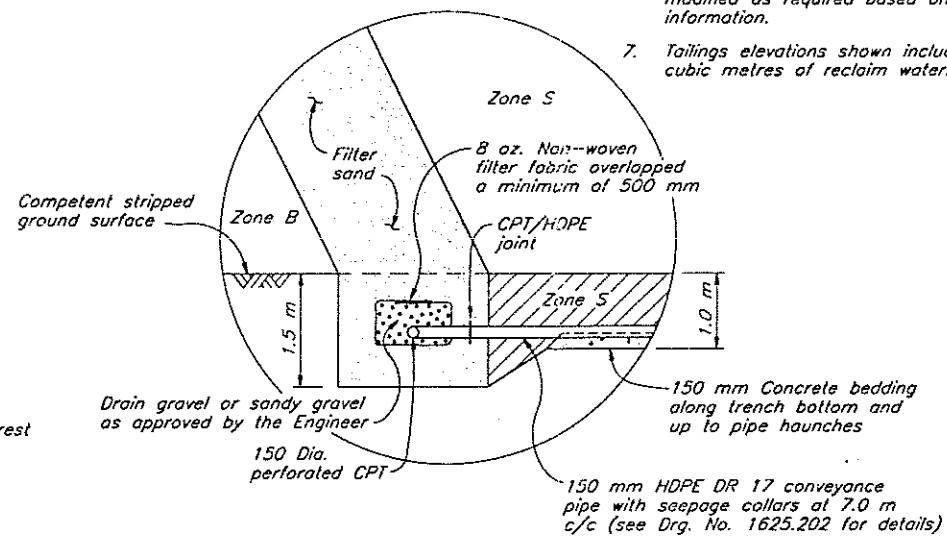
SECTION 1625.110
SOUTH EMBANKMENT
Scale A



DETAIL A
MAIN EMBANKMENT TOE DRAIN
Scale B

ZONE	MATERIAL TYPE	PLACEMENT AND COMPACTION REQUIREMENTS
Coarse Bearing Layer	Free draining durable waste rock fill or coarse sandy gravel	Placed and spread in maximum 1.0 m thick layers. Compaction as directed by the Engineer.
Blanket/Toe Drain	Filter sand	Placed and spread in maximum 1.0 m thick layers. Vibratory compaction as directed by the Engineer.
Foundation Drains	Drain Gravel	Placed and compacted as shown on the Drawings
S	Glacial till	Placed, moisture conditioned and spread in maximum 300 mm thick layers (after compaction). Compaction to 98% of std. proctor maximum dry density.
B	Glacial till	Placed, moisture conditioned and spread in maximum 600 mm thick layers (after compaction). Compaction to 98% of std. proctor maximum dry density.
C	Random fill	Glacial till or other approved material placed in maximum 600 mm thick layers (after compaction). Vibratory compaction as required by the Engineer.
CS	Cycloned sand or sandy gravel alluvium	Placed and spread in maximum 1.0 m thick layers. Vibratory compaction as directed by the Engineer.

- NOTES
- Groundwater monitoring wells to be installed by Others.
 - Perimeter Embankment seepage collection pond to be located in the field by the Engineer. Pipework invert elevations may be adjusted in the field by the Engineer.
 - Additional outlet pipework to seepage ponds will be included if required.
 - Toe drain at Main Embankment to be installed during Stage II construction. Conveyance pipework to be installed in 1996, with abutment penetration at El. 930 approximately.
 - Future toe drains, shown for Stages IV and VI will be added if required.
 - Dashed lines imply preliminary design. Ongoing design will be modified as required based on filling records and monitoring information.
 - Tailings elevations shown include provision for 2.5 million cubic metres of reclaim water.



DETAIL B
PERIMETER EMBANKMENT LONGITUDINAL DRAIN
AND OUTLET PIPE DRAIN
Scale B



DRG. NO.	DESCRIPTION	REV.	DATE	DESCRIPTION	APPROVED
1625.102	TAILINGS STORAGE FACILITY - FOUNDATION PREPARATION AND BASIN LINER - SECTIONS AND DETAILS				
1625.110	TAILINGS STORAGE FACILITY - STAGE Ia/Ib TAILINGS IMPOUNDMENT - GENERAL ARRANGEMENT				
	REFERENCE DRAWINGS				

REV.	DATE	DESCRIPTION	APPROVED
4	SEP 4/96	REVISED DRAINAGE DETAILS	KJB

REV.	DATE	DESCRIPTION	APPROVED
3	JUN 12/96	REVISED EMBANKMENT AND TOE DRAIN	
2	APR 10/96	REVISED EMBANKMENT STAGES	
1	MAY 26/95	ISSUED FOR DESIGN REPORT	
0	APR 6/95	ISSUED FOR REVIEW	

KNIGHT PIESOLD LIMITED
CONSULTING ENGINEERS - VANCOUVER, B.C.

DESIGNED KDE
DRAWN WAL/VY
CHECKED KJB
APPROVED KJB

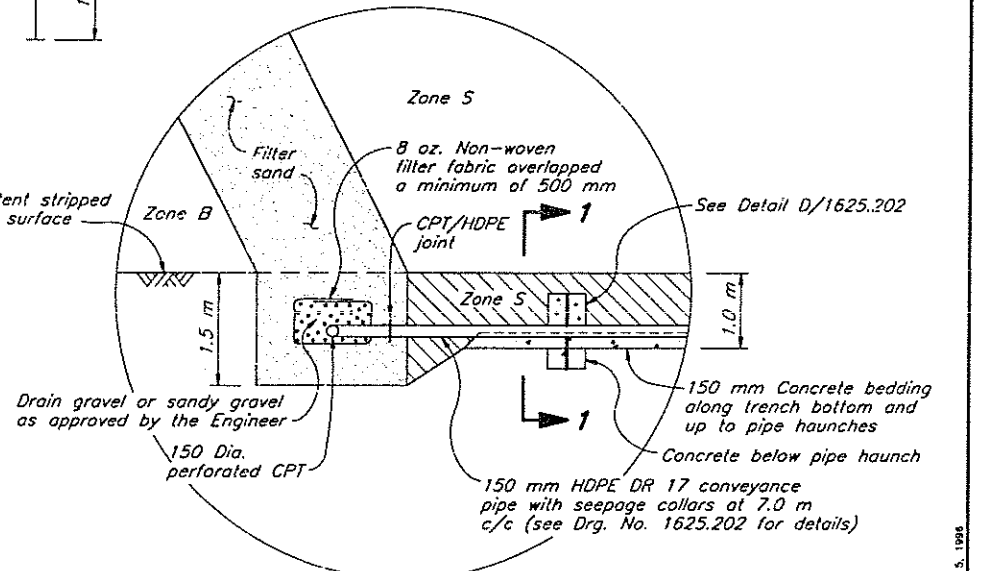
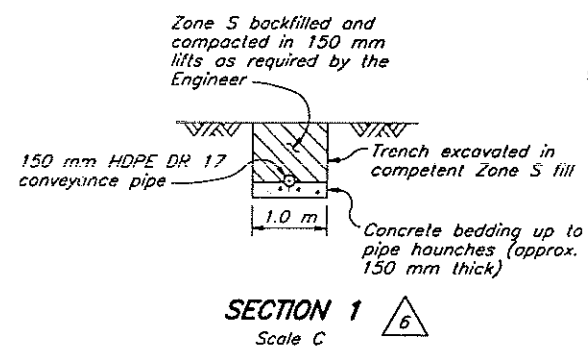
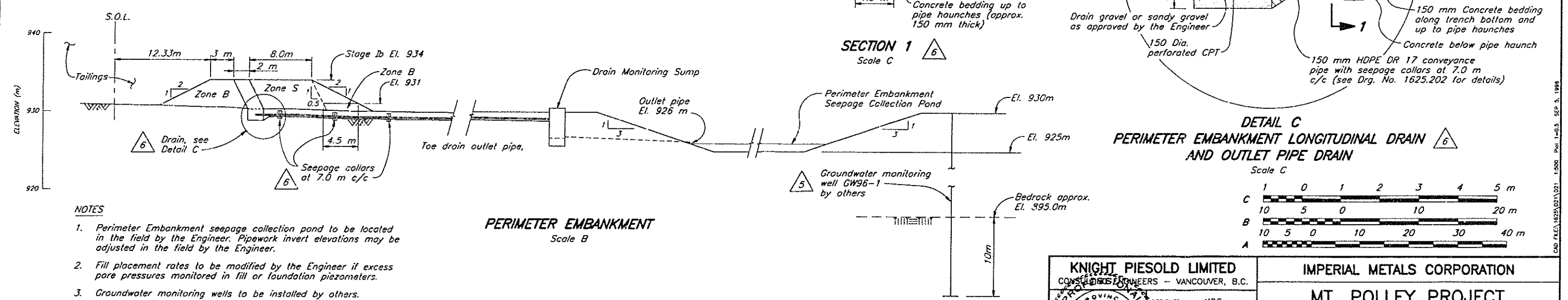
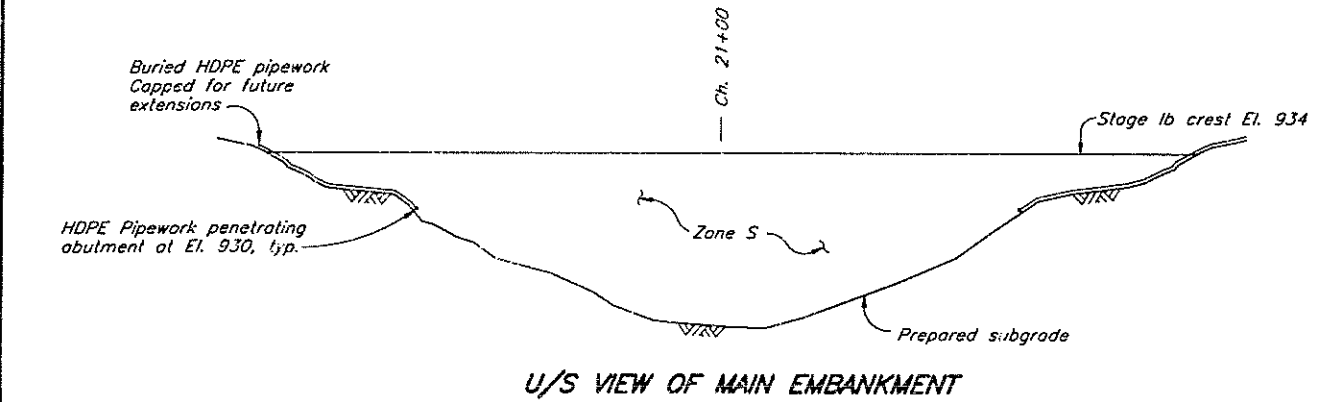
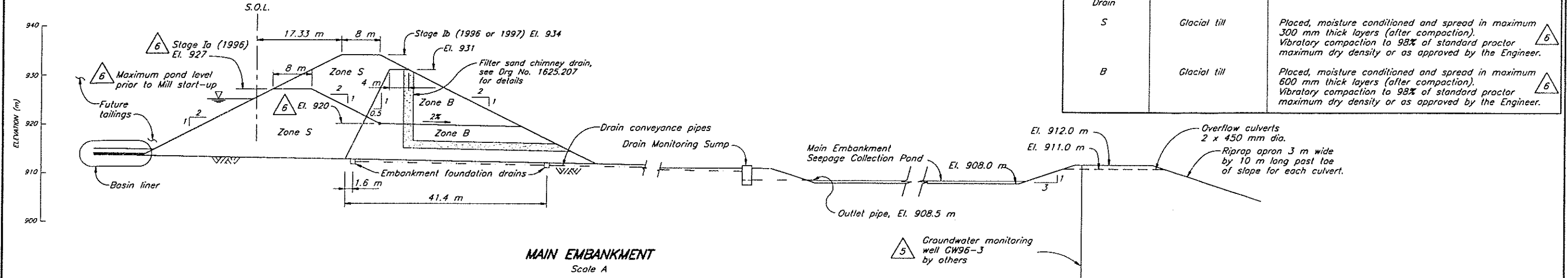
DATE APRIL 6, 1995

IMPERIAL METALS CORPORATION
MT. POLLEY PROJECT
TAILINGS STORAGE FACILITY
TAILINGS EMBANKMENT
SECTIONS AND DETAILS

SCALE AS SHOWN
DRG. NO. 1625.111
REV. 4

CAD FILE: PROJECT 1625.110.DWG 1:500 Plot 1 of 3 SEP 5, 1998

ZONE	MATERIAL TYPE	PLACEMENT AND COMPACTION REQUIREMENTS
Blanket/Toe Drain	Filter sand	Placed and spread in maximum 1.0 m thick layers. Vibratory compaction as directed by the Engineer.
Foundation Drain	Drain Gravel	Placed and compacted as shown on the Drawings
S	Glacial till	Placed, moisture conditioned and spread in maximum 300 mm thick layers (after compaction). Vibratory compaction to 98% of standard proctor maximum dry density or as approved by the Engineer.
B	Glacial till	Placed, moisture conditioned and spread in maximum 600 mm thick layers (after compaction). Vibratory compaction to 98% of standard proctor maximum dry density or as approved by the Engineer.



- NOTES**
- Perimeter Embankment seepage collection pond to be located in the field by the Engineer. Pipework invert elevations may be adjusted in the field by the Engineer.
 - Fill placement rates to be modified by the Engineer if excess pore pressures monitored in fill or foundation piezometers.
 - Groundwater monitoring wells to be installed by others.

REV.	DATE	DESCRIPTION	APPROVED	REV.	DATE	DESCRIPTION	APPROVED
6	SEP 4/96	STAGE Ia ADDED, MODIFIED DRAINAGE DETAIL	KJB	2	APR 1/96	OVERFLOW CULVERTS ADDED	
5	MAY 28/96	ISSUED FOR CONSTRUCTION		1	MAR 22/96	UPDATE DRAINAGE	
4	APR 19/96	EMBANKMENT EROSION PROTECTION		0	JUNE 2/95	ISSUED FOR TENDER	
3	APR 11/96	RE-ISSUED FOR TENDER					

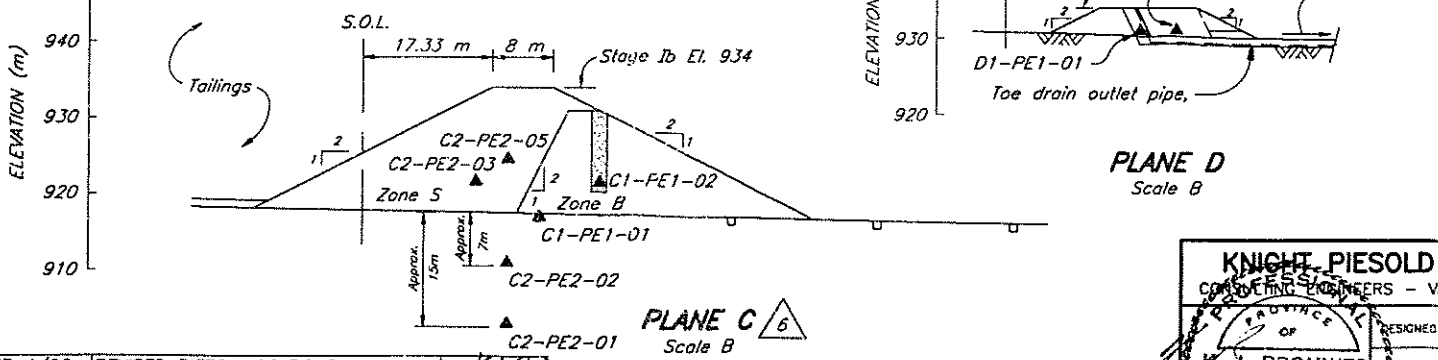
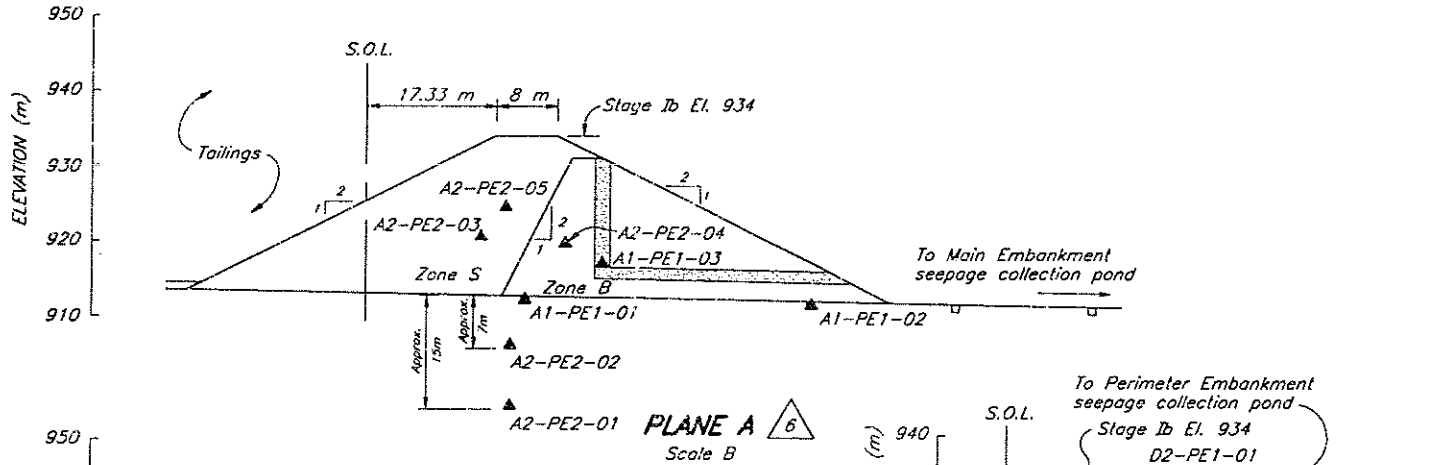
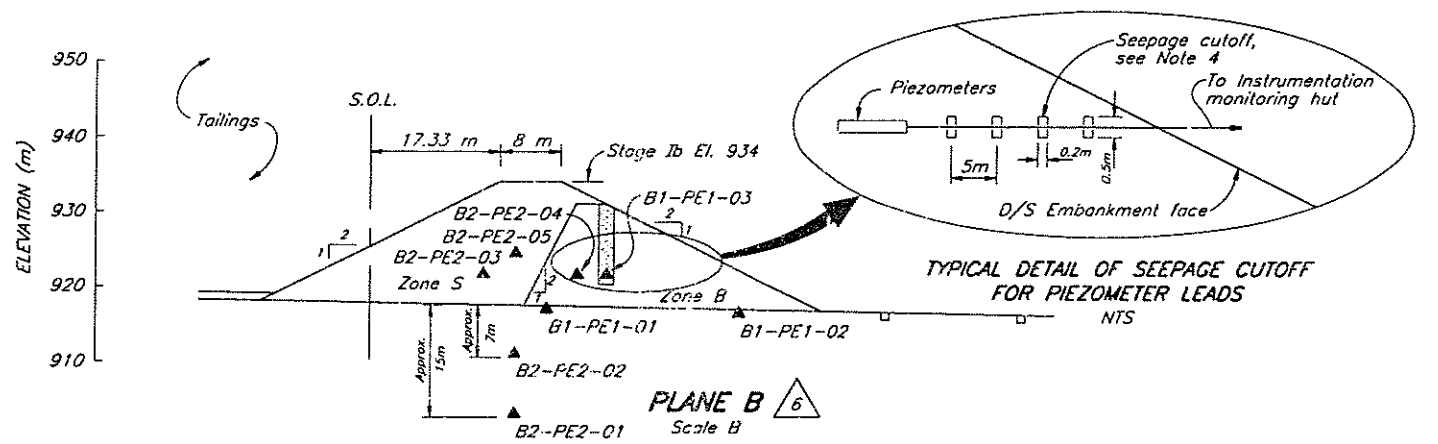
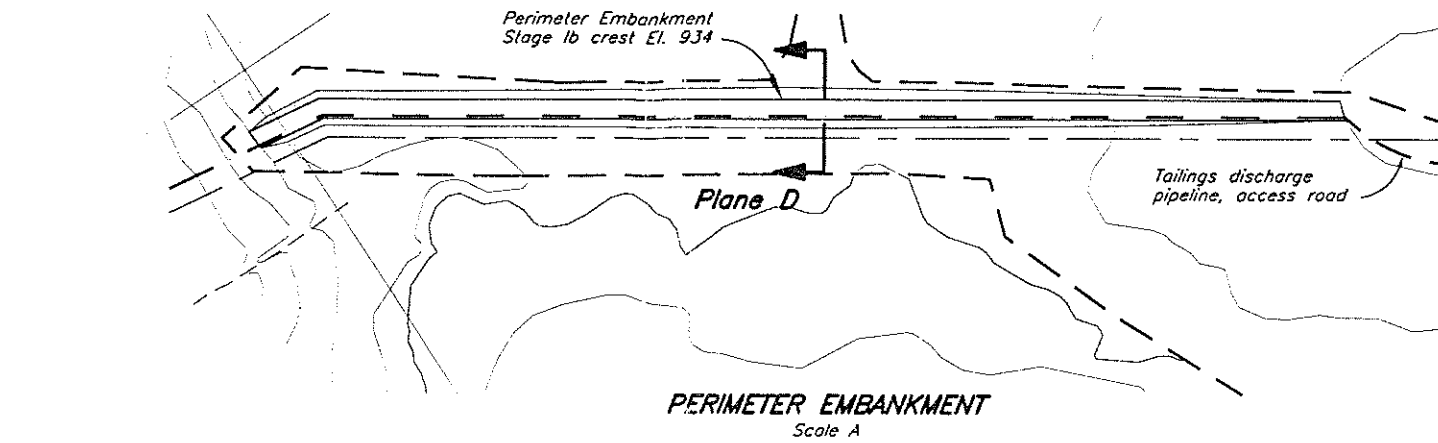
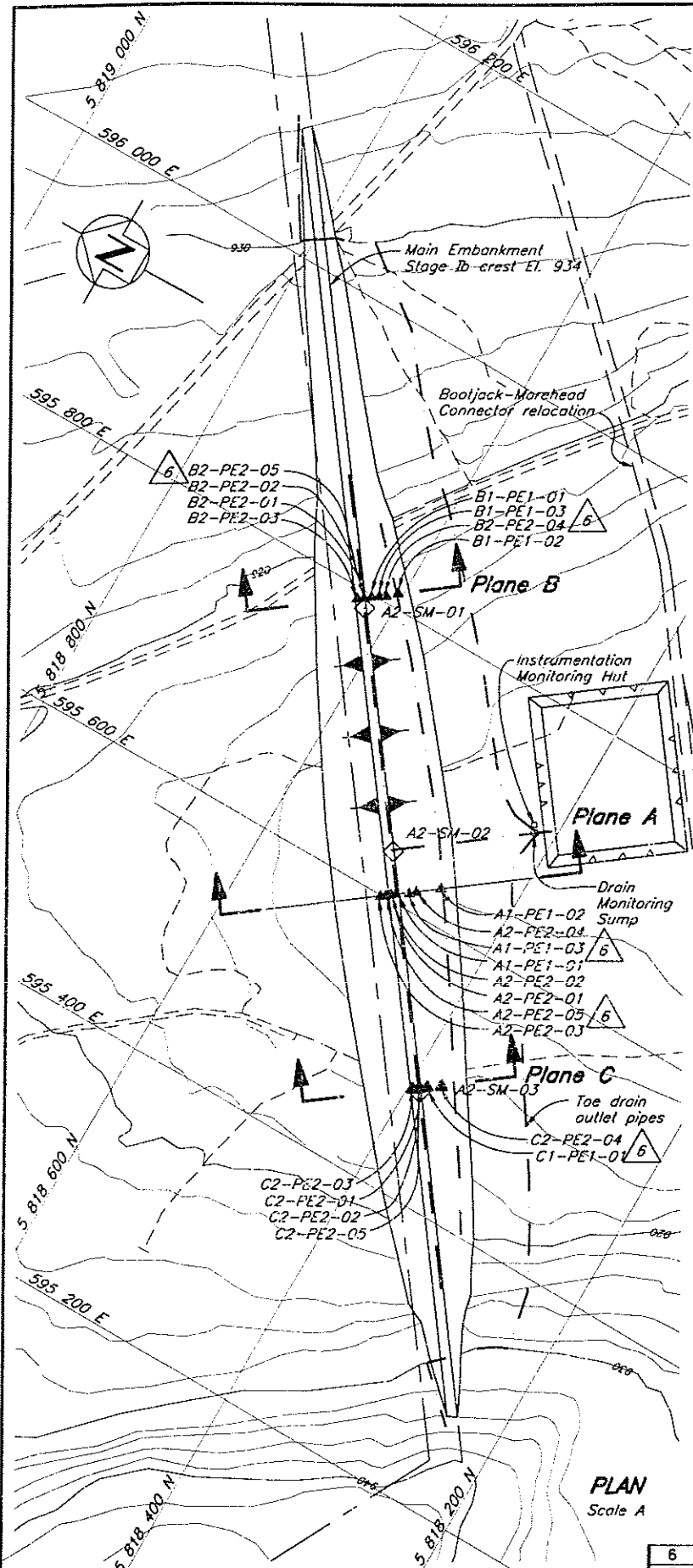
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	DRAWN	NAL/YY							
	CHECKED	KJB							
APPROVED	KJB	DATE	JUNE 2, 1995	SCALE	AS SHOWN	DRG. NO.	510-14-02-1625.211	REV.	6

DRG. NO.	DESCRIPTION
	REFERENCE DRAWINGS

REVISIONS

REVISIONS

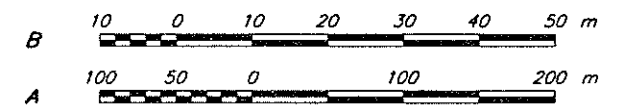
CAD FILE: 1625.2021.DWG 1:500 Plot 1-4-95 SEP 5, 1995



SUMMARY OF PIEZOMETERS LEAD LENGTHS		
PIEZOMETER No.	LEAD LENGTH (m)	
△6 A1-PE1-03	200	
△6 A1-PE1-01	175	
A1-PE1-02	150	
A2-PE2-01	200	
A2-PE2-02	200	
A2-PE2-03	175	
A2-PE2-04	200	
A2-PE2-05	175	
△6 B1-PE1-03	305	
B1-PE1-01	300	
B1-PE1-02	275	
B2-PE2-01	325	
B2-PE2-02	325	
B2-PE2-03	325	
△6 B2-PE2-04	330	
B2-PE2-05	325	
△6 C1-PE1-01	325	
△6 C1-PE1-02	330	
C2-PE2-01	350	
C2-PE2-02	350	
C2-PE2-03	325	
C2-PE2-05	325	
△6 D1-PE1-01	90	
D2-PE1-01	85	

- NOTES**
- Piezometers are vibrating type, RST model VW-2100 with a pressure rating of 100 psi or equivalent, connected to a readout panel via standard non-vented model VW-232 direct burial cable.
 - Piezometer leads are to be extended to a prefabricated monitoring hut located downstream of the final embankment toe.
 - Future survey monuments not shown. A minimum of 2 monuments will be installed for each embankment raise.
 - Seepage cutoffs placed at 5m intervals with 10% bentonite added to fine grained till backfill

- LEGEND**
- Plane I.D. (A, B etc.)
 - Area (0-Tailings, 1-Drain, 2-Embankment)
 - A0-PE1-01-Number I.D.
 - Pressure Rating (1-Low, 2-High)
 - Type of Instrumentation (PE-Piezometer electric, SM-Survey Monument)
 - A1-PE1-01 ▲ Embankment foundation drain and toe drain piezometer
 - A2-PE2-01 ▲ Embankment foundation and fill piezometer
 - A2-SM-01 ◇ Embankment survey monument



REV.	DATE	DESCRIPTION	APPROVED	REV.	DATE	DESCRIPTION	APPROVED
6	SEP 4/96	REVISED PIEZO. LOCATIONS	KJB	2	JAN 18/96	REVISED SEEPAGE COLLECTION POND	
5	MAY 24/96	ISSUED FOR CONSTRUCTION		1	JUL 27/95	BASIN GROUNDWATER DRAINS REVISED	
4	APR 1/96	PIEZOMETER INFORMATION ADDED		0	JUN 2/95	ISSUED FOR TENDER	
3	MAR 25/96	ROAD UPDATED					

KNIGHT PIESOLD LIMITED
CONSULTING ENGINEERS - VANCOUVER, B.C.

K. J. BROUWER
REGISTERED PROFESSIONAL ENGINEER
COLUMBIA

DESIGNED: GRG
DRAWN: RDT/WY/DHS
CHECKED: KJB
APPROVED: KJB

IMPERIAL METALS CORPORATION
MT. POLLEY PROJECT
TAILINGS STORAGE FACILITY INSTRUMENTATION

DATE: JUNE 2, 1995
SCALE: AS SHOWN
DRG. NO. 510-77-01-1625.220
REV. 6

DRG. NO.	DESCRIPTION
510-77-01-1625.220	TAILINGS STORAGE FACILITY INSTRUMENTATION