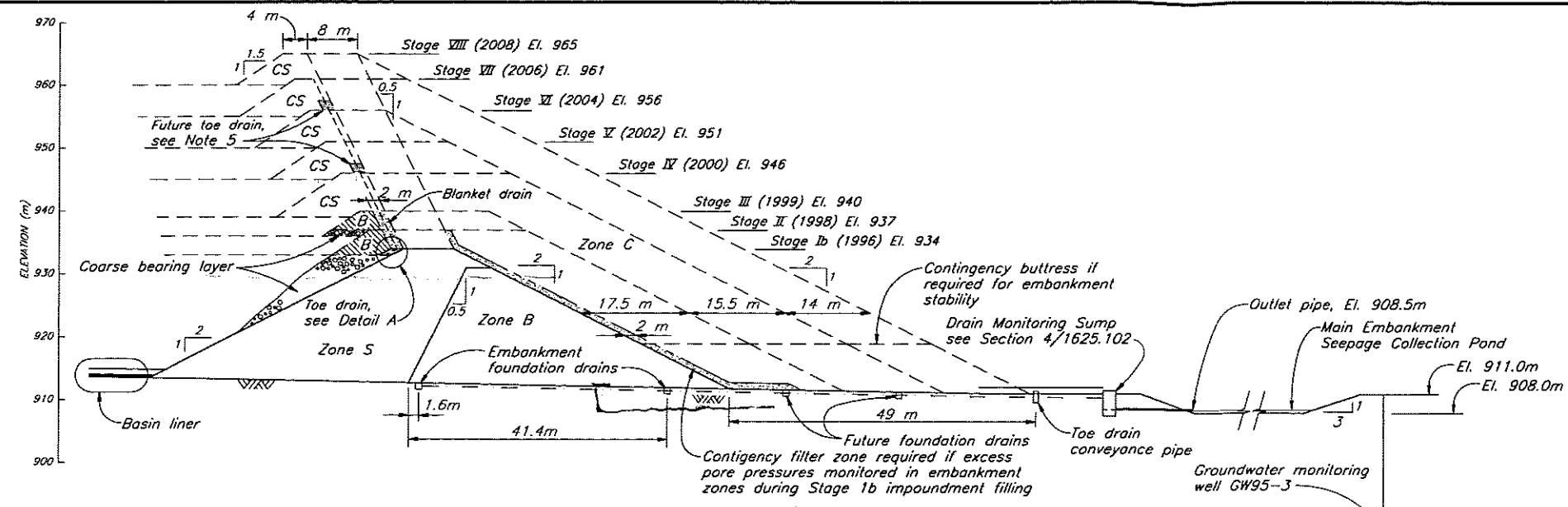
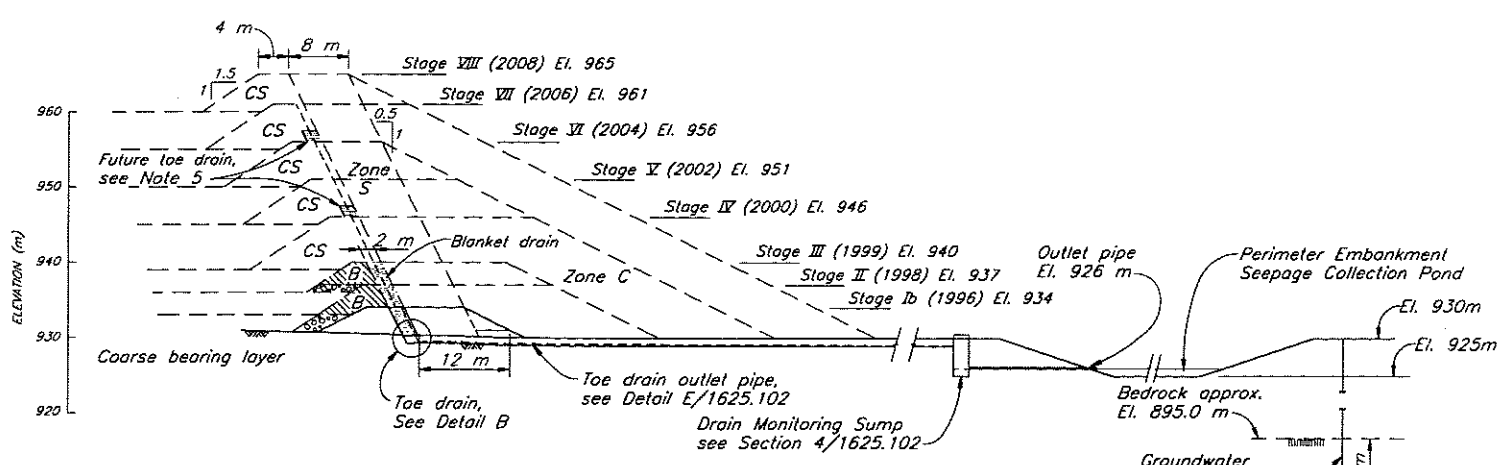


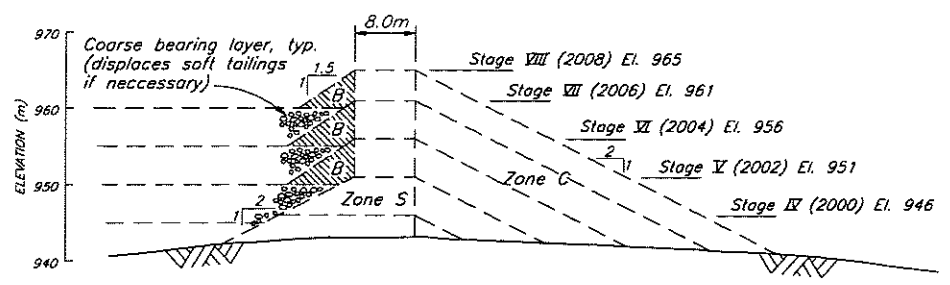
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SECTION 1625.110
MAIN EMBANKMENT
Scale A

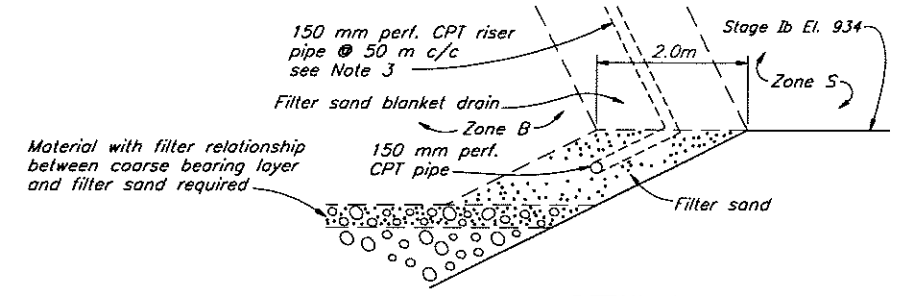


SECTION 1625.110
PERIMETER EMBANKMENT
Scale A

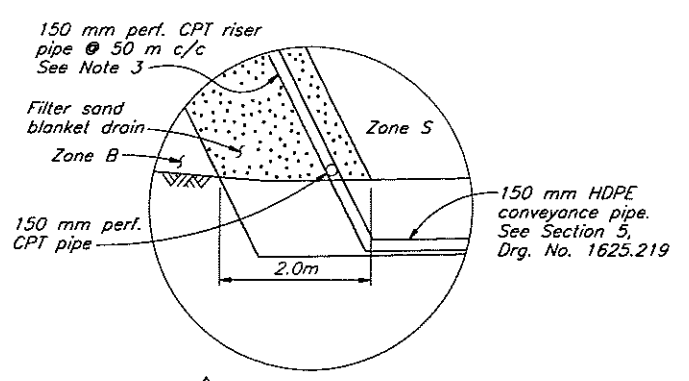


SECTION 1625.110
SOUTH EMBANKMENT
Scale A

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). Vibratory compaction to 95% of modified proctor maximum dry density.
B	Glacial till	Placed, moisture conditioned and spread in maximum 600 mm thick layers (after compaction). Vibratory compaction to 90% of modified 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	Placed and spread in maximum 1.0 m thick layers. Vibratory compaction as directed by the Engineer.



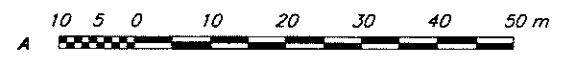
DETAIL A
MAIN EMBANKMENT TOE DRAIN
N.T.S.



DETAIL B
PERIMETER EMBANKMENT DRAIN
N.T.S.

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.
- CPT Riser pipes to be installed for extensions during future embankment raises. 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 as required. Future toe drains will be connected to existing outlet pipework.
- 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.



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
DRG. NO.	DESCRIPTION
REFERENCE DRAWINGS	

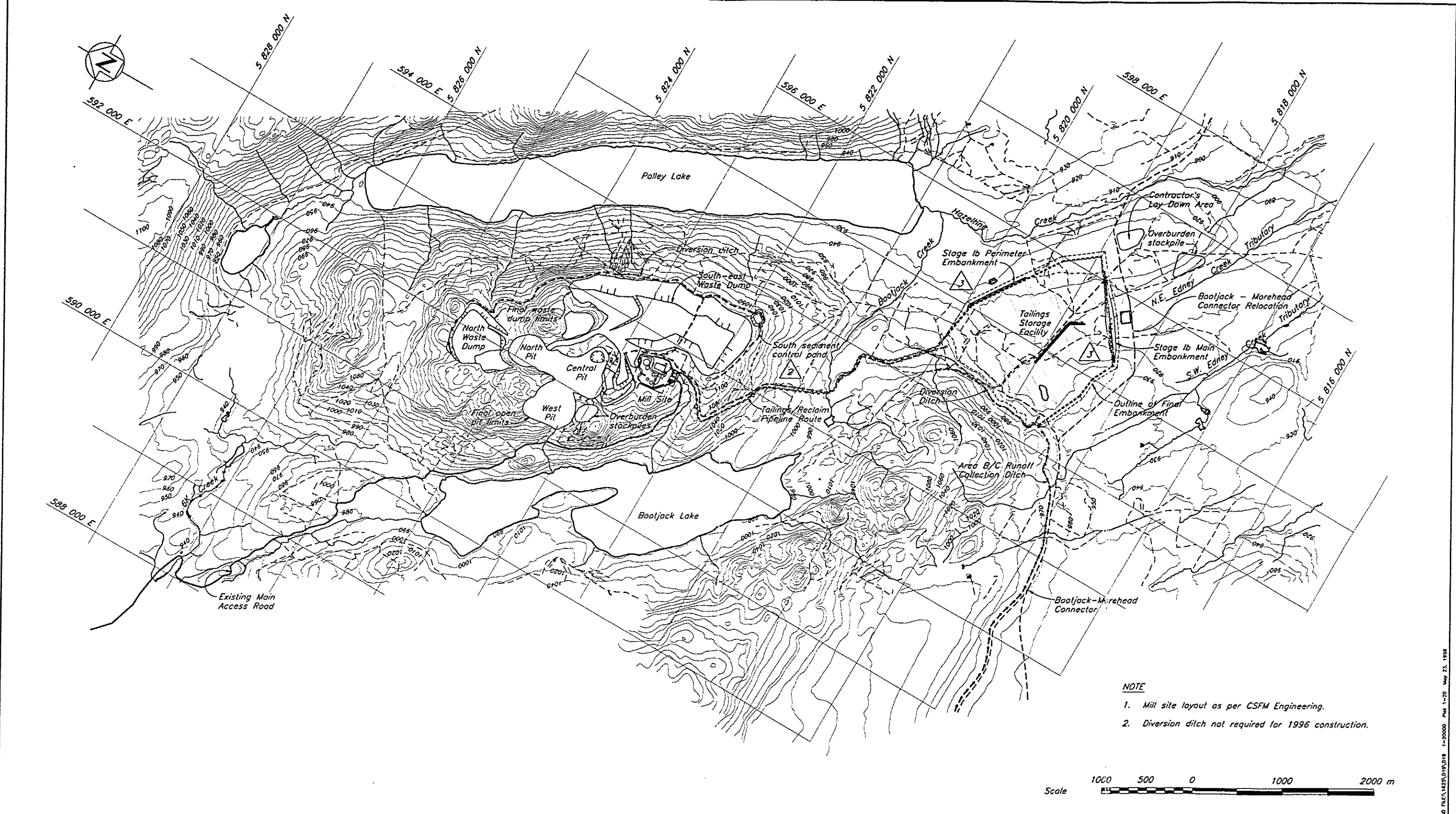
REV.	DATE	DESCRIPTION	APPROVED
REVISIONS			

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

* SIGNATURES AND PROFESSIONAL SEAL ON REV.1 ORIGINAL

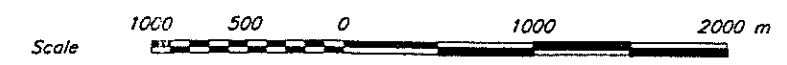
KNIGHT PIESOLD LIMITED CONSULTING ENGINEERS - VANCOUVER, B.C.		IMPERIAL METALS CORPORATION	
DESIGNED KDE		MT. POLLEY PROJECT	
DRAWN MAL/YY		TAILINGS STORAGE FACILITY TAILINGS EMBANKMENT SECTIONS AND DETAILS	
CHECKED *			
APPROVED *			
DATE	APRIL 6, 1995	SCALE AS SHOWN	DRG. NO. 1625.111
			REV. 3

CAD FILE: PROJECT\1625.DWG: 1:500 PLOT 1:0.3 JUNE 13, 1996



NOTE

1. Mill site layout as per CSFM Engineering.
2. Diversion ditch not required for 1996 construction.



DRG. NO.	DESCRIPTION	REV.	DATE	DESCRIPTION	APPROVED
	REFERENCE DRAWINGS			REVISIONS	

3	MAY 24/96	ISSUED FOR CONSTRUCTION		
2	APRIL 1/95	MILLSITE AND CONTROL POND REVISED		
1	MAR 25/96	UPDATE OPEN PITS, WASTE DUMP, SITE DRAINAGE & ROADS		
0	JUNE 2/95	ISSUED FOR TENDER		

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

DESIGNED: KDE/KGB
 DRAWN: RDT/NSD
 CHECKED: MDD
 APPROVED: KJB

DATE: **JUNE 2, 1995**

IMPERIAL METALS CORPORATION

MT. POLLEY PROJECT

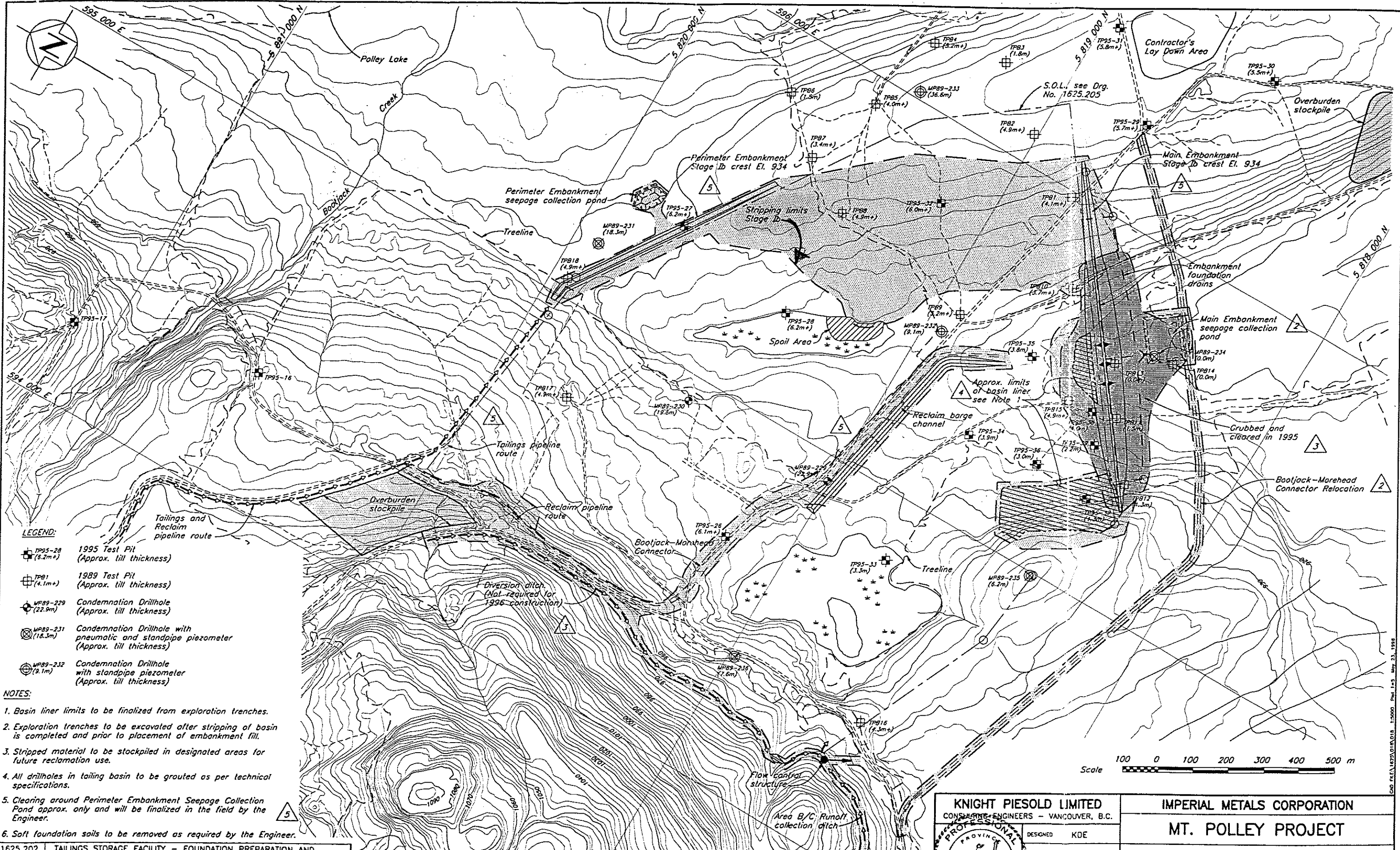
OVERALL SITE PLAN

SCALE AS SHOWN

DRG. NO. 510-12-01-1625.200

REV. 3

CAD FILE: 825/019/D18 1-20000 Plot 1-20 May 23, 1995



- LEGEND:**
- TP95-28 (6.2m+) 1995 Test Pit (Approx. till thickness)
 - TP81 (4.1m+) 1989 Test Pit (Approx. till thickness)
 - MP89-229 (22.9m) Condemnation Drillhole (Approx. till thickness)
 - MP89-231 (18.3m) Condemnation Drillhole with pneumatic and standpipe piezometer (Approx. till thickness)
 - MP89-232 (9.1m) 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 in tailing basin 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.
 6. Soft foundation soils to be removed as required by the Engineer.

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

5	MAY 24/96	ISSUED FOR CONSTRUCTION	KIB
4	APR 11/96	RE-ISSUED FOR TENDER	
3	APRIL 1/96	NOTE 4 AND STRIPPING LIMITS	
REV.	DATE	DESCRIPTION	APPROVED
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	APPROVED
REVISIONS			

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

DESIGNED: KDE
DRAWN: ROT
CHECKED: MOB
APPROVED: KIB

DATE: JUNE 2, 1995

IMPERIAL METALS CORPORATION

MT. POLLEY PROJECT

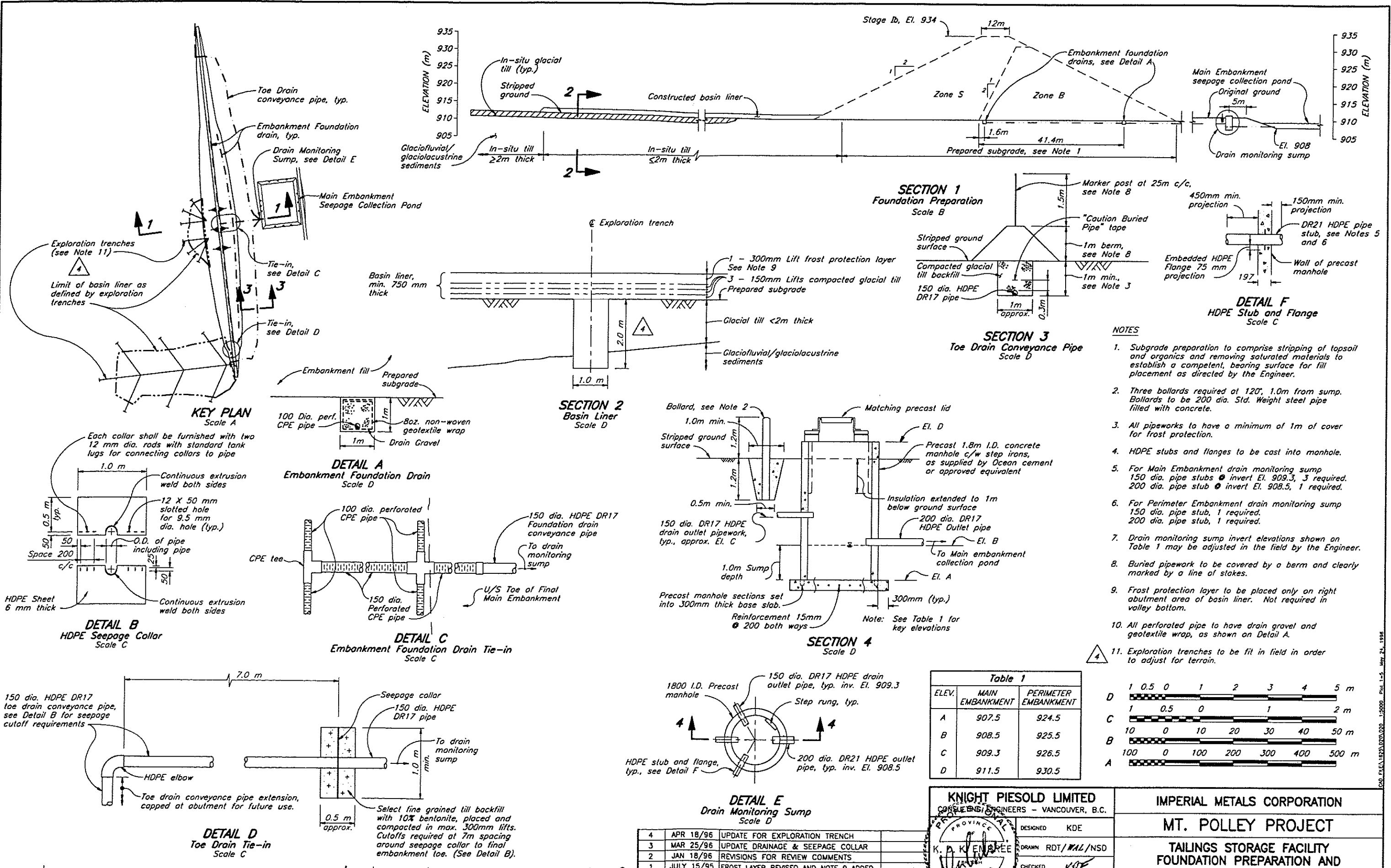
**TAILINGS STORAGE FACILITY
BASIN PREPARATION
AND BASIN LINER**

SCALE AS SHOWN

DRG. NO. 510-11-01-1625.201

REV. 5

CADD FILE: 1625.205.DWG DATE: 1995 JUN 1 11:53 AM



- NOTES**
- Subgrade preparation to comprise stripping of topsoil and organics and removing saturated materials to establish a competent, bearing surface for fill placement as directed by the Engineer.
 - Three bollards required at 120', 1.0m from sump. Bollards to be 200 dia. Std. Weight steel pipe filled with concrete.
 - All pipework to have a minimum of 1m of cover for frost protection.
 - HDPE stubs and flanges to be cast into manhole.
 - For Main Embankment drain monitoring sump 150 dia. pipe stubs @ invert El. 909.3, 3 required. 200 dia. pipe stub @ invert El. 908.5, 1 required.
 - For Perimeter Embankment drain monitoring sump 150 dia. pipe stub, 1 required. 200 dia. pipe stub, 1 required.
 - Drain monitoring sump invert elevations shown on Table 1 may be adjusted in the field by the Engineer.
 - Buried pipework to be covered by a berm and clearly marked by a line of stakes.
 - Frost protection layer to be placed only on right abutment area of basin liner. Not required in valley bottom.
 - All perforated pipe to have drain gravel and geotextile wrap, as shown on Detail A.
 - Exploration trenches to be fit in field in order to adjust for terrain.

DRG. NO.	DESCRIPTION	REV.	DATE	DESCRIPTION	APPROVED
		5	MAY 24/96	ISSUED FOR CONSTRUCTION	

REV.	DATE	DESCRIPTION	APPROVED
4	APR 18/96	UPDATE FOR EXPLORATION TRENCH	
3	MAR 25/96	UPDATE DRAINAGE & SEEPAGE COLLAR	
2	JAN 18/96	REVISIONS FOR REVIEW COMMENTS	
1	JULY 15/95	FROST LAYER REVISED AND NOTE 9 ADDED	
0	JUNE 2/95	ISSUED FOR TENDER	

DATE	DESCRIPTION	APPROVED
JUNE 2, 1995	DESIGNED KDE	
	DRAWN RDT/WAL/NSD	
	CHECKED KDE	
	APPROVED KJB	

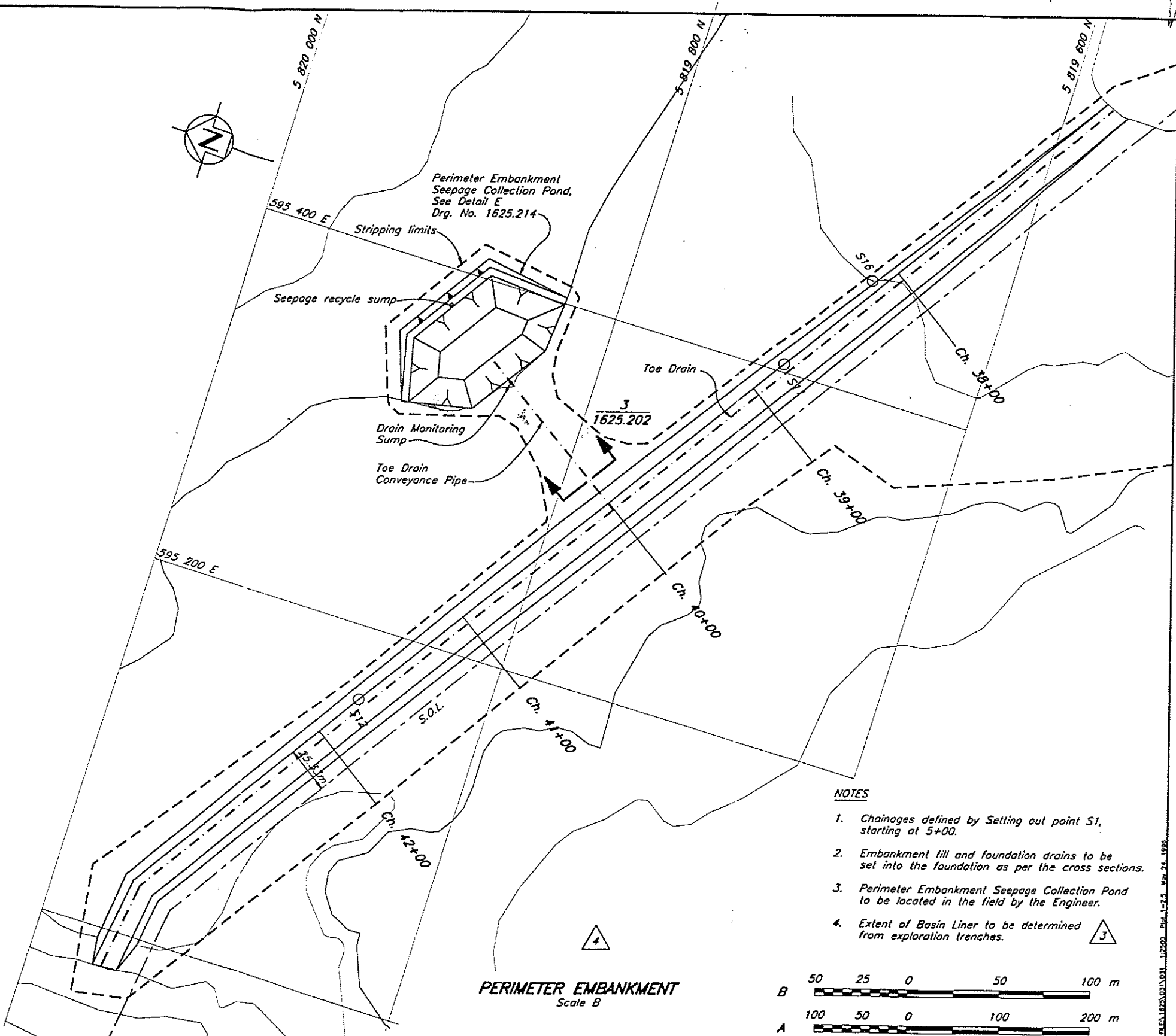
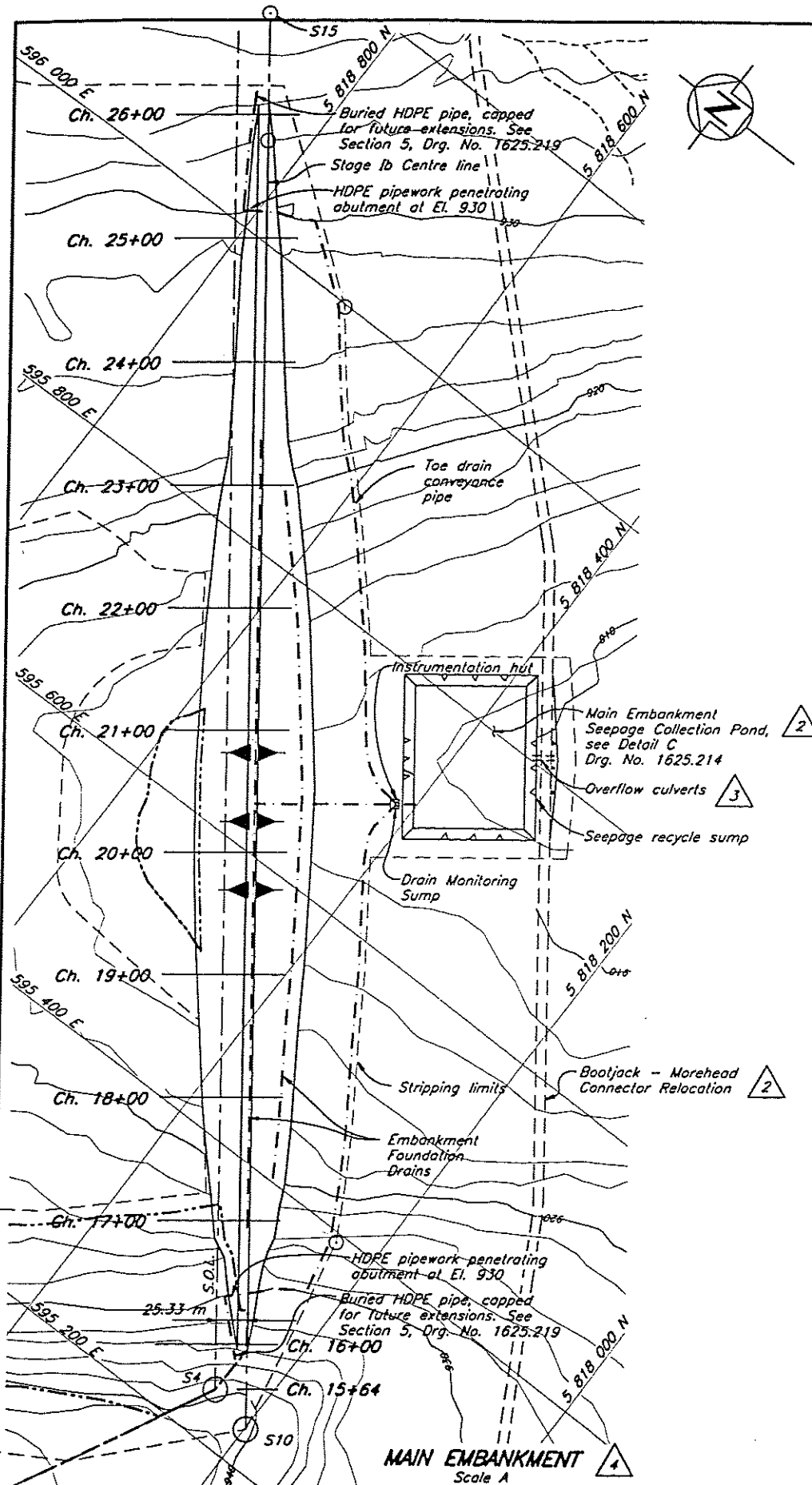
KNIGHT PIESOLD LIMITED
CORPORATE ENGINEERS - VANCOUVER, B.C.

PROVINCIAL ENGINEER
K. A. KENNEDY

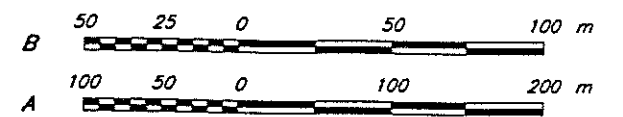
IMPERIAL METALS CORPORATION

MT. POLLEY PROJECT

**TAILINGS STORAGE FACILITY
FOUNDATION PREPARATION AND
BASIN LINER
SECTION AND DETAILS**



- NOTES**
1. Chainages defined by Setting out point S1, starting at 5+00.
 2. Embankment fill and foundation drains to be set into the foundation as per the cross sections.
 3. Perimeter Embankment Seepage Collection Pond to be located in the field by the Engineer.
 4. Extent of Basin Liner to be determined from exploration trenches.



PERIMETER EMBANKMENT
Scale B

MAIN EMBANKMENT
Scale A

1625.202	TAILINGS STORAGE FACILITY - FOUNDATION PREPARATION AND BASIN LINER - SECTIONS AND DETAILS
1625.214	TAILINGS STORAGE FACILITY - SEDIMENT CONTROL AND SEEPAGE COLLECTION - SECTIONS AND DETAILS
DRG. NO.	DESCRIPTION
REFERENCE DRAWINGS	

4	MAY 24/95	ISSUED FOR CONSTRUCTION	KJB
REV.	DATE	DESCRIPTION	APPROVED
REVISIONS			

3	APR 1/96	OVERFLOW CULVERTS ADDED	
2	MAR 25/96	UPDATE ROADS AND DRAINS	
1	JULY 27/95	BASIN LINER AND DRAINAGE REVISED	
0	JUNE 2/95	ISSUED FOR TENDER	
REV.	DATE	DESCRIPTION	APPROVED
REVISIONS			

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

DESIGNED: KDE
DRAWN: RDT
CHECKED: KJB
APPROVED: KJB

DATE: **JUNE 2, 1995**

IMPERIAL METALS CORPORATION

MT. POLLEY PROJECT

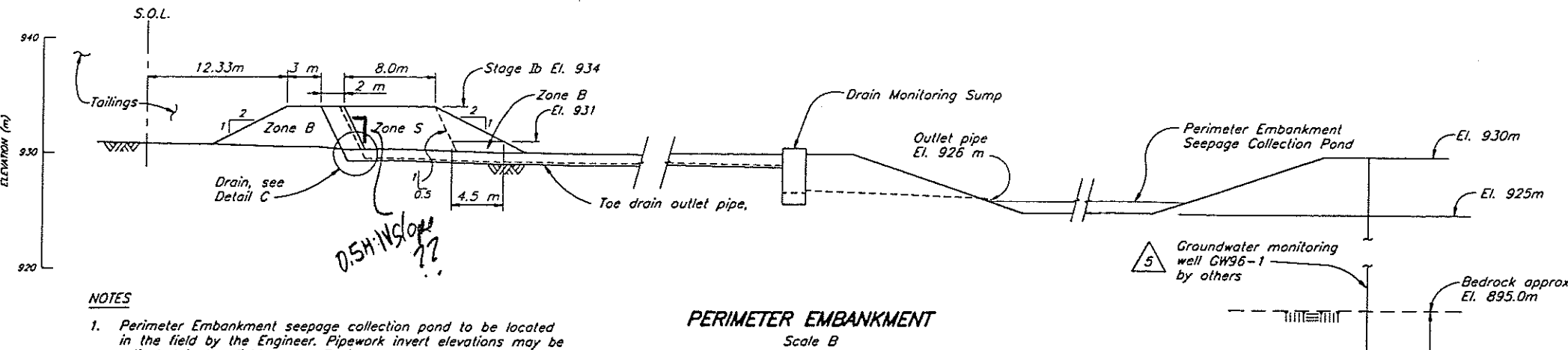
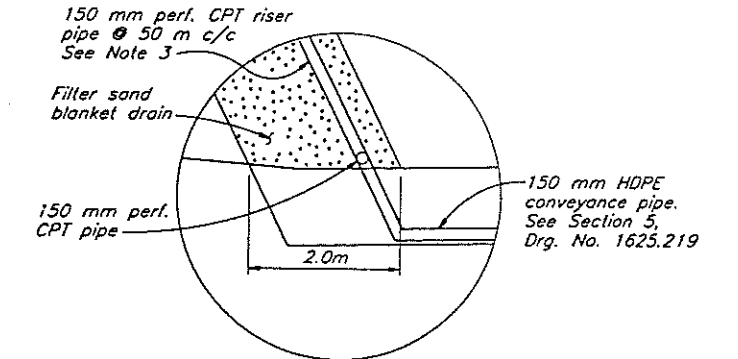
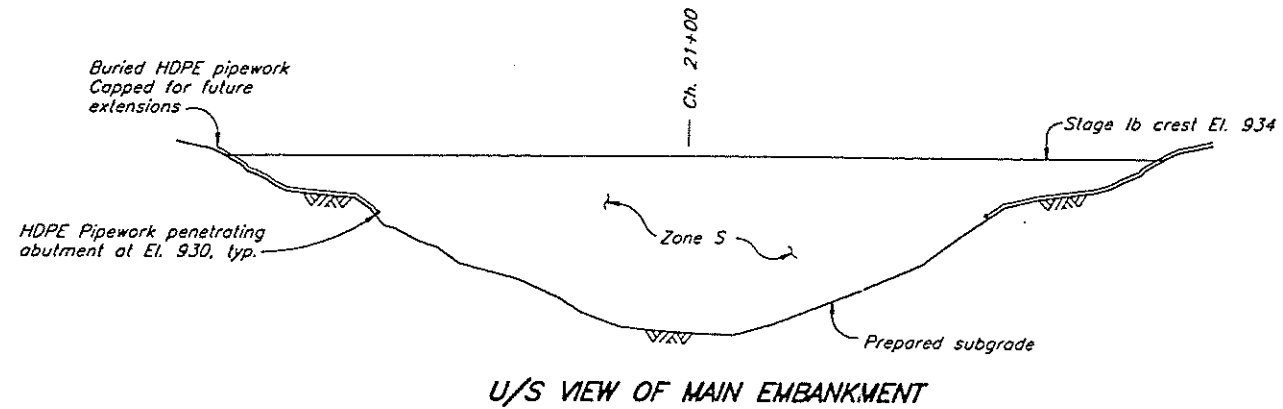
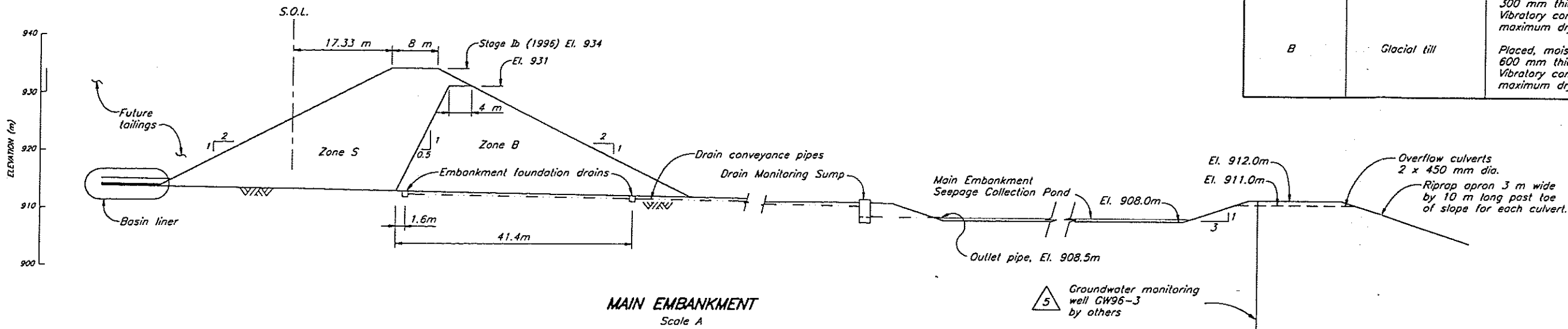
**TAILINGS STORAGE FACILITY
MAIN AND PERIMETER EMBANKMENTS
PLAN**

SCALE AS SHOWN

DRG. NO. 510-14-01-1625.210

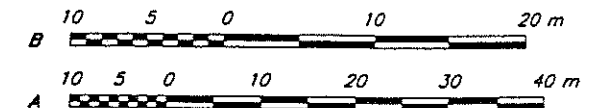
REV. 4

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 95% of modified 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 90% of modified proctor maximum dry density or as approved by the Engineer.



NOTES

1. 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.
2. Fill placement rates to be modified by the Engineer if excess pore pressures monitored in fill or foundation piezometers.
3. Groundwater monitoring wells to be installed by others.



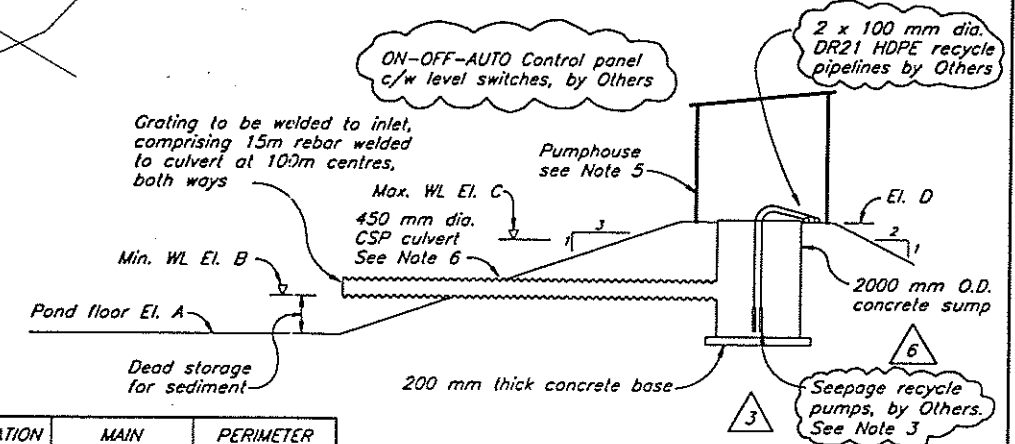
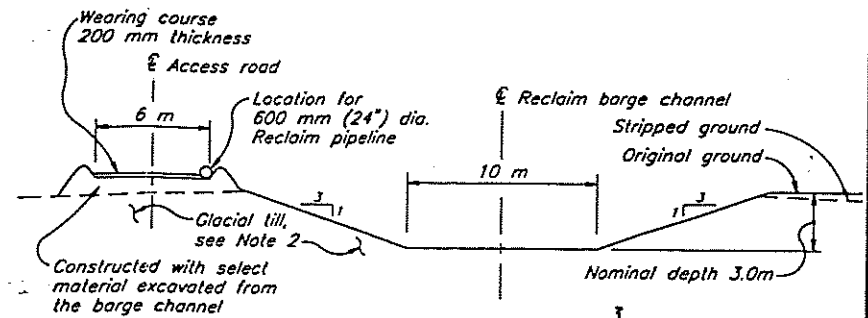
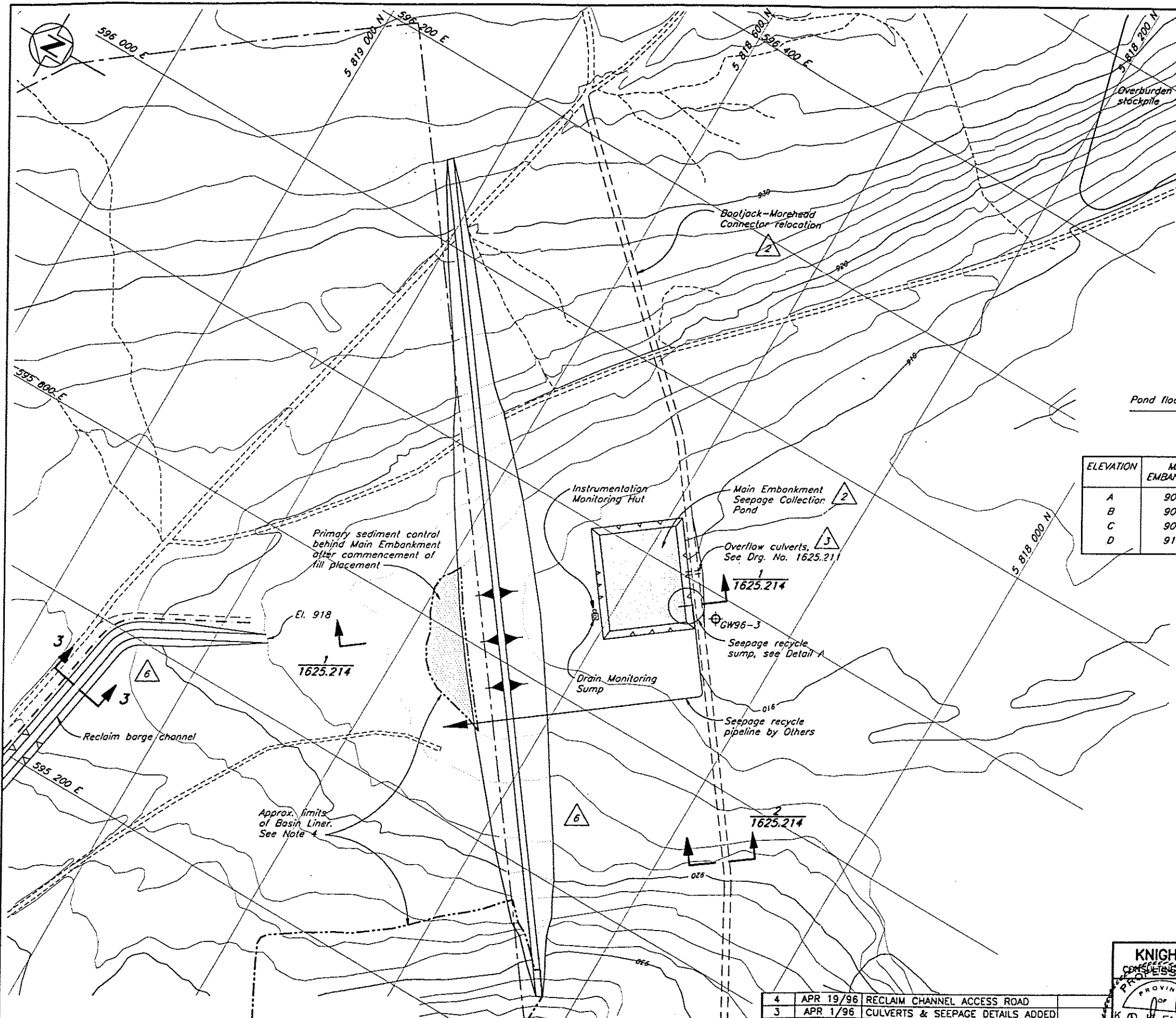
PERIMETER EMBANKMENT
Scale B

KNIGHT PIESOLD LIMITED CONSULTING ENGINEERS - VANCOUVER, B.C.		IMPERIAL METALS CORPORATION	
DESIGNED: KDE DRAWN: WLV/Y CHECKED: KAS APPROVED: KJB		MT. POLLEY PROJECT	
DATE: JUNE 2, 1995		TAILINGS STORAGE FACILITY TAILINGS EMBANKMENT SECTIONS AND DETAILS	
SCALE AS SHOWN		DRG. NO. 510-14-02-1625.211	
REV. 5		REV. 5	

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

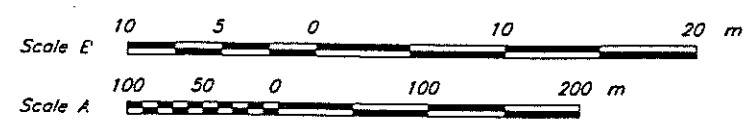
DRG. NO.	DESCRIPTION
	REFERENCE DRAWINGS

CAD FILE: 1625.021A.DWG 1:500 Plot: 1-0.5 May 24, 1995



ELEVATION	MAIN EMBANKMENT	PERIMETER EMBANKMENT
A	908.0	925.0
B	908.5	926.0
C	909.5	927.5
D	911.0	930.0

- NOTE**
1. Test pits indicate 4m thickness of till in proposed location of barge channel. Additional test pits will be required to confirm adequate thickness of till to finalize barge channel alignment.
 2. Compacted glacial till shall be placed along the barge channel excavation to meet basin liner requirements as directed by the Engineer.
 3. Seepage recycle pumps to be 2 - 100 mm electric submersible pumps, discharging to 2 - 100 mm pipelines extended up D/S face of tailings embankment. Pump sump to be fully enclosed with an insulated building c/w venting and I beam suitable for raising the pumps.
 4. Extent of basin liner to be determined from exploration trenches.
 5. Pumphouse by C.S.F.M. Engineering, Ltd. see Drg. No. 903
 6. Penetration of concrete sump by CSP culvert to be water tight.



1625.214	SEDIMENT CONTROL AND SEEPAGE COLLECTION - SECTIONS AND DETAILS
DRG. NO.	DESCRIPTION
REFERENCE DRAWINGS	

6	MAY 24/96	ISSUED FOR CONSTRUCTION	DB
5	APR 26/96	CHANGE NOTE	
REV.	DATE	DESCRIPTION	APPROVED
REVISIONS			

4	APR 19/96	RECLAIM CHANNEL ACCESS ROAD	
3	APR 1/96	CULVERTS & SEEPAGE DETAILS ADDED	
2	MAR 25/96	UPDATE ROAD & DRAINAGE	
1	JUL 27/95	BASIN LINER REVISED	
0	JUN 2/95	ISSUED FOR TENDER	
REV.	DATE	DESCRIPTION	APPROVED
REVISIONS			

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

DESIGNED: KDE
DRAWN: RDT/VY
CHECKED: MJB
APPROVED: [Signature]

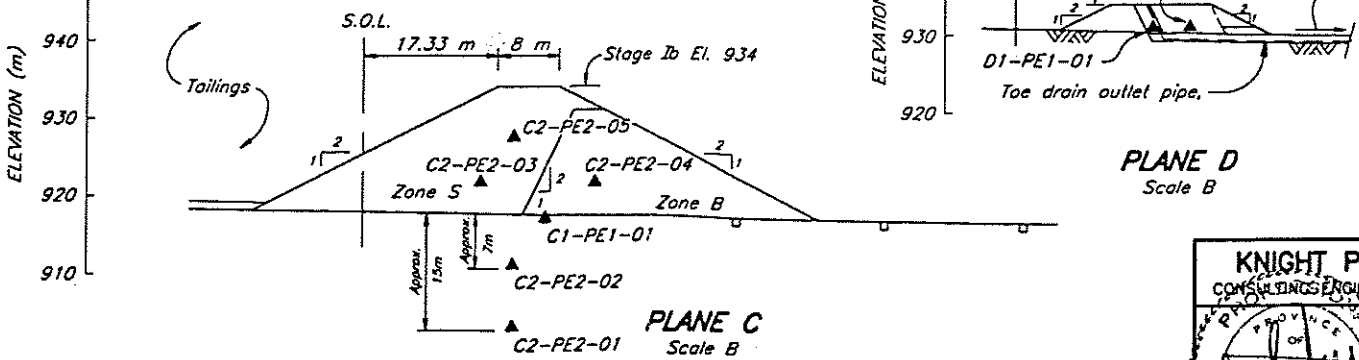
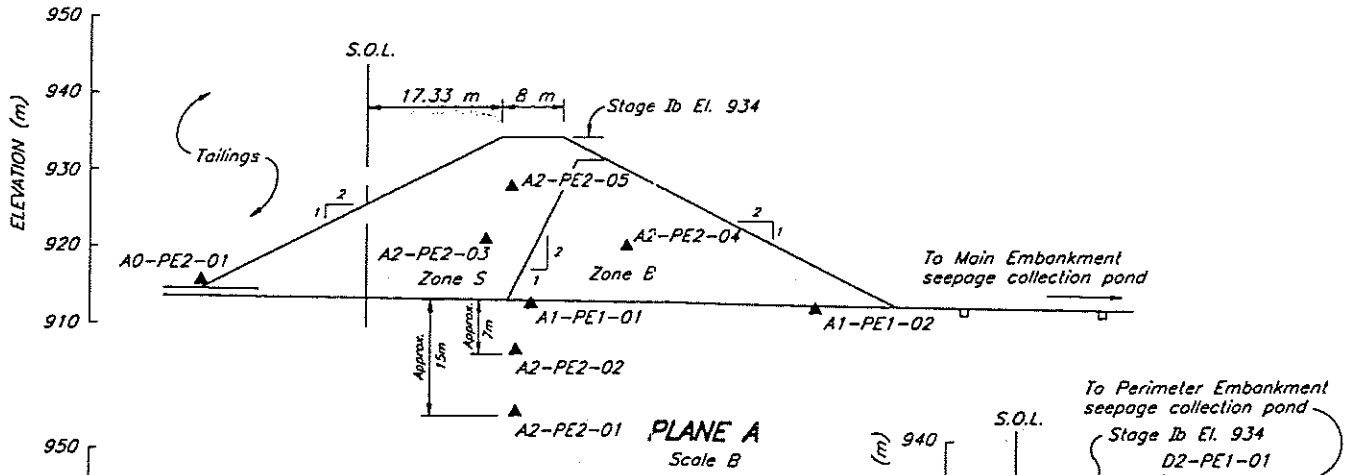
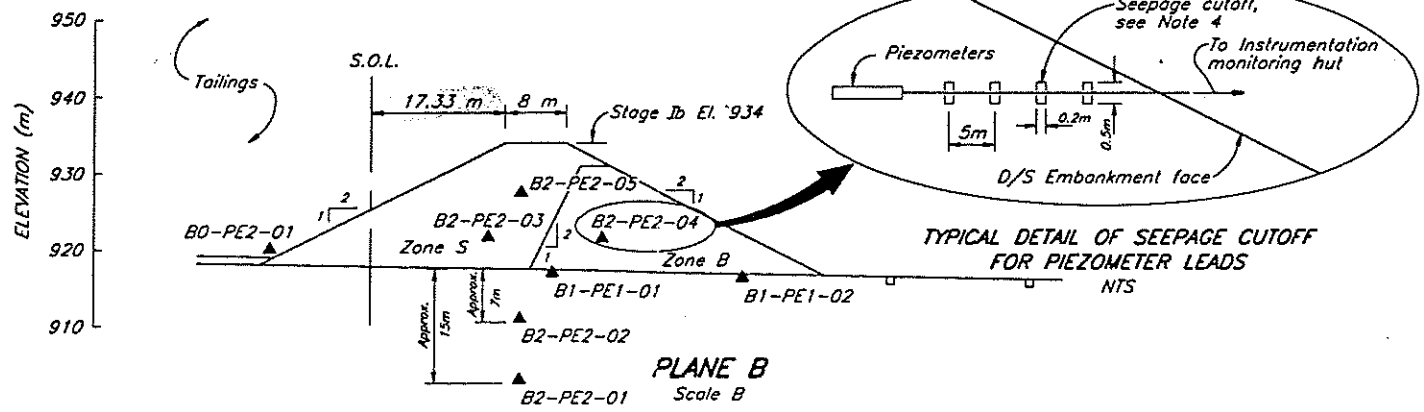
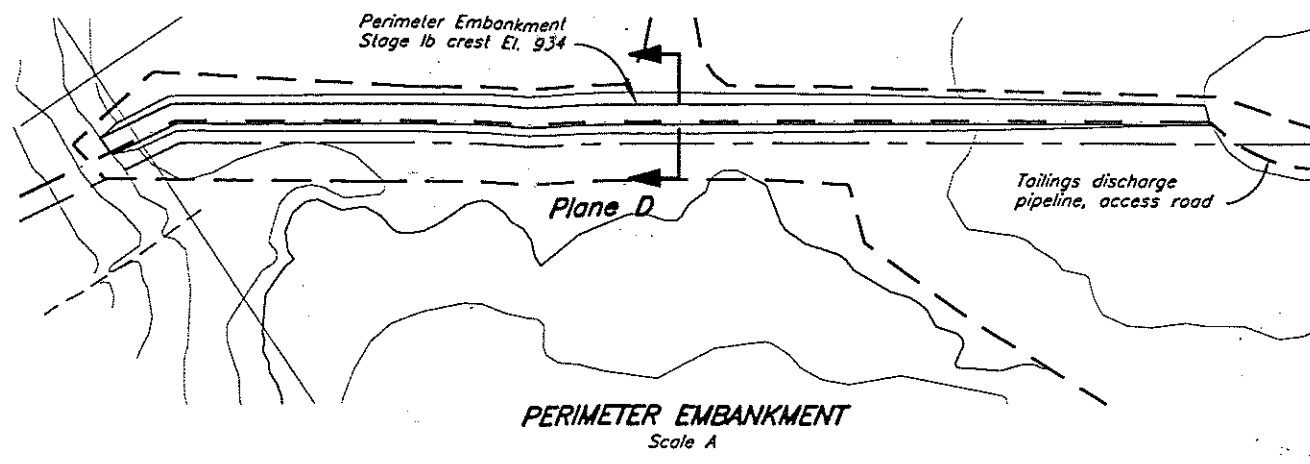
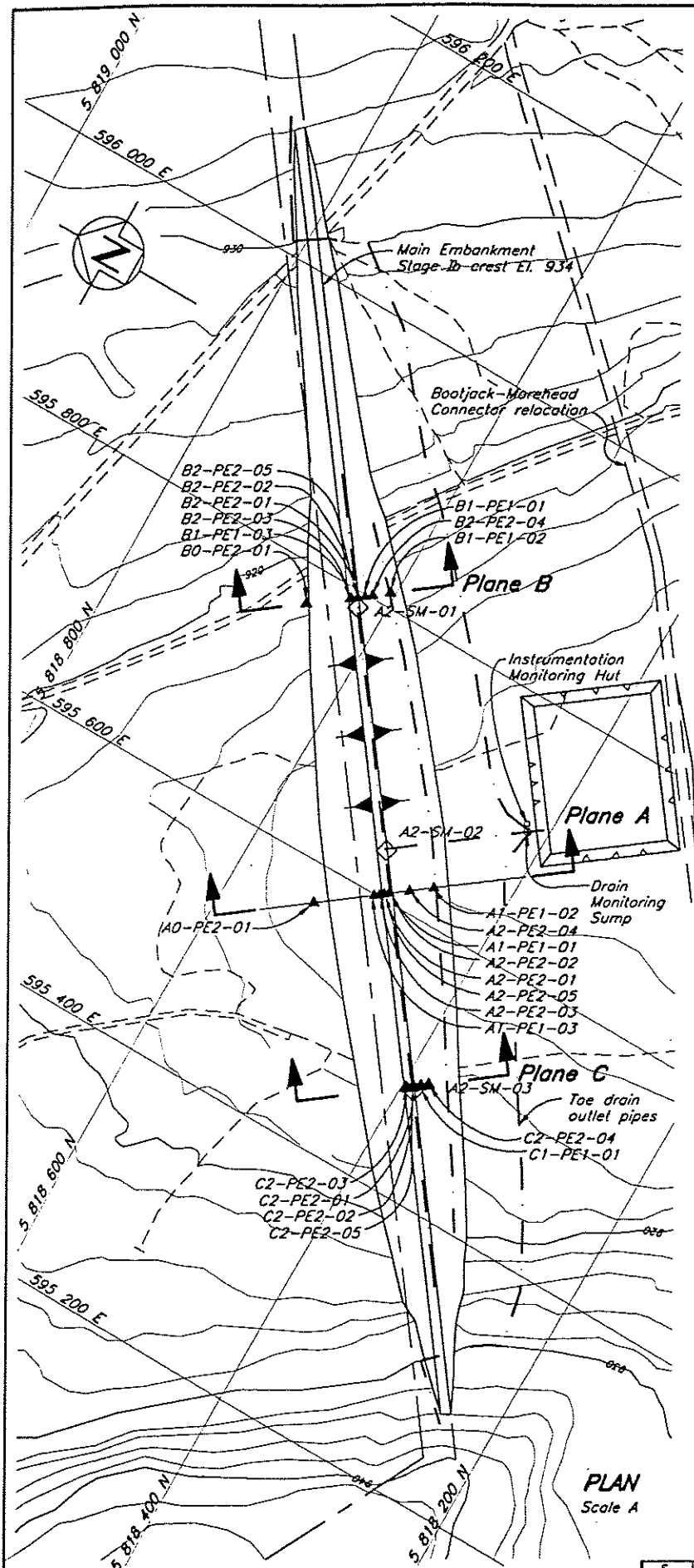
DATE: **JUNE 2, 1995**

IMPERIAL METALS CORPORATION

MT. POLLEY PROJECT

**TAILINGS STORAGE FACILITY
SEDIMENT CONTROL AND
SEEPAGE COLLECTION**

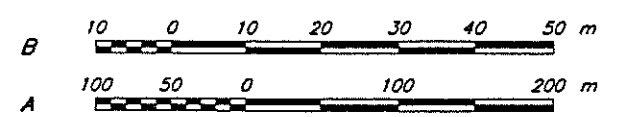
SCALE AS SHOWN
DRG. NO. 510-19-01-1625.213
REV. 6



SUMMARY OF PIEZOMETERS LEAD LENGTHS	
PIEZOMETER No.	LEAD LENGTH (m)
A0-PE2-01	250
A1-PE1-01	175
A1-PE1-02	150
A2-PE2-01	200
A2-PE2-02	200
A2-PE2-03	175
A2-PE2-04	175
A2-PE2-05	175
B0-PE2-01	350
B1-PE1-01	300
B1-PE1-02	275
B2-PE2-01	325
B2-PE2-02	325
B2-PE2-03	325
B2-PE2-04	300
B2-PE2-05	325
C1-PE1-01	325
C2-PE2-01	350
C2-PE2-02	350
C2-PE2-03	325
C2-PE2-04	325
C2-PE2-05	325
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)
 - A0-PE2-01 ▲ Tailings mass piezometer
 - 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
5	MAY 24/96	ISSUED FOR CONSTRUCTION	KIB	2	JAN. 18/96	REVISED SEEPAGE COLLECTION POND	
4	APR 1/96	PIEZOMETER INFORMATION ADDED		1	JULY 27/95	BASIN GROUNDWATER DRAINS REVISED	
3	MAR 25/96	ROAD UPDATED		0	JUNE 2/95	ISSUED FOR TENDER	

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

DESIGNED GRG
DRAWN RDT/YY
CHECKED MDB
APPROVED KIB

DATE **JUNE 2, 1995**

IMPERIAL METALS CORPORATION

MT. POLLEY PROJECT

TAILINGS STORAGE FACILITY INSTRUMENTATION

SCALE AS SHOWN

DRG. NO. **510-77-01-1625.220** REV. **5**

DRG. NO.	DESCRIPTION
	REFERENCE DRAWINGS