APPENDIX 11

RECORD of CONTAMINATED SOILS EXCAVATED

AND

DISPOSAL LOCATIONS IN THE MINE

TABLE 1
POLARIS MINE - CONTAMINATED SOILS EXCAVATED
TO DECEMBER 31, 2004

[1]Contaminated Soil Locations	DRP Forecast Volumes To Be Excavated (m^3 in-situ volume)		[4]Estimated Volumes Excavated To Date (m^3 in-situ volume)		Estimated Volumes Excavated During 2004 (m^3 in-situ volume)		[3]Total Volumes Excavated (m^3 in-situ volume)	
	Hydrocarbons	Metals	Hydrocarbons	Metals	Hydrocarbons	Metals	Hydrocarbons	Metals
North Portal Pb Ore Stockpile Area	-	TBA	-	11,352	-	-	-	11,352
Fuel Bladder Storage Area	12,000	-	12,513	-	-	-	12,513	-
Old Crusher	-	TBA	-	1,079	-	-	-	1,079
Tails Thickener/ Tailings Lines	TBA	3,000	-	2,183	-	-	-	2,183
CRF Plant	100	-	40	-	-	-	40	-
Exploration Dump & Stockpile Area		TBA	-	11,028	-	10,607	-	21,635
Firehall Training Area	2,000		1,465	-	11,747	5,048	13,212	5,048
Concentrate Storage Shed Area	Note 2	Note 2	-	24,314	1,731	26,869	1,731	51,183
Barge Area	20,000	85,000	28,314	-	48,164	31,985	76,478	31,985
Dock Cells			12,210		3,519	8,481	15,729	8,481
Shoreline				44,645	-	(9,666)	-	34,979
Foldaway Buildings	2,000	-	628	110	15,946	161	16,574	271
Incinerator Area							4,390	6,110
Accommodation Building	500	-	-	-	1,800	-	1,800	-
Quonset Huts	TBA	-	-	-	-	-	-	-
Snow Dumps		3,500		1,641	-	14,000	-	15,641
Lube Storage / Tank Farm Area	-	-			3,150	-	3,150	-
June 2002 Fuel Spill	Note 3	-	-	-	580	-	580	-
Miscellaneous	-		-	-	628	110	628	110
TOTALS	36,600	91,500	55,170	96,352	87,265	87,595	146,825	190,057
TOTAL CONTAMINANTS		**128,100**		**151,522**		**174,860**		**336,882**

Notes:

Note 1 - Some area boundaries have changed from the 2003 4th Quarter report as volumes presented are based on surveyed data which has changed the definition of some of the areas.

Note 2 - DRP estimated metals contaminated soils in the Concentrate Storage Area and the Barge area together as one quantity.

Note 3 - this fuel spill ocurred after the DRP was issued so there was not estimate for it.

Note 4 - Total volumes are based on surveys of remediated areas.

Abreviations:

DRP - Decommissioning and Reclamation Plan

TBA - Areas identified in the DRP as being contaminated but no estimate of volumes were made as investigations were not completed.

TABLE 2
POLARIS MINE - CONTAMINATED SOILS HANDLING TO DECEMBER 31, 2004

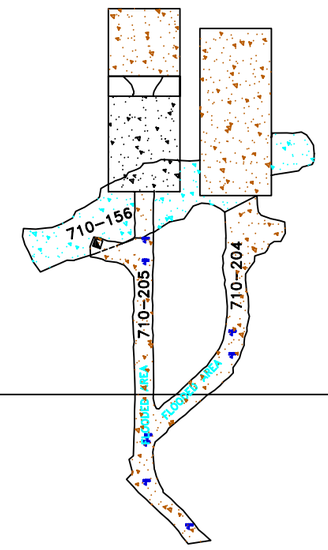
HYDROCARBON CONTAMINATED SOILS		METALS CONTAMIANTED SOILS		TOTALS CONTAMINATED SOILS (M^3)		
LRDQL	MINE	LRDQL	MINE	LRDQL	MINE	TOTAL
0	146,844	80,324	109,774	80,324	256,618	336,942

NOTES:

Hydrocarbon Soils include Co-contaminated (Metals & Hydrocarbons)
LRDQL - refers to Little Red Dog Quarry Landfill
MINE - refers to the underground working of the mine

2200 N | 2100 N | 2000 N | 1900 N | 1800 N

1600 E | 1500 E | 1400 E



Sept 4 2003

Level flooded with Water from under the Barge excavation

MATERIALS PLACED UNDERGROUND

- NORMAL MINE BACKFILL FROM OPERATIONS
- METALS CONTAMINATED SOILS
- HYDROCARBON CONTAMINATED SOILS
- OTHER MATERIALS STORAGE

1800 N

POLARIS MINE

DRAWN BY: J.A. | CHECKED BY:

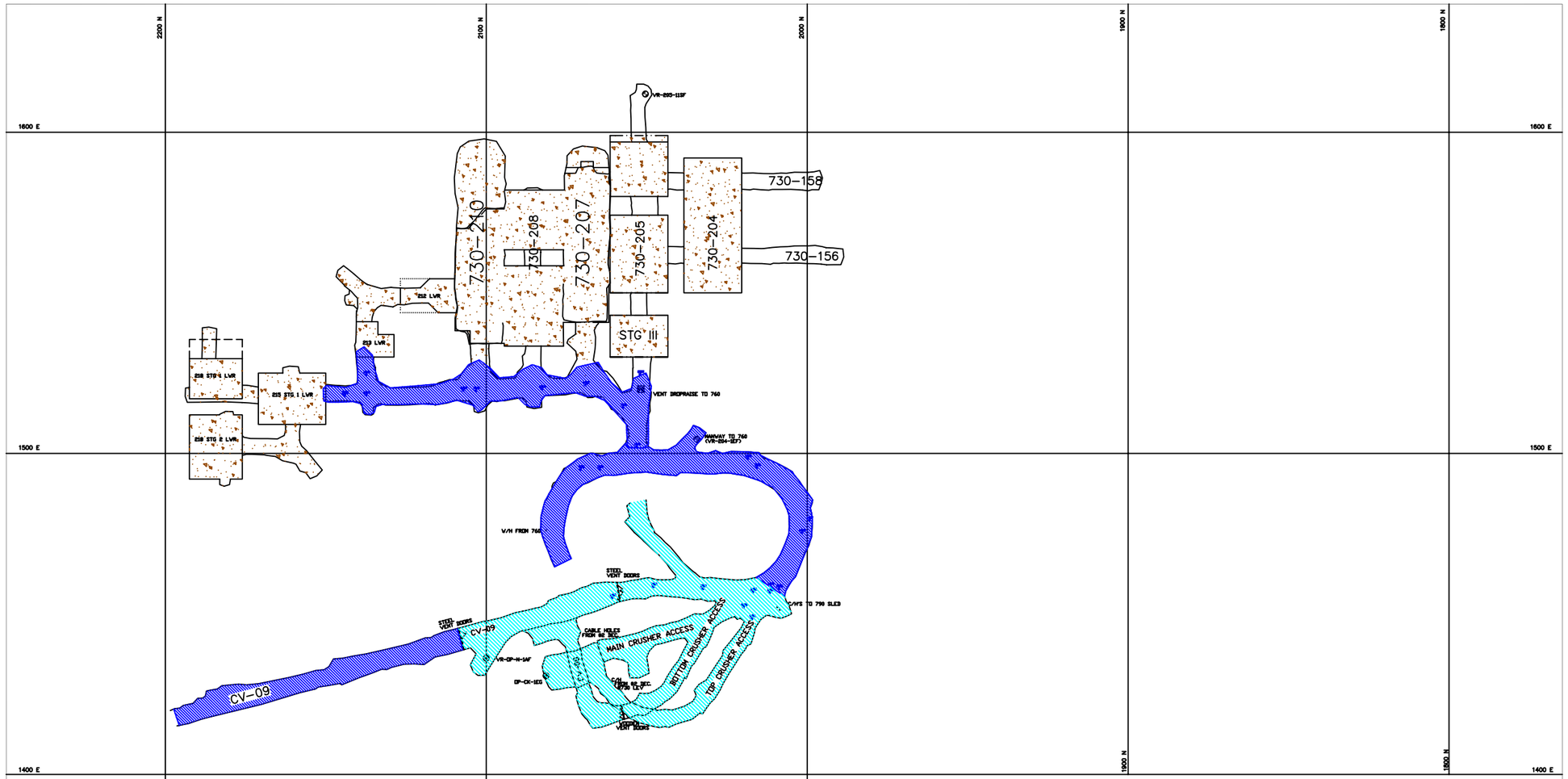
REVISED BY: | DATE: | REVISION

710 LEVEL

FINAL MINE PLAN – AFTER MINE SEALED

as of December 31, 2004

SCALE: 1:1500



MATERIALS PLACED UNDERGROUND

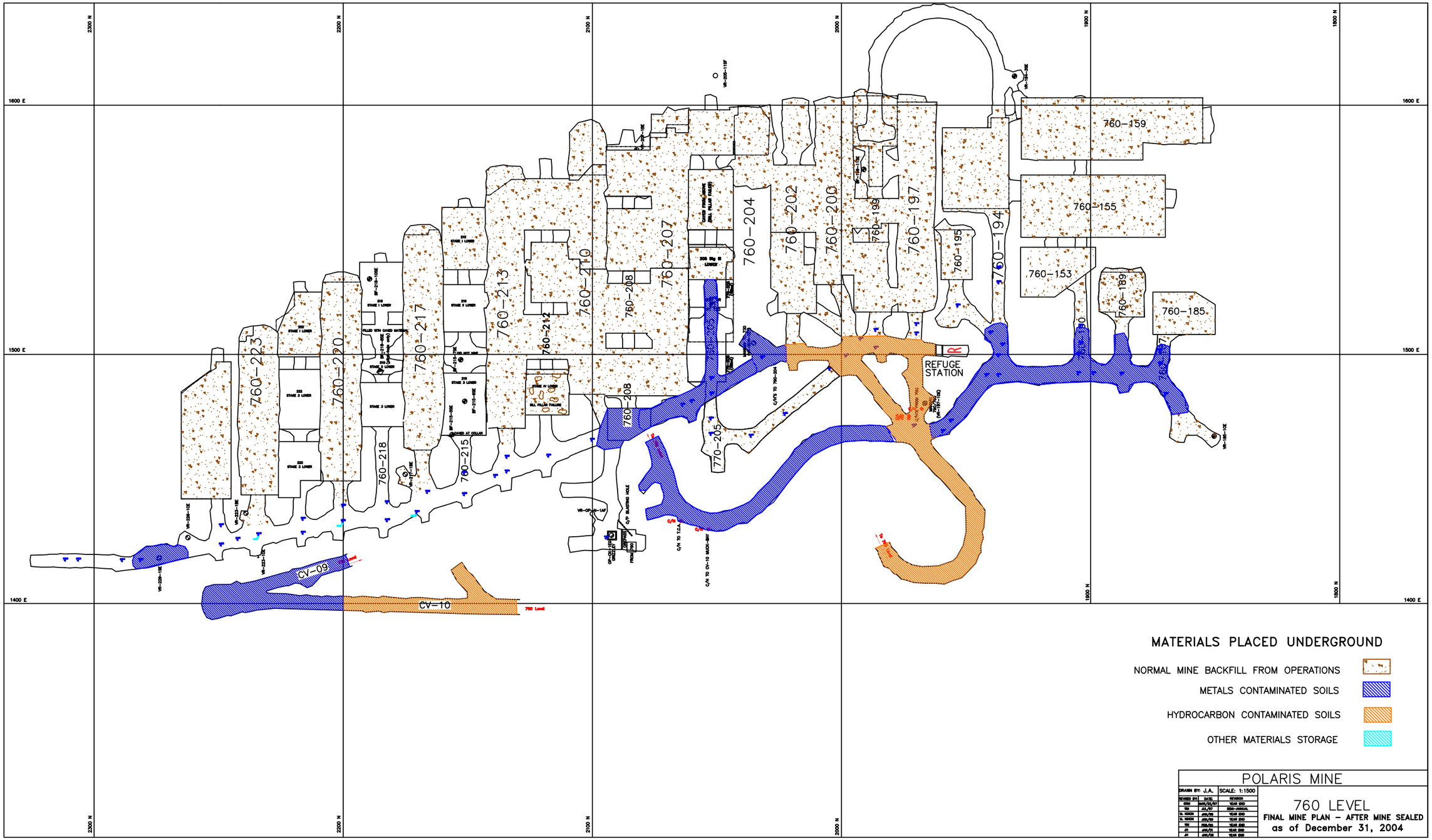
- NORMAL MINE BACKFILL FROM OPERATIONS
- METALS CONTAMINATED SOILS
- HYDROCARBON CONTAMINATED SOILS
- OTHER MATERIALS STORAGE

POLARIS MINE

DRAWN BY: J.A.	SCALE: 1:1500	
REVISED BY:	DATE:	REVISION

730 LEVEL

FINAL MINE PLAN – AFTER MINE SEALED
as of December 31, 2004



MATERIALS PLACED UNDERGROUND

NORMAL MINE BACKFILL FROM OPERATIONS	▨
METALS CONTAMINATED SOILS	▨
HYDROCARBON CONTAMINATED SOILS	▨
OTHER MATERIALS STORAGE	▨

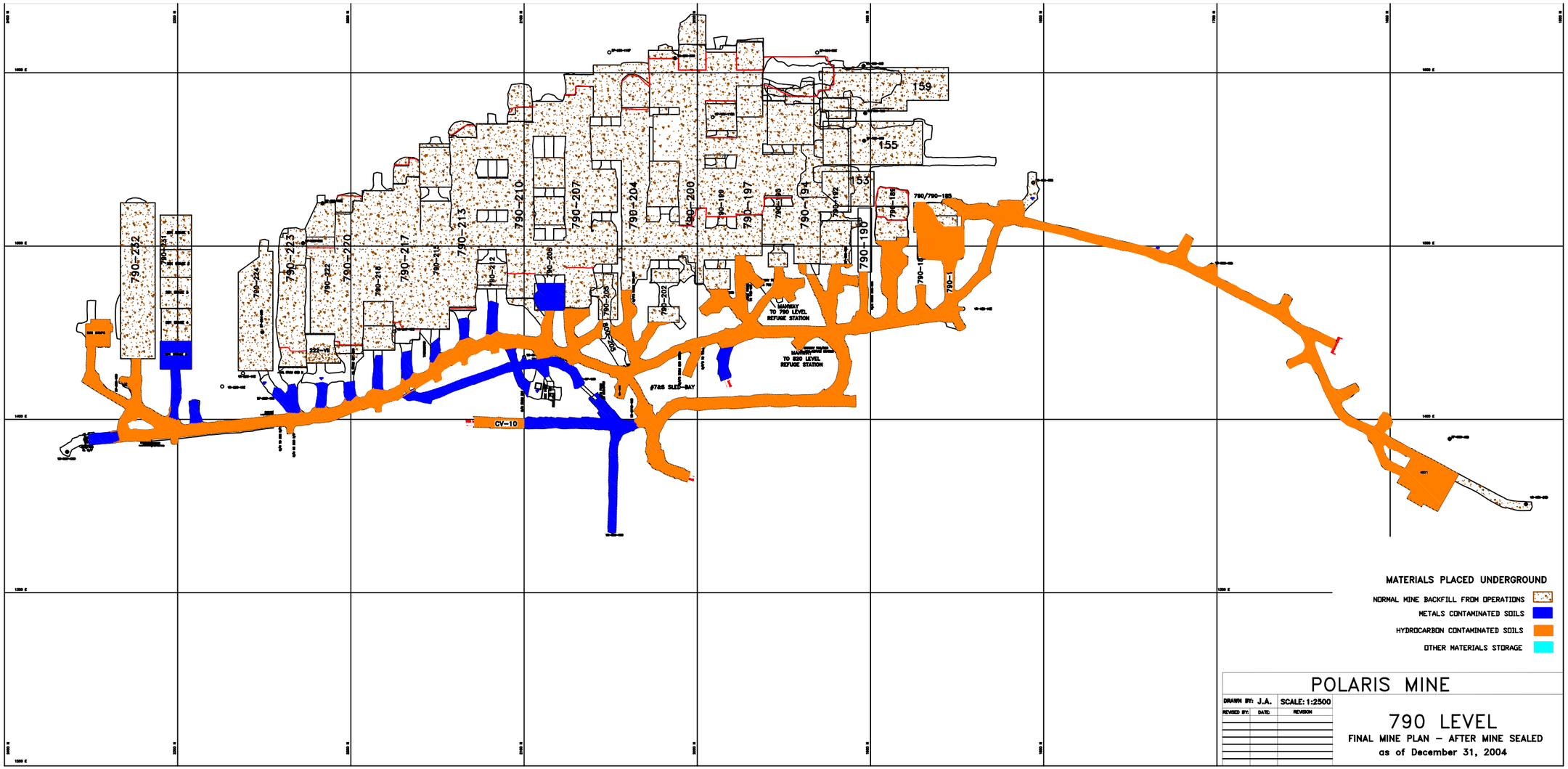
POLARIS MINE

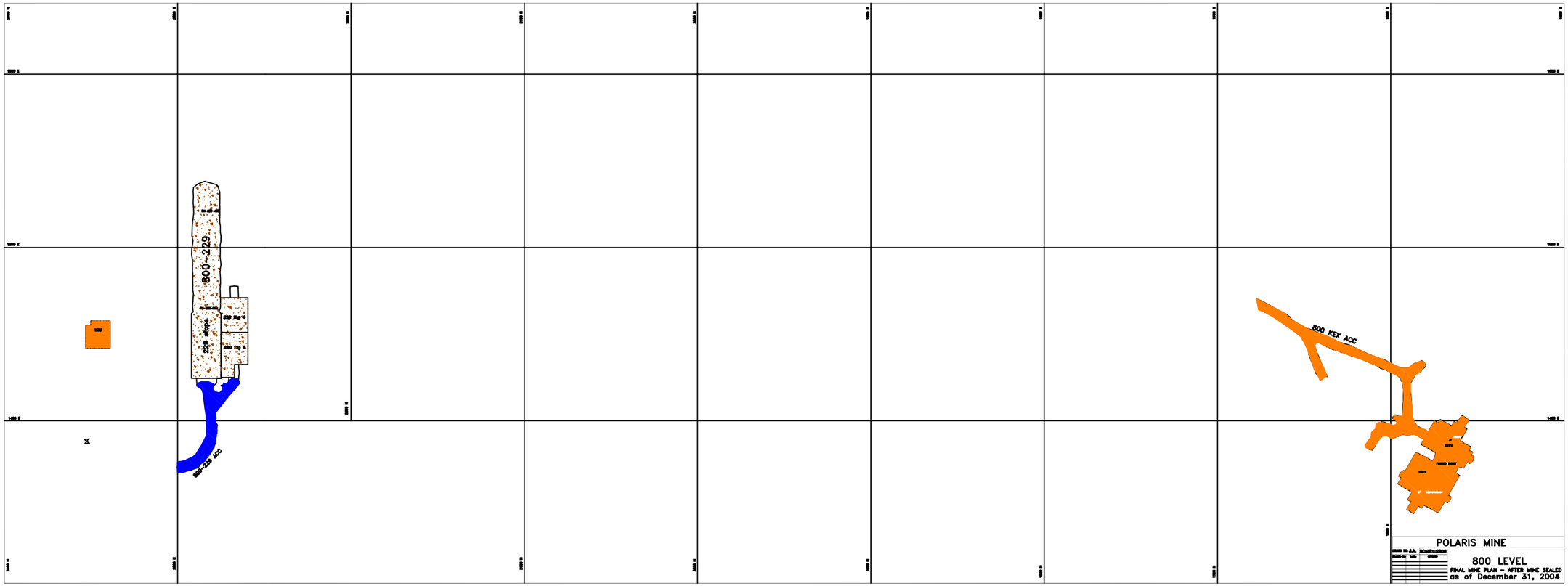
DRAWN BY: J.A.
SCALE: 1:1500

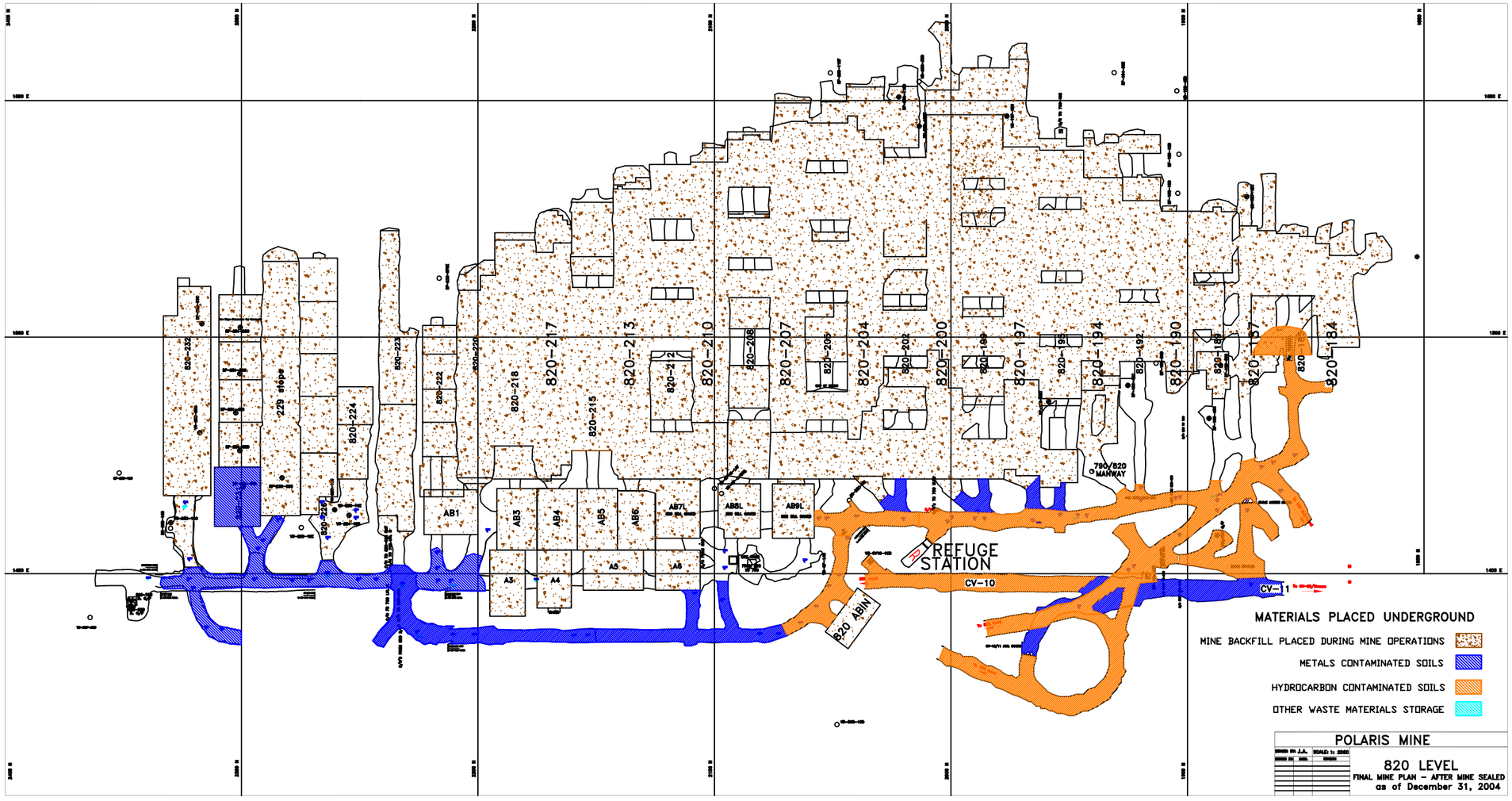
REVISED BY:	DATE:	REVISION
GWM	MAR/22/97	YEAR END
WM	JUL/97	SEMI-ANNUAL
M. NIXON	JAN/98	YEAR END
M. NIXON	JAN/99	YEAR END
WM	FEB/00	YEAR END
JH	JAN/01	YEAR END
JH	JAN/02	YEAR END

760 LEVEL

FINAL MINE PLAN – AFTER MINE SEALED
as of December 31, 2004


790-252
790-223
790-220
790-217
790-213
790-210
790-207
790-204
790-200
790-197
790-194
790-190
790-1
159
155
153
780/790-185
MANWAY
TO 790 LEVEL
REFUSE STATION
MANWAY
TO 820 LEVEL
REFUSE STATION
6785 SUMP
CV-10
MATERIALS PLACED UNDERGROUND
NORMAL MINE BACKFILL FROM OPERATIONS
METALS CONTAMINATED SOILS
HYDROCARBON CONTAMINATED SOILS
OTHER MATERIALS STORAGE
POLARIS MINE
DRAWN BY: J.A.
SCALE: 1:2500
REVISED BY:
DATE:
REVISION
790 LEVEL
FINAL MINE PLAN – AFTER MINE SEALED
as of December 31, 2004


800-229
800-229 ACC
800 KEK ACC
POLARIS MINE
800 LEVEL
FINAL MINE PLAN – AFTER MINE SEALED
as of December 31, 2004


820-232
229 stope
820-224
820-223
820-222
820-220
820-218
820-217
820-215
820-213
820-212
820-210
820-208
820-207
820-205
820-204
820-202
820-200
820-198
820-197
820-195
820-194
820-192
820-190
820-189
820-187
820-184
790/820 MANWAY
AB1
AB3
AB4
AB5
AB6
AB7L
AB8L
AB9L
A3
A4
A5
A6
REFUGE STATION
CV-10
CV-1
820 ABIN
MATERIALS PLACED UNDERGROUND
MINE BACKFILL PLACED DURING MINE OPERATIONS
METALS CONTAMINATED SOILS
HYDROCARBON CONTAMINATED SOILS
OTHER WASTE MATERIALS STORAGE
POLARIS MINE
820 LEVEL
FINAL MINE PLAN – AFTER MINE SEALED
as of December 31, 2004

2000 N
1900 N
1800 N
1700 N
1600 E
1500 E
1400 E

850/820–187
850/820–185
850/820–184
825–181
825–152
825–150
825–185
825–176
825–172
C/H FROM 850
CV–11
CV–12

MATERIALS PLACED UNDERGROUND

MINE BACKFILL PLACED DURING MINE OPERATIONS

METALS CONTAMINATED SOILS

HYDROCARBON CONTAMINATED SOILS

OTHER WASTE MATERIALS STORAGE

POLARIS MINE

DRAWN BY: J.A.	SCALE 1:1250
REVISED BY:	DATE: / REVISION

825 SUBLEVEL

FINAL MINE PLAN – AFTER MINE SEALED

as of December 31, 2004

850 NORTH LEVEL

MATERIALS PLACED UNDERGROUND

MINE BACKFILL PLACED DURING MINE OPERATIONS

METALS CONTAMINATED SOILS

HYDROCARBON CONTAMINATED SOILS

OTHER WASTE MATERIALS STORAGE

POLARIS MINE

850 LEVEL SOUTH

FINAL MINE PLAN – AFTER MINE SEALED

as of December 31, 2004

Mak Parts
Pump
Compressor
Hydraulic Pack

880–145
880–142
880–141
880–139
880–137
880–135
880 DUMP
125W
680–124W

NP–231
NP–229
NP–227
NP–142
NP–140

880–223
880–220
880–217
880–213
880–210
880–207
880–204
880–200
880–197
880–194
880–190
880–187
880–184
880–181

AB1 AB2 AB3 AB4 AB5 AB6 AB7 AB8 AB9 AB10 AB11 AB12 AB13 AB14 AB15 AB16 AB17 AB19 AB20

A STOPE
A/B UNDERCUT
B STOPE
B/C UNDERCUT

105–7
105–6

Tires, Steel & Pallets
Tailings Lines

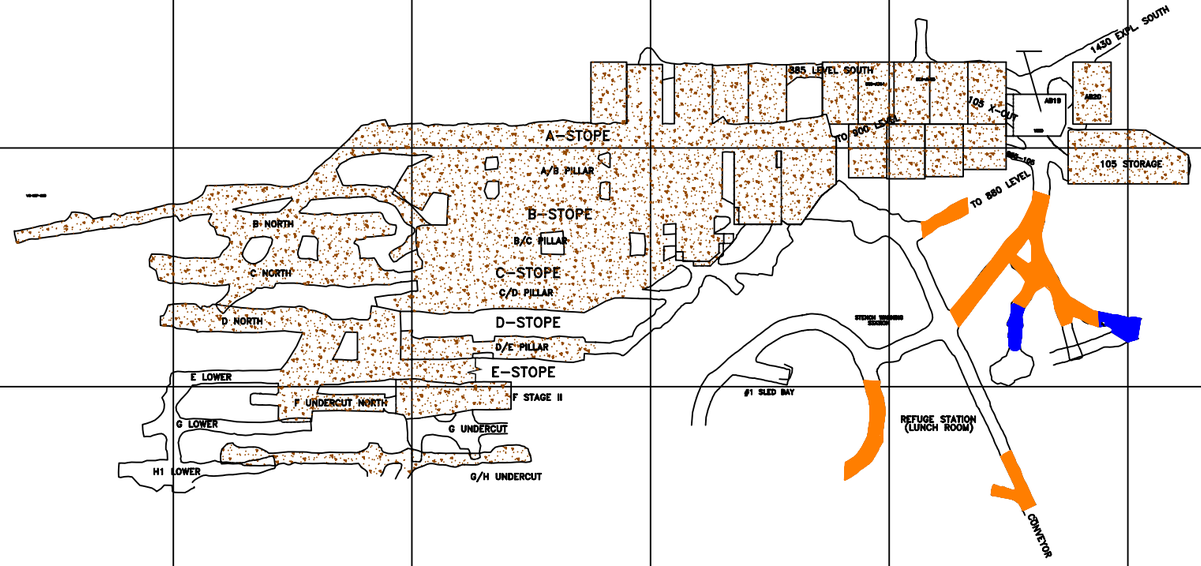
SLED–BAY
LADDER UP TO REFUGE STATION
REFUGE STATION NEXT RIGHT

MATERIALS PLACED UNDERGROUND

- MINE BACKFILL PLACED DURING MINE OPERATIONS
- METALS CONTAMINATED SOILS
- HYDROCARBON CONTAMINATED SOILS
- OTHER WASTE MATERIALS STORAGE

POLARIS MINE

880 LEVEL SOUTH
FINAL MINE PLAN – AFTER MINE SEALED
as of December 31, 2004



MATERIALS PLACED UNDERGROUND

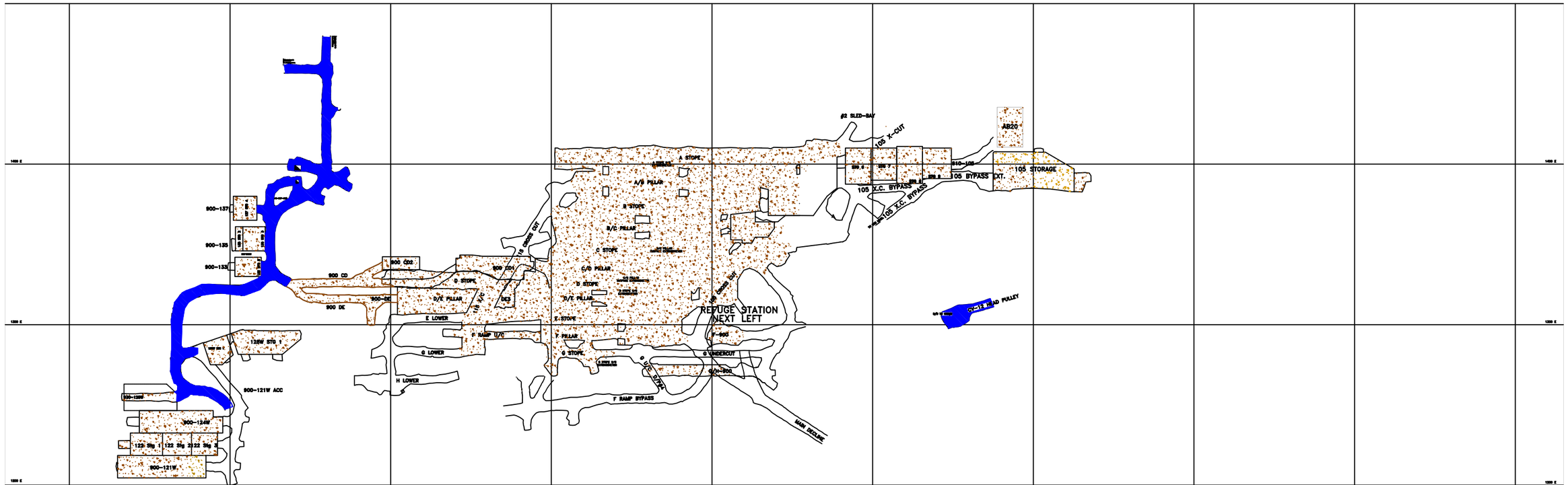
- MINE BACKFILL PLACED DURING MINE OPERATIONS
- METALS CONTAMINATED SOILS
- HYDROCARBON CONTAMINATED SOILS
- OTHER WASTE MATERIALS STORAGE

POLARIS MINE

DRAWN BY: J.A.	SCALE:1:2500
REVISED BY:	DATE: / REVISION

885 LEVEL

FINAL MINE PLAN – AFTER MINE SEALED
as of December 31, 2004



MATERIALS PLACED UNDERGROUND

- MINE BACKFILL PLACED DURING MINE OPERATIONS
- METALS CONTAMINATED SOILS
- HYDROCARBON CONTAMINATED SOILS
- OTHER WASTE MATERIALS STORAGE

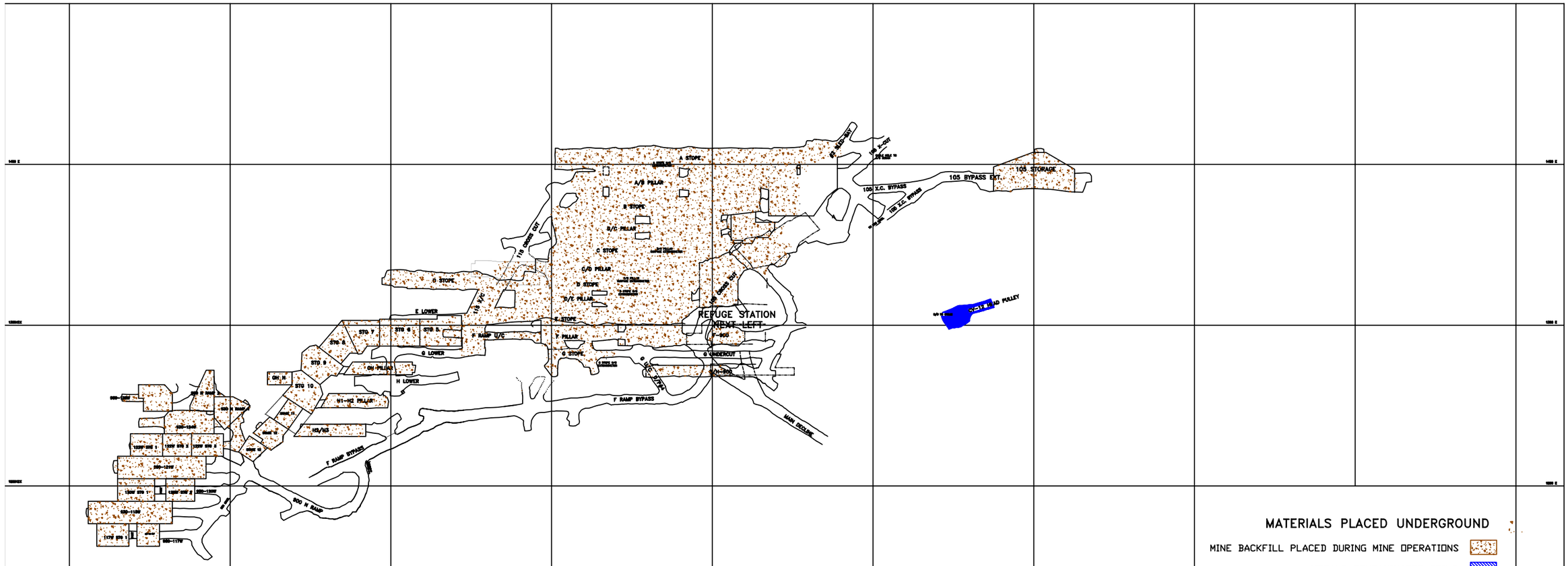
POLARIS MINE

DRAWN BY: J.A. SCALE: 1:2500

DRAWN BY:	DATE:	REVISIONS

900 LEVEL

FINAL MINE PLAN – AFTER MINE SEALED
as of December 31, 2004



MATERIALS PLACED UNDERGROUND

- MINE BACKFILL PLACED DURING MINE OPERATIONS
- METALS CONTAMINATED SOILS
- HYDROCARBON CONTAMINATED SOILS
- OTHER WASTE MATERIALS STORAGE

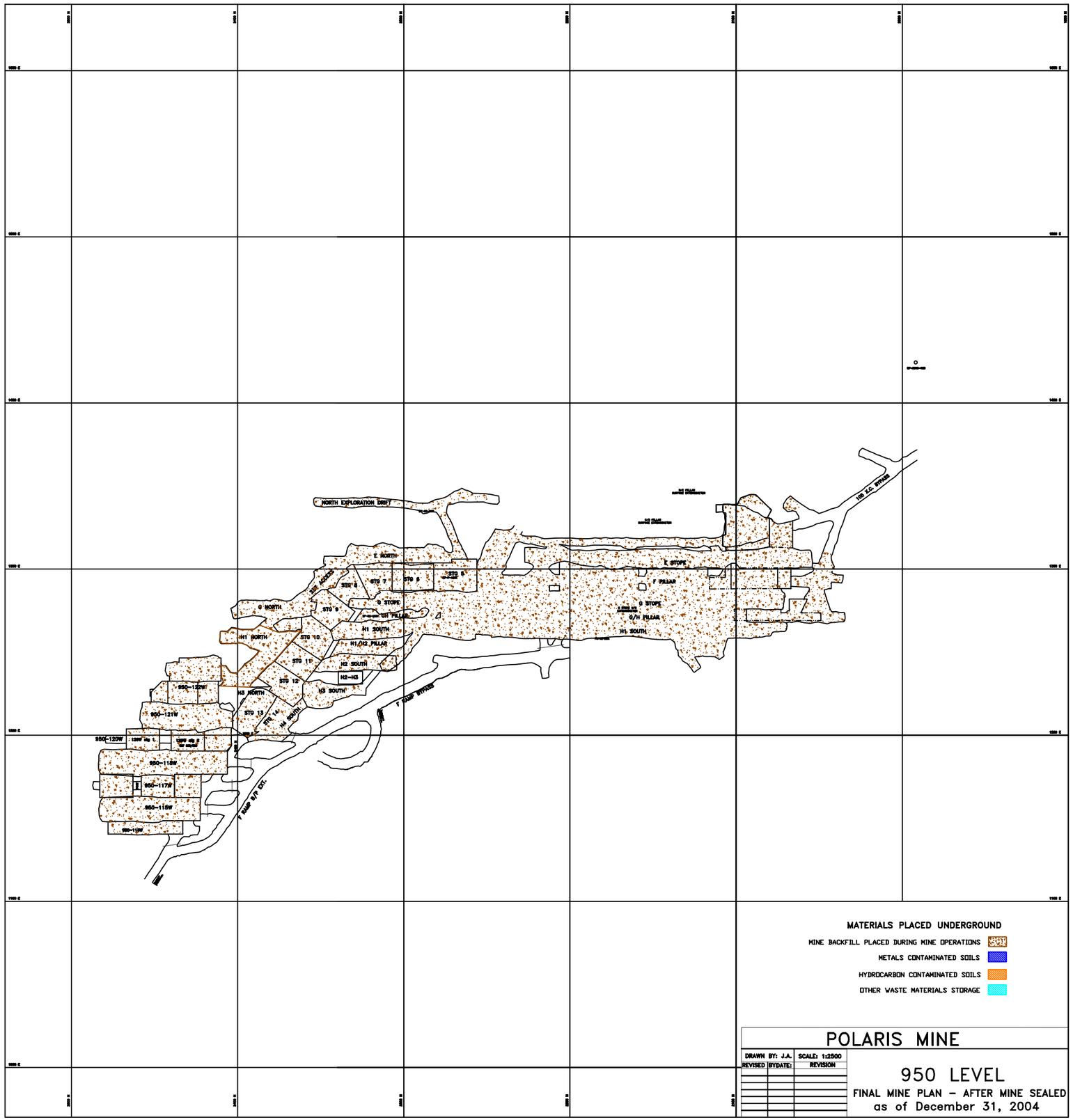
POLARIS MINE

DRAWN BY: J.A. | SCALE: 1:2500

930 LEVEL

FINAL MINE PLAN – AFTER MINE SEALED

as of December 31, 2004



MATERIALS PLACED UNDERGROUND

- MINE BACKFILL PLACED DURING MINE OPERATIONS
- METALS CONTAMINATED SOILS
- HYDROCARBON CONTAMINATED SOILS
- OTHER WASTE MATERIALS STORAGE

POLARIS MINE

DRAWN BY: J.A.		SCALE: 1:2500
REVISED	BYDATE:	REVISION

950 LEVEL

FINAL MINE PLAN – AFTER MINE SEALED
as of December 31, 2004

2500 N
2500 N
2400 N
2300 N
2200 N
1300 E
1300 E
1200 E
1200 E
960 F
960–120W
960–118W
960–117W
960–115W
960–113W
Tailings Line Storage Area
1100 E
1100 E
2300 N
2500 N
2500 N
2400 N
2300 N

MATERIALS PLACED UNDERGROUND

MINE BACKFILL PLACED DURING MINE OPERATIONS

METALS CONTAMINATED SOILS

HYDROCARBON CONTAMINATED SOILS

OTHER WASTE MATERIALS STORAGE

POLARIS MINE

DRAWN BY: MJH	SCALE: 1:1500
REVISED BY:	DATE:

960 LEVEL

FINAL MINE PLAN – AFTER MINE SEALED
as of December 31, 2004

PORTAL PLUG

MACHINERY AND TELEPHONE POLES

NORTH PORTAL

ANFO PLANT

ø4 SLED-BAY

FUEL BAY (1000 GAL)

ANFO STORAGE

MAIN DECLINE

STEEL SETS

MACHINERY

BAGS OF LIME

CV-01 CONVEYOR

JUNE 2003 MELT WATER STORAGE AREA

COB #1

CV-02 CONVEYOR

MAIN DECLINE

MACHINERY

PORTAL PLUG

PORTAL PLUG

PORTAL PLUG

CV-03

MATERIALS PLACED UNDERGROUND

MINE BACKFILL PLACED DURING MINE OPERATIONS

METALS CONTAMINATED SOILS

HYDROCARBON CONTAMINATED SOILS

OTHER WASTE MATERIALS STORAGE

POLARIS MINE

DRAWN BY: J.A. SCALE: NTS

REVISED BY	DATED	REVISION

980 LEVEL

FINAL MINE PLAN – AFTER MINE SEALED

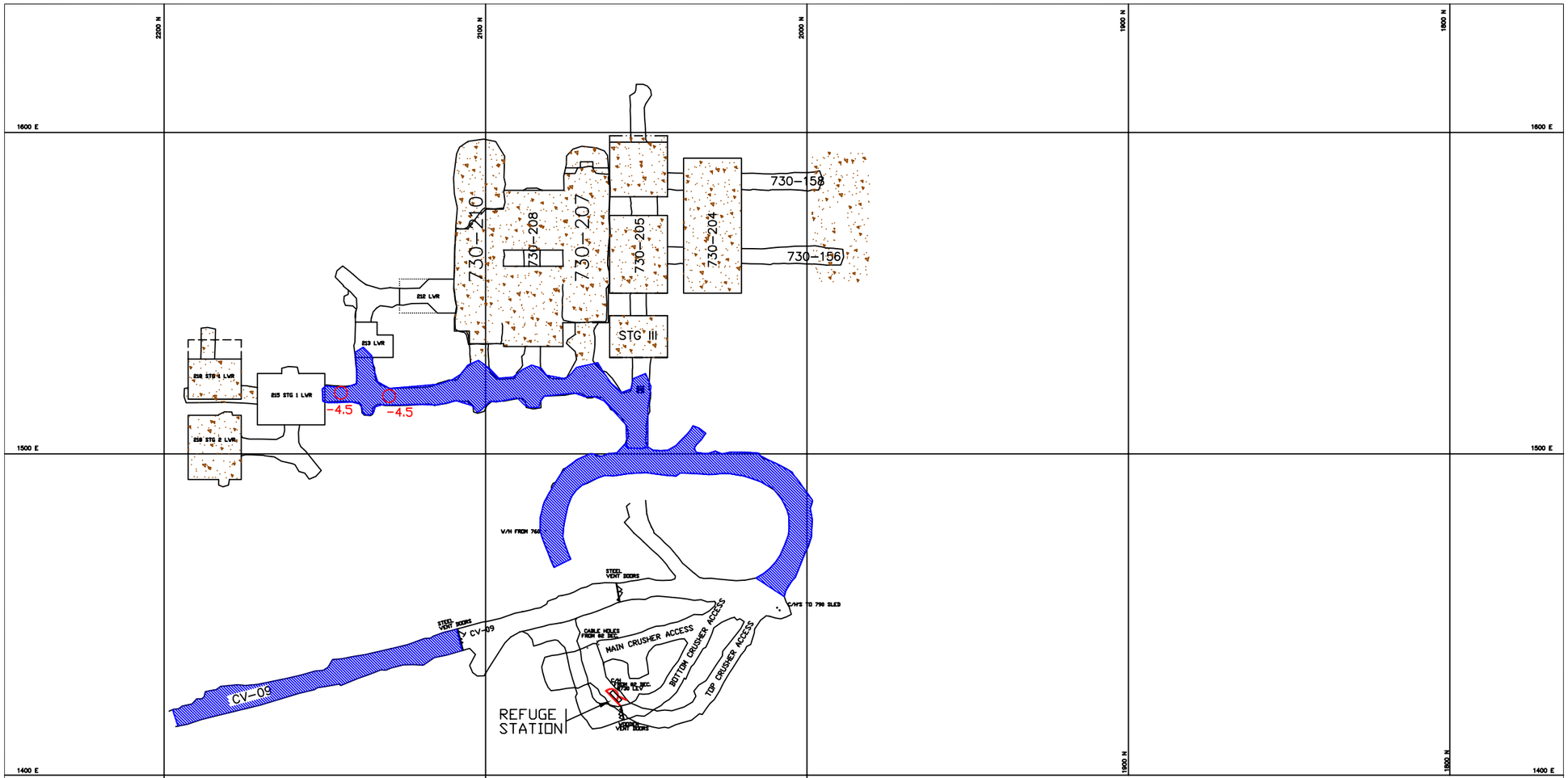
as of December 31, 2004

APPENDIX 12

ROCK TEMPERATURES SURROUNDING

THE

UNDERGROUND MINE WORKINGS



MATERIALS PLACED UNDERGROUND

NORMAL MINE BACKFILL FROM OPERATIONS

METALS CONTAMINATED SOILS

HYDROCARBON CONTAMINATED SOILS

OTHER MATERIALS STORAGE

ROCK TEMPERATURE -5.5

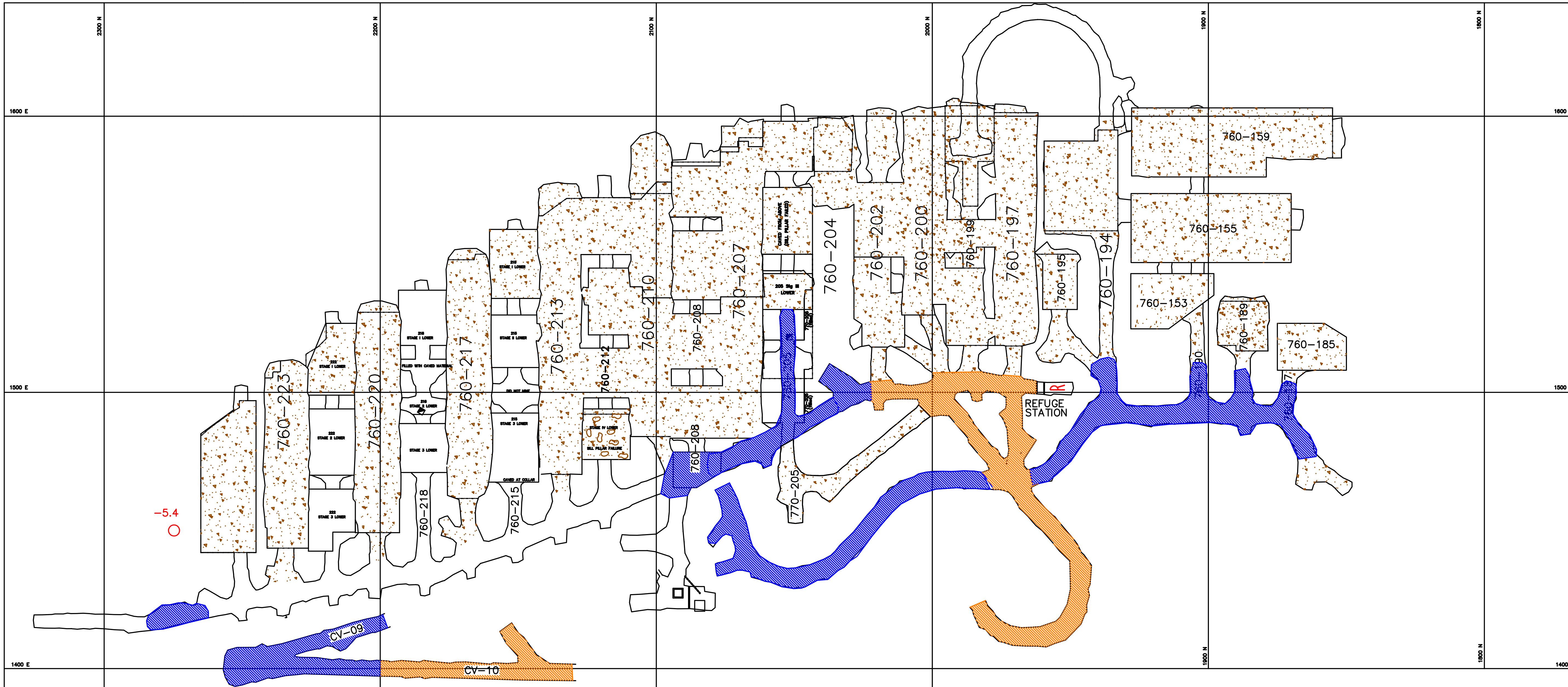
POLARIS MINE

DRAWN BY: J.A. SCALE: 1:500

REVISED BY:	DATE:	REVISION
GMM	MAR/02/07	YEAR END
NM	JUL/07	SEMI-ANNUAL
GL MINOR	JAN/08	YEAR END
GL MINOR	JAN/09	YEAR END
NM	FEB/09	YEAR END
NLB	JAN/01	YEAR END
JH	JAN/10	YEAR END

730 LEVEL

Contamination Placement as of December 31, 2003



MATERIALS PLACED UNDERGROUND

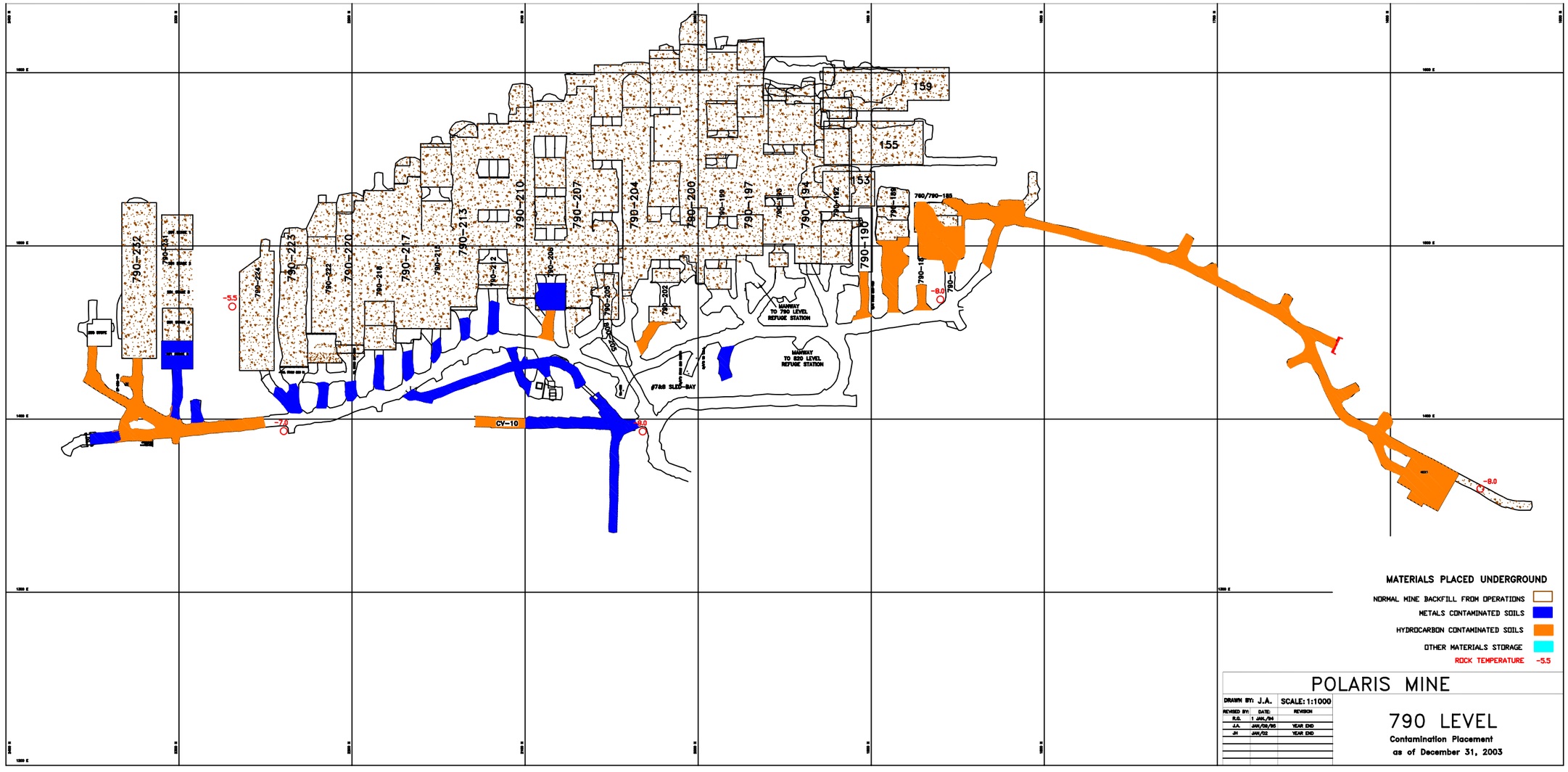
- NORMAL MINE BACKFILL FROM OPERATIONS
- METALS CONTAMINATED SOILS
- HYDROCARBON CONTAMINATED SOILS
- OTHER MATERIALS STORAGE
- ROCK TEMPERATURE -5.5

POLARIS MINE

DRAWN BY: J.A. SCALE: 1:500

760 LEVEL

Contamination Placement as of December 31, 2003



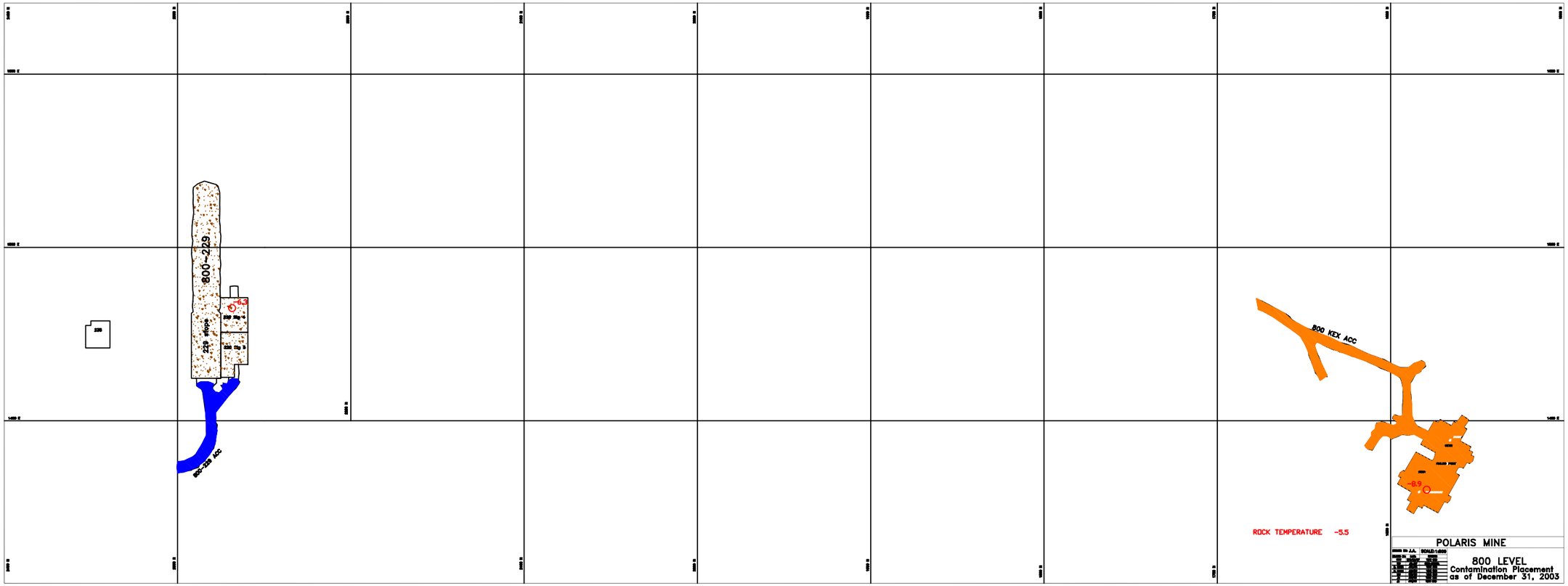
POLARIS MINE

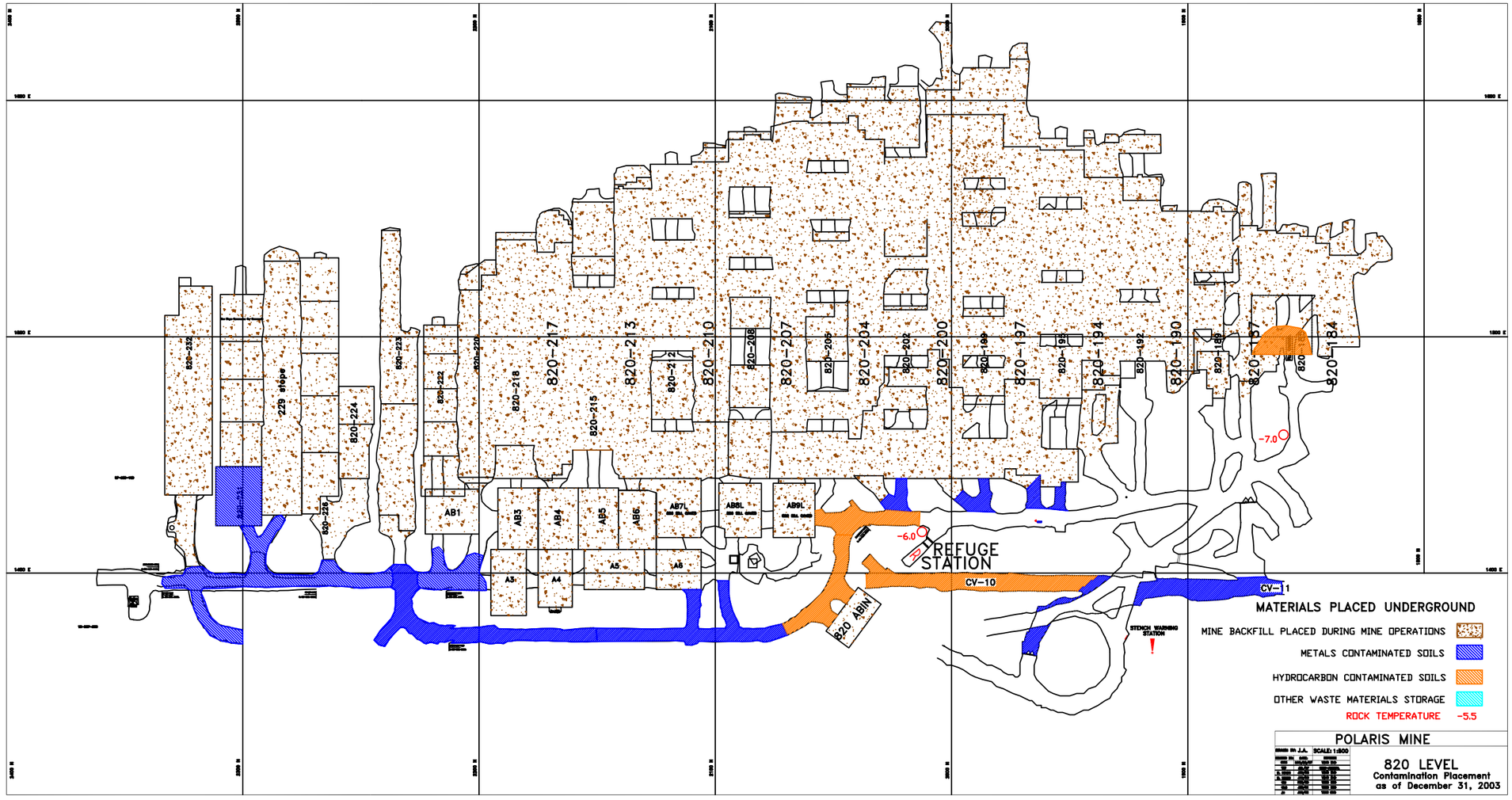
DRAWN BY: J.A. | SCALE: 1:1000

REVISED BY:	DATE:	REVISION
R.G.	1 JAN./04	
J.A.	JAN/03/03	YEAR END
JH	JAN/02	YEAR END

790 LEVEL

Contamination Placement
as of December 31, 2003


800-229
229 stope
800-229 ACC
800 KEX ACC
-8.9
ROCK TEMPERATURE -5.5
POLARIS MINE
800 LEVEL
Contamination Placement
as of December 31, 2003


820-232
229 stope
820-224
820-225
820-223
820-222
820-220
820-218
820-217
820-215
820-213
820-212
820-210
820-208
820-207
820-205
820-204
820-202
820-200
820-199
820-197
820-195
820-194
820-192
820-190
820-188
820-187
820-185
820-184
AB1
AB3
AB4
AB5
AB6
AB7L
AB8L
AB9L
A3
A4
A5
A6
-7.0
-6.0
REFUGE STATION
CV-10
CV-11
820 ABIN
STENCH WARNING STATION
MATERIALS PLACED UNDERGROUND
MINE BACKFILL PLACED DURING MINE OPERATIONS
METALS CONTAMINATED SOILS
HYDROCARBON CONTAMINATED SOILS
OTHER WASTE MATERIALS STORAGE
ROCK TEMPERATURE -5.5
POLARIS MINE
820 LEVEL
Contamination Placement
as of December 31, 2003

850 NORTH LEVEL

MATERIALS PLACED UNDERGROUND

MINE BACKFILL PLACED DURING MINE OPERATIONS

METALS CONTAMINATED SOILS

HYDROCARBON CONTAMINATED SOILS

OTHER WASTE MATERIALS STORAGE

ROCK TEMPERATURE -5.5

POLARIS MINE

850 LEVEL SOUTH

Contamination Placement

as of December 31, 2003

Mak Parts
Pump
Compressor
Hydraulic Pack

880-145

880-142

880-141

880-139

880-137

880-135

880 DUMP

NP-231

NP-229

NP-227

NP-142

NP-140

880-223

880-220

880-217

880-213

880-210

880-207

880-204

880-200

880-197

880-194

880-190

880-187

880-184

880-181

880-178

A STOPE

A/B UNDERCUT

B STOPE

B/C UNDERCUT

AB1 AB2 AB3 AB4 AB5 AB6 AB7 AB8 AB9 AB10 AB11 AB12 AB13 AB14 AB15 AB16 AB17 AB19 AB20

105-7

105-6

Tires, Steel
& Pallets

Tailings Lines

SLED-BAY

LADDER UP TO
REFUGE STATION

REFUGE STATION
NEXT RIGHT

125W

880-124W

MATERIALS PLACED UNDERGROUND

MINE BACKFILL PLACED DURING MINE OPERATIONS

METALS CONTAMINATED SOILS

HYDROCARBON CONTAMINATED SOILS

OTHER WASTE MATERIALS STORAGE

ROCK TEMPERATURE -5.5

POLARIS MINE

880 LEVEL SOUTH
Contamination Placement
as of December 31, 2003

MATERIALS PLACED UNDERGROUND

MINE BACKFILL PLACED DURING MINE OPERATIONS

METALS CONTAMINATED SOILS

HYDROCARBON CONTAMINATED SOILS

OTHER WASTE MATERIALS STORAGE

ROCK TEMPERATURE -5.5

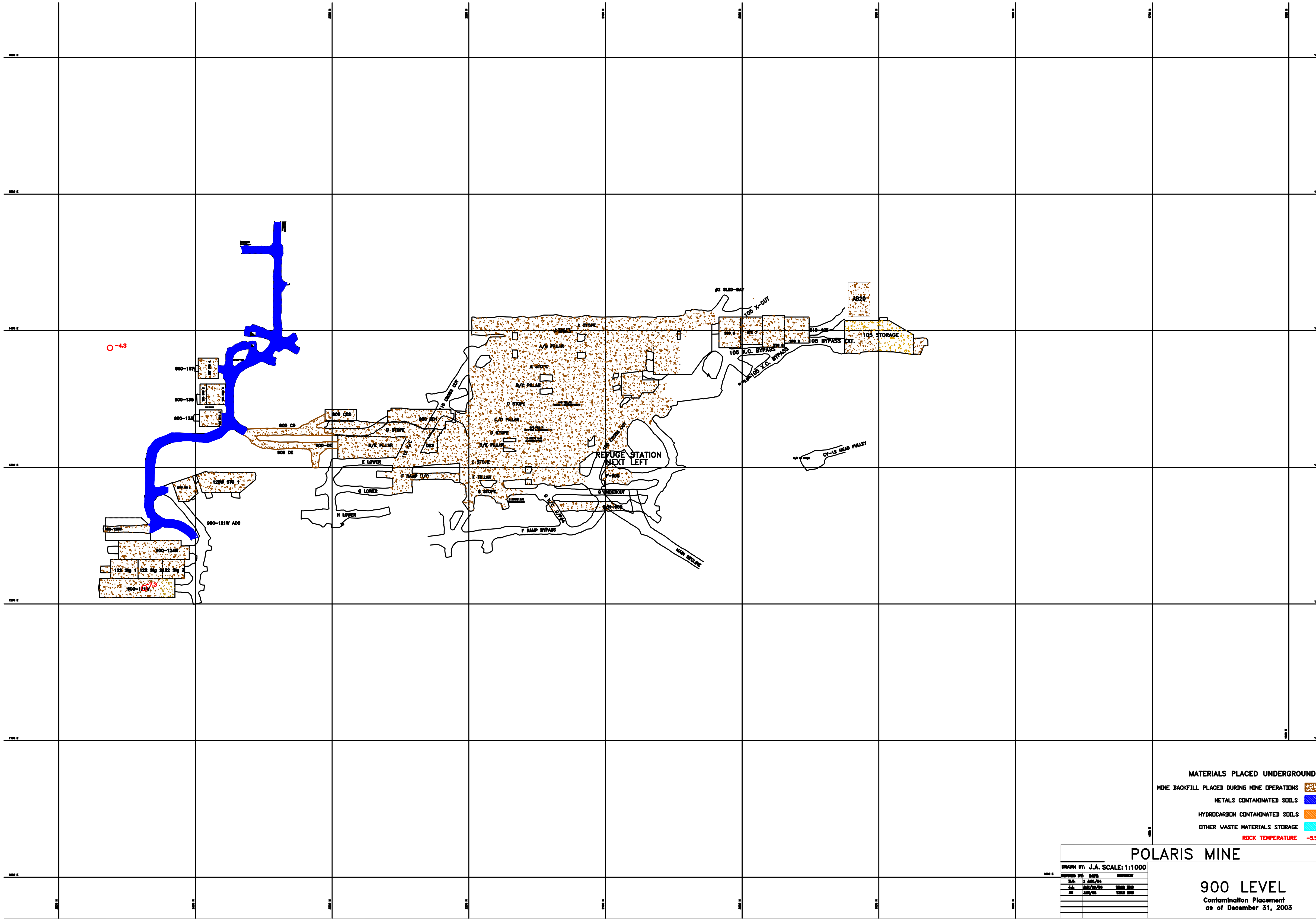
POLARIS MINE

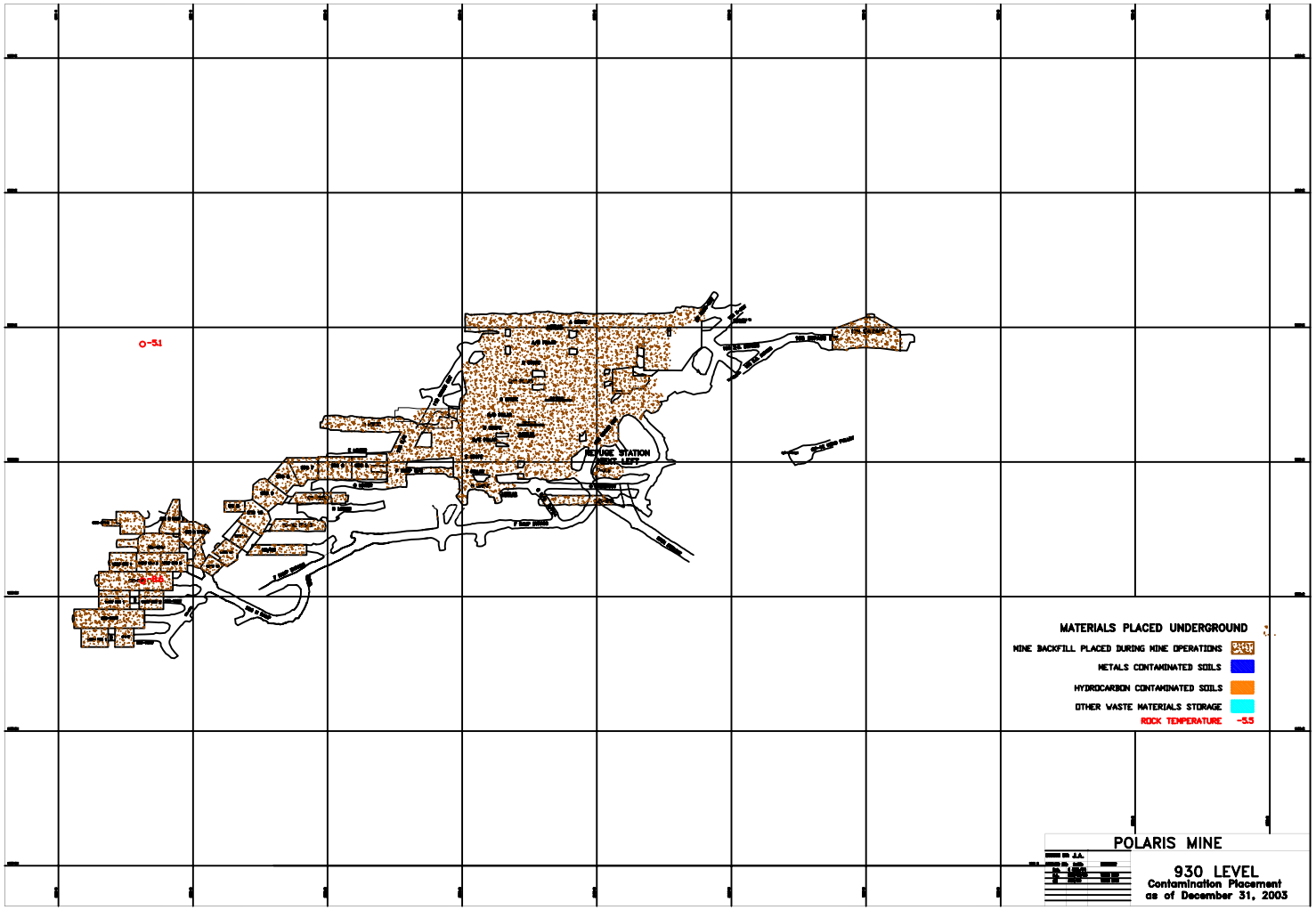
DRAWN BY: J.A. SCALE:1:1000

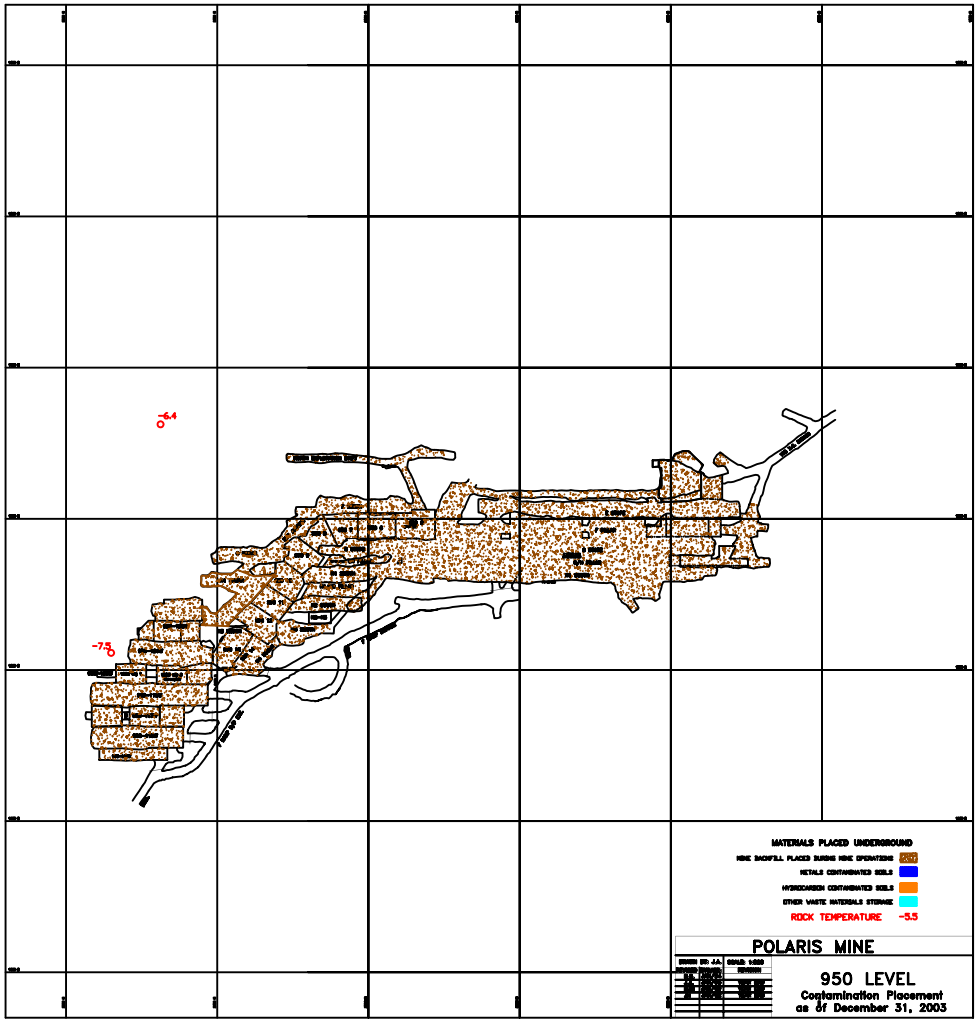
REVISED BY:	DATE	REVISION
R.A.	1 JAN./04	
J.A.	JAN./05/05	YEAR END

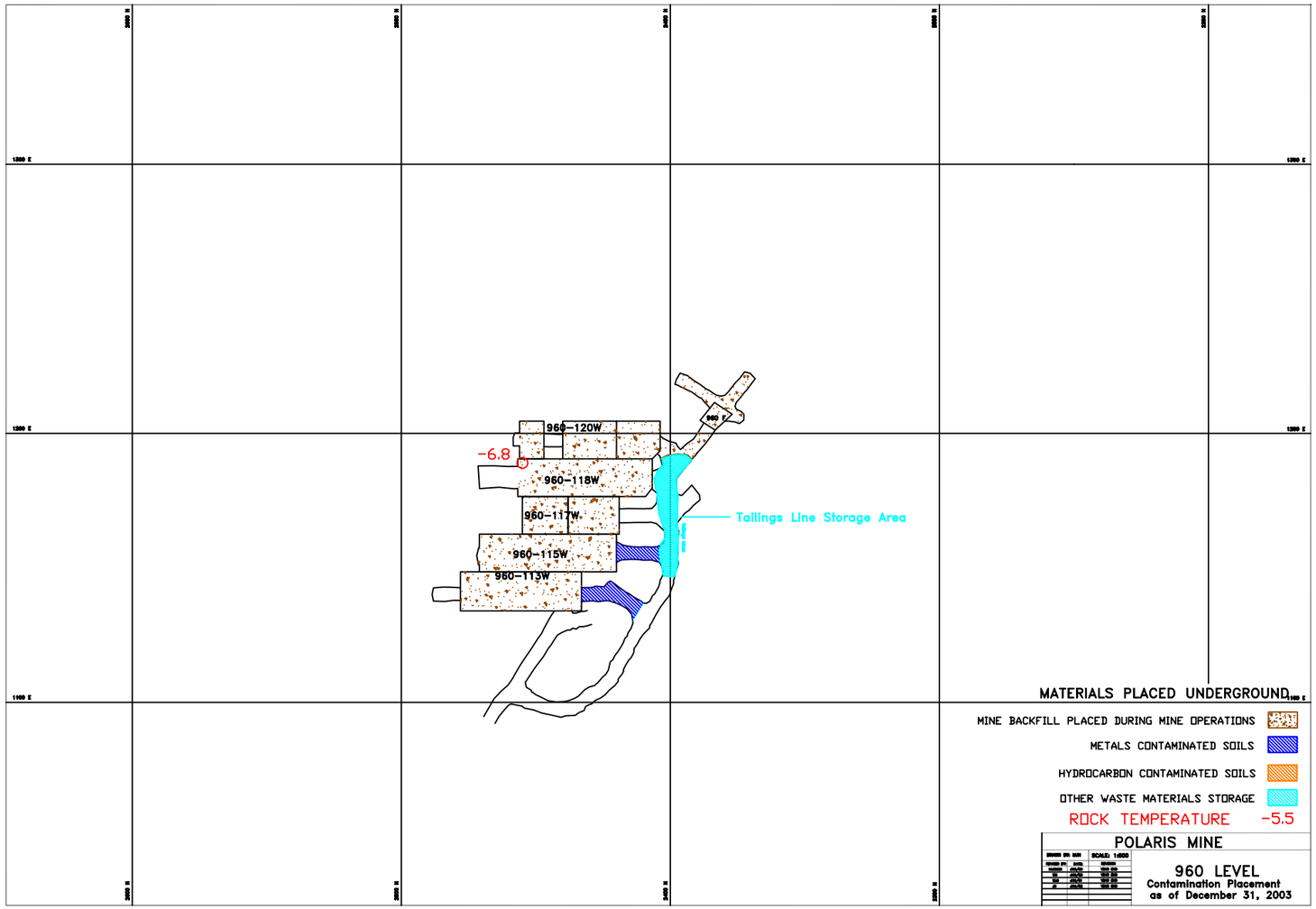
885 LEVEL

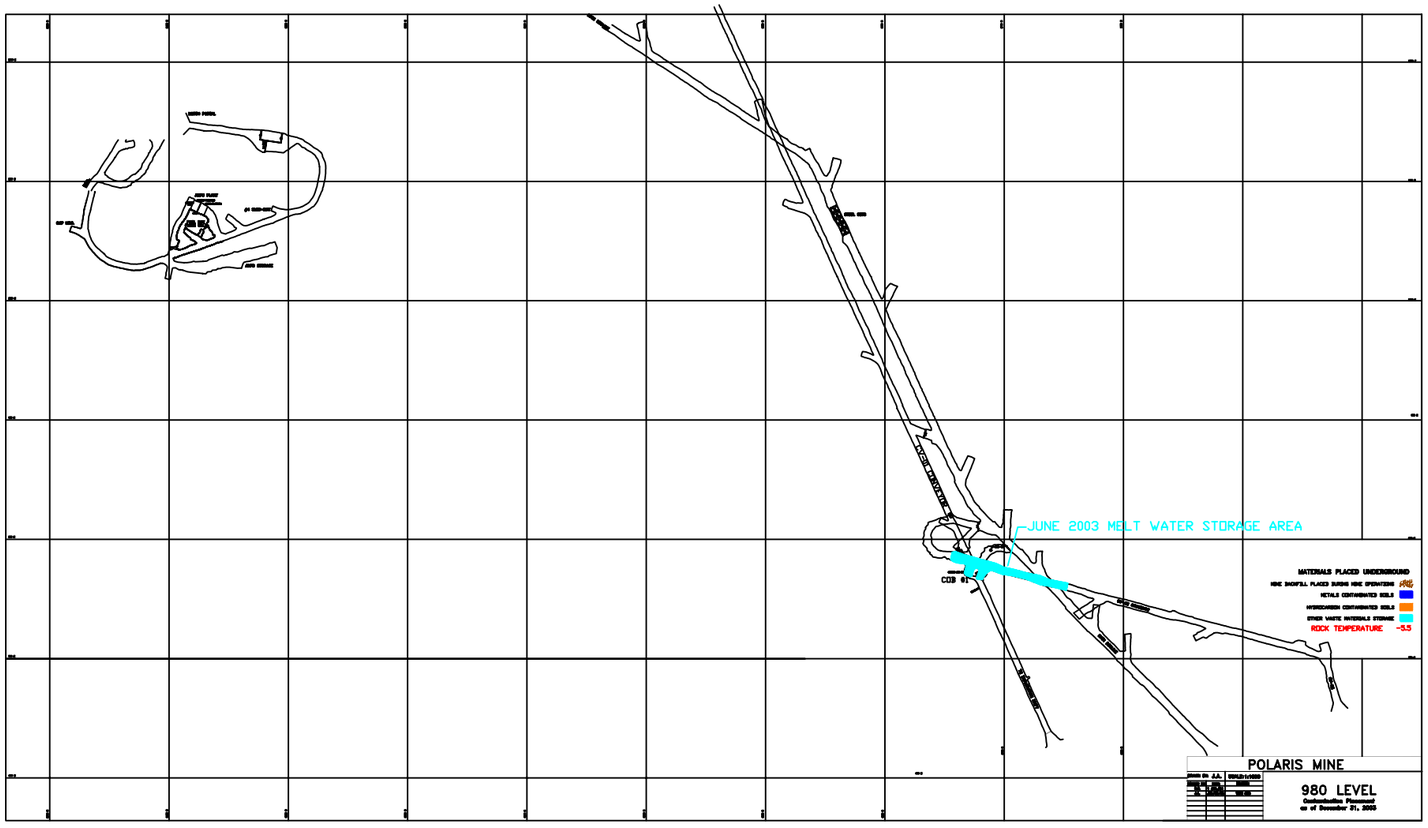
Contamination Placement as of December 31, 2003


REFUGE STATION
NEXT LEFT
105 X.C. BYPASS
105 BYPASS EXT.
105 STORAGE
105 X-CUT
#2 SLED-BAY
900 CD
900 DE
E LOWER
G LOWER
H LOWER
F RAMP BYPASS
MAIN DECLINE
CV-13 HEAD PULLEY
900-121W ACC
MATERIALS PLACED UNDERGROUND
MINE BACKFILL PLACED DURING MINE OPERATIONS
METALS CONTAMINATED SOILS
HYDROCARBON CONTAMINATED SOILS
OTHER WASTE MATERIALS STORAGE
ROCK TEMPERATURE -5.5
POLARIS MINE
DRAWN BY: J.A. SCALE: 1:1000
900 LEVEL
Contamination Placement
as of December 31, 2003


MATERIALS PLACED UNDERGROUND
MINE BACKFILL PLACED DURING MINE OPERATIONS
METALS CONTAMINATED SOILS
HYDROCARBON CONTAMINATED SOILS
OTHER WASTE MATERIALS STORAGE
ROCK TEMPERATURE -5.5
POLARIS MINE
930 LEVEL
Contamination Placement
as of December 31, 2003


-6.4
-7.5
MATERIALS PLACED UNDERGROUND
MINE BACKFILL PLACED DURING MINE OPERATIONS
METALS CONTAMINATED SOILS
HYDROCARBON CONTAMINATED SOILS
OTHER WASTE MATERIALS STORAGE
ROCK TEMPERATURE -5.5
POLARIS MINE
950 LEVEL
Contamination Placement
as of December 31, 2003


960-120W
960-118W
960-117W
960-115W
960-113W
-6.8
Tailings Line Storage Area
MATERIALS PLACED UNDERGROUND
MINE BACKFILL PLACED DURING MINE OPERATIONS
METALS CONTAMINATED SOILS
HYDROCARBON CONTAMINATED SOILS
OTHER WASTE MATERIALS STORAGE
ROCK TEMPERATURE -5.5
POLARIS MINE
960 LEVEL
Contamination Placement
as of December 31, 2003


JUNE 2003 MELT WATER STORAGE AREA
CCB 91
MATERIALS PLACED UNDERGROUND
ROCK TEMPERATURE -3.5
POLARIS MINE
980 LEVEL
Condemnation Placement
as of December 31, 2003

APPENDIX 13

GARROW LAKE EROSION MONITORING

2004 GARROW LAKE EROSION MONITORING PINS

The data recorded in the attached table for the Erosion monitoring pin at Station 10 on July 17, 2004 is incorrect. Not sure whether the wrong pin was measured or if the data was just incorrectly recorded.

However, there is sufficient data to compare 2004 data to 2003 data. There is no sign of erosion at any of the locations being monitored.

There were no pictures or measurements of the erosion pins taken in either June or September due to snow conditions around the lake. In July obtained pictures and measurements of three of the four pins and in August obtained measurements and photographs of all pins.

Pin measurements indicate no significant movements occurred during either of 2003 or 2004.

GARROW LAKE EROSION MONITORING PINS

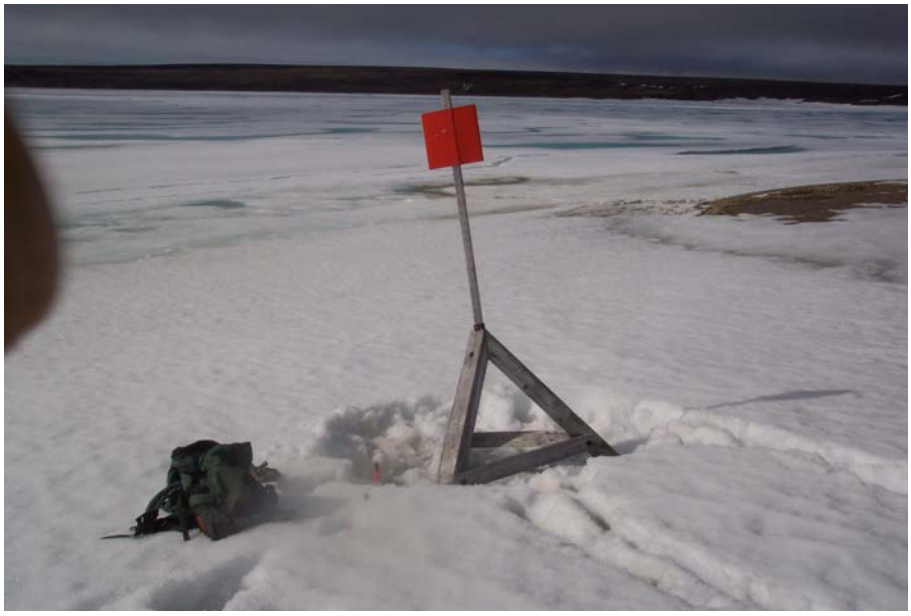
Month	Distance (cm) - Top of Pin to Ground				Photographs Taken
	Stn. 8	Stn. 9	Stn. 10	Stn. 11	
Jul-03	56.5	45	61.5	50	Yes
Aug-03	56.5	45	61.5	50	Yes
Sep-03	56.5	44	61	50	Yes
Jun-04	n.a.	n.a.	n.a.	n.a.	No
17-Jul-04	57.0	n.a.	17.5	50.7	Yes (2 only)
18-Aug-04	56.5	45.1	61.5	50.7	Yes but can't locate
Sep-04	n.a.	n.a.	n.a.	n.a.	No

Station # 8 - Garrow Lake North Quadrant
Station # 9 - Garrow Lake East Quadrant
Station # 10 - Garrow Lake South Quadrant
Station # 11 - Garrow Lake West Quadrant

Note 1 - distance measured is along the side of the pin (not vertical distance)
Note 2 - "Not Available" - Can not measure pin as either buried in snow or obstructed by ice

JULY 2004 PHOTOGRAPHS

Erosion Pin Station # 8 – July 17, 2004



Erosion Pin Station #9 – July 17, 2004

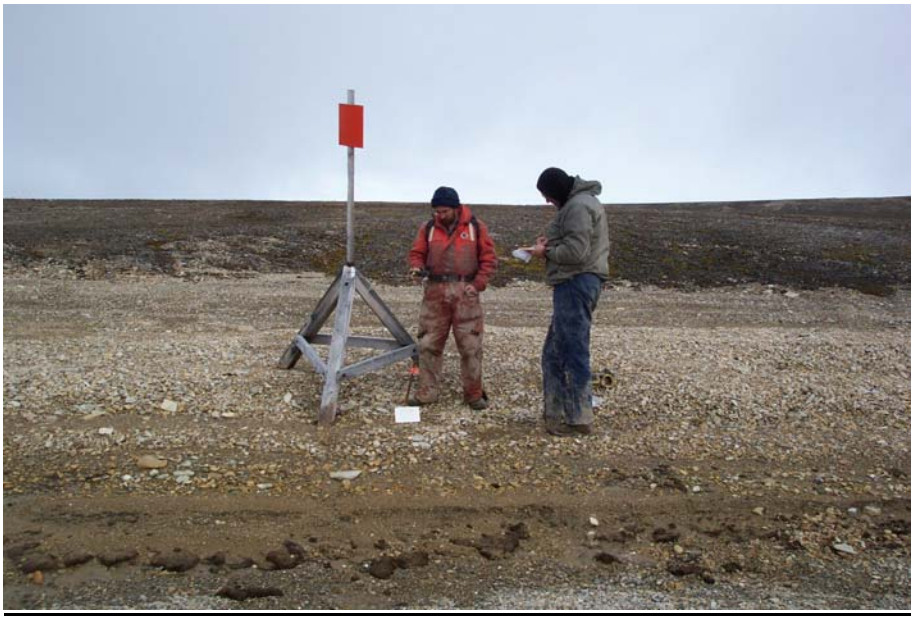
JULY 2004 PHOTOGRAPHS

Erosion Pin # 11 – July 17, 2004

AUGUST 2004 PHOTOGRAPHS

Erosion Pin Station #8 - August 18, 2004

AUGUST 2004 PHOTOGRAPHS



Erosion Pin Station #9 – August 18, 2004

Erosion Pin Station #10 – August 18, 2004

AUGUST 2004 PHOTOGRAPHS

Erosion Pin Station 11 – August 18, 2004

APPENDIX 14

GARROW CREEK EROSION MONITORING

GARROW CREEK EROSIONG MONITORING – POST DAM DECOMMISSIONING

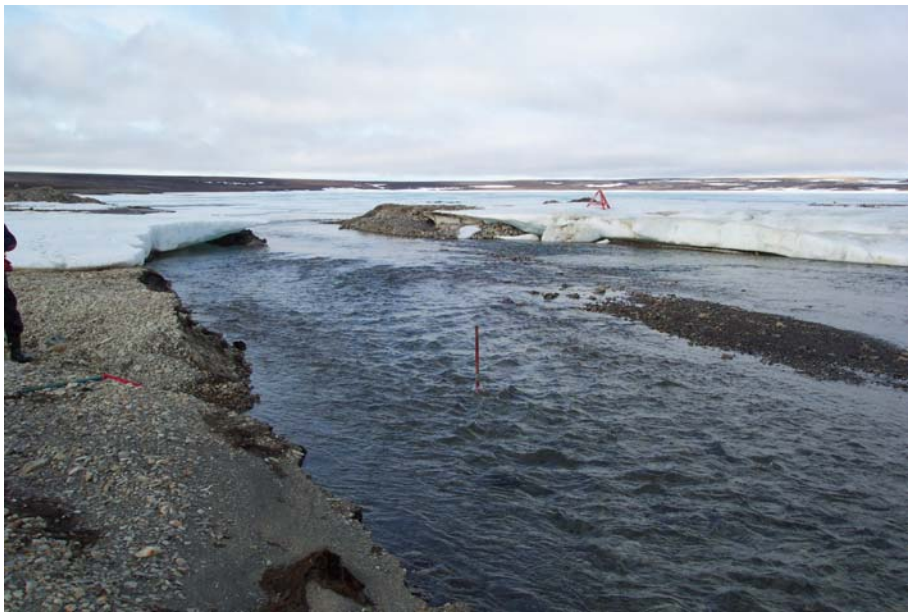
Approvals for the decommissioning of the Garrow dam included monitoring requirements when there were surface flows the first summer the dam was decommissioned. Monitoring included:

1. Erosion Monitoring using rebar pins in the creek bed that are measured weekly during the period of flow,
2. TSS sampling weekly during the period of flow,
3. Photographic records of the creek flow from established locations weekly during the period of flow, and
4. Photographic record at regular intervals along the length of the creek once at the end of the discharge season to document conditions.

1. EROSION MONITORING PINS

Three rebar pins were placed into the creek channel to monitor for erosion of the creek bottom (see photographs below). One pin was placed near the outlet of Garrow Lake, one about midway between the lake and the ocean, and one near the outlet of the creek into the ocean.

Below are photographs of each of the three pins.



Station 12 – Near the outlet of Garrow Lake

Station 13 – Midway between Garrow Lake and the Ocean

Station 14 – Near the Outlet of the Creek into the Ocean

On a weekly basis starting on July 16th, measurements were taken from the top of the pin to the creek bottom. Any erosion of the channel bottom at the location of the pin would be identified by the distance from the top of the pin to the creek bed. The measurements taken during the flow period seem to suggest that the bed of the creek was dynamic and in the case of two of the three monitoring stations, indicated some deposition of material in the stream bed.

GARROW CREEK - EROSION MONITORING DURING DAM DECOMMISSIONING

Station	Location	Date	Height of Pin above Gnd/ Creek Bed (mm)	Height of Water above Creek Bed (mm)	Erosion since date set (mm)	UTM 14 Coords		Comments
12	Garrow Creek - near outlet of Garrow Lake	July 16 2004	1000	350		561605	8367448	Set erosion pin 2.5m east of west bank. Set at 5:00 pm. See photo
		July 20 2004	980	280	20			
		July 27 2004	980	100	20			Wavebreak channel plugged to control flow. Water from lake is not flowing into creek.
		August 3 2004	995	30	5			
		August 10, 2004	995	35	5			
		August 17, 2004	1000	30	0			
		August 21, 2004	1000	30	0			
13	Garrow Creek - midway between Garrow Lake and Garrow Bay	July 16 2004	830	370		561730	8366764	Set erosion pin 9.0 m east of west bank. Set at 5:00 pm. See photo
		July 20 2004	800	260	30			see photo
		July 20 2004	800	110	30			
		August 3 2004	790	25	40			
		August 10, 2004	785	65	45			
		August 17, 2004	790	70	40			
		August 21, 2004	805	80	25			
14	Near mouth of Garrow Garrow Creek discharging into Garrow Bay	July 17 2004	550	300		561925	8366248	Set erosion pin approx. 50 ft from mouth of Garrow Bay. Set at 5:00 pm See photo
		July 20 2004	550	420	0			see photo
		July 24 2004	535	40	15			
		August 3 2004	530	30	20			
		August 10, 2004	530	25	20			
		August 17, 2004	530	25	20			
		August 21, 2004	535	25	15			

2. TSS MEASUREMENTS

On a weekly basis, TSS samples were taken from the Final Discharge Point (designated under MMER). The samples were analyzed by ALS Laboratories in Vancouver. The samples were submitted along with the routine weekly and monthly sampling required under the MMER requirements.

On July 6th, 2004 the TSS results exceeded permit and MMER criteria. This was reported to Environment Canada. At the same time as the TSS sample was collected, samples were also collected for Total Metals and Acute Toxicity. The results indicated that the TSS was not caused by mobilization of tailings but rather from erosion of the creek channel. All metals concentrations in the water were compliant with the Water Licence and MMER criteria. Additionally, the Acute Toxicity testing for Rainbow Trout and Daphnia magna show there was no acute toxicity. All other TSS sampling events during the discharge season were compliant with the Water Licence and the MMER.

TSS MONITORING OF GARROW CREEK

At Station 12

Date	TSS	ALS Sample #
6-Jul-08	117	U5572
13-Jul-04	5.7	U5829
20-Jul-04	<3.0	U6161
27-Jul-04	<3.0	U6382
3-Aug-24	3.3	U6832
10-Aug-24	3	U6897
17-Aug-04	5.3	U7327
24-Aug-04	4.4	U7610
31-Aug-04	14.5	U7699
3-Sep-04	3.3	U8363
7-Sep-04	9.7	U7985

3. PHOTOGRAPHIC RECORD DURING DISCHARGE SEASON

The following photographs were generally taken from the same locations each time to provide a record of flow and creek channel changes that occurred over time during the 2004 discharge period. The requirement was to do this on a weekly basis but this was done on a more frequent basis through July when the flow was at its highest. It is evident from the photographs that some erosion of the channel occurred during the peak flows. The dam was decommissioned prior to spring melt and more water than anticipated was initially released as the ice on the lake and in the channel melted.

July 5 2004

July 6 2004

July 7 2004

July 8 2004

July 9 2004

July 10 2004

July 11 2004

July 12 2004

July 14 2004

July 15 2004

July 20 2004

July 25 2004

July 26 2004

July 30 2004

Aug 3 2004

Aug 10 2004

Aug 17 2004

4. PHOTOGRAPHIC RECORD OF CREEK CHANNEL NEAR END OF DISCHARGE SEASON

The monitoring program also included the requirement to take a series of photographs along the complete length of Garrow Creek channel once flow for the season had been concluded. Due to weather conditions, the channel would have been under snow before all water had ceased flowing so the photography was done near the end of July when flow was low and before snow covered the landscape. A series of survey markers were set up every 100 metres along the length of the channel starting at Garrow Lake outflow origin through to where the creek discharges into the ocean. The following photographs are identified by the distance from the origin of the creek flow.

GARROW CREEK

PHOTOGRAPHIC RECORD OF
CONDITIONS ALONG THE ENTIRE
LENGTH OF CREEK JULY 26, 2004

NEAR THE END OF DISCHARGE SEASON

STATION 0 +00

STATION 0 +100

STATION 0 +200

STATION 0 +300

STATION 0 +400

STATION 0 +500

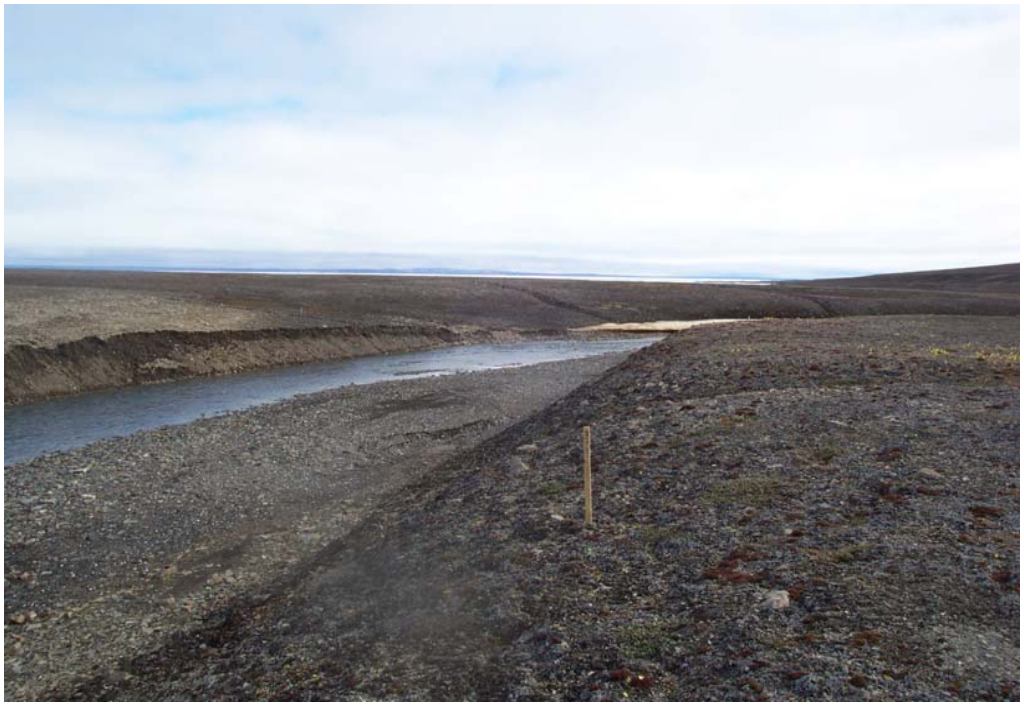
STATION 0 +600

STATION 0 +700

STATION 0 +800

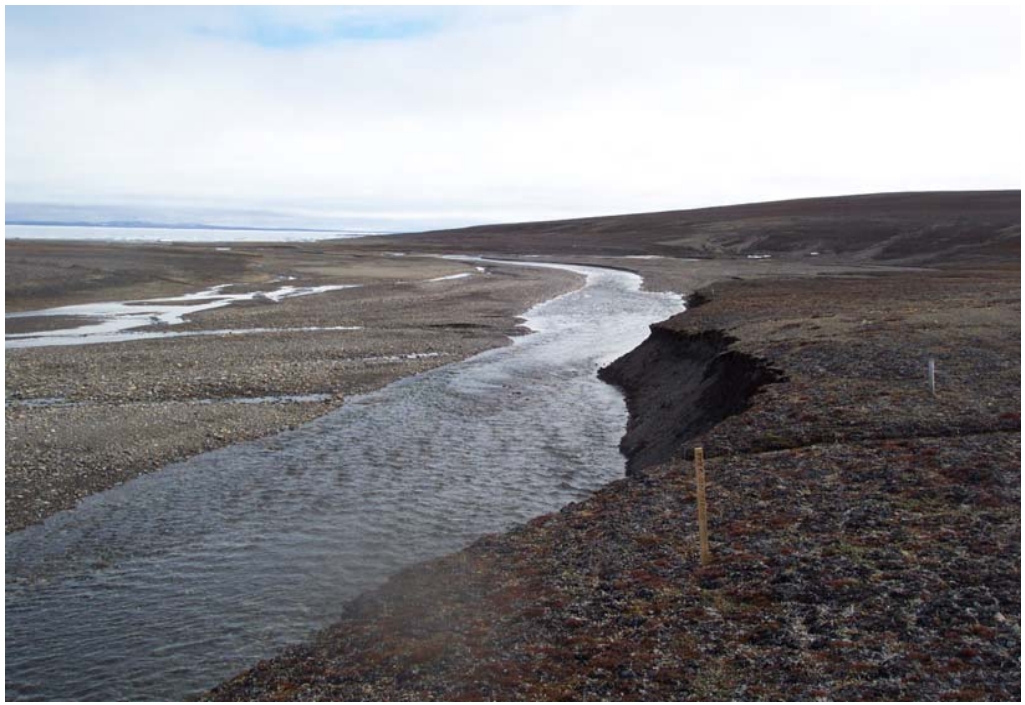
STATION 0 +900

STATION 0 +1000



STATION 0 +1100

STATION 0 +1200



STATION 0 +1300

STATION 0 +1400

STATION 0 +1500

STATION 0 +1600

STATION 0 +1700

STATION 0 +1800