Appendix B - FIGURES

Figure 1.3: Pogo Mine As-built

Figure 1.3a: 1525 Portal Area As-built

Figure 1.3b: Airstrip Area As-build

Figure 1.3c: Mill and Camp Bench Area As-built

Figure 1.3d: RTP and Drystack Area As-built

Figure 4.1: Pogo Access Road and Transmission Line

Figure 6.1: Process Flow Diagram

Figure 6.2: As-built Mill Plant

Figure 7.1a: Drystack Storage Facilities Year 2010

Figure 7.1b: Drystack Storage Facilities Year 2011

Figure 7.1c: Drystack Storage Facilities Year 2012

Figure 7.1d: Drystack Storage Facilities Year 2013

Figure 7.1e: Drystack Storage Facilities Year 2014

Figure 7.1f: Drystack Storage Facilities Year 2015

Figure 7.1g: Drystack Storage Facilities Year 2016

Figure 7.1h: Drystack Storage Facilities Year 2017

Figure 8.1: Conceptual Water Management Flows

Figure 8.2: Process Flow Diagram with Water Use

Figure 8.3: Water Balance 2,500 tpd Average Case

Figure 8.4: RTP Dam As-built

Figure 8.5: RTP Seepage Collection System

Figure 8.6: Off-River Treatment Works

Figure 8.7: Off-River Treatment Works Pump Lift Station & Outlet Structure

Note: The year-by-year drawings were created assuming the shells would be constructed during summer season and 93,000 – 98,000 tons of drystack would be placed annually. In June 2011, ADNR approved to construct shells year-round and it will facilitate the shell construction by placing 200,000 – 250,000 tons of drystack annually. However, the maximum heights of the shells are limited by the elevation of existing diversion ditch and won't exceed the height shown in Drawing 9.1 of DSTF C&M Plan (DSTF Plan and section (20 million tons)).

AIRSTRIP

3,825,000 N

MILL

FILTER / BACK FILL PLANT

RINGER CREEK

NORTH CREEK

3,820,000 N

1525 PORTAL

1810000 E

1815000 E

1820000 E

0 1000 2000 3000

SCALE (FT)

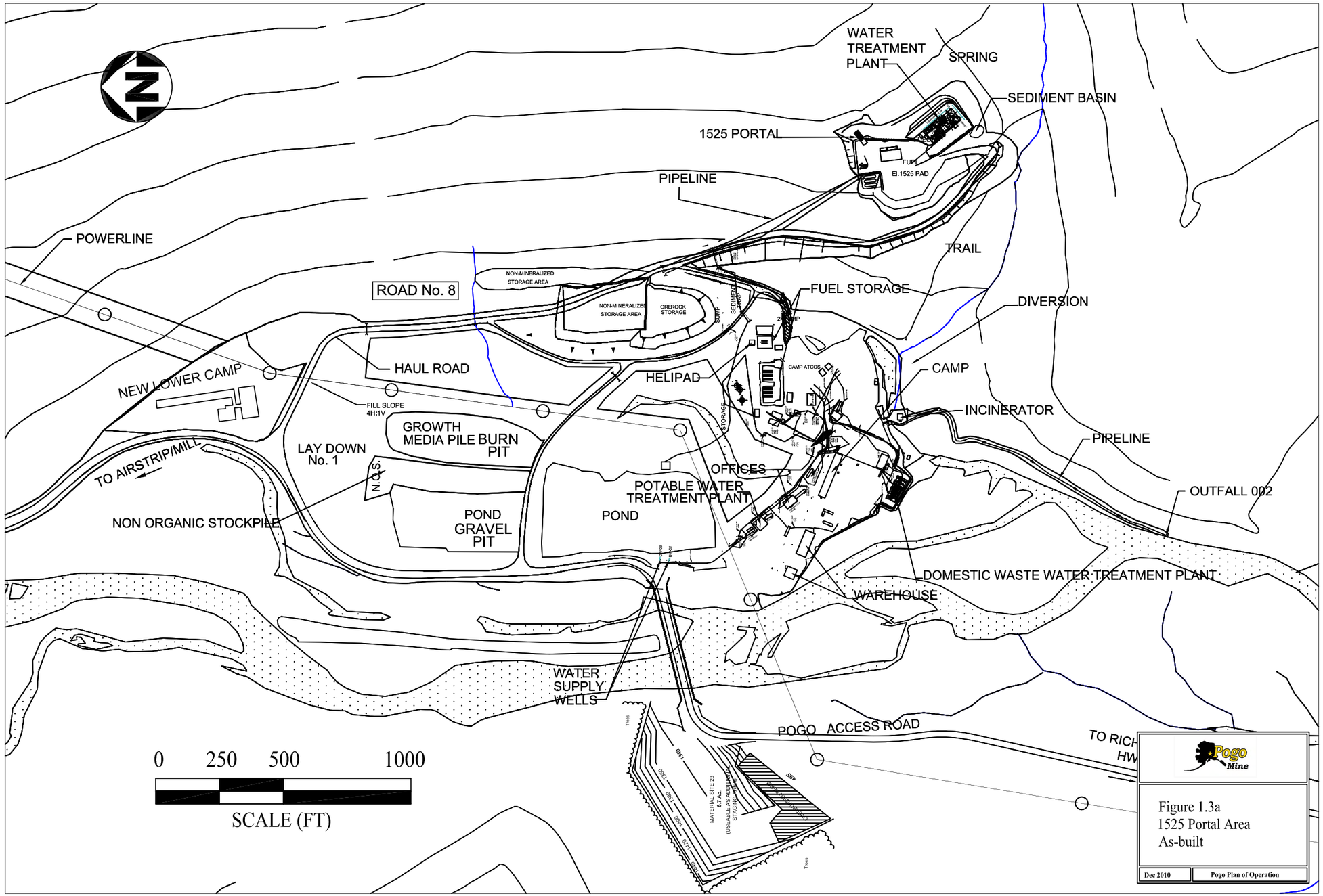
3,815,000 N

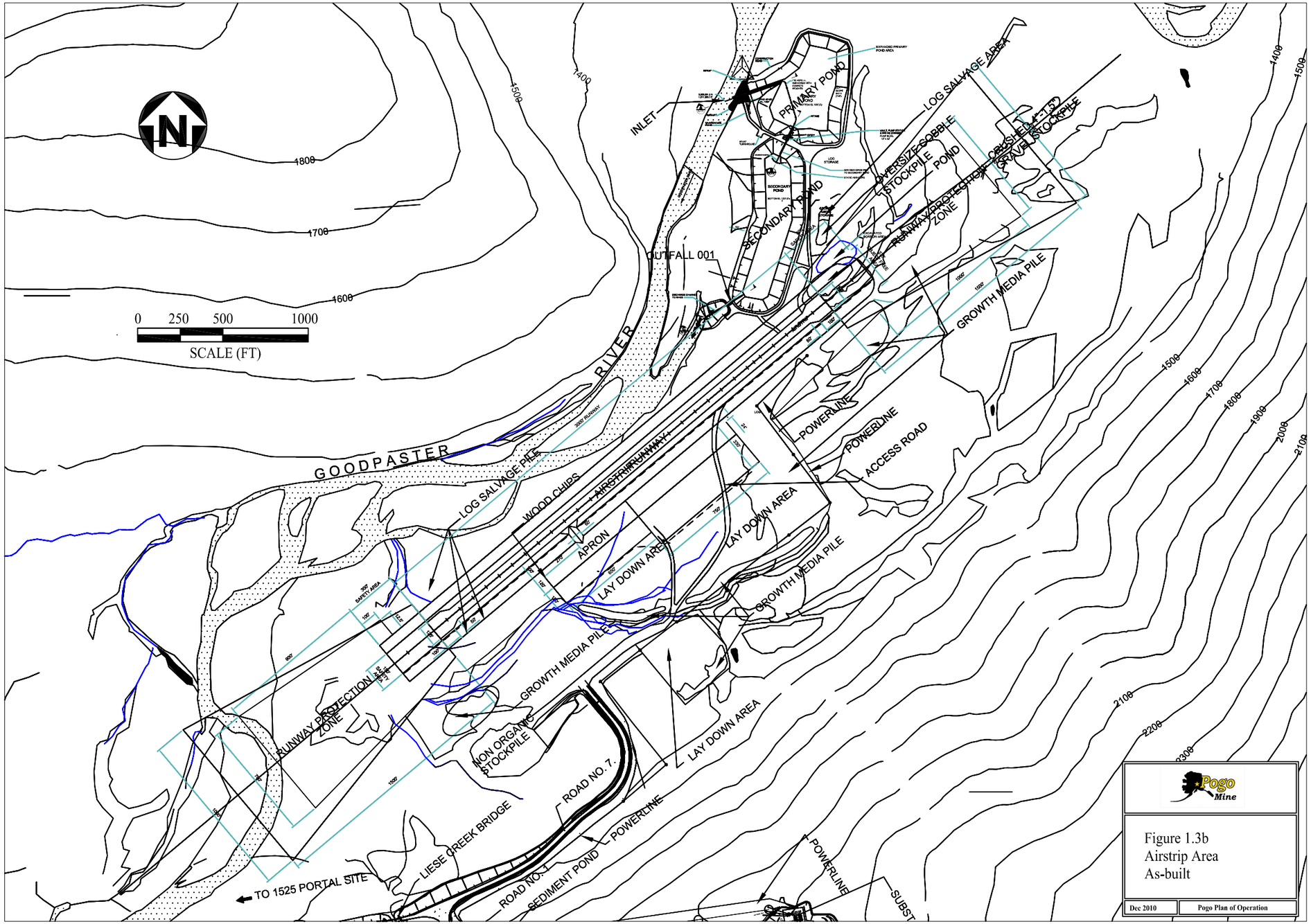
GRAVEL PITS

Pogo Mine

Figure 1.3
Pogo Mine As-built

Dec 2010 | Pogo Plan of Operation

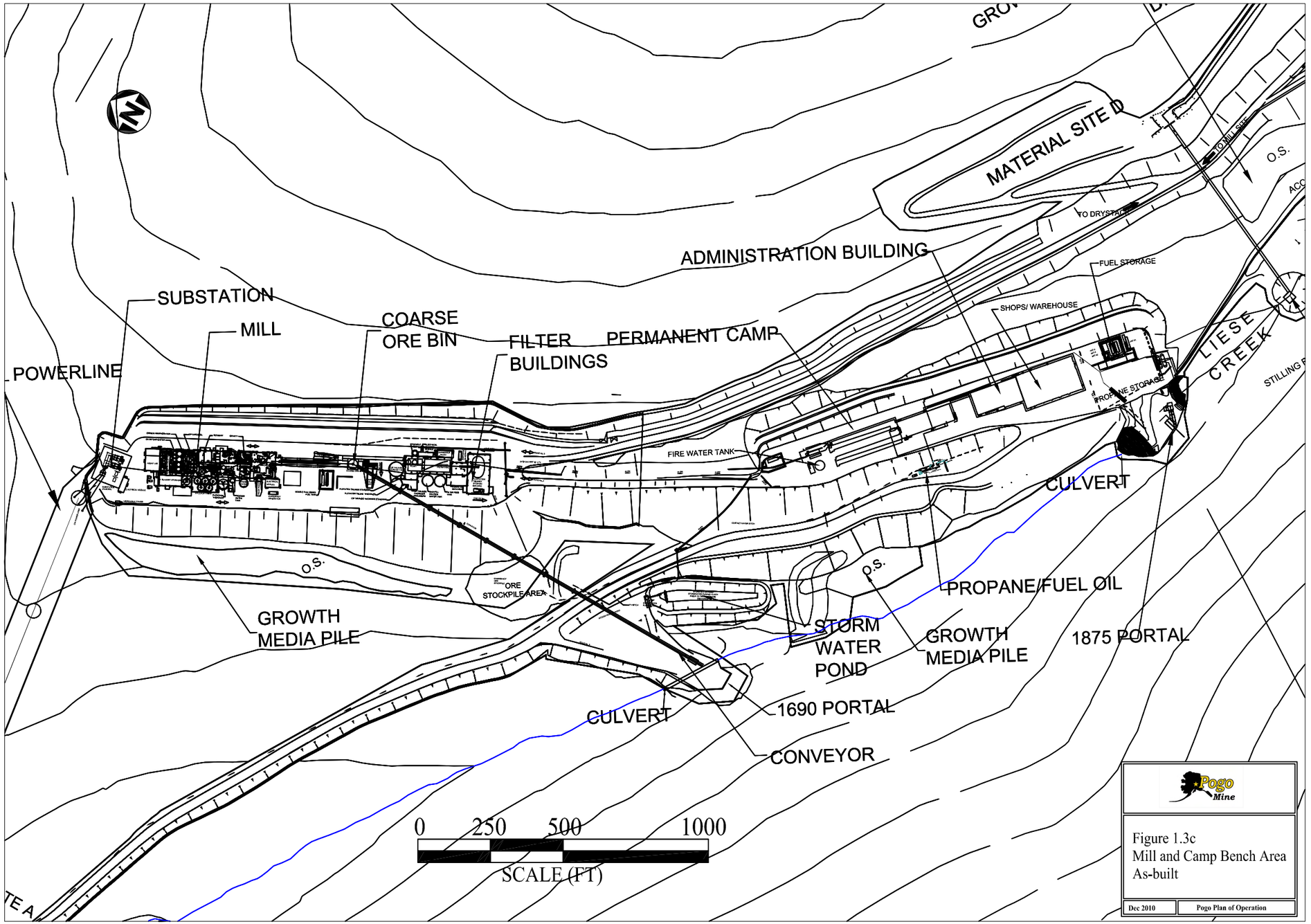

N
WATER TREATMENT PLANT
SPRING
SEDIMENT BASIN
1525 PORTAL
FUEL
El.1525 PAD
PIPELINE
POWERLINE
TRAIL
ROAD No. 8
NON-MINERALIZED STORAGE AREA
NON-MINERALIZED STORAGE AREA
OREROCK STORAGE
SUMP
SEDIMENT POND
FUEL STORAGE
DIVERSION
HAUL ROAD
HELIPAD
CAMP ATCO'S
CAMP
NEW LOWER CAMP
FILL SLOPE 4H:1V
INCINERATOR
GROWTH MEDIA PILE
BURN PIT
LAY DOWN No. 1
N.O.S.
OFFICES
PIPELINE
TO AIRSTRIP/MILL
POTABLE WATER TREATMENT PLANT
OUTFALL 002
NON ORGANIC STOCKPILE
POND
POND GRAVEL PIT
DOMESTIC WASTE WATER TREATMENT PLANT
WAREHOUSE
WATER SUPPLY WELLS
POGO ACCESS ROAD
TO RICH HW
MATERIAL SITE 23
8.7 Ac.
(USE AS ALTERNATIVE STAGING AREA)
0
250
500
1000
SCALE (FT)
Pogo Mine
Figure 1.3a
1525 Portal Area
As-built
Dec 2010
Pogo Plan of Operation

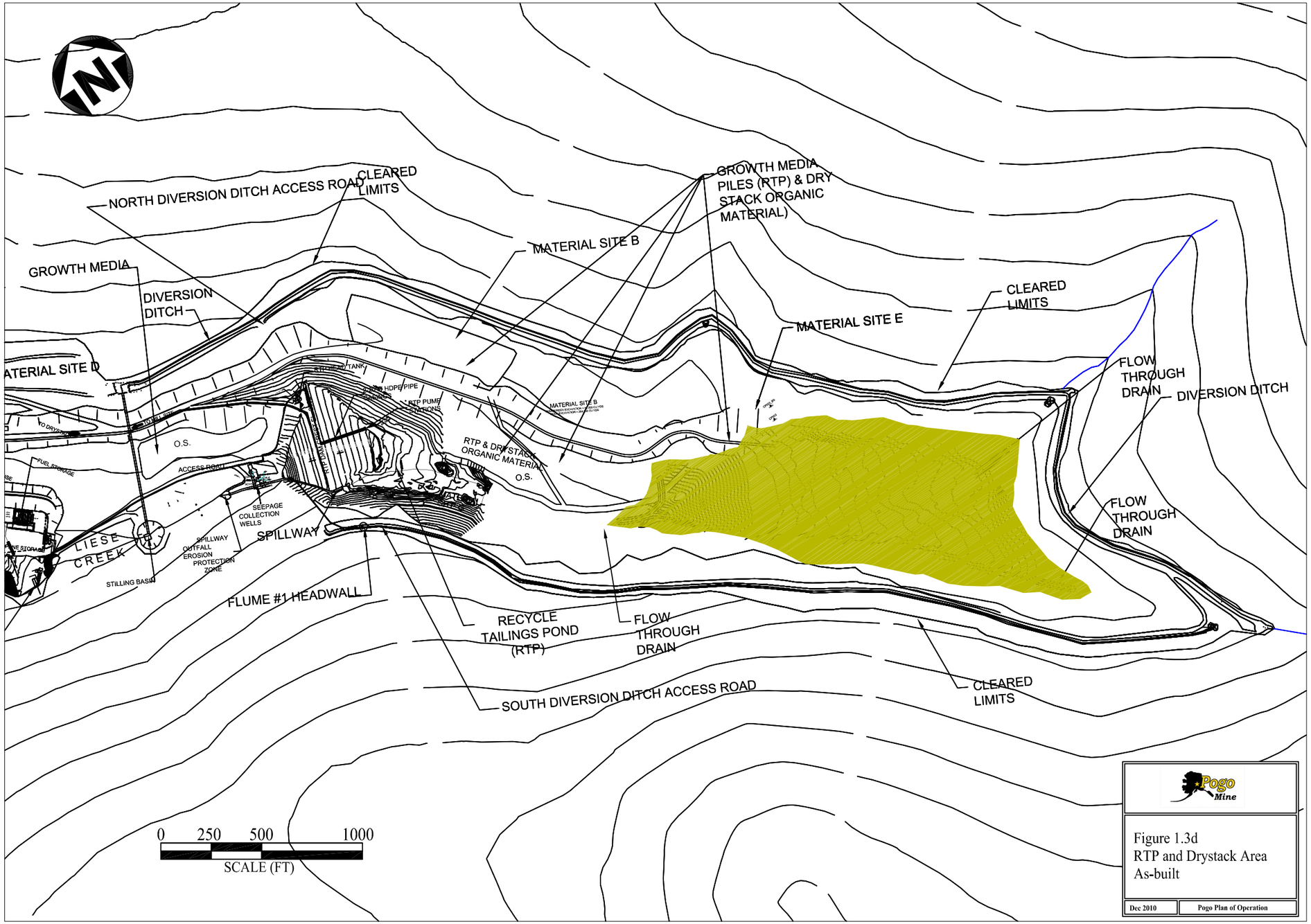


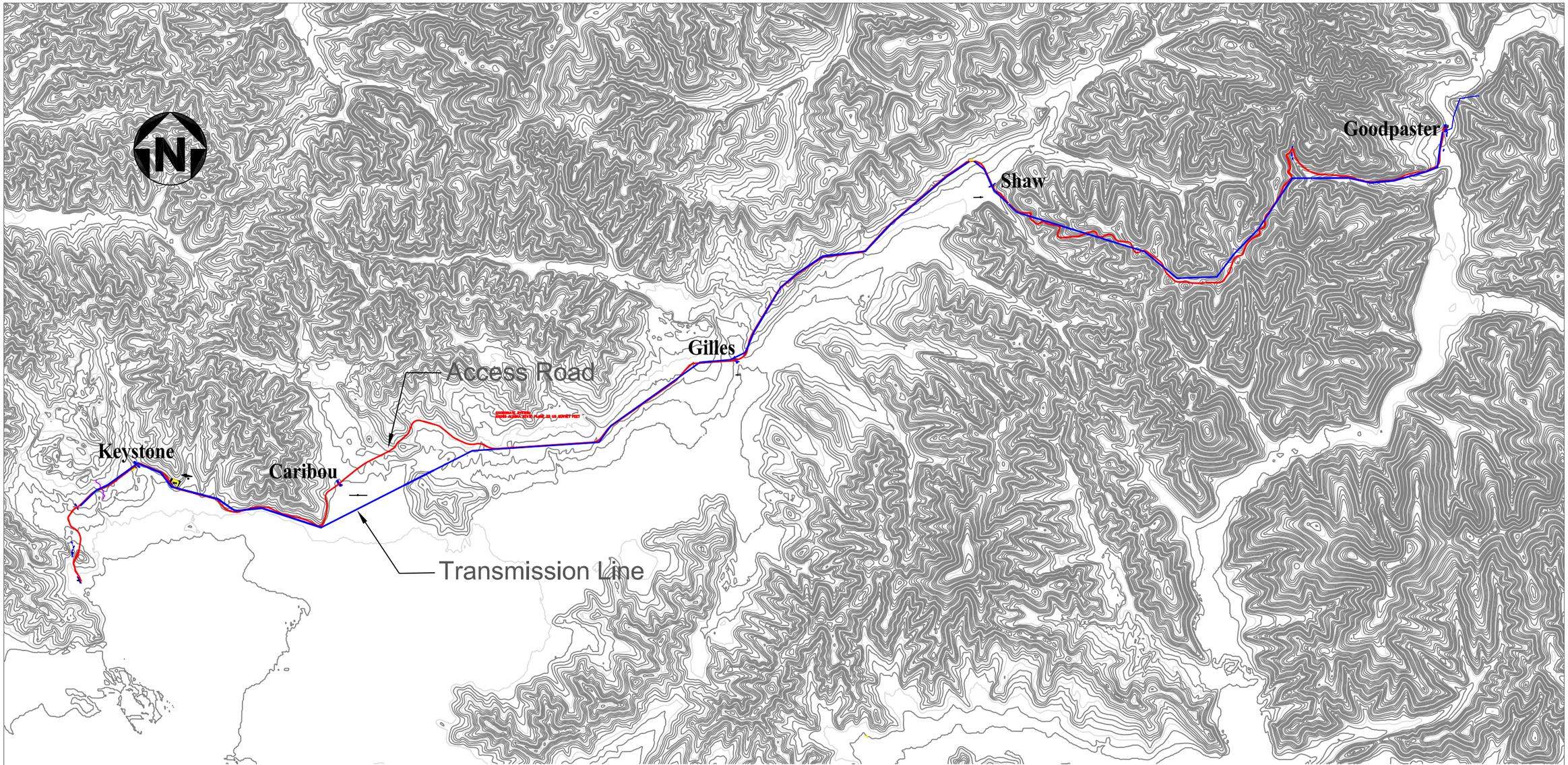
Pogo Mine

Figure 1.3b
Airstrip Area
As-built

Dec 2010	Pogo Plan of Operation


MATERIAL SITE D
ADMINISTRATION BUILDING
SUBSTATION
MILL
COARSE ORE BIN
FILTER BUILDINGS
PERMANENT CAMP
POWERLINE
FUEL STORAGE
SHOPS/ WAREHOUSE
LIESE CREEK
FIRE WATER TANK
PROPANE STORAGE
CULVERT
O.S.
ORE STOCKPILE AREA
GROWTH MEDIA PILE
PROPANE/FUEL OIL
STORM WATER POND
GROWTH MEDIA PILE
1875 PORTAL
CULVERT
1690 PORTAL
CONVEYOR
0 250 500 1000
SCALE (FT)
Pogo Mine
Figure 1.3c
Mill and Camp Bench Area
As-built
Dec 2010
Pogo Plan of Operation


NORTH DIVERSION DITCH ACCESS ROAD
CLEARED LIMITS
GROWTH MEDIA PILES (RTP) & DRY STACK ORGANIC MATERIAL)
MATERIAL SITE B
GROWTH MEDIA
DIVERSION DITCH
MATERIAL SITE E
CLEARED LIMITS
FLOW THROUGH DRAIN
DIVERSION DITCH
ATERIAL SITE D
O.S.
ACCESS ROAD
FUEL STORAGE
LIESE CREEK
STILLING BASIN
SEEPAGE COLLECTION WELLS
SPILLWAY OUTFALL EROSION PROTECTION ZONE
SPILLWAY
RTP & DRY STACK ORGANIC MATERIAL
O.S.
FLOW THROUGH DRAIN
FLUME #1 HEADWALL
RECYCLE TAILINGS POND (RTP)
FLOW THROUGH DRAIN
SOUTH DIVERSION DITCH ACCESS ROAD
CLEARED LIMITS
0 250 500 1000
SCALE (FT)
Pogo Mine
Figure 1.3d
RTP and Drystack Area
As-built
Dec 2010
Pogo Plan of Operation



SCALE: 1 : 14000

Pogo Mine

Figure 4.1
Pogo Access Road and
Transmission Line

Dec 2010	Pogo Plan of Operation

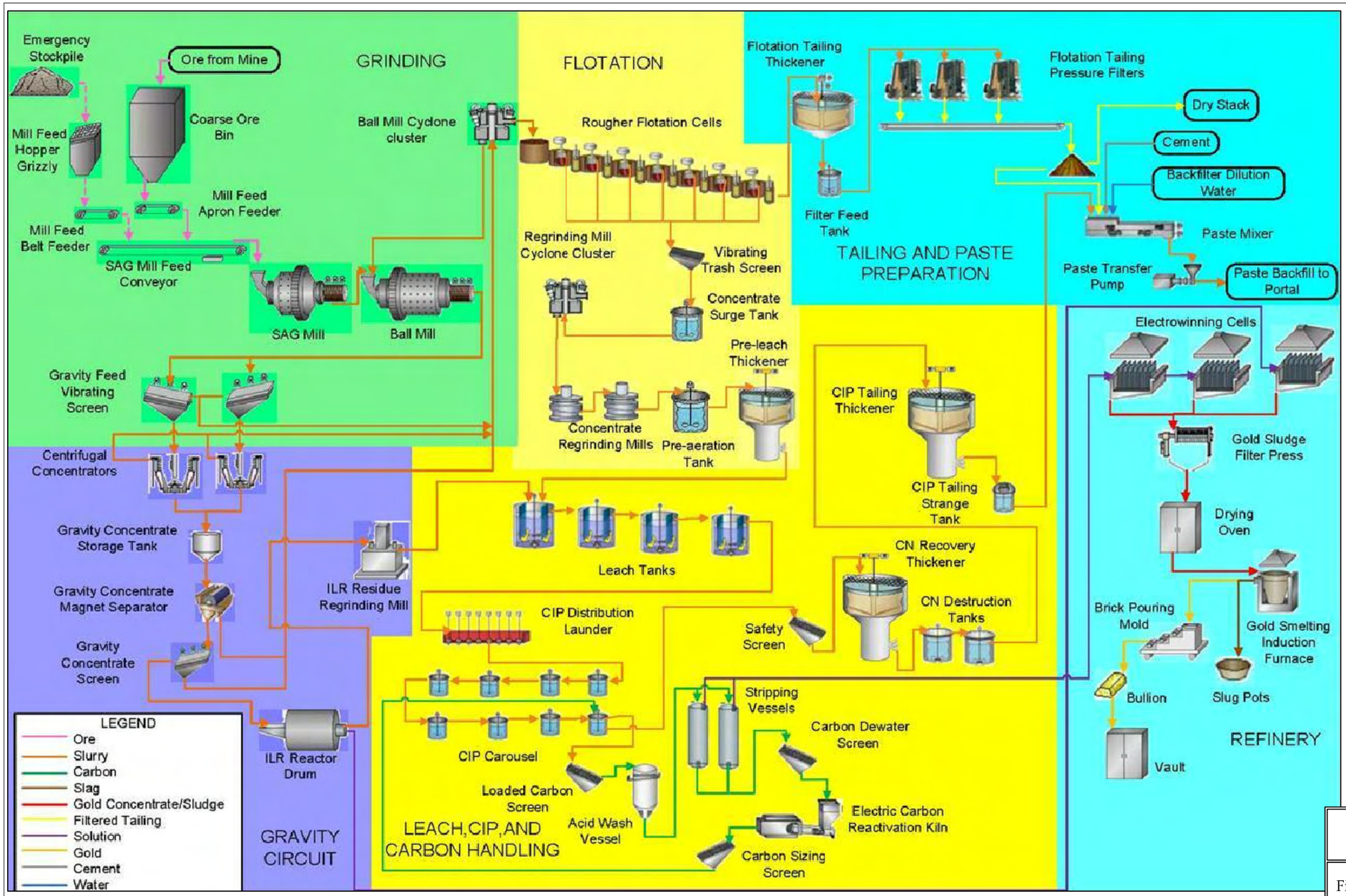
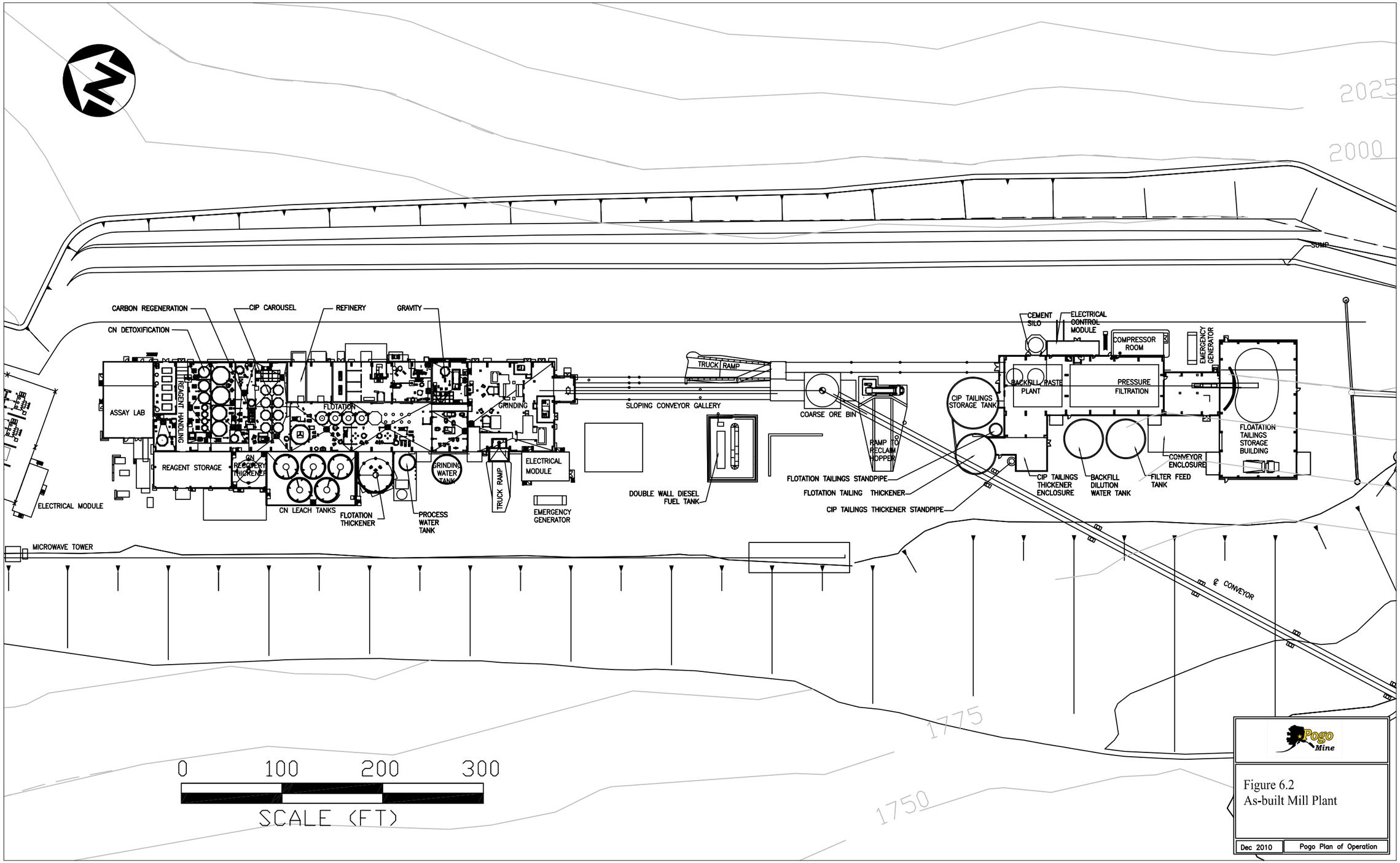


Figure 6.1
Process Flow Diagram

Dec 2010	Pogo Plan of Operation



Pogo Mine

Figure 6.2
As-built Mill Plant

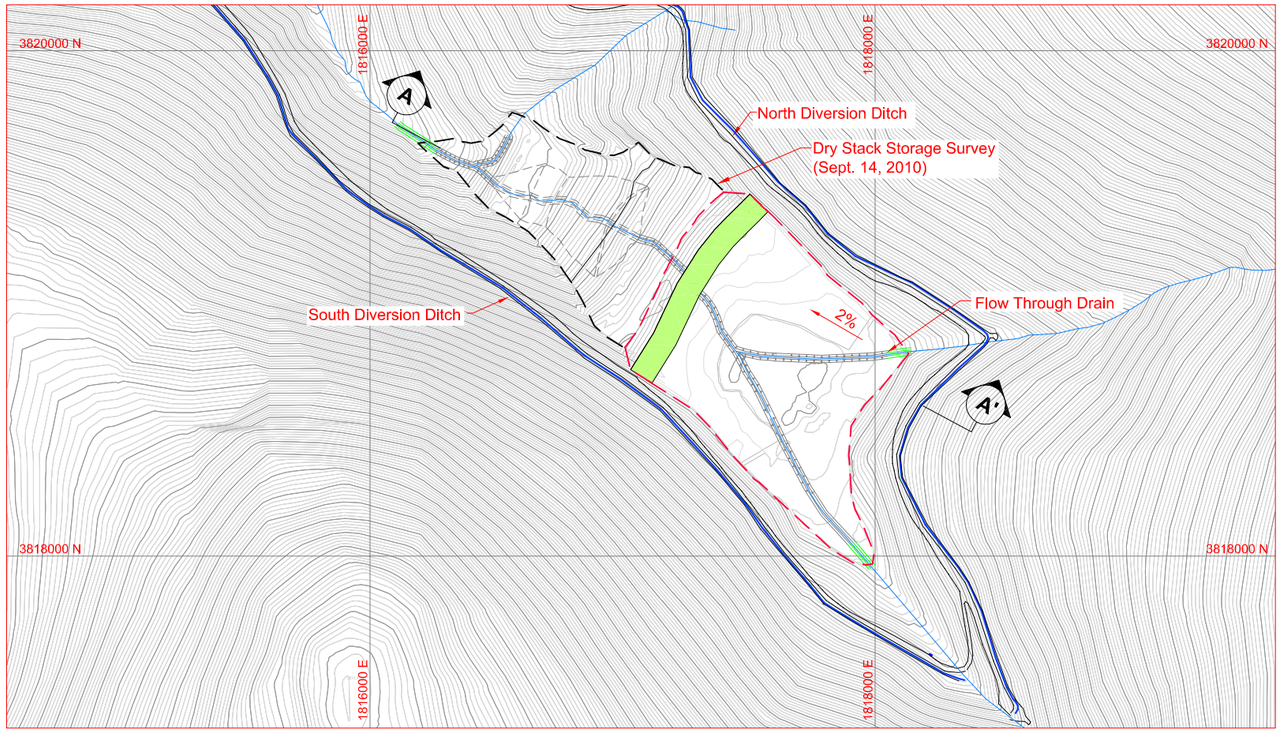
Dec 2010 | Pogo Plan of Operation

LEGEND

- Diversion Ditch
- Extent of Year 2010 Material Placement
- Rock Drain Extension Required for Year 2010
- Green Rock Outer Shell
- Dry Stack Material
- Tailings

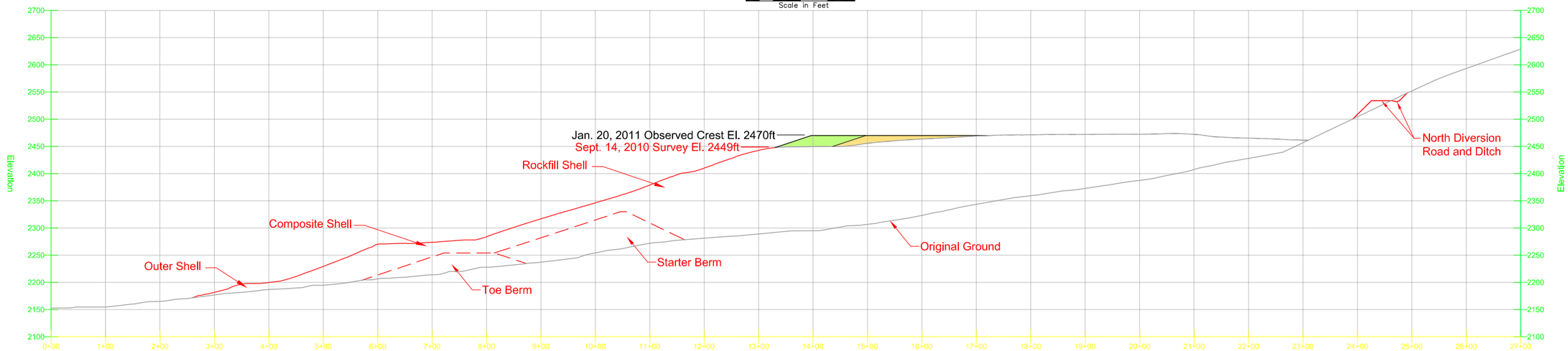
NOTES

1. Contour interval is 5ft.
2. Base contour data received from POGO mine site.



PLAN VIEW
DRY STACK STORAGE AREA

0 150' 300' 450' 600'
Scale in Feet



A CROSS SECTION A - A'

0 50' 100' 150' 200'
Scale in Feet

DRAWING NO.	DRAWING TITLE	DRAWING NO.	DRAWING TITLE
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Pogo Mine

Sumitomo Metal Mining Pogo LLC

SRK JOB NO.: 1CS021.000

2010 Pogo Plan of Operations

DRAWING TITLE:
Figure 7.1a
Drystack Tailings Facility
Plan and Section End of 2010

DRAWING NO.	SHEET	REVISION NO.
1	1 of 8	A

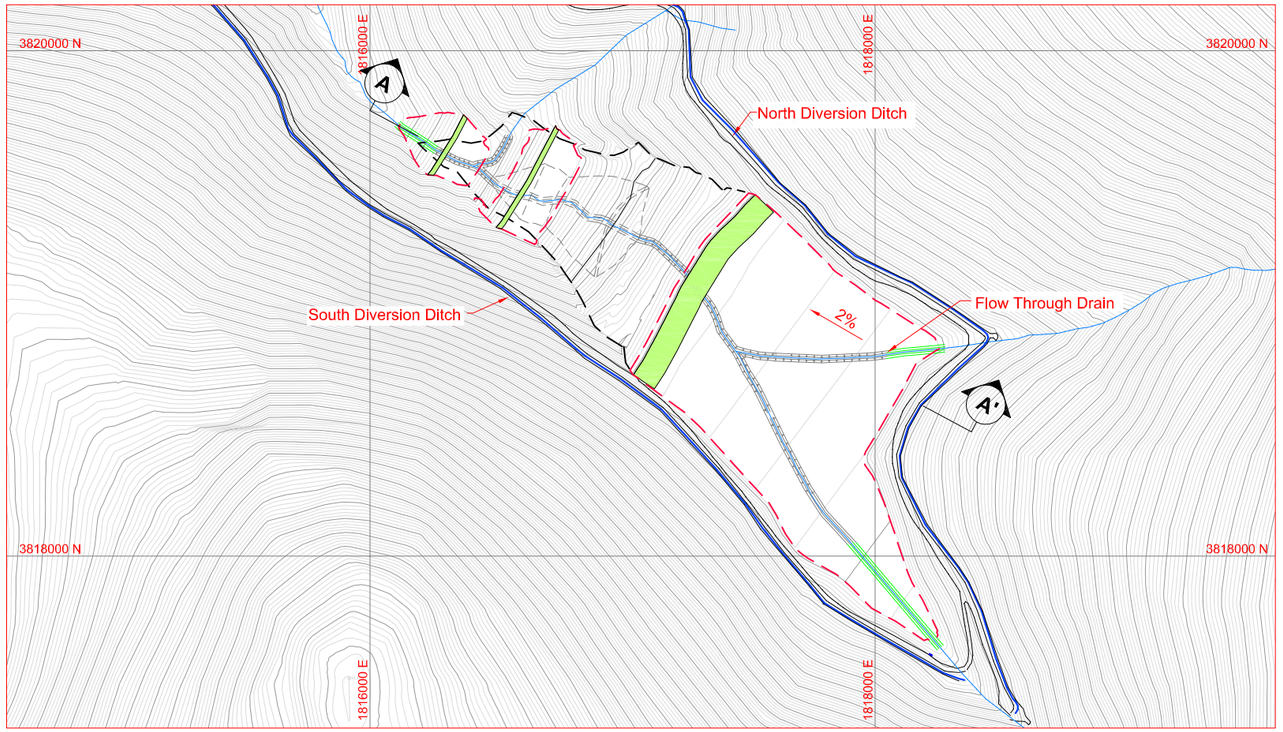
G:\Environmental\Plan of Ops and Reclamation Plan Working Copy\Plan of Operations Update 2010\2010 POO Figures\2010 Plan of Operation Figures - AutoCAD\Figure 7.1a-b DSTF Year-by-Year Plan.dwg

LEGEND

- Diversion Ditch
- Extent of Year 2011 Material Placement
- Rock Drain Extension Required for Year 2011
- Green Rock Outer Shell
- Dry Stack Material
- Tailings

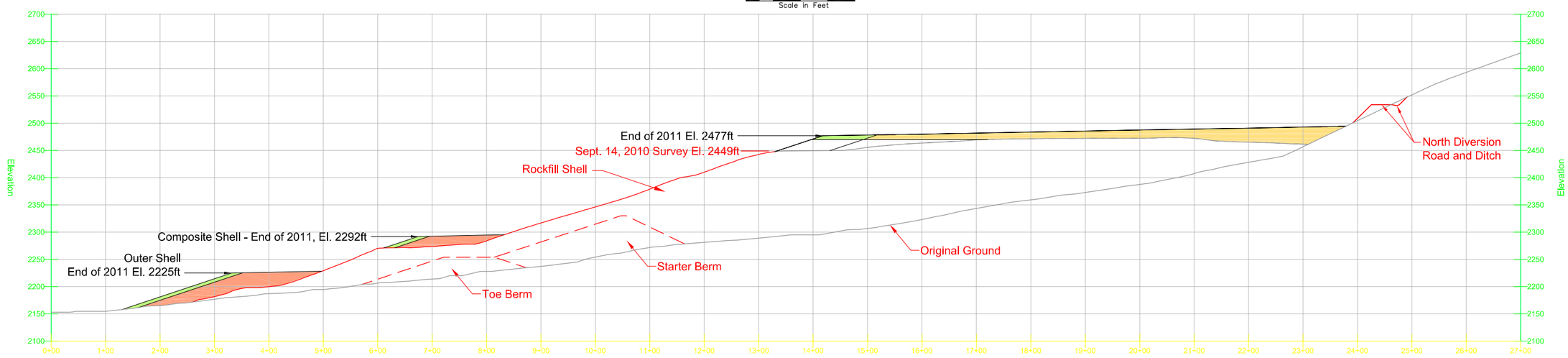
NOTES

1. Contour interval is 5ft.
2. Base contour data received from POGO mine site.



PLAN VIEW
DRY STACK STORAGE AREA

0 150' 300' 450' 600'
Scale in Feet



A CROSS SECTION A - A'

0 50' 100' 150' 200'
Scale in Feet

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Sumitomo Metal Mining Pogo LLC

SRK JOB NO.: 1CS021.000

2010 Pogo Plan of Operations

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Figure 7.1b
Drystack Tailings Facility
Plan and Section End of 2011

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2	2 of 8	A

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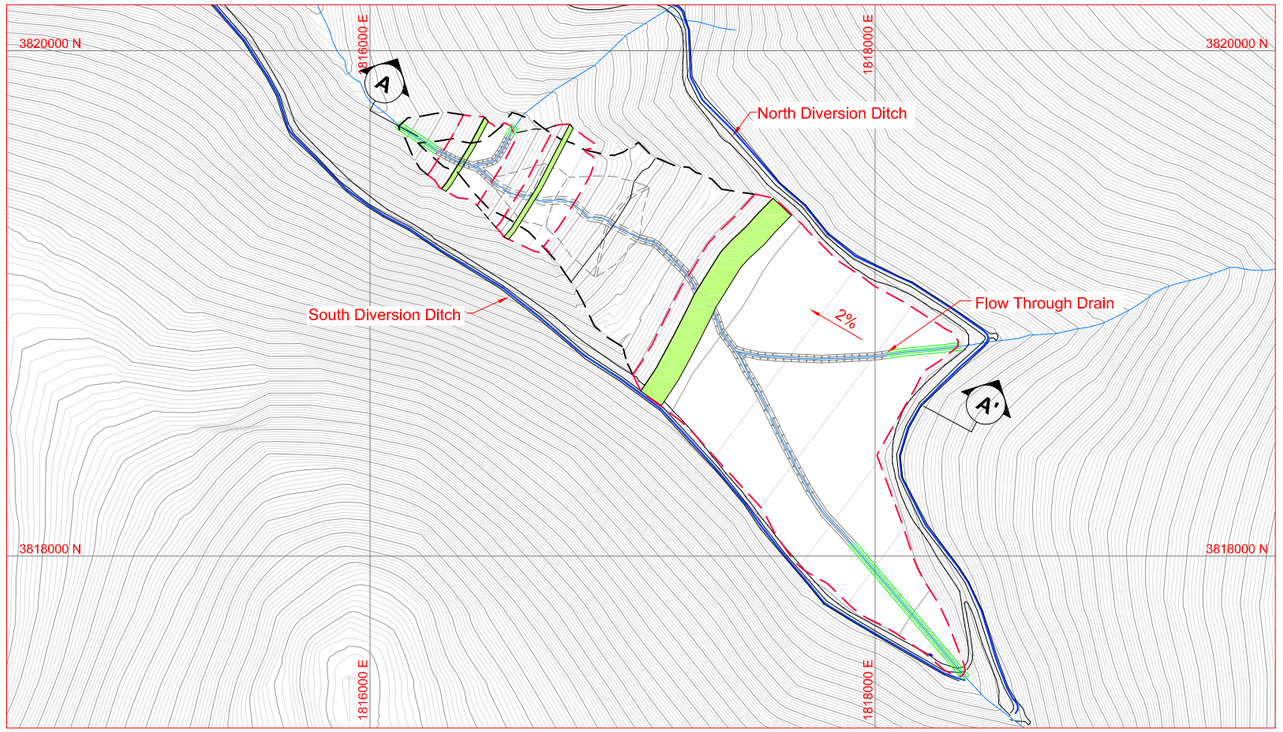
LEGEND

- Diversion Ditch
- Extent of Year 2012 Material Placement
- Rock Drain Extension Required for Year 2012
- Green Rock Outer Shell
- Dry Stack Material
- Tailings

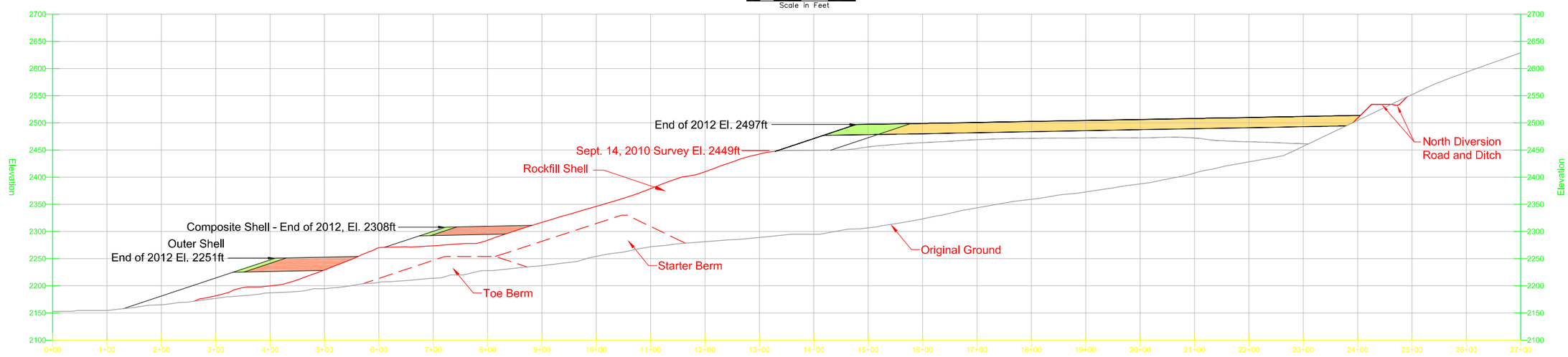
NOTES

1. Contour interval is 5ft.
2. Base contour data received from POGO mine site.



PLAN VIEW
DRY STACK STORAGE AREA

0 150' 300' 450' 600'
Scale in Feet



A **CROSS SECTION A - A'**

0 50' 100' 150' 200'
Scale in Feet

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Sumitomo Metal Mining Pogo LLC

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2010 Pogo Plan of Operations

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Figure 7.1c
Drystack Tailings Facility
Plan and Section End of 2012

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3	3 of 8	A

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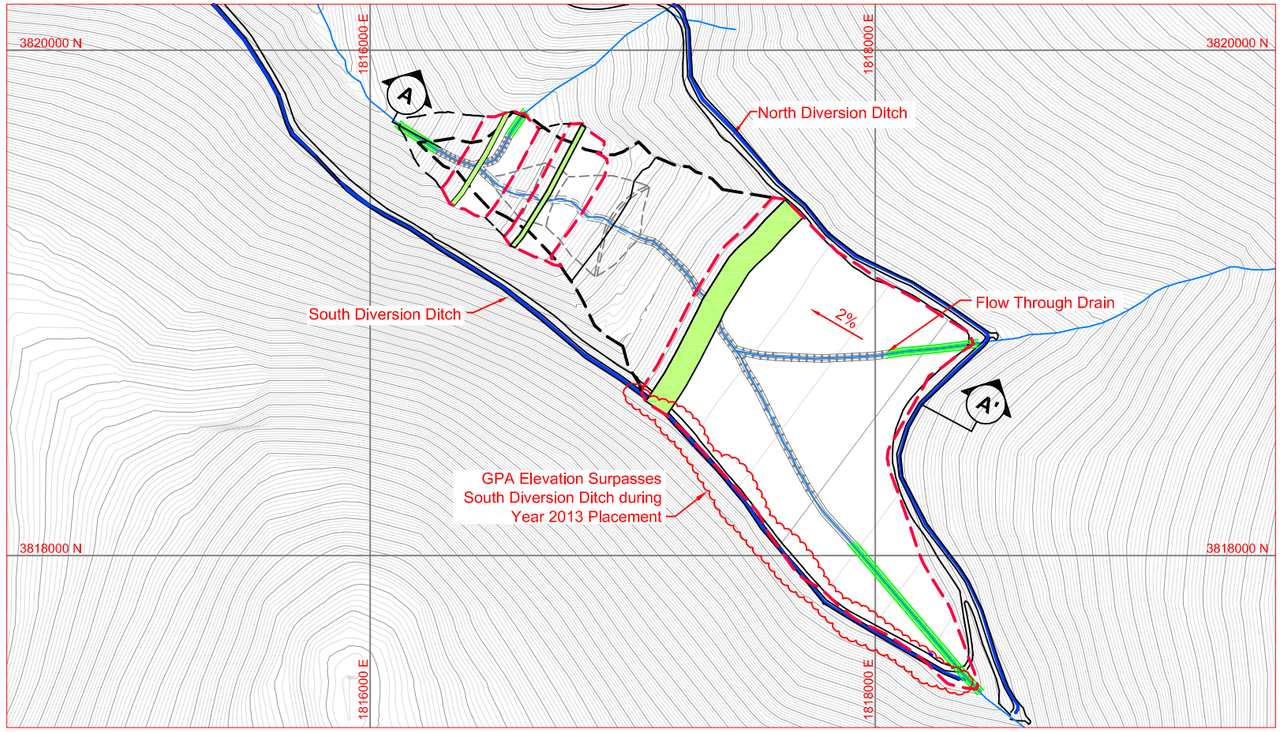
LEGEND

- Diversion Ditch
- Extent of Year 2013 Material Placement
- Rock Drain Extension Required for Year 2013
- Green Rock Outer Shell
- Dry Stack Material
- Tailings

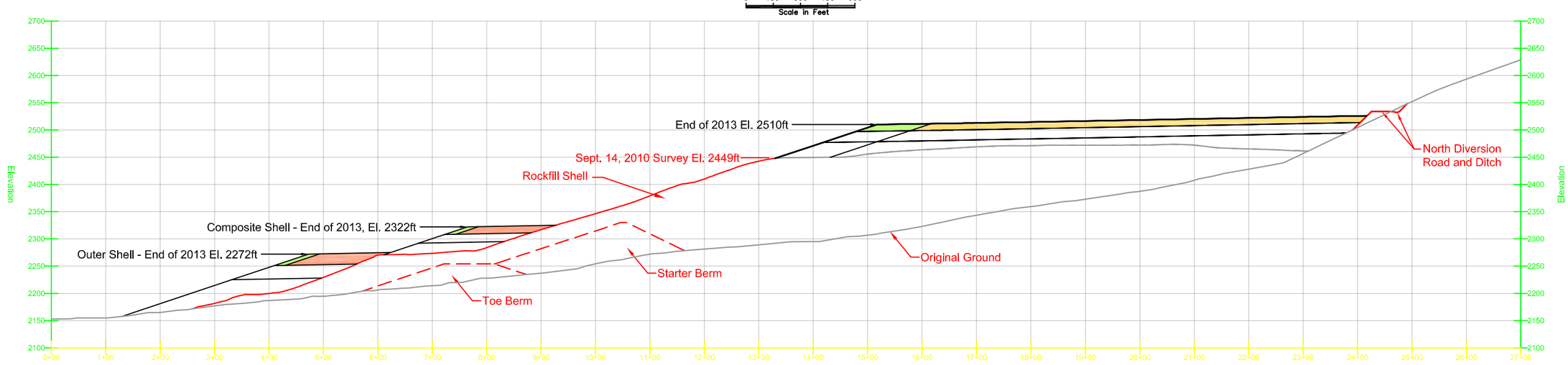
NOTES

1. Contour interval is 5ft.
2. Base contour data received from POGO mine site.



PLAN VIEW
DRY STACK STORAGE AREA

0 150' 300' 450' 600'
Scale in Feet



A CROSS SECTION A - A'

0 50' 100' 150' 200'
Scale in Feet

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Figure 7.1d
Drystack Tailings Facility
Plan and Section End of 2013

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4	4 of 8	A

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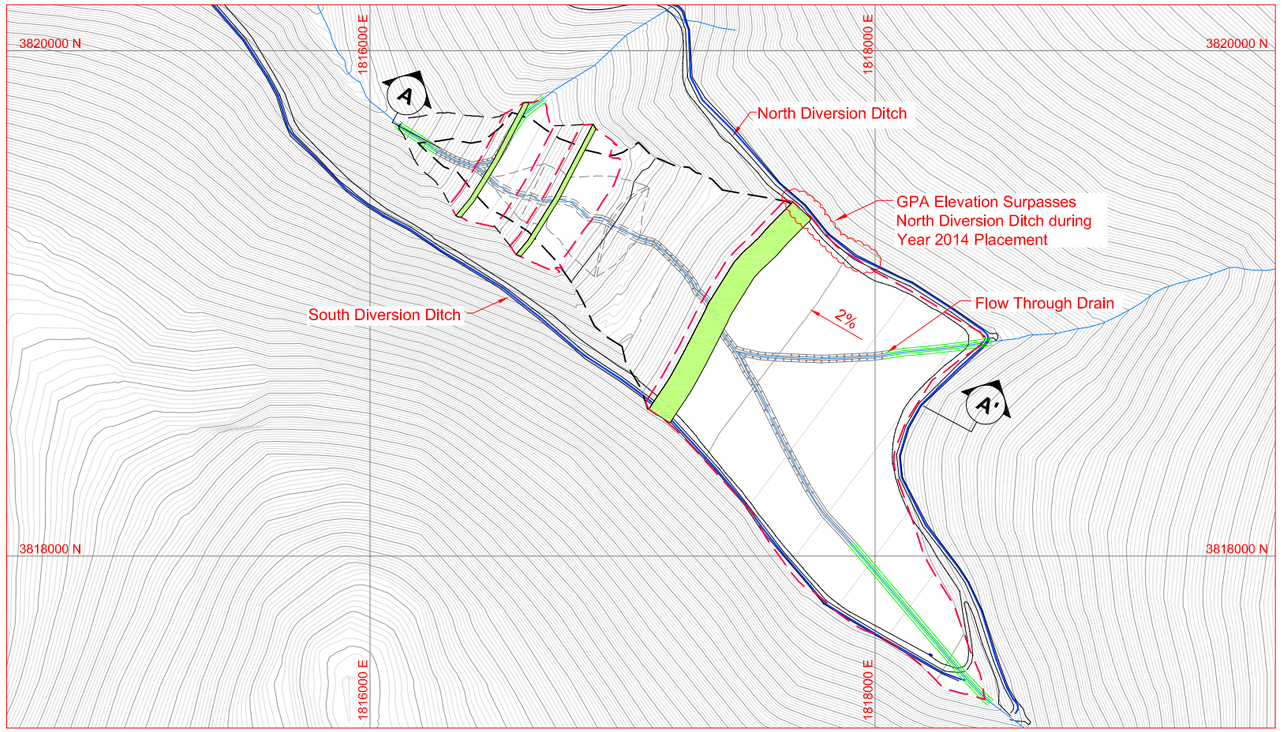
LEGEND

- Diversion Ditch
- Extent of Year 2014 Material Placement
- Rock Drain Extension Required for Year 2014
- Green Rock Outer Shell
- Dry Stack Material
- Tailings

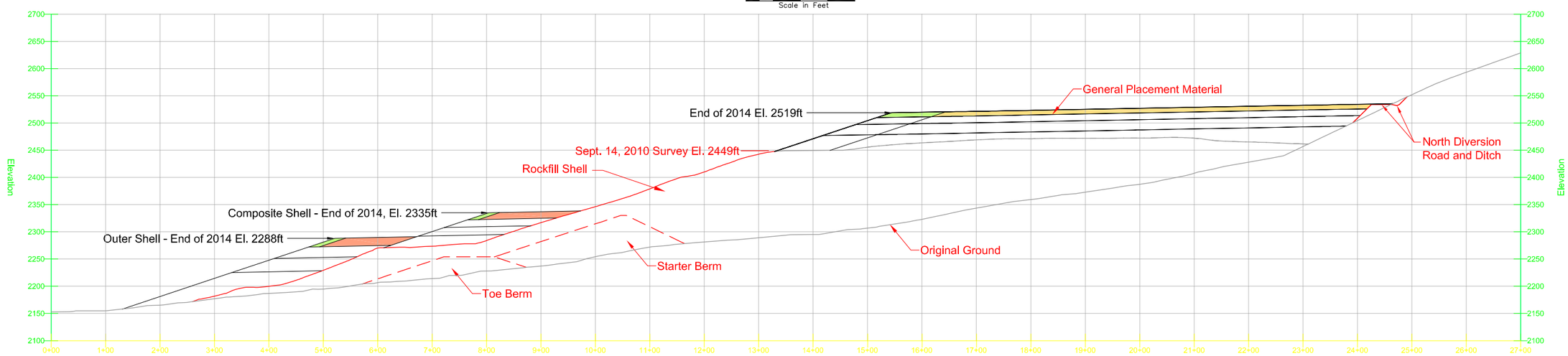
NOTES

1. Contour interval is 5ft.
2. Base contour data received from POGO mine site.



PLAN VIEW
DRY STACK STORAGE AREA

0 150' 300' 450' 600'
Scale in Feet



A **CROSS SECTION A - A'**

0 50' 100' 150' 200'
Scale in Feet

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Figure 7.1e
Drystack Tailings Facility
Plan and Section End of 2014

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5	5 of 8	A

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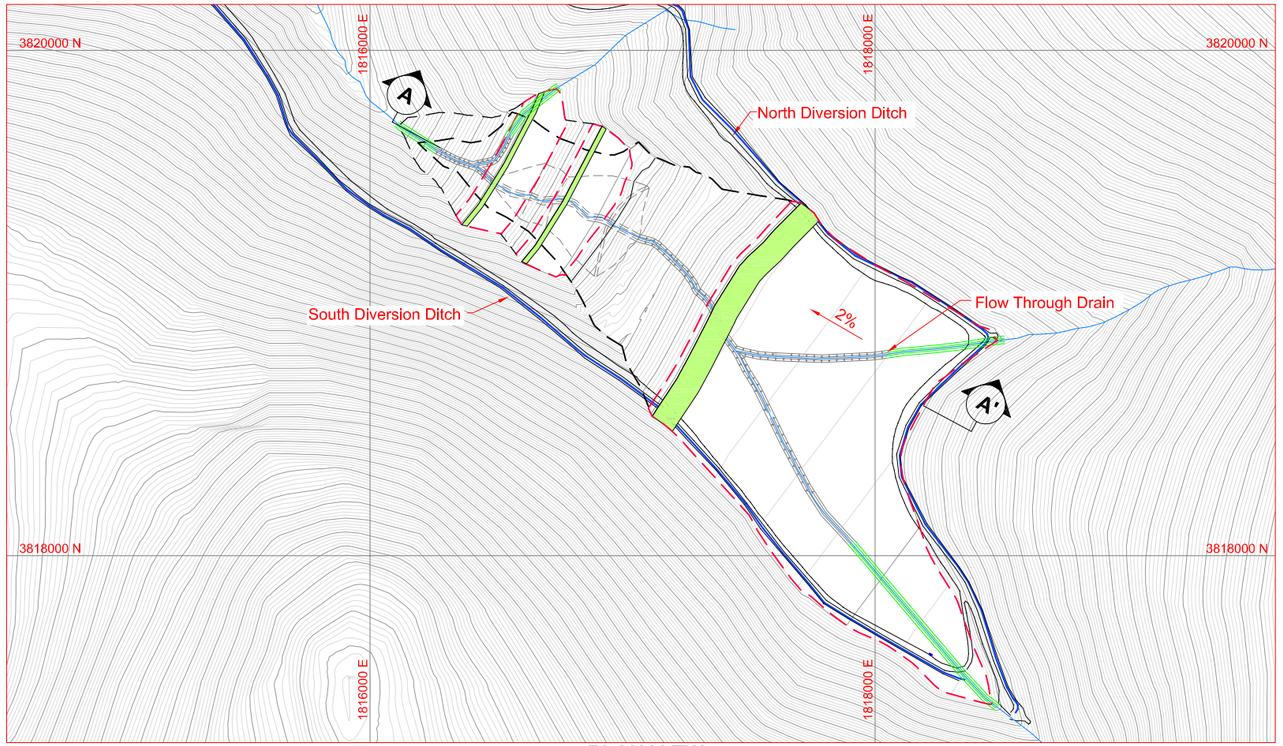
LEGEND

- Diversion Ditch
- Extent of Year 2015 Material Placement
- Rock Drain Extension Required for Year 2015
- Green Rock Outer Shell
- Dry Stack Material
- Tailings

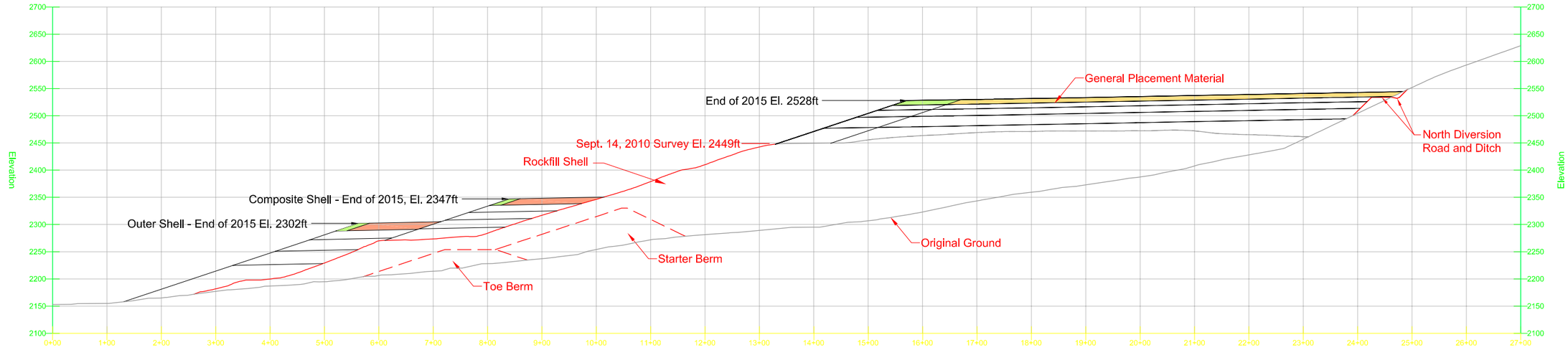
NOTES

1. Contour interval is 5ft.
2. Base contour data received from POGO mine site.



PLAN VIEW
DRY STACK STORAGE AREA

0 150' 300' 450' 600'
Scale in Feet



A **CROSS SECTION A - A'**

0 50' 100' 150' 200'
Scale in Feet

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Figure 7.1f
Drystack Tailings Facility
Plan and Section End of 2015

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6	6 of 8	A

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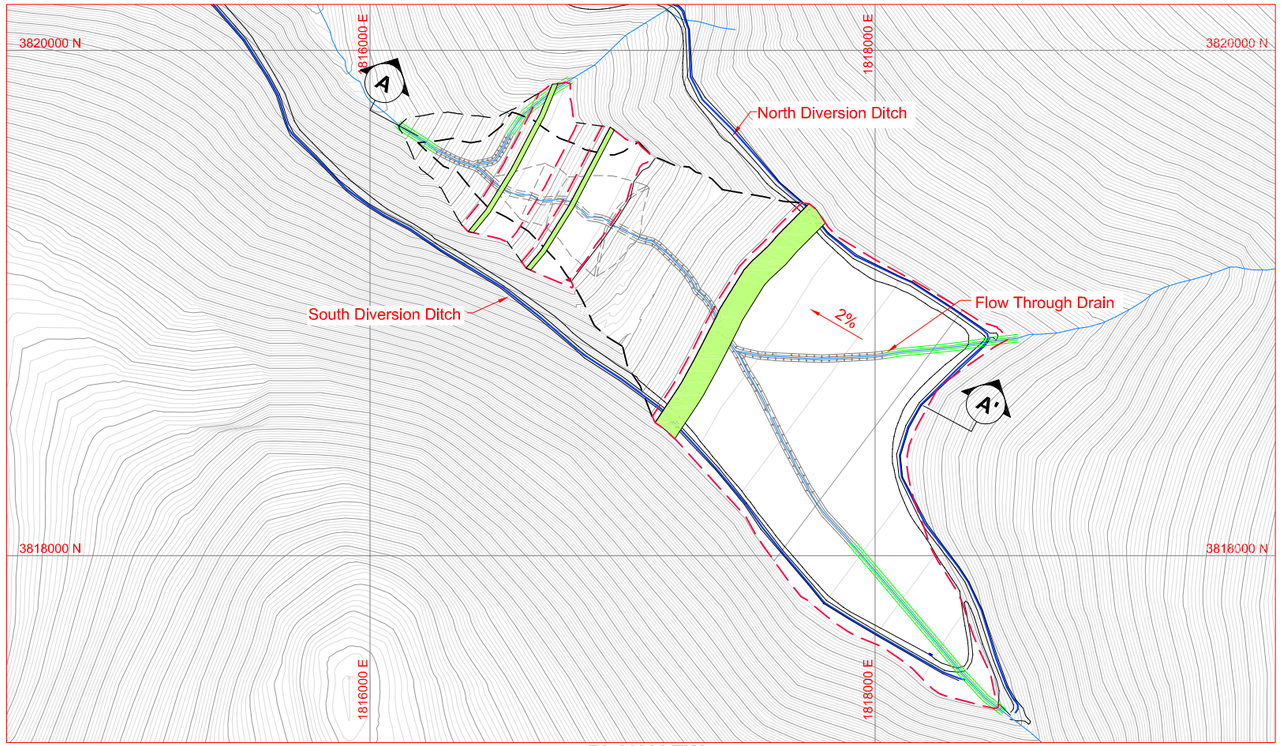
LEGEND

- Diversion Ditch
- Extent of Year 2016 Material Placement
- Rock Drain Extension Required for Year 2016
- Green Rock Outer Shell
- Dry Stack Material
- Tailings

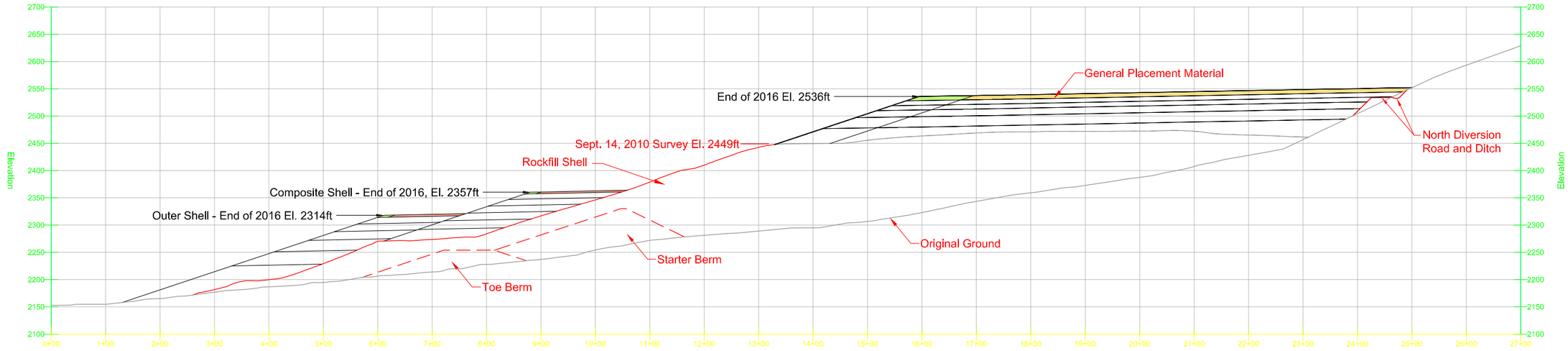
NOTES

1. Contour interval is 5ft.
2. Base contour data received from POGO mine site.



PLAN VIEW
DRY STACK STORAGE AREA

0 150' 300' 450' 600'
Scale in Feet



A **CROSS SECTION A - A'**

0 50' 100' 150' 200'
Scale in Feet

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2010 Pogo Plan of Operations

DRAWING TITLE:
Figure 7.1g
Drystack Tailings Facility
Plan and Section End of 2016

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7	7 of 8	A

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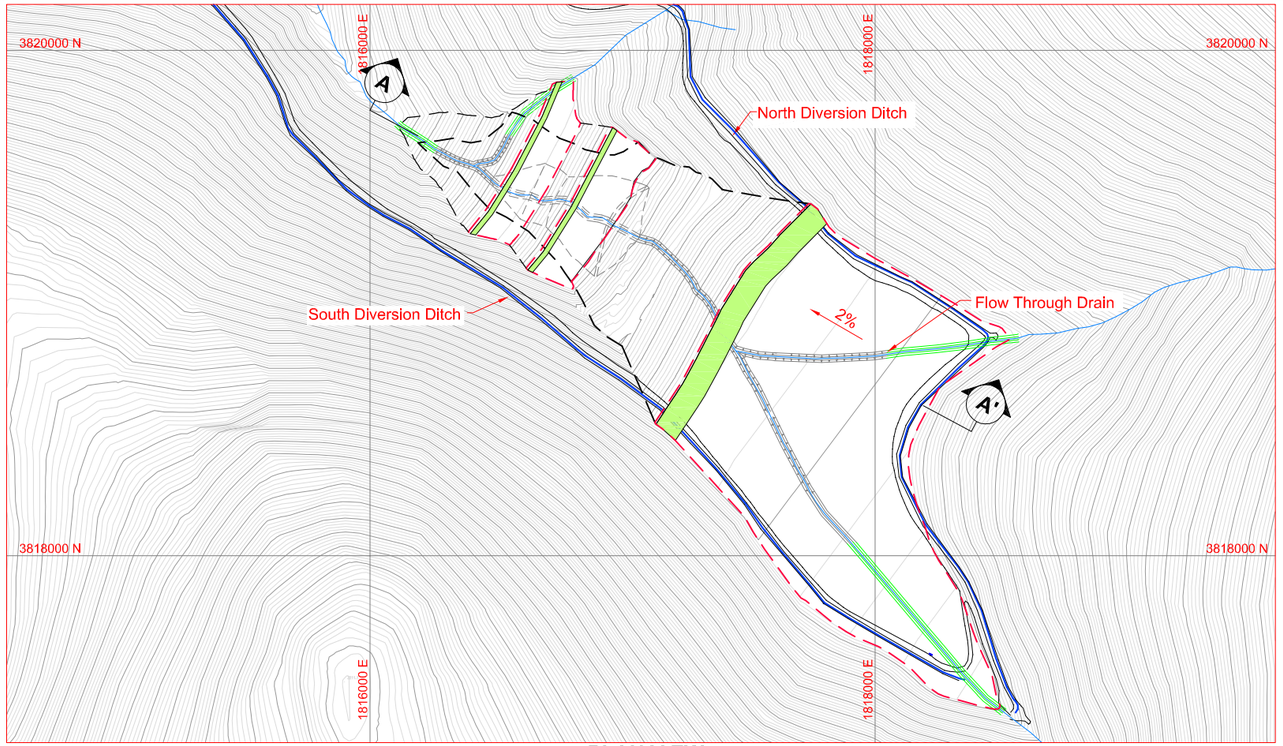
LEGEND

- Diversion Ditch
- Extent of Year 2017 Material Placement
- Rock Drain Extension Required for Year 2017
- Green Rock Outer Shell
- Dry Stack Material
- Tailings

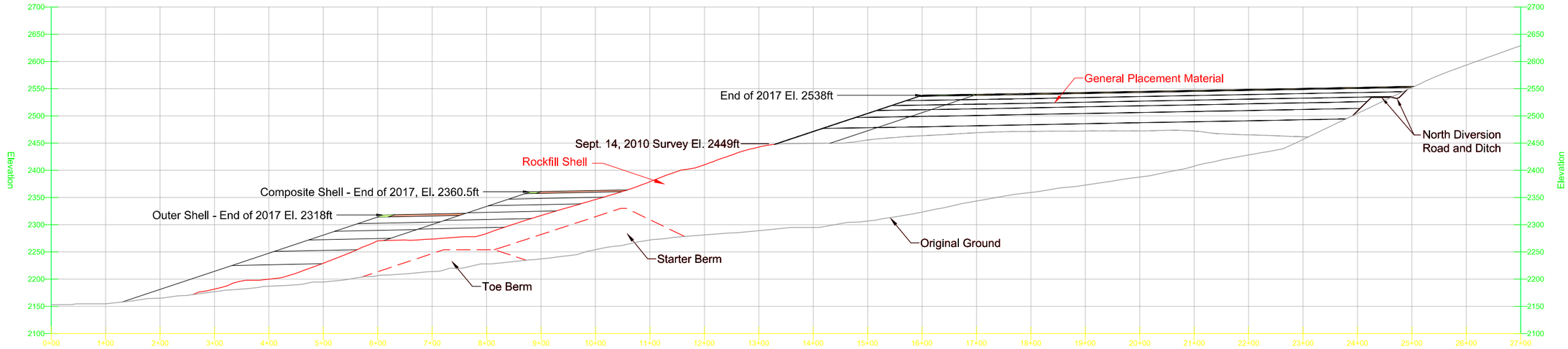
NOTES

1. Contour interval is 5ft.
2. Base contour data received from POGO mine site.



PLAN VIEW
DRY STACK STORAGE AREA

0 150' 300' 450' 600'
Scale in Feet



A **CROSS SECTION A - A'**

0 50' 100' 150' 200'
Scale in Feet

DRAWING NO.	DRAWING TITLE	DRAWING NO.	DRAWING TITLE
–	–		

REFERENCE DRAWINGS

NO.	DESCRIPTION	CHK'D	APP'D	DATE
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FILE NAME:

Pogo Mine

Sumitomo Metal Mining Pogo LLC

SRK JOB NO.: 1CS021.000

2010 Pogo Plan of Operations

DRAWING TITLE:
Figure 7.1h
Drystack Tailings Facility
Plan and Section End of 2017

DRAWING NO.	SHEET	REVISION NO.
8	8 of 8	A

G:\Environmental\Plan of Ops and Reclamation Plan Working Copy\Plan of Operations Update 2010\2010 POO Figures\2010 Plan of Operation Figures - AutoCAD\Figure 7.1a-h DSTF Year-by-Year Plan.dwg

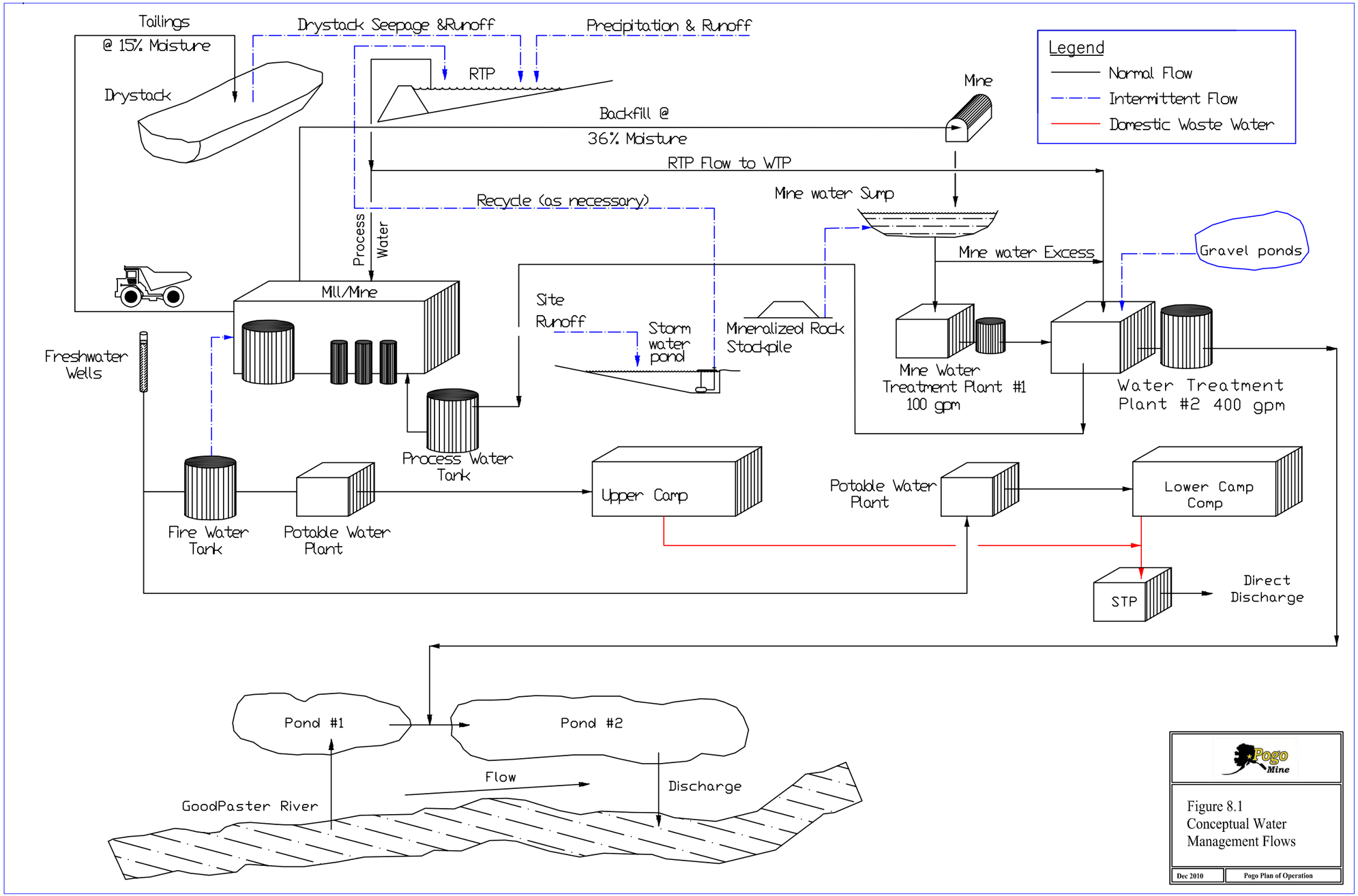


Figure 8.1
Conceptual Water
Management Flows

Dec 2010	Pogo Plan of Operation

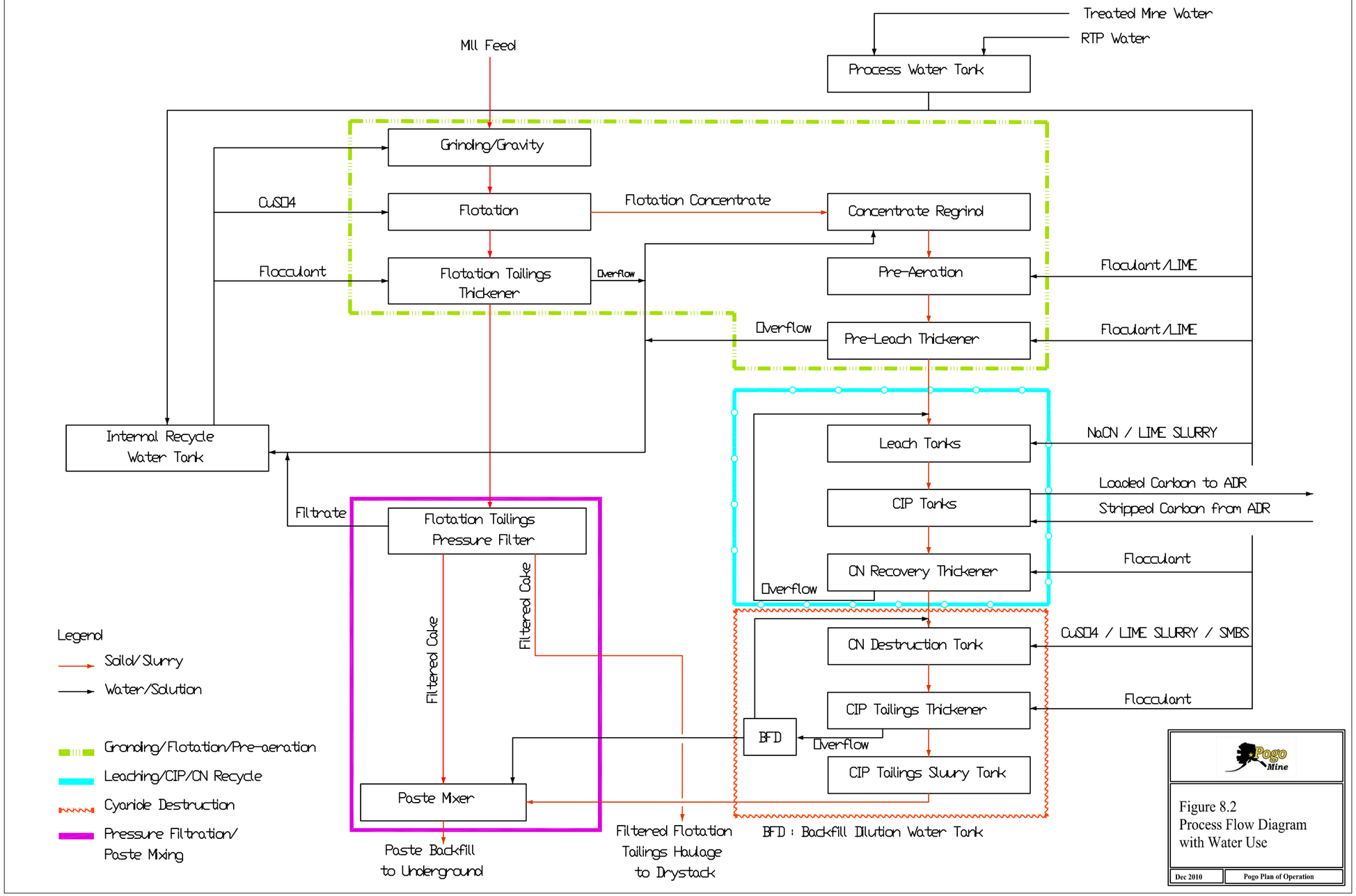


Figure 8.2
Process Flow Diagram with Water Use

POTABLE WATER TREATMENT PLANT

FRESH WATER

0 / 45

EMERGENCY FILL ONLY

0 / 45

HEAD TANK RTP

161 / 600

FRESH WATER TO RTP PUMP

FIRE WATER RESERVE

REVERSE FLOW AS REQUIRED

0 / 45

TRUCK WASH

WASTE WATER PUMP TRUCK SHOP

0 / 90

GRAVEL PIT POND

TANK FIRE WATER

0 / 270

PRECIPITATION

EVAPORATION

RTP CATCHMENT, DIVERSION DITCH LEAKAGE, DEVELOPMENT ROCK SEEPAGE

0 / 1

0 / 1

92 / NA

0 / 150

1525 PORTAL

1875 PORTAL

161 / 600

FILTERED FLOTATION TAILING

45 / NA

96 / 350

SEEPAGE AND SEEPAGE CATCHMENT

TAILING SEEPAGE & RUNOFF

TAILING DRY STACK

21 / NA

RTP

Mine Service Water Recycle

Underground Stopes

1690 PORTAL

REVERSE FLOW AS REQUIRED

1525 PORTAL

46 / 300

48 / 3500

74 / 580

120 / 200

Mine Drainage

120 / NA

14 / NA

ORE

Mill/Paste Plant

Paste

BACKFILL

115 / NA

RTP SEEPAGE PUMPS

MWTP #2

100 / 120

100 / 120

MAIN SUMP DEWATERING

4 / NA

DITCH

PROCESS WATER

100 / 300

(SUMMER ONLY)

MWTP #1

Mine inflow

170 / NA

189 / 600

BLOWER ORTW AERATION

RETAINED WATER (STOPE)

48 / 3500 RUNOFF

(EMERGENCY OVERFLOW SUMMER ONLY)

Underground

TO MINE 1690 PORTAL

RIVER WATER

TO RIVER

1.1 MILLION USG STORM DRAINAGE POND

OFF-RIVER TREATMENT WORKS

STATIC TUBE AERATORS

LEGEND

USGPM	Average
USGPM	Maximum

RTP DISTRIBUTION HEADER

ORE/FILTER CAKE SLURRY

NORMAL FLOW

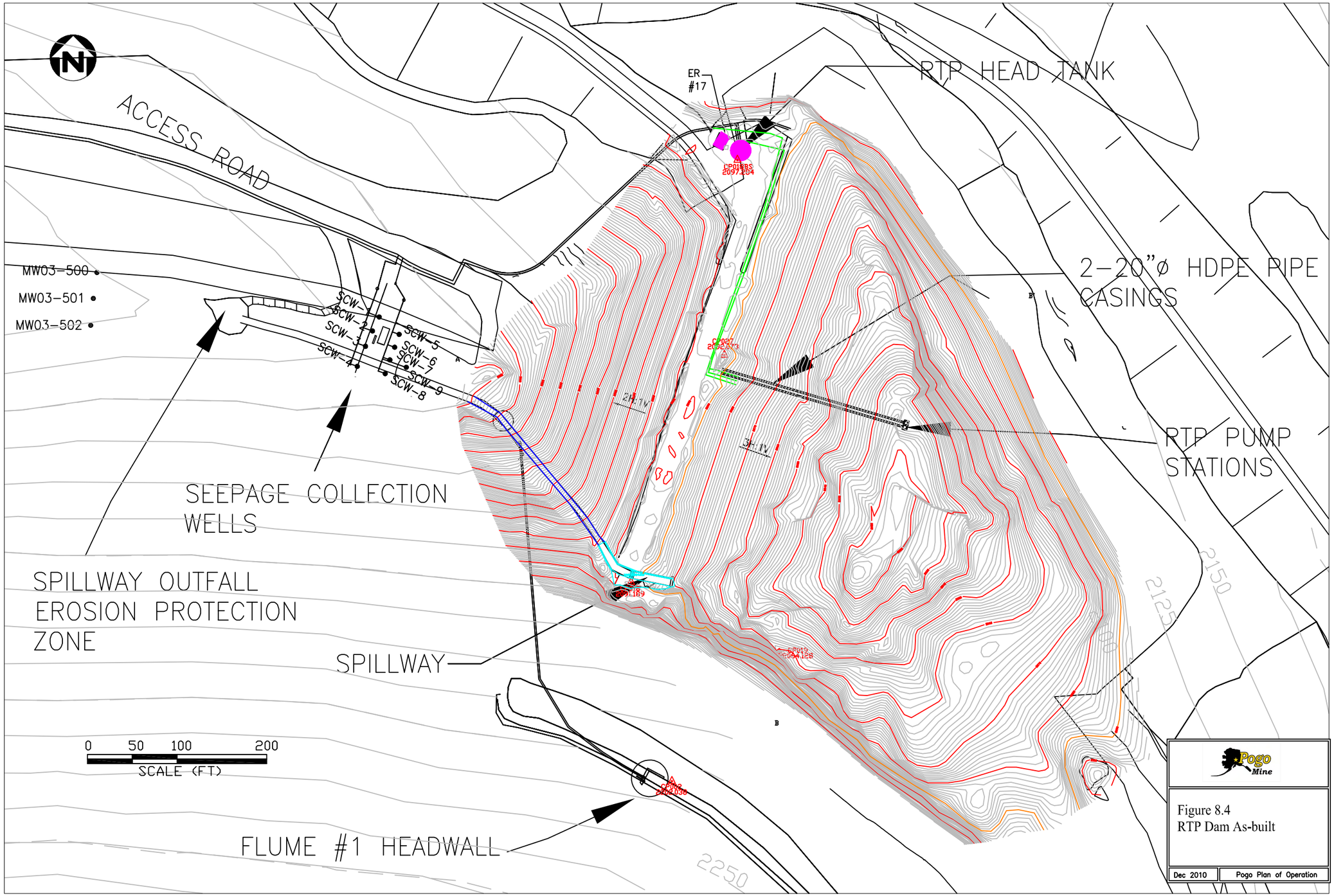
INTERMITTENT FLOW

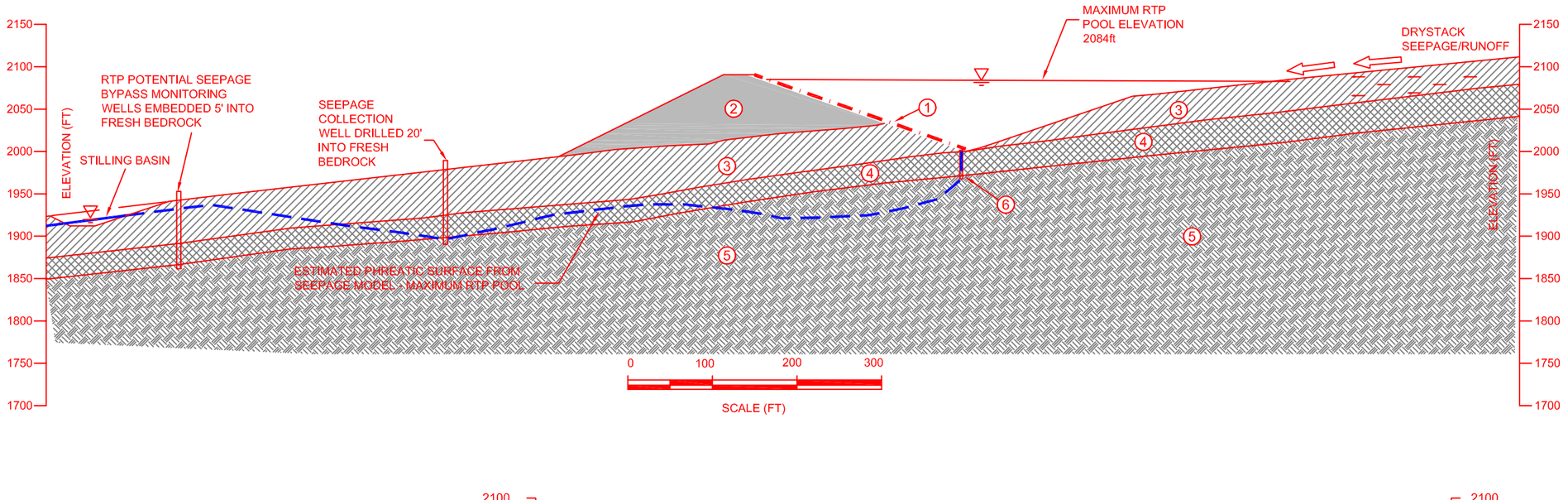
RECYCLED WATER

Pogo Mine

Figure 8.3
Water Balance
2,500 tpd Average Case

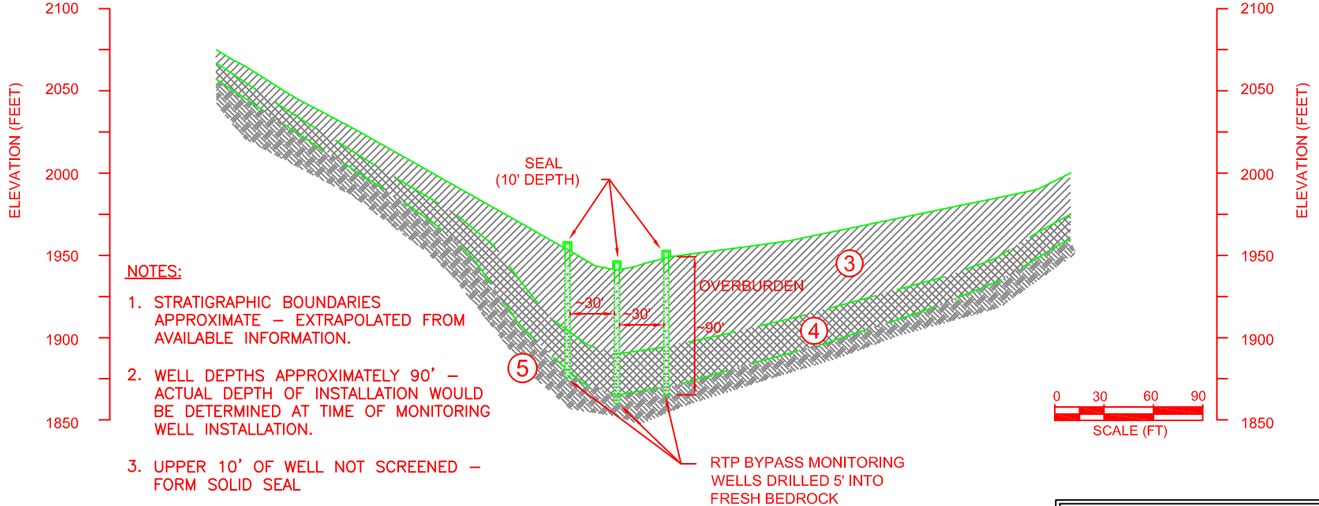
Dec 2010 | Pogo Plan of Operation


ACCESS ROAD
RTP HEAD TANK
ER #17
2-20"ø HDPE PIPE CASINGS
RTP PUMP STATIONS
MW03-500
MW03-501
MW03-502
SCW-1
SCW-2
SCW-3
SCW-4
SCW-5
SCW-6
SCW-7
SCW-8
SCW-9
SEEPAGE COLLECTION WELLS
SPILLWAY OUTFALL EROSION PROTECTION ZONE
SPILLWAY
FLUME #1 HEADWALL
2.5:1V
3:1V
2150
2125
2100
2250
0 50 100 200
SCALE (FT)
Pogo Mine
Figure 8.4
RTP Dam As-built
Dec 2010
Pogo Plan of Operation



LEGEND

1. LINER
2. ROCKFILL
3. OVERBURDEN
4. WEATHERED BEDROCK
5. FRESH BEDROCK
6. SEEPAGE CUT-OFF GROUT CURTAIN



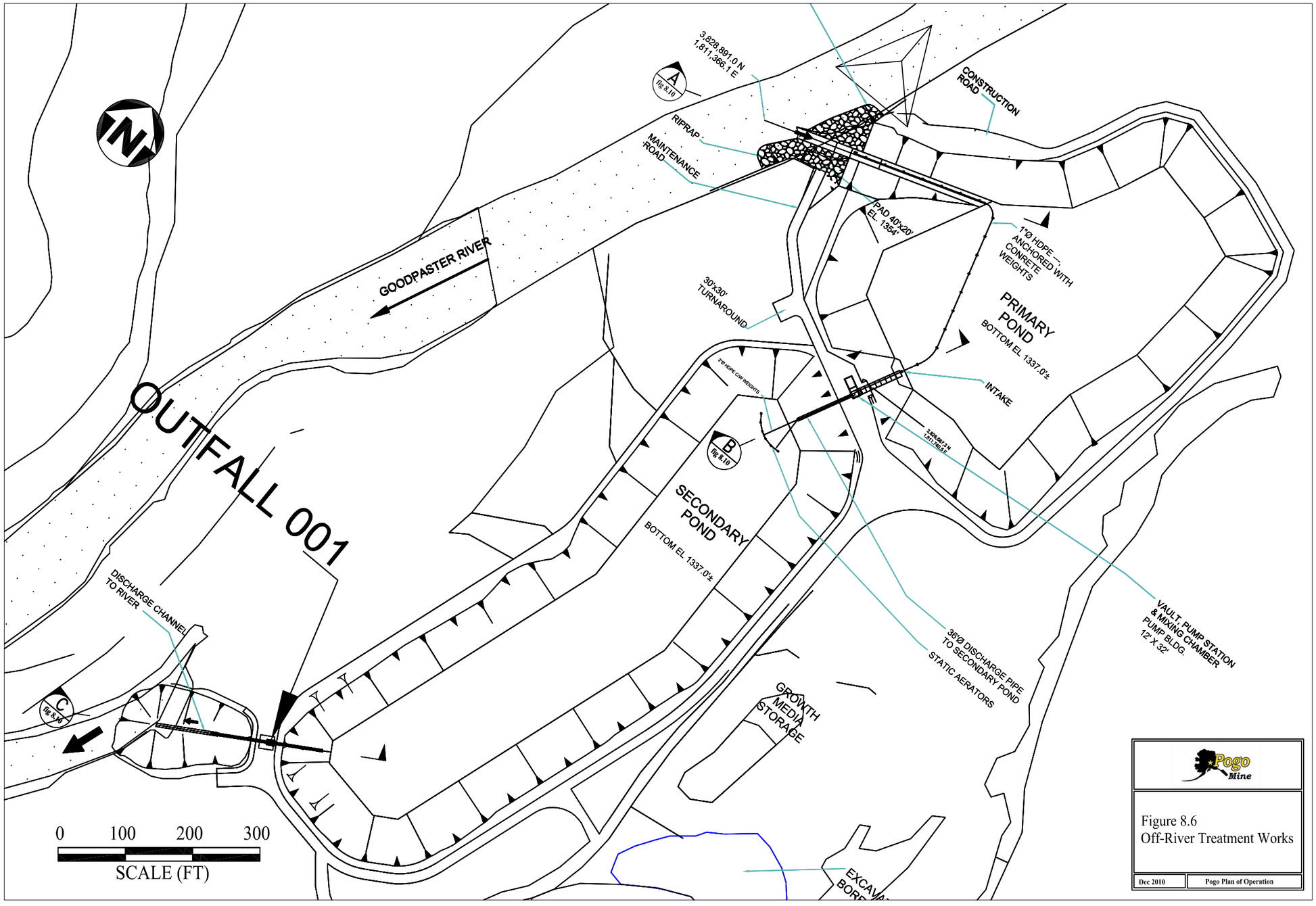
NOTES:

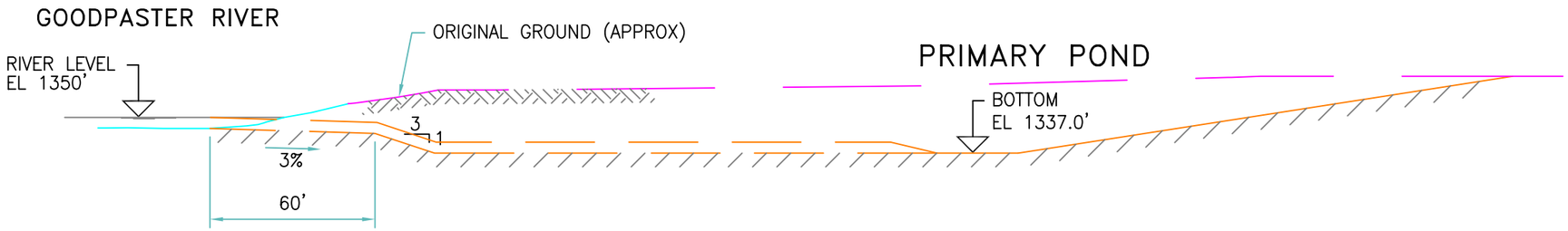
1. STRATIGRAPHIC BOUNDARIES APPROXIMATE – EXTRAPOLATED FROM AVAILABLE INFORMATION.
2. WELL DEPTHS APPROXIMATELY 90' – ACTUAL DEPTH OF INSTALLATION WOULD BE DETERMINED AT TIME OF MONITORING WELL INSTALLATION.
3. UPPER 10' OF WELL NOT SCREENED – FORM SOLID SEAL

Pogo Mine

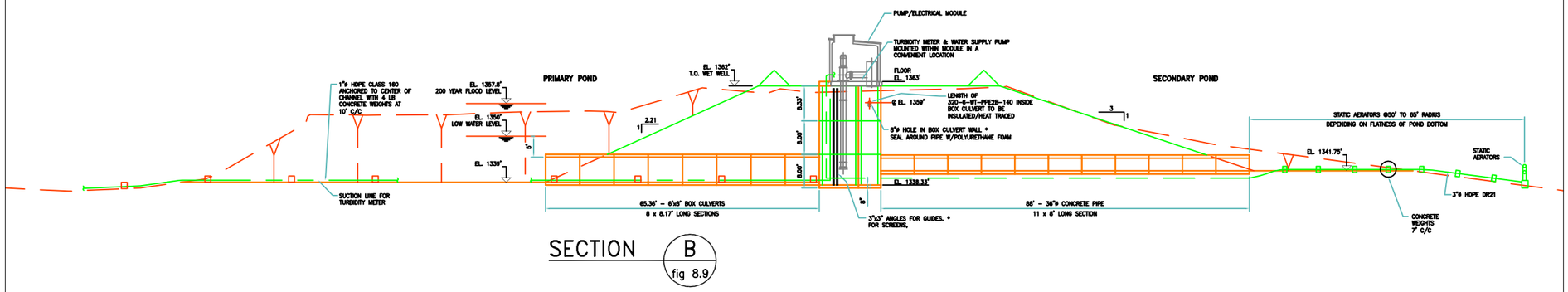
Figure 8.5
RTP Seepage Collection System

Dec 2010	Pogo Plan of Operation

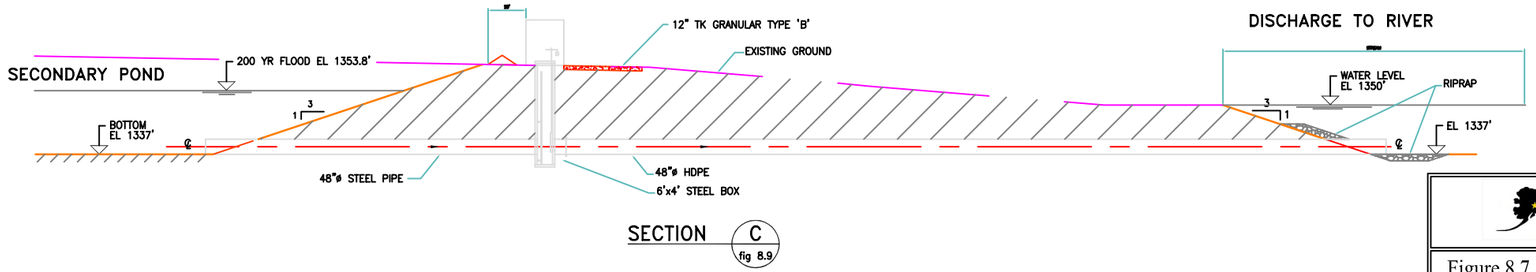

N
OUTFALL 001
GOODPASTER RIVER
3,828,891.0 N
1,811,366.1 E
A
fig. 8.10
RIPRAP
MAINTENANCE ROAD
CONSTRUCTION ROAD
PAD 40'x20'
EL. 1354'
1"Ø HDPE ANCHORED WITH CONRETE WEIGHTS
PRIMARY POND
BOTTOM EL 1337.0±
30'x30' TURNAROUND
3"Ø HDPE C/W WEIGHTS
INTAKE
B
fig. 8.10
SECONDARY POND
BOTTOM EL 1337.0±
DISCHARGE CHANNEL TO RIVER
C
fig. 8.10
36"Ø DISCHARGE PIPE TO SECONDARY POND
STATIC AERATORS
VAULT, PUMP STATION & MIXING CHAMBER
PUMP BLDG.
12' X 32'
GROWTH MEDIA STORAGE
EXCAVA
BORR
0
100
200
300
SCALE (FT)
Pogo Mine
Figure 8.6
Off-River Treatment Works
Dec 2010
Pogo Plan of Operation



SECTION A
fig 8.9



SECTION B
fig 8.9



SECTION C
fig 8.9

Figure 8.7
Off-River Treatment Works
Pump Lift Station and
Outlet Structure

Dec 2010	Pogo Plan of Operation