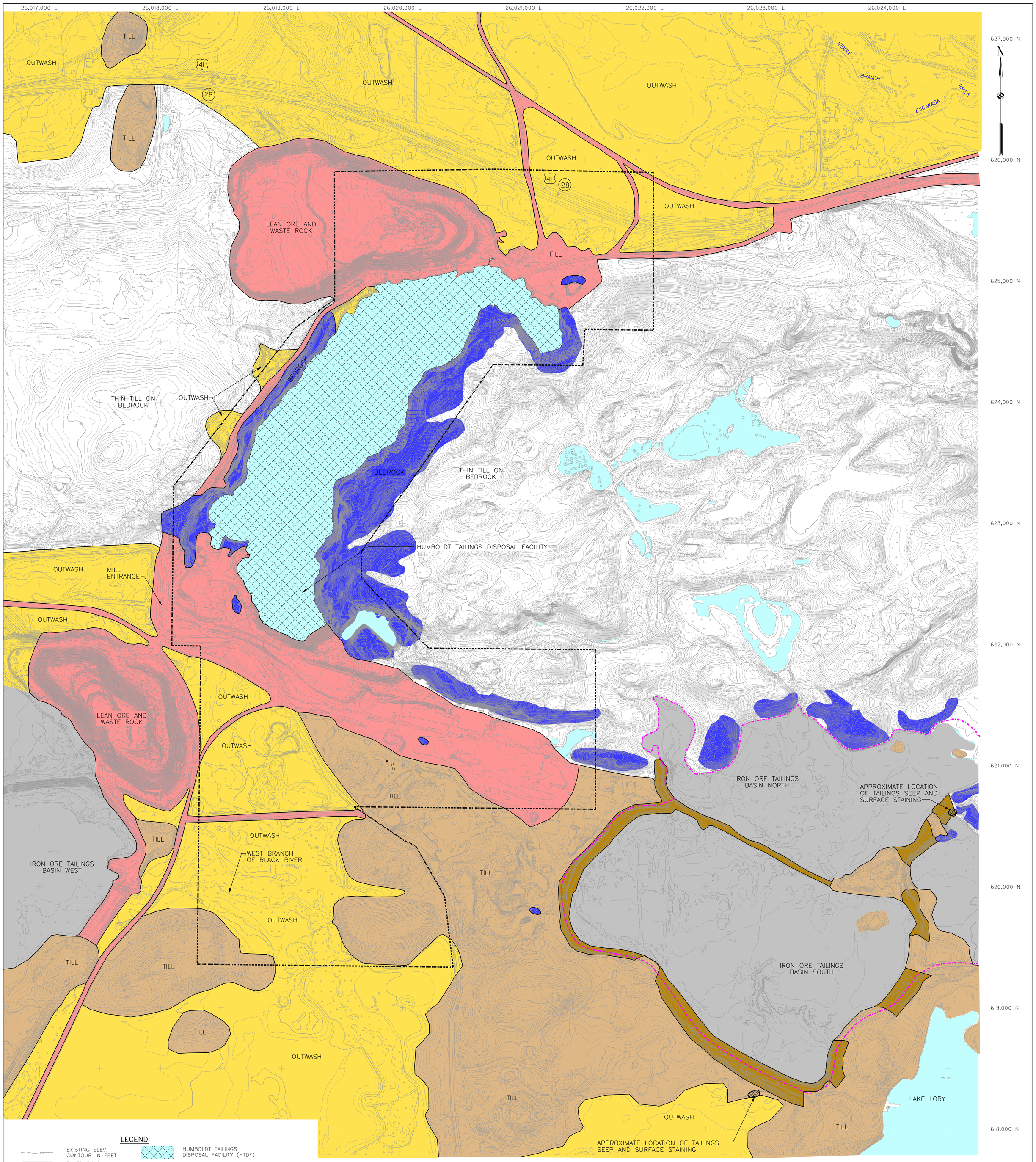

NOTES:

1. TOPOGRAPHIC AND PLANIMETRIC DATA SUPPLIED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN. DATE OF PHOTOGRAPHY: APRIL 27, 2006.
2. CONTOUR INTERVAL BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. HORIZONTAL DATUM BASED ON NAD 83/96. HORIZONTAL COORDINATES BASED ON MICHIGAN STATE PLANE.
3. SITE LOCATION: PROJECT SITE WITHIN SECTIONS 2 AND 11, T47N, R29W, HUMBOLDT TOWNSHIP, MARQUETTE COUNTY, MICHIGAN.
4. CONTOUR INTERVAL SHOWN IS 10 FOOT.

Foth Infrastructure & Environment, LLC

REVISED	DATE	BY	DESCRIPTION

CHECKED BY:	JSL	DATE:	AUG. '08
APPROVED BY:	SVDI	DATE:	AUG. '08
APPROVED BY:		DATE:	

Kennecott Eagle Minerals

FIGURE 3-1

SURFICIAL GEOLOGY

Scale:	AS SHOWN	Date:	AUGUST, 2008
Prepared By:	JOW	Project No.	06W003

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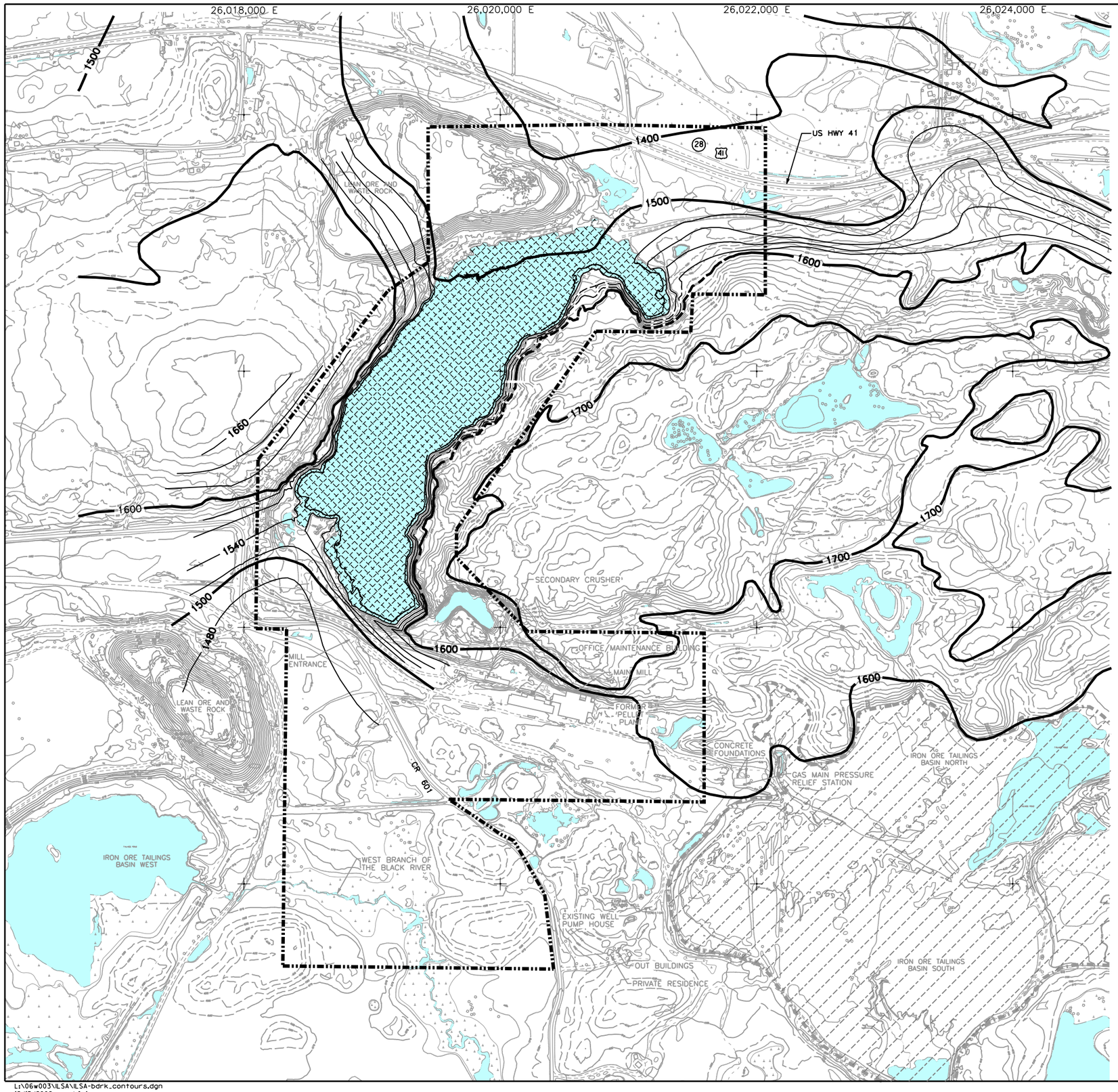
12/15/2008 bjw1



N

LEGEND

- EXISTING ELEV. CONTOUR IN FEET
- TREE
- TREE LINE
- BUILDING
- TRAIL
- PAVED ROAD
- UNPAVED ROAD
- STREAM/LAKE
- HUMBOLDT TAILINGS DISPOSAL FACILITY (TDF)
- PRE-EXISTING IRON ORE TAILINGS DISPOSAL FACILITY
- KEMC PROJECT LOCATION
- 1700 — BEDROCK CONTOUR MAP (TRAVERSE ENGINEERING SERVICES, NOVEMBER, 1984)

NOTES:

1. TOPOGRAPHIC AND PLANIMETRIC DATA SUPPLIED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN. DATE OF PHOTOGRAPHY: APRIL 27, 2006.
2. CONTOUR INTERVAL BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. HORIZONTAL DATUM BASED ON NAD 83/96. HORIZONTAL COORDINATES BASED ON MICHIGAN STATE PLANE.
3. KEMC PROJECT LOCATION WITHIN SECTIONS 2 AND 11 T47N, R29W, HUMBOLDT TOWNSHIP, MARQUETTE COUNTY, MICHIGAN.
4. CONTOUR INTERVAL SHOWN IS 10 FOOT.
5. BEDROCK CONTOURS MODIFIED AFTER SUPINA (1984).

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APPROVED BY:	SVD1	DATE:	AUG. '08
APPROVED BY:		DATE:	

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FIGURE 3-2

BEDROCK CONTOUR ELEVATIONS

Scale:	0 200' 400'	Date:	AUGUST, 2008
Prepared By:	JOW	Project No.	06W003

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12/15/2008 bjw1

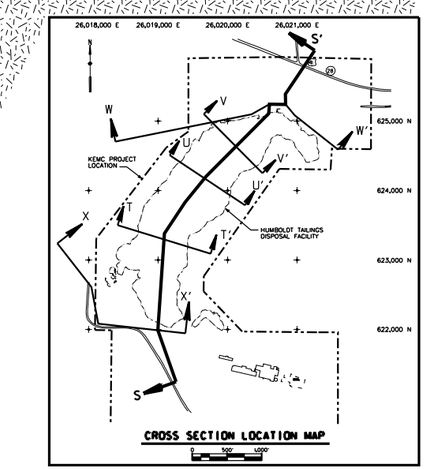
SECTION S - S'

SOUTH — NORTH

KMW-9P (OUT OF SECTION)
KMW-9
PW-2
EXISTING GRADE
FILL
OWC
OWF
1556.27
1551.35
BEDROCK ELEVATION
GNEISS
BATHYMETRIC SURVEY
NEGAUNEE IRON FORMATION
ROPES MINE TAILINGS
BEDROCK SURFACE
WATER ELEV.=1537.88
JUNE 5, 2007
HW-1
HMP-009
HW-6
WATER
1535.66
1534.33
1533.39
ORGANIC MUCK
OWC W/CLAY
OWF W/CLAY

LEGEND

- F FILL — SAND, GRAVEL AND MINE WASTE ROCK
- Owf FINE-GRAINED OUTWASH DEPOSITS — GLACIAL FLUVIAL STRATIFIED SAND AND SILT
- Owc COARSE-GRAINED OUTWASH DEPOSITS — GLACIAL FLUVIAL STRATIFIED SAND, GRAVEL, COBBLES AND BOULDERS
- P PEAT
- T IRON ORE TAILINGS
- IC ICE-CONTACT DEPOSITS — ABLATION TILL, FLOW TILL, GLACIO-FLUVIAL SILT, CLAY AND SAND
- PCu UNDIFFERENTIATED BEDROCK — LOWER PROTEROZOIC METASEDIMENTS AND INTRUSIVE ROCKS AND ARCHEAN GNEISS (BEDROCK)
- INFERRED GEOLOGIC CONTACT
- 1554.6 (6/5/07) WATER LEVEL ELEVATION (6/5/07)



CROSS SECTION LOCATION MAP

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CHECKED BY: JSL			DATE: AUG. '08
APPROVED BY: SVDI			DATE: AUG. '08
APPROVED BY:			DATE:

Kennecott Eagle Minerals

FIGURE 3-3

CROSS SECTION S-S'

Scale: AS SHOWN | Date: AUGUST, 2008
Prepared By: JOW | Project No. 06W003

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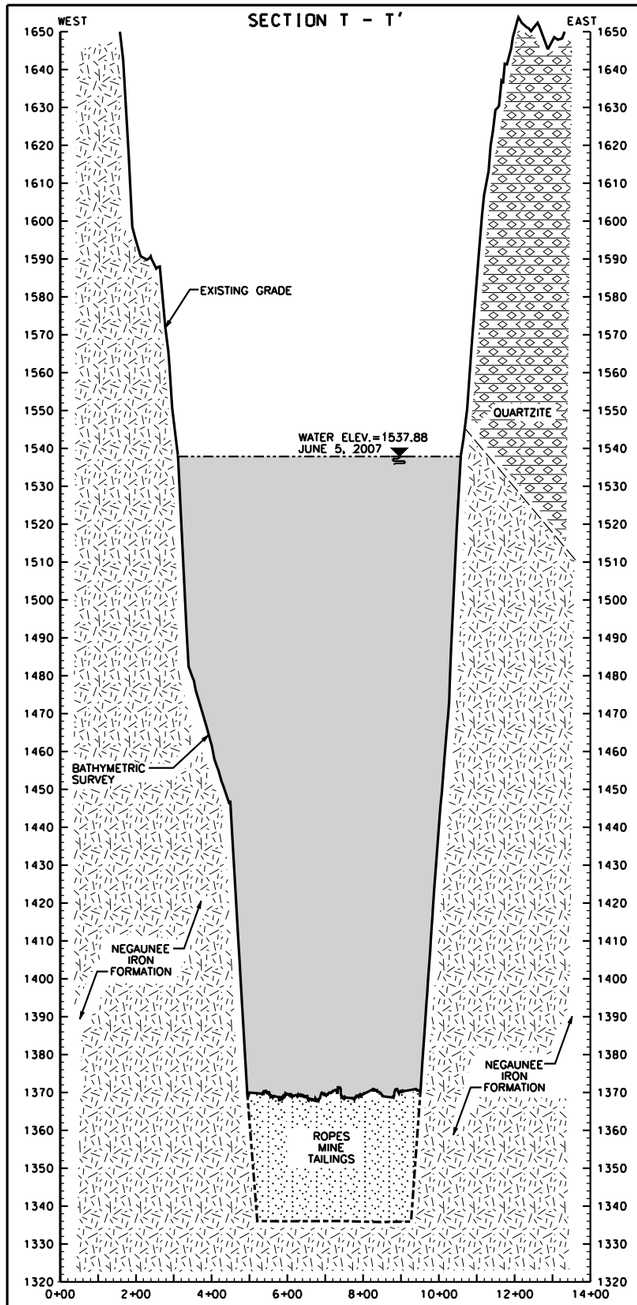
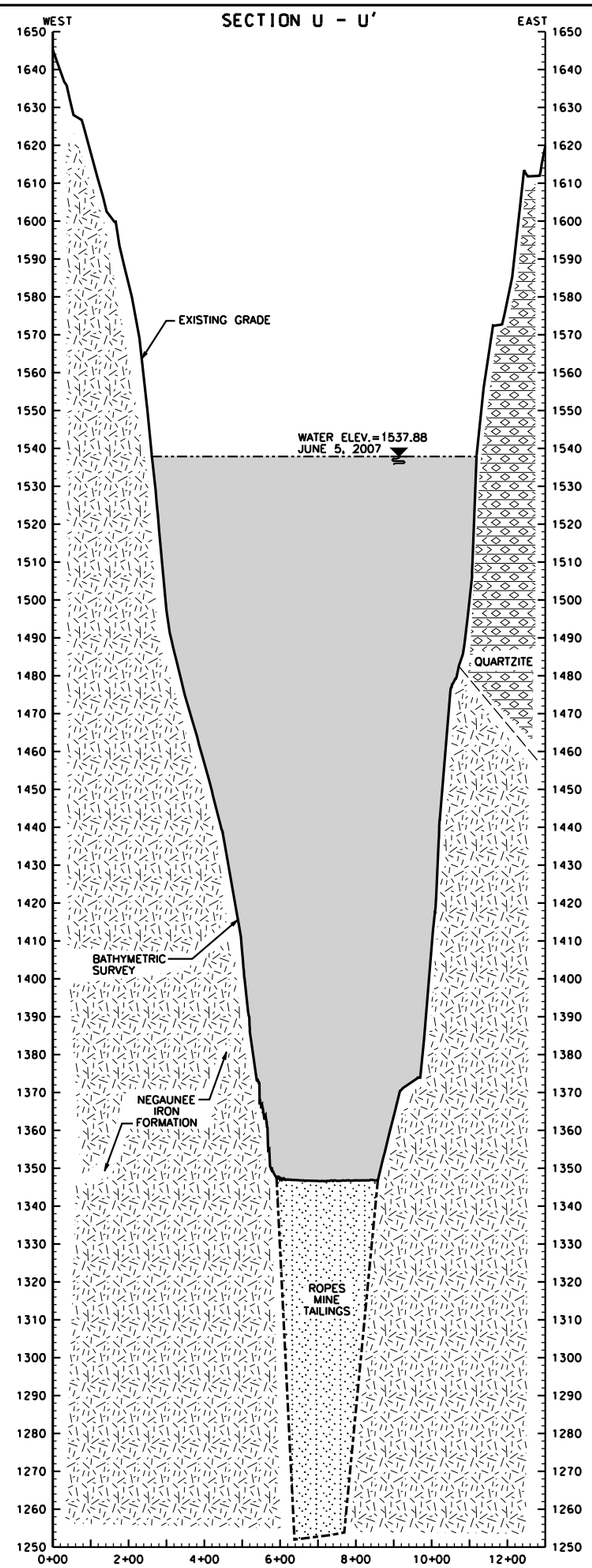
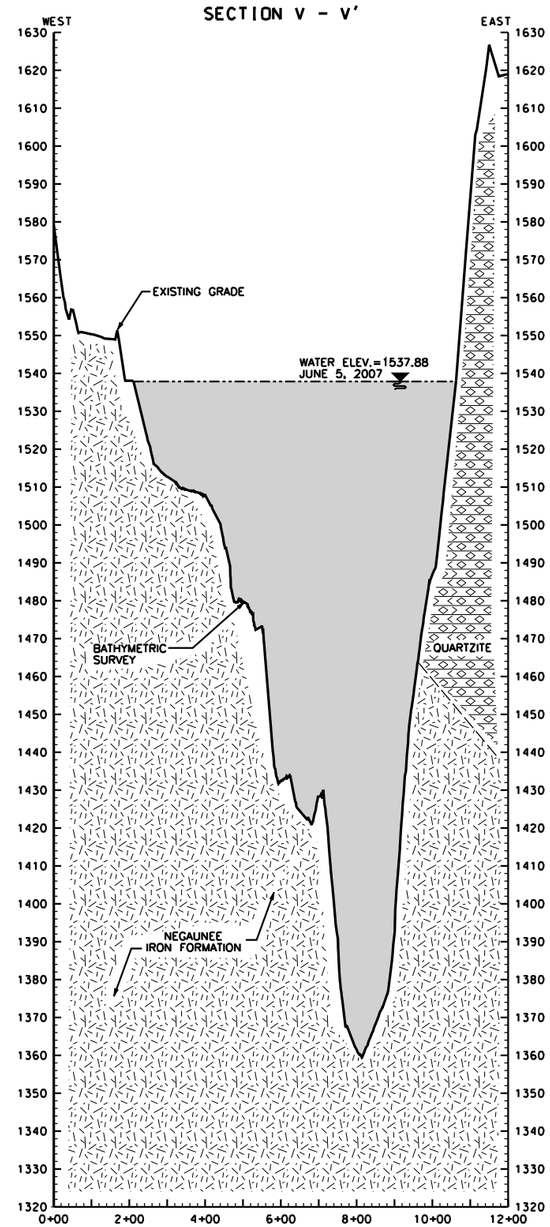
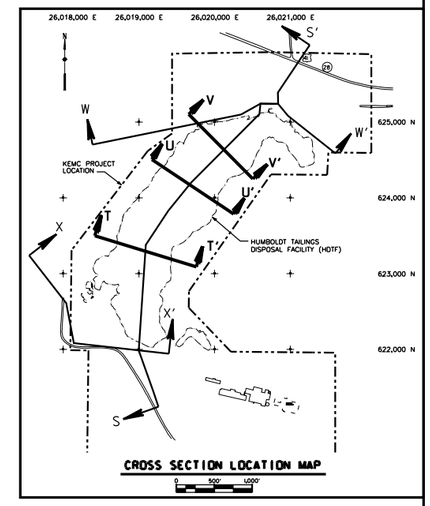
12/15/2008 bjwl



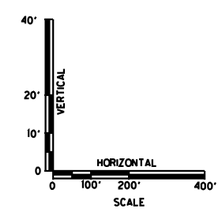






LEGEND

- F FILL — SAND, GRAVEL AND MINE WASTE ROCK
- Owf FINE-GRAINED OUTWASH DEPOSITS — GLACIAL FLUVIAL STRATIFIED SAND AND SILT
- Owc COARSE-GRAINED OUTWASH DEPOSITS — GLACIAL FLUVIAL STRATIFIED SAND, GRAVEL, COBBLES AND BOULDERS
- P PEAT
- T IRON ORE TAILINGS
- IC ICE-CONTACT DEPOSITS — ABLATION TILL, FLOW TILL, GLACIO-FLUVIAL SILT, CLAY AND SAND
- PCu UNDIFFERENTIATED BEDROCK — LOWER PROTEROZOIC METASEDIMENTS AND INTRUSIVE ROCKS AND ARCHEAN GNEISS (BEDROCK)
- INFERRED GEOLOGIC CONTACT
- 1554.6 (KMW-9) WATER LEVEL ELEVATION (6/5/07)



NOTES:

1. BATHYMETRY SURVEY CONDUCTED BY FOTH IE ON MAY 1, 2007.
2. TOP ELEVATION OF EAGLE TAILINGS MAY VARY BASED UPON MOUNDING DURING PLACEMENT. TOP ELEVATION WILL NOT EXCEED 1475 MSL.

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APPROVED BY:		DATE:	

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FIGURE 3-4

CROSS SECTIONS T-T', U-U' AND V-V'

Scale:	AS SHOWN	Date:	AUGUST, 2008
Prepared By:	JOW	Project No.	06W003

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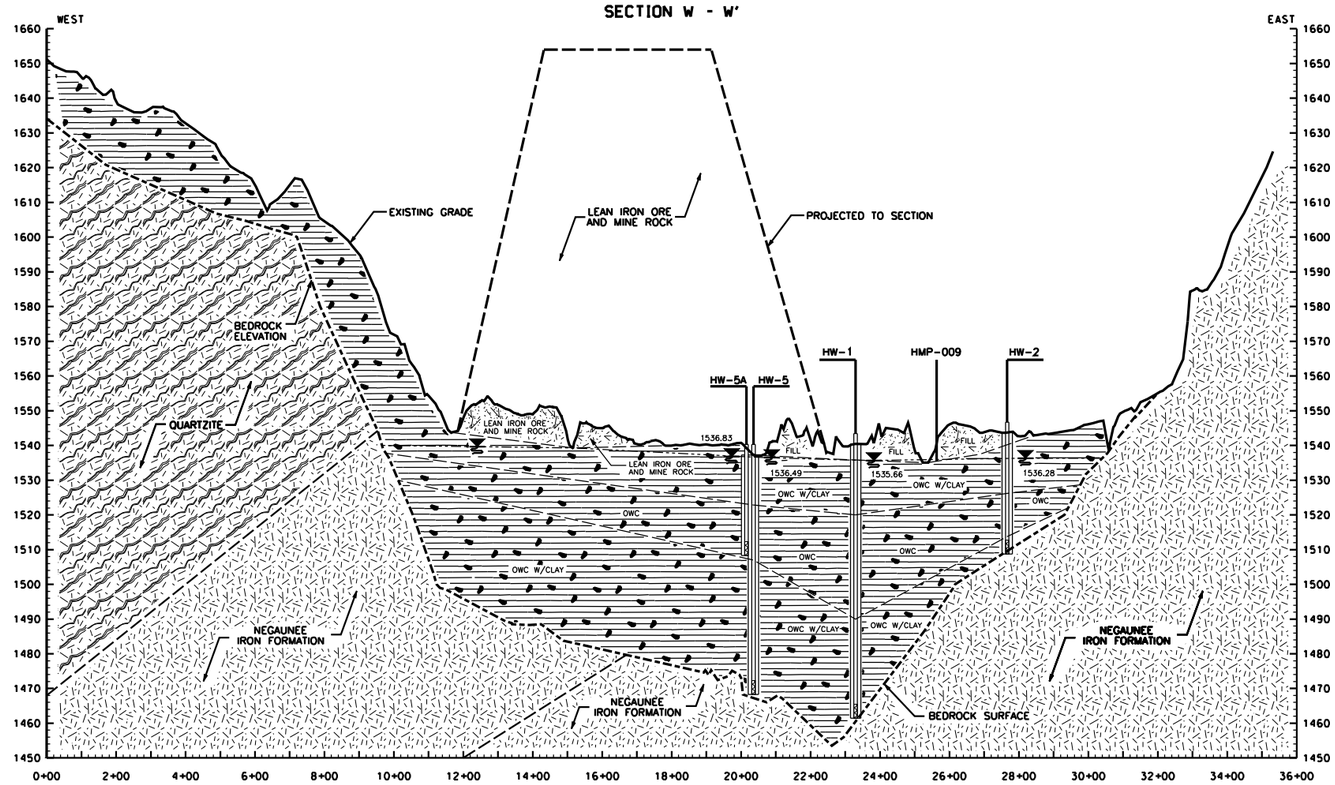
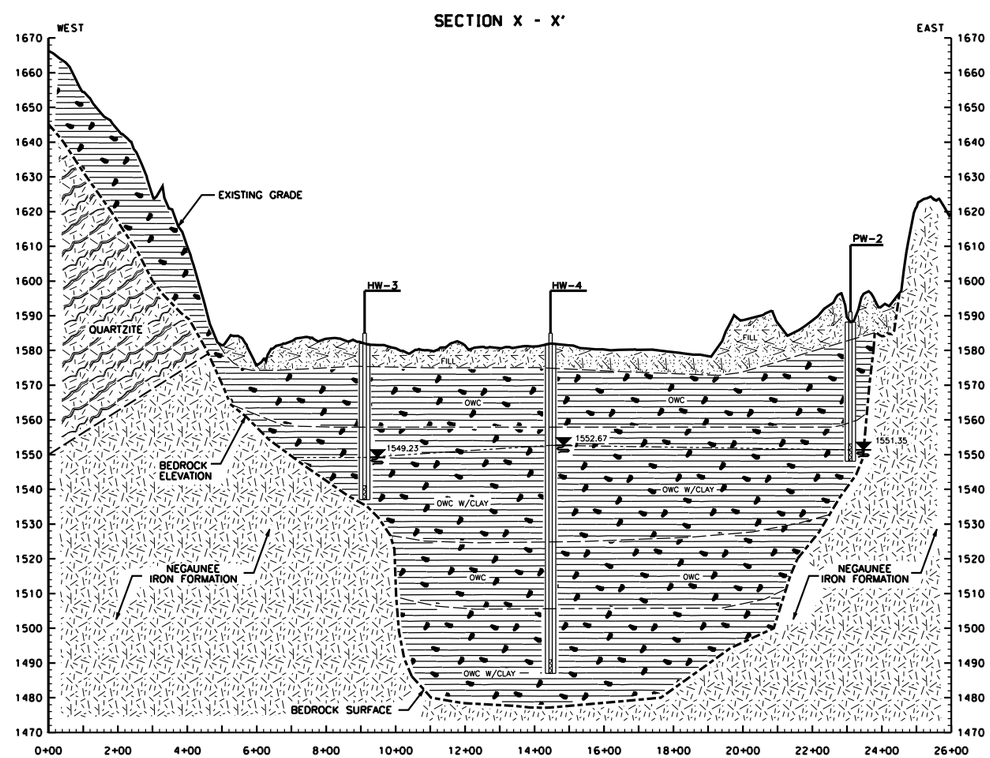
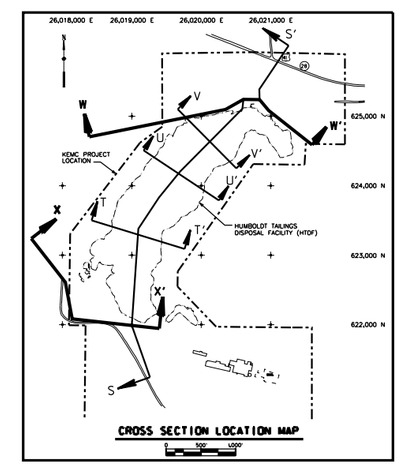
12/15/2008 bjwl





LEGEND

- F FILL — SAND, GRAVEL AND MINE WASTE ROCK
- Owf FINE-GRAINED OUTWASH DEPOSITS — GLACIAL FLUVIAL STRATIFIED SAND AND SILT
- Owc COARSE-GRAINED OUTWASH DEPOSITS — GLACIAL FLUVIAL STRATIFIED SAND, GRAVEL, COBBLES AND BOULDERS
- P PEAT
- T IRON ORE TAILINGS
- IC ICE-CONTACT DEPOSITS — ABLATION TILL, FLOW TILL, GLACIO-FLUVIAL SILT, CLAY AND SAND
- PCu UNDIFFERENTIATED BEDROCK — LOWER PROTEROZOIC METASEDIMENTS AND INTRUSIVE ROCKS AND ARCHEAN GNEISS (BEDROCK)
- INFERRED GEOLOGIC CONTACT
- 1536.9 06MW-21 — WATER LEVEL ELEVATION (6/5/07)



Foth Infrastructure & Environment, LLC			
REVISED	DATE	BY	DESCRIPTION
CHECKED BY: JSL			DATE: AUG. '08
APPROVED BY: SVDI			DATE: AUG. '08
APPROVED BY:			DATE:

Kennecott Eagle Minerals

FIGURE 3-5

CROSS SECTIONS W-W' AND X-X'

Scale: AS SHOWN | Date: AUGUST, 2008

Prepared By: JOW | Project No. 06W003

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12/15/2008 bjwl