LIST OF TABLES

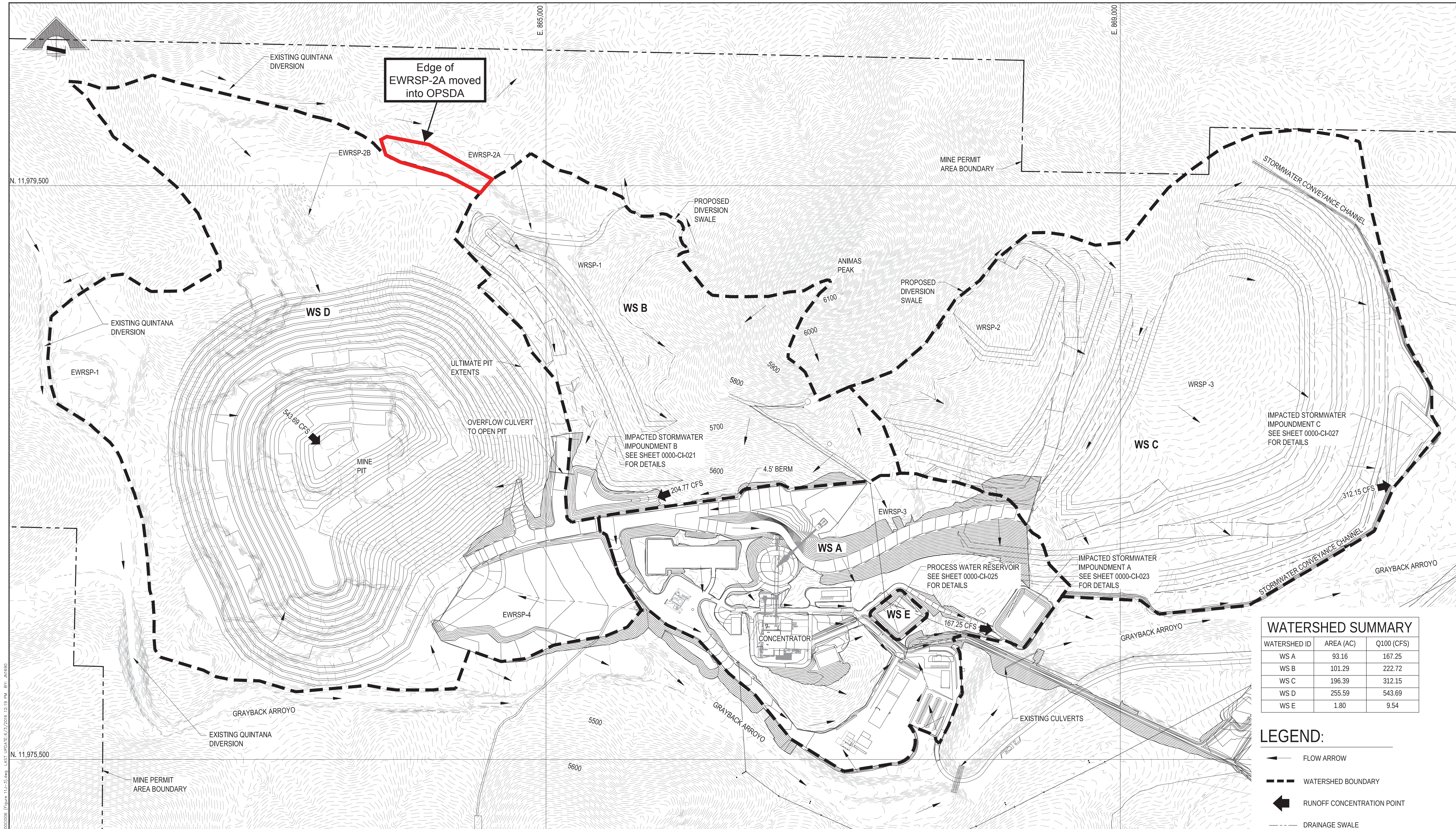
LIST OF FIGURES

20.6.7.11.J IDENTIFICATION AND PHYSICAL DESCRIPTION OF THE COPPER MINE FACILITY

An applicant shall provide the following information;

The following subsections **20.6.7.11.J.(2) through (11)** provide the information required. They describe the proposed Copper Flat mine facility in detail showing the location and features of the facility as required by the Copper Rules, including the impoundments and waste rock stockpiles, the open pit mine facility, sumps,, tanks, pipelines and wash units, stormwater management, water wells and monitoring wells, flow meters, surface waters, sampling locations, and waste treatment facility.

The infrastructure supporting the project is discussed in various places in this application. For example, under normal operating conditions electrical power is provided to the site by the Sierra Electric Cooperative, a reliable provider of residential and commercial electrical power throughout the region. However, recognizing the need to ensure that emergency power is available for critical operating systems for the protection of personnel safety, as well as protection of human health and the environment, the Copper Flat facilities will be equipped with sufficient backup power systems to provide emergency power. An on-site diesel powered generator designed to provide sufficient emergency power to the facility in the event of a power failure will be installed. All critical systems, including pumps, sumps, process areas, tailings impoundment pipelines and other areas that have dedicated process water handling equipment that must remain operational during disruption of the normal power supply, will be tied into the site emergency power grid to ensure that unauthorized discharges to ground water do not occur. The emergency generator will start automatically whenever power a disruption is detected and will be tested monthly to ensure dependable response and operation.



WATERSHED SUMMARY

WATERSHED ID	AREA (AC)	Q100 (CFS)
WS A	93.16	167.25
WS B	101.29	222.72
WS C	196.39	312.15
WS D	255.59	543.69
WS E	1.80	9.54

PLAN VIEW

SCALE: 1" = 300'

EWRSP = EXISTING WASTE ROCK STOCKPILE
WRSP = WASTE ROCK STOCKPILE

SCALE IN FEET (300 150 0 300 600)
CONTOUR INTERVAL = 5FT
DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

THEMAC RESOURCES

REFERENCES DWG. NO.	TITLE	REFERENCES DWG. NO.	TITLE
0000-CI-021	IMPACTED STORMWATER IMPOUNDMENT A PLAN VIEW		
0000-CI-023	IMPACTED STORMWATER IMPOUNDMENT B PLAN VIEW		
0000-CI-025	PROCESS WATER RESERVOIR PLAN VIEW		
0000-CI-027	IMPACTED STORMWATER IMPOUNDMENT D PLAN VIEW		

REVISIONS NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT	REVISIONS NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

SCALE: 1" = 300'		DATE
DESIGNED BY	SAM	NOV 12
DRAWN BY	SAM	NOV 12
CHECKED BY	TDL	NOV 12
PROJECT MGR	RKZ	NOV 12
CLIENT APPR.		

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COPPER FLAT PROJECT

GENERAL SITE CIVIL MINE AREA DEVELOPED WATERSHED AREAS

JOB NO. M3 PN-120085
DWG NO. **FIGURE 11J-3**
REV NO. P11 DATE 01 JUN 16

The surge pond is designed to retain tailings from the cyclone plant and other process water from the plant site not diverted directly to the tailings impoundment in the event of temporary upset conditions. Under normal operating conditions the surge pond will be empty. The surge pond is designed with a feasibility level design capacity of 1.6 million gallons, sufficient to handle the volume of upset conditions plus direct precipitation from a 100-year 24-hour precipitation event with at least 2 feet of freeboard. The design capacity conservatively assumes that an upset would occur during a maximum precipitation event and that the processing facility is running at maximum design rates. Given these assumes, the pond would reach its capacity in approximately one half hour. The pond will be equipped with dedicated pumps to automatically begin pumping materials to the TSF when the fluids in the pond reach a predetermined level. These pumps will be tied into the site's emergency power grid described earlier herein. The process control room will be equipped with emergency alarms that notify the operator of an upset condition allowing the operator to make necessary adjustments in the process, as needed. Section 7.4 of Appendix A describes the management of flows in more detail.

Methods proposed to prevent pollution of groundwater

The primary method to prevent pollution of groundwater at the tailings impoundment, the surge pond, the TSF underdrain collection pond and the process water reservoir will be through the use of engineered systems to control and manage water. These systems include the use of liners, installation of a tailings dam and impoundment underdrain system, where appropriate, installation of a leak collection system, and construction of appropriate run-off and run-on control structures. Storm water will be diverted away from and around these facilities to the maximum extent possible to minimize the potential for contact of storm water with materials that have the potential to impact ground water. Run-on to these facilities will be minimized to the maximum extent possible so as to reduce the volume of water that enters these facilities, thus mitigating the potential for impact to groundwater.

The tailings dam and impoundment will be constructed with underdrain systems that will collect water from the dam and the impoundment and capture it in the underdrain collection pond. The tailings impoundment will be lined with an 80 mil HDPE geomembrane, or equivalent, material.

The underdrain collection pond will be double-lined with a 60 mil HDPE geomembranes, or equivalent, and be equipped with a leak collection system to protect groundwater. In addition, the water in the pond will be continually evacuated from collection pond to the process water reservoir where it will be recycled into the process circuit.

Storm water that falls onto the down-stream face of the tailings dam will be captured in run-off control ditches. The ditches will be constructed at the outside toe of the dam and routed to the underdrain collection pond.

The surge pond will also be lined with a 60 mil HDPE geomembrane, or equivalent, to protect groundwater.

Ore is an economic term. That is, mineralized material only becomes ore when it can be economically processed to extract the commodity to sell at a profit. As such, the proposed new waste rock stockpiles, i.e., material not deemed to be ore by NMCC, will be constructed as units segregated by the grade of copper contained in the waste rock material so as to maximize its potential to be processed as ore in the future. New proposed Waste Rock Stockpile no. 1 (WRSP 1) will contain the highest non-ore grade material. New proposed Waste Rock Stockpile no. 2 (WRSP 2) will contain the next highest non-grade material. New proposed Waste Rock Stockpile no. 3 (WRSP 3) will contain all the remaining material.

The proposed waste rock stockpiles will be built generally to a configuration of 3 horizontal to 1 vertical slope angles (18.4 degrees). This configuration will help facilitate reclamation at the end of the mine life as provided for in Section **20.6.7.33.C.(3)**. Each lift within the stockpile will be maximally 75 ft. high and be placed at angle of repose (35.54 degrees) with 120 ft. setbacks left between lifts to maintain the 3 to 1 overall angle for the stockpile. Surface water run-off collection trenches will be constructed, as needed, to collect and route run-off and/or flowing seeps from the proposed stockpiles to the storm water impoundments describe above. These trenches will be constructed in a manner to maximizing positive flow while minimizing the potential for ponding and erosion.

As shown in Figure 11J-2, there are also four existing waste rock stockpiles from previous operations at the site. They are;

- EWRSP-1 located at the western end of the site within the open pit surface drainage area. EWRSP-1 is identified in previous reports as the “existing west waste rock disposal facility” (WRDF);
- EWRSP-2A and 2B located at the northwest side of the site within the open pit surface drainage area. EWRSP-2A and B are identified in previous reports as the “existing north waste rock disposal facility” (WRDF);
- EWRSP-3 located next to the primary crusher. EWRSP-3 is identified in previous documents as the “low grade ore stockpile”; and
- EWRSP-4 located southeast of the mine. EWRSP-4 is identified in previous documents alternatively as the “lean ore stockpile” and the “south waste disposal facility”.

EWRSP-1 and EWRSP-2B will be reclaimed as discussed in more detail later herein in conformance with an approved MORP and Closure Plan. EWRSP-2A will be incorporated into the larger new proposed WRSP-1 constructed during operations. It will be enveloped and covered over by the new stockpile as WRSP-2 being developed over time.

EWRSP-3 is located to the east of the primary crusher as shown on Figure 11J-2. Some of this material will be fed into the processing circuit in the early stages of process operations to “condition” the circuit. “Conditioning” refers to the process of feeding new equipment, first with water, followed by some waste rock and then to “line” the new machinery and prepare it for full operations. The material at EWRSP-3 may also be blended over time into the process if economic conditions warrant. The area containing EWRSP-3 will be the staging or holding area for rock that is too large to be fed directly into the crusher that has to be broken down with a pneumatic hammer.

EWRSP-4 will be graded and re-contoured as discussed later herein to direct surface water flow to the mine pit. The southern edge of the stockpile will be reclaimed in conformance with the approved MORP and Closure Plan during operations to protect against potential surface water impacts to Grayback Arroyo from the EWRSP. The graded and contoured area will be utilized during operations as an additional equipment storage and lay-down area and will be reclaimed at the end of the mine life in accordance with the reclamation and closure plan.

This section, together with section **20.6.7.11.N.(1), Engineering, Design, Construction and Surveying, Waste Rock Stockpiles, 20.6.7.11.O, Material Characterization and Material Handling Plan, and 20.6.7.11.P, Hydrologic Conceptual Model,** of NMCC's Discharge Permit application, contain the design plans for the proposed new waste rock stockpiles (WRSPs) located outside the open pit surface drainage area pursuant to **20.6.7.21.B.(1).(d).** The proposed areal extent and configuration of these new proposed WRSPs and the topography of the site where they will be located is shown in Figures 11J-4 through 11J-15. The geology of the site is described in detail later in this application in section **20.6.7.11.K, Soils, Geology and Hydrology.**

Figures 11J-4 through 11J-15 show the design and construction sequencing for the mine pit and the new proposed WRSPs beginning at the preproduction stage through the life of the mine. Their design and configuration is based on consideration of site-specific conditions as discussed in more detail below and in the sections of the application cited above. For example, the material characterization work performed by NMCC as described in section **20.6.7.11.O** that follows provides the basis for controlling surface run-off and seepage from the stockpiles using run-off collection trenches to capture it and routing it to impacted surface water impoundments. Similarly, the information presented in sections **20.6.7.11.K and P** regarding site geology and hydrology conditions provides the basis for placing the waste rock stockpiles over low permeability andesite bedrock.

Section **20.6.7.11.J.(6)** of this application provides a discussion and analysis of the storm water diversion structures present at the site that will minimize the contact between storm water run-on and the waste rock material.

Location
The location of the existing and proposed new waste rock stockpiles is shown in Figure 11J-1 provided herein in response to **20.6.7.11.J.(1)** and Figures 11J-2 and 3. Figures 11J-4 through 15 provide additional design detail of how the proposed new WRSP's will be constructed over time.

- Proposed WRSP 1 will be located along the western edge of developed watershed (WS) B;
- Proposed new WRSP 2 will be located in the western third of developed WS C;
- Proposed new WRSP 3 will be located in the remainder of developed WS C;
- EWRSP-1 is located at the western end of the site within the open pit surface drainage area. EWRSP-1 is identified in previous reports as the "existing west waste rock disposal facility (WRDF)" ;
- EWRSP-2A and 2B are located at the northwest side of the site within the open pit surface drainage area. EWRSP-2A and B are identified in previous reports as the "existing north waste rock disposal facility" (WRDF);
- EWRSP-3 is located next to the primary crusher in WS A. EWRSP-3 identified in previous documents as the low grade ore stockpile; and
- EWRSP-4 located southeast of the mine pit. EWSRP-4 is identified in previous documents alternatively as the "lean ore stockpile" and the south waste disposal facility.

Purpose
The purpose of the waste rock stockpiles is to store the all of material excavated from the mine that is not ore or clean topsoil, i.e., growth media, in conformance with the definition of "waste rock" in **20.6.7.7.B.(65)**.

Liner material
The proposed new stockpiles will be constructed over andesite bedrock, a very low permeability formation that provides a natural liner protective of groundwater. Andesite at the site has a permeability of less than 10^{-6} centimeters per second (cm/sec) (SRK, May 2013). Alluvial fans may exist, such as may be the case underlying a portion of proposed WRSP-3, as indicated in the New Mexico Bureau of Geology Draft Open-File Map 242 (Jochems, et al., 2014). The stormwater collection channels constructed along the toe of the new proposed stockpiles will also serve as collection galleries for potential seepage that may occur along the interface between the alluvial material and the andesite. Alluvial materials that may exist along the toe of the stockpiles will be removed and the collection channels constructed into the andesite. The channels will follow the land surface contours for positive drainage to the lined impacted stormwater impoundments. NMCC also proposes monitoring wells directly down-gradient of the channels in the drainages as discussed in Appendix E of the Discharge Plan application to monitor for any potential discharges.

Draft Open-file Map 242 indicates fan deposits (Qaf1 and Qaf2) exist in the area of proposed WRSP-3 at an estimated maximal thickness of approximately 3 to 4 meters. However, there are no drill data or measured sections to support these estimates. As such, a field reconnaissance was performed by JSAI on May 25, 2016 to correlate the information mapped in Draft Open-file

Map 242 and site conditions. JSAI concluded, based on visual observation, that the thickness of the alluvial cover in that area is a minimal thin veneer overlying the andesite, not a wedge-shaped mass of alluvium thickening towards Grayback Arroyo as might be assumed from simply interpreting the map. Looking at the location of proposed WRSP-3 from the entrance road along the south side of Grayback Arroyo to the north toward the location, JSAI observed outcrops of andesite visible on the north side of Grayback Arroyo that were not mapped by Jochems et al (2014). Exposure of andesite was also seen in a small drainage channel near or at the toe of the proposed WRSP-3, also not mapped by Jochems et al. (2014). These observed andesite outcrops in the area of mapped units Qaf1 and Qaf2 (Jochems et al., 2014) indicate that the alluvial fans are much thinner than the map tends to indicate.

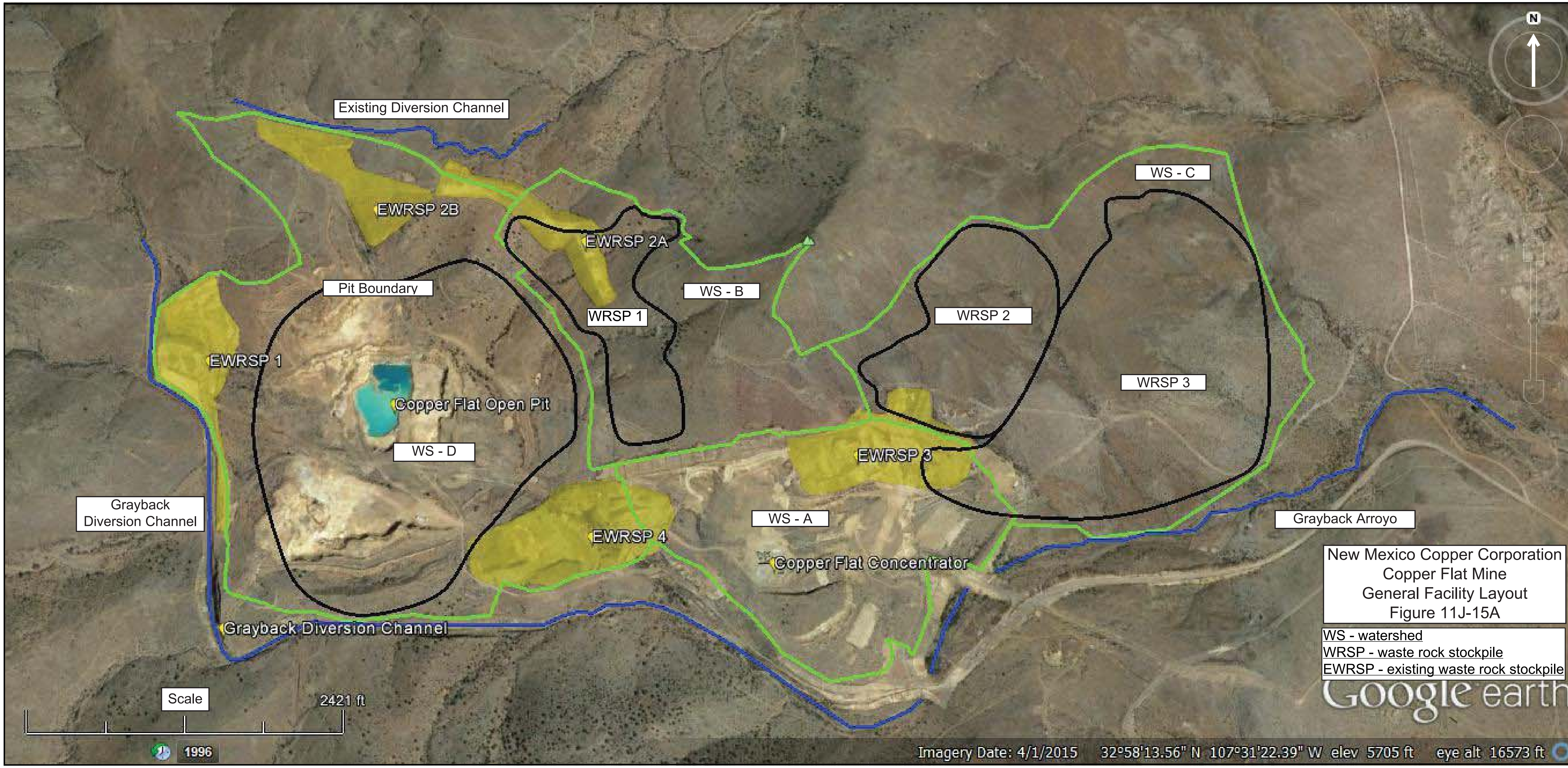
SRK Consulting (U.S.), Inc. conducted a mine waste characterization program for the Copper Flat project. SRK's waste characterization investigations were undertaken in the midst of formulation of the Copper Rules and the report was submitted in advance of their promulgation in December 2013. Nonetheless, every effort was made to conduct the investigation in a manner consistent with Section **20.6.7.21.A.(1).(a), (b), (c) and (d)** of the Copper Rules. Further, the results of the testing demonstrated that the waste rock produced at Copper Flat will not be acid generating or generate a leachate containing water contaminants. The results of SRK's investigations have been previously presented to interval precipitation event with a minimum 2 ft. of freeboard. The water captured will be retained in the impoundments less than thirty days and transported to the process water reservoir for use in the process circuit. As described above, the process water reservoir will be double-lined and equipped with a leak collection and recovery system.

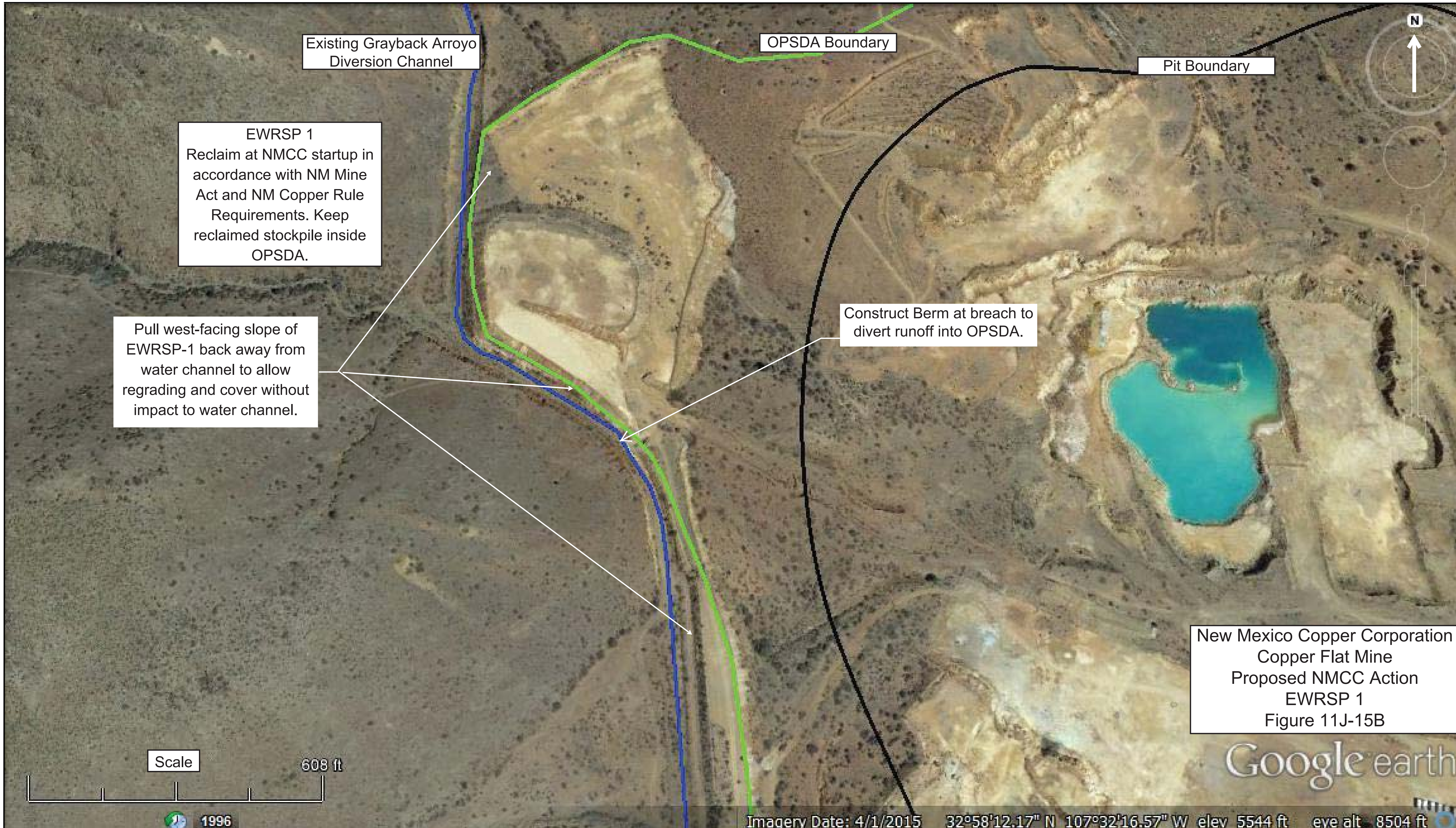
NMCC recognizes NMED's concerns regarding the existing waste rock stockpiles (EWRSPs) at the site. Section **20.6.7.21.C.(2)** allows the existing stockpiles to continue to "operate" as previously permitted. Figures 11J-3 and 11J-15A show that EWRSP-1, EWRSP-2A and EWRSP-2B are located within the open pit surface drainage area (OPSDA). The mine pit acts as a natural drainage sink for surface and ground water at this location. EWRSP-3 is located at the north end of developed watershed A (WS A) within the plant site. EWRSP-4 is located southeast of the mine pit. NMCC proposes the following plan to address how each of the existing waste rock stockpiles will be managed during operations. The details of the plan will be described in the pending MORP submittal and are generally discuss herein. NMCC will conduct some interim maintenance and reclamation at these locations to ensure that all surface water drainage at the EWRSP's is appropriately managed.

EWRSP-1 and EWRSP-2B will be reclaimed during the operations phase of the project. This will allow NMCC to establish test-plots to test a variety of vegetation scenarios, thus aiding NMCC in determining successful reclamation and revegetation alternatives to implement at closure. At EWRSP-1, as shown in Figure 11J-15B, a berm will be constructed immediately downstream of the location of the breach that currently exists to divert surface water drainage back into the OPSDA so that it no longer enters Grayback Arroyo. This work is scheduled to be performed in the summer of 2016. In addition, during operations, NMCC will reclaim EWRSP-1 as described in the approved MORP to ensure that all surface run-off reports to the open pit and away from the arroyo drainage. At EWRSP-2B, as shown in Figure 11J-15C, the wastes will be re-graded and reclaimed during operations in accordance with the approved MORP.

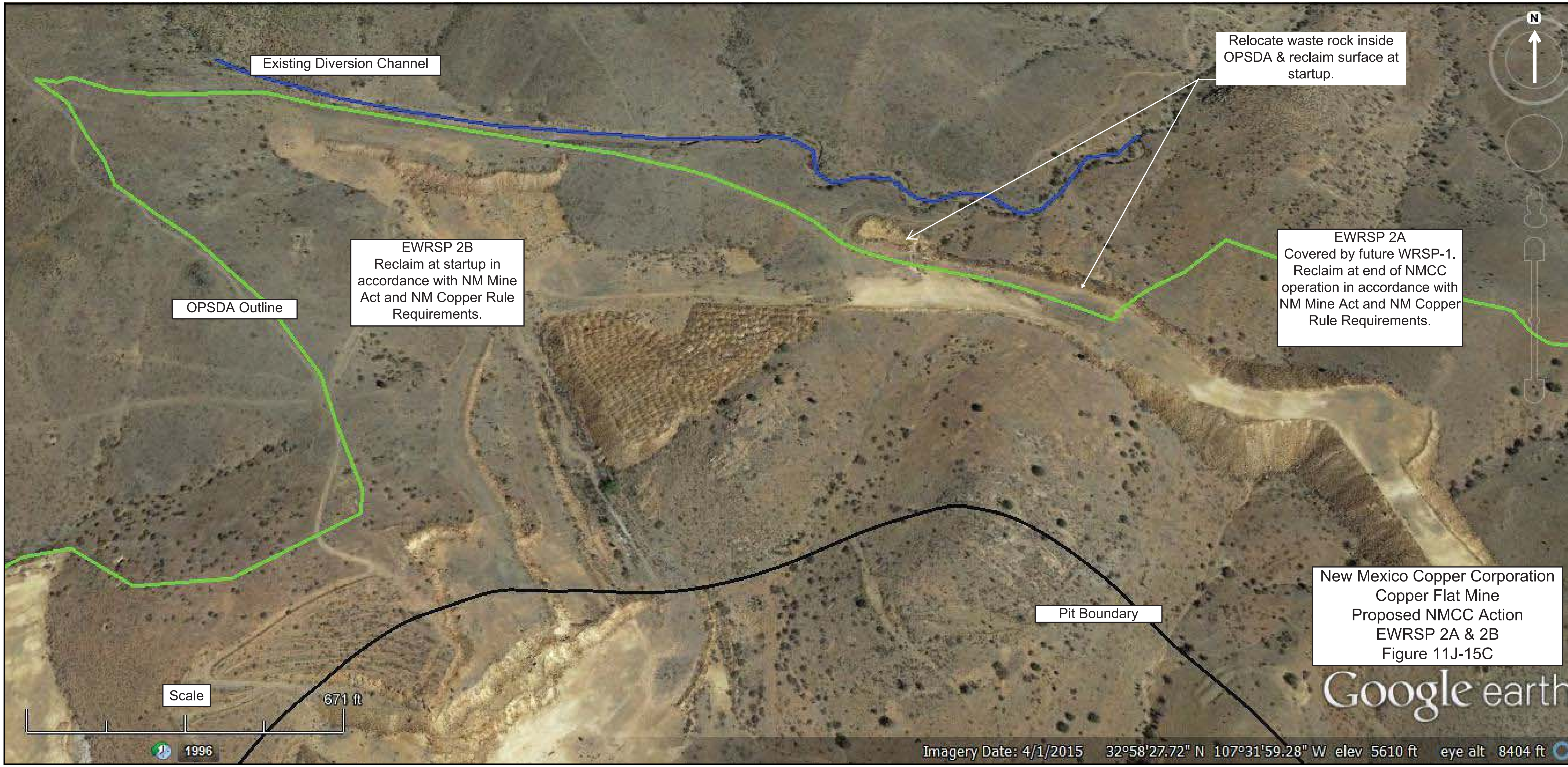
At EWRSP-2A, a small amount of waste at the northernmost edge of the stockpile may be just outside of the OPSDA as is shown on Figure 11J-15C. NMCC will remove and redeposit any such waste onto the portion of EWRSP-2A that is located within the OPSDA. This will performed during the site construction and site preparation phase of the project prior to the commencement of construction of Waste Rock Stockpile 1 (WRSP-1). As shown Figures 11J-4 through 15, EWRSP-2B will be covered over time with the waste rock deposited in WRSP-1 during operations and will simply become part of WRSP-1 over the life of the mine.

NMCC has chosen to manage surface water runoff from the eastern one-third of the OPSDA by developing a sub-watershed, i.e. developed WS B (see Figure 11J-3). The purpose of this sub-watershed is to manage runoff from proposed new waste rock stockpile WRSP-1 to be constructed within the watershed. Impacted storm water impoundment B will be constructed at the southwest corner of developed WS B as a surface water runoff control measure to manage surface water inflow to the mine pit. The captured surface water runoff will be utilized as process make-up water.


Existing Diversion Channel
EWRSP 2B
EWRSP 2A
WS - C
Pit Boundary
WS - B
WRSP 1
WRSP 2
EWRSP 1
WRSP 3
Copper Flat Open Pit
WS - D
EWRSP 3
Grayback
Diversion Channel
WS - A
Grayback Arroyo
EWRSP 4
Copper Flat Concentrator
New Mexico Copper Corporation
Copper Flat Mine
General Facility Layout
Figure 11J-15A
Grayback Diversion Channel
WS - watershed
WRSP - waste rock stockpile
EWRSP - existing waste rock stockpile
Scale
2421 ft
1996
Imagery Date: 4/1/2015 32°58'13.56" N 107°31'22.39" W elev 5705 ft eye alt 16573 ft



Existing Grayback Arroyo Diversion Channel
OPSDA Boundary
Pit Boundary
N
EWRSP 1
Reclaim at NMCC startup in accordance with NM Mine Act and NM Copper Rule Requirements. Keep reclaimed stockpile inside OPSDA.
Pull west-facing slope of EWRSP-1 back away from water channel to allow regrading and cover without impact to water channel.
Construct Berm at breach to divert runoff into OPSDA.
New Mexico Copper Corporation
Copper Flat Mine
Proposed NMCC Action
EWRSP 1
Figure 11J-15B
Scale
608 ft
1996
Imagery Date: 4/1/2015 32°58'12.17" N 107°32'16.57" W elev 5544 ft eye alt 8504 ft
Google earth



Existing Diversion Channel
Relocate waste rock inside OPSDA & reclaim surface at startup.
EWRSP 2B
Reclaim at startup in accordance with NM Mine Act and NM Copper Rule Requirements.
OPSDA Outline
EWRSP 2A
Covered by future WRSP-1.
Reclaim at end of NMCC operation in accordance with NM Mine Act and NM Copper Rule Requirements.
Pit Boundary
New Mexico Copper Corporation
Copper Flat Mine
Proposed NMCC Action
EWRSP 2A & 2B
Figure 11J-15C
Scale
671 ft
1996
Imagery Date: 4/1/2015 32°58'27.72" N 107°31'59.28" W elev 5610 ft eye alt 8404 ft
Google earth
N

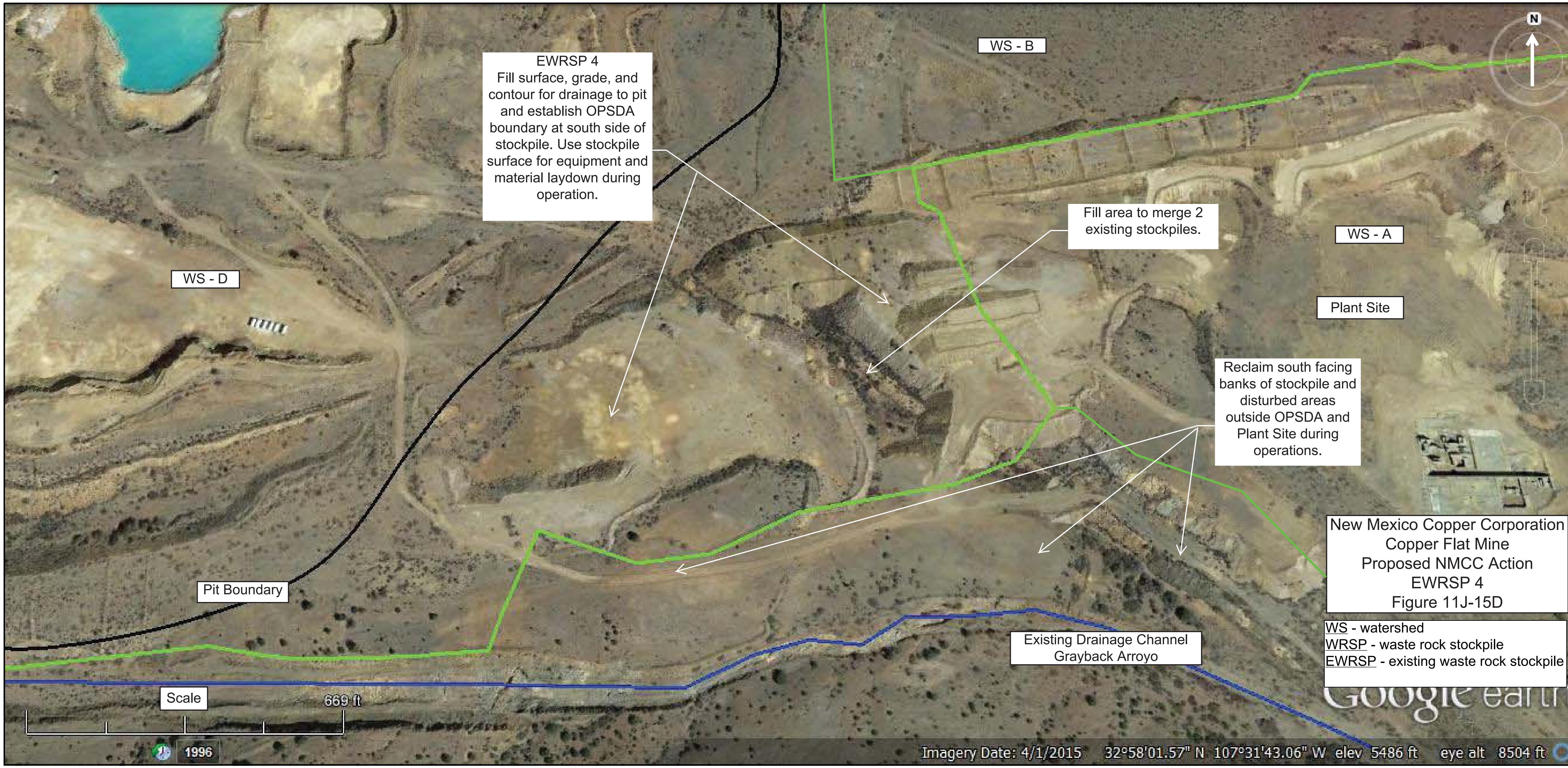
EWRS-3 represents the last vestiges of ore and low grade materials left from the Quintana operation at shut-down. As discussed earlier herein, early in NMCC's operation some of this material will be processed through the new processing equipment as a circuit "conditioning" activity. During subsequent operations some of this waste rock stockpile may also be blended with run-of-mine ore and fed into the process if economic conditions warrant. The EWRSP-3 area is part of the processing site (see Figure 11J-3 and 11J-15A). During operations it will be utilized as the area of temporary storage of run-of-mine ore transported from the pit not immediately fed into the primary crusher. During operations storm water runoff from this area will be captured in impacted storm water impoundment A.

EWRSP-4 will be re-graded and contoured during the site preparation and construction phase of the project for use as an equipment storage and laydown area during operations as shown in Figure 11J-15D. Impacted stormwater runoff from the area will be managed by grading the surface such that runoff from the area will be routed into the open pit away from Grayback Arroyo. The southern face of the stockpile will be reclaimed to protect against potential surface water impacts to Grayback Arroyo. The remainder of the area will be reclaimed at the end of operations. Details of reclamation will be provided in the revised Mine Operation and Reclamation Plan (MORP) to be submitted later this year.

The cost of reclamation of all the existing waste stockpiles will be included in the financial surety calculations provided in the MORP. At the end of the life of the mine, the Copper Flat facility will be reclaimed in accordance with the approved reclamation plan/closure plan. All of the waste rock stockpiles will be reclaimed by contouring and grading the piles to prevent run-on, control run-off and minimize infiltration of precipitation. Three feet of soil cover will be placed over the stockpiles and out-slopes. The cover will promote evapotranspiration, further reduce infiltration and facilitate re-vegetation. NMCC believes that the steps described above contribute significantly to protection of groundwater.

VI. 20.6.7.11J.(2) DESCRIPTION OF PROPOSED SLAG

New Mexico Copper does not propose to produce slag at the Copper Flat project inasmuch as the proposed facility does not include a smelter.


EWRSP 4
Fill surface, grade, and contour for drainage to pit and establish OPSDA boundary at south side of stockpile. Use stockpile surface for equipment and material laydown during operation.
WS - B
WS - A
WS - D
Fill area to merge 2 existing stockpiles.
Plant Site
Reclaim south facing banks of stockpile and disturbed areas outside OPSDA and Plant Site during operations.
New Mexico Copper Corporation
Copper Flat Mine
Proposed NMCC Action
EWRSP 4
Figure 11J-15D
WS - watershed
WRSP - waste rock stockpile
EWRSP - existing waste rock stockpile
Pit Boundary
Existing Drainage Channel
Grayback Arroyo
Scale
669 ft
1996
Imagery Date: 4/1/2015 32°58'01.57" N 107°31'43.06" W elev 5486 ft eye alt 8504 ft
N

Pit dewatering

Dewatering of the mine pit and the pit lake will be necessary prior to mining and continuously throughout the life of the mine. The water contained in the pit lake prior to operations will be used for dust control during construction and operations. NMCC understands that use of the water produced from the mine pit must meet NMCC water quality standards if it is to be used for dust control purposes at locations outside of the OPSDA. NMCC will utilize all of the water produced from the open pit during operations for dust suppression on the haul roads, working areas, and waste rock stockpiles only within the OPSDA. NMCC will also utilize excess water from the OPSDA as an additional source of process water whenever possible. NMCC will utilize water produced from the mine pit for dust suppression outside of the OPSDA only if the quality of water meets limits placed on the discharge permit.

NMCC anticipates that during operations, groundwater will continue to seep into the pit at an annual average rate of approximately 24 gpm (39 AFY). In addition, storm water runoff will contribute an average of approximately 68 AFY to the pit. Water removal from the pit will continue over the operational life of the mine through a sump or series of sumps located within the pit. Water removal will end once mining of the pit is completed.

20.6.7.11.J.(5) *a description of existing or proposed sumps, tanks, pipelines and truck and equipment wash units, including information for each unit regarding its location, purpose, construction material, dimensions and capacity; for portable tanks or pipelines or those subject to periodic relocation, identify the areas within which they may be used;*

Figures 11J-20A and 11J-20B are scaled maps that display the location of proposed pipelines. Table11J-5 provides information describing the location of each pipeline and providing information regarding the purpose, construction materials, dimension and capacity of each pipeline. This information supplements the Process Facility Containment Report prepared by M3 that provides the sump, tank, pipeline and truck and equipment wash unit information requested. The report is included in this DP application as Appendix C. The purpose of this report is, in part, to identify and describe the proposed sumps, tanks, pipelines and truck and wash units, including their purpose, construction material, dimensions and capacity. This report also provides information regarding the form and design of the containment structures that will be incorporated into the process to contain and manage materials containing water contaminants that have the potential to migrate to groundwater and cause and exceedance of applicable groundwater standards and meet the requirements of **20.6.7.22**, **23 and 26 NMAC**.

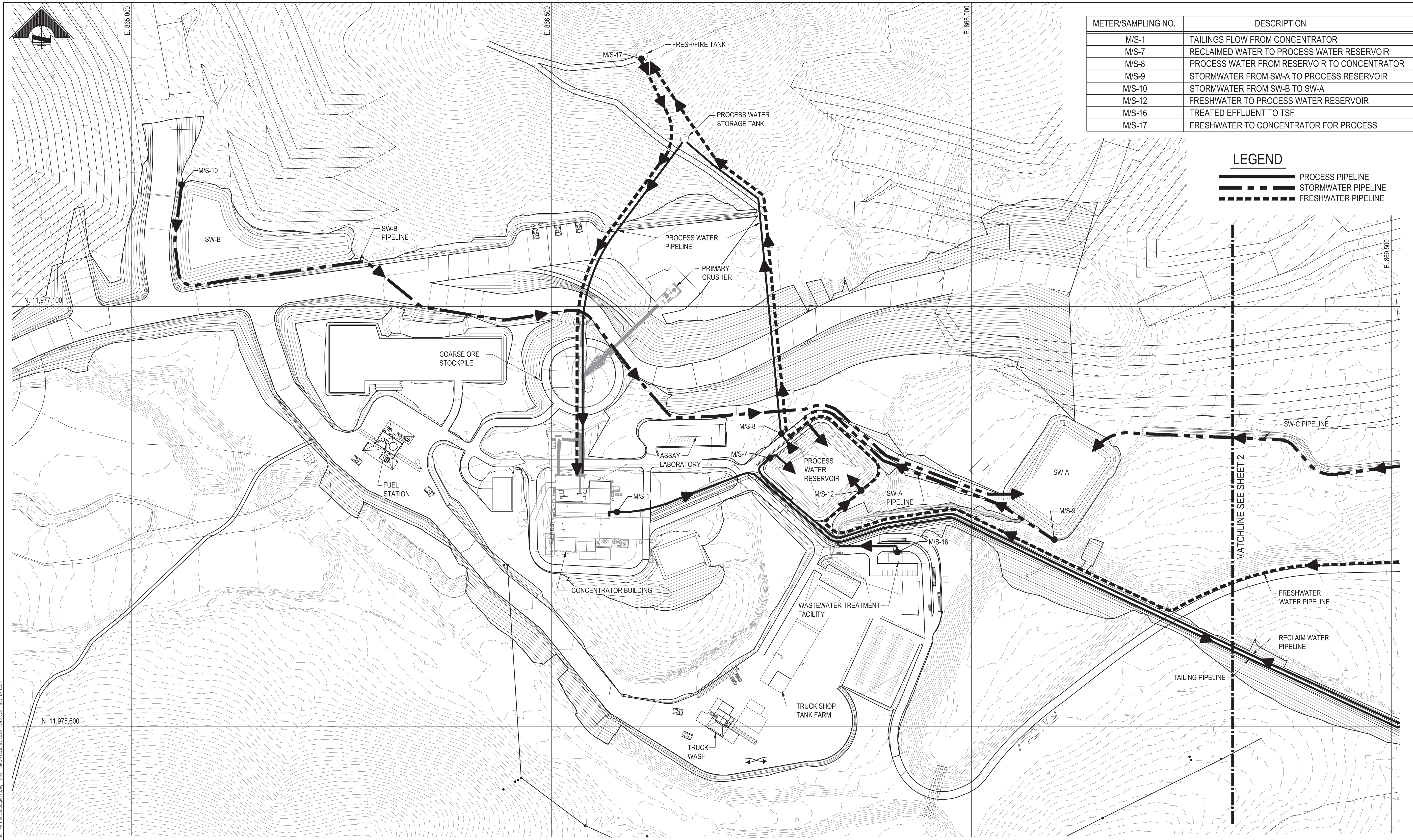
Drawing no. 0000-CI-008 in Appendix C is a scaled map of the location of the various process facility containment areas. Drawing no. 0000-GA-050 is a scaled map of the concentrator area identifying the containment arrangement for all of the process tanks, including the locations of the sumps and tanks. Drawing no. 1010-AR-012 is a scaled map of the truck shop tank farm showing the location of the tanks and sump. Drawing no. 1010-GA-010 is a scaled map of the fuel station showing the location of the tanks and sumps. Drawing no. 1010-GA-001 is a scaled drawing showing the location of the Truck Wash and its sumps or settling tanks.

With respect to the requirements of **20.6.7.23.C.(6)** for a pipeline evaluation plan for existing pipelines, NMCC will not be utilizing any existing pipelines at the Copper Flat mine with the exception of the freshwater pipeline providing water from the off-site well field. As such not pipeline evaluation plan is necessary.

METER/SAMPLING NO.	DESCRIPTION
M/S-1	TAILINGS FLOW FROM CONCENTRATOR
M/S-7	RECLAIMED WATER TO PROCESS WATER RESERVOIR
M/S-8	PROCESS WATER FROM RESERVOIR TO CONCENTRATOR
M/S-9	STORMWATER FROM SW-A TO PROCESS RESERVOIR
M/S-10	STORMWATER FROM SW-B TO SW-A
M/S-12	FRESHWATER TO PROCESS WATER RESERVOIR
M/S-16	TREATED EFFLUENT TO TSF
M/S-17	FRESHWATER TO CONCENTRATOR FOR PROCESS

LEGEND

- PROCESS PIPELINE
- STORMWATER PIPELINE
- FRESHWATER PIPELINE



SITE PLAN

150 75 0 150 300
SCALE IN FEET
DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

THEMAC RESOURCES

REFERENCES		REFERENCES		REVISIONS						REVISIONS					
DWG. NO.	TITLE	DWG. NO.	TITLE	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

SCALE: 1"= 150'		DATE
DESIGNED BY	SAM	FEB 13
DRAWN BY	SAM	FEB 13
CHECKED BY	TDL	FEB 13
PROJECT MGR	RKZ	FEB 13
CLIENT APPR.		

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COPPER FLAT PROJECT

SITE GENERAL
CIVIL
PIPELINES AND FLOWMETER LOCATIONS
SHEET 1

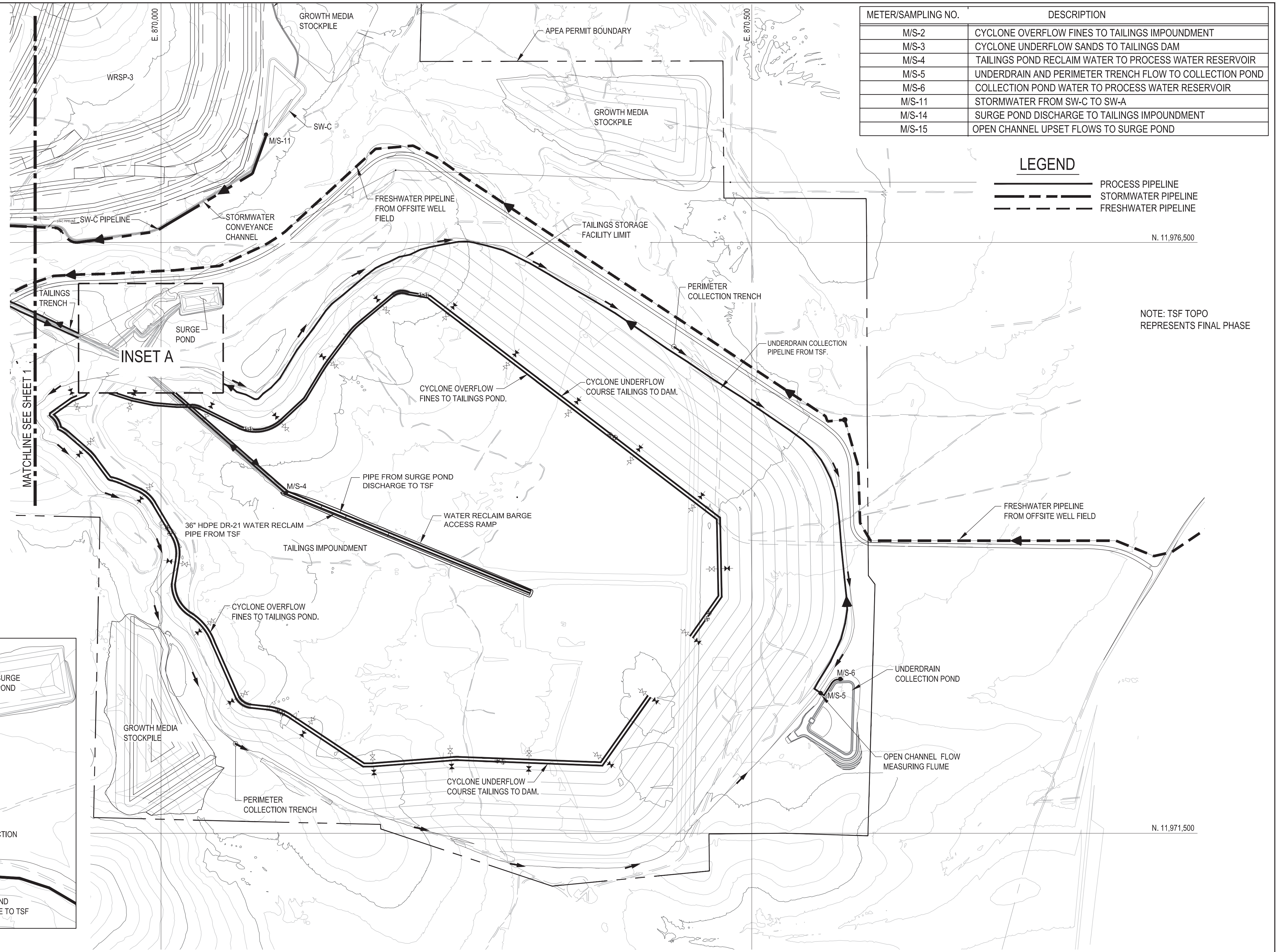
JOB NO. M3 PN-120085
DWG NO. Figure 11J-20A
REV NO. P2
DATE 09 JUN 16

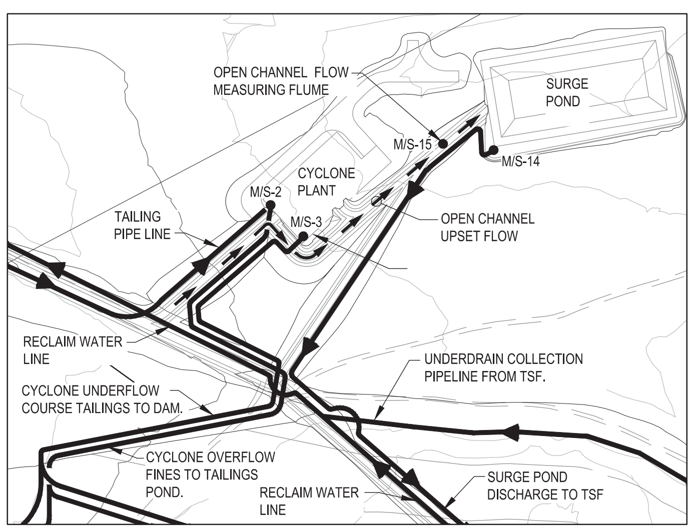
METER/SAMPLING NO.	DESCRIPTION
M/S-2	CYCLONE OVERFLOW FINES TO TAILINGS IMPOUNDMENT
M/S-3	CYCLONE UNDERFLOW SANDS TO TAILINGS DAM
M/S-4	TAILINGS POND RECLAIM WATER TO PROCESS WATER RESERVOIR
M/S-5	UNDERDRAIN AND PERIMETER TRENCH FLOW TO COLLECTION POND
M/S-6	COLLECTION POND WATER TO PROCESS WATER RESERVOIR
M/S-11	STORMWATER FROM SW-C TO SW-A
M/S-14	SURGE POND DISCHARGE TO TAILINGS IMPOUNDMENT
M/S-15	OPEN CHANNEL UPSET FLOWS TO SURGE POND

LEGEND

- PROCESS PIPELINE
- STORMWATER PIPELINE
- FRESHWATER PIPELINE

NOTE: TSF TOPO REPRESENTS FINAL PHASE





INSET A

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SITE PLAN

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SCALE IN FEET

DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

THEMAC RESOURCES

REFERENCES		REFERENCES	
DWG. NO.	TITLE	DWG. NO.	TITLE

REVISIONS						REVISIONS					
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

SCALE:	AS NOTED	DATE
DESIGNED BY	SAM	FEB 13
DRAWN BY	SAM	FEB 13
CHECKED BY	TDL	FEB 13
PROJECT MGR	RKZ	FEB 13
CLIENT APPR.		

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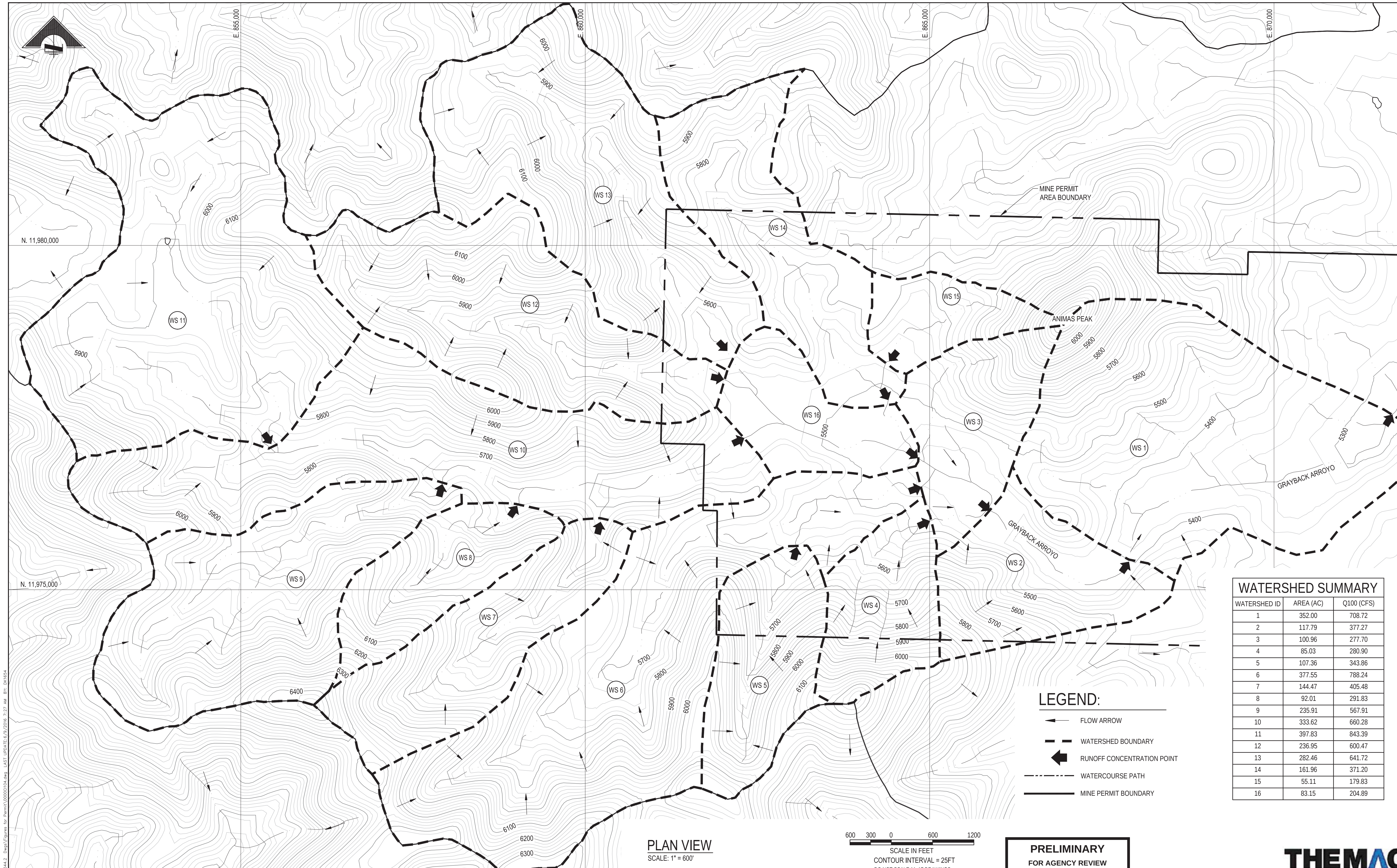
COPPER FLAT PROJECT

SITE GENERAL
CIVIL
PIPELINES AND FLOWMETER LOCATIONS
SHEET 2

JOB NO. M3 PN-120085
DWG NO. **Figure 11J-20B**
REV NO. P2
DATE 09 JUN 16

TABLE 11J-5
PROCESS & IMPACTED STORM WATER PIPELINE DETAILS

Description	Location	Purpose	Construction Material	Pipe Diameter	Pipe Capacity (gpm)
Whole Tailings Transport	Concentrator Bldg to Cyclone Plant	Transport tailings to TSF via Cyclone Plant	HDPE SDR 17	30 in.	15,000
TSF Barge Water Reclaim	TSFimpoudment to Process Water Reservoir	Transport reclaimed water for re-use in process	HDPE SDR 21	36 in.	13,000
Underdrain collection to reclaim	Underdrain collection pond to intersect and join TSF barge reclaim pipeline	Transport reclaimed water for re-use in process	HDPE SDR 21	20 in.	4,000
Cyclone Overflow	Cyclone Plant to TSF Impoundment	Transport tailings fines to TSF impoundment	HDPE SDR 17	30 in.	13,100
Cyclone Underflow	Cyclone Plant to TSF Dam	Transport tailings sands to TSF dam	HDPE SDR 9	12 in.	1,990
Surge Pond	Surge pond to TSF	Transport upset condition fluids to TSF impoundment	HDPE SDR 17	12 in.	2,000
Impacted Stormwater Impoundment C	Impoundment C to Impoundment A	Transport runoff water from WRSP-2 and 3 to Impoundment A	HDPE SDR 21	10 in.	2,000
Impacted Stormwater Impoundment B	Impoundment B to impoundment A	Transport runoff water from WRSP-1to impoundment A	HDPE SDR-21	6 in.	700
Impacted stormwater impoundment A	Impoundment A to Process Water Reservoir	Transport runoff water from plant area and impoundments B and C to Process water reservoir	HDPE SDR 21	12 in.	3,500
Process Water Reservoir	Process water reservoir to process water tank to concentrator bldg	Transport re-use water to process water tank	HDPE SDR 21	24 in.	15,000
Process Water Tank	Process Water Tank to Concentrator bldg..	Transport re-use water to Concentrator bldg..	HDPE SDR 21	30 in.	50.000
Wastewater treatment	Wastewater treatment plant to intersect with and tap into Tailings Transport pipeline	Transport and dispose of waste water from treatment plant	HDPE SDR 17	2 in.	50



LEGEND:

- FLOW ARROW
- WATERSHED BOUNDARY
- RUNOFF CONCENTRATION POINT
- WATERCOURSE PATH
- MINE PERMIT BOUNDARY

WATERSHED SUMMARY

WATERSHED ID	AREA (AC)	Q100 (CFS)
1	352.00	708.72
2	117.79	377.27
3	100.96	277.70
4	85.03	280.90
5	107.36	343.86
6	377.55	788.24
7	144.47	405.48
8	92.01	291.83
9	235.91	567.91
10	333.62	660.28
11	397.83	843.39
12	236.95	600.47
13	282.46	641.72
14	161.96	371.20
15	55.11	179.83
16	83.15	204.89

600 300 0 600 1200

SCALE IN FEET
CONTOUR INTERVAL = 25FT
DO NOT SCALE 11x17 DRAWINGS

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REFERENCES		REFERENCES		REVISIONS						REVISIONS					
DWG. NO.	TITLE	DWG. NO.	TITLE	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

SCALE: 1" = 600'		DATE
DESIGNED BY	AJE	OCT 15
DRAWN BY	AJE	OCT 15
CHECKED BY		
PROJECT MGR		
CLIENT APPR.		

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COPPER FLAT PROJECT

GENERAL SITE
CIVIL
PRE QUINTANA
EXISTING WATERSHED AREAS

JOB NO. M3 PN-120085
DWG NO. **Figure 11J-25**
REV NO. P2
DATE 09 JUN 16

The waste will be primarily quartz monzonite and andesite and the ore will be primarily breccia. NMCC will implement a waste material classification program as described in Section 2.5 of the MPO. It is anticipated that the waste rock generated will oxidize very slowly and may potentially produce acid over some period of time. The ARD potential associated with un-oxidized waste rock is relative in the long-term. SRK determined that the waste rock can be considered as being inert with respect to ARD for a timeframe in the order approximately 20 years. Therefore, the vast majority of the waste material, i.e., about that will be generated will generally have a low ARD potential. As indicated above, the transitional materials that have been exposed to oxidizing conditions over time have the most potential for acid generation.

WASTE MATERIAL CLASSICATION

Section 2.6.2 of the MPO generally describes the general waste classification approach that will be implemented at Copper Flat. The subsequent work conducted by SRK and presented in its May, 2013 Geochemical Characterization Report confirms the approach to be utilized. However, while the approach is generally the same as described in Appendix C of the MPO, there will be some aspects of material handling that may differ from the information provided therein as supported by the later findings of SRK's material characterization studies. The overarching approach to waste rock material handling to control ARD will be to control that movement of water through the waste rock stockpiles in combination with continual diligent monitoring and characterization of the waste materials produced to SRK's conclusion that the majority of the material has a low ARD potential. As discussed in more detail below, NMCC believes that depositing the small amounts of high ARD potential waste materials, i.e., the transitional waste, when encountered, along with the large amounts of non-ARD materials will further reduce the potential for the ARD materials to create acid. The buffering capacity of the large volume non-transitional waste will neutralize the small volume transitional waste. Should field characterization reveal that more ARD materials than anticipated are being generated the materials handling plan will be adjusted to consider isolation, encapsulation and other means of treatment to mitigate the potential for acid generation. The non-transitional waste will be used as base material in any areas where it has been determined in the field that transitional material should be segregated. However, as a practical matter, under normal circumstances large volumes of non-transitional waste will typically be placed below, above and all around the transitional waste produced.

SRK recommended in its May 2013 report that, during proposed operations, specific controls would be needed to collect storm water runoff from the waste rock stockpiles and that storm-water diversions would be required to prevent run-on. SRK also recommended that covering the waste rock stockpiles with a re-vegetated 36-inch cover at the end of mine life would reduce infiltration of water and flux of oxygen into the facility, and thus, limit oxidation of sulfide minerals. SRK also noted that migration of seepage from the waste rock stockpiles into the underlying bedrock would be anticipated to be very small, or nil, because of the low permeability of the andesite underlying the area. These recommendations have been incorporated into NMCC's design of its waste rock stockpiles.

Figure 11O-1 describes process that will be utilized in the NMCC's proposed waste classification program during operations. Following the evaluation path shown in Figure 11O-1, a determination will be made as to classification, and periodic confirmation testing will be conducted. Confirmation testing will include a field testing program for representative samples of the cuttings, as determined by the qualified geologist or technician. The tests conducted will include paste pH, saturated paste conductivity, and acid base accounting testing (total sulfur, sulfate sulfur, and NP testing).

As described in more detail in Section 2.6.2 of Appendix C of the MPO, prior to blasting active benches in the open pit, the drill cuttings from each drill blast hole will be inspected. Blast-hole drill cuttings will be visually inspected by a qualified geologist or trained technician prior to blasting and removal of the material from the pit. The rock type, color, degree of oxidation, sulfide content and other pertinent features will be noted and transferred to the bench plan maps. All materials characterized as oxide or low sulfide waste will be sampled for confirmation testing. Material classified as low sulfide waste rock will be subject to periodic confirmation testing at a frequency initially of one confirmation test for each five blastholes designated as oxide waste rock. This frequency will adjusted as ongoing testing and field observation continues to demonstrate consistent reproducible results supporting visual waste classification. NMCC anticipates a frequency of confirmation testing in the longer term to be one test for every 20 holes. Confirmation testing will be performed on-site using a Leco Furnace to evaluate the classification determinations made.

WASTE ROCK FLAGGING AND ROUTING

Waste rock from the open pit will be examined as benches are mined to identify sulfide bearing transition material that may represent ARD potential. Specific procedures will be established by the mine operations team when preparing for start-up; however it is anticipated that the procedures employed by the operation will be similar to the following description, which follows standard mine geology practices and methods. The operations team will develop full details after the team is assembled to begin startup of the mine. As requested by NMED, NMCC will meet with NMED staff as plans develop to discuss the plan and receive input prior to implementation.

The mine waste rock identification, flagging, and routing process will be similar to mine ore control procedures and the two processes will be completed simultaneously. Identification, digging plan design, field identification for operations, determination of destination and placement, and routing of ore and waste materials will be the responsibility of the mine technical services team, which typically includes geology engineering, and surveying disciplines. The mining and ore/waste classification cycle begins with blasthole drilling. At Copper Flat, all benches mined will require blasting; therefore all areas mined will be drilled on a regular grid pattern across the full width and length of each bench. Each blasthole will be assigned a unique identification number (ID) for data tracking, and each will be surveyed and plotted onto a blasthole location map that is spatially tied to a three dimensional (3D) model of the mine geology. As holes are drilled and surveyed, the ID and survey coordinates of each blasthole will be logged into a blast hole data base. After drilling, and before blasting, the geology of the

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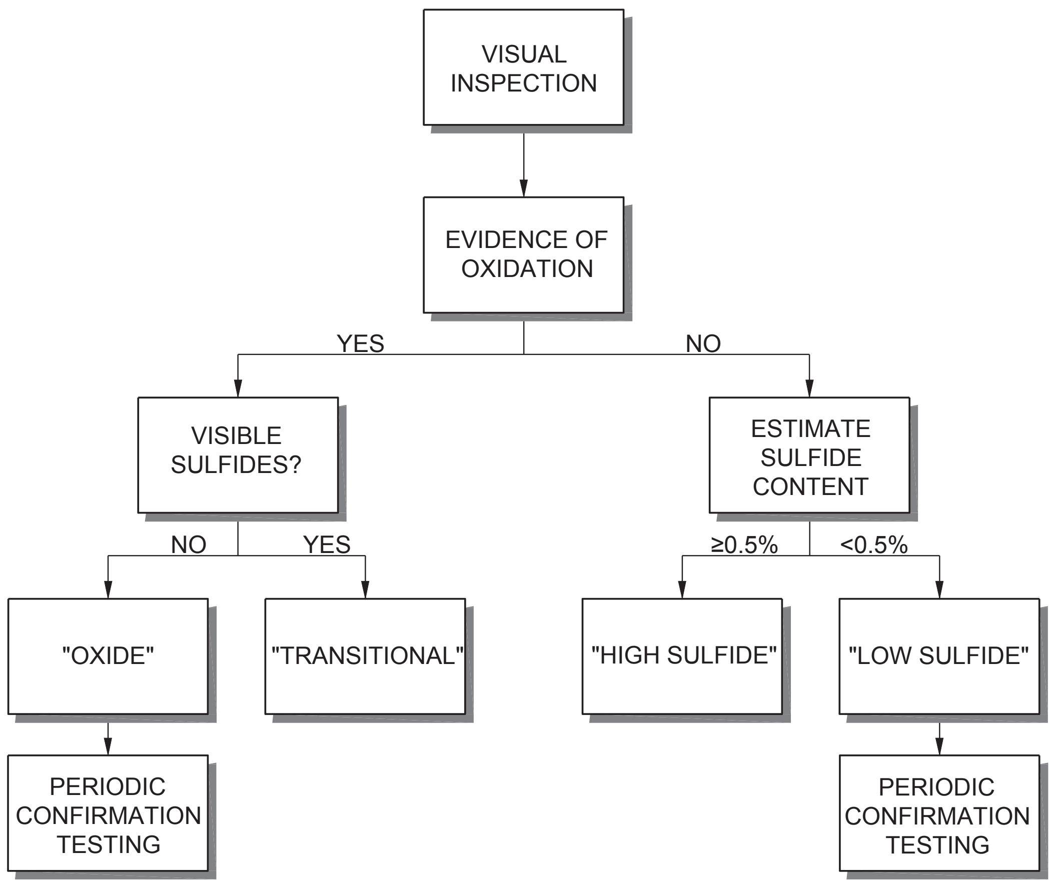

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Golder Associates

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PREPARED	CM
DESIGN	XXX
REVIEW	TS
APPROVED	XXX

PROJECT

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COPPER FLAT PROJECT
SIERRA COUNTY, NEW MEXICO

TITLE

OPERATIONAL WASTE CLASSIFICATION FLOWCHART

PROJECT No.	PHASE	Rev.	FIGURE
153-1453	0006	1	11O-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A bench surfaces and exposed mine faces will be examined for key geologic parameters and the geology mapped to the same scale as the blast hole maps. The blasthole cuttings will be visually examined to determine rock type, sulfide content, and oxidation level and samples taken for laboratory analysis. Data from field examinations will be logged into the blasthole data base and plotted onto the blasthole map, with the analytical results added to the maps and the database upon receipt from the laboratory. When the geologic and analytical data for a specific area is complete, the technical services team will develop ore and waste zone boundaries and identify material types that are subject to a specific routing plan, such as for ore transport or transport of potential ARD material to the WRSP. The boundaries and material designations will be transferred back to the blasthole maps and survey coordinates produced for identifying material boundary lines in the field.

After blasting, and before excavation begins, the material boundary lines will be established on the top of the broken rock by survey, and the broken rock visually examined again to determine if any field adjustment in classification is needed; field adjustments will be transferred to the blasthole maps for record keeping. Even after having been blasted, the area will be closed to excavation and material removal until all data is received and the "dig plan" is finalized by the technical services team. When an area is opened for excavation of material, the specific ore and waste boundary lines will be visually identified on the top of the broken rock and specific material types designated with color coded flagging. Copies of the blasthole maps showing the corresponding material types and boundaries will be provided to the mine equipment operators for reference during material removal.

As excavation proceeds, the loader operators will selectively excavate specific ore or waste material types following the dig plan established by the technical services team. Each haul truck will be loaded with only the one type of material designated. After loading, the loader operator will communicate the material type to the truck operator through an established signal system. The material type loaded into the truck will designate a pre-determined destination for the load. The truck operator will track loads by material type and destination and the load information will be compiled and maintained by mine staff for reporting.

TRANSITIONAL WASTE MATERIAL DISPOSAL

Section 2.6.2.2 of Appendix C of the MPO provides that material classified as "transition waste" will be isolated in a waste rock stockpile area and covered with a minimum of six feet of "non-transition" material. SRK's investigation determined that the transitional material to be excavated will be less than 4% of the total volume of waste produced from the operation. SRK's analysis was performed prior to development of the most recent mine plan for Copper Flat which is reflected in this DP application. Even so, the most recent mine plan indicates that transitional material will still be produced at the same relative ratio as compared to non-transition waste. NMCC anticipates that the transitional waste will be produced in the first 8 years of operation (approximately 5.4 million tons), with about half of it produced in the first 2 years. Some of this material will be disposed of in WRSP-1, which located in the OSPDA. The remainder will be disposed of in WRSP-2 and 3. During the same two years as much as 5.2 million tons of non-transitional acid neutralizing waste material, will also be produced. Some of this acid neutralizing material will be used as neutralizing material for those areas where transitional material may be deposited. NMCC will lay a minimum 10 ft. of base of non-transitional waste underlying the area where transitional material will be deposited in the WRSPs and ensure that at least 10 feet of non-transitional waste surrounds the transitional waste in such a manner that the transitional waste is not exposed to oxidation.

The remaining approximate 2.6 million tons of transitional material will be produced over years 3 through 8 at an average rate of approximately 433 thousand tons per year while at the same time about 27.6 million tons, an average of 4.6 million tons of acid neutralizing non-transitional waste will be produced. As such, the greatest volume of waste material generated by far, will be classified as un-oxidized high sulfide and/or un-oxidized low sulfide waste. As confirmed by SRK's waste rock characterization investigations, this material poses negligible short-term risk of ARD. While NMCC considers it unnecessary, and perhaps to some extent, contrary to the desire to minimize potential acid generation, to isolate and concentrate that material in one area, NMCC will continue to identify potential ARD generating waste during operations and take steps to establish disposal areas within the WRSPs for this material ensuring that a minimum of 10 ft. of non-transitional acid-neutralizing waste surrounds the transitional waste within the WRSPs where the potential ARD generating material will be deposited. As a practical matter, NMCC will ensure that non-transitional material is placed below, above and all around the transitional material wherever possible, providing a thick neutralizing "blanket" around the transitional material.

Quality assurance testing will also be performed in addition to the daily field sampling. Up to 10 archived blast-hole samples will be randomly selected and subjected to paste pH, saturated paste conductivity, and acid base accounting testing (total sulfur, sulfate sulfur, and NP testing). The testing will be performed by a third-party independent state approved laboratory. The samples will be classified with respect to ARD potential on the basis of NP/AP ratio. The samples will be located on the appropriate bench plan maps and the quality assurance test classifications will be compared to the operational waste classification designations.

At the end of the mine life the waste rock stockpiles will be reclaimed in accordance with the approved reclamation and closure plan. The waste rock stockpiles will be covered with a minimum of 3 ft. of soil completely mitigate the potential for acid generation and impacts to groundwater.

SRK has performed significant kinetic testing of waste materials since the time of submittal of the MPO. Humidity cell testing results were first reported to NMED in SRK's May, 2013 report. Continued and more extensive humidity cell results were reported to NMED in February, 2014 in an SRK report titled "Humidity Cell Termination Report for the Copper Flat Project, New Mexico". These documents are included in this Discharge Plan application by reference. As indicated before, these documents provide the basis for NMCC's mine waste characterization and handling plans.

20.6.7.11.S FLOW METERING SYSTEM

An application shall describe a copper mine facility's flow metering system pursuant to Paragraph (5) of Subsection C of 20.6.7.17 NMAC, Subsection E of 20.6.7.18 NMAC, and Subsections C and E of 20.6.7.29 NMAC, including:

(1) *the method(s) (i.e., pumped versus gravity flow) of process water discharge and stormwater transfer and handling;*
(2) *the proposed flow measurement devices for each flow method and information about its type and capacity; and*
(3) *the location of all existing and proposed flow meters required pursuant to the copper mine rule or a discharge permit.*

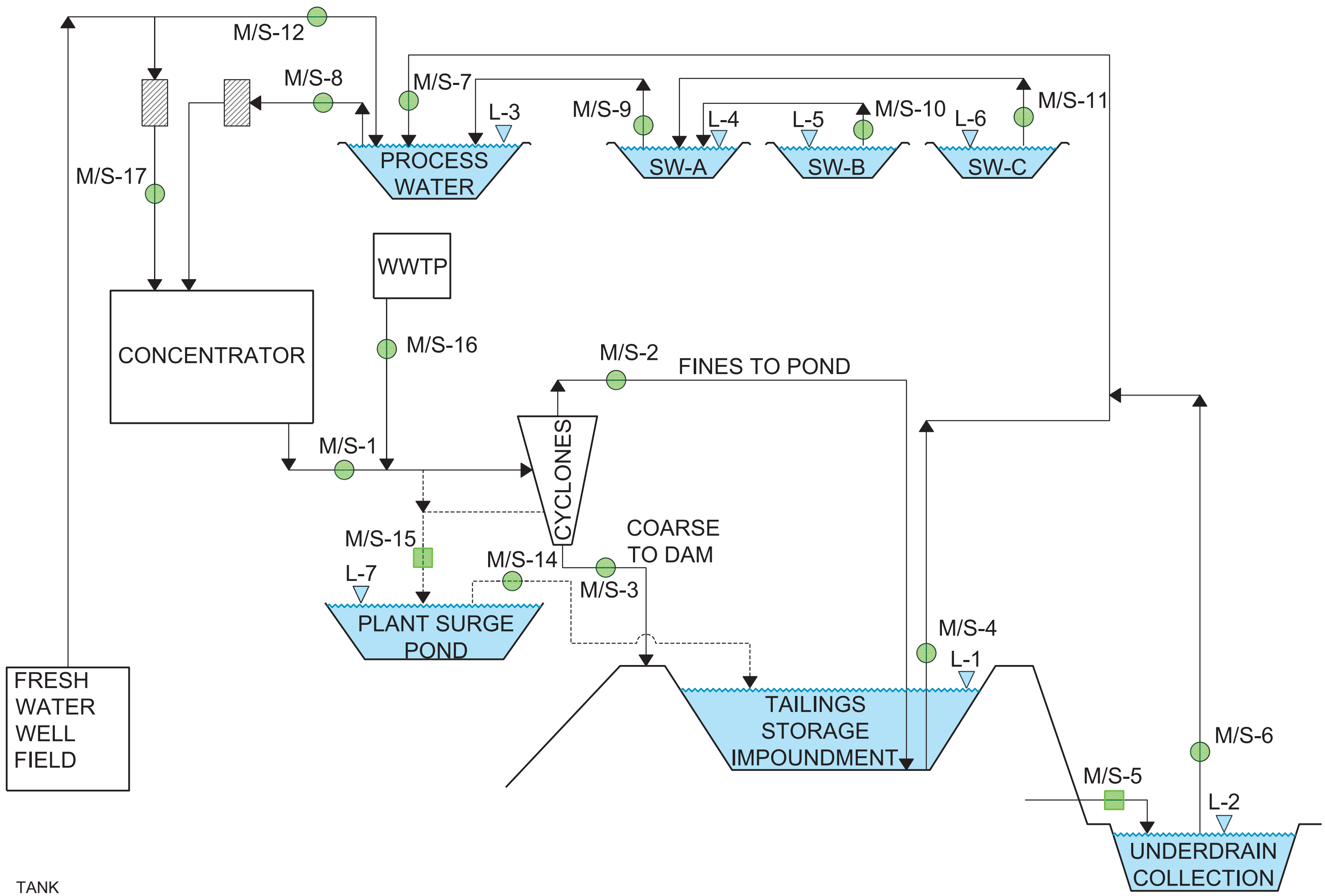
will be handled using a combination of transfer methods, including gravity flow and mechanical pumps. Figure 11S-1 is a schematic diagram that shows the sources of water and the metering locations. Figures 11J-20A and 11J-20B (see pages 82A and 82B in Section 20.6.7.11.J.(5) of the DP application) are scaled maps that identify the locations of the flow meters and fixed pumps. The source of water to the process will be from the fresh water well field and the process water reservoir which will contain a combination of water pumped from the off-site fresh water well field, recycled water pumped from the tailings impoundment and captured storm water, pumped to the process water reservoir, when available.

As shown on Figure 11S-1, fresh intake water will be pumped from an off-site well field on-site to the freshwater tank and/or the process water reservoir and metered at these locations. Process make-up water will be pumped and metered from the process water reservoir into the process facility through the process water tank. Maximal utilization of recycled water will minimize the need for freshwater to the extent possible.

Mine ore fed to the SAG mill will be ground and pulped for the concentration and flotation process. The flotation overflow materials will be directed to the remaining steps of the product concentration process. The underflow material from the flotation circuit will be discharged from the sump and transported as whole tailings materials via gravity flow to the cyclones at the tailings storage facility. Outflow from the flotation sump will be metered as shown on Figure 11S-1.

The cyclones will separate the sand or coarse fraction from the slimes or fines fraction of the tailings. The cyclone underflow or sand fraction will be pumped and metered to the tailings area where it will be used as the material to construct the dam. The cyclone overflow or slimes fraction will be pumped and metered to the interior of the tailings storage facility behind the dam where it will be deposited and allowed to separate as free water which will form a pool of water, and sludge which will separate from the free water and line the inside of the impoundment.

The free water will be pumped off of the surface of the impoundment using a floating pump barge located within tailings pond. The water will be pumped and metered at the barge



TANK

WEIR BOX/SAMPLING

FLOW METER/SAMPLING

WATER LEVEL

FLOW DIRECTION

WWTP WASTE WATER TREATMENT PLANT

SW-A STORMWATER POND A

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DESIGN	XXX
REVIEW	TS
APPROVED	XXX

PROJECT

NEW MEXICO COPPER CORPORATION
COPPER FLAT PROJECT
SIERRA COUNTY, NEW MEXICO

TITLE

FLOW METER AND SAMPLING LOCATIONS

PROJECT No.	PHASE	Rev.	FIGURE
153-1453	0006	1	11S-1

outflow back to the process area, through a recycle water pipeline to the process water reservoir for reuse back in the process.

An underflow drain system will be installed beneath the dam and at the bottom of the lined tailings impoundment. The underflow drain system will collect water from the bottom of the impoundment and the bottom of the dam. This water will be directed to an underdrain collection pond constructed immediately down-gradient from the tailings impoundment. The underdrain collection pond will also be utilized as the impacted storm water impoundment for storm water runoff captured off of the downstream face of the dam. Water produced from the underdrain collection gallery and the storm water collection ditches will be measured at a weir box installed at the inflow point of the ditch into the underdrain collection pond. The water in the underdrain pond will be pumped and metered at the pond pump discharge into the underdrain recycle water pipeline which will join the recycle water pipeline and pumped to the process water reservoir where it, too, will be utilized as process make-up water. Recycle water from the tailings impoundment and underdrain water from the underdrain collection pond in the pipeline will also be metered upstream of union between the barge recycle water stream and the underdrain pond water stream as shown in Figure 11S-1.

NMCC will also construct three impacted storm water impoundments to capture runoff from the Copper Flat site facilities. The water collected therein will be pumped metered at each impoundment pump outlet to the process water reservoir as shown in Figure 11S-1 a used as process make-up water.

As indicated in Subsection **20.6.7.11.J.(11)** of this application, NMCC will utilize a packaged wastewater treatment plant for domestic wastes. The treated water will be pumped and metered the tailings slurry that is pumped to the TSF.

The processing facility will be designed with contingency mechanisms that will allow diversion of process water from the process area and the cyclone plant directly to the surge pond in the event of upset conditions. Transport of these flows will be accomplished using the pumps in the process and by gravity in the secondary containment ditch which is designed to route upset flows to the surge pond. The contingency pipelines will also be metered as shown in Figure 11S-1. A weir box will be installed at the secondary containment ditch entrance to the surge pond to measure inflow.

20.6.7.11.T CLOSURE PLAN

An application shall include a closure plan for all portions of a copper mine facility pursuant to Subsection A of 20.6.7.18 NMAC, 20.6.7.33 NMAC, 20.6.7.34 NMAC and 20.6.7.35 NMAC unless closure of the copper mine facility is covered, or will be covered, by a separate closure discharge permit.

This section describes NMCC's Closure Plan per the requirements of the Copper Rule. In November 2012 NMCC submitted its Mine Operation and Reclamation Plan (MORP) (NMCC 2012) to the New Mexico Mining and Minerals Division. In 2010 NMCC had also submitted its MPO to the BLM. These documents are currently under review by the respective agencies and will be incorporated into this Discharge Plan upon approval. The 2012 MORP, including the reclamation plan, was reviewed by MMD, was determined administratively complete and underwent technical review by MMD and other agencies, including the NMED. A series of comments and requests for additional information and NMCC responses followed, including submittal of various documents that have since modified the original 2012 submittal. All of this documentation is considered as part of the application documentation for the MORP, and, therefore, for this DP application as well.

The 2012 MORP is currently being revised by NMCC to provide updated and more detailed information regarding NMCC's most current proposed mine operation and reclamation plans. It will be resubmitted to the MMD in the near future.

The Reclamation Plan component of the MORP will contain updated detailed information required by the Discharge Plan application. In effect, the approved MORP and the approved Discharge Permit will be one and the same as it relates to groundwater protection as one cannot be approved without obtaining approval for the other. As such, NMCC has included herein as much information as is currently available in addressing the requirements of the DP application. However, much of the detail regarding reclamation design, implementation and financial assurance will not be available until the revised MORP is submitted.

20.6.7.18 General Operational Requirements

In accordance with subsection **20.2.6.7.18.A** of the Copper Rule, Planning for closure, NMCC has designed and will operate its mine facility units in a manner that considers implementation of its Closure Plan.

In accordance with subsection **20.6.7.18.A.(1)** NMCC has identified material on-site that is suitable for use to construct the necessary covers. The suitability of soils for reclamation purposes will relate to physical or chemical parameters. Steep slopes limit harvesting topdressing materials due to increased erosion potential and the difficulty in establishing vegetation to re-stabilize the slope, whereas chemical parameters can affect how well a soil provides nutrients to plants during the re-vegetation process. Soil texture, the relative amount of sand, silt, and clay, affects water available to plants (available water holding capacity, AWHC), rate of water movement into and through the soil, and seed-soil contact during germination. The relative size of soil particles can also affect the total porosity and water holding capability of the soil. Larger cobbles and stones can effectively decrease porosity and thus the water holding capability of the soil.

Chemical components of soils, such as the amount of calcium carbonate present, the pH, sodium, and salinity can impact various aspects of the soil. Calcium carbonate can affect the availability of nutrients, affect the hydraulic properties of the soil, and can limit root growth in high concentrations. The pH can affect the availability of nutrients. Salinity will compete with plant roots for water in the soil, and sodium, although it has little effect on plants, can act as a dispersing cation and degrade soil structure which can alter water movement into and through the soil.

Topdressing, for the purposes of reclamation, refers to soil and/or geological material used as reduce infiltration of precipitation through the underlying materials. The amount of growth media to be removed was initially estimated on the basis of the soil survey included in the BDR. In response to agency comments NMCC submitted an addendum to the BDR (THEMAC 2013), which contains a Technical Memorandum (Insert C), prepared by Golder Associates which, in turn, includes a Supplemental Soils Investigation Report that provided additional characterization and suitability assessment for soil resources at the site. The report provides a more detailed description of the soil resources at the site to support reclamation planning. A borrow investigation was performed to assess the range of available soil materials. The suitability criteria provided in the original BDR document were revised based on the new information.

Section 3.4 of Golder's Supplemental Soils Investigation report discusses the suitability of the soils for us as cover material. Section 4.0 provides estimates of the volume of cover material available on-site and the amount that will be required to meet the cover requirements. In general, the soil materials identified by Golder are suitable for use in the primary or secondary root zone and acceptable for use as soil cover.

Salvaged topdressing materials will be stored in the growth media stockpiles shown in Figure 11J-1. It will be stockpiled so as not to be disturbed by mining operations. The side-slopes of these stockpiles will be shaped with overall slopes of 3H:1V or shallower to minimize soil loss. To further minimize erosion and the establishment of undesirable weeds, the stockpiles will be seeded with an interim seed mix. Diversion ditches will be constructed up-gradient of the stockpiles, where necessary, to minimize run-on erosion. Additionally, berms will be constructed around the crest of stockpiles, as needed, to prevent out-slope erosion from overland flow. BMPs such as silt fences or staked straw bales will be used as necessary to capture sediment and reduce soil loss.

In accordance with subsection **20.6.7.18.A.(2) NMAC, NMCC** has considered the grading and drainage plans in its design of the facility, including its waste rock stockpiles and tailings impoundment (See subsection **20.6.711.J.(2)** above).

Closure Water Management and Water Treatment Plan

The Closure water management and treatment plan as required in subsection **20.6.7.33.H NMAC** for the Copper Flat mine has three fundamental aspects to it that make it somewhat unique for this site and for the State of New Mexico copper mining projects. First with respect to the water in the open pit, NMCC has demonstrated that the open pit is a hydrologic sink (see JSAI, 2011; JSAI, 2014). Second, closure water management as it pertains to the waste rock stockpiles and the plant site area involves the continued use of the impacted storm water impoundments to capture run-off from those areas while reclamation actions are being undertaken and ensuring that water from those impoundments is removed from them in less than thirty days. The water may be utilized for dust suppression or simply may be transferred into the tailings storage impoundment. Third, closure water management of the water inventoried in the tailing impoundment actually begins at design and approval of NMCC's proposed water recycling and underdrain system. A fundamental aspect of the water management plan for closure is design and implementation of an efficient water recycling program at the tailings storage impoundment during operations. A water recycling barge and underdrain system as described in detail in section **2.6.7.11.J** of this application and in Appendix A is proposed for the TSF that maximizes use of water during operations. Over 70% of the process water utilized in the mill operations will be provided by recycled water from the TSF. As such less water will have to be drained from the TSF before the TSF can be permanently reclaimed and closed.

At the end of production some water will remain in the TSF impoundment and embankment. At en of operation the TSF will enter a "drying out" or "draining" period. Section 6.5.2, of Appendix A indicates that the maximum down-drain flow rate at final buildout of the dam is anticipated to be approximately 448 gpm from the dam underdrain and 66 gpm from the impoundment underdrain. As such, the dam will drain more quickly than the impoundment and is, therefore, anticipated to undergo reclamation sooner than the impoundment surface. The underdrain systems will continue to operate after cessation of operations. An "active" underdrain water management program will commence thereafter, including pumping captured water from underdrain collection pond back to the impoundment surface and using forced evaporation equipment to reduce the volume of water. The TSF embankment is expected to drain quickly, allowing its reclamation to begin within 3 to 5 years after ceasing operations. It is anticipated that some reclamation of the impoundment may begin within 3 to 5 years of ceasing operation as the impoundment continues to drain and dry, allowing construction equipment to be utilized to commence cover placement. The duration of continued operation of the "active" water management system will be driven by the volume of water that continues to drain from the impoundment. NMCC has planned for 5 to 10 years of operation of the active program followed by a longer period of "passive" drain-down water management. After decommissioning of the active program and full reclamation of the TSF, any water that may continue to drain from the TSF (at ever decreasing rates for an estimated 20 years) will be captured in evaporation cells that will be constructed below the toe of the TSF. The underdrain collection pond will be incorporated into these cells. The details of their design, operation and reclamation will be provided in the MORP to be submitted in the near future. These costs will be included in the financial surety calculations.

John Shomaker and Associates letter to NMCC, “Response to questions regarding the rapid-fill scenario for post mining reclamation of proposed Copper Flat open pit, June 25, 2015 (JSAI 2015).

Jochems, A. P., Kelley, S. A., Seager, W. R., Cikoski, C. T., and Koning, D. J., 2014, Geologic map of the Hillsboro 7.5-Minute Quadrangle, Sierra County, New Mexico: New Mexico Bureau of Geology and Mineral Resources, Open-file Geologic Map 242, DRAFT, June, 2014 (Jochems, et al., 2014

New Mexico Environment Department letter to NMCC, “Comment Resolution Response: Geochemical Characterization Report, Geochemical Modeling of the Pit Lake and associated documents for the Copper Flat Project, Copper Flat Mine, DP-1”, February 23, 2015 (NMED 2015).

New Mexico Copper Corporation, Copper Flat Mine Plan of Operations, December 2010 and Revisions (NMCC 2010).

New Mexico Copper Corporation, Mine Operations and Reclamation Plan, Copper Flat Project, July 2012 (NMCC 2012).

Sargent, Hauskins, and Beckwith (SHB), Tailings Dam and Disposal Area, Quintana Mineral Corporation, Copper Flat Project, Gold Dust, New Mexico, October 1980 (SHB 1980).

Sargent, Hauskins, and Beckwith (SHB), Geohydrologic Evaluation for Submission of Discharge Plan, Copper Flat Project, Quintana Mineral Corporation, Sierra County, New Mexico, June 1981 (SHB 1981).

Seager, W. R., Clemons, R. E., Hawley, J. W., and Kelley, R. E., 1982, Geology of northwest part of Las Cruces 1x2 sheet (Scale 1:125,000), New Mexico: New Mexico Bureau of Mines & Mineral Resources Geologic Map 53.

SRK Consulting U.S. Inc., as presented in their “Geochemical Characterization Report for the Copper Flat Project New Mexico, May 2013” (SRK 2013).

SRK Consulting U.S. Inc., Humidity Cell Termination Report for the Copper Flat Project, New Mexico, February, 2014 (SRK 2014).

THEMAC Resources, Copper Flat Mine Baseline Data Report Addendum, July 17, 2013 (THEMAC 2013)