## GALLUP COAL FIRE MITIGATION PROJECT GALLUP, NEW MEXICO

### ENTERPRISE - BROWN AND NAVAJO UNDERGROUND COAL MINE FIRES PROJECT NO. EMNRD-MMD-2024-01

#### PROJECT LOCATION

- GALLUP, NEW MEXICO

Sheet Number Sheet Title **COVER SHEET** 

ACCESS ROUTE PLAN

**ENTERPRISE BROWN SITE PLAN** 

NAVAJO NO. 1 SITE PLAN

NAVAJO NORTH SITE PLAN

ENTERPRISE-BROWN EXCAVATION PLAN AND PROFILE

NAVAJO NO 1 EXCAVATION PLAN AND PROFILE

#### **SHEET INDEX**

#### **GENERAL NOTES:**

#### **SURVEY NOTES:**

CONTOURS WERE DERIVED FROM PHOTOGRAMMETRIC Tt UAV SURVEYS CONDUCTED DURING FIELD INVESTIGATIONS AND ARE REGISTERED TO THE

#### SUMMARY OF WORK:

- 1. WORK AT THE ENTERPRISE-BROWN AND NAVAJO NO. 1 INVOLVES EXCAVATING BURNING AND NON-BURNING COAL AND OVERBURDEN (PRIMARILY SANDSTONE). BURNING COAL WILL BE BLENDED WITH NON-BURNING OVERBURDEN, ALLOWED TO COOL, AND BACKFILLED INTO THE EXCAVATED AREAS. FOLLOWING EXCAVATION AND BLENDING ACTIVITIES, THE SITE WILL RECEIVE FINAL GRADE AND BE REVEGETATED.
- 2. WORK AT THE NAVAJO NORTH SITE INVOLVES THE INSTALLATION OF POLYURETHANE FOAM (PUF) PLUGS IN THREE OPEN SUBSIDENCE FEATURES.

# NAVAJO NORTH LOCATION NAVAJO NO. 1 LOCATION **ENTERPRISE-BROWN LOCATION** © 2023 Microsoft Corporation © 2022 Maxar ©CNES (2022) Distribution Airbus DS

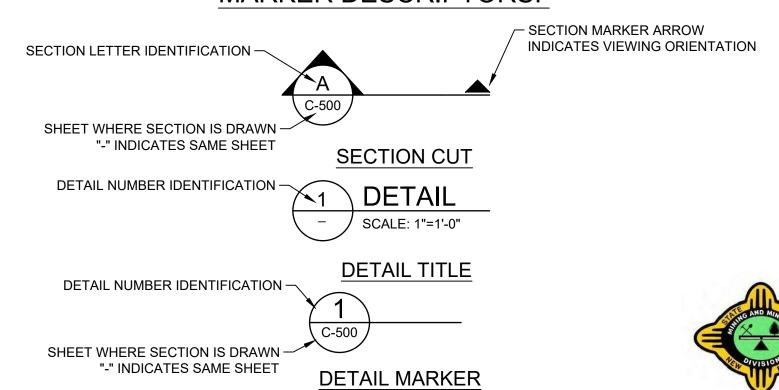
#### SUBMITTED TO

NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT 1220 SOUTH ST. FRANCIS DRIVE SANTA FE, NM 87505 PROJECT ENGINEER: MEGHAN McDONALD P.E. PHONE: (505) 629-9872

#### SUBMITTED BY / DESIGN ENGINEER

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#### MARKER DESCRIPTORS:



ABANDONED MINE LAND PROGRAM MINING AND MINERAL DIVISION

NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT

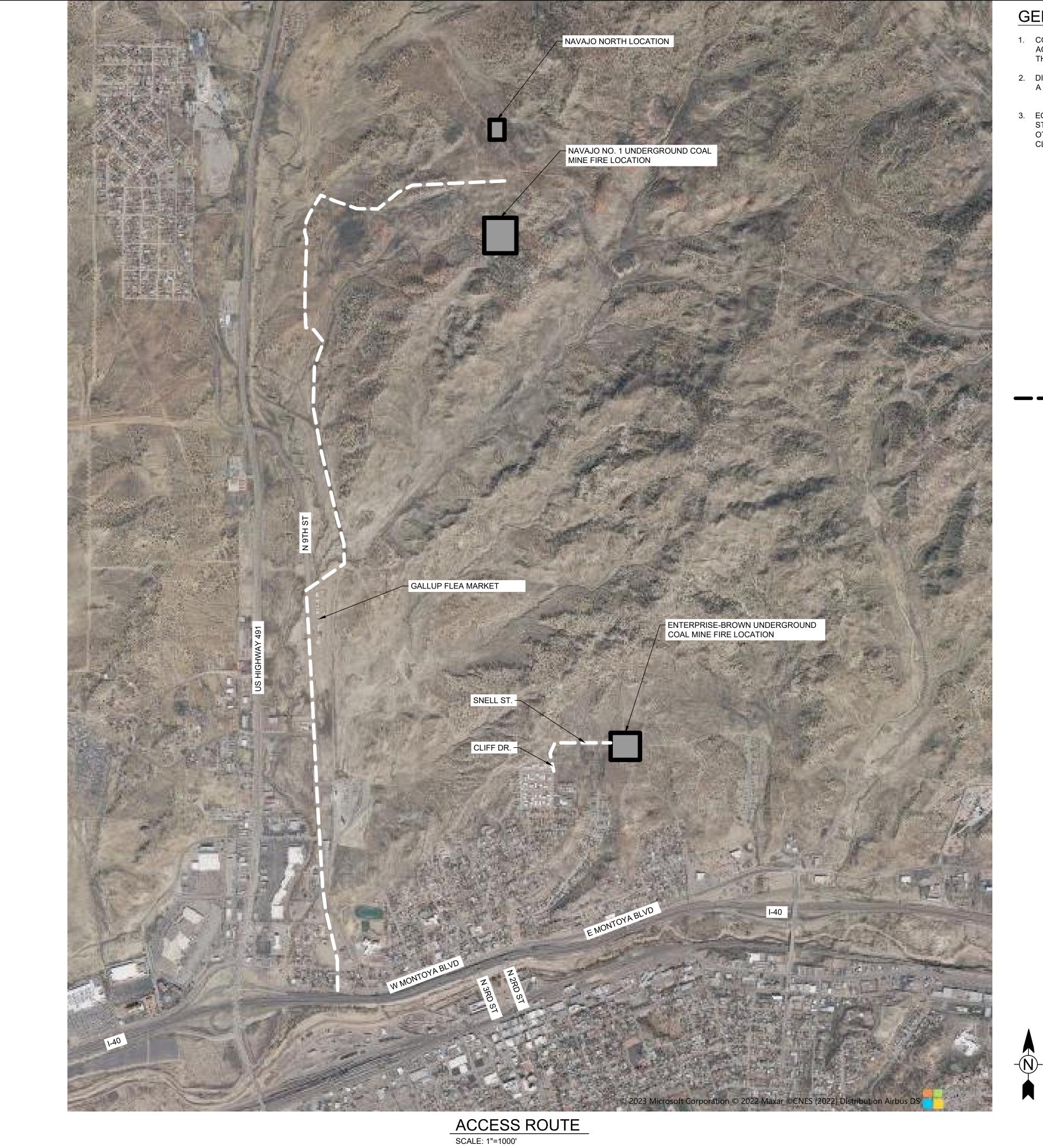


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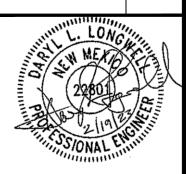


**GENERAL NOTES:** 

- CONTRACTOR IS TO FOLLOW EQUIPMENT ACCESS ROUTE AS SHOWN OR AS DIRECTED BY THE PROJECT MANAGER.
- 2. DISTURBANCE TO THE AREA SHALL BE KEPT TO A MINIMUM.
- 3. EQUIPMENT OPERATION, MATERIAL STORAGE.STAGING, OFFROAD TRAVEL, AND/OR
  OTHER PROJECT IMPACTS OUTSIDE OF
  CLEARED AREAS IS PROHIBITED.







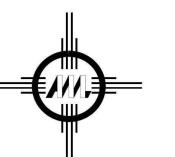
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TWO-TRACK ACCESS ROUT

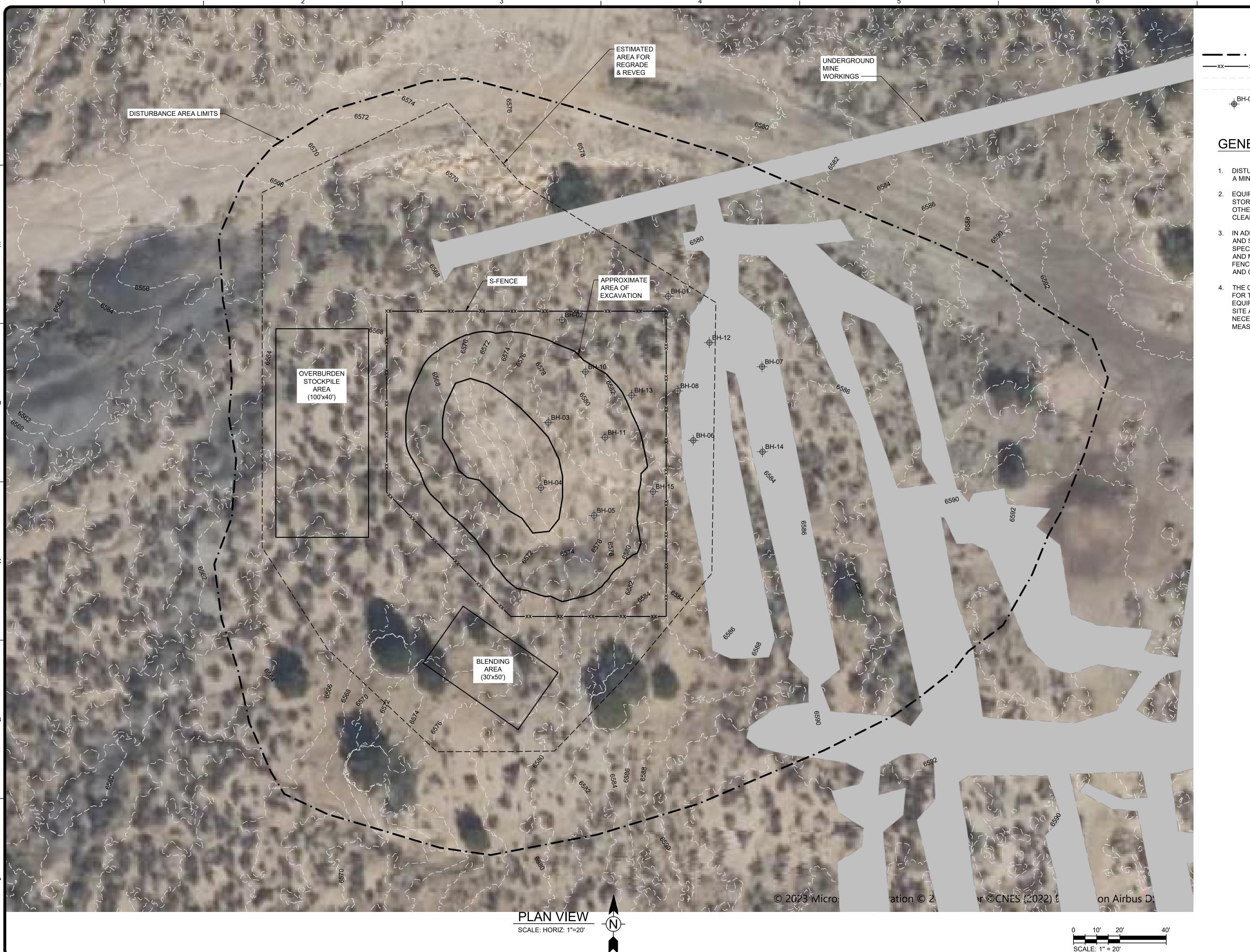
117-7119001 S. HURLEY

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L. WEATHERL D. LONGWELL



#### <u>LEGEND</u>

DISTURBANCE AREA LIMITS

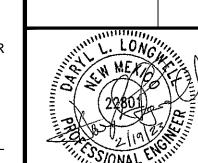
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MAJOR CONTOUR (10' INTERVAL)MINOR CONTOUR (2' INTERVAL)

— — MINOR CONTOUR (2' INT 09 BOREHOLE LOCATION

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- 3. IN ADDITION TO APPROPRIATE STORMWATER AND SEDIMENT CONTROLS, PER THE SPECIFICATIONS, CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION SAFETY FENCING AROUND ALL OPEN EXCAVATIONS AND OTHER HAZARDOUS AREAS.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY AND SECURITY OF EQUIPMENT AND MATERIALS STORED AT THE SITE AND SHALL INSTALL AND MAINTAIN NECESSARY OR APPROPRIATE SECURITY MEASURES.

**GENERAL NOTES:** 



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BY CAUTION - THIS PROJECT REQUIRES CON WORK IN, AROUND, AND OVER HAZAF UNPROTECTED MINE SHAFTS, STOPES, OTHER OPENINGS WHICH MAY BE OPENINGS WHICH MAY BE OPENINGS WHICH MAY BE OPENING SURFACE OR HIDDEN FROM VIEW BY TRADOR THIN AND UNSTABLE LAYERS OF MATERIALS OR ROCK. THE CONSTRUCTO RESPONSIBLE FOR THOROUGHLY INVESTINGS SITE CONDITIONS AND SCHEDULING EQUIPMENT OPERATIONS, PERSONNEL A PROCEDURES TO PREVENT ACCIDENTS AN

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DESN: S. HURLEY
DRWN: L. WEATHERL
CHKD: D. LONGWELL

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**LEGEND** 

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DISTURBANCE AREA LIMITS

MAJOR CONTOUR (10' INTERVAL) MINOR CONTOUR (2' INTERVAL)

BOREHOLE LOCATION



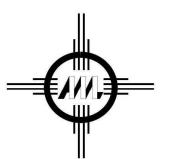
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SCALE: HORIZ: 1"=30'



#### **FEATURE 1**

A SINKHOLE SUBSIDENCE FEATURE, APPROXIMATELY 15-FEET IN DIAMETER WITH A FRACTURE IN THE BEDROCK AT THE BASE. STEADY FLOW OF MUSTY AIR VENTS FROM FRACTURE. SLIGHTLY ELEVATED TEMPERATURES (ABOVE AMBIENT) OBSERVED DURING INVESTIGATION, BUT NO HAZARDOUS GASES OR COMBUSTION INDICATORS WERE DETECTED.



#### FEATURE 2

A DISCRETE FRACTURE IN THE BEDROCK WALL OF A SMALL SINKHOLE. SLIGHT FLOW OF AIR OBSERVED. TEMPERATURES WERE RECORDED NEAR AMBIENT, BUT NO HAZARDOUS GASES OR COMBUSTION INDICATORS WERE DETECTED DURING INVESTIGATION.



#### FEATURE 3

A SINKHOLE SUBSIDENCE FEATURE APPROXIMATELY 30-FEET IN DIAMETER WITH AN OPENING IN THE FRACTURED SANDSTONE AT THE BASE OF THE SOUTHERN WALL. SLIGHTLY ELEVATED TEMPERATURES (ABOVE AMBIENT) OBSERVED DURING INVESTIGATION, BUT NO HAZARDOUS GASES OR COMBUSTION INDICATORS WERE DETECTED.

#### **GENERAL NOTES:**

- 1. DISTURBANCE TO THE AREA SHALL BE KEPT TO A MINIMUM. AT THE NAVAJO NORTH SITE, VEHICULAR TRAFFIC IS RESTRICTED TO THE EXISTING POWERLINE ROAD. NO OFF-ROAD VEHICULAR ACCESS IS ALLOWED DUE TO CULTURAL RESOURCES IN THE AREA.
- 2. TWO-PART POLYURETHANE FOAM (PUF) WILL BE PLACED TO SEAL THE OPEN ROCK FRACTURES AT EACH IDENTIFIED FEATURE.
- 3. ALL PUF MATERIALS SHALL BE TRANSPORTED BY HAND OR WHEELBARROW TO THE SITE FEATURES ALONG PATHWAYS TO BE DESIGNATED BY THE AML PROJECT MANAGER.
- 4. THE DEPTH OR MINIMUM THICKNESS OF THE PUF PLUG SHALL BE A MINIMUM OF TWO TIMES THE SMALLEST DIMENSION OF THE OPENING. CONTRACTOR IS RESPONSIBLE FOR MEASURING OPENINGS AND SATISFYING THEMSELVES OF THE REQUIRED QUANTITIES, PRIOR TO BIDDING.
- 5. PUF SHALL BE INSTALLED IN LIFTS WITH A MAXIMUM RISE OF 18-INCHES WITH ADEQUATE TIMES BETWEEN LIFTS TO PREVENT SUBSEQUENT LIFTS OF FRESH FOAM FROM CUTTING INTO THE RISING FOAM OF A PRECEDING LIFT, IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
- 6. FOLLOWING THE PLACEMENT AND CURING OF THE PUF PLUGS, ALL PUF SHALL BE COVERED WITH A MINIMUM 2-FOOT THICK SOIL COVER.





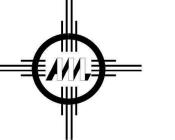


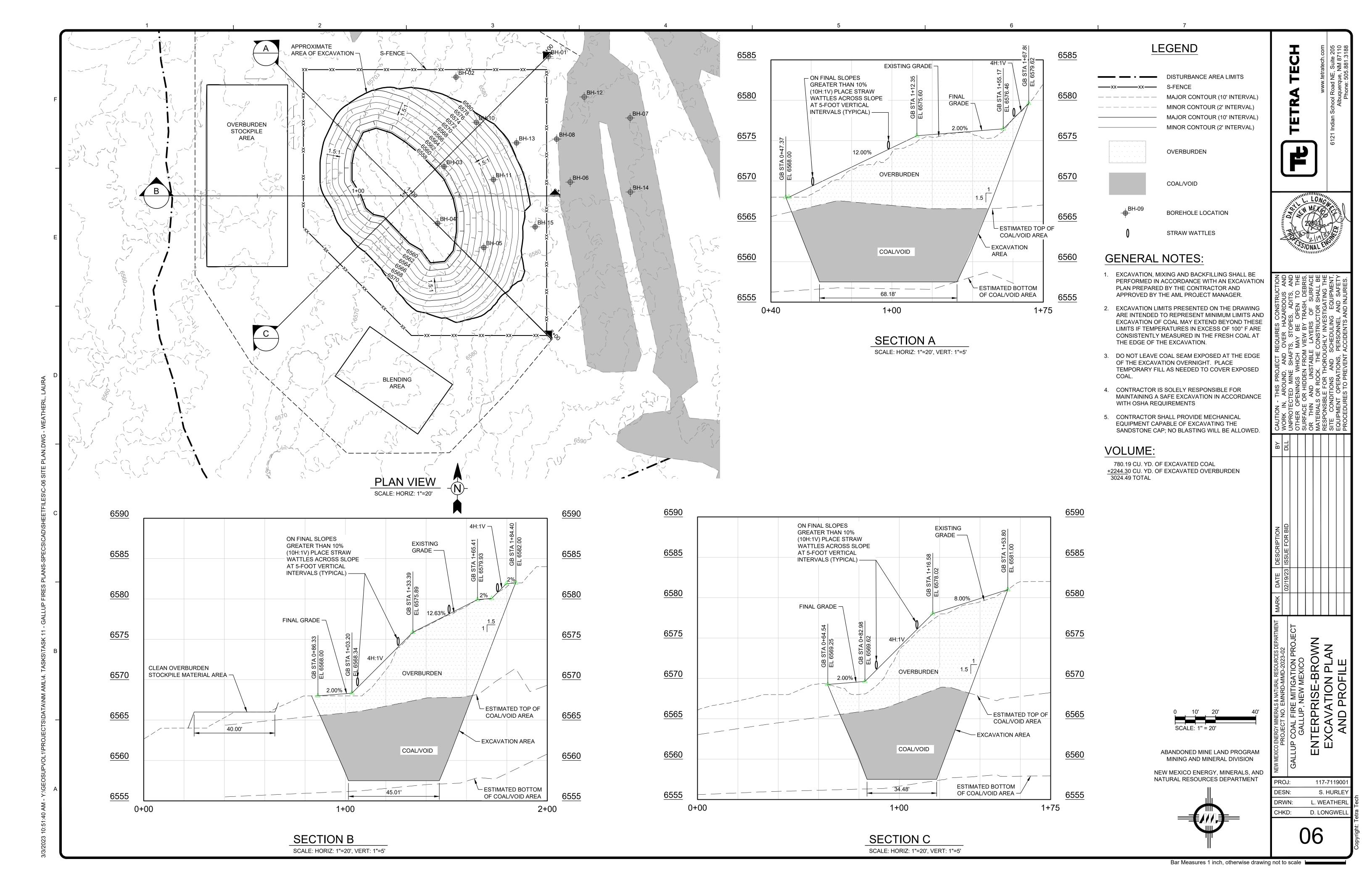
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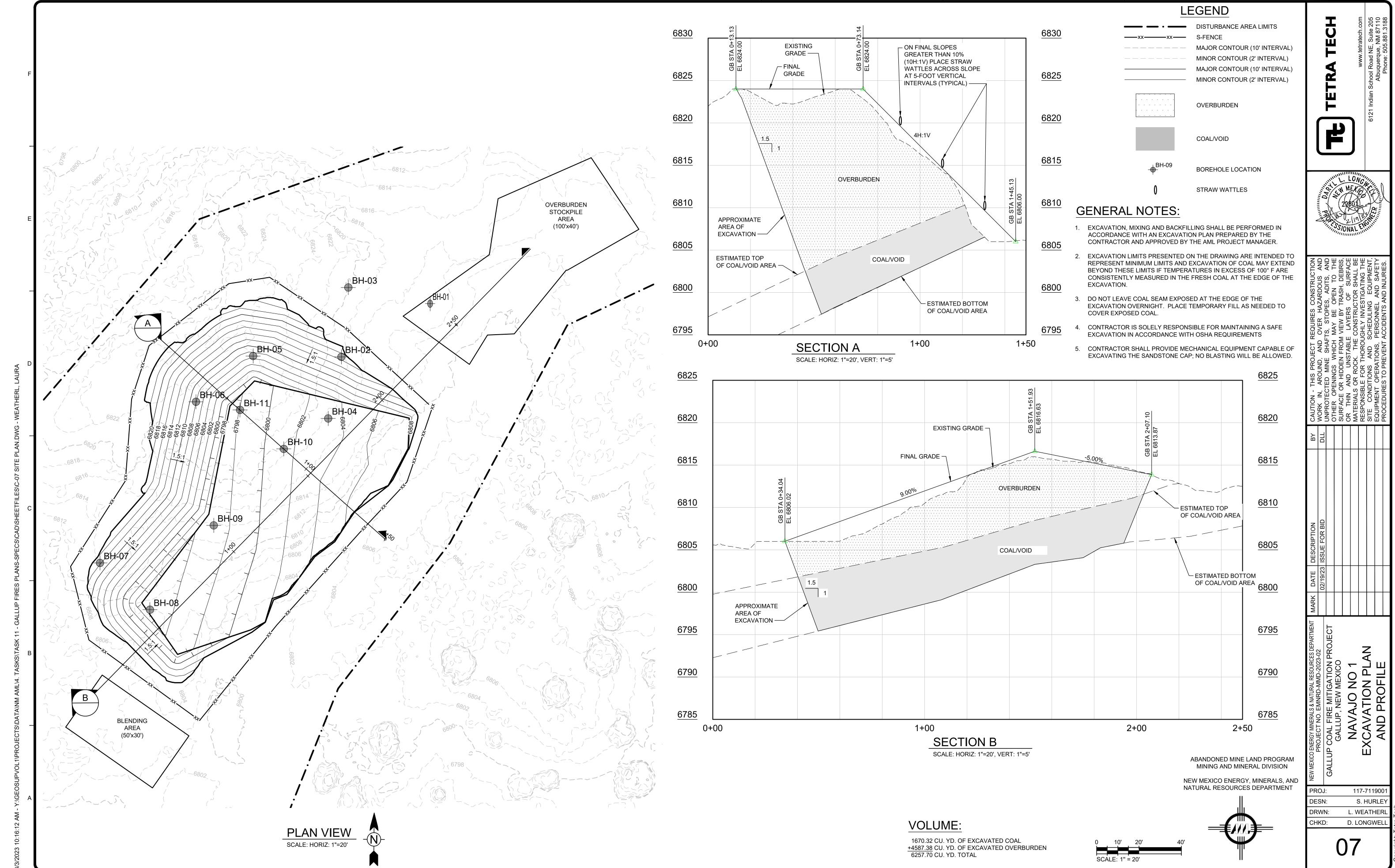
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