



**U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE**

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 3/2/2021

ORM Number: SPA2020-169

Associated JDs: N/A

Review Area Location¹: State/Territory: New Mexico City: Unincorporated County/Parish/Borough: Cibola

Center Coordinates of Review Area: Latitude 35.164620° Longitude -107.299969°

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- There are “navigable waters of the United States” within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- There are “waters of the United States” within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)²

§ 10 Name	§ 10 Size	§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters): ³			
(a)(1) Name	(a)(1) Size	(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):			
(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination
N/A.	N/A.	N/A.	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):			
(a)(3) Name	(a)(3) Size	(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):			
(a)(4) Name	(a)(4) Size	(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	N/A.	N/A.

¹ Map(s)/figure(s) are attached to the AJD provided to the requestor.

² If the navigable water is not subject to the ebb and flow of the tide or included on the District’s list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.

³ A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.



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D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)): ⁴				
Exclusion Name	Exclusion Size		Exclusion ⁵	Rationale for Exclusion Determination
Meyers Draw	10912	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	See Section III. C below for information supporting the exclusion determination.
Arroyo del Valle	1918	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	See Section III. C below for information supporting the exclusion determination.
East Tributary	3490	linear feet	(b)(3) Ephemeral feature, including an ephemeral stream, swale, gully, rill, or pool.	See Section III. C below for information supporting the exclusion determination.
Pit 1	N/A.	N/A.	(b)(9) Water-filled depression constructed/excavated in upland/non-jurisdictional water incidental to mining/construction or pit excavated in upland/non-jurisdictional water to obtain fill/sand/gravel.	See Section III. C below for information supporting the exclusion determination.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

- Information submitted by, or on behalf of, the applicant/consultant: [Aquatic Resources Delineation Report for the St. Anthony Mine Closure Project, Cibola County, New Mexico November 2020](#)

This information is sufficient for purposes of this AJD.

Rationale: [N/A or describe rationale for insufficiency \(including partial insufficiency\).](#)

- Data sheets prepared by the Corps: [Title\(s\) and/or date\(s\).](#)
- Photographs: [Aerial and Other:](#)
- Corps site visit(s) conducted on: [Date\(s\).](#)

⁴ Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.

⁵ Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.



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- Previous Jurisdictional Determinations (AJDs or PJDs): [ORM Number\(s\) and date\(s\)](#).
- Antecedent Precipitation Tool: *provide detailed discussion in Section III.B.*
- USDA NRCS Soil Survey: [January 11, 2020](#)
- USFWS NWI maps: [Title\(s\) and/or date\(s\)](#).
- USGS topographic maps: [NM Moquino 2020](#)

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	N/A.
Other USDA data (specify)	NRCS Ecological site R035XA119NM - Clayey Bottomland
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Sources	A. Park Williams, Edward R. Cook, Jason E. Smerdon, Benjamin I. Cook, John T. Abatzoglou, Kasey Bolles, Seung H. Baek, Andrew M. Badger, Ben Livneh. 2018. Large Contribution from Anthropogenic Warming to an Emerging North American Megadrought. Science. Vol. 368 Issue 6488. Pp. 314-318.

B. Typical year assessment(s): According to the Antecedent Precipitation Tool (APT), July through October is the time of year with the most precipitation over a 30-year rolling period for the review area; and the monsoon season occurs between mid-June and the end of September. However, it should be noted that upon reviewing the ATP results discussed in the next section, this area experiences a highly variable amount of precipitation each year. Due to this lack of a consistent amount of precipitation from year to year for the review area, it is difficult to determine whether the analysis has been conducted during normal, wetter, or drier conditions. Regardless, the results of this AJD are not heavily reliant on the typical year assessment.

It is also worth noting that a recent study by Columbia University notes that the American Southwest is experiencing a historic “megadrought” not seen in centuries. In fact, for several western states, including New Mexico, the last twenty years ranks as the second-driest period in the past 1,200 years (A. Park. Williams, 2018). Based on this data, it seems reasonable that in New Mexico a typical year within the 30-year rolling period is characterized by drought conditions—even severe drought conditions.

C. Additional comments to support AJD: The review area for this AJD includes the location of the St. Anthony Mine Closure Project. The review area is located on private land within a 615.4-acre project site approximately 40 miles west of Albuquerque and 4.6 miles southeast of Seboyeta in Cibola County, New Mexico. United Nuclear Corporation obtained the services of SWCA Environmental Consultants (SWCA) to conduct fieldwork and research to support this AJD, which resulted in the preparation of the Aquatic Resources Delineation Report.

According to information provided by the Natural Resources Conservation Service, the review area has an arid climate with distinct seasonal temperature variations and large annual and diurnal temperature changes characteristic of a continental climate. Precipitation averages 8 to 10



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inches annually; however, deviations of 4 inches or more from the average are common. Approximately 50 percent of the precipitation occurs between July and November, which is the dominant growing season of native plants. Summer precipitation is characterized by high-intensity, short-duration rainstorms. Winter precipitation averages less than one-half inch per month, usually in the form of rain.

There are two predominate soil types present in the review area: Sparank-San Mateo complex (65 percent) and Dumps-Pits complex (30 percent). Sparank-San Mateo complex, which is described as “well drained” with a depth to restrictive feature of more than 80 inches and depth to the water table of more than 80 inches. The soil is characterized as having a low available water capacity and does not flood or pond. A typical profile for Sparank soil consists of 0 to 2 inches of clay loam in the A Horizon, 2 to 60 inches of silty clay loam in the C Horizon, the San Mateo soils consists of 0 to 2 inches of clay loam in the A Horizon, 2 to 29 inches of silty clay loam in the C1 Horizon, and 29 to 60 inches of ratified sandy loam to silty clay loam in the C2 Horizon. The Dumps-Pits complex, which is fragmented material and bedrock left over from mining activity. A typical profile for this soil consists of 0 to 60 inches of fragmental material in the Cr Horizon.

In addition to the report prepared by SWCA, the APT was run for the following dates in conjunction with reviewing satellite imagery of the review area: April 7, 2019, October 1, 2014, January 20, 2013, and December 10, 2004 (see document 2020-169 APT Batch Result St Anthony Mine.pdf and 2020-169 Satellite Images.pdf). The date of April 7, 2019 was selected because of available satellite imagery and the Antecedent Precipitation Condition is listed as “Wetter than Normal”. This date also has satellite imagery of the confluence between the Rio San Jose and the Arroyo Conchas showing surface water in the former but not the latter. The Arroyo Conchas is the waterway that the review area drains to approximately 3.5 miles from the project site. The date of October 1, 2014 was selected because there is satellite imagery available and the APT condition was listed as “Normal Conditions”, and according to the 30-year rolling average is in the time of year with the most precipitation. The satellite imagery for this data also shows surface water within the Rio San Jose but none in the Arroyo Conchas. The dates of January 20, 2013 and December 10, 2004 were selected as both dates fall within the wet season and have satellite imagery available. The date of January 20, 2013 also shows surface water in the Rio San Jose but none in the Arroyo Conchas. The date of December 10, 2004 is listed as “Normal” conditions per the APT. No surface water was observed in the review area on this date.

East Tributary 3,490-foot channel

During fieldwork conducted by SWCA on March 20, 23, and 24, 2020, no evidence of recent flow along the East Tributary was observed, nor were any indicators of seasonal flows present. Photographs B-11 and B-12 in Appendix B of the SWCA’s report depict typical conditions along the channel and demonstrate the lack of a riparian corridor, marginal channel morphology, and presence of upland vegetation within the mapped ordinary high water mark (OHWM); and no adjacent wetlands are present.



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In addition to SWCA's field assessment, the APT was run for the following additional dates in conjunction with reviewing satellite imagery of the review area: January 20, 2013 and December 10, 2004 (see document 2020-169 ATP Batch Result East Tributary.pdf, St. Anthony - East Tributary - Satellite image 2013-01-20.PNG and St. Anthony - East Tributary - Satellite image 2004-12-10.PNG). The date of January 20, 2013 was selected because it is in the wet season with satellite imagery available. The date of December 10, 2004 was selected because it is in the wet season with satellite imagery available and the APT was listed as "Normal Conditions". Additionally, within the previous 30 days there were 5 precipitation events, including one event with over 1 inch of recorded precipitation. No surface water or indication of recent flows were observed in the stream channel for these dates. As such, and in consideration of the other information provided above, it has been determined that this stream channel only experiences flows in response to rain events and, therefore, is ephemeral.

Meyer Draw 10,912-foot channel

Meyer Draw enters the review area on the north edge of the mine site and flows southeast approximately 10,912 feet before it joins with the East Tributary and becomes Arroyo del Valle, which continues to the southeastern boundary of the mine site.

SWCA reported that over the dates of March 20, 23 and 24 of 2020 Meyer Draw contained flows of approximately 0.25–0.5 cubic feet per second (cfs) in portions of the channel along with dry reaches interspersed throughout the site (see Photographs B-1 through B-8, with standing or flowing water more prevalent within its northern end (see Photographs B-1 and B-2). However, it was noted that the water observed within the stream channel is attributable to upstream groundwater pumping with some influence of local precipitation (this is further discussed below). Furthermore, groundwater elevations in proximity to Meyer Draw range from approximately 50 feet at Monitoring Well [MW]-3 to 108 feet at MW-1 below the surface elevation (Intera 2020).

As just mentioned, a major contributing factor to the presence of some surface water in Meyer Draw is groundwater pumping to irrigate fields and overflow from stock ponds for livestock upstream of the review area. Exclusion (7) of the Navigable Waters Protection Rule (NWPR) is for artificially irrigated areas, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease (22338 Federal Register/Vol. 85, No. 77). In the case of Meyer Draw, it would no longer exhibit surface water except in response to storm events if the upstream groundwater pumping ceased.

Regarding whether the pumping of groundwater should be included as base flow, 33 CFR Part 328 states:

"Most perennial and intermittent rivers in the Southwest are groundwater dependent, flowing primarily in a baseflow regime and supported by discharge from a connected regional or alluvial



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aquifer or both. . . [P]art of the baseflow is often sustained or augmented by slow drainage of a shallow alluvial aquifer from past flooding.” (22276 Federal Register / Vol. 85, No. 77).

As stated above, based on monitoring well data the groundwater elevations in proximity to Meyer Draw range from approximately 50 feet to 108 feet below the surface elevation (Intera 2020). As such, it can be concluded that a hydrologic connection to groundwater is not present for the reach of this stream channel within the review area.

Review of satellite imagery from January 20, 2013, which falls within the wet season, showed surface water and ice within the Rio San Jose, which is downstream of the mine site. However, no surface water was present in Meyer Draw. Based on the information provided in SWCA’s report and other information reviewed, it has been determined that Meyer Draw is an ephemeral stream channel.

Arroyo del Valle 1918-foot channel

Arroyo del Valle is in the southeast corner of the review area. It originates at the confluence of Meyer Draw and the East Tributary and flows south to the Arroyo Conchas, which in turn flows into the Rio San Jose approximately 13 miles downstream.

SWCA reported that standing water and minimal flow was observed in the Arroyo del Valle during fieldwork, with that flow terminating near the downstream part of the review area. However, monitoring well data indicates that there is not a connection to groundwater. Located downgradient from Meyer Draw, the presence of surface water in the channel is the result of the upstream pumping of groundwater and precipitation events. As such, Arroyo del Valle is also determined to be an ephemeral stream channel.

Drainages A through E

According to the Aquatic Resources Delineation Report, Drainages A through E were formed from stormwater flows down steep mine slopes with highly erodible soils. Upon examining the photographs in the report, these features do not exhibit a bed and bank and, therefore, are not waters of the U.S (WOTUS).

Pit 1 East and Pit 1 West wetlands

There are two open water areas in Pit One. These are designated as Pit 1 East Wetland and Pit 1 West Wetland in the Aquatic Resources Delineation Report prepared by SWCA. Pit 1 is a closed depression with the open water areas situated approximately 190 feet below the eastern edge of Pit 1; and there is no surface hydrologic connection between the open water areas and Meyer Draw. The ground surface elevation in the current Pit 1 bottom is as much as 100 feet below Meyer Draw, which is the lowest recorded point within the review area. Based on review of



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historical aerial imagery from United States Geological Service on October 1, 1951 and November 11, 1974, Pit 1 was excavated in uplands (see document 2020-169 Historic Aerial Imagery.pdf). Because this depression does not impound jurisdictional waters, and was constructed in uplands as part of mining activities, these wetland features meet the (b)(9) category of exclusions under the NWPR:

“(b)(9) Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel.” 33 C.F.R. 328.3(b)(9).

Conclusion

Based on the information provided in SWCA’s report, soil and water table data, review of aerial imagery, and current regulations, it is determined that the review area does not contain WOTUS.

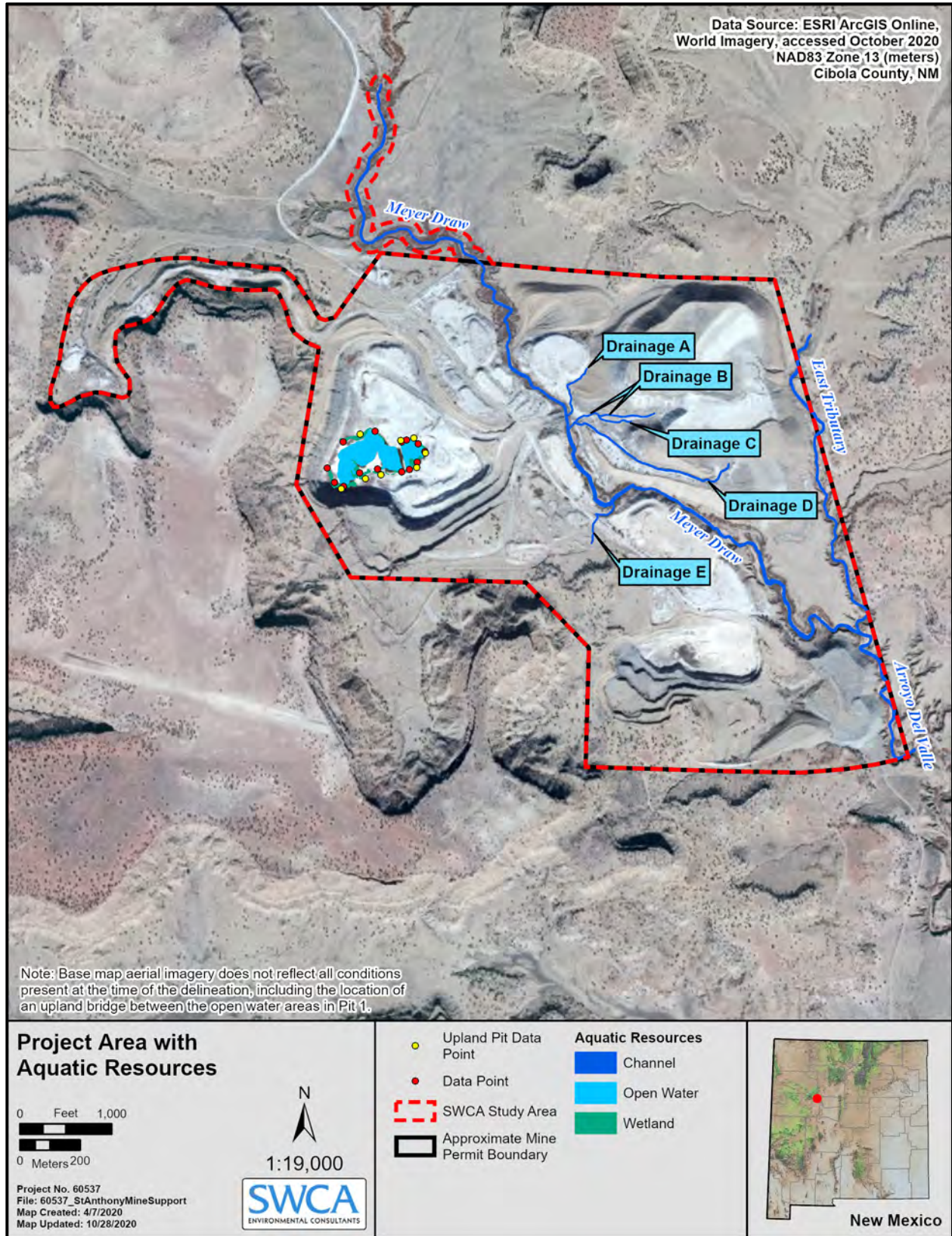


Figure A-2. Site aquatic resources inventory map.

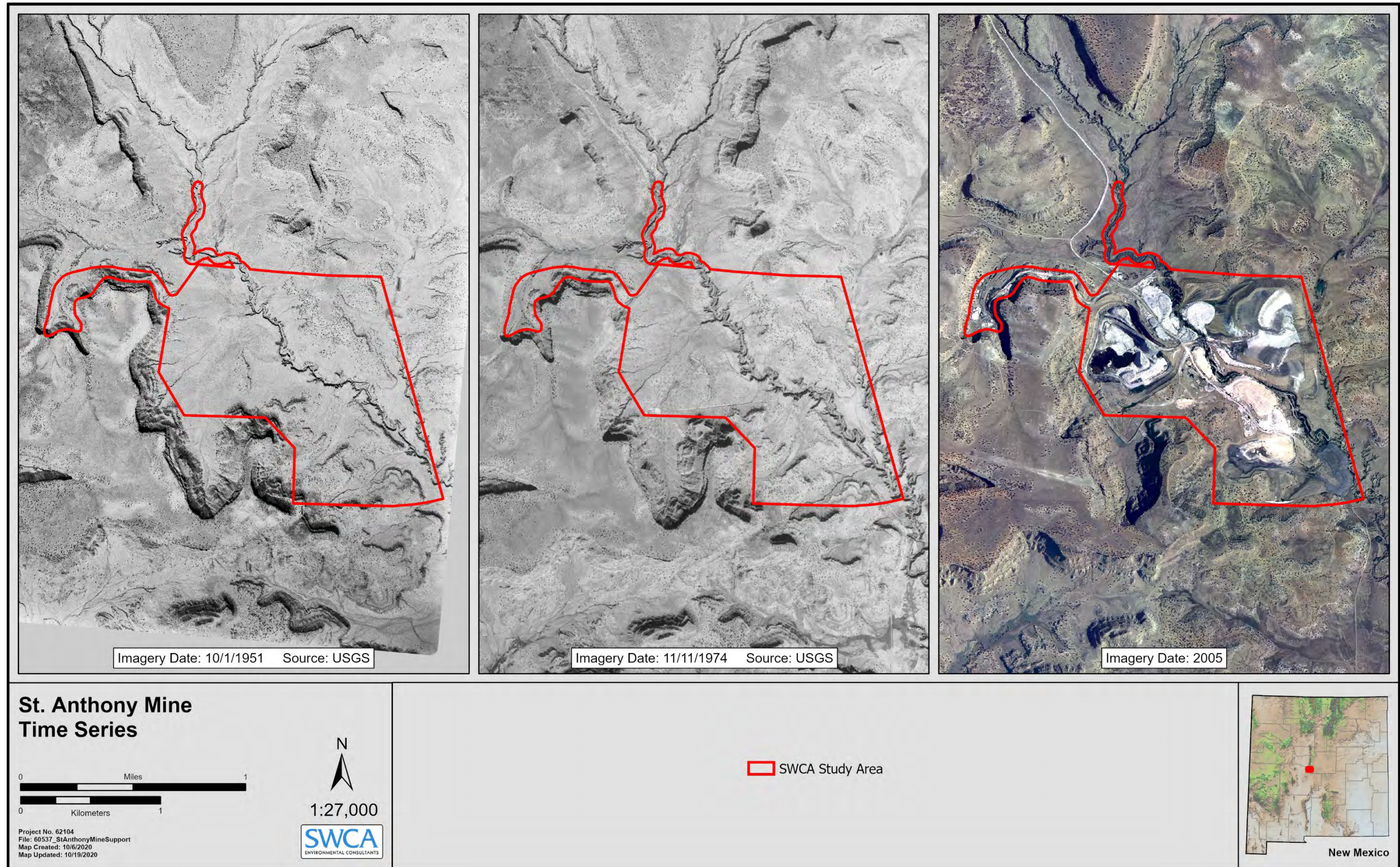


Figure A-5. Historic conditions at the Site.



Photograph B-1. North end of Meyer Draw, facing south.



Photograph B-2. Meyer Draw just inside north of Site, facing south.



Photograph B-3. Meyer Draw where head-cutting starts just below north road crossing.



Photograph B-4. Meyer Draw roughly midway through the Site.



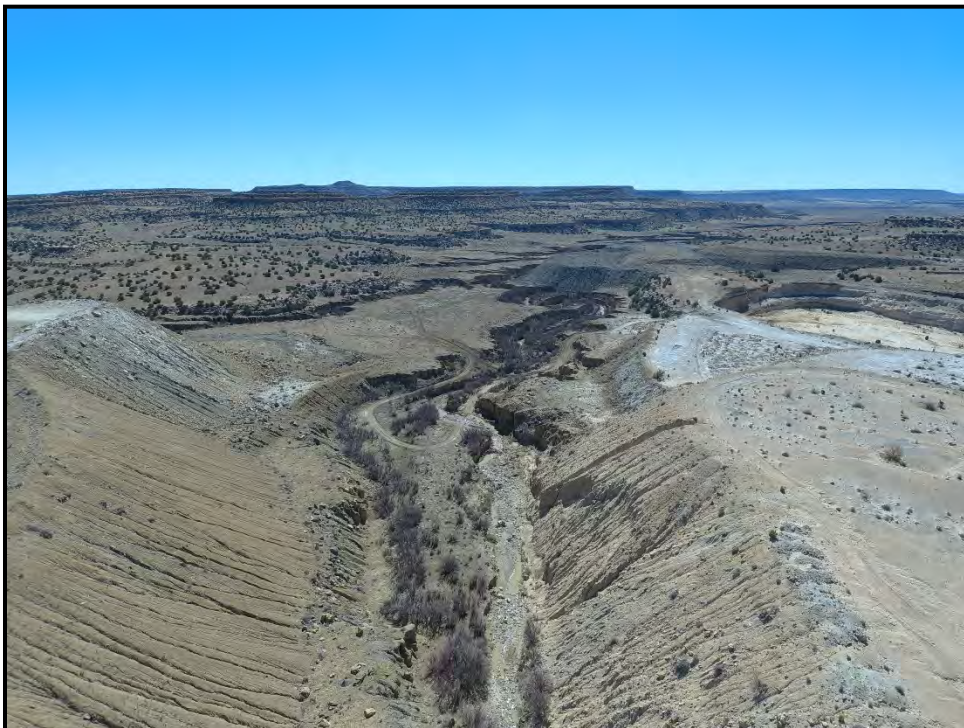
Photograph B-5. Meyer Draw roughly midway through the Site, facing north from roughly 150 feet. Drainage A merges into Meyer Draw from the east.



Photograph B-6. Meyer Draw roughly midway through the Site, facing east.



Photograph B-7. Meyer Draw near the southern road crossing.



Photograph B-8. Meyer Draw roughly midway through the Site, facing south toward the confluence with East Tributary and formation of Arroyo del Valle.



Photograph B-11. East Tributary near confluence with Meyer Draw.



Photograph B-12. Head-cut area at top of the East Tributary.



Photograph B-15. Drainage B, facing northwest.



Photograph B-16. Drainage C, facing northwest.



Photograph B-17. Drainage D, facing north.



Photograph B-18. Overview of Drainages B, C, and D, facing southeast.



Photograph B-19. Drainages A, B, C, and D at their outfalls to Meyer Draw from the east.



Photograph B-20. Drainage E, facing south.



Photograph B-21. Drainage E at the outfall to Meyer Draw.



Photograph B-22. Overview of Drainage E, facing west-northwest.