DEMING MILL & MILL TAILINGS
DEMING, NEW MEXICO

Mining and Minerals Division Permit No. LU009RE

Test Pitting Results 6/01/2022

Locations, Procedures, Data Management and Results

Prepared For:

Mining Act Reclamation Program
Mining and Minerals Division
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1.0 INTRODUCTION

The MMD-approved closeout plan for the Deming Mill and Mill Tailings identified four areas of concern related to exposed tailings on the east side of Peru Mill Road within the permit area. The closeout plan calls for test pitting within these areas to secure information necessary to develop a reclamation plan.

AREAS OF CONCERN

Reclamation will require the covering of exposed tailings on the north slope of the Cypress Tailings. In addition, exposed tailings in an area north of the Cypress Tailing and south of

the Mimbres River and in an area north of the Mimbres River will need to be either removed or covered. Also, a portion of the north bank of the Mimbres River will require removal of exposed tailings and/or covering, stabilization and protection. Test pitting with a backhoe and hand tools will clarify the best options related to covering in place and/or partial removal and consolidation of tailing material.

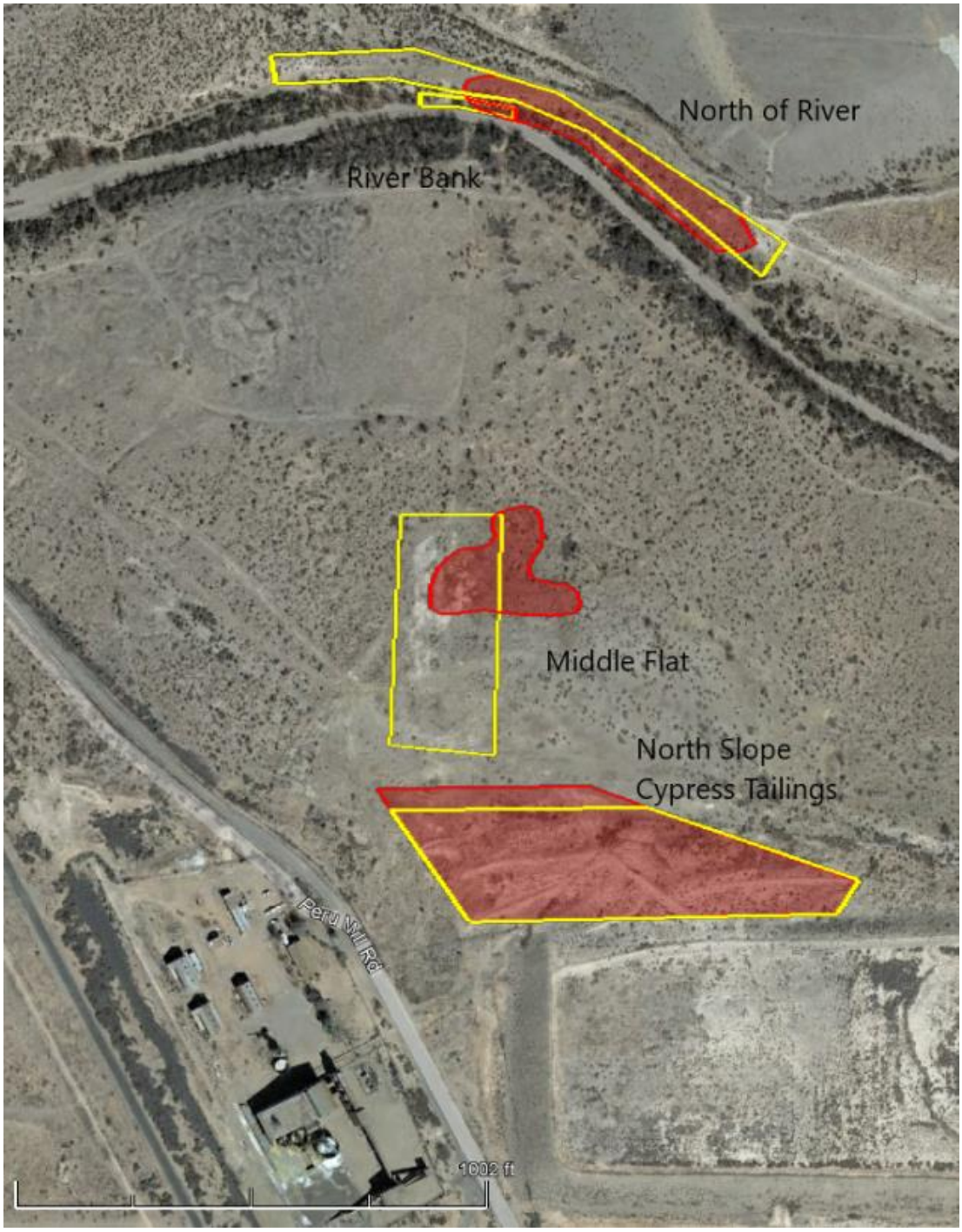
On October 4, 2021, representatives of Geo Southwest, LP (Geo) met with representatives of MMD, NM Environment Department and the NM Surface Water Quality Bureau at Deming. Twenty locations for test pitting were selected and marked. Geo has since engaged the services of Gene Rosenlund of Integrated Geological Services, LLC to assist with the preparation of this plan and with the collection and analysis of the test pitting data.

Nine additional test pitting sites have been selected including 1) one on the Riverbank in an area disturbed by ATV and 4-wheeler traffic, 2) five in the Middle Flat area to determine the depth of the observed tailing and 3) three north of the Cypress Tailings to help determine the boundary of the area to be covered.

During the excavation, it was determined that 4 of the pits originally planned were not necessary. (GEOSW10, GEOSW20, GEOSW21, and GEOSW25). Consultation with onsite representatives of MMD, MN Environmental Department and the NM Surface Water quality Bureau at Deming confirmed that in fact these pits are not needed, and authorization was given to remove them from the study.

2.0 SUMMARY

As a result of this study ample data is now available to assess the requirements for the reclamation of the four areas of concern. Each has unique characteristics. Here is what we have learned from each of the areas of concern.



North of River

The tailings found north of the Mimbres River are typically well sorted dark yellowish orange/brown weakly cemented gypsum bearing fine sand. Some areas show evidence of remobilized tailings mixed with sand and gravel. pH values range from 2.94 to 5.44 with a median value of 3.52 and average of 3.64 with a median thickness of 6 inches and average of 5.57 inches. Tailings are erratic with little lateral continuity and in places are covered with a thin veneer of natural sediments (slope wash or aeolian sand). Tailings are estimated to be present in 1.16 acres at this site.

Riverbank

Limited testing in this area immediately adjacent to the river channel (2 pits) revealed only one site where the tailings are present. Here 15 inches of weakly cemented interbedded fine grained sand tailings mixed with medium to coarse alluvial sand was encounter at the surface, in the bank but not in the river channel. There is little evidence to indicate that the tailings are being transported downstream in the river channel but rather are related to slope wash. It is estimated that only 1,837 square feet of this material is present here.

Middle Flat

Only three pits in this area intersected tailings. The most notable occurrence was in pit GEOSW3 where very well cemented tailings prevented excavation beyond 19 inches. The tailings consisted of 10 inches of well cemented sandstone comprised of tailings overlain by 5 inches of Interbedded loosely cemented light gray and black medium grained sand with root fragments. Further study revealed that the cementing agent here is gypsum. In an adjacent pit, GEOSW5, the tailings covered soil containing root material. Leaching from the tailings above was sufficient to produce 4 inches of soil with a pH of 3.78. This area is estimated to contain 0.98 acres of tailings.

North Slope Cypress Tailings

The goal of pitting in this area was define the northern extension of tailing which have eroded from the Cypress tailings to the south. Three pits established a northern limit by encountering only natural sediments. One pit, GEOSW27, did encounter a sandy soil with abundant roots containing occasional reddish sandy clusters suggesting that trace amounts of limited tailings may be present. The pH was measured at 5.11. It is estimated that 4.53 acres of tailing may be associated with this area.

3.0 PROCEEDURES

The following recommended procedures were used for pit excavation and description.

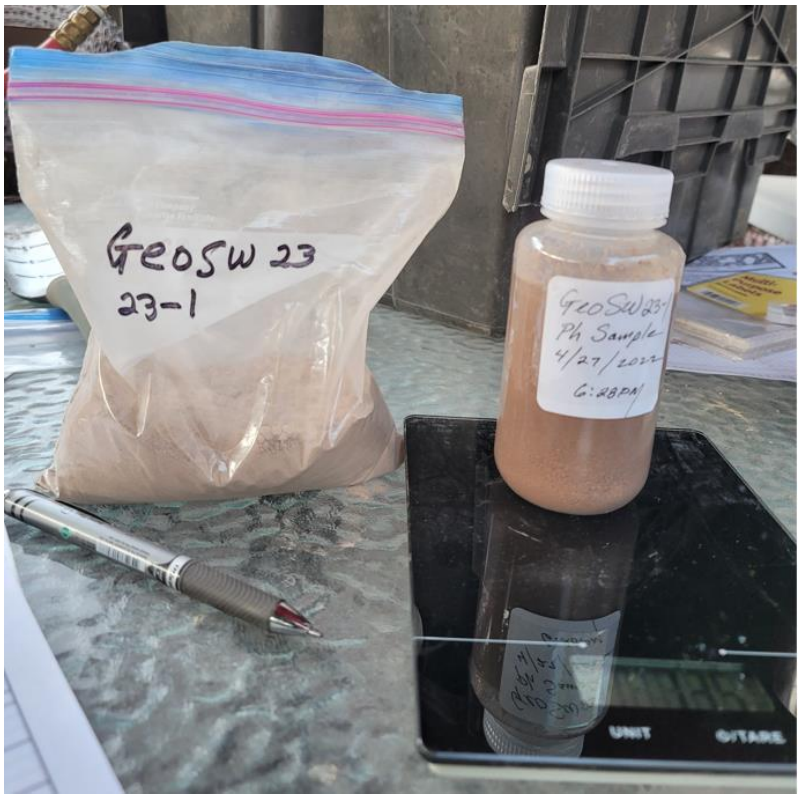
1. Prior to excavation, the pit sites were located and marked by a representative of Geo Southwest, LP using a hand-held GPS unit and the coordinates provided in this plan.
2. Geo Southwest, LP obtained a local subcontractor who provided a backhoe and operator.
3. The pits were excavated to dimensions of at least 3 feet deep, 6 feet long and 4 feet wide.
4. During excavation, the material was segregated by bucketful by in order of extraction and placed adjacent to the pit on soil.
5. One of the pit walls was dug vertical so that the relationship of the materials deposited there were exposed.
6. Gene Rosenlund, Geologist of Integrated Geologic Services, LLC was contracted and provided an in-field description and capture a record of lithologies encountered and thickness of each. **Detailed logs and photographs of each pit may be found in Attachments 1 thru 4**. Criterial items used to identify the tailings were included:
    a. **Grainsize** (fine sand 0.06 mm – 0.2 mm), (Optimum grain size for base and precious metal extraction via flotation is 0.63 mm – 0.125 mm.
    b. **Color**. Other associates have suggested that due to the high concentration

of iron and the observed colors of orange, yellow and red in association with tailings at Deming, color may be useful in tailing identification. The Munsell Color System was applied to the color descriptions to standardize color observations.

c. **Homogeneity**. Tailings were expected to be fine sand with no significant grain size variation. Natural soil will reflect the sorting and varied grain size distribution expected within the fluvial depositional environment of the of the alluvial deposits underlying the areas of interest. Particular attention was applied to identify areas where mixing of soil and tailings has occurred.

d. **Paste pH**. Paste pH is a field screening technique already shown to be useful with the Deming tailings. This method has been suggested by state environmental agencies and was used as an onsite objective test of materials encountered. Paste pH was measured at least once for each test pit, and sometimes at multiple depths within different layers depending on the conditions encountered. The pH testing process was as follows:

    i. Equal amounts, by weight (150 grams), of soil and distilled, deionized water was placed in a 250 ml reagent bottle.



ii. The bottle was capped and shake vigorously a few times.

iii. The mixture was left to stand for 1 minute or more to dissolve the salts in the soil.

iv. The cap was removed the pH meter electrode place into the wet soil slurry.

v. The pH was measured and recorded.

vi. The bottle was recapped and saved for a second pH test after several days if needed.

vii. The pH meter Was calibrated at the beginning of the day before the 1st test, at noon, and midway through the afternoon with pH 4, 7 and 10 buffer solutions.

viii. **Detailed Ph test logs are available in Attachment 5.**

7. Photographs were taken at each pit. A vertical placard showing feet and inches was be placed against the vertical pit wall as photographs were taken which record

the thickness of visually different layers. **Photographs of each pit may be found in Attachments 1 thru 4.**

8. Pits were refilled. Upon completion of the description and sampling of the excavated material it was returned to the pit in reverse order of removal.
9. Pit markers were repositioned at the pre-pit location.
10. Even though the work plan did not require a formal health and safety plan (HASP), some of the elements of a HASP were followed for successful, safe fieldwork. Safety throughout the project. Appropriate personal protective equipment such as reflective vests were worn and communication between the backhoe operator, geologist, inspectors and other people on site during backhoe operation were maintained.

4.0 RESULTS BY AREA OF CONCERN

The results or each area of concern are presented hereafter in detail.

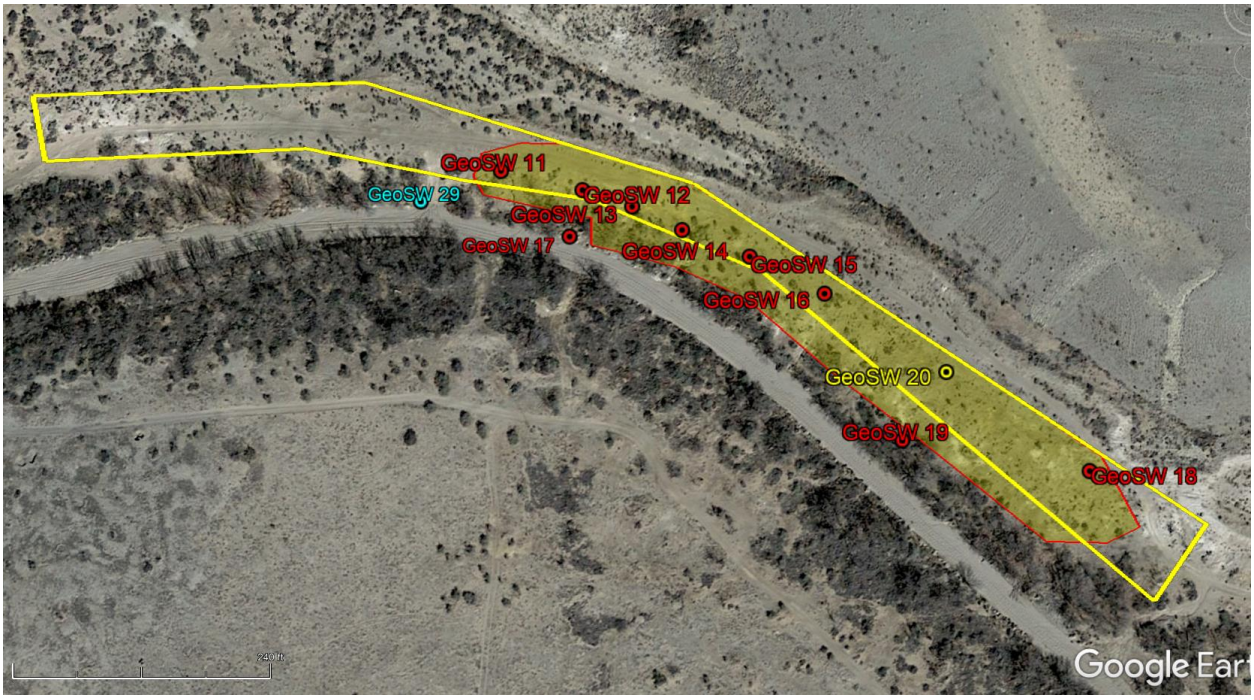
4.1 North of Mimbres River

Corner locations for Area North of River (N RIV BK)

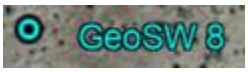
	Degrees, Minutes, Seconds		Decimal Degrees		Universal Transverse Mercator		
Title	Latitude DMS	Longitude DMS	Latitude DD	Longitude DD	Northing	Easting	Description
North of River 1	32°17'24.21"N	107°47'16.67"W	32.290059	-107.787964	3576001.23	237449.50	Poly Area of Concern
North of River 2	32°17'24.34"N	107°47'13.09"W	32.290094	-107.786969	3576002.80	237543.28	Poly Area of Concern
North of River 3	32°17'23.42"N	107°47'9.52"W	32.289838	-107.785977	3575972.03	237635.96	Poly Area of Concern
North of River 4	32°17'20.29"N	107°47'3.94"W	32.288971	-107.784429	3575871.81	237779.48	Poly Area of Concern
North of River 5	32°17'19.59"N	107°47'4.51"W	32.288775	-107.784585	3575850.63	237764.00	Poly Area of Concern
North of River 6	32°17'22.60"N	107°47'8.75"W	32.289611	-107.785764	3575946.24	237655.46	Poly Area of Concern
North of River 7	32°17'23.27"N	107°47'10.62"W	32.289796	-107.786283	3575968.15	237607.06	Poly Area of Concern
North of River 8	32°17'23.73"N	107°47'13.71"W	32.289926	-107.787142	3575984.43	237526.57	Poly Area of Concern
North of River 9	32°17'23.61"N	107°47'16.54"W	32.289893	-107.787928	3575982.66	237452.42	Poly Area of Concern

Test Pit locations for the Area north of the Mimbres River (N RIV BK).

	Degrees, Minutes, Seconds		Decimal Degrees		Universal Transverse Mercator		
Title	Latitude DMS	Longitude DMS	Latitude DD	Longitude DD	Northing	Easting	Description
GeoSW 11	32°17'23.55"N	107°47'11.57"W	32.289874	-107.786548	3575977.32	237582.32	Test Pit
GeoSW 12	32°17'23.37"N	107°47'10.69"W	32.289826	-107.786302	3575971.41	237605.34	Test Pit
GeoSW 13	32°17'23.23"N	107°47'10.16"W	32.289786	-107.786156	3575966.55	237619.06	Test Pit
GeoSW 14	32°17'23.02"N	107°47'9.62"W	32.289729	-107.786006	3575959.88	237633.03	Test Pit
GeoSW 15	32°17'22.76"N	107°47'8.86"W	32.289656	-107.785794	3575951.26	237652.71	Test Pit
GeoSW 16	32°17'22.43"N	107°47'8.04"W	32.289563	-107.785568	3575940.45	237673.79	Test Pit
GeoSW 17	32°17'22.96"N	107°47'10.84"W	32.289710	-107.786346	3575958.61	237600.94	Test Pit
GeoSW 18	32°17'20.81"N	107°47'5.17"W	32.289115	-107.784769	3575888.79	237747.75	Test Pit
GeoSW 19	32°17'21.10"N	107°47'7.21"W	32.289195	-107.785337	3575899.04	237694.48	Test Pit
GeoSW 20	32°17'21.71"N	107°47'6.72"W	32.289363	-107.785200	3575917.33	237707.91	Test Pit



Pit not excavated



Pit with no tailings present

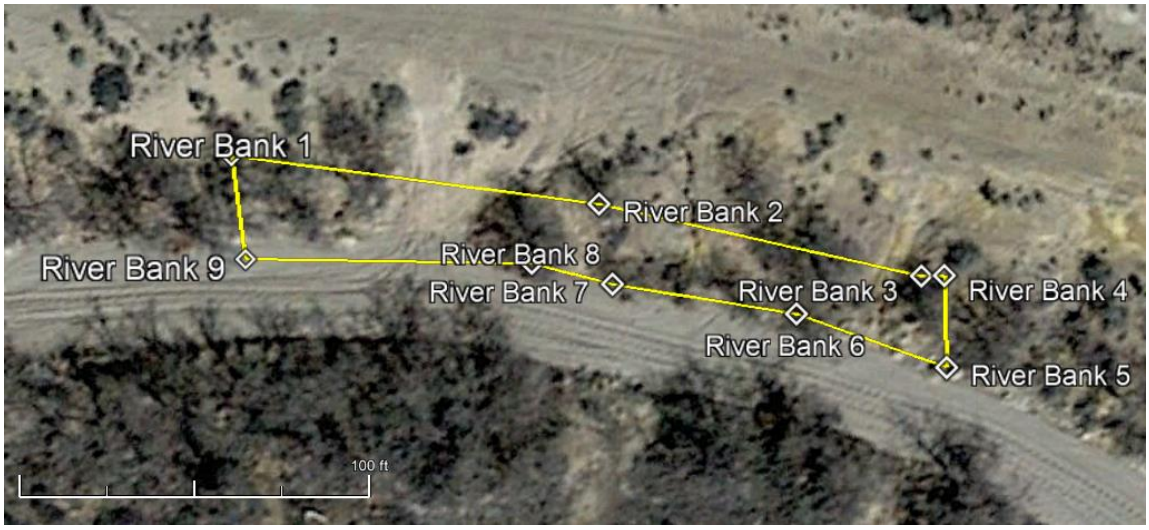
Pit with tailings present

Estimated area with tailings present (1.16 Acres)

Test Pit Results for the Area north of the Mimbres River (N RIV BK).

Study Area	Sample No.	Material Classification	Ph	Interval Sampled (Inches)	Munsell Rock Color	Sorting	Grain Size	Description
N RIV BK	GEOSW11-2	Tailings	3.51	9 - 21	Dark yellowish orange 10YR 6/6	Poorly sorted	coarse to fine sand 70% medium gravel 20+%	Composite of tailings and sandy gravel indicating a mixture of tailings and natural sediments. No gypsum
N RIV BK	GEOSW11-3	Natural Sediments	6.15	21 - 36	Pale yellowish brown 10YR 6/2	Very well sorted	Silt	Very well sorted, dense silt
N RIV BK	GEOSW12-1	Tailings	5.44	0 - 6	Dark yellowish orange 10YR 6/6	Well Sorted	Fine sand	Weakly cemented fine grained sand tailings. Minor gypsum
N RIV BK	GEOSW13-1	Tailings	4.02	0 - 8	Dark yellowish orange 10YR 6/6	Well Sorted	Fine sand	Tailings, moderately cemented fine grained sand. Cementing agent is gypsum
N RIV BK	GEOSW14-1	Tailings	3.52		Dark yellowish orange 10YR 6/6	Well sorted	Fine sand	Tailings, moderately cemented fine grained sand with gypsun micro clusters. (0.5mm)
N RIV BK	GEOSW15-1	Tailings	3.55	3 - 5	Dark yellowish orange 10yr 6/2	Well sorted	Fine sand	Tailings, Very fine sand with occasional gravel. No gypsum
N RIV BK	GEOSW16-1	Tailings	3.09	3 - 6	Dark yellowish brown 1-YR 6/6	Well sorted	Fine sand	Tailings, fine sand, no gypsum
N RIV BK	GEOSW16-2	Natural Sediments	6.48	6 - 36	Pale yellowish brown 10yr 6/2	Moderately sorted	Fine sand 50% silt 50%	Silty sand, massive, weakly bedded with less than 5% fine gravel
N RIV BK	GEOSW18-1	Tailings	2.95	0 - 5	Dark yellowish orange 10yr 6/2	Well Sorted	Fine sand	Tailings, fine sand, weakly cemented, no gypsum.
N RIV BK	GEOSW19-1	Tailings	2.94	0 - 5	Dark yellowish orange 10yr 6/6	Moderately sorted	Fine sand	Tailings, fine sand, weakly cemented, w/gypsum. (1 mm sand gypsum clusters)

4.2 Riverbank

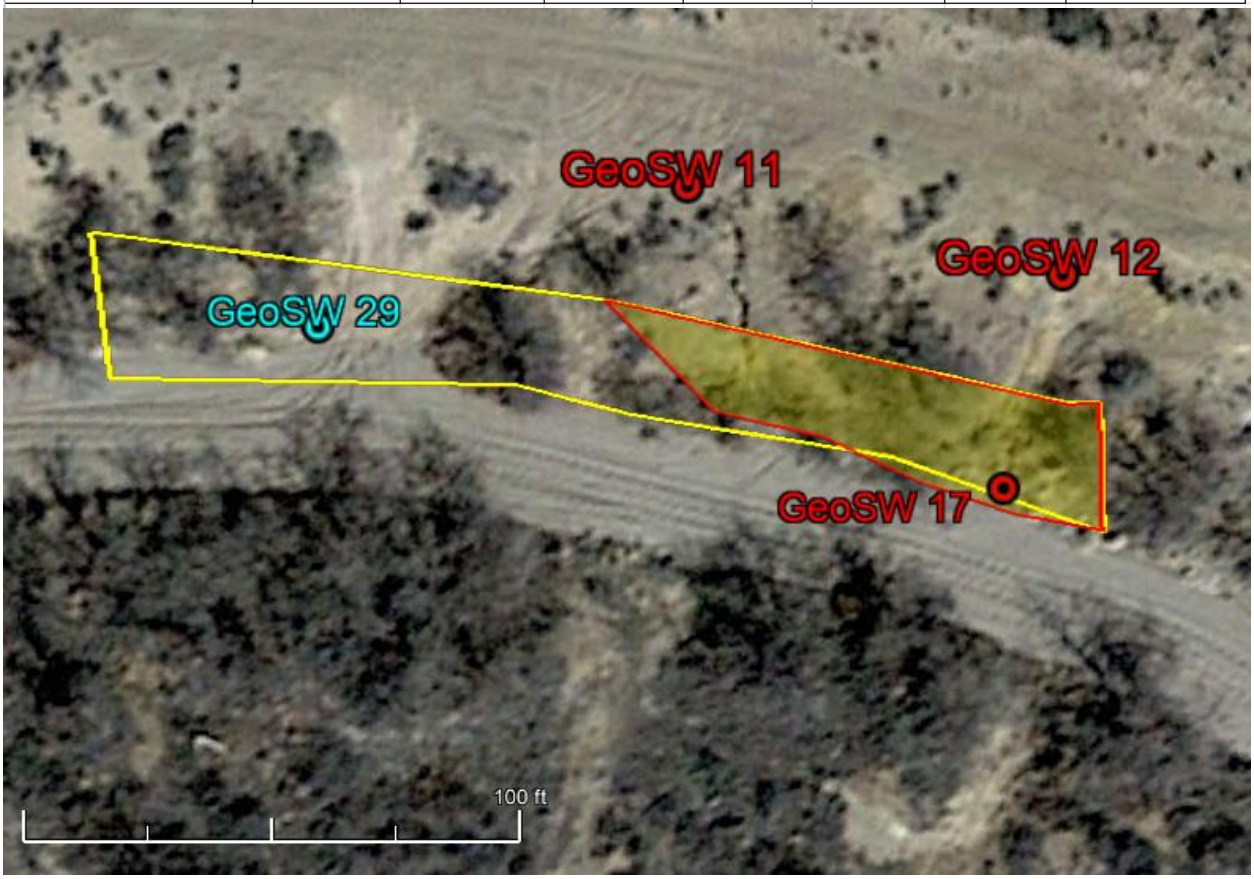


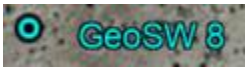
Corner Locations for Riverbank Area (RIV BK)

	Degrees, Minutes, Seconds		Decimal Degrees		Universal Transverse Mercator		
Title	Latitude DMS	Longitude DMS	Latitude DD	Longitude DD	Northing	Easting	Description
River Bank 1	32°17'23.46"N	107°47'12.99"W	32.289849	-107.786942	3575975.62	237545.19	Poly Area of Concern
River Bank 2	32°17'23.33"N	107°47'11.76"W	32.289814	-107.786601	3575970.78	237577.28	Poly Area of Concern
River Bank 3	32°17'23.13"N	107°47'10.68"W	32.289759	-107.786299	3575963.88	237605.38	Poly Area of Concern
River Bank 4	32°17'23.12"N	107°47'10.58"W	32.289755	-107.786271	3575963.51	237607.99	Poly Area of Concern
River Bank 5	32°17'22.87"N	107°47'10.60"W	32.289687	-107.786279	3575955.82	237607.26	Poly Area of Concern
River Bank 6	32°17'23.01"N	107°47'11.09"W	32.289724	-107.786415	3575960.46	237594.55	Poly Area of Concern
River Bank 7	32°17'23.08"N	107°47'11.70"W	32.289745	-107.786584	3575963.03	237578.65	Poly Area of Concern
River Bank 8	32°17'23.14"N	107°47'11.99"W	32.289759	-107.786665	3575965.08	237571.11	Poly Area of Concern
River Bank 9	32°17'23.18"N	107°47'12.93"W	32.289773	-107.786924	3575966.95	237546.54	Poly Area of Concern

Test Pit locations for Riverbank Area along the Mimbres River (RIV BK).

	Degrees, Minutes, Seconds		Decimal Degrees		Universal Transverse Mercator		
Title	Latitude DMS	Longitude DMS	Latitude DD	Longitude DD	Northing	Easting	Description
GeoSW 17	32°17'22.96"N	107°47'10.84"W	32.289710	-107.786346	3575958.61	237600.94	Test Pit
GeoSW 29	32°17'23.28"N	107°47'12.44"W	32.289800	-107.786789	3575969.70	237559.44	Additional Test Pit





Pit with no tailings present

Pit with tailings present

Estimated area with tailings present (1,837 square feet)

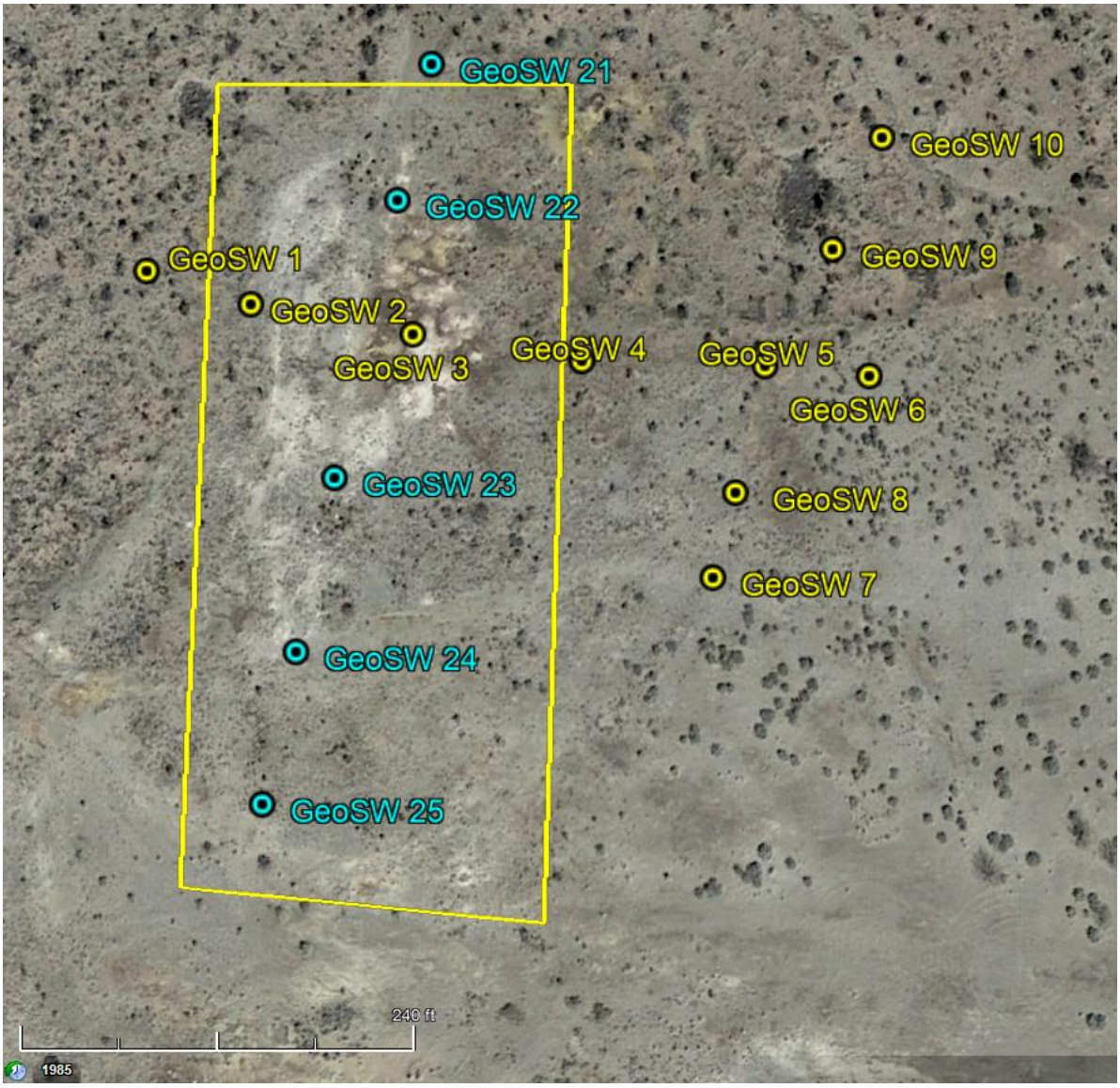
Test Pit Results for Riverbank Area along the Mimbres River (RIV BK).

Study Area	Sample No.	Material Classification	Ph	Interval Sampled (Inches)	Munsell Rock Color	Sorting	Grain Size	Description
RIV BK	GEOSW17-1	Tailings	4.80	0 - 11	Dark yellowish orange 10YR 6/6	Well sorted	Medium to fine sand	Weakly cemented, Interbedded fine grained tailings and medium to coarse alluvial sand. Micro Sand/gypsum clusters
RIV BK	GEOSW17-2	Tailings	3.24	11 - 15	Pale brown 5YR 5/2	Well sorted	Fine Sand	Tailings, weakly cemented fine sand, with gypsum.
RIV BK	GEOSW17-3	Natural Sediments	6.78	16 - 60	Pale yellowish brown 10YR 6/2	Well sorted	Silt	Massive well compacted silty sand with no pebbles or gravel.
RIV BK	GEOSW29-1	Natural Sediments	6.49	0 - 8	Pale yellowish brown 10YR 6/2	Poorly sorted	Medium sand & Medium gravel	Bedded sand and gravel. (slope wash)
RIV BK	GEOSW29-2	Natural Sediments	6.93	8 - 61	Yellowish gray 5Y 7/2	Moderately sorted	Fine sand 60% silt 40%	Silty sand, massive, weakly bedded with less than 5% fine gravel

4.3 Middle Flat

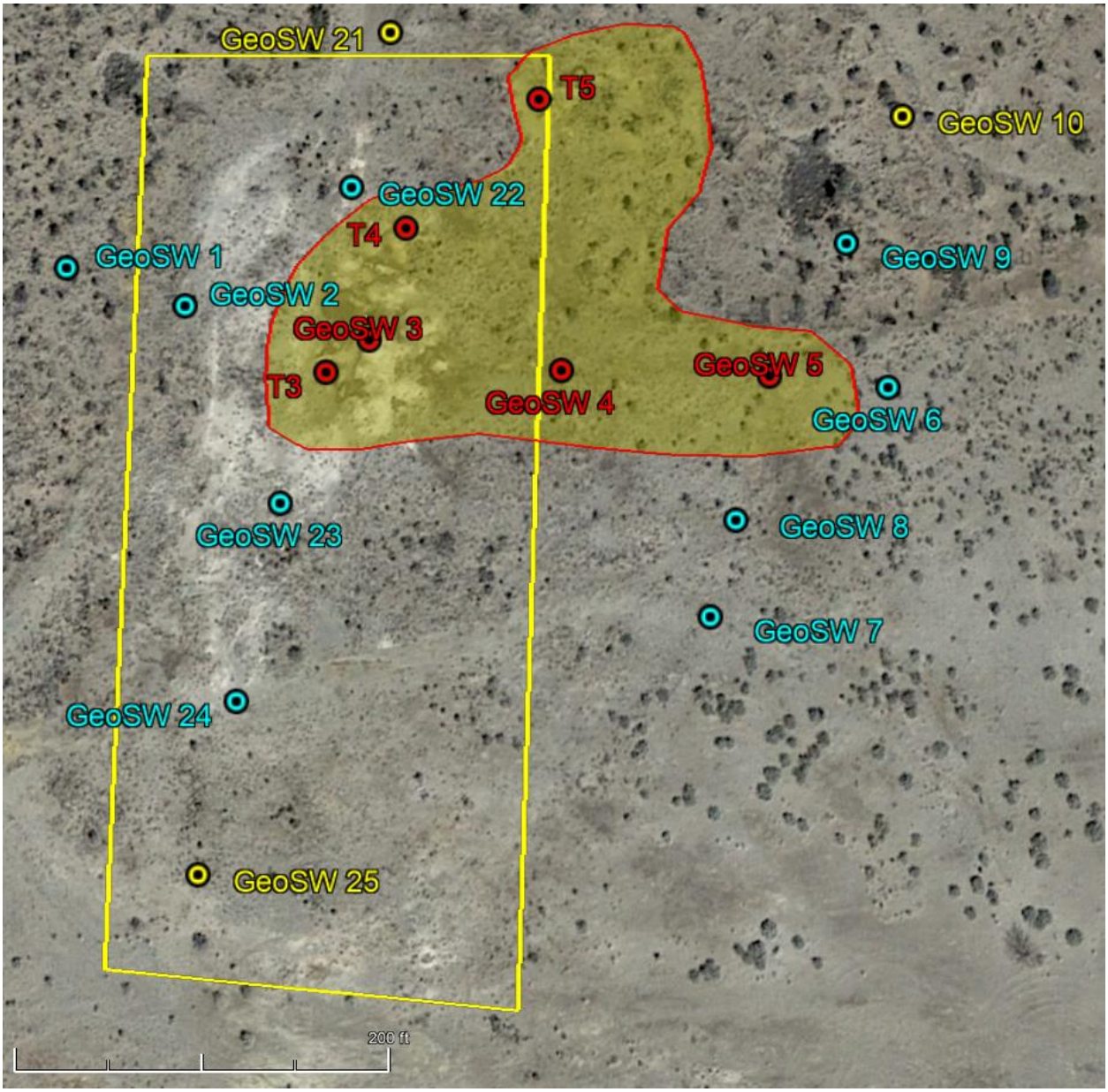
Corner Locations for Mid Flat Area (MID FLAT)

	Degrees, Minutes, Seconds		Decimal Degrees		Universal Transverse Mercator		
Title	Latitude DMS	Longitude DMS	Latitude DD	Longitude DD	Northing	Easting	Description
Flat Area Between CY&RV 1	32°17'14.60"N	107°47'13.45"W	32.287389	-107.787071	3575702.98	237526.06	Poly Area of Concern
Flat Area Between CY&RV 2	32°17'14.60"N	107°47'10.94"W	32.287388	-107.786372	3575701.28	237591.74	Poly Area of Concern
Flat Area Between CY&RV 3	32°17'9.57"N	107°47'11.14"W	32.285991	-107.786428	3575546.45	237582.48	Poly Area of Concern
Flat Area Between CY&RV 4	32°17'9.78"N	107°47'13.72"W	32.286051	-107.787145	3575554.68	237515.13	Poly Area of Concern



Proposed Test Pit Locations for the Mid Flat Area (MID FLAT)

	Degrees, Minutes, Seconds		Decimal Degrees		Universal Transverse Mercator		
Title	Latitude DMS	Longitude DMS	Latitude DD	Longitude DD	Northing	Easting	Description
GeoSW 1	32°17'13.49"N	107°47'13.95"W	32.287080	-107.787208	3575669.11	237512.13	Test Pit
GeoSW 2	32°17'13.29"N	107°47'13.21"W	32.287026	-107.787003	3575662.57	237531.31	Test Pit
GeoSW 3	32°17'13.11"N	107°47'12.06"W	32.286975	-107.786684	3575656.10	237561.15	Test Pit
GeoSW 4	32°17'12.95"N	107°47'10.86"W	32.286931	-107.786349	3575650.46	237592.57	Test Pit
GeoSW 5	32°17'12.92"N	107°47'9.56"W	32.286923	-107.785988	3575648.69	237626.58	Test Pit
GeoSW 6	32°17'12.86"N	107°47'8.82"W	32.286905	-107.785783	3575646.21	237645.87	Test Pit
GeoSW 7	32°17'11.65"N	107°47'9.93"W	32.286570	-107.786092	3575609.75	237615.75	Test Pit
GeoSW 8	32°17'12.16"N	107°47'9.77"W	32.286710	-107.786047	3575625.21	237620.40	Test Pit
GeoSW 9	32°17'13.62"N	107°47'9.08"W	32.287118	-107.785856	3575669.97	237639.59	Test Pit
GeoSW 10	32°17'14.29"N	107°47'8.73"W	32.287303	-107.785759	3575690.25	237649.29	Test Pit
GeoSW 21	32°17'14.74"N	107°47'11.90"W	32.287429	-107.786639	3575706.24	237566.73	Additional Test Pit
GeoSW 22	32°17'13.93"N	107°47'12.14"W	32.287202	-107.786705	3575681.45	237559.80	Additional Test Pit
GeoSW 23	32°17'12.25"N	107°47'12.58"W	32.286737	-107.786828	3575630.00	237546.94	Additional Test Pit
GeoSW 24	32°17'11.21"N	107°47'12.88"W	32.286448	-107.786912	3575598.16	237538.26	Additional Test Pit
GeoSW 25	32°17'10.31"N	107°47'13.13"W	32.286198	-107.786981	3575570.61	237531.00	Additional Test Pit



Test Pit Results for the Mid Flat Area (MID FLAT)

Pit not excavated

Pit with no tailings present

Pit with tailings present

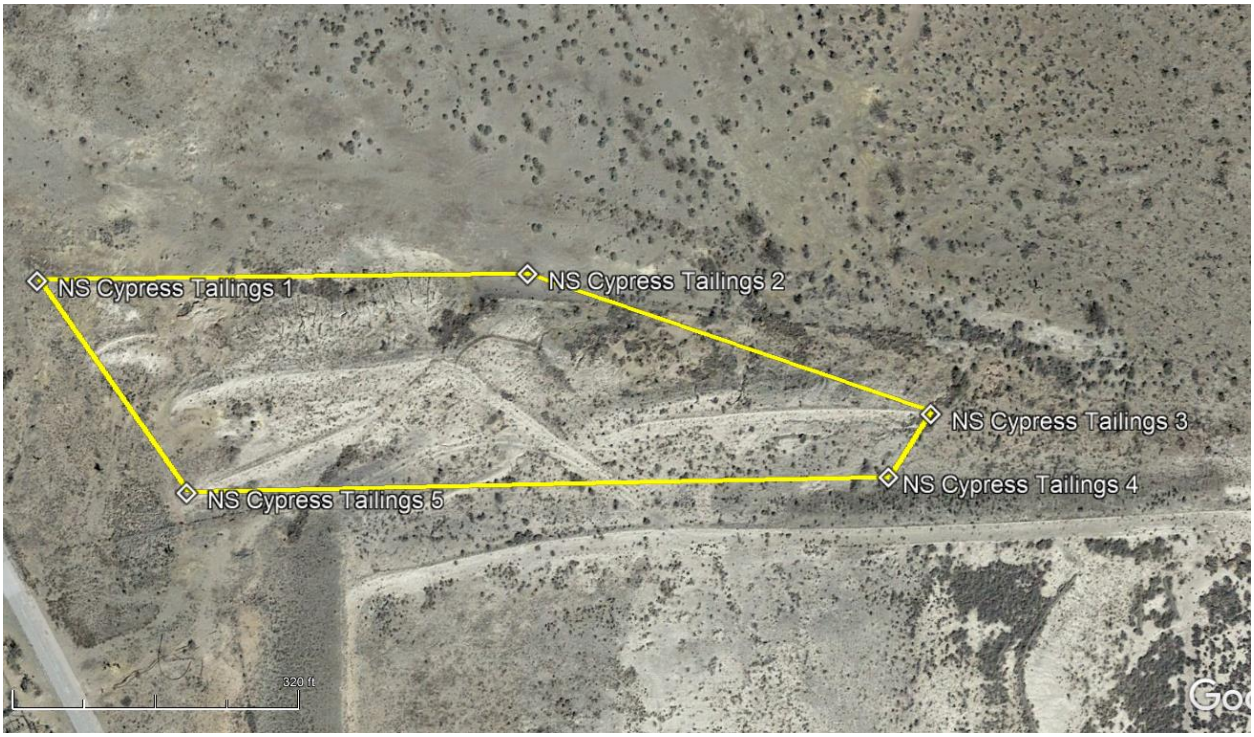
Tailings exposed at surface

Estimated area with tailings present (0.98 Acres)

Test Pit Results for the Mid Flat Area (MID FLAT)

Study Area	Sample No.	Material Classification	Ph	Interval Sampled (Inches)	Munsell Rock Color	Sorting	Grain Size	Description
Mid Flat	GEOSW1-1	Natural Sediments	6.25	0 - 6	Yellowish Gray 5Y 7/2	Well Sorted	Fine Sand	Fine grained sandy soil with root debris. Top two inches is wind blown sand with clumps of roots associated with plants.
Mid Flat	GEOSW2-1	Natural Sediments	7.21	0 - 5	Grayish Blue 5PB 5/2	Poorly Sorted	Fine Grained sand 30%, Fine gravel 70%	Loosely cemented fine sand with pebble sized (1mm) concretions. Grass roots in top 1 inch
Mid Flat	GEOSW2-2	Natural Sediments	6.88	M	Pale yellowish brown 10YR 6/2	Well Sorted	85% Fine to medium grained sand with 15% medium grained gravel	Medium sand with medium grained gravel with occasional pebble up to 50 mm.
Mid Flat	GEOSW3-1	Natural Sediments	7.03	0 - 4	Moderate orange pink 5YR 8/4	Poorly sorted	Fine sand	Loosely cemented fine sand forming 10 mm sand concretions with root fragments.
Mid Flat	GEOSW3-2	Tailings	3.85	4 - 9	N1 Black and N7 light gray	Well Sorted	Medium grained sand	Interbedded loosely cemented light gray and black medium grained sand with root fragments
Mid Flat	GEOSW3-3	Tailings	2.65	9 - 19	Dark yellowish orange 10YR 6/6	Very well sorted	Fine sand	Well cemented sandstone comprised of tailings. To hard to dig with backhoe. A second pit was excavated 20 feet to the north where the same hard well cemented tailings were intersected. Further study revealed that the cementing agent is gypsum.
Mid Flat	GEOSW4-1	Tailings	4.17	0 - 3	dark yellowish orange 10yr 6/2	Moderately Sorted	Fine Sand	Tailings, fine sand, weakly cemented. No gypsum
Mid Flat	GEOSW4-2	Tailings	4.48	3 - 12	Moderate yellowish brown 10YR 5/4	Well Sorted	Fine Sand 90% fine gravel 10%	Fine sand with minor fine gravel. Very little or no gypsum.
Mid Flat	GEOSW4-3	Natural Sediments	7.89	12 -25	Moderate Yellowish Brown 10YR 5/4	Well Sorted	Fine Sand 80%, Coarse Sand & Fine gravel 20%	Fine sand with minor fine gravel, graded bedding
Mid Flat	GEOSW5-1	Tailings	3.64	0 - 4	Dark yellowish orange 10yr 6/2	Well Sorted	Fine Sand 85% fine gravel 15%	Weakly cemented tailings, Very fine sand with occasional gravel with gypsum crystals
Mid Flat	GEOSW5-2	Tailings	3.78	4 -8	Moderate brown 5YR 3/4	Well Sorted	Fine Sand	Weakly cemented sandy soil with abundant carbon plant remnants. No Gypsum
Mid Flat	GEOSW6-1	Natural Sediments	6.54	0 - 6	Moderate Pink 5R 7/4	Well Sorted	Fine sand	Fine grained sandy soil with root mat and organic debris.
Mid Flat	GEOSW6-2	Natural Sediments	6.71	6 - 27	Moderate Pink 5R 7/4	Moderately Sorted	Fine Grained 90%, fine gravel 10%	Fine grained sand with fine gravel pebbles
Mid Flat	GEOSW7-1	Natural Sediments	7.81	0 - 5	Medium yellowish brown 10YR 5/4	Well sorted	Medium sand	Sandy Soil with minor organics
Mid Flat	GEOSW8-1	Natural Sediments	6.42	0 - 6	Moderate yellowish brown 10YR 5/4	Poorly sorted	Medium fine sand 80% medium gravel 20%	Fine to medium grained soil with abundant root masses
Mid Flat	GEOSW9-1	Natural Sediments	6.45	0 - 7	Moderate yellowish brown 10YR 5/4	Well sorted	Fine sand	Sandy soil with roots
Mid Flat	GEOSW9-2	Natural Sediments	6.88	7 - 36	Dark yellowish brown 10YR 4/2	Well sorted	Fine sand	Massive fine grained sand with occasional fine grained pebble.
Mid Flat	GEOSW22-1	Natural Sediments	6.26	0 - 8	Pale yellowish brown 10YR 6/2	Moderately well sorted	Fine grained 95% fine gravel 5%	Sand with abundant root fragments occasional spots of tailings
Mid Flat	GEOSW22-2	Natural Sediments	6.65	8 - 27	Pale yellowish brown 10YR 6/2	Moderately sorted	Fine grained 95% fine gravel 5%	Sand with root fragments
Mid Flat	GEOSW23-1	Natural Sediments	6.79	0 - 6	Very pale orange 10YR 8/2	Very well sorted	Silt	Bed of silt covering the surface
Mid Flat	GEOSW24-1	Natural Sediments	6.63	0 - 5	Moderate Pink 5R 7/4	Well sorted	Fine sand	Sandy soil with abundant roots
Mid Flat	GEOSW24-2	Natural Sediments	6.81	5 - 15	Pale yellowish brown 10YR 6/2	Well sorted	Fine grained 95% fine gravel 5%	Sand with root fragments

4.4 North of Cypress Tailings

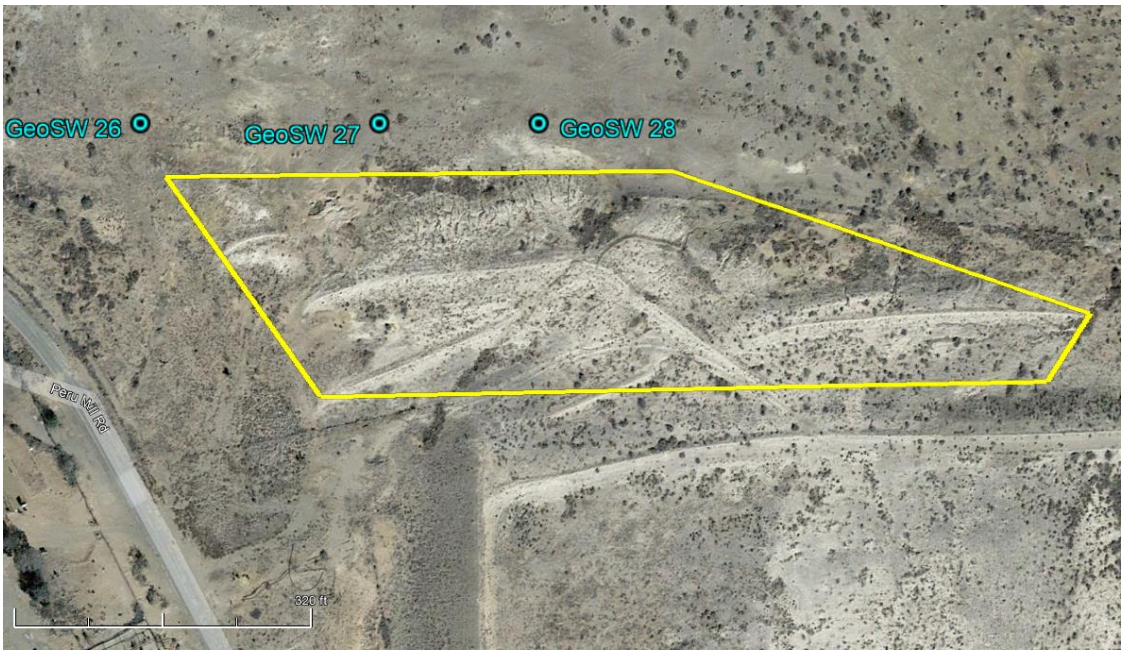


Corner Locations for the area north of the Cypress Tailings (CYP N)

	Degrees, Minutes, Seconds		Decimal Degrees		Universal Transverse Mercator		
Title	Latitude DMS	Longitude DMS	Latitude DD	Longitude DD	Northing	Easting	Description
NS Cypress Tailings 1	32°17'8.42"N	107°47'13.69"W	32.285672	-107.787137	3575512.76	237514.83	Poly Area of Concern
NS Cypress Tailings 2	32°17'8.48"N	107°47'7.34"W	32.285689	-107.785372	3575510.29	237681.05	Poly Area of Concern
NS Cypress Tailings 3	32°17'6.96"N	107°47'2.09"W	32.285268	-107.783915	3575459.90	237817.22	Poly Area of Concern
NS Cypress Tailings4	32°17'6.24"N	107°47'2.63"W	32.285068	-107.784064	3575438.08	237802.51	Poly Area of Concern
NS Cypress Tailings 5	32°17'6.08"N	107°47'11.75"W	32.285023	-107.786597	3575439.35	237563.72	Poly Area of Concern

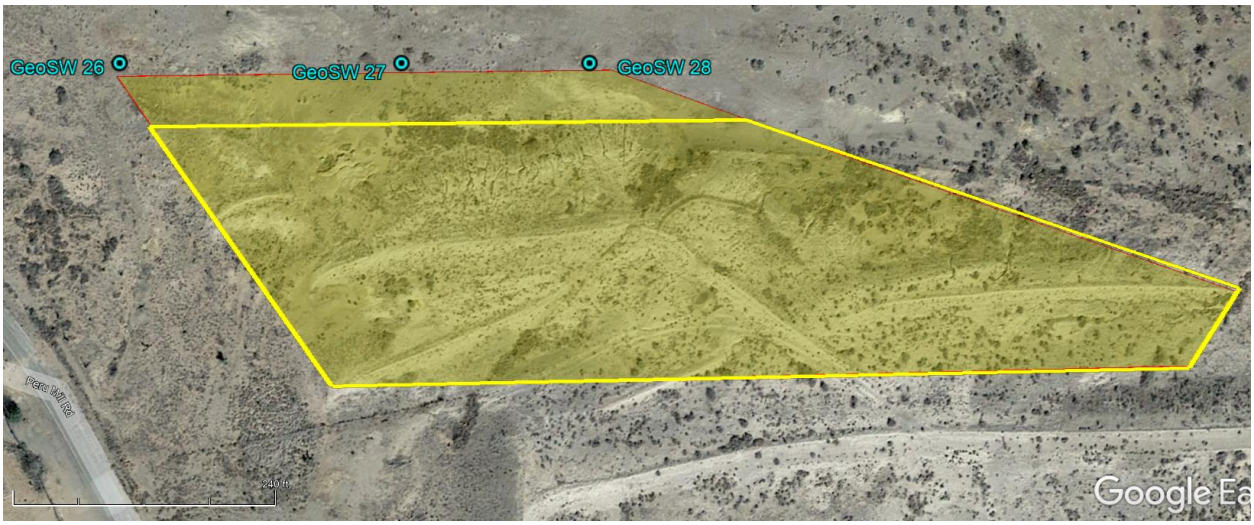
Proposed Pit Locations for the area north of the Cypress Tailings (CYP N)

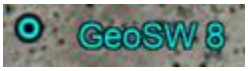
	Degrees, Minutes, Seconds		Decimal Degrees		Universal Transverse Mercator		
Title	Latitude DMS	Longitude DMS	Latitude DD	Longitude DD	Northing	Easting	Description
GeoSW 26	32°17'8.29"N	107°47'12.52"W	32.285637	-107.786811	3575507.96	237545.34	Additional Test Pit
GeoSW 27	32°17'8.35"N	107°47'10.16"W	32.285652	-107.786156	3575508.20	237607.15	Additional Test Pit
GeoSW 28	32°17'8.36"N	107°47'8.02"W	32.285657	-107.785562	3575507.06	237663.16	Additional Test Pit



Actual Pit Locations for the area north of the Cypress Tailings (CYP N)

	Degrees, Minutes, Seconds		Decimal Degrees		Universal Transverse Mercator		
Title	Latitude DMS	Longitude DMS	Latitude DD	Longitude DD	Northing	Easting	Description
GeoSW 26 New Location	32°17'9.00"N	107°47'14.00"W	32.285833	-107.787222	3575530.80	237507.20	Additional Test Pit
GeoSW 27 New Location	32°17'9.00"N	107°47'11.00"W	32.285833	-107.786389	3575528.76	237585.68	Additional Test Pit
GeoSW 28 New Location	32°17'9.00"N	107°47'9.00"W	32.285833	-107.785833	3575527.40	237638.06	Additional Test Pit





Pit with no tailings present

Estimated area with tailings present (4.53 Acres)

Results for the area north of the Cypress Tailings (CYP N)

Study Area	Sample No.	Material Classification	Ph	Interval Sampled (Inches)	Munsell Rock Color	Sorting	Grain Size	Description
CYP N	GEOSW26-1	Natural Sediments	6.90	0 - 17	Moderate yellowish brown 10YR 5/4	Poorly sorted	Fine sand 70% coarse gravel 30%	Sandy soil underlain by sand and gravel. Abundant roots.
CYP N	GEOSW26-2	Natural Sediments	6.84	17 - 48	Pale yellowish brown 10YR 6/2	Well sorted	Fine sand	Massive fine grained sand showing depositional lines of bedding.
CYP N	GEOSW27-1	Natural Sediments	5.11	0 - 8	Moderate yellowish brown 10YR 5/4	Well sorted	Fine sand	Sandy soil with roots. May contain some tailings as evidenced by occasional reddish clusters.
CYP N	GEOSW27-2	Natural Sediments	5.53	8 - 30	Pale brown 5YR 5/2	Well sorted	Fine sand	Bedded fine sand showing layers of deposition
CYP N	GEOSW27-3	Natural Sediments	7.08	3 - 48	Pale yellowish brown 10YR 6/2	Well sorted	Claystone	Massive sandy claystone
CYP N	GEOSW28-1	Natural Sediments	6.37	0 - 9	Moderate yellowish brown 10YR 5/4	well sorted	Fine sand	Sandy soil with occasional tailing fragment near the surface. Abundant roots
CYP N	GEOSW28-2	Natural Sediments	6.53	9 - 18	Pale yellowish brown 10YR 6/2	well sorted	Fine sand	Massive fine sand

ATTACHMENT 1

Pit logs and photographs - Area North of River (N RIV BK)

Pits Included:

GEOSW 11

GEOSW 12

GEOSW 13

GEOSW 14

GEOSW 15

GEOSW 16

GEOSW 18

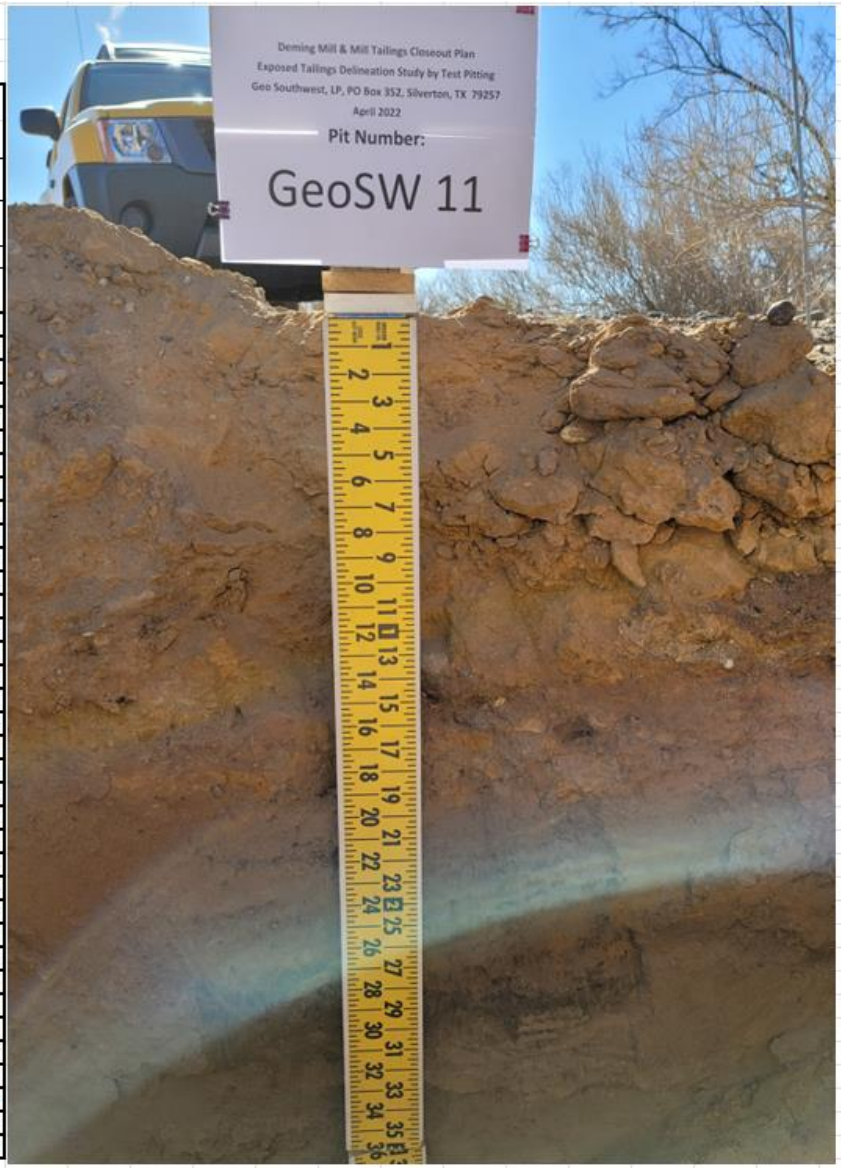
GEOSW 19

Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing: S 70 E	PIT NUMBER: GeoSW 11
		Date Excavated: 4/20/2022

Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Pale yellowish brown 10YR 6/2	Well sorted	Fine grained sand 90% medium grained gravel 10%	1–8	Remobilized tailings? Interbedded fine grained sand with occasional gravel pebbles. No gypsum Ph sample: GeoSW11-1	3.75	1–8
Dark yellowish orange 10YR 6/6	Poorly sorted	coarse to fine sand 70% medium gravel 20+%	9–20	Composite of tailings and sandy gravel indicating a mixture of tailings and natural sediments. No gypsum Ph sample: GeoSW11-2	3.51	9–20
Pale yellowish brown 10YR 6/2	Very well sorted	Silt	21–36	Very well sorted, dense silt Ph sample: GeoSW11-3	6.15	21–36



Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing: S 60 E	PIT NUMBER: GeoSW 12
		Date Excavated: 4/20/2022

Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Dark yellowish orange 10YR 6/6	Well Sorted	Fine grained	1	Weakly cemented fine grained sand tailings. Minor gypsum		1
			2			2
			3		5.44	3
			4	Ph sample GeoSW12-1		4
			5			5
Pale yellowish brown 10YR 6/2	Well Sorted	Fine grained sand with minor clay	6	Sand with minor clay		6
			7			7
			8			8
			9			9
			10			10
			11			11
			12			12
			13			13
			14			14
			15			15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27			27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
			36			36

Deming Mill & Mill Tailings Closeout Plan
Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing: S 50 W	PIT NUMBER: GeoSW 13
		Date Excavated: 4/20/2022

Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH
Dark yellowish orange 10YR 6/6	Well Sorted	Fine grained	1–7	Tailings, moderately cemented fine grained sand. Cementing agent is gypsum **Ph sample: GeoSW13-1**	4.02
Pale yellowish brown 10YR 6/2	Well Sorted	Fine grained	8–36	Sand with minor clay	

Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC		Logged by: G. Rosenlund		PIT WALL LOG		
		Photo Bearing: N 50 W		PIT NUMBER: GeoSW 14		
				Date Excavated: 4/20/2022		
Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Dark yellowish orange 10YR 6/6	Well sorted	Fine grained	1	Tailings, moderately cemented fine grained sand with gypsun micro clusters. (0.5mm)		1
			2			2
			3			3
			4	Ph sample SeoSW14-1	3.52	4
			5			5
			6			6
Pale yellowish brown 10YR 6/2	Well sorted	fine grained	7	Sand with minor clay		7
			8			8
			9			9
			10			10
			11			11
			12			12
			13			13
			14			14
			15			15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27			27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
			36			36

Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing: S 70 E	PIT NUMBER: GeoSW 15
		Date Excavated: 4/20/2022

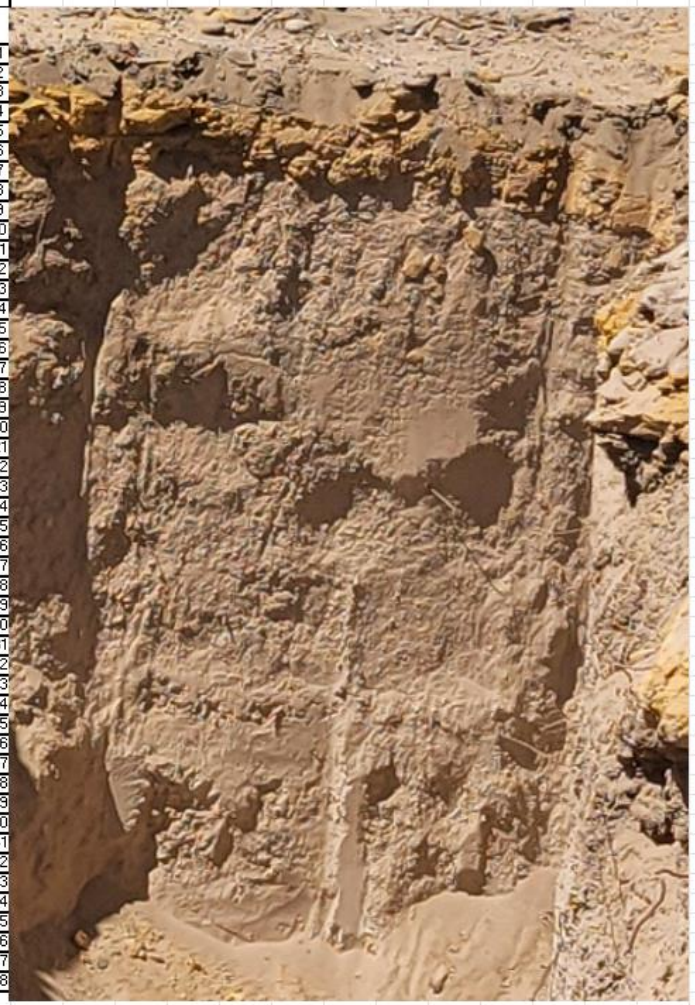
Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Dark yellowish brown 10YR	Moderately sorted	medium sand 80% fine gravel	1	wind blown sand, with small pebbles		1
			2			2
			3			3
Dk yellowish orange 10yr	Well sorted	Fine Sand	4	Tailings, Very fine sand with occasional gravel. No gypsum	3.55	4
			5			5
Pale yellowish brown 10YR 6/2	Moderately sorted	Fine sand 50% silt 50%	6	**Silty sand, massive, bedded with less that 5% fine gravel**		6
			7			7
			8			8
			9			9
			10			10
			11			11
			12			12
			13			13
			14			14
			15			15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27			27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
			36			36

Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing: S 45 W	PIT NUMBER: GeoSW 16
		Date Excavated: 4/26/2022

Munsell Rock Color	Homogeneity	Grain Size	Depth	Description/Remarks	PH	
Dark yellowish brown 10YR	Moderately sorted	Medium sand 80%	1	Fine grained wind blown sand (aeolian)		1
			2			2
Dark yellowish brown 1-YR 6/6	Well sorted	Find Sand	3	Tailings, fine sand, no gypsum		3
			4	**Ph sample: GeoSW16-1**	3.1	4
			5			5
Pale yellowish brown 10yr 6/2	Moderately sorted	Fine sand 50% silt 50%	6	Silty sand, massive, weakly bedded with less than 5% fine gravel		6
			7			7
			8			8
			9			9
			10			10
			11			11
			12			12
			13			13
			14			14
			15			15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27	**Ph sample: GeoSW16-2**	6.8	27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
			36			36
			37			37
			38			38
			39			39
			40			40
			41			41
			42			42
			43			43
			44			44
			45			45
			46			46
			47			47
			48			48



Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC		Logged by: G. Rosenlund Photo Bearing: S 60 E		PIT WALL LOG PIT NUMBER: GeoSW 18 Date Excavated: 4/20/2022		
Munsell Rock Color	**Homogeneity Sorting**	**Grain Size**	**Depth Inches**	**Description/Remarks**	**PH**	
Dk yellowish orange 10yr 6/2	Well Sorted	Fine grained	1	Tailings, fine sand, weakly cemented, no gypsum. **Ph sample GeoSW18-1**	2.95	1
			2			2
			3			3
			4			4
Pale yellowish brown 10yr 6/2	Moderately sorted	Fine sand 50% silt 50%	5	Silty sand, massive, weakly bedded with less than 5% fine gravel		5
			6			6
			7			7
			8			8
			9			9
			10			10
			11			11
			12			12
			13			13
			14			14
			15			15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27			27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34	This lithology continues to 60 inches and beyond		34
			35			35
			36			36

Deming Mill & Mill Tailings Closeout Plan
Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	S 60 E	PIT NUMBER: GeoSW 19
		Date Excavated: 4/20/2022

Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Dk yellowish orange 10yr 6/6	Moderately sorted	Fine sand	1	Tailings, fine sand, weakly cemented, w/gypsum. (1 mm sand gypsum clusters)	2.94	1
			2			2
			3			3
			4			4
Pale yellowish brown 10yr 6/2	Moderately sorted	Fine Sand 50% silt 50%	5	Silty sand, massive, weakly bedded		5
			6			6
			7			7
			8			8
			9			9
			10			10
			11			11
			12			12
			13			13
			14			14
			15			15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27			27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
			36			36

ATTACHMENT 2

Pit logs and photographs - Riverbank Area along the Mimbres River (RIV BK).

Pits Included:

GEOSW 17

GEOSW 29

Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing: N 15 E	PIT NUMBER: GeoSW 17
		Date Excavated: 4/20/2022

Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Dark yellowish orange 10YR 6/6	Well sorted	Medium to fine sand	1	Weakly cemented, Interbedded fine grained tailings and medium to coarse alluvial sand. Sand/gypsum clusters		1
			2			2
			3			3
			4			4
			5			5
			6		4.8	6
			7	**Ph sample: GeoSW17-1**		7
			8			8
			9			9
			10			10
Pale brown 5YR 5/2	Well sorted	Fine Sand	11	Tailings, weakly cemented fine sand,		11
			12	with gypsum.		12
			13		3.24	13
			14	**Ph sample: GeoSW17-2**		14
Dark	Well sorted	Medium to	15	Tailings, fine sand weakly cemented		15
Pale yellowish brown 10YR 6/2	Well sorted	Silt	16	Massive well compacted silty sand		16
			17	with no pebbles or gravel.		17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26		6.78	26
			27	**Ph sample GeoSW17-3**		27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35	This lithology continues to 60 inches		35
			36	and beyond		36

Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC		Logged by: G.	PIT WALL LOG		
		Photo Bearing: N 25 E	PIT NUMBER: GeoSW 29		
			Date Excavated: 4/26/2022		
Munsell Rock	**Homogeneity**	**Grain Size**	**Depth**	**Description/Remarks**	**PH**
Pale yellowish brown 10YR 6/2	Poorly sorted	Medium sand & Medium gravel	1–7	Bedded sand and gravel. (slope wash) **Ph sample: GeoSw29-1**	6.5
Yellowish gray 5Y 7/2	Moderately sorted	Fine sand 60% silt 40%	8–60	Silty sand **Ph sample: GeoSW29-2**	6.9

ATTACHMENT 3

Pit logs and photographs - Mid Flat Area (MID FLAT).

Pits Included:

GEOSW 1

GEOSW 2

GEOSW 3

GEOSW 4

GEOSW 5

GEOSW 6

GEOSW 7

GEOSW 8

GEOSW 9

GEOSW 22

GEOSW 23

GEOSW 24

Deming Mill & Mill Tailings Closeout Plan
Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing:	PIT NUMBER: GeoSW 1
		Date Excavated: 4/21/2922

Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Yellowish Gray 5Y 7/2	Well Sorted	Fine Sand	1	Fine grained sandy soil with root debris. Top two inches is wind blown sand with clumps of roots associated with plants.	6.25	1
			2			2
			3			3
			4	Ph Sample GeoSW 1-1		4
			5			5
			6			6
Pale yellowish brown 10YR 6/2	Moderately Sorted	90% fine sand, 10% fine to coarse gravel	7	Fine to coarse sand with minor fine to coarse gravel pebbles.		7
			8			8
			9			9
			10			10
			11			11
			12			12
			13			13
			14			14
			15			15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27			27
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			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
			36			36

Deming Mill & Mill Tailings Closeout Plan
Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing: N 70 W	PIT NUMBER: GeoSW 1
		Date Excavated: 4/21/2922

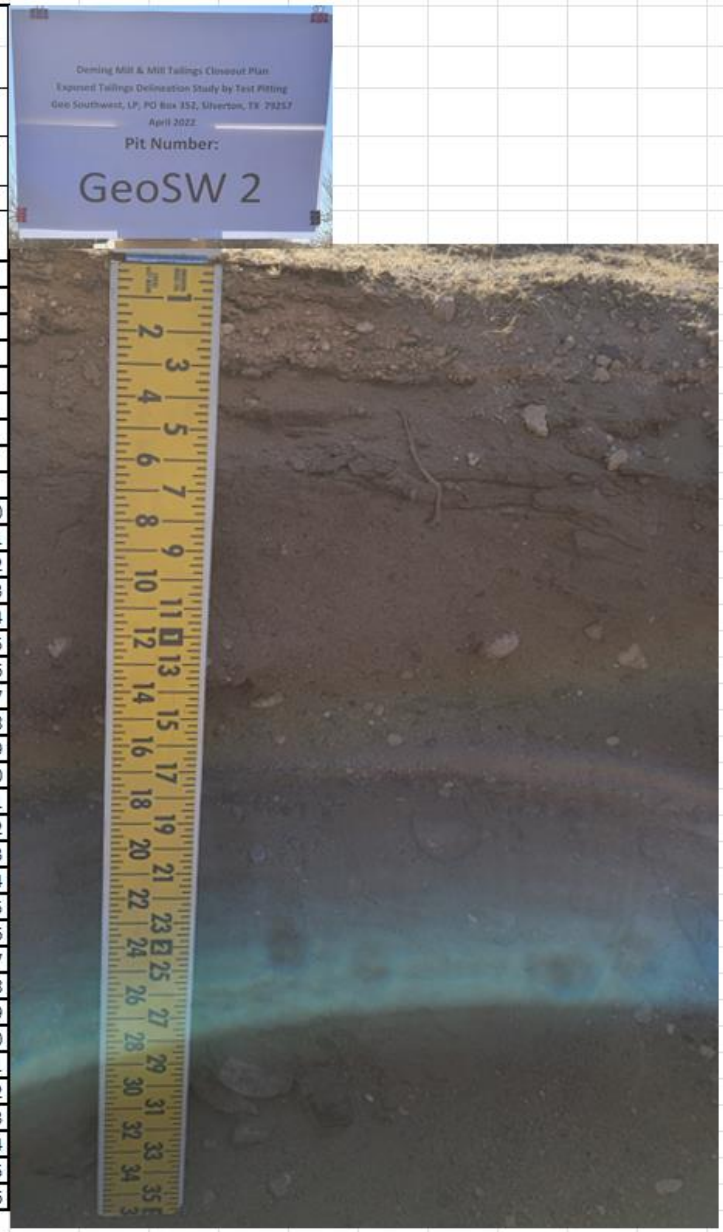
Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Yellowish Gray 5Y 7/2	Well Sorted	Fine Sand	1	Fine grained sandy soil with root debris. Top two inches is wind blown sand with clumps of roots associated with plants.	6.25	1
			2			2
			3			3
			4			4
			5	Ph Sample GeoSW 1-1		5
			6			6
Pale yellowish brown 10YR 6/2	Moderately Sorted	90% fine sand, 10% fine to coarse gravel	7	Fine to coarse sand with minor fine to coarse gravel pebbles.		7
			8			8
			9			9
			10			10
			11			11
			12			12
			13			13
			14			14
			15			15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27			27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
			36			36

Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing: S 75 E	PIT NUMBER: GeoSW 2
		Date Excavated: 4/21/2022

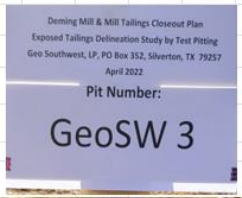
Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Grayish Blue 5PB 5/2	Poorly Sorted	Fine Grained sand 30%, Fine gravel	1–4	Loosely cemented fine sand with pebble sized (1mm) concretions. Grass roots in top 1 inch **Ph Sample GeoSW2-1**	7.21	1–4
Pale yellowish brown 10YR 6/2	Well Sorted	85% Fine to medium grained sand with 15% medium grained gravel	5–20	Medium sand with medium grained gravel with occasional pebble up to 50 mm. **Ph Sample: GeoSW2-2**	6.88	5–20
Pale yellowish brown 10YR 6/2	Poorly Sorted	Fine grained sand	21–29	Fine grained sand with medium grained gravel with occasional pebble up to 50 mm.		21–29
Pale yellowish brown 10YR 6/2	Poorly Sorted	80%Coarse Sand and 20 % medium gravel	30–36	Sand and Gravel		30–36

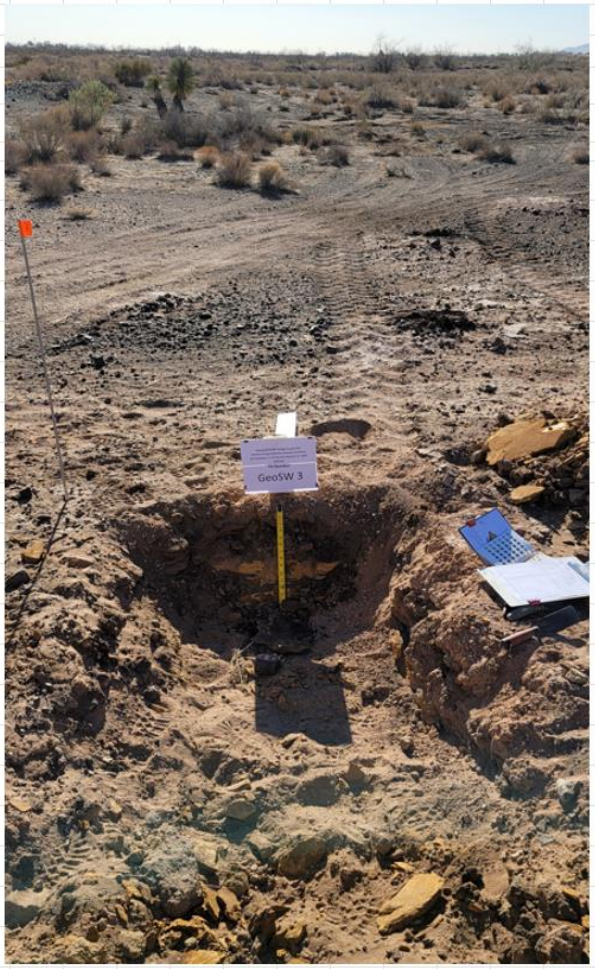


Deming Mill & Mill Tailings Closeout Plan
Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing: S 75 E	PIT NUMBER: GeoSW 3
		Date Excavated: 4/21/2022

Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Moderate orange pink 5YR 8/4	Poorly sorted	Fine sand	1	Loosely cemented fine sand forming 10 mm sand concretions with root fragments.		1
			2	Ph sample: GeoSW3-1	7.03	2
			3			3
N1 Black and N7 light gray	Well Sorted	Medium grained sand	4	Interbedded loosely cemented light gray and black medium grained sand with root fragments		4
			5			5
			6	Ph sample: GeoSW3-2	3.85	6
			7			7
			8			8
Dark yellowish orange 10YR 6/6	Very well sorted	fine sand	9	Well cemented sandstone comprised of tailings. To hard to dig with backhoe. A second pit was excavated 20 feet to the north where the same hard well cemented tailings were intersected.		9
			10			10
			11			11
			12	Further study revealed that the cementing agent is gypsum.		12
			13			13
			14		2.65	14
			15	Ph sample: GeoSW3-3		15
			16			16
			17			17
			18			18
			19			19



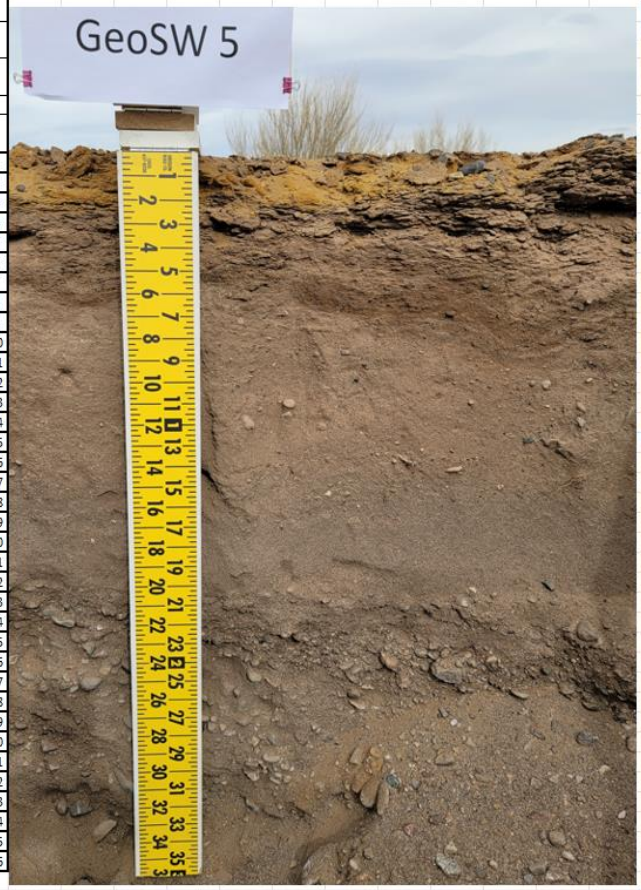


Deming Mill & Mill Tailings Closeout Plan
Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG				
	Photo Bearing: N 83 E	PIT NUMBER: GeoSW 4				
		Date Excavated: 4/21/2022				
Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Dk yellowish orange 10yr 6/2	Moderately Sorted	Fine Sand	1	Tailings, fine sand, weakly cemented. No Gypsum		1
			2	Ph sample: GeoSW 4-1	4.17	2
			3			3
Moderate yellowish brown 10YR 5/4	Well Sorted	Fine Sand 90% fine gravel 10%	4	Fine sand with minor fine gravel. Very little or no gypsum.		4
			5			5
			6			6
			7			7
			8	**Ph sample: GeoSW4-2**	**4.48**	8
			9			9
			10			10
			11			11
			12			12
Moderate Yellowish Brown 10YR 5/4	Well Sorted	Fine Sand 80%, Coarse Sand & Fine gravel 20%	13	Fine sand with minor fine gravel, graded bedding		13
			14			14
			15			15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24	**Ph sample: GeoSW4-3**	**7.89**	24
			25			25
			26			26
			27			27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
			36			36

Deming Mill & Mill Tailings Closeout Plan
Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC		Logged by: G. Rosenlund Photo Bearing: S 88 E		PIT WALL LOG PIT NUMBER: GeoSW 5 Date Excavated: 4/19/2022		
Munsell Rock Color	**Homogeneity Sorting**	**Grain Size**	**Depth Inches**	**Description/Remarks**	**PH**	
Dk yellowish orange 10yr 6/2	Well Sorted	Fine Sand 85% fine gravel 15%	1 2 3	Weakly cemented tailings, Very fine sand with occasional gravel with gypsum crystals	**3.64**	1 2 3
Moderate brown 5YR 3/4	Well Sorted	Fine Sand	4 5 6 7	Weakly cemented sandy soil with abundant carbon plant remnants. No Gypsum **Ph sample: GeoSW5-2**	**3.78**	4 5 6 7
Moderate yellowish brown 10YR 5/4	Well Sorted	Fine Sand 95% fine gravel 5%	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Massive sand with occasional fine gravel pebble.		8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
Moderate yellowish brown 10YR 5/4	Poorly Sorted	Fine Sand 50% Fine to coarse Gravel 50%	23 24 25 26 27 28 29 30 31 32 33 34 35 36	Stream bed sand and gravel		23 24 25 26 27 28 29 30 31 32 33 34 35 36



Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC		Logged by: G. Rosenlund Photo Bearing: N 35 E		PIT WALL LOG PIT NUMBER: GeoSW 6 Date Excavated: 4/21/2022		
Munsell Rock Color	**Homogeneity**	**Grain Size**	**Depth**	**Description/Remarks**	**PH**	
Moderate Pink 5R 7/4	Well Sorted	Fine Grained	1	Fine grained sandy soil with root mat and organic debris. **Ph sample: GeoSW6-1**	6.5	1
			2			2
			3			3
			4			4
			5			5
Moderate Pink 5R 7/4	Moderately Sorted	Fine Grained 90%, fine gravel 10%	6	Fine grained sand with fine gravel pebbles		6
			7			7
			8			8
			9			9
			10			10
			11			11
			12			12
			13			13
			14			14
			15	**Ph sample GeoSW6-2**	6.7	15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
Moderate Pink 5R 7/4	Poorly Sorted	Fine Gravel 60% Coarse gravel 10% coarse to fine sand 30%	27	Gravel and Sand		27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
			36			36
			37			37
			38			38
			39			39
			40			40
			41			41
			42			42
			43			43
			44			44
			45			45
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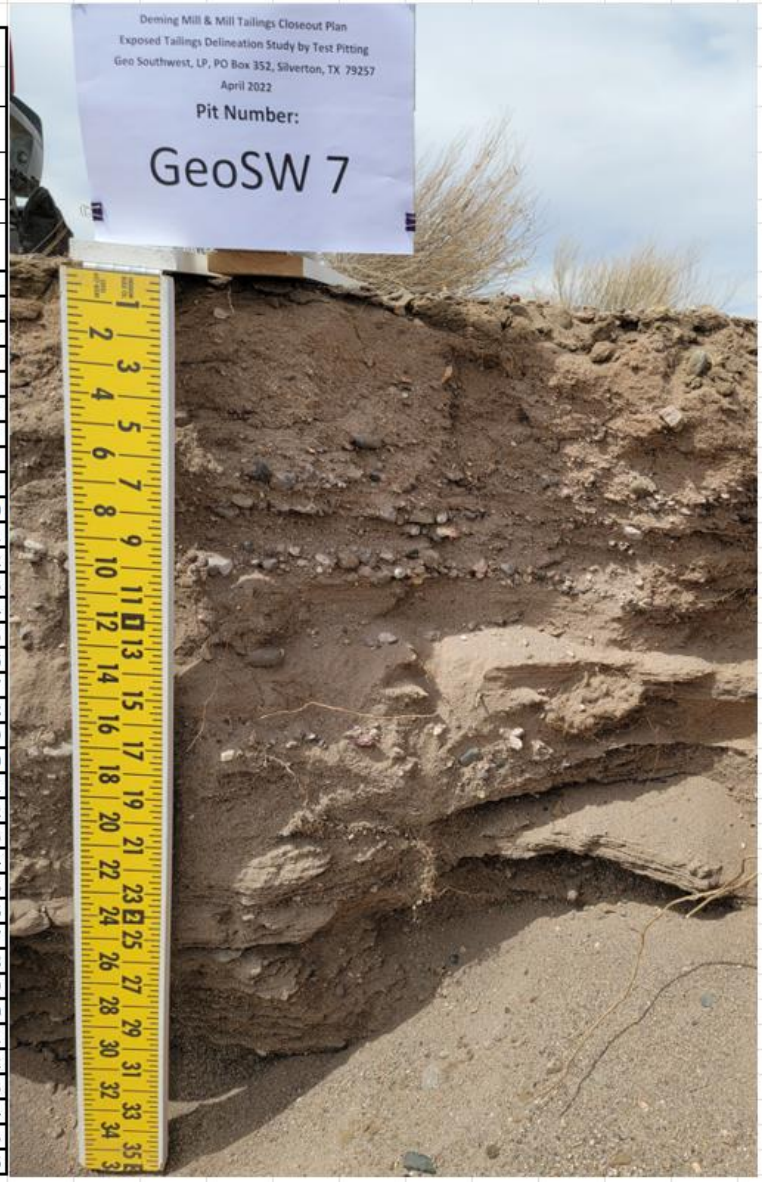
			47			47
			48			48

Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG				
	Photo Bearing: N 10 E	PIT NUMBER: GeoSW 7				
		Date Excavated: 4/19/2022				
Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Medium yellowish brown 10YR 5/4	Well sorted	Medium sand	1	Sandy Soil with minor organics	7.81	1
			2			2
			3			3
			4			4
Medium yellowish brown 10YR 5/4	Poorly sorted	Fine sand to coarse gravel	5	Lenticular sandy gravel		5
			6			6
			7			7
			8			8
			9			9
			10			10
Medium yellowish brown 10YR 5/4	Well sorted	Find Sand to fine gravel	11	Lenticular sand showing bedding pattern from stream channel deposition.		11
			12			12
			13			13
			14			14
			15			15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27			27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
			36			36



Deming Mill & Mill Tailings Closeout Plan
Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC		Logged by: G. Rosenlund		PIT WALL LOG		
		Photo Bearing: N 88 E		PIT NUMBER: GeoSW 8		
				Date Excavated: 4/19/2022		
Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Moderate yellowish brown 10YR 5/4	Poorly sorted	Medium fine sand 80% medium gravel 20%	1	Fine to medium grained soil with abundant root masses Ph sample: GeoSW8-1	6.42	1
			2			2
			3			3
			4			4
			5			5
Moderate yellowish brown 10YR 5/4	Well sorted	Fine sand 80% fine gravel 20%	6	Fine sand and fine gravel		6
			7			7
			8			8
			9			9
			10			10
			11			11
			12			12
Very Lt Gray	Poorly sorted	Med Gravel	13	Gravel/coarse sand lends		13
Moderate yellowish brown 10YR 5/4	very well sorted	fine sand 95%	14	Massive fine sand bed.		14
			15			15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
Moderate yellowish brown 10YR 5/4	Poorly sorted	Fine sand 50% Fine gravel 50%	27	Stream bed deposited fine sand and fine gravel		27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
			36			36

Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

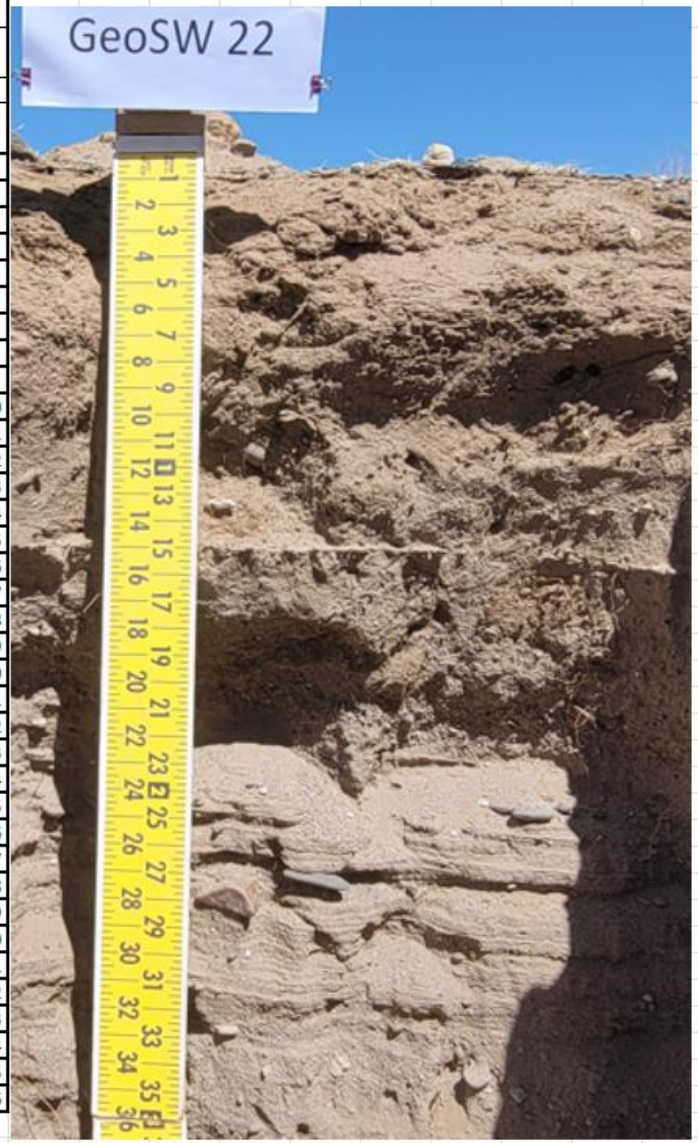
Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing: N 92 E	PIT NUMBER: GeoSW 9
		Date Excavated: 4/21/2022

Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH
Moderate yellowish brown 10YR 5/4	Well sorted	Fine grained	1–6	Sandy soil with roots Ph sample: GeoSw9-1	6.45
Dark yellowish brown 10YR 4/2	Well sorted	Fine grained	7–36	Massive fine grained sand with occasional fine grained pebble. Ph sample: GeoSw9-2	6.88

Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC		Logged by: G. Rosenlund		PIT WALL LOG		
		Photo Bearing: N 82 E		PIT NUMBER: GeoSW 22		
				Date Excavated: 4/21/2022		
Munsell Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Pale yellowish brown 10YR 6/2	Moderately well sorted	Fine grained 95% fine gravel 5%	1–7	Sand with abundant root fragments occasional spots of tailings Ph sample: GeoSW22-1	6.26	1–7
Pale yellowish brown 10YR 6/2	Moderately sorted	Fine grained 95% fine gravel 5%	8–26	Sand with root fragments Ph sample: GeoSW22-2	6.65	8–26
Pale yellowish brown 10YR 6/2	Well sorted	fine grained	27–36	Bedded sand showing bands of deposition This lithology extends to 48 inches and beyond		27–36



Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing: N 65 E	PIT NUMBER: GeoSW23
		Date Escavated: 4/21/2022

Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Very pale orange 10YR 8/2	Very well sorted	Silt	1	Bed of silt covering the surface		1
			2			2
			3	Ph sample: GeoSW23-1	6.79	3
			4			4
			5			5
Pale yellowish brown 10YR 6/2	Moderately sorted	Fine sand 90% coarse to fine gravel 10%	6	Sand with minor gravel pebbles.		6
			7			7
			8			8
			9			9
			10			10
			11			11
			12			12
			13			13
			14			14
			15			15
			16			16
			17			17
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			23			23
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			25			25
			26			26
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			28			28
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			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
			36			36

Deming Mill & Mill Tailings Closeout Plan
Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC		Logged by: G. Rosenlund		PIT WALL LOG		
		Photo Bearing: N 47 E		PIT NUMBER: GeoSW 24		
				Date Excavated: 4/21/2022		
Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Moderate Pink 5R 7/4	Well sorted	fine sand	1	Sandy soil with abundant roots		1
			2			2
			3	Ph Sample: GeoSW24-1	6.63	3
			4			4
Pale yellowish brown 10YR 6/2	Well sorted	Fine grained 95% fine gravel 5%8	5	Sand with root fragments		5
			6			6
			7			7
			8			8
			9			9
			10	Ph Sample: GeoSW24-2	6.81	10
			11			11
			12			12
			13			13
			14			14
Medium yellowish brown 10YR 5/4	Poorly sorted	Fine grained sand to medium gravel	15	Bedded lenses of sand and gravel		15
			16			16
			17			17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
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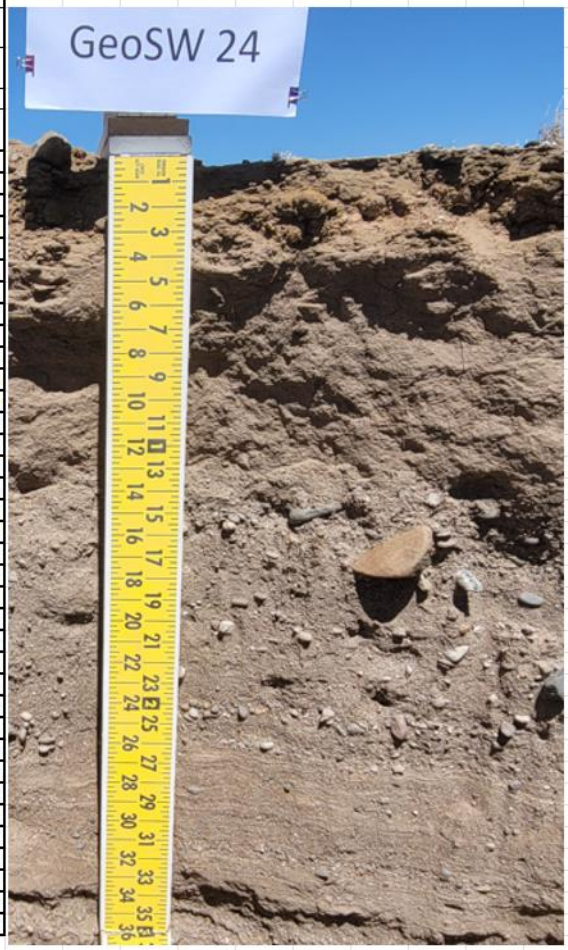
			36			36



ATTACHMENT 4

Pit logs and photographs – Area north of the Cypress Tailings (CYP N).

Pits Included:

GEOSW 26

GEOSW 27

GEOSW 28

Deming Mill & Mill Tailings Closeout Plan
Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC		Logged by: G. Rosenlund		PIT WALL LOG		
		Photo Bearing: N 18 E		PIT NUMBER: GeoSW 26		
				Date Escavated: 4/21/2022		
Munsell Rock Color	Homogeneity Sorting	Grain Size	Depth Inches	Description/Remarks	PH	
Moderate yellowish brown 10YR 5/4	Poorly sorted	Fine sand	1	Sandy soil with abundant roots.		1
			2			2
			3			3
			4			4
			5			5
			6			6
			7			7
			8			8
			9	Ph sample: GeoSW26-1 Interval = 0 to 17 inches	6.90	9
			10			10
Pale yellowish brown 10YR 6/2	Poorly sorted	Fine sand 70% Fine gravel 30%	11	Fine sand and gravel		11
			12			12
			13			13
			14			14
			15			15
			16			16
Pale yellowish brown 10YR 6/2	Well sorted	Fine sand	17	Massive fine grained sand showing depositional lines of bedding.		17
			18			18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27	Ph sample: GeoSW26-2	6.84	27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35	This lithology continues to 48 inches and beyond.		35
			36			36

Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC		Logged by: G. Rosenlund Photo Bearing: N 25 E		PIT WALL LOG PIT NUMBER: GeoSW 27 Date Excavated: 4/21/2022		
Munsell Rock Color	**Homogeneity**	**Grain Size**	**Depth**	**Description/Remarks**	**PH**	
Moderate yellowish brown 10YR 5/4	Well sorted	Fine sand	1	Sandy soil with roots. May contain some tailings as evidenced by occasional reddish clusters.		1
			2			2
			3			3
			4	**Ph sample: GeoSW27-1**	**5.1**	4
			5			5
			6			6
			7			7
Pale brown 5YR 5/2	Well sorted	Fine sand	8	Bedded fine sand showing layers of deposition		8
			9			9
			10			10
			11			11
			12			12
			13			13
			14			14
			15			15
			16			16
			17			17
			18	**Ph sample: GeoSW27-2**	**5.5**	18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27			27
			28			28
			29			29
Pale yellowish brown 10YR 6/2	Well sorted	Claystone	30	Massive sandy claystone		30
			31			31
			32			32
			33	**Ph sample: GeoSW27-3 interval = 30 to 48 inches**	**7.1**	33
			34			34
			35	This lithology continues to 48 inches and beyond		35
			36			36

Deming Mill & Mill Tailings Closeout Plan

Exposed Tailings Delineation Study by Test Pitting

Integrated Geologic Services, LLC	Logged by: G. Rosenlund	PIT WALL LOG
	Photo Bearing: N40E	PIT NUMBER: GeoSW 28
		Date Excavated: 4/21/2022

Munsell Rock Color	Homogeneity	Grain Size	Depth	Description/Remarks	PH	Depth
Moderate yellowish brown 10YR 5/4	well sorted	Fine sand	1	Sandy soil with occasional tailing fragment near the surface. Abundant roots		1
			2			2
			3			3
			4			4
			5	**Ph sample: GeoSW28-1**	**6.4**	5
			6			6
			7			7
			8			8
Pale yellowish brown 10YR 6/2	well sorted	Fine sand	9	Massive fine sand		9
			10			10
			11			11
			12			12
			13	**Ph sample: GeoSW28-2**	**6.5**	13
			14			14
			15			15
			16			16
			17			17
Pale yellowish brown 10YR 6/2	Poorly sorted	Fine sand 50% Medium gravel 50%	18	Layered Sand and gravel		18
			19			19
			20			20
			21			21
			22			22
			23			23
			24			24
			25			25
			26			26
			27			27
			28			28
			29			29
			30			30
			31			31
			32			32
			33			33
			34			34
			35			35
Pale yellowish brown 10YR 6/2	Very well sorted	Fine sand	36	Massive fine sand		36
			37			37
			38			38
			39			39
			40			40
			41			41
			42			42
			43			43
			44			44
			45			45
			46			46
			47			47
			48			48

ATTACHMENT 5

pH Test logs for all samples

Area north of the Mimbres River (N RIV BK)

Study Area	Sample No.	Date Collected	Gross Sample Weight (gr)	Tested Sample Portion Wt. (gr)	H2O Added Wt. (gr)	Sample Prep. Date	Sample Prep. Time	Ph Meter Calibration Date	Ph Meter Calibration Time	Date of Ph Test	Time of Ph Test
N RIV BK	GEOSW11-1	4/20/2022	292	152	150	4/20/2022	8:50 PM	4/30/2022	12:47 PM	4/30/2022	1:44 PM
N RIV BK	GEOSW11-2	4/20/2022	268	150	151	4/20/2022	9:09 PM	4/30/2022	12:47 PM	4/30/2022	1:47 PM
N RIV BK	GEOSW11-3	4/20/2022	350	152	150	4/20/2022	9:31 PM	4/30/2022	12:47 PM	4/30/2022	1:49 PM
N RIV BK	GEOSW12-1	4/20/2022	476	151	151	4/20/2022	9:45 PM	4/30/2022	12:47 PM	4/30/2022	1:53 PM
N RIV BK	GEOSW13-1	4/20/2022	600	150	150	4/20/2022	9:57 PM	4/30/2022	12:47 PM	4/30/2022	1:56 PM
N RIV BK	GEOSW14-1	4/20/2022	435	150	150	4/27/2022	3:51 PM	4/30/2022	12:47 PM	4/30/2022	2:00 PM
N RIV BK	GEOSW15-1	4/20/2022	557	150	150	4/27/2022	5:21 PM	4/30/2022	12:47 PM	4/30/2022	2:16 PM
N RIV BK	GEOSW16-1	4/20/2022	347	150	150	4/27/2022	5:05 PM	4/30/2022	12:47 PM	4/30/2022	2:20 PM
N RIV BK	GEOSW16-2	4/20/2022	528	150	150	4/27/2022	5:12 PM	4/30/2022	12:47 PM	4/30/2022	2:33 PM
N RIV BK	GEOSW18-1	4/20/2022	512	150	150	4/27/2022	4:09 PM	4/30/2022	2:39 PM	4/30/2022	2:42 PM
N RIV BK	GEOSW19-1	4/20/2022	324	150	160	4/27/2022	4:22 PM	4/30/2022	2:39 PM	4/30/2022	2:44 PM

Area along the Mimbres River (RIV BK)

Study Area	Sample No.	Date Collected	Gross Sample Weight (gr)	Tested Sample Portion Wt. (gr)	H2O Added Wt. (gr)	Sample Prep. Date	Sample Prep. Time	Ph Meter Calibration Date	Ph Meter Calibration Time	Date of Ph Test	Time of Ph Test
RIV BK	GEOSW17-1	4/20/2022	426	150	153	4/27/2022	4:39 PM	4/30/2022	12:47 PM	4/30/2022	2:37 PM
RIV BK	GEOSW17-2	4/20/2022	477	151	150	4/27/2022	4:47 PM	4/30/2022	12:47 PM	4/30/2022	2:29 PM
RIV BK	GEOSW17-3	4/20/2022	452	150	151	4/27/2022	4:55 PM	4/30/2022	12:47 PM	4/30/2022	2:31 PM
RIV BK	GEOSW29-1	4/20/2022	675	150	153	4/27/2022	3:46 PM	4/30/2022	2:39 PM	4/30/2022	3:25 PM
RIV BK	GEOSW29-2	4/20/2022	503	150	150	4/27/2022	3:56 PM	4/30/2022	2:39 PM	4/30/2022	3:27 PM

Mid Flat Area (MID FLAT)

Study Area	Sample No.	Date Collected	Gross Sample Weight (gr)	Tested Sample Portion Wt. (gr)	H2O Added Wt. (gr)	Sample Prep. Date	Sample Prep. Time	Ph Meter Calibration Date	Ph Meter Calibration Time	Date of Ph Test	Time of Ph Test
Mid Flat	GEOSW1-1	4/21/2022	685	150	151	4/27/2022	6:36 PM	4/30/2022	12:47 PM	4/30/2022	12:51 PM
Mid Flat	GEOSW2-1	4/21/2022	559	150	154	4/27/2022	5:42 PM	4/30/2022	12:47 PM	4/30/2022	12:55 PM
Mid Flat	GEOSW2-2	4/21/2022	677	150	152	4/27/2022	5:50 PM	4/30/2022	12:47 PM	4/30/2022	1:00 PM
Mid Flat	GEOSW3-1	4/21/2022	556	150	151	4/27/2022	6:54 PM	4/30/2022	12:47 PM	4/30/2022	1:08 PM
Mid Flat	GEOSW3-2	4/21/2022	508	150	152	4/27/2022	7:01 PM	4/30/2022	12:47 PM	4/30/2022	1:10 PM
Mid Flat	GEOSW3-3	4/21/2022	1204	150	150	4/27/2022	8:00 PM	4/30/2022	12:47 PM	4/30/2022	1:15 PM
Mid Flat	GEOSW4-1	4/19/2022	313	150	150	4/19/2022	9:51 PM	4/20/2022	6:33 AM	4/20/2022	6:37 AM
Mid Flat	GEOSW4-2	4/19/2022	416	150	151	4/19/2022	10:06 PM	4/20/2022	6:33 AM	4/20/2022	6:41 AM
Mid Flat	GEOSW4-3	4/19/2022	551	150	150	4/19/2022	10:21 PM	4/20/2022	6:33 AM	4/20/2022	6:45 AM
Mid Flat	GEOSW5-1	4/19/2022	370	150	150	4/19/2022	10:51 PM	4/20/2022	6:33 AM	4/20/2022	6:57 AM
Mid Flat	GEOSW5-2	4/19/2022	363	150	150	4/19/2022	11:03 PM	4/20/2022	6:33 AM	4/20/2022	7:02 AM
Mid Flat	GEOSW6-1	4/21/2022	584	150	151	4/27/2022	2:35 PM	4/30/2022	12:47 PM	4/30/2022	1:20 PM
Mid Flat	GEOSW6-2	4/21/2022	654	150	150	4/27/2022	2:48 PM	4/30/2022	12:47 PM	4/30/2022	1:23 PM
Mid Flat	GEOSW7-1	4/19/2022	415	150	150	4/19/2022	10:21 PM	4/20/2022	6:33 PM	4/20/2022	6:48 PM
Mid Flat	GEOSW8-1	4/19/2022	608	152	150	4/19/2022	10:42 PM	4/20/2022	6:33 PM	4/20/2022	6:53 PM
Mid Flat	GEOSW9-1	4/21/2022	603	150	150	4/27/2022	2:12 PM	4/30/2022	12:47 PM	4/30/2022	1:35 PM
Mid Flat	GEOSW9-2	4/21/2022	662	150	152	4/27/2022	12:26 PM	4/30/2022	12:47 PM	4/30/2022	1:28 PM
Mid Flat	GEOSW22-1	4/21/2022	660	156	155	4/27/2022	2:57 PM	4/30/2022	2:39 PM	4/30/2022	2:48 PM
Mid Flat	GEOSW22-2	4/21/2022	690	156	157	4/27/2022	3:03 PM	4/30/2022	2:39 PM	4/30/2022	2:50 PM
Mid Flat	GEOSW23-1	4/21/2022	592	150	150	4/27/2022	6:28 PM	4/30/2022	2:39 PM	4/30/2022	2:54 PM
Mid Flat	GEOSW24-1	4/21/2022	712	150	151	4/27/2022	3:10 PM	4/30/2022	2:39 PM	4/30/2022	2:57 PM
Mid Flat	GEOSW24-2	4/21/2022	749	150	151	4/27/2022	3:16 PM	4/30/2022	2:39 PM	4/30/2022	3:00 PM

Area north of Cypress Tailings (CYP N)

Study Area	Sample No.	Date Collected	Gross Sample Weight (gr)	Tested Sample Portion Wt. (gr)	H2O Added Wt. (gr)	Sample Prep. Date	Sample Prep. Time	Ph Meter Calibration Date	Ph Meter Calibration Time	Date of Ph Test	Time of Ph Test
CYP N	GEOSW26-1	4/21/2022	725	150	150	4/27/2022	3:27 PM	4/30/2022	2:39 PM	4/30/2022	3:05 PM
CYP N	GEOSW26-2	4/21/2022	606	150	153	4/27/2022	3:35 PM	4/30/2022	2:39 PM	4/30/2022	3:09 PM
CYP N	GEOSW27-1	4/21/2022	806	151	153	4/27/2022	5:58 PM	4/30/2022	2:39 PM	4/30/2022	3:12 PM
CYP N	GEOSW27-2	4/21/2022	734	152	153	4/27/2022	6:07 PM	4/30/2022	2:39 PM	4/30/2022	3:14 PM
CYP N	GEOSW27-3	4/21/2022	493	150	153	4/27/2022	6:16 PM	4/30/2022	2:39 PM	4/30/2022	3:17 PM
CYP N	GEOSW28-1	4/21/2022	658	151	152	4/27/2022	7:09 PM	4/30/2022	2:39 PM	4/30/2022	3:20 PM
CYP N	GEOSW28-2	4/21/2022	795	152	151	4/27/2022	7:16 PM	4/30/2022	2:39 PM	4/30/2022	3:20 PM