SAMPLING AND ANALYSIS PLAN:
METHODS TO MEASURE URANIUM ORE CONCENTRATIONS
RED BLUFF NO.1 AND ROUNDY SITE
MCKINLEY COUNTY, NEW MEXICO

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ABBREVIATIONS AND ACRONYMS

bgs.....below ground surface

BH.....Borehole

BLM ..... Bureau of Land Management

cpm.....counts per minute

DPT ..... Direct Push Technology

Eberline .....Eberline Services, Inc.

EPA.....U.S. Environmental Protection Agency

GPS .....global positioning system

HPGe .....High-Purity Germanium

MARSSIM..... Multi-Agency Radiation Survey and Site Investigation Manual

MDC.....Minimum Detectable Concentration

µR/hr .....microroentgen per hour

NaI .....Sodium Iodide

NORM .....Naturally Occurring Radioactive Material

TENORM ..... Technologically Enhanced Naturally Occurring Radioactive Material

NMED ..... New Mexico Environmental Department

pCi/g..... picoCuries per gram

PNNL.....Pacific Northwest National Laboratory

RPR..... Red Bluff and Roundy

SAP ..... Sampling and Analysis Plan

SS..... Surface Soils

VSP .....Visual Sample Plan

1.0 INTRODUCTION

This sampling and analysis plan (2025 SAP) has been developed to describe the radioactive characterization sampling and analysis activities for the Red Bluff No.1 Mine Site Assessment project located in McKinley County, NM under the State of New Mexico Contract #26-667-2030-00005.

2.0 PURPOSE

The purpose of this investigation is to characterize radioactive material concentrations in soils and rocks within the Red Bluff No.1 and Roundy site boundary (Site) based on results of a gamma radiation level walkover survey, as established during the Phase 1 Site Radiological Survey Plan[1]. This 2025 SAP is intended to supplement the guidance and procedures described in the September 2025 Site Radiological Survey Plan and to supersede those procedures where indicated.

Results from this investigation will provide information about:

- Radioisotope soil concentrations in soil at Red Bluff No.1 and Roundy sites at locations of elevated gamma radiation (2x background) discovered during the gamma radiation level walkover survey, and
- Information regarding the depth to which radioisotope concentrations may be elevated.

2.1 SUBSURFACE SAMPLING

Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) area classifications (i.e., Class 1, Class 2, Class 3) and other areas requiring sampling bias have been determined based upon the results of the gamma radiation level walkover survey. This sampling plan will be MARSSIM compliant. It is expected that much of the sampling data gathered can be used in the final status plan as well.

2.1.1 Decision Logic and Sampling Process

Decision logic for identifying areas of the Site for subsurface sampling will govern sampling locations. This logic will accommodate the needs of the study and access limitations including but not limited to property owner restrictions, encountering bedrock when drilling, or encountering cultural artefacts at the sample site.

This decision logic and sampling process can be expressed in the following hierarchy:

1. Gamma radiation level walkover survey results will be used to locate those areas onsite that exhibit radiation levels 2x background.
2. Determine extents of the elevated radiation field.
3. Determine the number of samples to adequately assess the area and label sample sites with their GPS locations.
4. Determine what manner of sampling and what probable depth the geology of the identified area supports.
5. Confirm landowner approval of subsurface sampling activities, where applicable.
6. Confirm suitability of sample site (i.e., no cultural artifacts present).
7. Using a small tracked drill rig, GeoProbe™ or similar direct push technology, acquire a core sample at each GPS sample location.
8. Log the core and the borehole with a handheld radiation detector.
9. Separate samples by depth profile according to the core and borehole log data.
10. Proceed to the next sampling location.

This decision hierarchy is depicted in Attachment 1 for convenience.

Item 3 in the decision hierarchy is dependent upon MARSSIM methodology in that classifying areas as either MARSSIM Class 1, 2, or 3 will drive the number of samples within each area and thus the total number of samples to be collected on site. Typically, a closure criteria is pre-selected and the MARSSIM manual guides stakeholders toward meeting those criteria. An important component of the closure criteria is the planned acceptable radionuclide concentrations in the soils at each depth of concern. This acceptable concentration is known as the Derived Concentration Guideline over a wide area ($DCGL_W$).

In this case, the closure criteria have not yet been finalized awaiting dose modeling scenarios for abandoned uranium mines. Therefore, a preliminary $DCGL_W$ of 5 pCi/g radium-226 (Ra-226) over background Ra-226 concentrations in the first 15 centimeters of soil (the 5/15 rule) and 15 pCi/g Ra-226 over background Ra-226 concentrations averaged over each successive 15 cm depth matching the guidance from *Joint Guidance for the Cleanup and Reclamation of Existing Uranium Mining Operations in New Mexico*[2] has been selected to allow for an initial MARSSIM classification. Revisions may be made as more data becomes available.

[1] (ENTACT, LLC, 2025)
[2] (Energy, Minerals & Natural Resoures Department Mining and Minerals Division and New Mexico Environment Department, 2016)

The MARSSIM Manual[3] describes the difference between the class areas as such:

- Class 1 areas, prior to remediation, are impacted areas with concentrations of residual radioactivity that exceed the $DCGL_W$.
- Class 2 areas are impacted areas where concentrations of residual activity that exceed the $DCGL_W$ are not expected.
- Class 3 areas are impacted areas that have a low probability of containing areas with residual radioactivity.

The MARSSIM manual further defines the maximum size each Class area can be as follows:

MARSSIM Class Area	Permissible Area (m^2)
Class 1	0-2,000
Class 2	2,000-10,000
Class 3	>10,000

Table 1 - MARSSIM Class Area Sizes

As discussed in the Site Radiological Survey Report: Red Bluff No.1 and Roundy Site[4] (hereafter "the survey report"), the MARSSIM class areas were determined and mapped using the data acquired from the gamma walkover survey. Some areas of the site were inaccessible due to steep terrain and unsafe conditions. Inaccessible areas without radiological data from directly adjacent areas were left unclassified, though they generally meet the criteria for a Class 2 area. They will be investigated further while onsite during the sampling phase. MARSSIM Class 3 areas were highlighted in green, Class 2 areas were highlighted in yellow, and Class 1 areas were highlighted in magenta as shown in Attachment 2. The Class areas were selected following the statistical analysis of gamma response data population.

Class 1 areas are targeted with biased sampling for the pre-remediation sampling. As stated in the survey report4, the areas designated as Class 1 featured count rates in excess of 41,500 cpm and are likely to require some form of remedial action. The MARSSIM required sampling process is meant to propose a sampling frequency in each survey unit that will allow for the correct final status decision to be made. This biased sampling approach will aid in determining the depth of the radioactive material in each Class 1 region enabling proper remedial action, while being efficient with resources until the final status survey samples are needed.

Biased radiological samples and geotechnical samples are also planned within the abandoned excavation pits on site to determine their suitability as repositories for future remedial action. The phase of sampling planned for 2025 is focused on acquiring the necessary radiological data to begin the remedial design given the time constraints discussed herein regarding sample hold time and processing. As such, the geotechnical sampling necessary to determine the suitability of the proposed repositories onsite is planned for the January 2026 mobilization along with the radiological sampling for the New Mexico State Land portion of the Red Bluff No. 1 site. An addendum to this 2025 SAP will be submitted at a later date to describe the geotechnical sampling details proposed.

Class 2 and 3 areas will be sampled according to a systematic triangular grid with fixed spacing such that each survey unit has no fewer than 15 samples. The particular sampling locations were placed using Pacific Northwest National Laboratory's (PNNL) Visual Sampling Plan (VSP) software, which is rapidly becoming an industry standard for this purpose. This sampling frequency will enable a 95% confidence that the sample data will correctly conclude the survey unit is contaminated above the closure criteria if in fact that is true, and no more than a 5% chance of concluding the survey unit meets the closure criteria in the event it does not. It is expected that many of these samples may qualify to be included in the final status survey.

A cultural resource survey was completed while the gamma response walkover survey was progressing. The cultural resource survey is meant to identify those areas on the site of cultural significance that will require special handling in the event there are any sampling or remedial activities intended to take place within them. The cultural resource avoidance areas have been identified and incorporated into the sample location planning in preliminary consultation with New Mexico.

Subsequent discussions with the archeological team at the state of New Mexico resulted in removing the standard 100-foot buffer zones around the avoidance zones, and information that indicates the avoidance zone covering the Roundy Shaft area is unlikely to be eligible for consideration as a cultural avoidance zone and likely able to be removed from consideration when planning sample locations. The avoidance zones encompass multiple areas around the site. Two sample locations in the Red Bluff region (1 biased and 1 Class 2) were moved to minimize impact to the characterization. There were too many impacted Class 2 sample locations in the western Unknown strip mine region of the site to move and maintain compliance with MARSSIM methodology. Those sample locations will not be included in this study.

[3] (USEPA, 2001)
[4] (ENTACT, LLC, 2025)

The sampling locations planned thus far are shown in Attachment 3 with the sample points denoted red representing the systematic triangular grid and those in light blue representing the biased samples. The blue hatched areas are the cultural resource avoidance zones and any activities taking place within the buffer zones around them will be overseen by a qualified archeologist as approved by the state of New Mexico. The archeologist team will be asked to mark the cultural resource avoidance zones by flag or similar method during before the drill crew approaches them and will then assist the drill team as they enter the buffer zone. The black hatched area across the top of the Piedra Triesta region denotes the property understood to be under Bureau of Land Management (BLM) jurisdiction. Only one biased sample is proposed on the Piedra Trieste Class 1 area to characterize the portion of the Class 1 areas that extend onto private land as remedial action is not currently planned for the BLM land. The black crosshatched area in the southwestern region of the Red Bluff No. 1 portion of the site denotes the New Mexico State Land and will be assessed during a separate mobilization currently planned for January 2026. The radiological sampling proposed for the State Land is the same as the rest of the site. The property regional divisions discussed in the survey report[5] have been preserved for the sampling plan.

2.2 SELECTION OF A SURROGATE RADIONUCLIDE FOR PLANNING

Multiple radionuclides are expected to be present in the soils and rocks at the Site given its prior use as a uranium mine. Gamma spectroscopy will be used to identify and quantify them in the samples to be collected. The selected analytical lab, Eberline Analytical Corporation (Eberline), will use the gamma spectroscopic method Environmental Protection Agency (EPA) Method 901.1 Modified on all samples collected at the Site. The radionuclides reported are the gamma emitting progeny in the uranium-238 (Thorium-234, Radium-226, Lead-214, Bismuth-214 and thorium-232 (Radium-228, Actinium-228, Lead-212, Thallium-208) decay chains and Potassium-40.

Some of these radionuclides, like U-238, are difficult to detect, while others, like bismuth-214 (Bi-214), are readily detectable with a variety of instrument types.

When a consistent mixture of radionuclides is present in an area, MARSSIM allows planners to select and use one radionuclide as a surrogate for all the radionuclide in the mixture to simplify calculations and remove duplication. In this mixture, thorium-234 (Th-234) is an easily detected surrogate for U-238 and either lead-214 (Pb-214) or Bi-214 is an easily detectable surrogate for Ra-226. Surrogates detected in samples acquired under this plan will be designated as the isotope they are being used to detect (i.e., Bi-214 and/or Pb-214 will be used to confirm the detected Ra-226 activity).

2.2.1 Sample Hold Times for Adequate Radioisotope Detection Statistics

An important concept often overlooked in planning sampling activities is the sample hold time required to accurately detect the isotopes discussed in Section 2.2 above. All samples will be sealed and held either onsite, at an ENTACT-operated facility, or at Eberline lab for a period of no less than 21 days before they are analyzed via gamma spectroscopy with an average of 7 days post analysis for data and report generation. This 21-day hold time allows for an equilibrium, present in undisturbed nature, between Ra-226 and its surrogates (Pb-214 and Bi-214). When disturbed, through sampling, excavation, or any other means, some unknown portion of the radon-222 (Rn-222) gas generated by the decay of Ra-226 is lost. An industry standard assumption is that the equilibrium will be reestablished well enough for an accurate gamma spectroscopic analysis in 21 days as long as the samples remain sealed for the entire duration of the hold time.

Typical lab turnaround is an additional 7 days for analysis, preliminary data generation, and final report generation for an average time from the date the sample was sealed to data receipt of 28 days.

2.2.2 Property Access

Prior to the start of the sampling activities, ENTACT will confirm with the New Mexico Environmental Department (NMED) that property owner access and agreements for drilling/boring activities have been secured. Based on the landowner responses, the team will be able to pre-plan, based on the decision logic discussed in Section 2.1.1, the allotted time needed, and materials required.

2.3 SAMPLING SEQUENCE

2.3.1 Borehole Sample Collection

Geologic considerations will influence the target depth of the samples, and a geologist will be consulted as needed. It is unlikely that any samples will need to penetrate bedrock. Typically, subsurface sampling of this type would only require depths of 4 feet, but site conditions will inform the sampling depths and will be determined later. The current plan is to use a tracked GeoProbe direct push technology (DPT) sample 4 feet (the length of one standard DPT tool string) beyond the native layer unless bedrock is encountered first. Based on ENTACT's experience with this type of geology and uranium in this chemical form, it is not expected that surface contamination will extend 4 feet beyond the native layer though it is possible. If core scanning indicates contamination beyond 4 feet it is unlikely that contamination is due to the material at the surface and increasingly likely that subsurface contamination at this depth and beyond represent some remainder of the original ore body.

[5] (ENTACT, LLC, 2025)

Samples will be collected from the top 6 inches of soil and each additional foot of depth to acquire a depth profile of the radioactive materials in the soil and rock to plan remediation action in compliance with the assumed 5/15 pCi/g standard remediation criteria (i.e., 5 pCi/g in the top 15 cm, and 15 pCi/g for all depths below at **15 cm** increments)[6]. However, after modeling is complete, alternative standards may be used.

The investigation activities will be conducted, where possible, using a tracked Geoprobe™- type DPT rig equipped with a 3" DT45 Geoprobe Dual Tube sampling system with MC7 liners. The Geoprobe will proceed to each marked borehole location and continuous soil cores will be collected and logged. If the planned location cannot be safely reached, the hole will be location adjusted in consultation with an ENTACT Health Physicist. At each boring location, the soil core will be advanced through overburden fill and dredge deposits, terminating at a depth of 4 feet below the native layer or at bedrock, whichever is encountered first. If refusal is met, the borehole location may be offset at the discretion of an ENTACT Health Physicist. The DPT rig will be checked for contamination between borings and will be decontaminated as needed.

Cores from these boreholes will be labeled with a unique sample identification number that will include a reference to the boring designation from the sampling map, the borehole number (if more than one borehole is taken at the same location), the core sequence number or depth interval, an arrow indicating the top of the soil core, and the date.

Soil cores obtained from each borehole will be examined by the accompanying geologist. At a minimum, the geologist will identify the depths that soil transitions from one subsurface unit to the next.

When a sample is collected, the actual sampling location will be verified with calibrated GPS equipment and the coordinates recorded on field forms.

Collection will provide 200-300 grams of soil, sufficient for sample analysis minimum mass requirements from the lab.

2.3.2 Borehole Gamma Logging

Not all samples will require lab analysis. A gamma scintillator probe, such as a Ludlum Model 44-2 or similar, will be lowered into the borehole once the core is removed and the radiation levels at each **15cm** increment will be recorded to create downhole logging data. Radiation levels from the borehole logging will be used to determine the in-situ depth and thickness of soil deposits that produce an anomalous radiation reading and drive decisions about which samples will require lab analysis.

Once the borehole has reached its endpoint, a waterproof PVC sleeve will be inserted into the hole. A 1-inch NaI probe with a long cable will be used to record one minute radiation measurements at half foot (6-inch) intervals along the length of each borehole. These measurements will be recorded in counts per minute (cpm) and the depth of each measurement will be recorded as depth bgs in negative feet. For example, the depth of a gamma measurement taken at 3.5 feet bgs will be recorded as "-3.5 feet". This "gamma log" will be used to identify the depth bgs of the subsurface soil layers producing elevated radioactivity.

2.3.3 Soil Core Gamma Scanning

Radioactivity from the soil core will be measured by taking 1-minute integrated gamma measurements at **15cm** intervals using a 3-inch NaI detector along the length of the core(s). Once all measurements have been taken along the tube, they will be averaged, and the highest single value will be compared to the calculated average. If the maximum value exceeds the average by 30% or more, the associated **15cm** interval of soil will be selected for collection and evaluation.

2.4 SAMPLE LABELING

Each soil sample will be assigned a unique alpha-numeric identification code including an abbreviation of the property name, followed by the sample type and a unique sample number. The numeric portion of the sample identification code describing the depth will be separated from the borehole information by a dash "-". The starting and ending depths will be separated by a dash. The identifiers (IDs) expected for this sampling campaign are listed below:

- Sample Type: For subsurface soils extracted by borehole (BH); for surface soils (SS).
- Property ID: Red Bluff and Roundy (RBR)
- Sample Number: 001 through 999, with 001 being the first sample collected at the property.
- Sample Depth: This will consist of start and stop sample depths in feet with a dash between the two depths (i.e., 0-0.5 feet).

[6] (Energy, Minerals & Natural Resoures Department Mining and Minerals Division and New Mexico Environment Department, 2016)

For example, Figure 1 below depicts how the first subsurface soil sample collected at the first property would be labeled:

BH-RBR-001-0-1			
BH	RBR	001	0-0.5
Sample Type	Property ID	Location Number	Sample Depth (ft)

Figure 1 - Sample Labelling Convention Example

Each field duplicate sample will be labeled with the same sample identification as the original sample followed by the letter "D". The sealed sample bags will be stored in a secure location in a manner that maintains chain-of-custody requirements until such time as they are ready for shipment.

2.5 HANDLING AND SHIPPING SAMPLES

Samples collected for laboratory analysis will be placed in a sealable plastic sample jar, logged on a chain-of-custody form, and placed in a cooler or equivalent strong, tight container. The chain-of-custody form for the shipment will be placed in the cooler/container along with the sample and remain there, except when the form requires updating, until the cooler is ready for shipment.

After samples are in the cooler and before shipment, the cooler will be opened, and empty space will be filled with appropriate packing material. The cooler will be closed and the exterior surveyed with a calibrated exposure rate meter (e.g., Ludlum Measurements Model 19, or equivalent) to verify compliance with federal shipping regulations in 49 CFR 173. It is expected that the samples will comply with exemption criteria in 49 CFR 173.436, which will be verified before shipment. The chain-of-custody form will be signed by the Survey Manager or designee (the signatory). The form will be copied, and the original form will be replaced in the cooler. The cooler will be completely closed, and a custody seal will be applied to the outside of the container. The container will be secured with strong tape or other binding prior to shipment.

A copy of the signed chain-of-custody form will be retained. The cooler will either remain in the custody of the signatory, or it may be consigned to a courier or delivery service, such as Fed Ex or United Parcel Service. A signed copy of the shipping papers will serve as a record of custody between the signatory and the receiving party (such as a laboratory).

Packages containing samples shall be shipped for delivery to the following laboratory:

Eberline Analytical Corporation
601 Scarboro Rd # A, Oak Ridge, TN 37830
2016 TNI Std: TN010672025-19
DoD-ELAP: 70747 / L24-611
DOECAP-AP: 70747 / L24-612

2.6 SAMPLE ANALYSIS

Samples will be sent to Eberline, a NELAP accredited radioanalytical laboratory in Oak Ridge, Tennessee for gamma spectroscopy (EPA 901.1 Modified). Eberline will generate radioisotope concentrations for each sample sent in pCi/g. Analytical radioisotope concentration data will be correlated to onsite survey/counting data and used to develop the remediation plan.

3.0 MATERIALS AND EQUIPMENT

3.1 RADIOLOGICAL DETECTORS

The borehole logging data will be acquired with a Ludlum Model 44-2 1-inch gamma scintillation probe, or equivalent, paired with a Ludlum Model 2241-2 detector system, or equivalent.

The core gamma scanning will be performed using a Ludlum Model 44-20 3-inch gamma scintillation probe, or equivalent, paired with a Ludlum Model 2221 detector system, or equivalent.

Other radiation survey equipment that will be used at the Site includes beta/gamma detectors (Model 44-9, Ludlum, or equivalent) that will be coupled to survey meters (Ludlum Model 2241-2 or equivalent). The beta/gamma survey instruments will be used to scan workers and equipment for surface radioactive contamination before leaving the work areas of the site.

The GPS equipment used for locating sampling sites for drilling will be a Juniper Systems Geode sub-meter GPS receiver, or equivalent.

3.1.1 Detector QA/QC

All radiological detection instrumentation will have current calibration (within the past 12 months, or more frequently if recommended by the manufacturer). Daily field performance checks (i.e. a background and source check) will be conducted in accordance with individual instrument use procedures. These performance checks will be performed prior to daily field activities and at any time the instrument response appears questionable. The performance check is accomplished by using a radioactive source and obtaining a measurement on each detector/meter combination. Deviations should not exceed ±20%. Deviations greater than ±20% will be investigated. If the unit is not performing properly, it will be replaced. Performing the daily source check validates instrument performance. Only data obtained using instruments that satisfy the performance requirements will be accepted for use in the evaluation. Results of the daily field performance checks will be recorded on an instrument quality control check form.

The survey results will be recorded in counts per minute (cpm).

3.1.2 Instrument Calibration and Sensitivity

Instrumentation will have been calibrated at a lab qualified to perform that work and calibration certificates will be stored onsite during the execution of this workplan. Duplicate calibration certificates are maintained by ENTACT.

The Ludlum Model 44-2 1-inch gamma scintillation probe is sensitive to the gamma energies emitted by the isotopes of concern and their progeny to a sufficient degree to perform the downhole logging effectively.

The Ludlum Model 44-20 3-inch gamma scintillation probe is sensitive to the gamma energies emitted by the isotopes of concern and their progeny to a sufficient degree to perform the core scanning effectively.

The Ludlum Model 44-9 alpha/beta probe is sensitive to the alpha, beta, and to a lesser degree gamma radiation energies emitted by the isotopes of concern and their progeny and is an appropriate radiation detector to use contamination screening.

3.2 EXAMPLE RADIOANALYTICAL EQUIPMENT

Eberline uses High Purity Germanium (HPGe) gamma spectroscopic systems capable of detecting minute amounts of gamma-emitting radioisotopes in various media. While their specific arrangement of equipment is proprietary, Eberline has demonstrated their systems perform well for the detection of radium and uranium in the quantities expected at the Site.

3.2.1 Radioanalytical Result QA/QC (Validation)

While ENTACT does not directly calibrate or perform QA/QC checks on the gamma spectroscopic systems employed by the lab, the data those systems generate will be evaluated to confirm their proper operation.

The isotopes of interest at the Site and their surrogates, are in a certain equilibrium in nature and, with the proper hold time as discussed above, the data generated by a gamma spectroscopic investigation should show activity concentration values at a reasonable approximation of that equilibrium. Any imbalance in the radioisotope proportions may require additional investigation steps including but not limited to contacting that lab for a recount of that sample and asking the lab for documentation of the proper operation of the detector system used on that sample.

3.2.2 Lab Sensitivities for Radium and Uranium

Typical minimum detectable concentrations (MDCs) on HPGe detector systems like those used by Eberline for gamma spectroscopic analysis for the isotopes of concern at the Site are shown in Table 2 below and demonstrate the systems are capable of meeting or exceeding the expected 5/15 remediation goals for this project[7].

Radionuclide[8]	Background Soil	Reference Std.
Ra-226 (Pb-214)	0.1-0.25 pCi/g	0.2-0.3 pCi/g
U-238 (Th-234)	0.8-1.4 pCi/g	1.2-2.4 pCi/g

Table 2 - Typical HPGe MDCs for the Radioisotopes of Concern

[7] (Energy, Minerals & Natural Resoures Department Mining and Minerals Division and New Mexico Environment Department, 2016)
[8] Daughters of these radionuclides, shown in parentheses, produce stronger gamma signatures than their parents and as such are easier to detect by gamma spectroscopy. The radionuclides of interest (radium-226 and uranium-238) presented outside the parentheses are the parents.

4.0 RECORDS

4.1 FIELD DATA

The field data (soil screening data, survey data, etc.) will be recorded in bound logbooks with numbered pages and/or in electronic formats, such as Microsoft Word or Excel applications. Field data will document the date, location, sampler's full name and initials, sample IDs, and any anomalies related to this Plan. Pictures are recommended at each location. Paper records will be maintained for future reference. Electronic files will be maintained on a company-based cloud server for security and back-up/redundancy.

4.2 LABORATORY ANALYTICAL RESULTS

Analytical results will be transmitted from the laboratories to ENTACT in an Excel® spreadsheet or an equivalent, compatible format such as a comma-delimited file. Once received, results will be stored electronically. A report of the analytical results will include a pdf-type file with full reporting contents and case narrative.

4.3 LABORATORY QA/QC DOCUMENTATION

Laboratory reports will include documentation of the analytical process, quality assurance/quality control data and analytical instrument performance will be sent in electronic format from the laboratories to the team. These analytical reports shall include:

- Copies of completed chain-of-custody forms,
- Analytical results for samples listed in the chain-of-custody forms,
- Instrument calibration and/or instrument quality control records,
- Results for blanks and spikes associated with the reported results,
- Results for duplicates,
- Sufficient documentation to reproduce calculated results from instrument responses, and
- A case narrative describing the analytical process used to produce the published results.

4.4 DATA VALADATION

Laboratory data will be validated as described in Section 3.2.1. The laboratory reports and validation packets will be maintained on the ENTACT cloud-based system and will be made available to NMED upon request.

5.0 ANTICIPATED PROJECT SCHEDULE

As illustrated on the project schedule, the field remedial investigation activities are anticipated to begin in late October 2025 and be completed in December 2025, weather-permitting. The proposed schedule is also dependent on confirmation of landowner access agreements/approvals of whose land sampling activities will take place, where applicable. The start date of the field investigation activities will depend upon NMED's permit approval. The remedial investigation summary report is anticipated to be complete and ready for submittal to the NMED no more than 30 days after receipt of the final analytical results from Eberline.

5.1 Borehole Drilling Schedule

There are more than 500 boreholes planned. The driller estimates they can direct push 30 sample cores an average of seven (7) feet per day. Given the priority of closing the Roundy site within the current New Mexico state fiscal year, ENTACT proposes to begin the sampling with the biased samples on the Roundy and Piedra Trieste regions of the property; then complete the Roundy, and Piedra Trieste Class 2 areas and collocated Class 3 sample points before proceeding to the Class 1 and 2 areas of the Unknown Strip Mine region of the property; complete all Class 3 samples for all regions except for Red Bluff No. 1; and then enter and complete the Schmidt property side of Red Bluff No. 1. The State Land portion of Red Bluff No. 1 is currently planned for January 2026 assuming access and sampling approvals are in place at that time. Given the delay in accessing the State Land portion of Red Bluff No. 1 and the priority given to closing the Roundy regions of the property, the private land portion of Red Bluff No. 1 will be completed last as those sample points are the lowest priority in determining a remedial action plan and the higher priority data should be acquired first.

Eberline will analyze the samples in the order they are received, which will mean the Class 1 and 2 sampling data for the Roundy property will be available first, enabling a remedial design. Given the similar geology of this property, it is likely the remainder of the Unknown Strip Mine site will end up exhibiting similar sampling data and thus be accommodated by the same remedial design. Red Bluff No. 1 includes the mesa and appears to feature bedrock close to the surface. As such, sampling data is required before conclusions can be made regarding whether the remedial design for the Roundy, and Unknown Strip Mine regions of the property could apply.

The planned sampling schedule is as follows in Table 3 and assumes minimal difficulty in locating the sample sites, traveling between sampling sites, 100% drill rig uptime, and no weather delays:

Property Region	# of Biased Samples	# of Class 2 samples	# of Class 3 samples	Expected days to complete
Red Bluff No. 1	10	66	13	~3 for Biased and Class 2 / ~0.5 for Class 3
Roundy	29	122	16	~6 for Biased and Class 2 / ~0.5 for Class 3
Piedra Trieste	1	21	13	~1 for Biased and Class 2 / ~0.5 for Class 3
Unknown	47	155	16	~7 for Biased and Class 2 / ~0.5 for Class 3

Table 3 – 2025 Planned Sampling Schedule by Site Region

REFERENCES

49 C.F.R. pt. 173 (2025)

Energy, Minerals & Natural Resoures Department Mining and Minerals Division and New Mexico Environment Department. (2016). Joint Guidance for the Cleanup and Reclamation of Existing Uranium Mining Operations in New Mexico.

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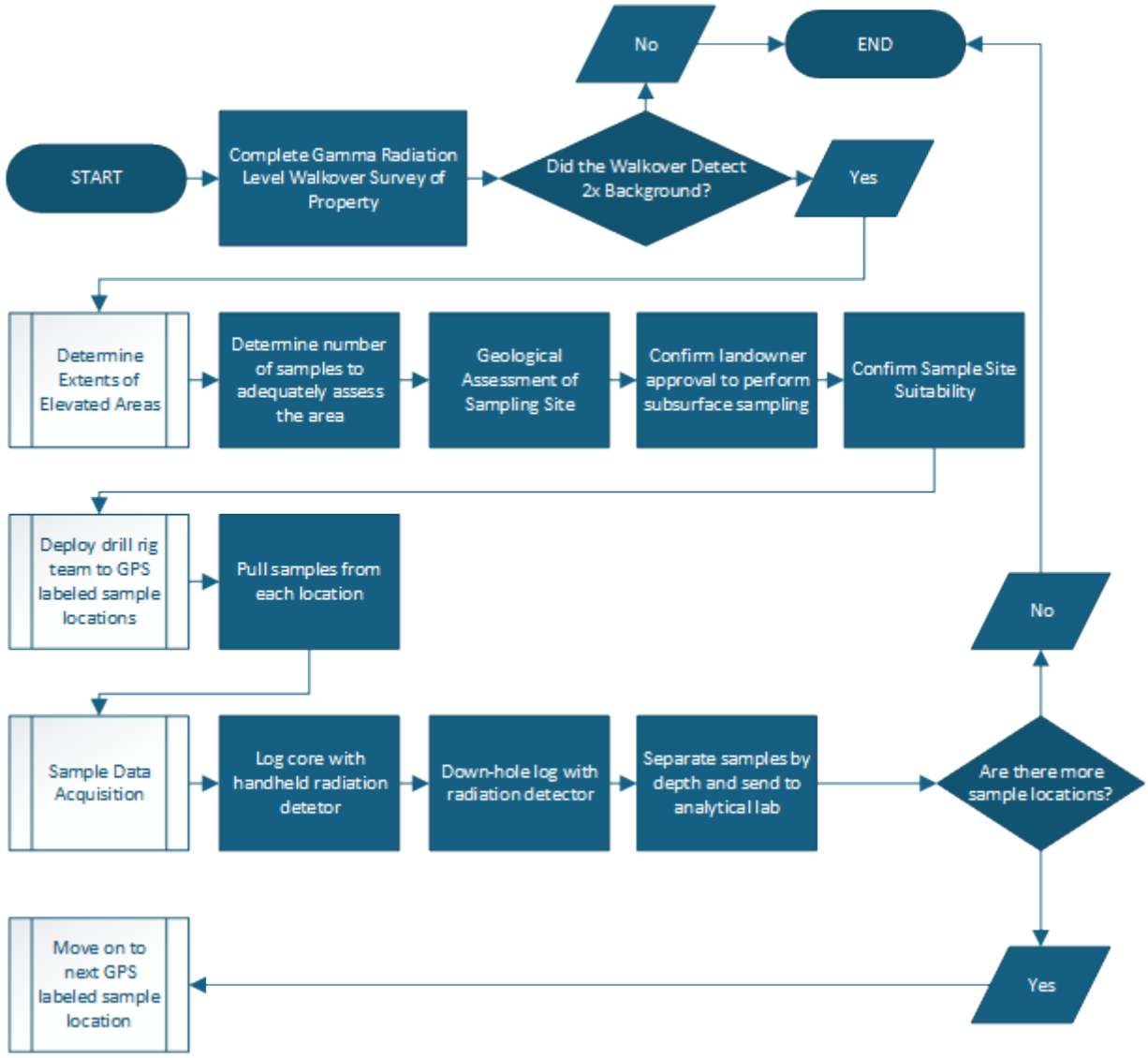
ATTACHMENTS

Attachment 1 - Hierarchy of Sampling Decision Logic and Sampling Process
Attachment 2 - MARSSIM Class 1 (magenta), 2 (yellow) and 3 (green) areas at the Site
Attachment 3 - Proposed Sampling Locations

ATTACHMENT 1

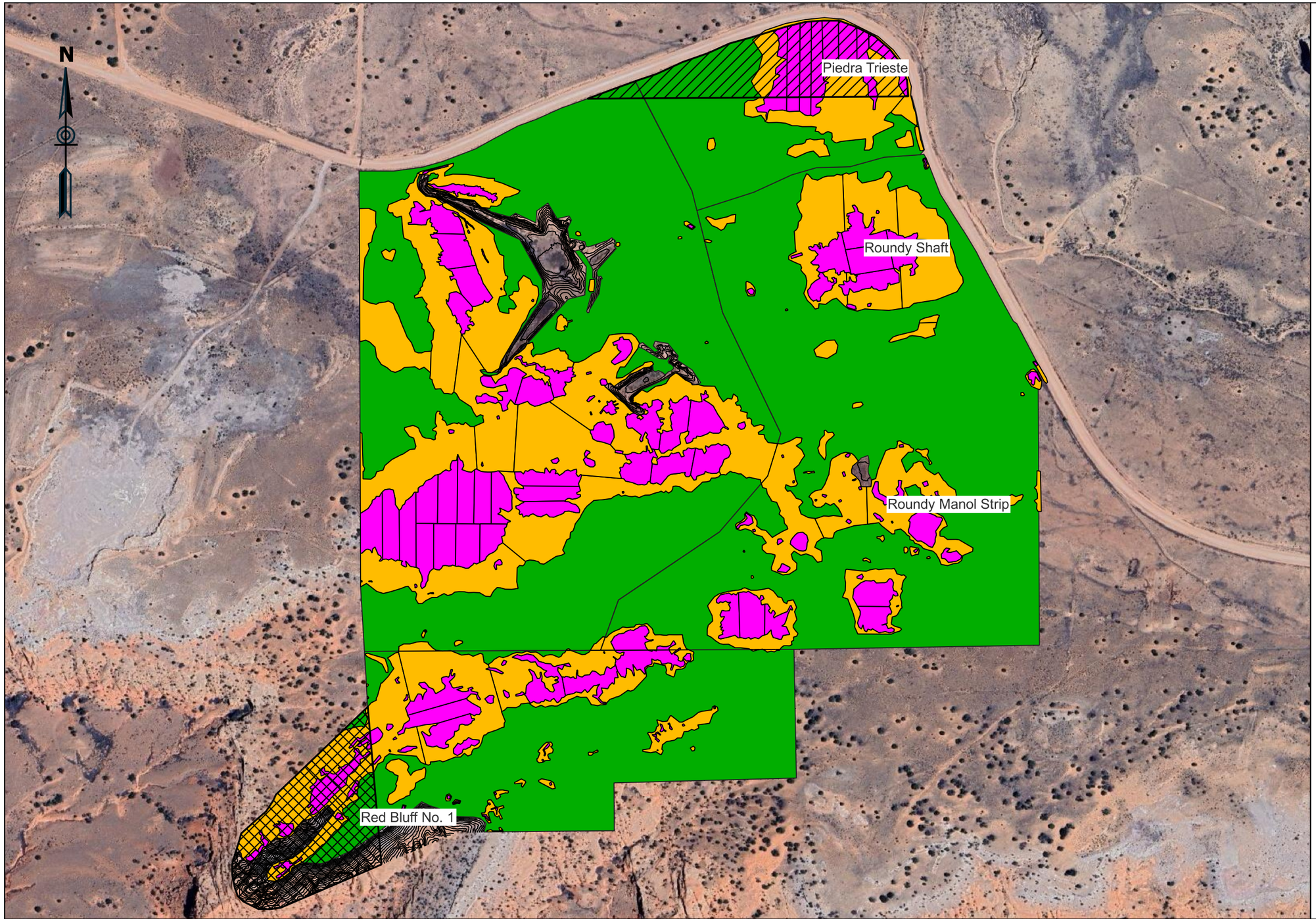
Hierarchy of Sampling Decision Logic and Sampling Process

Attachment 1 - Hierarchy of Sampling Decision Logic and Sampling Process



ATTACHMENT 2

MARSSIM Class 1 (magenta), 2 (yellow) and 3 (green) areas at the Site



LEGEND

AREA DESIGNATIONS

NM State Land

BLM land

MARSSIM AREAS

MARSSIM Class 1 areas

MARSSIM Class 2 areas

MARSSIM Class 3 areas

area labels

Elevation

USGS - 1 meter interval

Google Earth

SOURCES:

Google Earth Aerial Imagery
USGS Elevation (FEMA R6 Lidar 2016)
ENTACT 2025 Gamma Walkover Survey

0 500 1,000 ft

REV	DATE	BY	CHK'D	APR'VD	DESCRIPTION

Signature

PREPARED FOR:

ENTACT

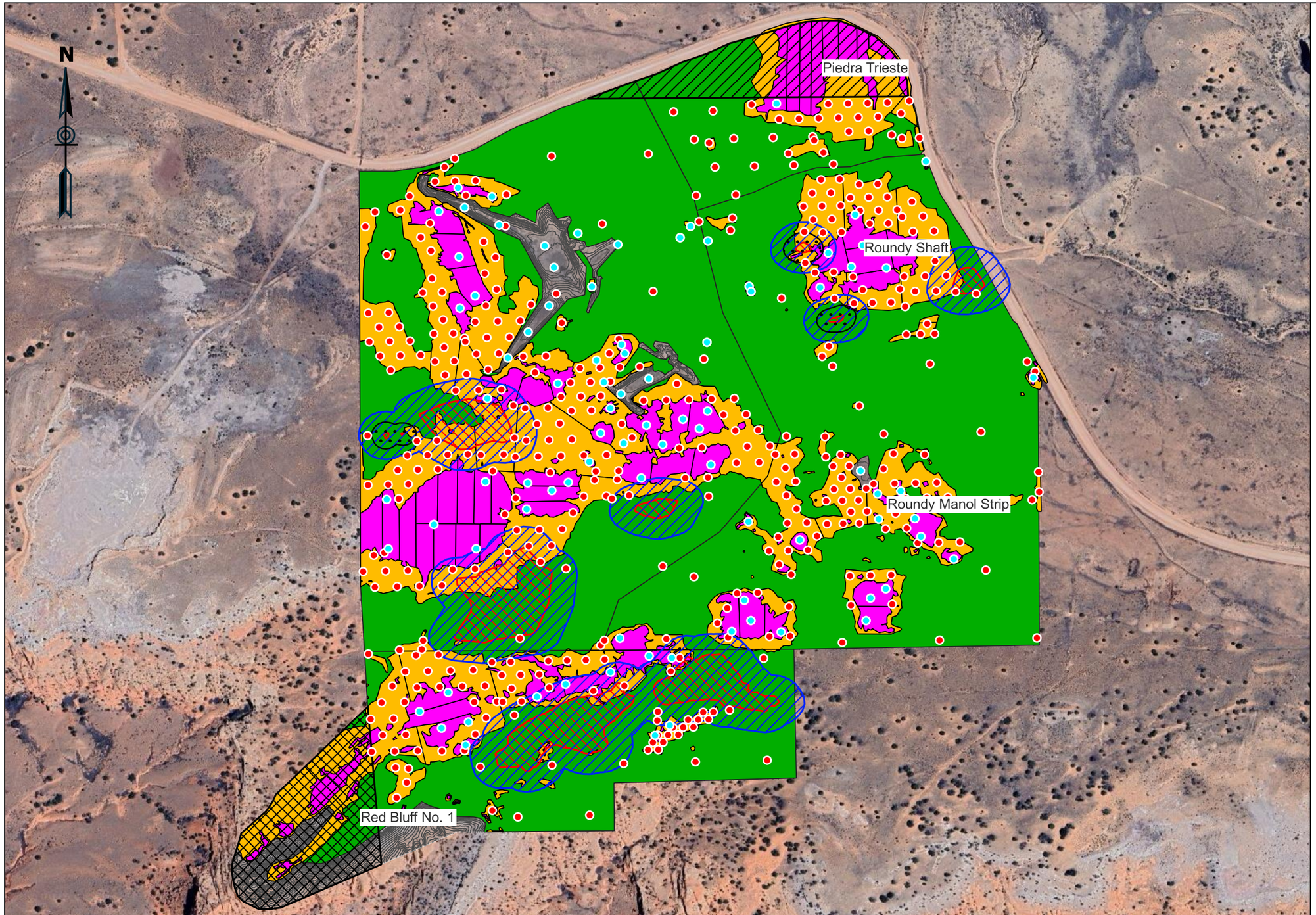
DRAWING NAME: MARSSIM Class 1, 2, and 3 areas at the Site

PROJECT NAME & LOCATION: Red Bluff No.1 & Roundy
McKinley County, NM

DRAWN BY	E. Fruchtnicht	APPROVED BY		DRAWING NO.	
DATE	11/10/2025	DATE		PROJECT NO.	E9462

ATTACHMENT 3

Proposed Sampling Locations



LEGEND

Sampling

Biased Samples

2025Mob Random Start Triangular Grid - modified

Cultural Resources

15m Avoidance per AML Comments

CR Avoidance Buffer modified - RESI

CR Avoidance RESI & AML Comments11-10-2025

AREA DESIGNATIONS

NM State Land

BLM land

MARSSIM AREAS

MARSSIM Class 1 areas

MARSSIM Class 2 areas

MARSSIM Class 3 areas

area labels

Area of Potential Effect - NMED

Elevation

USGS - 1 meter interval

SOURCES:

Google Earth Aerial Imagery
USGS Elevation (FEMA R6 Lidar 2016)
RESI 2025-149-01 Cultural Survey
ENTACT 2025 Gamma Walkover Survey

0 500 1,000 ft

REV	DATE	BY	CHK'D	APR'VD	DESCRIPTION

Signature

PREPARED FOR:

ENTACT

DRAWING NAME: Proposed Sampling Locations

PROJECT NAME & LOCATION: Red Bluff No.1 & Roundy
McKinley County, NM

DRAWN BY	E. Fruchtnicht	APPROVED BY		DRAWING NO.	
DATE	11/12/2025	DATE		PROJECT NO.	E9462