

March 21, 2025

Todd Jesse Department of Natural Resources Division of Reclamation, Mining and Safety 101 South 3rd, Suite 301 Grand Junction, CO 81501

RE: North Hangs Mine, File No., M-2024-059 112c Construction Materials Application Adequacy Response

Exhibit B

1. Per Rule 6.2.1(2)(b) & (e) please include a north arrow and signature on the Location Map. Exhibit B has been updated as required.

Exhibit C

2. Per Rule 6.4.3(a) please include the names of adjoining surface owners of record on a map in Exhibit C.

A table with corresponding labels for surface owners has been added to Map C-1.

3. Per Rule 6.4.3(g) please show the owner's name, type of structures, and location of all significant, valuable, and permanent man-made structures contained on the area of affected land and within two hundred (200) feet of the affected land. Exhibit S lists 7 structures between 5 owners. All of these structures should be identified.

A table with corresponding labels for structure owners has been added to Map C-1. Terra Energy's structure agreement certified mail receipt is attached to this response to complete the set.

4. Per Rule 6.2.1(2)(e) please include a north arrow on Map C-1.

The north arrow and scale can be found in the Map C-1 title block.

Exhibit D

5. The Mine Plan calls for Area A to be mined first after the Processing and Operating Area is established. However, a significant portion of Area A is within 400 ft of riverbank. Please commit to submitting a Technical Revision that addresses the February 2024 Floodplain Protection Standards for Sand and Gravel Pits Adjacent to Rivers and Perennial Streams (see comment below) before mining within 400 ft of the riverbank or revise the Mine Plan to begin mining in an area that is greater than 400 ft. from the riverbank.

No mining will take place within 400-ft of the riverbank prior to the approval of a technical revision that addresses the DRMS Floodplain Protection Standards for Sand and Gravel Pits Adjacent to Rivers and Perennial Streams.

Exhibit E

6. Section 5. Topsoil and Revegetation Plan calls for cottonwood trees to be planted in accordance with Maps F-2 and C-4. However, no Map F-2 was submitted and information on the submitted C-4 does not pertain to tree planting. Per Rule 6.4.5(2)(f)(iv) please specify the quantity size and location of cottonwoods to be planted.

Map C-4 is attached to this letter. The Map F-2 reference has been corrected to be Map F-1 and the revised page E-3 is attached.

Exhibit G

7. Please commit to submitting quarterly groundwater baseline data on a quarterly basis.

All quarterly groundwater data will be submitted on a quarterly basis.

8. Please commit to not exposing groundwater prior to the completion of 5 quarters of baseline groundwater data.

The applicant will provide DRMS with the five quarters of baseline water data prior to exposing groundwater on the site. A technical revision with this data will be provided once it is ready. Exhibit G has been modified to reflect this commitment.

- 9. Please commit to submitting a Technical Revision to address the floodplain protection standards before mining within 400 feet of the riverbank. For the entire permit area, the applicant must comply with the floodplain protection standards and the Technical Revision shall include one of three options to protect the hydrologic balance of the affected land and surrounding area:
 - a. A 400-foot setback from the riverbank, or shorter distance as described in the standards.
 - b. Designed structures to allow floodwaters from the 100-year event to enter and exit the pits without eroding banks.
 - c. A detailed analysis that illustrates that a 100-year flood will not result in river capture by the pits or significant damage to the riverbanks.
 - d. A combination of these options will be considered by the Division if proposed by the applicant. If the third option above is selected, this could entail one or a combination of the following:
 - e. A hydraulics model (e.g., the U.S. Army Corps of Engineers software HEC-RAS) that analyzes the velocities and forces during the 100-year flood.
 - f. A detailed hydrology and/or geomorphology study that illustrates that the 100-year storm will not cause significant damage to the riverbanks.

The Division is available to discuss these options (or similar options) with the applicant, prior to submittal of a revision.

The applicant will submit a technical revision to the DRMS prior to mining within 400-feet of the riverbank. Exhibits D & G have been revised to reflect this commitment and revision pages are attached.

Exhibit J

10. Per Rule 6.4.10(1)(a) please include estimates of cover and height for the principal species in each lifeform represented (i.e., trees, tall shrubs, low shrubs, grasses, forbs).

Please see the revised Exhibit J for the requested information.

11. Per Rule 6.4.10(1)(b) please include a description or map of the relationship of present vegetation types to soil types.

Information has been added to Map C-1 to clarify the relationship of pre-mine vegetation and soil types.

Exhibit M

12. Please provide copies of permits listed in Exhibit M. If a permit has not yet been received, a copy of the submitted permit application is also acceptable.

Copies of permits are not usually submitted to DRMS for the public file. At this time, the following permits have been issued to the applicant or are in process: CDWR gravel well permit and augmentation plan, CDPHE Fugitive Dust Permit, CDPHE Discharge Permit, USACOE wetland delineation and permit, CDOT access permit, and Garfield County Land Use Change permit.

Public Notice

13. Per 1.6.5(2) please provide proof of Public Notice publication. Proof may consist of either a copy of the last newspaper publication, to include the date published, or a notarized statement from the paper.

Proof of publication in the Glenwood Springs Post Independent is attached as requested.

Please feel free to contact my office with any further questions on this application. Regards,

Ben Langenfeld, P.E.

Lewicki & Associates, PLLC

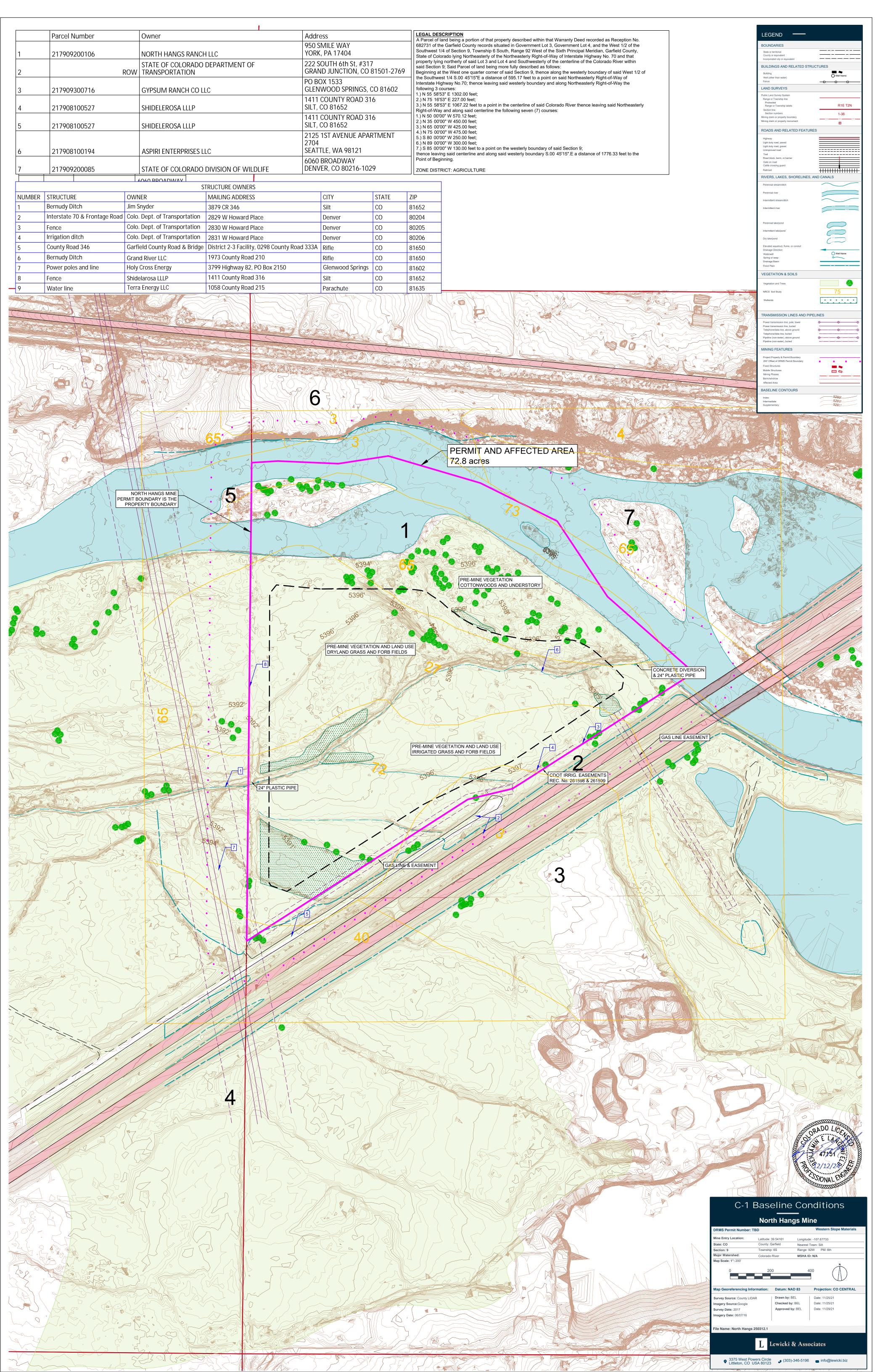
(720) 842-5321, ex. 1 benl@lewicki.biz

Attachments

Revised Exhibits and Maps

Terra Energy Structure Agreement Mailing Cert

Newspaper proof of publication



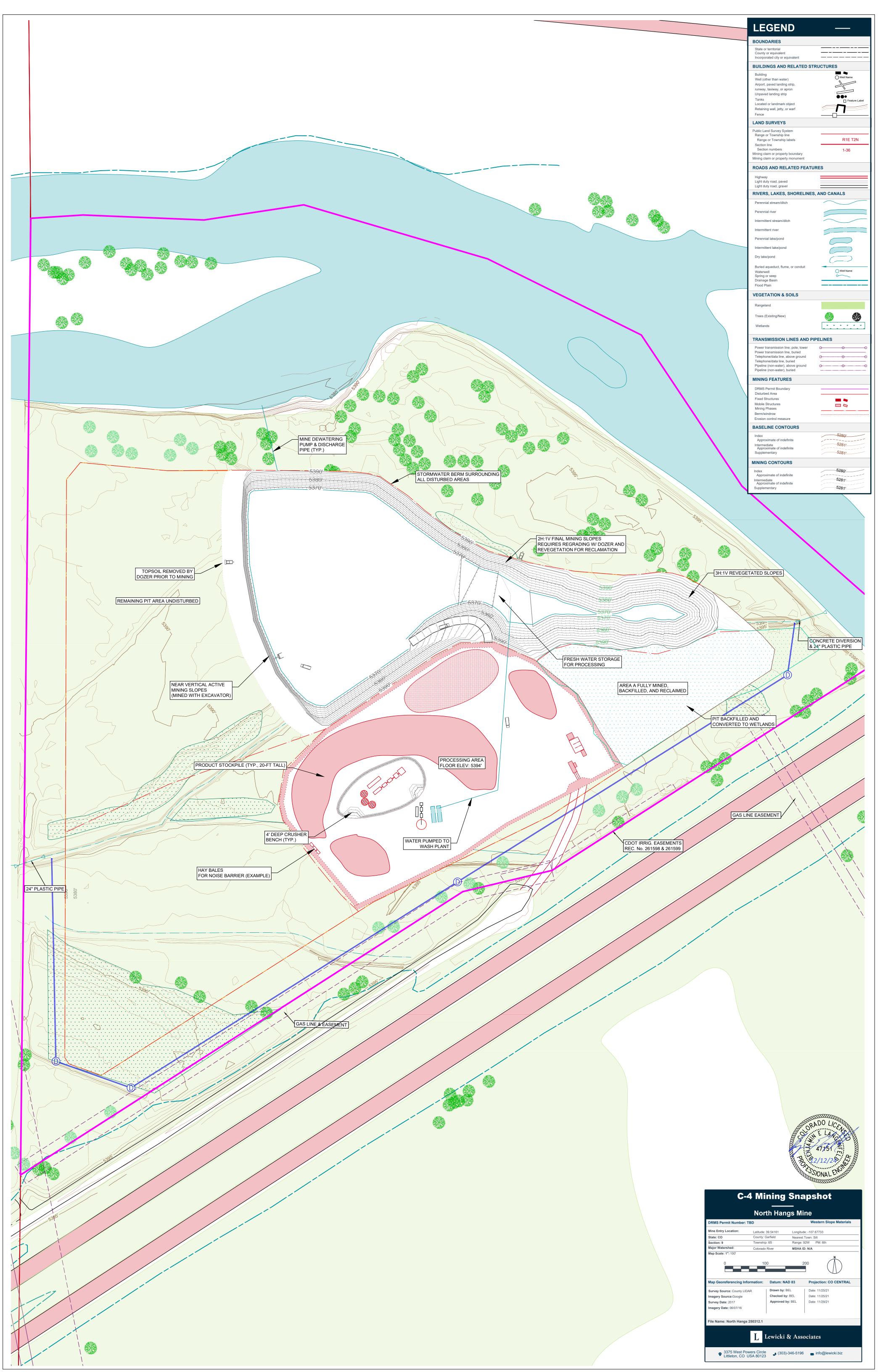
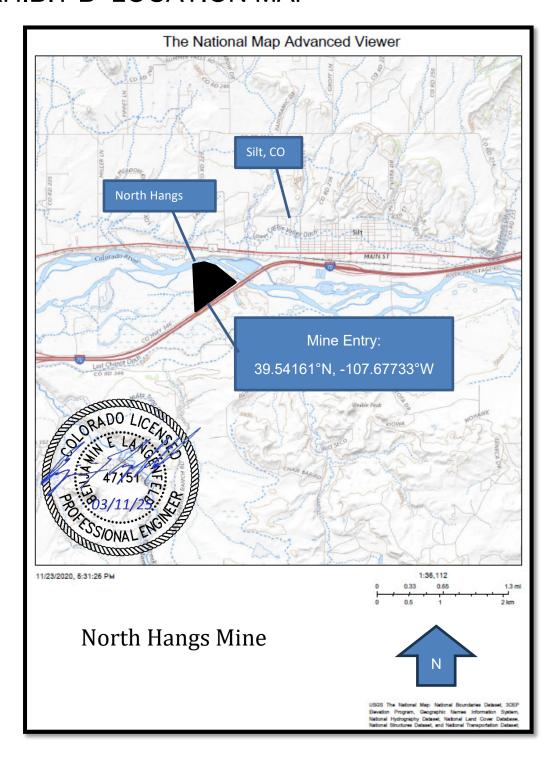


EXHIBIT B LOCATION MAP



out ground as part of reclamation, stored in the stockpile area, or be sold as fill. Details on topsoil and overburden quantities and material balance can be found in Table D-3 and Table E-3.

3. Mining Sequence

Once topsoil and overburden are stripped from the site, the deposit will be mined using shovels or loaders and haul trucks. The groundwater table is roughly four feet below ground level based on Western Slope's experience at their existing mine in the same aquifer, to the southeast (Grand River Park). Since groundwater will be exposed/encountered during mining, the entire pit will be dewatered using a pump. Details regarding this dewatering can be found in Exhibit G.

Mining will progress in the dewatered pit areas as shown on Map C-2. All mining will be to final 2H:1V slopes on the perimeter. The active mining highwall will be mined to the halfway point of the final mining slope. This will allow the active mining highwall to be knocked down to the final mining slope with a dozer when mining is complete in an area. No more than 25 acres of total disturbance will take place at any time. Most of this area will be within the lake area. A maximum of 11 acres of disturbed ground requiring topsoiling will be active at any given time.

Early mining will consist of mine operations on the north and south sides of the Bernudy Ditch with the ditch still in its pre-mining condition. Once the ditch has been moved into its new permanent route in a pipe, mining will commence through the ditch corridor. Prior to mining within 300 feet of the Colorado River, the permittee will submit a technical revision to the Division that includes the approved ditch reroute and designs for inflow/outflow structures along the Colorado River.

A discussion on water rights for groundwater exposure can be found in Exhibit G. Prior to the exposure of any groundwater, the permittee will provide the Division with a copy of the approved gravel well permit and any associated water supply plan.

Mining will not take place within 400-ft of the riverbank until a technical revision has been submitted to address groundwater quality data and riverbank armoring or protection.

As demonstrated in Table E-3, topsoil generated by stripping will be more than enough to successfully reclaim all disturbed areas in the greatest disturbance area scenario. WSM will maintain enough topsoil onsite in stockpiles to successfully reclaim the disturbed area to its final uses.

4. Final Use

The total affected area on the site is 72.8 acres, the same as the permit area. A maximum of 36 acres will be disturbed by mining activities. When the site is fully reclaimed, the final use of the affected area will be as listed in **Table E-1** and as depicted on the Exhibit F maps. The postmining land use will be compatible with the current existing land uses in the surrounding area.

5. Topsoil and Revegetation Plan

Throughout the reclamation process, topsoil will be replaced to a depth of 0-36 inches (18 inches on average) on all disturbed areas except those areas that will become the groundwater lake, the industrial/commercial area, and the access roads. However, for the purpose of material balance, it is assumed that the industrial/commercial area will be topsoiled. **Table E-3** is calculated based on this assumption. Topsoil available from stripping is in excess of that needed for reclamation. In accordance with Rule 6.4.5(2)(b).

The mature cottonwood trees within the mining area will be transplanted prior to mining. They will be moved to the areas in front of the processing area and concrete batch plant to aid in screening and will remain in their transplanted location for final reclamation. Additional saplings will be planted near the reclaimed lake and towards the river in the northeast of the site. Cottonwood saplings will be planted in accordance with Map F-1.

The seed mix for revegetation of the site was chosen because it will establish a diverse, effective, and long-lasting vegetative cover that is capable of self-regeneration without continued dependence on irrigation, soil amendments or fertilizer, and provides equal or better coverage than the existing vegetation of the surrounding area. Plantings will be limited to grasses and forbs that are well-suited to the property considering the soils and climate. **Table E-4** shows the rangeland revegetation seed mix. **Table E-5** shows the wetland fringe revegetation seed mix. The wetland mix will be applied in all wetland areas designated on the Exhibit F maps.

The revegetation plan considers environmental factors such as seasonal patterns of precipitation; temperature and wind; soil texture and fertility; slope stability; and direction of slope faces to provide the greatest probability of success with plant establishment and vegetation development.

Table E-3. Rangeland – Permanent* Seed Mix

Species*	Percentage of mix (%)	Project Drill Seed Mix Rate (lbs PLS** per acre)
Palome Indian ricegrass	20%	6
Ephraim crested wheatgrass	10%	3
Canbar canby bluegrass	3%	1
Sodar streambank wheatgrass	10%	3
Canada wildrye	20%	2.5
Slender wheatgrass	8%	2.5
Fourwing saltbrush	8%	0.3
Rabbitbrush	1%	0.3
Skunkbrush sumac	1%	0.3
Total	100%	18.9

^{*}Permanent vegetation seed mix consists of native species.

Table E-4. Wetland - Permanent* Seed Mix

Species*	Percentage of mix (%)	Project Drill Seed Mix Rate (lbs PLS** per acre)
Nebraska sedge	8%	1
Hardstem bulrush	31%	4
Beaked sedge	8%	1
Alkali bulrush	15%	2
Canada wildrye	19%	2.5
Slender wheatgrass	19%	2.5
Total	100%	13
Cottonwood saplings		Min. 1 per 250' of wetland fringe

^{*}Permanent vegetation seed mix consists of native species.

Note that the rates given in in the seed mix tables are for a drilled application rate and rates will be double for a broadcast application. All temporary seeding and berm seeding will be conducted with the Rangeland seed mix.

To ensure the establishment of a diverse and long-lasting vegetative cover, the operator will employ site preparation techniques and protection. The soil shall be mechanically conditioned using disks and rippers, mulch will be spread after seeding, and temporary irrigation may be

^{**}PLS = Pure live seed

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employed to ensure germination of as many seedlings as possible. Drill seeding will be utilized throughout the site.

Certified weed free mulch will be crimped into the surface at 2000 lbs. per-acre. Furrows from disking will be left in the topsoil to provide moisture concentration and shade areas to promote better conditions for successful vegetation establishment. Seeding will occur in the first favorable season following the placement of topsoil.

The site will be prepared to provide the best chance of vegetation establishment by completing the following as recommended by the NRCS in the Plant materials Technical Note No. 59:

"The seedbed should be well settled and firm but friable enough that seed can be drilled at the recommended depth. Soils that have been compacted by traffic or other equipment should be tilled (deep-chisled or ripped if necessary) to break up restrictive or compacted layers and then harrowed and rolled or packed to prepare the required firm seedbed. Avoid seedbed preparation when the soil is wet to prevent compaction of the seedbed. Planting depth less than 1 inch."

6. Reclamation Timing

Stormwater berms will be seeded within 90 days of their construction using the permanent rangeland mixture. All reclamation activities will be completed within two years of the completion of mining activities onsite.

Table E-6 summarizes the timing of reclamation throughout the life of the mine. The anticipated timing is based on a 15-year mine life, depending on market conditions. If the mine life is extended, the appropriate years will be added to the timeline to accommodate reclamation.

Table E-5. Reclamation Timetable

Years	Activity
1-2	Stripping of processing area and initial mining in Area A.
2-15	Mining of whole site, with concurrent reclamation.
15-17	Final reclamation. Industrial operations at processing area. Revegetation monitoring (two years minimum).

7. Post-Reclamation Site Drainage

Map G-1 shows the post mine drainage conditions in comparison to baseline and mining conditions.

8. Weed Control

Measures will be employed for the control of noxious weeds. A Weed Control Plan will be utilized as follows:

- 1) Every April and October, a weed survey will be taken of the affected area to identify and map the presence of any noxious weeds listed by the county and the state.
- 2) If any patches or plants are identified, they will be controlled within 30 days. This may include mowing, tillage, or spraying them with an herbicide approved for use by the weed control staff of Garfield County. Other methods of weed control (ie: biological) may be employed from time to time depending on the nature and extent of the targeted species.

After reclamation, weed surveys and controls will continue until the perennial vegetation cover on the site meet DRMS requirements and bond release is obtained.

9. Revegetation Success Criteria

Revegetation will be deemed adequate when erosion is controlled and vegetation is considered satisfactory according to Division standards. Reclamation is considered a success when a diverse and long-lasting vegetative cover is established and the site is free of prohibited noxious weed species that seriously threatens the continued development of the desired vegetation. Monitoring the reclamation on an ongoing basis will ensure its success. If problems arise, WSM will consult with the local NRCS office to get input regarding how to resolve the problem. If minor changes or modifications are suggested by the local NRCS office to the seeding or reclamation plan, revision plans will be submitted to the DRMS prior to their implementation. It is anticipated that the Division will provide assistance and feedback in evaluating the success of the ongoing reclamation process. Information on all areas disturbed and reclaimed as well as any other important items regarding the reclamation will be submitted in the annual reports to the Division.

flood has passed. All fuel storage onsite will be maintained elevated at least one foot above the base flood elevation and in secondary containment sufficient to hold 110% of the stored fuel.

Mining will not take place within 400 feet of the Colorado River prior to the construction of inlet/outlet structures. These structures are outlined on Map C-3. **Prior to mining within 400-ft of the Colorado River, the applicant will provide the Division with a technical revision outlining design specifics of these structures.** These design specifications will be in accordance with the *Urban Drainage and Flood Control District, Technical Review Guidelines for Gravel Mining & Water Storage Activities Within or Adjacent to 100-Year Floodplains*. Map C-3 shows the potential structure designs for reference.

3. Wetlands

WSM commissioned a wetlands survey of the site conducted by Environmental Solutions Inc (ESI) to determine the extent of wetlands that are present onsite. This survey is attached to the application in Exhibit J. Wetlands will not be disturbed by early mining. Prior to wetland disturbance, the applicant will secure any applicable US Army Corps of Engineers (USACOE) permits. No fill of wetlands will take place prior to securing said USACOE permits.

4. Location on Map

See Map C-1 for the location of all tributary water courses, wells, springs, stock water ponds, reservoirs, and ditches on the affected land and on adjacent lands where such structures may be affected by the proposed mining operations.

5. Known aquifers

The only known aquifer in the area is the shallow alluvial aquifer of the Colorado River. Depth to water table is expected to be found at four feet below ground surface, based on the depth to groundwater experienced by the operator at the Grand River Park operation to the southeast. According to the U.S. Geological Survey's Ground Water Atlas of the United States, the only groundwater aquifer system below the alluvial one in this area is the Unita-Animas Aquifer System. This is located beneath the Mancos Shale that underlays the site alluvium and will not be reach by mining or affected by mining. Mining will stop at least two feet above the shale bedrock.

6. Surface Water

The North Hangs Mine will interact with surface water in the area via runoff that enters the site. Map G-1 shows a comparison of the drainage patterns in all three stages of operational life. The priority for surface water protection at the North Hangs Mine is preventing the discharge of



⁴ https://pubs.usgs.gov/ha/ha730/ch c/

EXHIBIT J

VEGETATION INFORMATION

1. Existing Vegetation Community

The study area contains a mixture of grass-forb herbaceous vegetation in the irrigated pastures. Non-irrigated areas range from mature cottonwood galleries with shrubby midstory and sparse herbaceous understories to very dry, sparse shrublands and grassy areas. Flood irrigation has been heavily applied on the pasture areas, resulting in some areas dominated by hydrophytes along and below the ditches. Irrigation has typically begun in mid-April and does not shut off until October in most years. A detailed vegetation discussion can be found in the Environmental Solutions report in Appendix H-1.



Figure J-1 Typical rangeland vegetation found in permit area.



Figure J-1 Typical mature cottonwood galleries with shrubby midstory

2. Cover and Estimated Carrying Capacity

The final land use for the site will be a lake with surrounding rangeland. Since the lake is the vast majority of the site area, the rangeland is not anticipated to be used for grazing.

The vegetation along the Colorado River between Silt and Rifle, Colorado typically consists of a diverse riparian ecosystem with varying cover height and density. Mature cottonwood trees reaching heights of 50-70 feet form the tallest vegetation layer. In the midstory are Box elder, river birch, and willows ranging from 15-30 feet in height. In the understory typically is found shrubs such as red-osier dogwood, skunkbush sumac, and wild rose, which are typically 3-8 feet tall. Ground cover consists of grasses, sedges, rushes, and forbs generally less than 3 feet in height. The riparian corridor tends to have dense vegetation near the river's edge, creating a thick band of greenery. Cover is typically 50-90% at river adjacent sites like North Hangs, with the thickest vegetation within 100-ft of the river or other waterways. The vegetation thins as one heads away from waterways.



AFFIDAVIT OF PUBLICATION

State of Florida, County of Orange, ss:

Megan Villanueva, being first duly sworn, deposes and says: That (s)he is a duly authorized signatory of Column Software, PBC, duly authorized agent of Glenwood Springs Post Independent, that the same weekly newspaper printed, in whole or in part and published in the County of Garfield, State of Colorado, and has a general circulation therein; that said newspaper has been published continuously and uninterruptedly in said County of Garfield for a period of more than fifty-two consecutive weeks next prior to the first publication of the annexed legal notice or advertisement; that said newspaper has been admitted to the United States mails as a periodical under the provisions of the Act of March 3, 1879, or any amendments thereof, and that said newspaper is a weekly newspaper duly qualified for publishing legal notices and advertisements within the meaning of the laws of the State of Colorado.

That the annexed legal notice or advertisement was published in the regular and entire issue of every number of said weekly newspaper for the period of 4 insertions; and that the first publication of said notice was in the issue of said newspaper dated 29 Jan 2025, 5 Feb 2025, 12 Feb 2025, 19 Feb 2025 in the issue of said newspaper.

That said newspaper was regularly issued and circulated on those

Total cost for publication: \$165.88 NOTICE ID: 5bU7eH9ZTi9RiO57XLmX

NOTICE NAME: 8CD09 North Hangs Public Notice



(Signed)

JESSICA GORDON-THOMPSON Notary Public - State of Florida Commission # HH001658 Expires on August 17, 2026

VERIFICATION

State of Florida County of Orange

Subscribed in my presence and sworn to before me on this: 02/21/2025

Notary Public

Notarized remotely online using communication technology via Proof.

PUBLIC NOTICE

Western Slope Materials LLC; PO Box 1319, Carbondale, CO 81623 (970) 963-2296, has filed an application for a Regular (112) Construction Materials Operation Reclamation Permit with the Colorado Mined Land Reclamation Board under provisions of the Colorado Land Reclamation Act for the Extraction of Construction Materials. The proposed mine is known as the North Hangs Ranch, and is located at or near Section 9, Township 6S, Range 92W, 6th Prime Meridian.

The proposed date of commencement is April 2025, and the proposed date of completion is April 2040. The proposed future use of the land is General Agriculture. Additional information and tentative decision date may be obtained from the Division of Reclamation, Mining and Safety, 1313 Sherman St. Room 215, Denver, Colorado 80203, (303) 866-3567, or at the Garfield County Clerk and Recorder's Office, 109 8th St, Ste 200, Glenwood Springs, CO 81601, or the above-named applicant.

Comments must be in writing and must be received by the Division of Reclamation, Mining, and Safety by 4:00p.m. 20 days after the final publication of this notice.

Please note that under the provisions of C.R.S. 34-32.5-101 et seq. Comments related to noise, truck traffic, hours of operation, visual impacts, effects on property values and other social or economic concerns are issues not subject to this Office's jurisdiction. These subjects, and similar ones, are typically addressed by your local governments, rather than the Division of Reclamation, Mining, and Safety or the Mined Land Reclamation Board.

PUBLISHED IN THE GLENWOOD SPRINGS POST INDEPENDENT ON WEDNESDAY, JANUARY 29, 2025, WEDNESDAY, FEBRUARY 5, 2025, WEDNESDAY, FEBRUARY 12, 2025 AND WEDNESDAY, FEBRUARY 19, 2025. OUTBOUND TRACKING NUMBER 9414 7118 9956 0360 9639 10

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