STATE OF COLORADO

Armstrong - DNR, Ursula <ursula.armstrong@state.co.us>

McClave Ranch Pit (M-2024-038) - Exhibit G

PFM Consulting <pfmconsultingcompany@gmail.com> Tue, Aug 6, 2024 at 5:10 PM
To: "Armstrong - DNR, Ursula" <ursula.armstrong@state.co.us>
Cc: "Eschberger - DNR, Amy" <amy.eschberger@state.co.us>, ron@rocktran.com

Ursula,

Attached is the entire permit narrative, including Exhibit G on page 9. Please let me know if there is anything else you need to proceed with the review.

Thank you,

Jodi Schreiber, Owner
PFM Consulting LLC
719-529-0916
pfmconsultingcompany@gmail.com

PFM Consulting Website

"Success is stumbling from failure to failure with no loss of enthusiasm."
-Winston Churchill

On Tue, Aug 6, 2024 at 12:17 PM Armstrong - DNR, Ursula <ursula.armstrong@state.co.us> wrote:
[Quoted text hidden]

DRMS Permit Narrative 7.15.2024.pdf
547K

McClave Ranch Pit

Construction Material

Regular 112 Operation

Reclamation Permit Application Package

Colorado Division of Reclamation, Mining and Safety

June 2024

6.4.1 Exhibit A

Legal Description

The McClave Ranch Pit is located 38.099477°, - 102.887844 °. The pit will be accessed through Bent County Road JJ approximately 3.74 miles east of Hasty, CO. The site is approximately 112 acres and is described by the following legal description:

Location: Bent County, CO

NW ¼ , SW ¼ , SE ¼ of the NW ¼ of S35 T25S R49W

Entrance: 38.0994771°, - 102.887744°

6.4.2 Exhibit B

Index Map

6.4.3 Exhibit C

Pre-Mining and Mining Plan Map

of Affected Lands

6.4.4 Exhibit D

Mining Plan

The McClave Ranch Pit will be a regular 112 Operation in Bent County. Access to the site will be from Bent County Road JJ at the northwest corner of the site.

The site consists of Cascajo very gravelly sandy loam, Kimera loam, and Olney sandy loam. It is anticipated that shale will be found immediately beneath the material to be mined. The target gravel source is located beneath limited topsoil of 0-6 inches and overburden of an additional 1-3 feet. Aggregate material is anticipated to be an additional 10 feet in depth. Topsoil and overburden will be saved for reclamation of the mine site. The primary commodities of this site are landscape aggregate, gravel and road base. Incidental materials not used for construction material will be used to reconstruct the pit floor and lessen the pit slopes.

The life of the proposed operation is difficult to quantify due to the changing economic conditions in the construction industry and aggregate quality. Extraction will be limited to 70,000 tons per year. At this rate, the life of the mine would be approximately 10-15 years depending on local economic conditions.

Mining will proceed to the south of the entrance and then proceed east. Extracted material will be moved to the processing area that is anticipated to be in the west central portion of the pit. Earthmoving will be accomplished using front end loaders. Aggregate will be processed and sized using a crusher and screens. All equipment will be portable. The highwall will be no greater than 200’ in length and less than 10’ in height. Mining will occur in 20-acre phases. Reclamation will occur concurrently to mining and as one 20-acre phase is completed, a second phase will open.

All plant growth material and topsoil will be salvaged and stockpiled for reclamation use. These stockpiles will be located at the perimeter of the site and posted as reclamation topsoil. Waste rock and overburden will be stockpiled and used to rebuild the pit floor and slopes during reclamation. Established stockpiles will be stored onsite and seeded with the approved seed mix to reduce the chance of erosion. These stockpiles will be located separate from the landscape aggregate and gravel stockpiles.

Overburden perimeter stormwater berms will be constructed as excavation and reclamation progresses. These berms will serve to control erosion and keep sedimentation from reaching any drainage. Water for dust suppression will be obtained from the nearby Verhoeff Well and hauled onsite.

There will be no storage of fuel or lubricants onsite. Fuel will be hauled onsite as needed by vendor trucks.

Mining will develop a gravel pit to a depth of approximately 10 feet. No groundwater is expected to be encountered during excavation and mining; therefore, no impact to the hydrologic balance is anticipated. No acid or toxic producing materials will be exposed during mining. No explosives will be used in conjunction with mining or reclamation. All interior haul roads will be temporary and will be reclaimed after the mining has been completed.

This is a privately owned site and does not require the State Historic Preservation Office requirements for a cultural or historic study. If the operator encounters any structure of note, the State Historic Preservation Office will be notified.

6.4.5 Exhibit E

Reclamation Plan

Reclamation of the site will be of back to the original rangeland use of the site. The land has historically been rangeland and will be returned to such uses following mining operations.

Slopes will be returned to a 3H:1V slope or flatter when mining has concluded, thus allowing for reclamation to immediately follow mining as the site progresses. As topsoil, waste rock and overburden are removed from the working face, they will be stockpiled for future reclamation use. Throughout mining, slopes will be maintained at a 3H:1V minimum, except for the active mine face. Waste rock and overburden will be placed on the pit floor as quantity allows. Three inches of topsoil will be replaced on affected surfaces. If necessary, surfaces will be roughened prior to seeding. All materials used for backfilling will be generated from onsite sources. Onsite topsoil will be adequate for reclamation purposes. No importation of materials for reclamation purposes will be necessary.

No trees, shrubs, or bushy-type vegetation will be planted in the rangeland area of the site. Only the appropriate grasses selected by the NRCS will be used. The operator will use the seed mix on this site. The seed will be broadcast at the rates below.

Table S - Proposed Seed Mix

	Common Name	Scientific Nomenclature	Variety	Precip Zone	Keystone Ecological Specieis	Lifefor m	Specifications / Re: PLS / lb.	Specifications / Re: Applied PLS lbs/ac
Grasses	Green needlegrass	*Nassella viridula*	Lodorm	12		NC	181,000	0.50
	Indian Ricegrass	*Achnatherum hymenoides*		8		NC	141,000	0.50
	Little Bluestem	*Schizachyrium scoparium*	Aldous	14		NW	260,000	0.40
	Sand Dropseed	*Sporobolus cryptandrus*		8	XX	NW	5,298,000	0.15
	Sand Lovegrass	*Eragrostis trichodes*	Nebraska 27			NW	1,500,000	0.15
	Sideoats Grama	*Bouteloua curtipendula*	Vaughn	12	XX	NW	191,000	0.50
	Western Wheatgrass	*Pascopyrum smithii*	Arriba	10	XX	NC	110,000	2.00
	Total							**4.20**

ECS Quote
$58.75/AC

All mining structures, including interior haul roads and stormwater diversion structures, will be reclaimed following all mining operations. All buildings are portable. Upon commencement of reclamation, the area will be monitored for noxious weeds. The access road to the site from County Road JJ will be remain when the site has completed all mining operations.

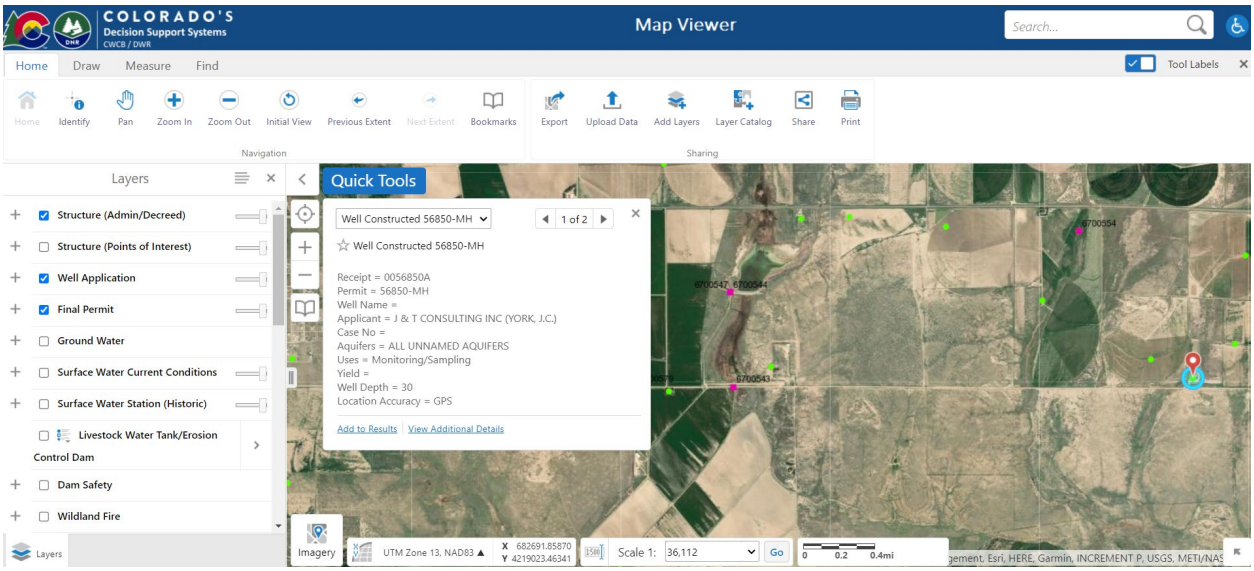
6.4.6 Exhibit F

Reclamation Plan Map

6.4.7 Exhibit G

Water Information

Mining is expected to have no impact on the prevailing hydrologic balance. Groundwater will not be exposed, and stormwater will not leave the site. The site will not discharge stormwater or process water drainage. Water depth is anticipated to be greater than the 10 feet mining depth, as noted below with a nearby depth recorded at 30 feet.



Runoff occurs as overland flow to natural drainage ravines in the vicinity. Stormwater best management practices such as waddles, straw bales, and perimeter berms will be placed to effectively manage stormwater. Historic flow will be maintained during mining.

Consumptive use of water may occur as dust suppression on the haul road and affected areas. The operator will use water from a nearby source and haul onsite.

The permittee will complete a stormwater management plan. Diversionary berms and impoundments will be constructed as recommended by the Water Quality Division.

6.4.8 Exhibit H

Wildlife Information

The property is used for rangeland. The site will be returned to rangeland during reclamation. Colorado Parks and Wildlife was contacted for comment during the permit application process. Their response is attached for review.

Forage and cover for wildlife is very limited due to the arid climate. Small animals, including rabbits, foxes, etc. are found in the surrounding environment. The site is within range for white tail deer, antelope, prairie dog, various snakes, various lizards, and ring-necked pheasant. Impacts to wildlife will be mitigated through a weed management plan and reseeding all mined areas with a diverse and native rangeland seed mix.

6.4.9 Exhibit I

Soils Information

A Custom Soil Resource Report for Bent County, specific to this site, is attached for review. The site is made up of Cascajo very gravelly sandy loam, Kimera loam, Olney Sandy loam, Satanta loam, and Travessilla-Olney Sandy loam.

The Kimera Series is a very deep, well-drained soil. It is formed in alluvium deposits derived from sedimentary rock. It is found on plains, interfluves, fans, ridges, and hills. The Casajo Series consists of deep, excessively drained soils that formed in very gravelly and sandy alluvium over shale or sandstone. It is usually found to a depth of 4-20 feet and are on terraces, terrace edges and ridges.

Topsoil is found at a depth of 0-6 inches onsite, with overburden accounting for approximately 1-3 feet onsite. Mineable aggregate is then found up to a depth of approximately 10 feet.

6.4.10 Exhibit J

Vegetation Information

The McClave Ranch Pit is characterized by rangeland. Native vegetation includes Sideoats Grama, Western Wheatgrass, Little Bluestem, cactus, yucca, and sagebrush.

6.4.11 Exhibit K

Climate

Climate data was pulled from the U.S Climate Data website for the Bent County, Colorado area.

Monthly | Daily | History | Geo & Map

Climate Las Animas - Colorado

	Jan	Feb	Mar	Apr	May	Jun
Average high in °F	47	51	61	70	79	89
Average low in °F	15	20	28	37	48	57
Av. precipitation in inch	0.38	0.41	0.93	1.24	1.94	1.87
Av. snowfall in inch	5	3	4	1	0	0

	Jul	Aug	Sep	Oct	Nov	Dec
Average high in °F	95	92	83	71	58	47
Average low in °F	63	61	51	38	24	16
Av. precipitation in inch	2.24	1.69	1.16	1.08	0.42	0.37
Av. snowfall in inch	0	0	0	1	2	3

6.4.12 Exhibit L

Reclamation Costs

Reclamation cost estimates were calculated on a per acre basis and applied to maximum active mining area of 112 acres.

Direct Tasks	Unit	Quantity	Cost	Total Cost
Grading Highwalls				
3H:1V Pushdown Dozer	Hours	35		$7700.00
Placing Topsoil/Fines				
Bull Dozer	Hours	6	$145.00	$870.00
Loader	Hours	6	$145.00	$870.00
Seeding				
Broadcasting	Hours	3	$300.00	$900.00
Seed Mix	Acre	1	$1200.00	$1200.00
Mulch	Acre	1	$187.50	$187.50
Tracking seed/mulch				
Dozer	Hours	0.33	$154.00	$50.82
Area Reclaimed	Acre	20.00		$89,266.40
Mobilization Fee	Hours	1	$1000	$1000
Indirect Tasks				
Liability Insurance			0.0155	$1383.00
Performance Bond			0.015	$1338.00
Profit			0.1	$8926.00
Job Superintendent	Hours	20	$88.00	$1,760.00
Miscellaneous Indirect			0.0925	$8257.00
Total Bond				$111,030.00

6.4.13 Exhibit M

Other Permits and Licenses

- Bent County Special Use Permit.

6.4.19 Exhibit N

Source of Legal Right to Enter

Please see enclosed the agreement between the landowner and the permittee.

6.4.15 Exhibit O

Owner of Record of Affected Land

Surface Area and Substance to be Mined

See enclosed deed.

6.4.16 Exhibit P

Municipalities Within Two Miles

There are no towns within two miles of the proposed mining operation.

6.4.17 Exhibit Q

Proof of Mailing Notices to Board of County Commissioners and Soil Conservation District

6.4.18 Exhibit R

Proof of Filing with County Clerk and Recorder

6.4.19 Exhibit S

Permanent Man-made Structures

Bent County Road JJ and a Southeast Colorado Power Association power line are within 200 feet of the site. Structure agreements for both are enclosed for review.