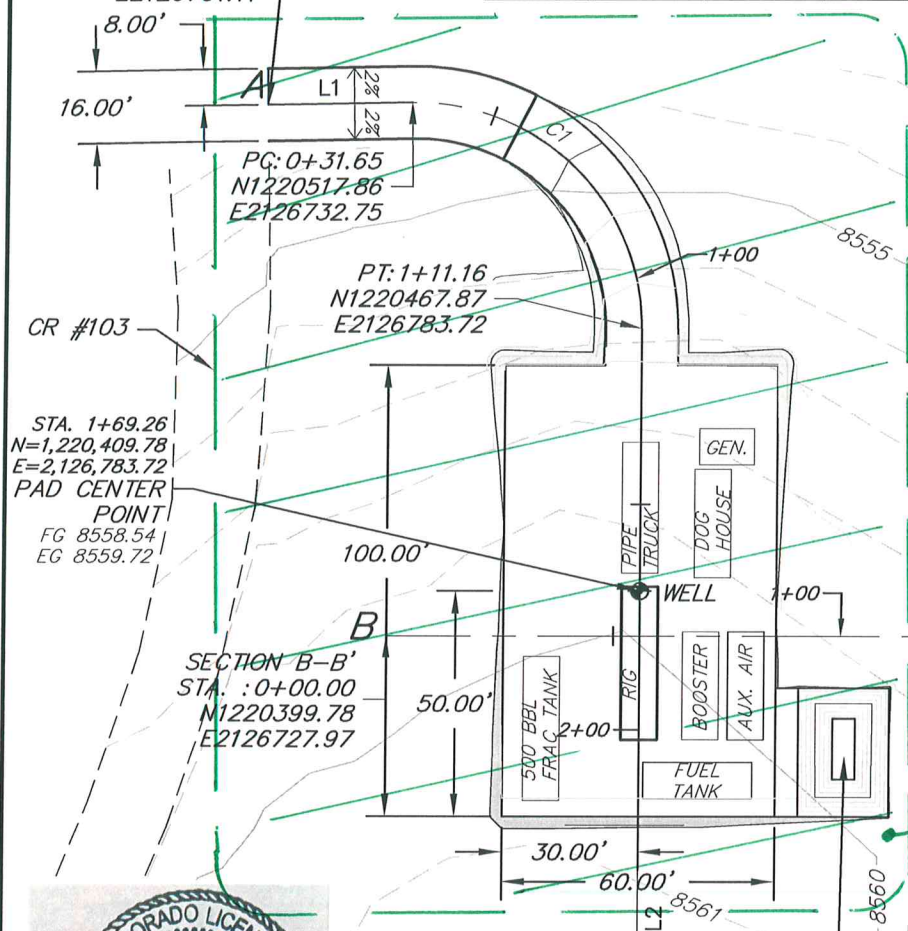


PROPOSED ACCESS
SECTION A-A'
STA. 0+00.00
N1220517.25
E2126701.11

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	50.00'	79.51'	50.98'	71.39'	S45°33'17"E	91° 06' 33"

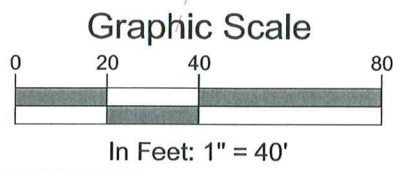
LINE TABLE		
LINE	BEARING	LENGTH
L1	N88°53'27"E	31.65'
L2	S0°00'00"E	148.73'

- NOTES:
1. PLACE SILT FENCING OR STRAW WATTLES AT TOE OF FILL SLOPES, FULL LENGTH.
 2. TOPSOIL DEPTH IS CONSIDERED TO BE 1.0'.
 3. DRAWING BASED ON SURVEY DATA COLLECTED AND COMPILED BY POWERS ENTERPRISES, INC., DATED 7/16/2020.
 4. DISCHARGE PIT CAPACITY BASED OFF OF VOLUME EXCAVATED FOR PIT.



SECTION B-B'
STA. :1+41.92
N1220399.78
E2126869.88

WEED CONTROL REGION
Description on Pages
A+5 of this Document



Revision 1: Dated 04/19/2021;
Description: REVISED TOPSOIL
QUANTITIES.; by TLB

Earthwork Quantities

Earthen Cut (10-15% Over Fill Yardage)	44 CY
Earthen Fill (Compacted)	170 CY
Topsoil (in place)	310 CY
Topsoil Stockpiled (20% Swell Factor)	372 CY
Pit Cut	74 CY
Pit Cut Stockpiled (20% Swell Factor)	89 CY

Affected Area

Affected Area in Acres	0.195
Affected Area in SF	8,530

Containment Pit Quantities (Each Pit)

Pit Capacity	10,997 gal.
Freeboard Capacity (1 ft)	3,948 gal.
Pit Capacity w/Freeboard	14,945 gal.

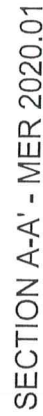
County: Rio Blanco	
Township 2S	Range 100W
Section: 9	Quarter: NENE
P.M. 6th	
FG CENTER PAD: 8558.54	
Drawn By: TLB	PE: TLB
QC: Xx	Project: 2020-530.001
Sheet 01 of 06	Date: 11/17/2020

Legend

- CUT SLOPES
- FILL SLOPES
- WELL PAD CENTER POINT



Shale Tech International Services LLC.
PROPOSED PAD FOR CORE HOLE MER 2020.01

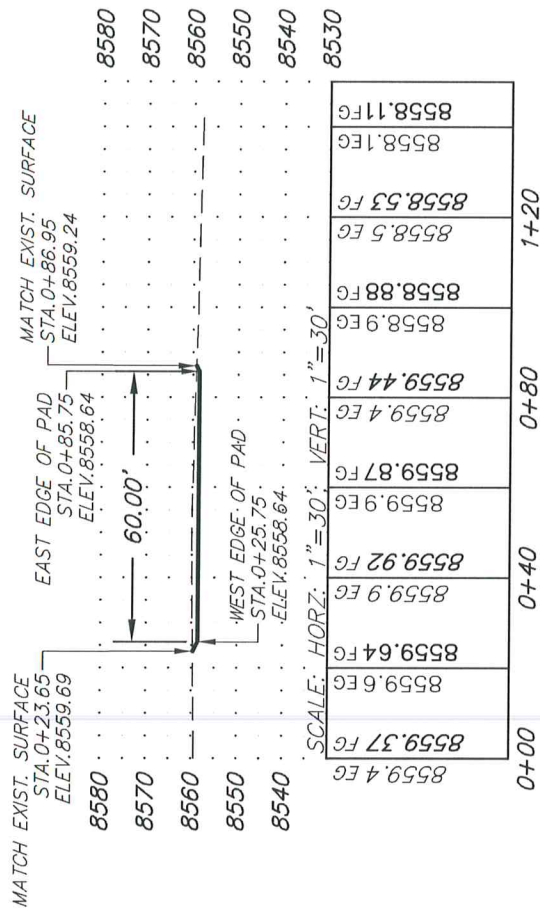


118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004 www.sgm-inc.com

Shale Tech International Services LLC.
PROPOSED PAD FOR CORE HOLE MER 2020.01

County: Rio Blanco		
Township 2S	Range 100W	
Section: 9	Quarter: NENE	
P.M. 6th		
FG CENTER PAD: 8558.54		
Drawn By: TLB	PE: TLB	
QC: Xx	Project: 2020-530.001	
Sheet 02 of 06	Date: 11/17/2020	

County: Rio Blanco	Range 100W
Township 2S	Quarter: NENE
Section: 9	P.M. 6th
Ground Elevation: 8558.54	
Drawn By: TLB	PE: TLB
QC: Xx	Project: 2020-530.001
Sheet 03 of 06	Date: 11/17/2020



SECTION B-B' - MER 2020.01



Revision 1: Dated 04/19/2021; Description: REVISED TOPSOIL QUANTITIES.; by TLB



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Shale Tech International Services LLC.
PROPOSED PAD FOR CORE HOLE MER 2020.01

MEMO

Date: May 23, 2024

To: Mahogany Energy Resources

From: Rusty Roberts

Subject: Site Visit to Shale Core sites 2020-01 and 2020-03

I conducted a site visit to the two shale core sites on May 20, 2024, to evaluate the present conditions of the reclamation on the two sites. The reclamation activities conducted on these sites have resulted in plant communities of perennial plant species that have stabilized both sites. The perennial grasses from the seed mix as well as native grasses from the seed bank in the redistributed topsoil are well established and have good distribution across both sites. In addition to grasses, there are numerous native forbs and several shrubs that have established on both sites either from their seed bank in the redistributed topsoil or have pioneered from plant communities adjacent to each site.

The following table lists the plant species I observed on the two sites and their estimated abundance on each site.

Plant Species Observed on Two Reclaimed Shale Core Sites on May 20, 2024			
Scientific Name	Common Name	Shale Core 2020-01*	Shale Core 2020-03*
Grass and Grasslike Species			
<i>Carex geyseri</i>	Geyer's sedge	xx	x
<i>Elymus trachycaulus</i>	slender wheatgrass	xxx	xxx
<i>Koeleria macrantha</i>	prairie junegrass	xx	xx
<i>Nassella viridula</i>	green needlegrass	x	
<i>Pascopyrum smithii</i>	western wheatgrass		x
<i>Poa secunda</i>	Sandberg bluegrass	xx	x
<i>Pseudoroegneria spicata</i> ssp. <i>inermis</i>	beardless bluebunch wheatgrass	x	xx
Forb Species			
<i>Achillea millefolium</i> var. <i>alpicola</i>	common yarrow	xx	x
<i>Alyssum desertorum</i>	desert madwort	x	x
<i>Antennaria rosea</i>	rosey pussytoes		x
<i>Artemisia frigida</i>	fringed sage	xx	xx
<i>Astragalus tenellus</i>	looseflower milkvetch	x	x
<i>Balsamorhiza sagittata</i>	arrowleaf balsamroot	x	x
<i>Castilleja linariifolia</i>	Wyoming Indian paintbrush	x	
<i>Comandra umbellata</i>	bastard toadflax	x	x
<i>Crepis acuminata</i>	longleaf hawksbeard	x	
<i>Cryptantha flavoculata</i>	roughseed cryptanth	x	x
<i>Cryptantha stricta</i>	Yampa River cryptanth	x	
<i>Cymopterus duchesneensis</i>	Duchesne springparsley	x	x
<i>Descurainia pinnata</i>	western tansymustard	x	x
<i>Erigeron compositus</i>	cutleaf daisy		x
<i>Eriogonum lonchophyllum</i>	spearleaf buckwheat	x	x
<i>Eriogonum umbellatum</i>	sulphur buckwheat	x	

<i>Galium bifolium</i>	twinleaf bedstraw	x	x
<i>Hedysarum boreale</i>	Utah sweetvetch	xx	x
<i>Heuchera parvifolia</i>	common alumroot	x	
<i>Lepidium densiflorum</i>	common pepperweed	x	x
<i>Lomatium macrocarpum</i>	big seed biscuitroot	x	x
<i>Lupinus argenteus</i>	silvery lupine	xx	
<i>Machaeranthera grindelioides</i>	rayless tansyaster		x
<i>Mertensia brevistyla</i>	shortstyle bluebells	xx	x
<i>Physaria acutifolia</i>	common twinpod	x	x
<i>Phlox longifolia</i>	longleaf phlox	x	x
<i>Taraxacum officinale</i>	dandelion	x	x
<i>Trifolium gymnocarpon</i>	hollyleaf clover	xx	x
<i>Zigadenus paniculatus</i>	foothill deathcamas	x	x
Shrub Species			
<i>Amelanchier utahensis</i>	Utah serviceberry	x	
<i>Artemisia tridentata</i> var. <i>vaseyana</i>	mountain big sagebrush	xx	x
<i>Chrysothamnus Greenei</i>	Greene's rabbitbrush	x	xx
<i>Krascheninnikovia lanata</i>	winterfat	x	x
<i>Symphoricarpos oreophilus</i> var. <i>utahensis</i>	mountain snowberry	x	x
*Abundance: xxx= High frequency with uniform distribution xx= Moderate frequency: occurrence scattered throughout x= Infrequent: only a small number of individuals noted			

In summary, I did not observe any plant species that are listed as an invasive, noxious species by the State of Colorado. The plant communities on both sites fairly represent the cover and mix of plant species that occurred on each site prior to disturbance.