

November 1, 2016

Amy Yeldell
Environmental Protection Specialist
Minerals Program, Grand Junction Field Office
101 S. 3rd St., Suite 301
Grand Junction, CO 81501

Vista Del Sol Ranch

Cecil "Cork" Powell
6500 U.S. Hwy 40
Dinosaur, CO 81610
970-374-2329

Dear Amy,

I realize that I have requested a previous extension but I am respectfully requesting another 30-60 days. I am attempting to re-evaluate the mining operation and am looking at the economic viability of operating the pit. This evaluation includes looking at potential demand and operating cost and also the cost of bonding and reclamation. Given that I spent approximately \$10-12,000.00 during October in the hopes of reducing the bonding requirement and not knowing what that reduction will be, I request a re-evaluation of the previous bonding value. This will allow me to make an informed decision on how to proceed.

At this juncture I am uncertain as to the future of the pit; it hinges on your evaluation, requirements, and the estimates of future income and cost.

I have provided a copy of a preliminary report on the reclamation work that was done in October. Keep in mind that it is provided as a draft document and is subject to revision, although I believe it provides sufficient information for you to evaluate the current reclaim. It will be provided as a final document for the permanent record in the future.

Thank you for your consideration of an extension and I am looking forward to resolving the future of the pit

Sincerely,


Cork Powell

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NOV 08 2016

GRAND JUNCTION FIELD OFFICE
DIVISION OF
RECLAMATION MINING & SAFETY

Reclamation Powell Gravel Pit 2016

(M1995012)

**Located
On The
Vista Del Sol Ranch**

**Owner:
Cecil "Cork" Powell**

**Subject to Revision and Editing
Draft**

Prepared For: Vista Del Sol Ranch and Cecil "Cork" Powell



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For: Cecil "Cork" Powell and the Vista Del Sol Ranch

By: Great Basin Environmental and Aquatics, www.greatbasinenvt.com and www.greatbasinenvt.solutions

Reclamation

In late September (2016) the owner/operator of the Powell Gravel Pit made the decision to reclaim approximately 1.1 acre. The reclaim concentrated on the eastern portions of the hill where terraces of overburden were left from the original mining in the 60's and 70's. See Map 1 for an approximate location.

On October 6, 2016 heavy equipment from W.C. Striegel, Inc. Rangely, Colorado, began working. Earthwork was finished on the 7th, with approximately 22 hours of equipment time between a CatD8R dozer and Cat345C excavator.



Photo 1. Earthwork in progress (see Photo 11 also).

The objectives:

- Return land form to a more natural appearance that conforms with the surroundings.
- Reduce slopes and maintain a 33% slope or less over a larger portion of the area if possible and economically feasible (not always possible).
- Seed with a species mix that would enhance the location for livestock and wildlife, plus reduce weedy plant species over time.
- Control water movement and reduce the potential for erosion.
- Meet the management objectives of Vista Del Sol Ranch and the pit ownership.

Name: Great Basin Vista Del Sol Ranch Mix					
Mix#:	2016.0535	Variety	Purity of Mix	Germ	Origin
Kind					
Siberian Wheatgrass	Vavilov	56.30%	77%	UT	
Russian Wildrye	Bozoisky	12.95%	95%	UT	
Slender Wheatgrass	Revenue	12.74%	95%	CN	
Fourwing Saltbush	VNS	8.23%	56%	UT	
Blue Flax	Appar	3.25%	92%	ID	
Yellow Sweet Clover	VNS	1.08%	89%	CN	
Other Crop:	0.05%	Noxious Weeds:		None	
Inert Matter:	5.22%	Weed Seed:		0.18%	
Net Weight:	11.8 lbs	Test Date:		2/16	

Figure 1. Seed mix tag for mix used to seed the reclaim on October 8th.

The pit owner/operator has not had any equipment on the reclaimed area or removed any product, from the time of purchase in 1979. It had been at least 40 years since this location was disturbed.

The following was done:

- Re-contoured overburden and terraces reducing the height and overall slope.
- Available topsoil was stripped and reused, although there were limited quantities.
- An attempt was made to not leave exposed areas of heavy, bentonitic clays on the surface.
- Large boulders were used to stabilize the toe of some steeper slopes.
- Five water bars were installed across the main slope (total of 365 ft).
- Eight "rock bars" were installed in a waterway (total of 80 ft).
- Biodegradable, weed free, straw filled blankets were used in strategic locations (8 ft x 600 ft covered).
- Biodegradable straw wattles were used (9 in dia. x 150 ft).
- The seed mix shown in Figure 1 was broadcast at double the drill rate, and a dozer "walked" the seed into the surface (Drill rate, 23 lbs/acre).
- Some remaining areas are steeper than a 3/1, with the long easterly facing slope averaging 6.75/1 (see Photos 4–6 and Appendix A, Map A4).
- 290 feet of steep, 40 year old, terraces (2/1 to 1/1) were contoured to considerably less (Map 1).
- Forage kochia will be seeded later in November with freshly harvested seed (2016 seed crop)

The lower portion of the south facing slope was not reduced in slope. This section has not been touched in over 40 years and has exhibited a high degree of stability under the current conditions. We believe that bedrock

provides stability, buttressing the hill, plus the soils are high in clays and exhibit minimal movement during precipitation and runoff events. The slope has also slowly re-vegetated over large portions and erosion has been minimal. The overall height of the hill was reduced and the slope was reduced above what appears to be a ledge of bedrock (Photos 2-3). This steep portion is approximately 0.25 acres and slopes range from 0.9/1 to 1.6/1 (see Map 1 and Appendix A, Map A4).

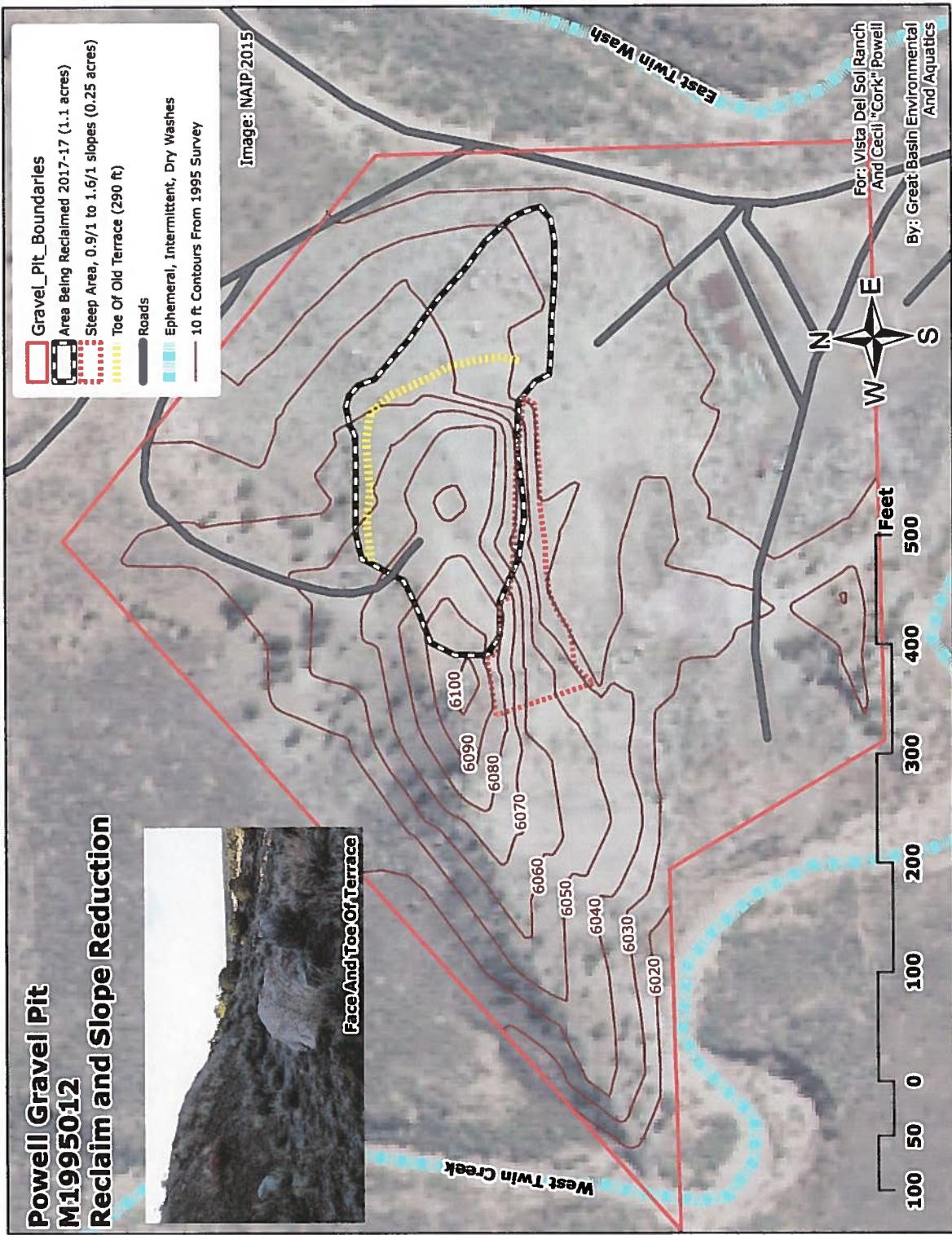
Photos 4-6 shows the original contour and the final as viewed from southeast boundary corner of the pit. Appendix B provides more photos of the before and after reclaiming.



Photo 2 and 3. Bedrock, solid yellow line and the dashed line is the top of the hill that was reduced in height.
Lower photo shows hill after contouring.

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For: Cecil "Cork" Powell and the Vista Del Sol Ranch
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Powell Gravel Pit
M1.99501.2
Reclaim and Slope Reduction



Map 1. Reclaim area for 2016-17.

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Photo 4. Hill before contouring to new configuration.



Photo 5. Earthwork in progress.



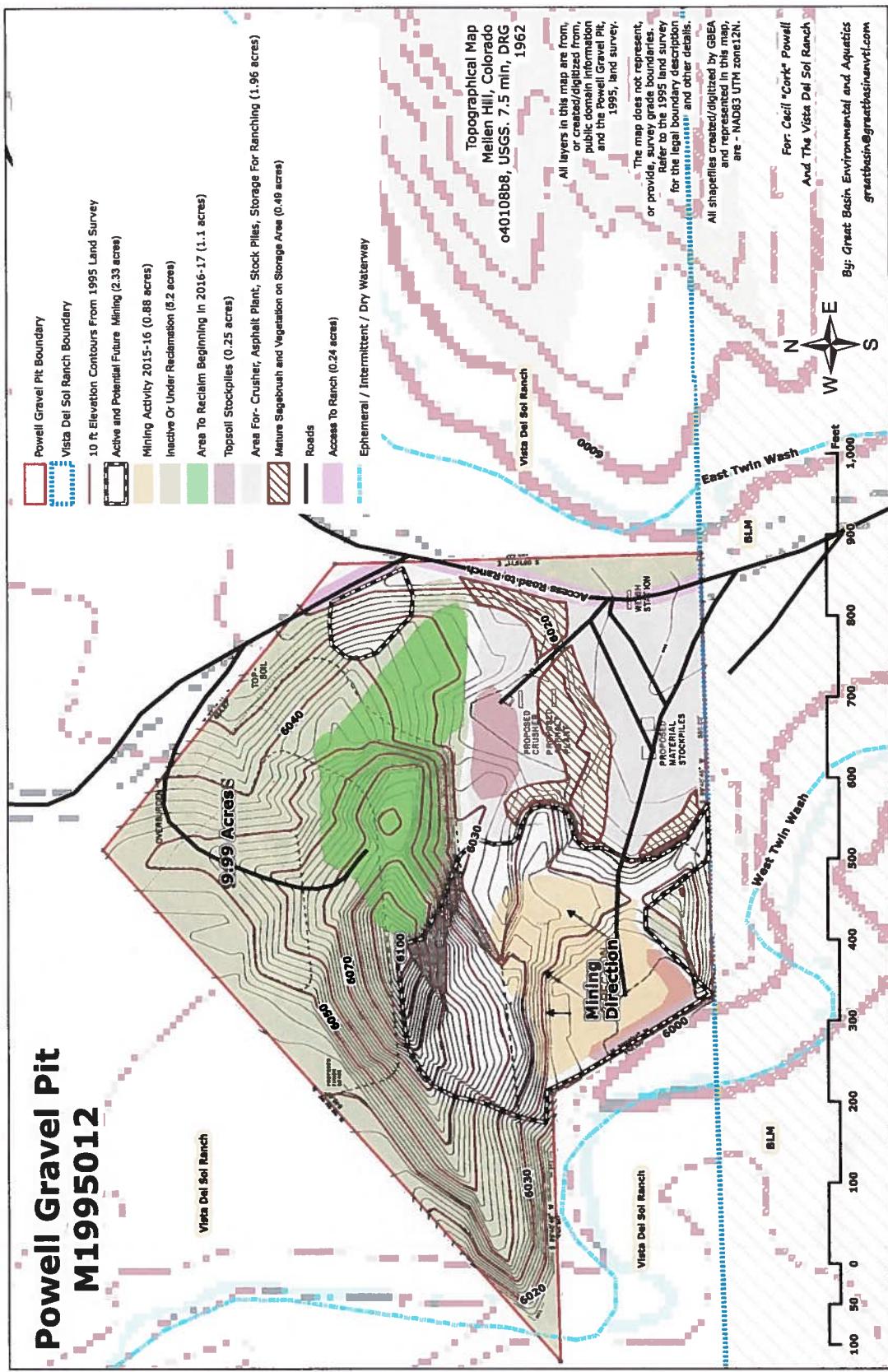
Photo 6. Final contour of reclaim area.

Appendix A

GIS and Maps, 11"x17"

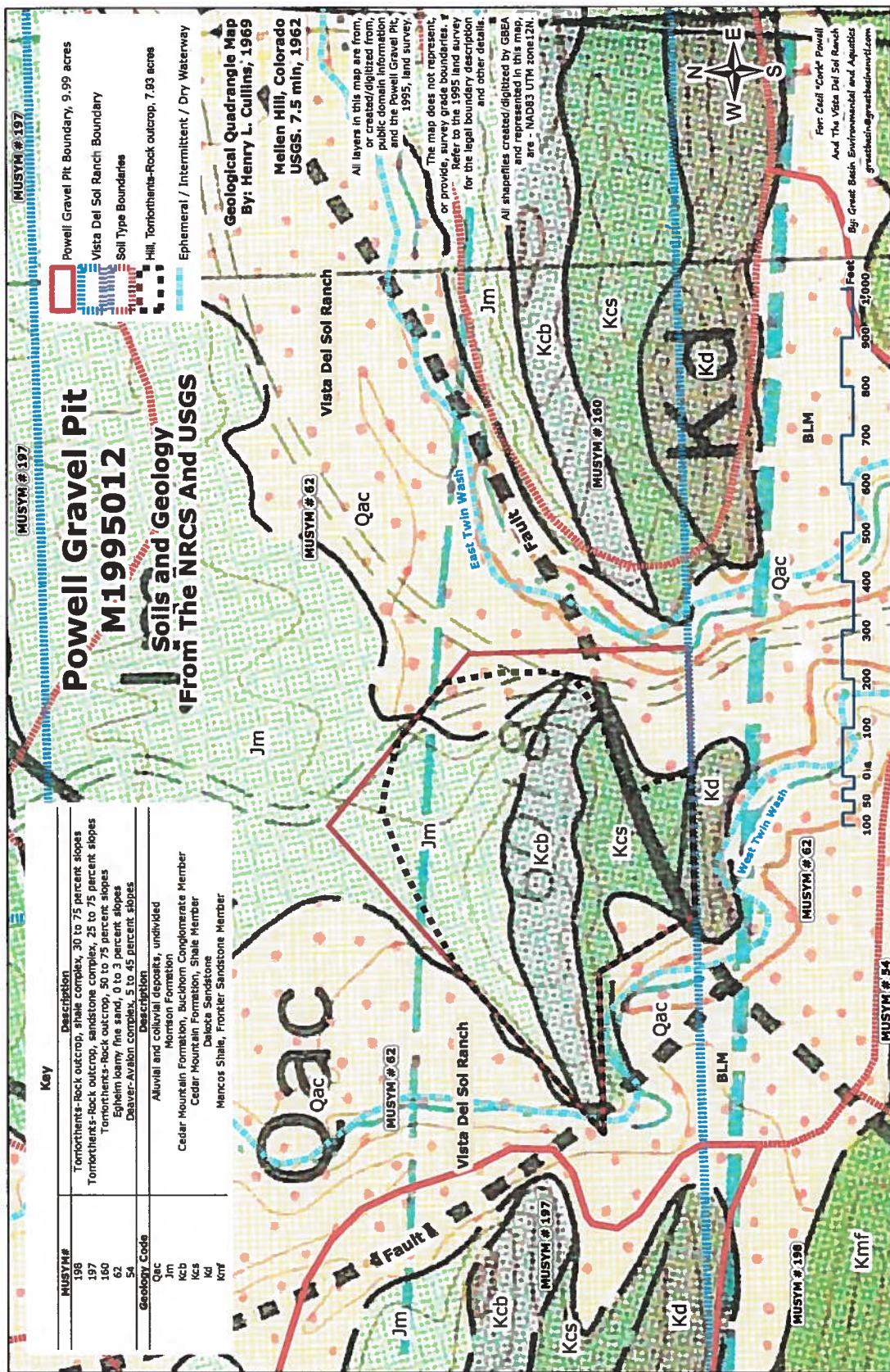
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Powell Gravel Pit
M1995012

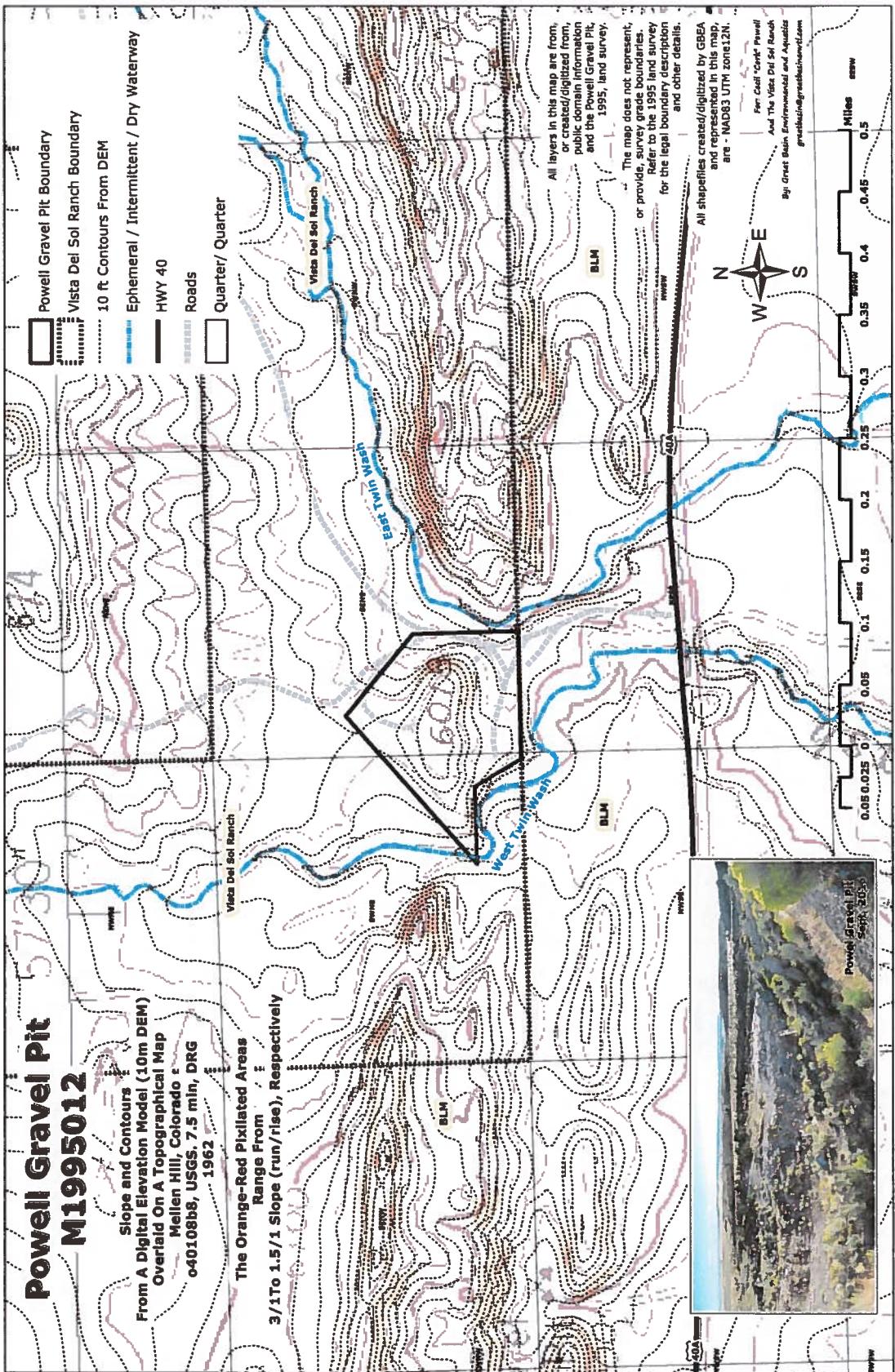


Map A1. Overview of current and future management.

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For Great Basin Environmental and Aquatics, Powell, and the Vista Del Sol Ranch
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Map A2. Soils and geology, for the description and associated climax plant communities see Table A1.



Map A3. Slope and contours of the surrounding land form. It is probably that the slope and contours in the pit boundaries represent historical conditions.

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Powell Gravel Pit
M1995012

Slope of Hills

**Both Natural - North Side Of Hill, South Hill
And
Mined Areas
Contours From: 1995 Land/Boundary Survey**

Run Is Displayed At Fall Line

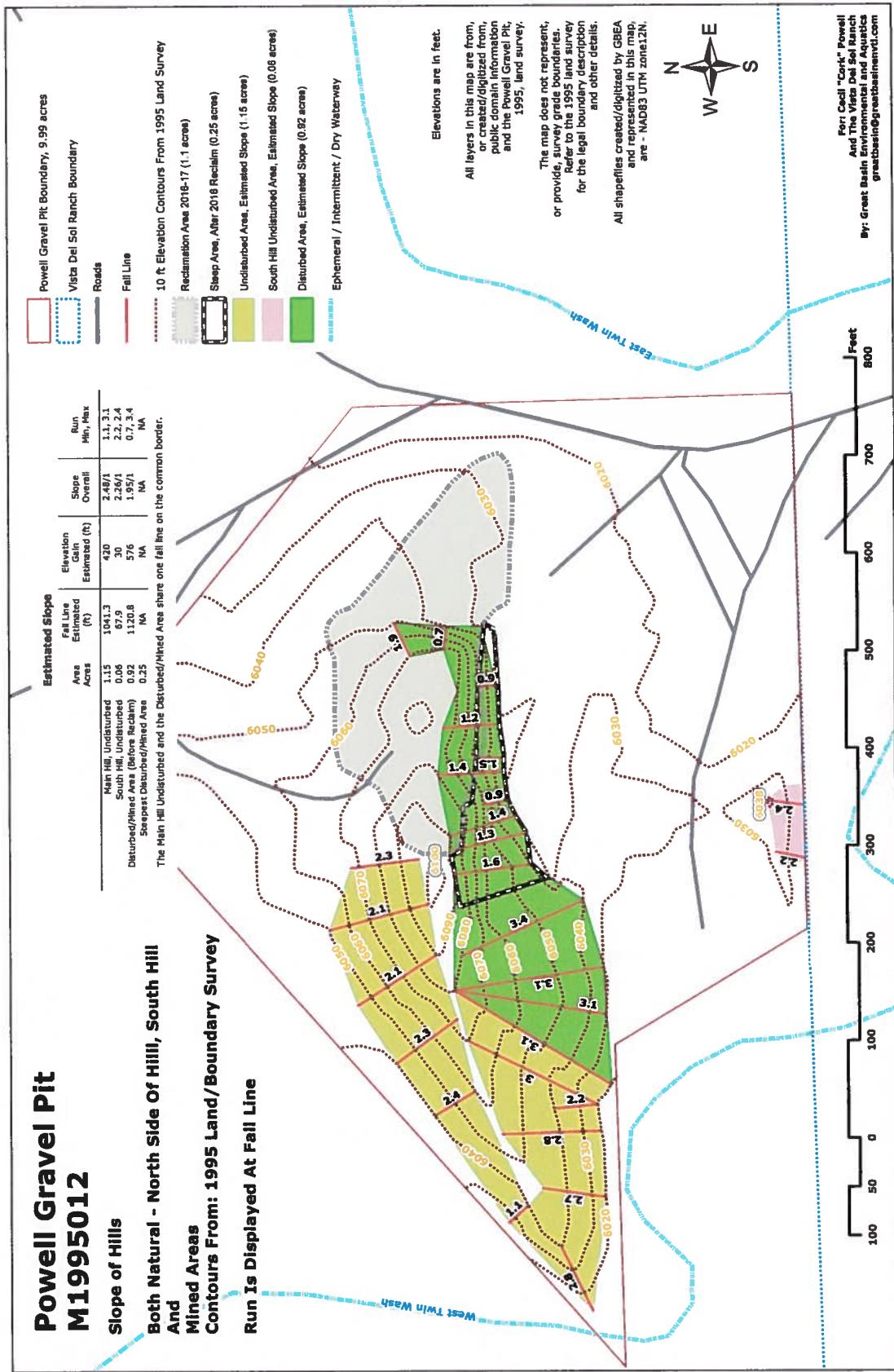


Table A1. Soils and plants by soil type (NRCS, 2004)

Soils and Plant Species Surrounding The Powell Gravel Pit*	
MUSYM#	Description
198	Torrontens-Rock outcrop, shale complex, 30 to 75 percent slopes
197	Torrontens-Rock outcrop, sandstone complex, 25 to 75 percent slopes
160	Torrontens-Rock outcrop, 50 to 75 percent slopes
62	Ephraim bamy fine sand, 0 to 3 percent slopes
54	Deaver-Avalon complex, 5 to 45 percent slopes

Native Plant Climax Species

Grasses	Common Name	MUSYM#
	Indian ricegrass	198, 197, 160, 62, 54
	Bottlebrush squirreltail	198, 197, 160, 54
	Needle and Thread	198, 197, 160, 54
	Western Wheatgrass	198, 197, 160, 54
	Akaii Sedge	62
	Basin Wildrye	62
	Bluebunch Wheatgrass	197
	Galleta	62
	Saline Wildrye	54
Shrubs	Common Name	MUSYM#
	Shadscale	198, 197, 160, 54
	Wyoming Big Sagebrush	198, 197, 160, 54
	Bud Sagebrush	198, 197, 160
	Fourwing Saltbush	198, 160, 62, 54
	Antelope Bitterbrush	197
	Big Sagebrush	62
	Greasewood	62
	True Mountain Mahogany	197

*From the NRCS soil surveys

Table A2. Geology key.

Geology Code	Key	Description
Qdc		Alluvial and colluvial deposits, undivided
Qrf		Alluvial fan
Qt		Terrace gravels
Jrn		Morrison Formation
Kcb		Cedar Mountain Formation, Buckhorn Conglomerate Member
Kcs		Cedar Mountain Formation, Shale Member
Kd		Dakota Sandstones
Knf		Mancos Shale, Frontier Sandstone Member
Km		Mancos Shale, Main body

Geology Surrounding The Powell Gravel Pit

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 For Ceil "Cot" Powell and the Vista Del Sol Ranch
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~~Appendix B~~

~~Photos~~

~~Current Conditions and Reclaim~~

~~2016~~

~~DYD~~

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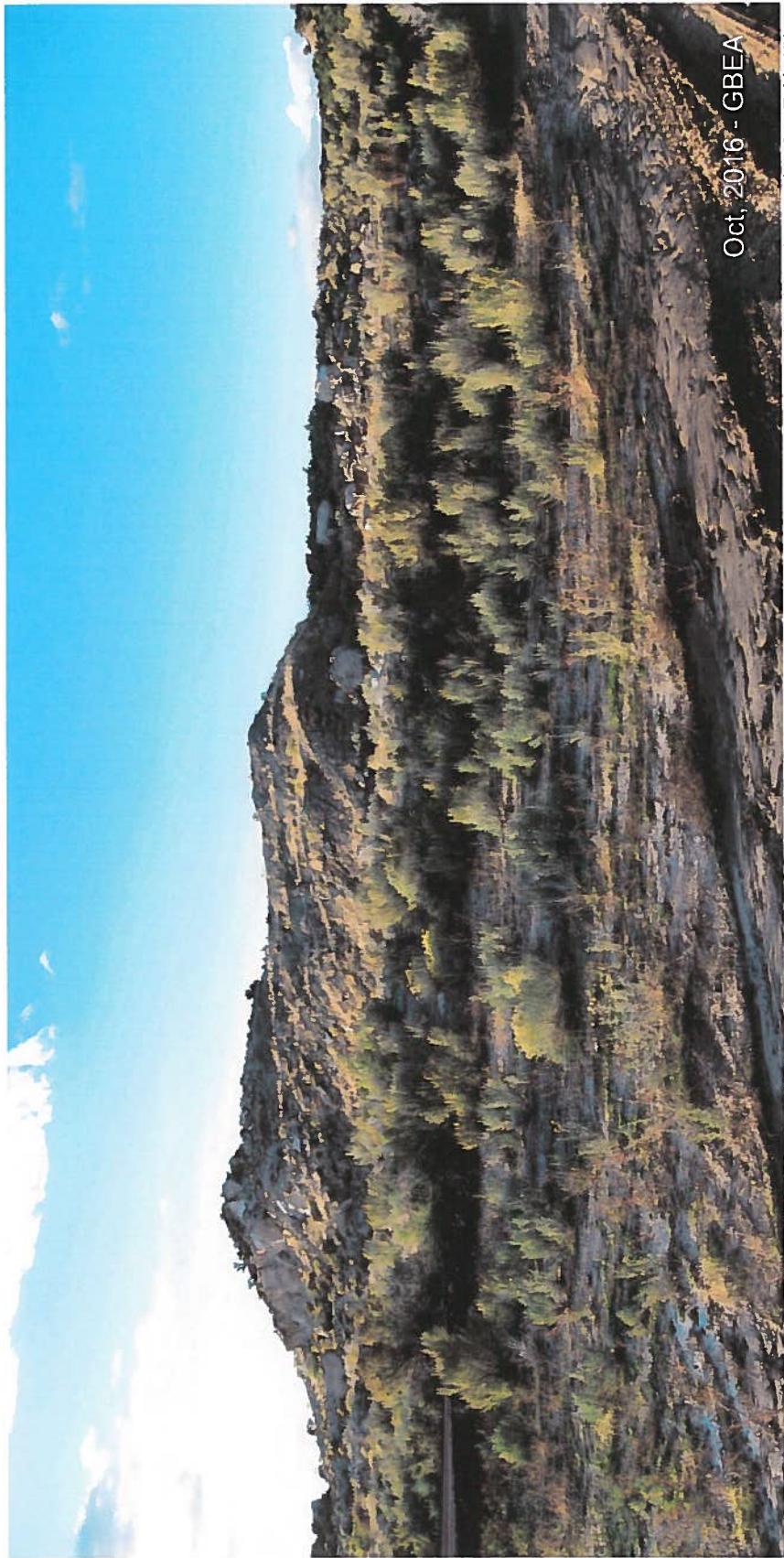


Photo B1. Early October, 2016. There is a fair covering of vegetation on the face of the hill and the easterly portion that was a series of terraces left from the 1970's. See Table XX.

Common Plant Species On Paved Gravel Pit

Common Name	Scientific Name	Common Name	Scientific Name
Bitterroot	<i>Achillea millefolium</i>	Cotton grass	<i>Artemesia tridentata</i>
Indian Paintbrush	<i>Aconitum lycoctonum</i>	Cotton grass	<i>Wyethia sulphurea</i>
Rockbeach Squamulea	<i>Erythronium americanum</i>	Sage	<i>Fragaria Virginiana</i>
Western Whipplea	<i>Paeonia anomala</i>	Sedum	<i>Salvia coccinea</i>
Flowers		Shrub	<i>Douglas Rabbitsnarch</i>
Yellow Sweet Clover	<i>Hedysarum occidentale</i>	Chokeberry	<i>Ostrya virginiana</i>
Carex/Cop. Carex	<i>Cynometra squarrosa</i>	Glossy Mallow	<i>Sorbus americana</i>
Brassica, Mustard and Whitefly		Gray Willow	<i>Prunus pensylvanica</i>
Black Crowfoot	<i>Bromus tectorum</i>	Heath	<i>Prunus virginiana</i>
Rockin Thistle	<i>Calochortus gunnisonii</i>	Common	
Hempstake	<i>Heuchera glabra</i>		

Note: No vegetations in monocultured areas measured along a transect were found.

Lined species are from a series of quadrat surveys made through this area in October.

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By: Great Basin Environmental and Aquatics, www.greatbasinenv.com and www.greatbasinenvsolutions

Oct, 2016 - GBEA



Photo B2 – B3. The storage area as of mid-September 2016. A band of mature big sagebrush and rabbitbrush (0.49 acres) separates an upper and lower flat area. Caution is advised if disturbing this vegetation as it controls runoff and prevents movement of sediment and erosion.

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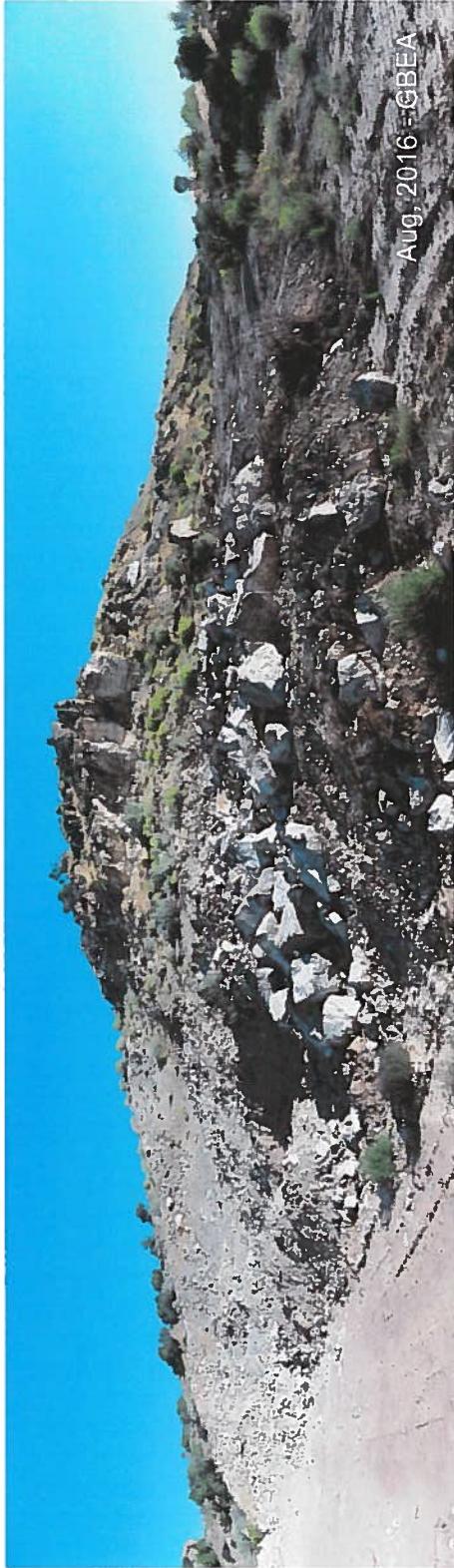


Photo B4. Active mining area as of late summer 2016.

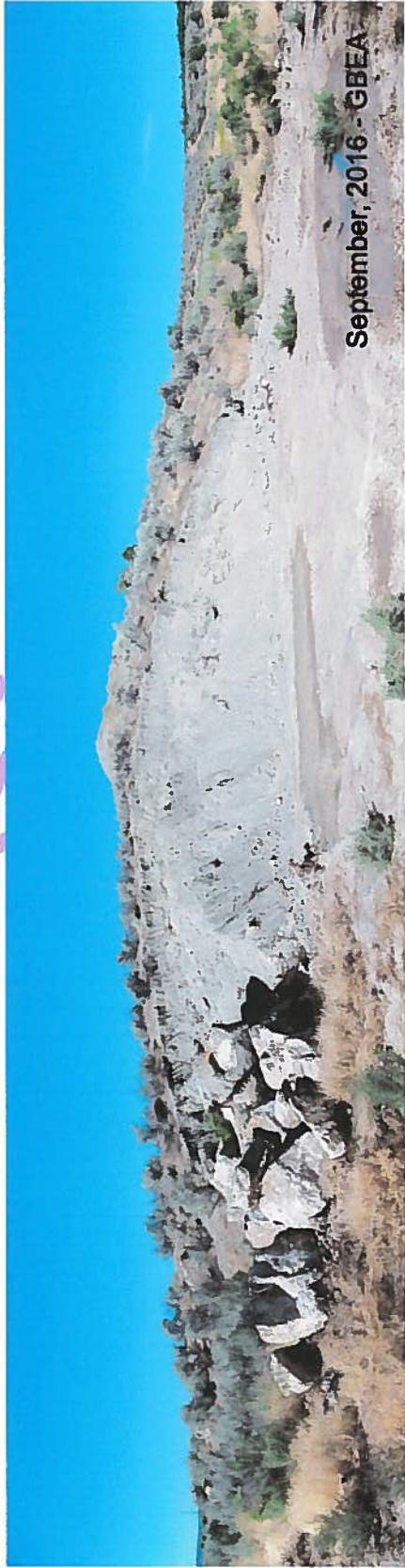


Photo B5 The eastern point of the hill where a small amount of bentonitic clays has been mined.

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By: Great Basin Environmental and Aquatics, www.greatbasinenv.com and www.greatbasinenvsolutions.com



Top photo was taken in late
August 2016 and the bottom
photo just after the seeding of the
reclaim area.

Photo B6 and B7. Overview of pit before and after the October 2016 reclamation. Photos taken from the southeast corner of the pit boundaries.

For Cecil "Cork" Powell and the Vista Del Sol Ranch.
By Great Basin Environmental and Aquatics, www.greatbasinenviro.com and www.greatbasinenviro.solutions



Photo B8. Reclamation, October 2016.

Oct 2018, GBE

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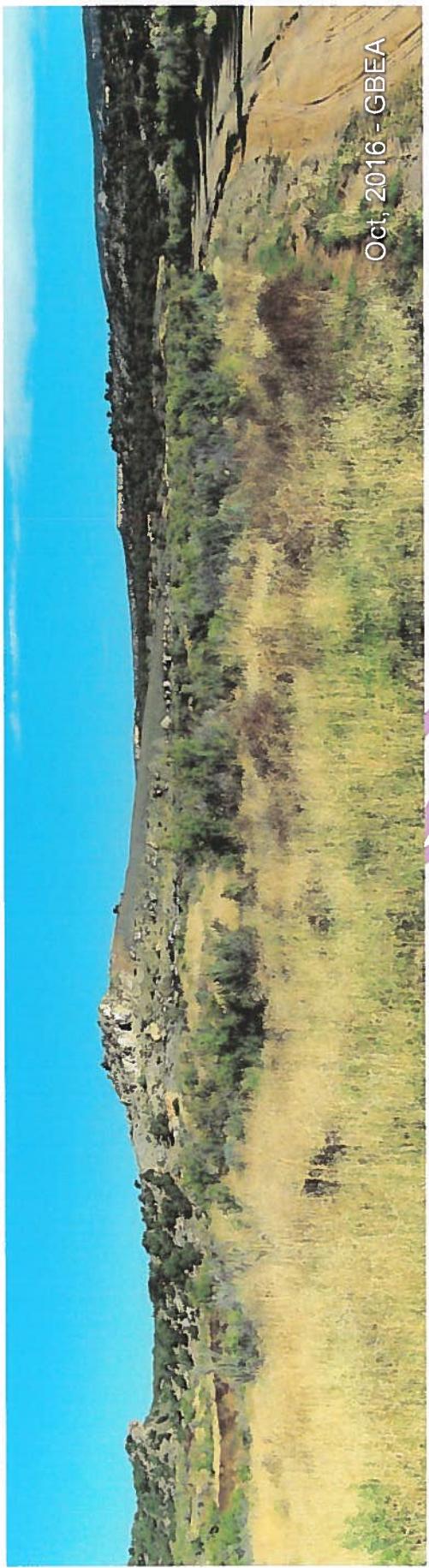


Photo B9. View from the gate after the current reclaim was seeded.

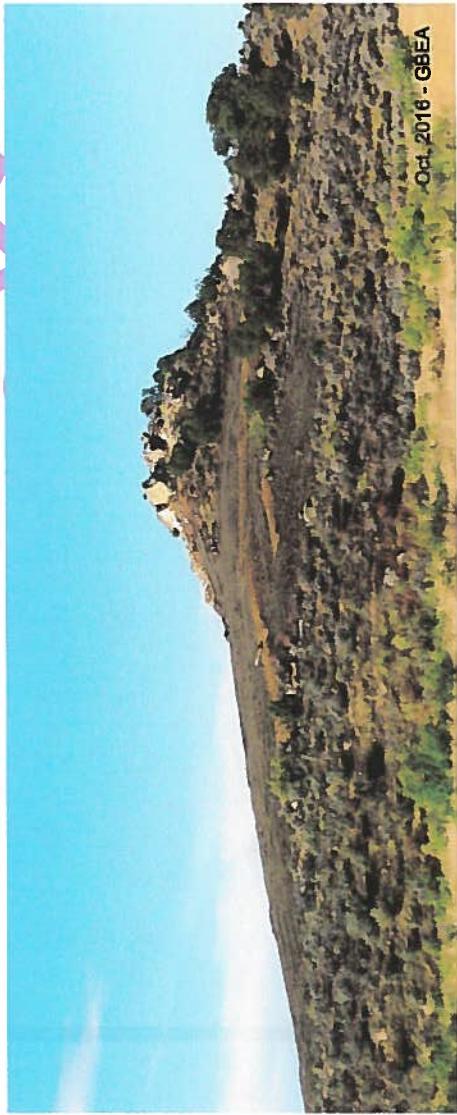


Photo B10. The north side of the hill after the current reclaim was seeded.

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For Ceci "Cec" Powell and the Vista Del Sol Ranch
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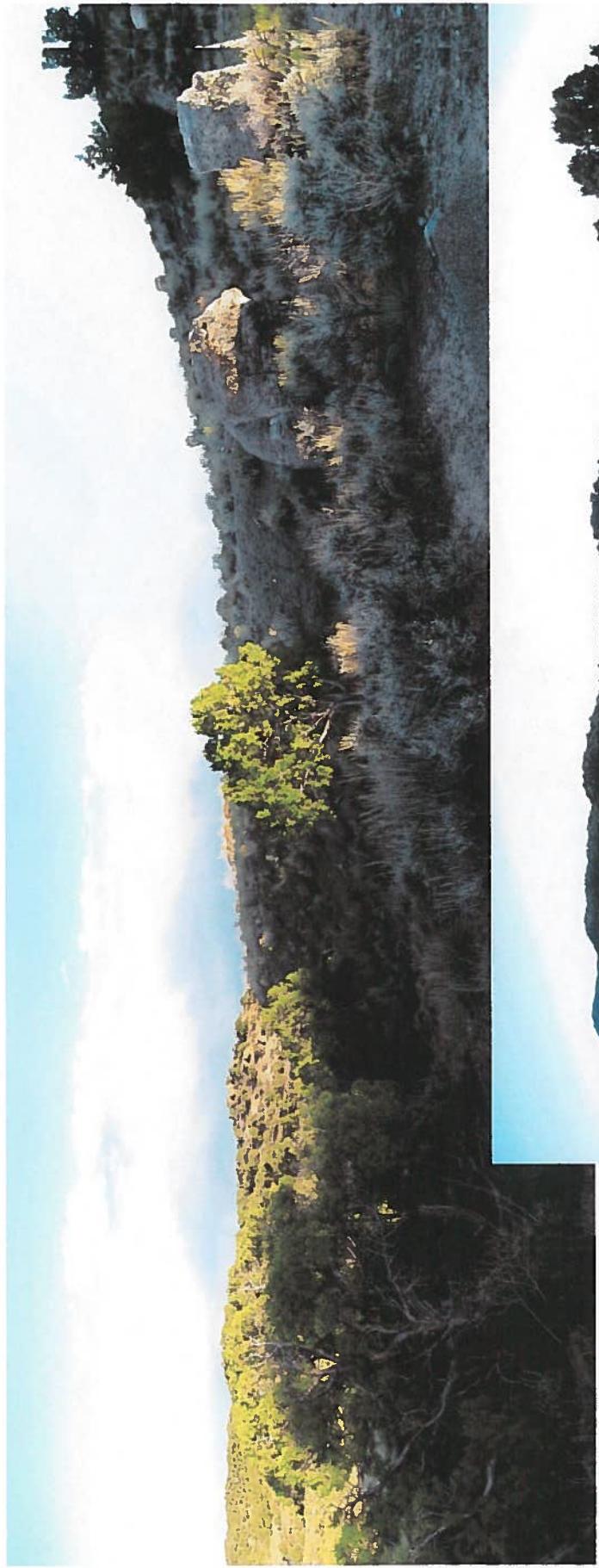


Photo B11 and B12. The north side of the hill before and after the reclaim. Note the straw blankets and waddles.

North side of hill before
and after current
reclaim.



Oct 3, 2016, Powell Pit, Tip Of East End, GBEA

Photo B13. The eastern tip of the hill before the terrace was removed. Note the shadscale plant in the center of the terrace with maturing seeds.

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For: Cecil "Cec" Powell and the Vista Del Sol Ranch
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