Petroglyph Energy, Inc.
Well Pad Final Reclamation Evaluation

Well Name: Martinez 07-06

Evaluation Date: July 14, 2015

Evaluated by: Wayne Erickson, Principal Scientist, Habitat Management, Inc.

Current Condition

Martinez 07-06 has fair establishment of grasses and forbs on about 50% of the well pad. The establishing reclaimed plant community has a good diversity of graminoids and forbs, with some sub-shrubs and shrubs. On about 50% of the well pad there is either little to no establishment of desirable plant species. This is primarily caused by very dense weed infestations.

Cheatgrass (*Bromus tectorum*) and field bindweed (*Convolvulus arvensis*) are the two noxious weeds presently growing on this site. Also, tall tumblemustard (*Sisymbrium altissimum*) is growing in high density stands on this site. Tall tumblemustard is not classified by the State of Colorado as a noxious weed. Tall tumblemustard stands are scattered throughout the cheatgrass infestations. Together these two plant species are adversely impacting the establishment and growth of desirable plant species in the reclaimed plant community across 50% of the well pad.

Field bindweed is growing in a dense patch on the northeast corner of the well pad. Both cheatgrass and field bindweed weed species are on Colorado List C. Control of these List C species is recommended but not required by Huerfano County. Please note that COGCC requires control of these List C species when they are adversely impacting the establishment of desired perennial plant species.

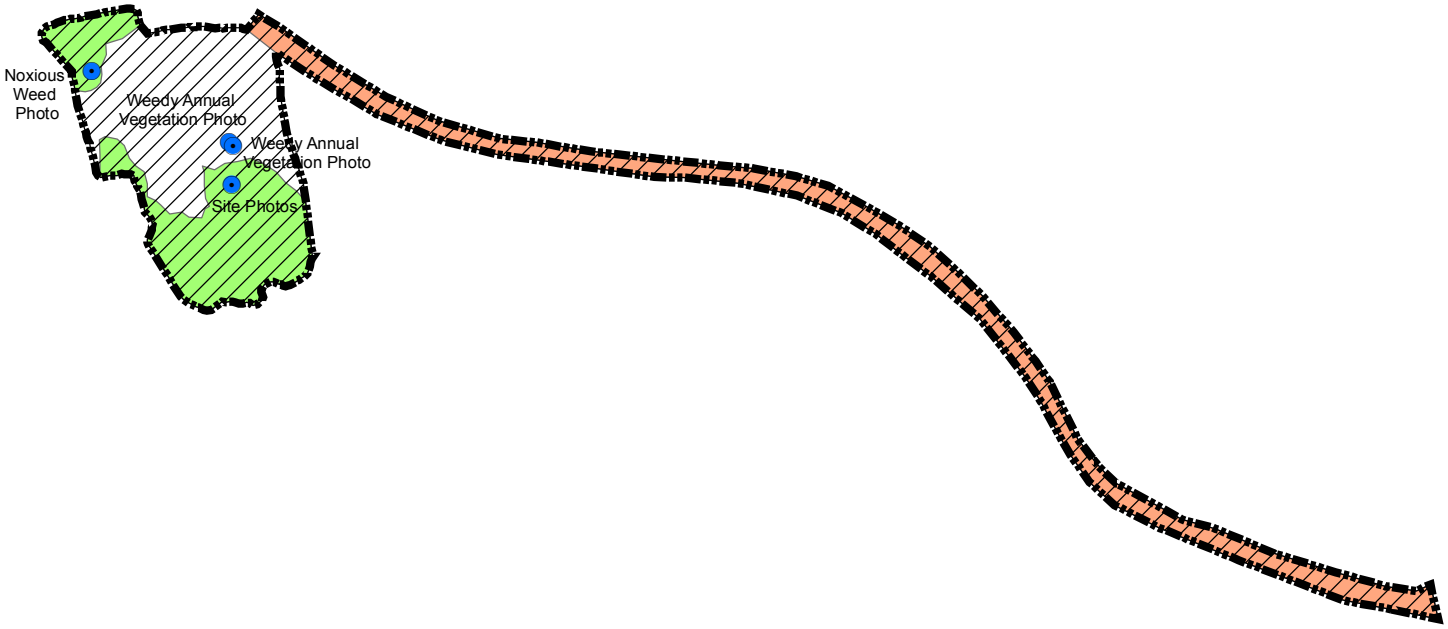
Compacted soils are not affecting plant growth on this site. Excessive soil erosion associated with storm water runoff was not observed.

Recommended Actions

Cheatgrass should be treated in the fall with an appropriate germination inhibiting herbicide. Field bindweed and tall tumblemustard should be treated in the spring with spot-applications of an appropriate broadleaf selective herbicide. Spring herbicide treatment of these two plant species will reduce seed production and inter-plant competition in 2016 and facilitate the establishment of desirable perennial plant species. Long-term cultural control of these two plant species will be realized through competition with the establishment of desirable vegetation on the site.

Following 2016 spring weed treatments this pad should be inter-seeded with the approved seed mixture. Following inter-seeding the areas should be raked and then mulched. Woodstraw is preferred for mulching the inter-seeded area, although native hay or cereal grain straw could be used.

After spring 2016 management activities are completed the site should be checked periodically for germination and establishment of desirable plant species in the inter-seeded areas, adequate control of existing weed infestations, new infestations of other noxious weed species, and for other conditions that may impact successful reclamation of this site.



Management Activity	Acres
Weed Management	1.64
Decompact, Seed & Mulch	0.56
Harrow, Interseed & Mulch	0.48

Weed Management
Decompact, Seed & Mulch
Harrow, Interseed & Mulch
Well Pad Boundary
Photo Point

N

0 112.5 225 450 Feet

Petroglyph Energy 2015

Martinez 07-06

Habitat Management
www.habitatmanagementinc.com

Evaluated: 7/14/15
Drawn: 12/14/15
Drawn By: RFB

Martinez 07-06

Access road east end

Photo Date 7/14/2015

Lat: Long:

Access road west end

Photo Date 7/14/2015

Lat: Long:

Compacted area

Photo Date 7/14/2015

Lat: Long:

Looking East

Photo Date 7/14/2015

Lat: 37.5381476456 Long: -104.8263899747

Looking North

Photo Date 7/14/2015

Lat: 37.5381476456 Long: -104.8263899747

Looking South

Photo Date 7/14/2015

Lat: 37.5381476456 Long: -104.8263899747

Looking West

Photo Date 7/14/2015

Lat: 37.5381476456 Long: -104.8263899747

Low vegetation density

Photo Date 7/14/2015

Lat: Long:

Martinez 07-06

Noxious weeds

Photo Date 7/14/2015

Lat: 37.5384492635 Long: -104.8268574353

Stockpile with cheatgrass and tall tumblemustard

Photo Date 7/14/2015

Lat: Long:

Weedy annual vegetation

Photo Date 7/14/2015

Lat: 37.5382603267 Long: -104.8263987625

Weedy annual vegetation

Photo Date 7/14/2015

Lat: 37.5382500246 Long: -104.8263846364