

**Petroglyph Energy, Inc.**  
**Well Pad Final Reclamation Evaluation**

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**Well Name: State 36-05**

**Evaluation Date:** July 15, 2015

**Evaluated by:** Lindsey Brandt; Senior Environmental Scientist; Habitat Management, Inc.

**Current Condition**

Portions of the State 36-05 well pad are establishing satisfactorily as shown in the attached photos and map. The rest of the pad is dominated by weedy annuals including tall tumbled mustard (*Sisymbrium altissimum*), however, often desirable vegetation is establishing underneath. Cheatgrass (*Bromus tectorum*) is dispersed throughout the site, however currently not abundant. Scotch thistle (*Onopordum acanthoides*) is abundant throughout the pad and diffuse knapweed (*Centaurea diffusa*) occurs scattered along the access road, as well as one plant on the southeast corner of the pad.

Tire ruts along the access road are causing water to channelize and erosion to occur. It appears that the road was driven on when wet which caused the tire ruts.

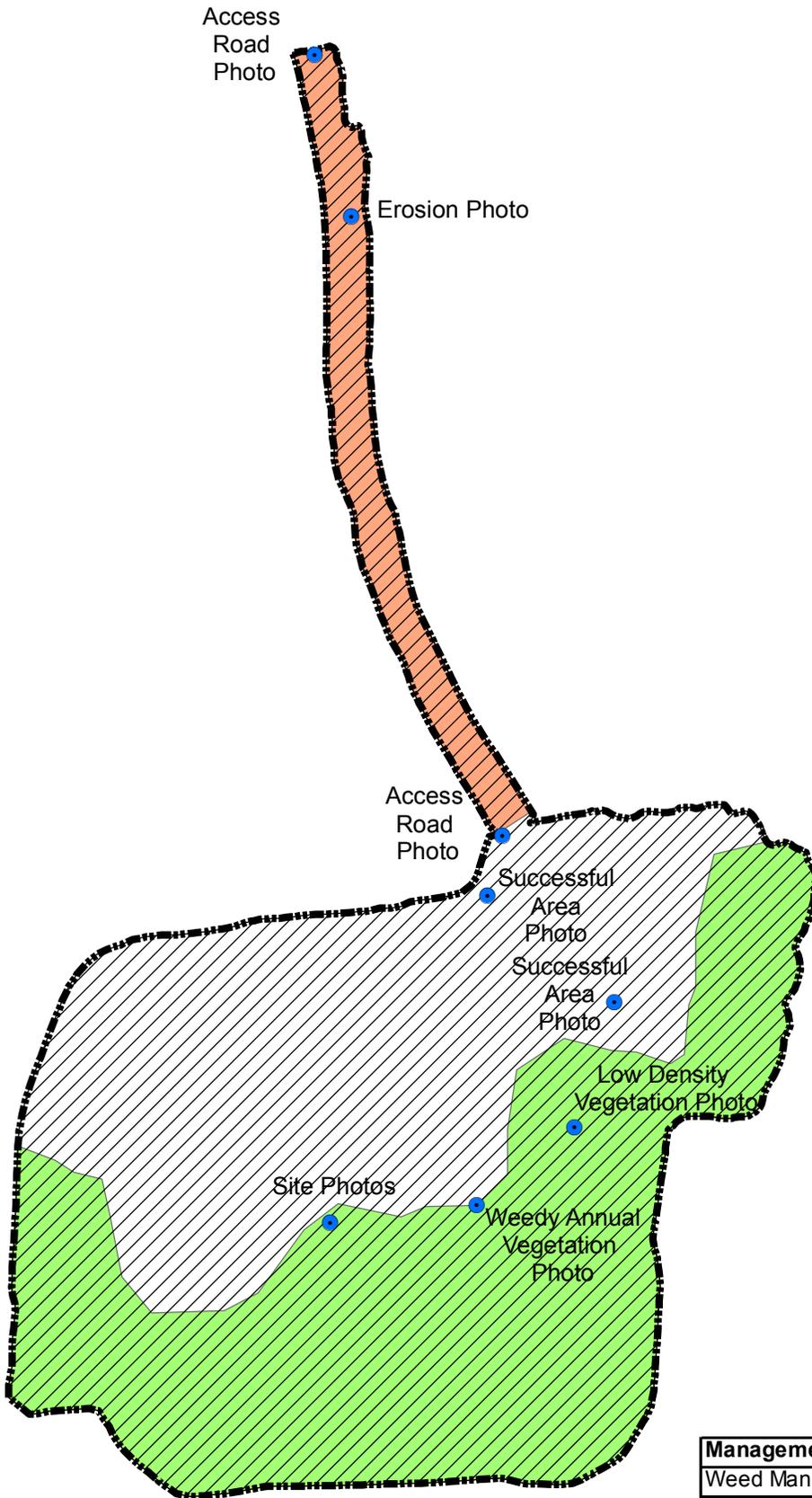
**Recommended Actions**

Many years of noxious weed management are likely required to effectively control weed infestations on this site. The entire well pad should be treated in the fall of 2015 to minimize the cheatgrass infestation. Prior to herbicide application the site should be mowed to remove the standing dead annual vegetation and allow for effective soil contact of herbicides. A pre-emergent herbicide should be applied to prevent germination of this winter annual.

Thistle and knapweed rosettes should be spot-sprayed with appropriate broadleaf selective herbicides in fall 2015 and spring 2016 ideally before bolting occurs. Pre-emergent herbicide application around the thistle infestation may also be beneficial to reducing this species.

The access road should be cross-rippled or harrowed to alleviate compaction, and BMPs should be installed to manage drainage. The access road and areas indicated on the attached map should be reseeded with the approved seed mix, and mulched with Woodstraw at a target rate of 60% cover.

After management activities are completed the access road should be blocked in order to prevent vehicle traffic on the site for several growing seasons. The site should be checked periodically to inspect for infestations of other noxious weeds, and identify other issues that may arise and potentially impact successful reclamation.



Management Activity	Acres
Weed Management	9.27
Mow, Harrow & Seed	4.4
Decompact, Seed & Mulch	0.72

 Weed Management

 Photo Point

 Decompact, Seed, & Mulch

 Mow, Harrow & Seed

 Well Pad Boundary



## Petroglyph Energy 2015

State 36-05



Evaluated: 7/16/15

Drawn: 12/14/15

Drawn By: RFB

## State 36-05



Access road

Photo Date 7/15/2015

Lat: 37.5687464555 Long: -104.8477005011



Access road end

Photo Date 7/15/2015

Lat: 37.5708124243 Long: -104.848319169



Erosion

Photo Date 7/15/2015

Lat: 37.5703839409 Long: -104.8481990349



Good area

Photo Date 7/15/2015

Lat: 37.5683068573 Long: -104.8473287908



Good area

Photo Date 7/15/2015

Lat: 37.5685890744 Long: -104.8477497464



Looking East

Photo Date 7/15/2015

Lat: 37.5677256504 Long: -104.8482743624



Looking North

Photo Date 7/15/2015

Lat: 37.5677256504 Long: -104.8482743624



Looking South

Photo Date 7/15/2015

Lat: 37.5677256504 Long: -104.8482743624

## State 36-05



Looking West

Photo Date 7/15/2015

Lat: 37.5677256504 Long: -104.8482743624



Low vegetation density

Photo Date 7/15/2015

Lat: 37.56797519 Long: -104.8474625517



Noxious weeds

Photo Date 7/15/2015

Lat: Long:



Ruts on road

Photo Date 7/15/2015

Lat: Long:



Weedy annual vegetation

Photo Date 7/15/2015

Lat: 37.5677705824 Long: -104.8477869541