Industry Submitted
Reclamation Success Documentation

The intent of requiring annual reclamation monitoring data is that an operator will submit data that requires minimal field review by the Bureau of Land Management's (BLM) Rawlins Field Office (RFO) staff prior to approving/rejecting a request for reclamation (rollover) credit against a disturbance cap or making a determination of final reclamation success/bond release. With each site that an operator is requesting a rollover credit or bond release, the following needs to be submitted to the RFO to be used to evaluate if the approved reclamation objectives have been achieved. At minimum, the submitted package will be reviewed for achievement of re-vegetation success, erosion and weed control.

1. Photos of the reclaimed area and an adjacent undisturbed reference site. Digital photographs should be used to document conditions of vegetation, site stability, erosion and other features or conditions subject to change over time, including the 10 reclamation requirements specified in IM WY-2009-022. Digital photos should be taken from each corner of a well pad with sufficient clarity and focus to monitor general conditions on the pad. More than four photos may be taken to capture important features. Each photo should include the direction of photo (compass), where it was taken from, and what the photo is capturing, e.g. noxious weeds (or lack of), a fence, a good stand of grass, certain forbs or shrubs, etc. The reference area photo(s) should be taken during the same year/time period as the photos of the reclamation.

2. Vegetation surveys that identifies by species and quantifies the density and diversity for both the reclaimed and adjacent undisturbed referenced areas vegetation. The Step-Point method is one methodology that can be used and involves making observations along a pace transect using a pointed stick or a marked point on the toe of the observer's boot. The Step-Point method measures the basal cover percentage for individual species, total basal cover percentage, and species composition by basal cover percentage. This method is best suited for use with grasses, forbs, and low shrubs. This method is relatively simple and easy to use and is suitable for measuring major vegetation characteristics of re-vegetation efforts. This methodology is both quantitative, reproducible and it is also possible to collect a fairly large number of samples within a relatively short period of time. The results of this method are not absolute, but instead provide a comparison of re-vegetation success in the reclaimed area to the existing native vegetation in a nearby area.

   At a minimum, at least one, preferably two, selected pace transects should extend across the widest axis of the reclaimed area to be evaluated. This works well on discrete sites such as well pads. On long, linear sites such as pipelines or reclaimed roads, it may be necessary to run a series of equally spaced transects across the shortest axis as opposed to running a continuous transect along the centerline. Each transect should be performed within the same ecological site. If more than one ecological site occurs in the reclaimed area, then separate transects need to be conducted within each ecological site.

   While the ARIM Record Of Decision discusses measuring canopy cover, the RFO will accept basal or canopy surveys as long as the same methodology is used for comparison between the reclaimed and reference undisturbed sites.

3. A history of the reclamation methods and treatments that have occurred on the locale,including seed mix(es) planted, other vegetative treatments, Best Management Practices, dates and weed treatments.

4. Surveys comparing erosive features of reclaimed area to adjacent the undisturbed reference area. The RFO recommends that the Erosion Condition Classification System (R. Clark/USDOI, 1980) be used to determine the pre and post-disturbance erosional features of the site. This system looks at soil movement, surface litter, surface rock fragments, pedestalling, flow patterns, rills and gullies.

5. A Geospatial polygon file, collected using a GPS unit, along the edge of each reclaimed area that is being requested for rollover credit. The GPS units used must a have rated accuracy of 4 meters or better (95% confidence interval). The GPS data will then be converted into the format of a shape file and the data will be referenced to NAD 1983 (CORS 96), UTM Zone 13N, meters. Attributes may be collected during field collection using a data dictionary on the GPS Units or incorporated into the shape file after it has been created.