

**BERRY PETROLEUM COMPANY**  
**P-32 WATER IMPOUNDMENT FACILITY**  
**RECLAMATION PLAN**

This Reclamation Plan is specifically intended for the Berry Petroleum Company (Berry) P-32 Water Impoundment Facility located on Old Mountain in Garfield County, Colorado. This facility is more specifically located in the SESE, Section 32, Township 5 South, Range 95 West, 6<sup>th</sup> P.M. This plan should augment and be used in conjunction with Berry's *Master Reclamation Plan – Piceance Basin* document.

**Interim Reclamation**

Interim reclamation work will begin as soon as practicable on all areas where final reclamation cannot be applied. Areas disturbed during construction including cut and fill slopes, access roads, and equipment lay-down areas will be stabilized, via grading and contouring, to prevent erosion, reduce soil loss, and reduce the chance of slope failure. Erosion and sediment control measures, such as rock armored BMPs, will be applied and maintained until a stable vegetative cover is established. Stormwater and erosion control Best Management Practices (BMPs) will be chosen based on site-specific conditions and may include the maintenance of BMPs that had been in place during construction.

Where required to establish seed growth during revegetation of bare soil, topsoil will be placed over the finished grade. For further aid in revegetation, the seedbed may be prepared by harrowing, disking, pitting, and/or ripping. Areas that have been seeded will be monitored for establishment and the presence of erosional features would be re-stabilized and reseeded until adequate vegetative cover is established.

Upon interim reclamation completion, Berry shall submit a Sundry Notice, Form 4 to describe reclamation actions performed and the final land use. This Form will include photographs of the site, taken during the growing season and facing each cardinal direction to document the success of reclamation. One photograph of adjacent undisturbed vegetation will also be included. All photographs provided will be identified by the date, well name, GPS location, and direction of view.

**Water Impoundment Closure**

The proposed water impoundment will be in operation at this location for the productive life of the nearby production wells or until Berry determines that the facility is no longer necessary or until the facility becomes incapable of supporting operations. Berry anticipates the useful operational life of the proposed facility to be 30 years. The pit will be emptied and the liner inspected every 3 to 5 years, or as the Director sees necessary.

A Site Investigation and Remediation Workplan, Form 27, will be provided to the COGCC for approval at least 60 days prior to closure. If it is determined that soils and/or surface and groundwater were detrimentally impacted by the facility the necessary remediation efforts will be implemented immediately. Implementation details for site remediation and emergency response procedures and contacts are included in the preliminary Operating Plan.

The facility will undergo final reclamation within six months following cessation of permanent operations. Final closure will include removal of all mechanical and electrical equipment, removal and disposal of synthetic liners, filling and grading of the pit, and final reclamation.

### Closure Sequence

Following cessation of permanent operations of the facility and upon decommissioning of the pit, the facility will be closed and reclaimed as outlined below:

- Stormwater and erosion control BMPs will be installed prior to closure construction activities and will remain in place until final stabilization is achieved.
- All remaining fluid will be drained and disposed of off-site.
- All equipment, structures, and fencing will be disassembled and removed from the site.
- Pit sediment will be removed and placed in an area lined with a pit liner so that it can be dried, tested, and determined if the soil is ready for final disposal.
- The containment liners will be bundled and rolled to one end of the pit using two excavators. Water and mud will be “squeezed” during this process. The water and mud from the liners and any remaining in the pit will be removed by a mud pump and added to the soils pile.
- The containment liners will be removed and recycled or otherwise disposed of at an approved facility.
- The sediment from the low point of the pit will be tested for compliance with Table 910-1 to ensure that there was no leakage.
- The spoils will be land farmed using periodic mixing of material with approved additives, which may include sawdust, bugs, or chemicals.
- Compacted surfaces will be ripped to loosen the soil and allow mixing with subgrade material.
- Aggregate surfacing material and clean soil will be used to fill in the pit and reduce slope angles on the pad; if the concentrations exceed the levels in Table 910-1, the waste will be disposed of off-site in an approved facility.
- Should subsidence occur over the closed pit location, additional topsoil will be added and the land will be re-leveled as close to the original contouring as possible.

Following facility closure, groundwater and surface water samples will be taken within one mile of the site.

### **Final Reclamation**

Following the removal of all structures, equipment, and materials, final reclamation will be initiated. All final reclamation activities will be conducted in accordance with COGCC 1000 Series Rules and Garfield County standards. Final Reclamation includes the practices of Interim Reclamation discussed above. The site will be graded to match original contours and any remaining stockpile will be spread evenly over the area. Additionally, self-sustaining vegetative communities will be established to 80 percent of pre-disturbance levels, excluding noxious weeds. The area will be stabilized so that the site meets future land uses including livestock grazing, wildlife habitat, and mineral exploration.

After reclamation has been completed, a 3<sup>rd</sup> party revegetation/reclamation specialist will inspect the site annually. Observations will be made for weed presence, fence damage, erosion occurrences, and bare ground resulting from lack of germination and fill-in of native seeded species. Evaluation of the reclamation will be based on species types present, diversity, and ground cover. Monitoring will commence during the first growing season and will continue until revegetation meets or exceeds predisturbance vegetation.

Final reclamation will be complete when a final Sundry Notice Form 4 is submitted describing the final reclamation procedures and designated final land use, there are no outstanding compliance issues for the site, and upon approval from the Director.