

# **SURFACE RECLAMATION PLAN**

**ALOHA MULA 15  
LINCOLN COUNTY, COLORADO**

**FEBRUARY 2015**

**Prepared for:**

**WIEPKING-FULLERTON ENERGY, L.L.C.  
Englewood, Colorado**



# **SURFACE RECLAMATION PLAN**

## **ALOHA MULA 15 LINCOLN COUNTY, COLORADO**

**FEBRUARY 2015**

**Prepared for:**

**WIEPKING-FULLERTON ENERGY, L.L.C.  
4600 South Downing Street  
Englewood, Colorado 80113**

**Prepared by:**

**LT ENVIRONMENTAL, INC.  
4600 West 60<sup>th</sup> Avenue  
Arvada, Colorado 80003  
(303) 433-9788**



## TABLE OF CONTENTS

1.0 RECLAMATION OBJECTIVES.....	1
2.0 RECLAMATION PERFORMANCE STANDARDS.....	2
3.0 SURFACE RECLAMATION PLAN.....	3
3.1 PRE-EXISTING SITE CONDITIONS.....	3
3.2 CURRENT SITE CONDITIONS .....	3
3.3 RECOMMENDATIONS .....	3
3.3.1 Soil Amendment.....	3
3.3.2 Soil Treatment .....	3
3.3.3 Seeding .....	3
3.3.4 Erosion Control .....	4
3.3.5 Site Protection .....	4
3.3.6 Weed Control .....	4
3.3.7 Monitoring.....	4
3.3.8 Recordkeeping.....	4
3.3.9 Submit Sundry Notice (Form 4).....	4
4.0 CONCLUSIONS .....	5

## FIGURES

FIGURE 1 – SITE LOCATION MAP

## APPENDICES

APPENDIX A – COGCC 1000 SERIES RECLAMATION REGULATIONS  
APPENDIX B – WELD LABORATORIES, INC. ANALYTICAL REPORT  
APPENDIX C – NRCS SEED MIX RECOMMENDATIONS  
APPENDIX D – COGCC FIELD INSPECTION FORM

## **1.0 RECLAMATION OBJECTIVES**

The objectives of final surface reclamation is to return the land, following use for energy development, to a condition approximating that which existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, ecological function and other natural resource values to maintain healthy, biologically active topsoil; to control erosion and sediment transport; and to minimize loss of habitat, forage, and visual resources. Surface reclamation will be judged successful when disturbed areas have been re-contoured, stabilized, and re-vegetated with a self-sustaining, vigorous, diverse, native (or otherwise approved) plant community sufficient to minimize visual impacts, provide forage, stabilize soils, and impede the invasion of noxious weeds.

Reclamation objectives are provided to ensure understanding of performance standards and Best Management Practices (BMPs), so Wiepking-Fullerton Energy, L.L.C. may implement the BMPs in an effective and cost efficient manner.

## **2.0 RECLAMATION PERFORMANCE STANDARDS**

Operators are required to meet reclamation performance standards. Successful compliance with reclamation performance standards is determined by the Colorado Oil and Gas Conservation Commission (COGCC). See Appendix A for COGCC 1000 Series Reclamation Regulations. If reclamation is unsuccessful, subsequent treatments and actions will be required until reclamation performance standards are met.



### **3.0 SURFACE RECLAMATION PLAN**

The Surface Reclamation Plan is an operator's opportunity to provide plans or analyses that support overall achievement of reclamation objectives. The Surface Reclamation Plan includes the following, to ensure reclamation objectives and standards are met. Changes and additions to a Surface Reclamation Plan may be necessary over the lifetime of a site to achieve the reclamation objectives and standards.

#### **3.1 PRE-EXISTING SITE CONDITIONS**

The legal site description is the northeast quarter of the southeast quarter of Section 19, Township 10 South, Range 55 West, 6<sup>th</sup> Principal Meridian. The site, Aloha Mula 15, is located 2.8 miles south of US Highway 40 and 0.15 miles east of County Road 26 in Lincoln County, Colorado. The Site Location Map is provided as Figure 1.

The pre-existing land use was rangeland. The terrain was flat with native grasses and sagebrush dominating the plant community.

#### **3.2 CURRENT SITE CONDITIONS**

The site's current land use is rangeland. The dominant plant species present are kochia and Russian thistle, both of which are commonly known to be invasive and usually undesirable. Total perennial non-invasive plant cover is below 80 percent (%) of pre-disturbance levels or reference area vegetation coverage levels required per COGCC Rule 1004.c.(2). The fence surrounding the site is down in multiple locations. There appears to be a recent vehicle disturbance near the entrance to the site.

#### **3.3 RECOMMENDATIONS**

##### **3.3.1 Soil Amendment**

A composite soil sample was collected from the site January 27, 2015. The sample was analyzed by Weld Laboratories, Inc. located in Greeley, Colorado. See Appendix B for the Analytical Report, suggested amendments, and application rates recommended by Weld Laboratories, Inc.

##### **3.3.2 Soil Treatment**

Alleviate soil compaction as required by COGCC Rule 1004.a. Rip compacted soil throughout the site to a minimum depth of 18 inches, unless bedrock is encountered at a shallower depth.

##### **3.3.3 Seeding**

Seed the site and access road using seeding recommendations provided by the National Resource Conservation Service (NRCS) to match adjacent rangeland (Appendix C).

### **3.3.4 Erosion Control**

Provide soil stabilization by crimp mulching certified weed-free native grass hay or wheat straw into the seeded areas.

### **3.3.5 Site Protection**

Repair and maintain the barbed wire fence surrounding the site and keep the gate closed to limit livestock grazing the reclaimed area for at least two years or until the vegetation has reached 80% of pre-disturbance or reference area vegetation coverage levels, excluding undesirable plant species.

### **3.3.6 Weed Control**

Conduct weed mitigation by mowing the site prior to kochia and Russian thistle seed set. Seed set for these species in this region is typically mid-July through August. More than one mowing event per growing season may be necessary.

### **3.3.7 Monitoring**

Monitor the site biannually during the growing season following reclamation activities to identify whether reclamation objectives and standards are likely to be achieved in the near future without additional actions and/or identify actions that are needed to meet the objectives and standards. Monitoring should be done by a qualified vegetation expert using quantitative methods, such as line-point intercept, during the growing season to determine if the site has achieved 80% of pre-disturbance or reference area vegetation coverage levels. Documentation of the vegetation monitoring data conducted by the qualified vegetation expert demonstrating that the vegetation meets the 80% standard is required per the COGCC Field Inspection Form (Appendix D).

Special attention should be given to the monitoring of undesirable species or noxious weeds for prompt control if necessary. Additional actions to achieve final reclamation is contingent on monitoring results.

### **3.3.8 Recordkeeping**

Keep a record, such as an invoice and/or other documentation, demonstrating all work completed and data collected on the site that relates to the surface reclamation. This is required per the COGCC Field Inspection Form and is useful in determining further reclamation actions if necessary.

### **3.3.9 Submit Sundry Notice (Form 4)**

Submit a Sundry Notice (Form 4) for final reclamation to the COGCC once the site has achieved the reclamation objectives and standards. Include invoices and/or documentation demonstrating the work completed on site that directly relates to the actions required on the COGCC Field Inspection Form.

## **4.0 CONCLUSIONS**

LT Environmental Inc. (LTE) makes the above recommendations in an effort to achieve the best possible reclamation results.

### **LIMITATIONS**

LTE believes that it has performed the services summarized in this report in a manner consistent with the level of care and skill ordinarily exercised by members of the environmental profession practicing at the same time and under similar conditions in the area of the project.



## FIGURES

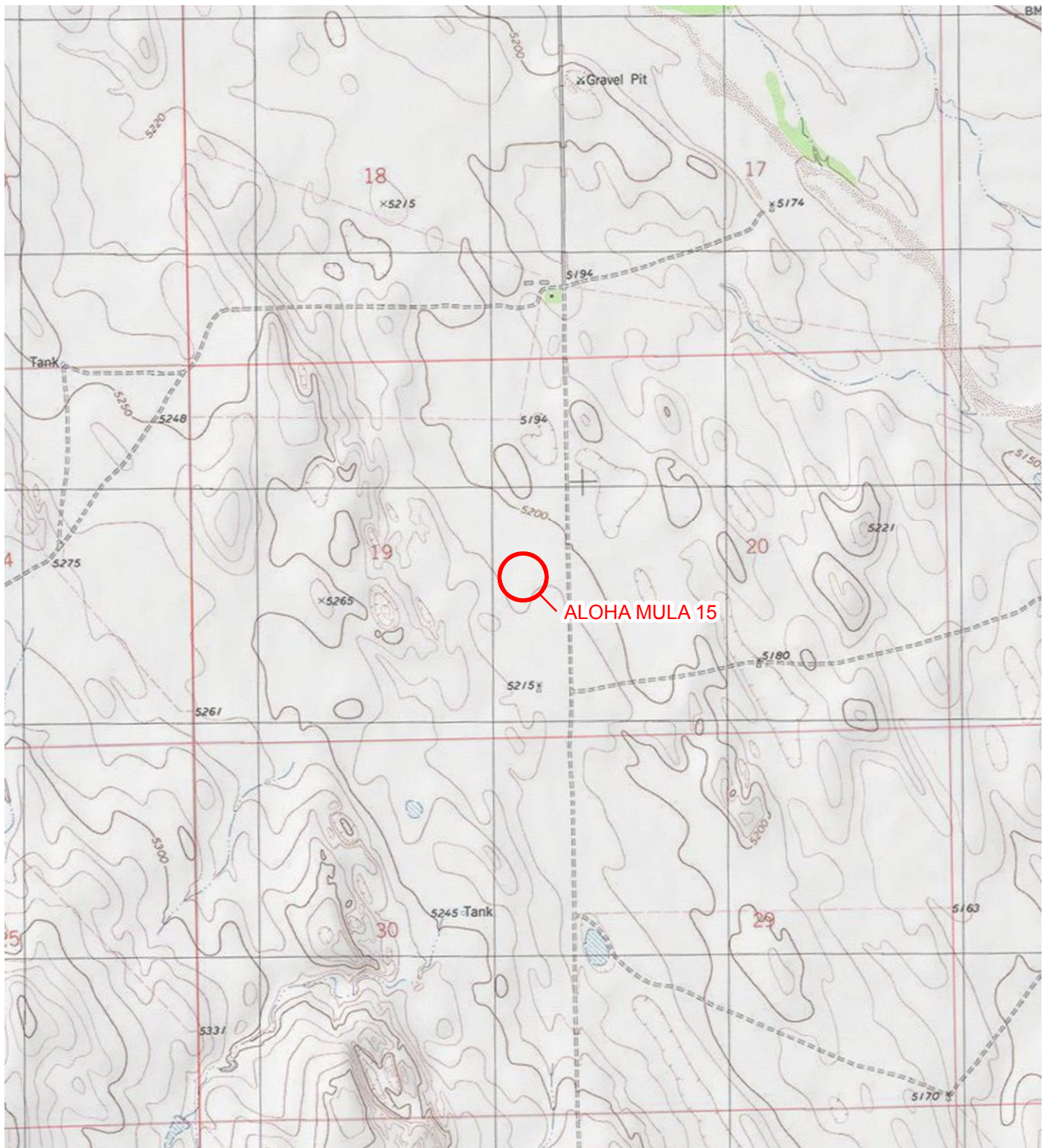
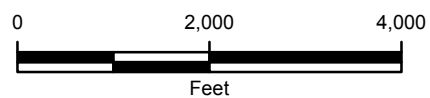


IMAGE COURTESY OF ESRI/USGS

# LEGEND

○ SITE LOCATION



COLORADO



FIGURE 1  
SITE LOCATION MAP  
ALOHA MULA 15  
NESE SEC 19 T10S R55W  
LINCOLN COUNTY, COLORADO  
WIEPKING-FULLERTON ENERGY, L.L.C.



**APPENDIX A**  
**COGCC 1000 SERIES RECLAMATION REGULATIONS**



## RECLAMATION REGULATIONS

### 1001. INTRODUCTION

- a. **General.** The rules and regulations of this series establish the proper reclamation of the land and soil affected by oil and gas operations and ensure the protection of the topsoil of said land during such operations. The surface of the land shall be restored as nearly as practicable to its condition at the commencement of drilling operations.
- b. **Additional requirements.** Notwithstanding the provisions of the 1000 Series rules, when the Director has reasonable cause to believe that a proposed oil and gas operation could result in a significant adverse environmental impact on any air, water, soil, or biological resource, the Director shall conduct an onsite inspection and may request an emergency meeting of the Commission to address the issue.
- c. **Surface owner waiver of 1000-Series Rules.** The Commission shall not require compliance with Rules 1002. (except Rules 1002.e.(1), 1002.e.(4), and 1002.f, for which compliance will continue to be required), Rule 1003, or Rule 1004 (except Rules 1004.c.(4) and 1004.c.(5), for which compliance will continue to be required), if the operator can demonstrate to the Director's or the Commission's satisfaction both that compliance with such rules is not necessary to protect the public health, safety and welfare, including prevention of significant adverse environmental impacts, and that the operator has entered into an agreement with the surface owner regarding topsoil protection and reclamation of the land. Absent bad faith conduct by the operator, penalties may only be imposed for non-compliance with a Commission order issued after a determination that, notwithstanding such agreement, compliance is necessary to protect public health, safety and welfare. Prior to final reclamation approval as to a specific well, the operator shall either comply with the rules or obtain a variance under Rule 502.b. This rule shall not have the effect of relieving an operator from compliance with the 900 Series Rules.

### 1002. SITE PREPARATION AND STABILIZATION

- a. Effective June 1, 1996:
  - (1) **Fencing of drill sites and access roads on crop lands.** During drilling operations on crop lands, when requested by the surface owner, the operator shall delineate each drillsite and access road on crop lands constructed after such date by berms, single strand fence, or other equivalent method in order to discourage unnecessary surface disturbances.
  - (2) **Fencing of reserve pit when livestock is present.** During drilling operations where livestock is in the immediate area and is not fenced out by existing fences, the operator, at the request of the surface owner, will install a fence around the reserve pit.
  - (3) **Fencing of well sites.** Subsequent to drilling operations, where livestock is in the immediate area and is not fenced out by existing fences, the operator, at the request of the surface owner, will install a fence around the wellhead, pit, and production equipment to prevent livestock entry.
- b. **Soil removal and segregation.**
  - (1) **Soil removal and segregation on crop land.** As to all excavation operations undertaken after June 1, 1996 on crop land, the operator shall separate and

store soil horizons separately from one another and mark or document stockpile locations to facilitate subsequent reclamation. When separating soil horizons, the operator shall segregate horizons based upon noted changes in physical characteristics such as organic content, color, texture, density, or consistency. Segregation will be performed to the extent practicable to a depth of six (6) feet or bedrock, whichever is shallower.

(2) **Soil removal and segregation on non crop-land.** As to all excavation operations undertaken after July 1, 1997 on non-crop land, the operator shall separate and store the topsoil horizon or the top six (6) inches, whichever is deeper, and mark or document stockpile locations to facilitate subsequent reclamation. When separating the soil horizons, the operator shall segregate the horizon based upon noted changes in physical characteristics such as organic content, color, texture, density, or consistency.

(3) **Horizons too rocky or too thin.** When the soil horizons are too rocky or too thin for the operator to practicably segregate, then the topsoil shall be segregated to the extent possible and stored. Too rocky shall mean that the soil horizon consists of greater than thirty five percent (35%) by volume rock fragments larger than ten (10) inches in diameter. Too thin shall mean soil horizons that are less than six (6) inches in thickness. The operator shall segregate remaining soils on crop land to the extent practicable to a depth of three (3) feet below the ground surface or bedrock, whichever is shallower, based upon noted changes in physical characteristics such as color, texture, density or consistency and such soils shall be stockpiled to avoid loss and mixing with other soils.

c. **Protection of soils.** All stockpiled soils shall be protected from degradation due to contamination, compaction and, to the extent practicable, from wind and water erosion during drilling and production operations. Best management practices to prevent weed establishment and to maintain soil microbial activity shall be implemented.

d. **Drill pad location.** The drilling location shall be designed and constructed to provide a safe working area while reasonably minimizing the total surface area disturbed. Consistent with applicable spacing orders and well location orders and regulations, in locating drill pads, steep slopes shall be avoided when reasonably possible. The drill pad site shall be located on the most level location obtainable that will accommodate the intended use. If not avoidable, deep vertical cuts and steep long fill slopes shall be constructed to the least percent slope practical. Where feasible, operators shall use directional drilling to reduce cumulative impacts and adverse impacts on wildlife resources.

e. **Surface disturbance minimization.**

(1) In order to reasonably minimize land disturbances and facilitate future reclamation, well sites, production facilities, gathering pipelines, and access roads shall be located, adequately sized, constructed, and maintained so as to reasonably control dust and minimize erosion, alteration of natural features, removal of surface materials, and degradation due to contamination.

(2) Operators shall avoid or minimize impacts to wetlands and riparian habitats to the degree practicable.

(3) Where practicable, operators shall consolidate facilities and pipeline rights-of-way in order to minimize adverse impacts to wildlife resources, including fragmentation of wildlife habitat, as well as cumulative impacts.

- (4) **Access roads.** Existing roads shall be used to the greatest extent practicable to avoid erosion and minimize the land area devoted to oil and gas operations. Roadbeds shall be engineered to avoid or minimize impacts to riparian areas or wetlands to the extent practicable. Unavoidable impacts shall be mitigated. Road crossings of streams shall be designed and constructed to allow fish passage, where practicable and appropriate. Where feasible and practicable, operators are encouraged to share access roads in developing a field. Where feasible and practicable, roads shall be routed to complement other land usage. To the greatest extent practicable, all vehicles used by the operator, contractors, and other parties associated with the well shall not travel outside of the original access road boundary. Repeated or flagrant instance(s) of failure to restrict lease access to lease roads which result in unreasonable land damage or crop losses shall be subject to a penalty under Rule 523.

**f. Stormwater management.**

- (1) All oil and gas locations are subject to the Best Management Practices requirements of Rule 1002.f.(2). In addition, upon the termination of a construction stormwater permit issued by the Colorado Department of Public Health and Environment for an oil and gas location, such oil and gas location is subject to the Post-Construction Stormwater Program requirements of Rule 1002.f.(3), except that such requirements are not applicable to Tier 1 Oil and Gas Locations.
- (2) Oil and gas operators shall implement and maintain Best Management Practices (BMPs) at all oil and gas locations to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. BMPs shall be maintained until the facility is abandoned and final reclamation is achieved pursuant to Rule 1004. Operators shall employ BMPs, as necessary to comply with this rule, at all oil and gas locations, including, but not limited to, well pads, soil stock piles, access roads, tank batteries, compressor stations, and pipeline rights of way. BMPs shall be selected based on site-specific conditions, such as slope, vegetation cover, and proximity to water bodies, and may include maintaining in-place some or all of the BMPs installed during the construction phase of the facility. Where applicable based on site-specific conditions, operators shall implement BMPs in accordance with good engineering practices, including measures such as:
- A. **Covering materials and activities and stormwater diversion** to minimize contact of precipitation and stormwater runoff with materials, wastes, equipment, and activities with potential to result in discharges causing pollution of surface waters.
  - B. **Materials handling and spill prevention procedures and practices** implemented for material handling and spill prevention of materials used, stored, or disposed of that could result in discharges causing pollution of surface waters.
  - C. **Erosion controls** designed to minimize erosion from unpaved areas, including operational well pads, road surfaces and associated culverts, stream crossings, and cut/fill slopes.
  - D. **Self-inspection, maintenance, and good housekeeping procedures and schedules** to facilitate identification of conditions that could cause breakdowns or failures of BMPs. These procedures shall include measures for maintaining clean, orderly operations and facilities and shall address cleaning and maintenance schedules and waste disposal

practices. In conducting inspections and maintenance relative to stormwater runoff, operators shall consider seasonal factors, such as winter snow cover and spring runoff from snowmelt, to ensure site conditions and controls are adequate and in place to effectively manage stormwater.

E. **Spill response procedures** for responding to and cleaning up spills. The necessary equipment for spill cleanup shall be readily available to personnel. Spill Prevention, Control, and Countermeasure plans incorporated by reference must be identified in the Post-Construction Stormwater Management Program specified in Rule 1002.f.(3).

F. **Vehicle tracking control practices** to control potential sediment discharges from operational roads, well pads, and other unpaved surfaces. Practices could include road and pad design and maintenance to minimize rutting and tracking, controlling site access, street sweeping or scraping, tracking pads, wash racks, education, or other sediment controls.

(3) Operators of oil and gas facilities shall develop a Post-Construction Stormwater Program in compliance with this section no later than the time of termination of stormwater permits issued by the Colorado Department of Public Health and Environment for construction of oil and gas facilities.

A. The Post-Construction Stormwater Program shall reflect good faith efforts by operators to select and implement BMPs intended to serve the purposes of this rule. BMPs shall be selected to address potential sources of pollution which may reasonably be expected to affect the quality of discharges associated with the ongoing operation of production facilities during the post-construction and reclamation operation of the facilities. Pollutant sources that must be addressed by BMPs, if present, include:

- i. Transport of chemicals and materials, including loading and unloading operations;
- ii. Vehicle/equipment fueling;
- iii. Outdoor storage activities, including those for chemicals and additives;
- iv. Produced water and drilling fluids storage;
- v. Outdoor processing activities and machinery;
- vi. Significant dust or particulate generating processes;
- vii. Erosion and vehicle tracking from well pads, road surfaces, and pipelines;
- viii. Waste disposal practices;
- ix. Leaks and spills; and
- x. Ground-disturbing maintenance activities.

- B. The Post-Construction Stormwater Program shall be developed, supervised, documented, and maintained by a qualified person(s) with training or prior work experience specific to stormwater management. Employees and subcontractors shall be trained to make them aware of the BMPs implemented and maintained at the site and procedures for reporting needed maintenance or repairs. Documentation shall include a description of the BMPs selected to ensure proper implementation, operation, and maintenance.
- C. Facility-specific maps, installation specification, and implementation criteria shall also be included when general operating procedures and descriptions are not adequate to clearly describe the implementation and operation of BMPs.

### 1003. INTERIM RECLAMATION

- a. **General.** Debris and waste materials other than de minimis amounts, including, but not limited to, concrete, sack bentonite and other drilling mud additives, sand plastic, pipe and cable, as well as equipment associated with the drilling, re-entry, or completion operations shall be removed. All E&P waste shall be handled according to the 900 Series rules. All pits, cellars, rat holes, and other bore holes unnecessary for further lease operations, excluding the drilling pit, will be backfilled as soon as possible after the drilling rig is released to conform with surrounding terrain. On crop land, if requested by the surface owner, guy line anchors shall be removed as soon as reasonably possible after the completion rig is released. When permanent guy line anchors are installed, it shall not be mandatory to remove them. When permanent guy line anchors are installed on cropland, care shall be taken to minimize disruption or cultivation, irrigation, or harvesting operations. If requested by the surface owner or its representative, the anchors shall be specifically marked, in addition to the marking required below, so as to facilitate farming operations. All guy line anchors left buried for future use shall be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor. In addition, all well sites and surface production facilities shall be maintained in accordance with Rule 603.j.
- b. **Interim reclamation of areas no longer in use.** All disturbed areas affected by drilling or subsequent operations, except areas reasonably needed for production operations or for subsequent drilling operations to be commenced within twelve (12) months, shall be reclaimed as early and as nearly as practicable to their original condition or their final land use as designated by the surface owner and shall be maintained to control dust and minimize erosion to the extent practicable. As to crop lands, if subsidence occurs in such areas additional topsoil shall be added to the depression and the land shall be re-leveled as close to its original contour as practicable. Interim reclamation shall occur no later than three (3) months on crop land or six (6) months on non-crop land after such operations unless the Director extends the time period because of conditions outside the control of the operator. Areas reasonably needed for production operations or for subsequent drilling operations to be commenced within twelve (12) months shall be compacted, covered, paved, or otherwise stabilized and maintained in such a way as to minimize dust and erosion to the extent practicable.
- c. **Compaction alleviation.** All areas compacted by drilling and subsequent oil and gas operations which are no longer needed following completion of such operations shall be cross-rippled. On crop land, such compaction alleviation operations shall be undertaken when the soil moisture at the time of ripping is below thirty-five percent (35%) of field capacity. Ripping shall be undertaken to a depth of eighteen (18) inches unless and to the extent bed rock is encountered at a shallower depth.



d. **Drilling pit closure.** As part of interim reclamation, drilling pits shall be closed in the following manner:

(1) **Drilling pit closure on crop land and within 100-year floodplain.** On crop land or within the 100-year floodplain, water-based bentonitic drilling fluids, except *de minimis* amounts, shall be removed from the drilling pit and disposed of in accordance with the 900 Series rules. Operators shall ensure that soils meet the concentration levels of Table 910-1, above. Drilling pit reclamation, including the disposal of drilling fluids and cuttings, shall be performed in a manner so as to not result in the formation of an impermeable barrier. Any cuttings removed from the pit for drying shall be returned to the pit prior to backfilling, and no more than *de minimis* amounts may be incorporated into the surface materials. After the drilling pit is sufficiently dry, the pit shall be backfilled. The backfilling of the drilling pit shall be done to return the soils to their original relative positions. Closing and reclamation of drilling pits shall occur no later than three (3) months after drilling and completion activities conclude.

(2) **Drilling pit closure on non-crop land.** All drilling fluids shall be disposed of in accordance with the 900 Series rules. Operators shall ensure that soils meet the concentration levels of Table 910-1, above. After the drilling pit is sufficiently dry, the pit shall be backfilled. Materials removed from the pit for drying shall be returned to the pit prior to the backfilling. No more than *de minimis* amounts may be incorporated into the surface materials. The backfilling of the drilling pit will be done to return the soils to their original relative positions so that the muds and associated solids will be confined to the pit and not squeezed out and incorporated in the surface materials. Closure and reclamation of drilling pits shall occur no later than six (6) months after drilling and completion activities conclude, weather permitting.

(3) **Minimum cover.** On crop lands, a minimum of three (3) feet of backfill cover shall be applied over any remaining drilling pit contents. As to both crop lands and non-crop lands, during the two (2) year period following drilling pit closure, if subsidence occurs over the closed drilling pit location additional topsoil shall be added to the depression and the land shall be re-leveled as close to its original contour as practicable.

e. **Restoration and revegetation.** When a well is completed for production, all disturbed areas no longer needed will be restored and revegetated as soon as practicable.

(1) **Revegetation of crop lands.** All segregated soil horizons removed from crop lands shall be replaced to their original relative positions and contour, and shall be tilled adequately to re-establish a proper seedbed. The area shall be treated if necessary and practicable to prevent invasion of undesirable species and noxious weeds, and to control erosion. Any perennial forage crops that were present before disturbance shall be re-established.

(2) **Revegetation of non-crop lands.** All segregated soil horizons removed from non-crop lands shall be replaced to their original relative positions and contour as near as practicable to achieve erosion control and long-term stability, and shall be tilled adequately in order to establish a proper seedbed. The disturbed area then shall be reseeded in the first favorable season following rig demobilization. Reseeding with species consistent with the adjacent plant community is encouraged. In the absence of an agreement between the operator and the affected surface owner as to what seed mix should be used, the operator shall consult with a representative of the local soil conservation district to determine the proper seed mix to use in revegetating the disturbed area. In an area where

an operator has drilled or plans to drill multiple wells, in the absence of an agreement between the operator and the affected surface owner, the operator may rely upon previous advice given by the local soil conservation district in determining the proper seed mixes to be used in revegetating each type of terrain upon which operations are to be conducted.

Interim reclamation of all disturbed areas no longer in use shall be considered complete when all ground surface disturbing activities at the site have been completed, and all disturbed areas have been either built on, compacted, covered, paved, or otherwise stabilized in such a way as to minimize erosion to the extent practicable, or a uniform vegetative cover has been established that reflects pre-disturbance or reference area forbs, shrubs, and grasses with total percent plant cover of at least eighty percent (80%) of pre-disturbance levels or reference areas, excluding noxious weeds. Re-seeding alone is not sufficient.

- (3) **Interim reclamation completion notice, Form 4.** The operator shall submit a Sundry Notice, Form 4, which describes the interim reclamation procedures and any associated mitigation measures performed, any changes, if applicable in the landowner's designated final land use, and at a minimum four (4) photographs taken during the growing season facing each cardinal direction which document the success of the interim reclamation and one (1) photograph which documents the total cover of live perennial vegetation of adjacent or nearby undisturbed land or the reference area. Each photograph shall be identified by date taken, well name, GPS location, and direction of view.

- f. **Weed control.** During drilling, production, and reclamation operations, all disturbed areas shall be kept as free of all undesirable plant species designated to be noxious weeds as practicable. Weed control measures shall be conducted in compliance with the Colorado Noxious Weed Act, C.R.S. §35-5.5-115 and the current rules pertaining to the administration and enforcement of the Colorado Noxious Weed Act. It is recommended that the operator consult with the local weed control agency or other weed control authority when weed infestation occurs. It is the responsibility of the operator to monitor affected and reclaimed lands for noxious weed infestations. If applicable, the Director may require a weed control plan.

#### **1004. FINAL RECLAMATION OF WELL SITES AND ASSOCIATED PRODUCTION FACILITIES**

- a. **Well sites and associated production facilities.** Upon the plugging and abandonment of a well, all pits, mouse and rat holes and cellars shall be backfilled. All debris, abandoned gathering line risers and flowline risers, and surface equipment shall be removed within three (3) months of plugging a well. All access roads to plugged and abandoned wells and associated production facilities shall be closed, graded and recontoured. Culverts and any other obstructions that were part of the access road(s) shall be removed. Well locations, access roads and associated facilities shall be reclaimed. As applicable, compaction alleviation, restoration, and revegetation of well sites, associated production facilities, and access roads shall be performed to the same standards as established for interim reclamation under Rule 1003. All other equipment, supplies, weeds, rubbish, and other waste material shall be removed. The burning or burial of such material on the premises shall be performed in accordance with applicable local, state, or federal solid waste disposal regulations and in accordance with the 900-Series Rules. In addition, material may be burned or buried on the premises only with the prior written consent of the surface owner. All such reclamation work shall be completed within three (3) months on crop land and twelve (12) months on non-crop land after plugging a well or final closure of associated production facilities. The Director may grant an extension where

unusual circumstances are encountered, but every reasonable effort shall be made to complete reclamation before the next local growing season.

- b. **Production and special purpose pit closure.** The operator shall comply with the 900 series rules for the removal or treatment of E&P waste remaining in a production or special purpose pit before the pit may be closed for final reclamation. After any remaining E&P waste is removed or treated, all such pits must be back-filled to return the soils to their original relative positions. As to both crop lands and non-crop lands, if subsidence occurs over closed pit locations, additional topsoil shall be added to the depression and the land shall be re-leveled as close to its original contour as practicable.
- c. **Final reclamation threshold for release of financial assurance.** Successful reclamation of the well site and access road will be considered completed when:
  - (1) On crop land, reclamation has been performed as per Rules 1003 and 1004, and observation by the Director over two growing seasons has indicated no significant unrestored subsidence.
  - (2) On non-crop land, reclamation has been performed as per Rules 1003 and 1004, and disturbed areas have been either built on, compacted, covered, paved, or otherwise stabilized in such a way as to minimize erosion to the extent practicable, or a uniform vegetative cover has been established that reflects pre-disturbance or reference area forbs, shrubs, and grasses with total percent plant cover of at least eighty percent (80%) of pre-disturbance or reference area levels, excluding noxious weeds, as determined by the Director through a visual appraisal. The Director shall consider the total cover of live perennial vegetation of adjacent or nearby undisturbed land, not including overstory or tree canopy cover, having similar soils, slope and aspect of the reclaimed area.
  - (3) Disturbances resulting from flow line installations shall be deemed adequately reclaimed when the disturbed area is reasonably capable of supporting the pre-disturbance land use.
  - (4) A Sundry Notice Form 4, has been submitted by the operator which describes the final reclamation procedures, any changes, if applicable, in the landowner's designated final land use, and any mitigation measures associated with final reclamation performed by the operator, and
  - (5) A final reclamation inspection has been completed by the Director, there are no outstanding compliance issues relating to Commission rules, regulations, orders, permit conditions or the act, and the Director has notified the operator that final reclamation has been approved.
- d. Final reclamation of all disturbed areas shall be considered complete when all activities disturbing the ground have been completed, and all disturbed areas have been either built upon, compacted, covered, paved, or otherwise stabilized in such a way as to minimize erosion, or a uniform vegetative cover has been established that reflects pre-disturbance or reference area forbs, shrubs, and grasses with total percent plant cover of at least eighty percent (80%) of pre-disturbance or reference area levels, excluding noxious weeds, or equivalent permanent, physical erosion reduction methods have been employed. Re-seeding alone is not sufficient.
- e. **Weed control.** All areas being reclaimed shall be kept as free as practicable of all undesirable plant species designated to be noxious weeds. Weed control measures shall be conducted in compliance with the Colorado Noxious Weed Act, C.R.S. §35-5.5-115 and

the current rules pertaining to the administration and enforcement of the Colorado Noxious Weed Act. It is recommended that the operator consult with the local weed control agency or other weed control authority when weed infestation occurs. It is the responsibility of the operator to monitor affected and reclaimed lands for noxious weed infestations. If applicable, the Director may require a weed control plan.

**APPENDIX B**

**WELD LABORATORIES, INC. ANALYTICAL REPORT**



# WELD LABORATORIES, INC.

Weld Laboratories, Inc.  
1527 1st Ave.  
Greeley, CO 80631

1527 First Avenue • Greeley, Colorado 80631  
Phone: (970) 353-8118 • Fax: (970) 353-1671  
www.weldlabs.com

**LT Environmental**  
**4600 W 60th Ave**  
**Arvada, CO 80003-6911**

**Date: 2/6/2015**

**Grower's Name: SS01 Aloha Mula 15**  
**Unit: N/A**  
**Field No.: N/A**

**Laboratory No. S15030-69**

<b>Soil Texture</b>	<b>SL</b>
<b>pH</b>	<b>7.1</b>
<b>Salts, mmhos/cm</b>	<b>0.38</b>
<b>Organic Matter, %</b>	<b>1.9</b>

**Crop: Turf**

**Yield goal: N/A**

**Units: N/A**

	<b>ppm</b>	<b>lbs/acre</b>
<b>Nitrate</b>	<b>29.1</b>	<b>105</b>
<b>Phosphorus</b>	<b>81</b>	<b>292</b>
<b>Potassium</b>	<b>575</b>	<b>2070</b>
<b>Calcium</b>	<b>970</b>	<b>3492</b>
<b>Sulfate</b>	<b>14.8</b>	<b>53</b>
<b>Boron</b>		
<b>Zinc</b>	<b>3.04</b>	<b>10.9</b>
<b>Iron</b>		
<b>Manganese</b>		
<b>Copper</b>		
<b>Magnesium</b>		
<b>Sodium</b>		

**Recommendations (units/acre)**

120	#N
0	#P <sub>2</sub> O <sub>5</sub>
0	#K <sub>2</sub> O
	#S
	#B
	#Zn
	#Fe
	#Mn
	#Cu
	#Mg

**APPENDIX C**  
**NRCS SEED MIX RECOMMENDATIONS**



**Grass Seeding: PART I - Planned**

<b>Planner:</b>	Aaron Reynolds			<b>Date:</b>	3-Feb-15	
<b>Producer:</b>	Aloha Mula 15					
<b>MLRA:</b>	Loamy Sand	<b>Contract/Agreement #:</b>			<b>Item Num:</b>	
<b>Seeding Operation:</b>	<b>Acres to be seeded:</b>	3		<b>Cropland:</b>	non-irrigated	
	<b>Seedbed Prep:</b>			<b>Drill Type:</b>	grass	
	<b>Planting Dates:</b>	Nov 1 to May 1		<b>Drill Spacing (in.):</b>	10	
	<b>Planting Depth (in.):</b>	1/4 to 1/2 inch				
<b>Fertilizer:</b>	<b>Pounds per acre recommended</b>			<i>(requires completion of 590 Job Sheet)</i>		
	<b>Nitrogen (N)</b>	<b>Phosphorus (P)</b>	<b>Potassium (K)</b>			
<b>Weed Control:</b>	<b>Dates:</b>			<i>(requires completion of 595 Job Sheet)</i>		
	<b>Description:</b>					
<b>Cover:</b>	<b>Amount:</b>					
	<b>Description:</b>					
	<b>Application Method:</b>					

**Seed Recommendations:**

Species	Variety (table 6: PMTN 59)	PLS Rates Irr/Non-Irr	PLS/Ac to use (100%)	% in mix	Rate (PLS lb/ac)	Acres to be seeded	Total PLS
Sand bluestem	Elida, Woodward, Garden	16.0 / 8.0	16.0	20	3.2	3.0	9.6
Sideoats grama	El Reno, Niner, Vaughn	9.0 / 4.5	9.0	20	1.8	3.0	5.4
Yellow indiangrass	Liano, Cheyenne, Holt	10.0 / 5.0	10.0	20	2.0	3.0	6.0
Prairie sandreed	Goshen	6.5 / 3.5	6.5	20	1.3	3.0	3.9
Switchgrass	Blackwell, NE 28, Pathefinder	4.0 / 2.0	4.0	15	0.6	3.0	1.8
Yellow sweetclover		7.0 / 3.5	7.0	5	0.4	3.0	1.1

**Totals**

52.5

100.0

9.3

3.0

27.8

**Other Seeding  
Information and  
Rates:**

Critical area seeding recommendation per acre, area should have no slopes greater than 3:1, mulched with weed free native grass hay or wheat straw, livestock excluded for 2 years

**Notes:** Use adapted improved varieties and cultivars in the following order of preference, when available:

1. certified name varieties, 2. named varieties, 3. common seed

PLS = Pure Live Seed

Double drilled seeding rate to obtain broadcast seeding rate.

**Certified Planner:** Scott Smith

**Date:** 2/3/2015



**APPENDIX D**  
**COGCC FIELD INSPECTION FORM**



**FORM  
INSP**Rev  
05/11**State of Colorado  
Oil and Gas Conservation Commission**1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109

DE	ET	OE	ES
----	----	----	----

Inspection Date:  
11/20/2014Document Number:  
673501882

Overall Inspection:

**ACTION REQUIRED****FIELD INSPECTION FORM**

Location Identifier	Facility ID	Loc ID	Inspector Name:	On-Site Inspection	2A Doc Num:
	424865	424856	COSTA, RYAN	<input type="checkbox"/>	

**Operator Information:**OGCC Operator Number: 96340Name of Operator: WIEPKING-FULLERTON ENERGY LLCAddress: 4600 S DOWNING STCity: ENGLEWOOD State: CO Zip: 80113

- ☐ THIS IS A FOLLOW UP INSPECTION
- ☒ FOLLOW UP INSPECTION REQUIRED
- ☐ NO FOLLOW UP INSPECTION REQUIRED
- ☐ INSPECTOR REQUESTS FORM 42 WHEN CORRECTIVE ACTIONS ARE COMPLETED

**Contact Information:**

Contact Name	Phone	Email	Comment
Ramos, Martha		martha.ramos@state.co.us	
Boone, Linda	(720) 271-8605	LDBoonePar@aol.com	
Herian, Tim	(316) 655-9200	therian1@cox.net	
Fincham, Jack	(303) 906-3335	fincham4@msn.com	

**Compliance Summary:**QtrQtr: NESE Sec: 19 Twp: 10S Range: 55W

Insp. Date	Doc Num	Insp. Type	Insp Status	Satisfactory /Action Required	PA P/F/I	Pas/Fail (P/F)	Violation (Y/N)
09/17/2013	668601426	DA	DA	ACTION REQUIRED		I	No
08/06/2012	663901465	DA	DA	ACTION REQUIRED		I	No
11/04/2011	663900052	XX	DG	SATISFACTORY			No

**Inspector Comment:****RECLAMATION INSPECTION****Related Facilities:**

Facility ID	Type	Status	Status Date	Well Class	API Num	Facility Name	Insp Status	
424865	WELL	DA	11/07/2011	DA	073-06459	Aloha Mula # 15	DA	<input checked="" type="checkbox"/>

**Equipment:**Location Inventory

Special Purpose Pits: _____	Drilling Pits: <u>1</u>	Wells: <u>1</u>	Production Pits: _____
Condensate Tanks: _____	Water Tanks: _____	Separators: _____	Electric Motors: _____
Gas or Diesel Mortors: _____	Cavity Pumps: _____	LACT Unit: _____	Pump Jacks: <u>1</u>
Electric Generators: _____	Gas Pipeline: _____	Oil Pipeline: <u>1</u>	Water Pipeline: _____
Gas Compressors: _____	VOC Combustor: _____	Oil Tanks: _____	Dehydrator Units: _____
Multi-Well Pits: _____	Pigging Station: _____	Flare: _____	Fuel Tanks: _____

**Location**

Inspector Name: COSTA, RYAN

Emergency Contact Number (S/A/V): \_\_\_\_\_

Corrective Date: \_\_\_\_\_

Comment: \_\_\_\_\_

Corrective Action: \_\_\_\_\_

**Spills:**

Type	Area	Volume	Corrective action	CA Date
------	------	--------	-------------------	---------

☐ Multiple Spills and Releases?

**Venting:**

Yes/No	Comment

**Flaring:**

Type	Satisfactory/Action Required	Comment	Corrective Action	CA Date

**Predrill**

Location ID: 424865

**Site Preparation:**

Lease Road Adeq.: \_\_\_\_\_ Pads: \_\_\_\_\_ Soil Stockpile: \_\_\_\_\_

**S/A/V:** \_\_\_\_\_

Corrective Action: \_\_\_\_\_ Date: \_\_\_\_\_ CDP Num.: \_\_\_\_\_

**Form 2A COAs:**

**S/A/V:** \_\_\_\_\_ **Comment:** \_\_\_\_\_

**CA:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Wildlife BMPs:**

BMP Type	Comment
Storm Water/Erosion Control	<p>BMP Plan</p> <p>Wiepking-Fullerton Energy, L.L.C. 4600 S. Downing St. Englewood, CO 80113 303-789-1798 303-761-9067 (fax)</p> <p>Certification to Discharge Under CDPS General Permit COR-03000 Stormwater Discharges Associated with Construction</p> <p>Certification Number COR 39788</p> <p>Aloha Mula # 15 well T10S, R55W Sec. 19: NE1/4SE1/4 Lincoln County, Colorado</p> <p>Description of Well Site and Construction Area 1-3 acre site with access road for drilling of oil and gas well. Terrain is flat with native grass and sagebrush. No receiving waters will be affected by well pad. Silt fences will be installed on low side site of drill site. Drilling pits closed and reclaimed with the drillsite. Topsoil will be separated and spread on drill site as final operation before reseeding operations which will be completed within 6 months weather permitting. To prevent soil erosion site will be disked and straw crimped in or manure spread.</p> <p>Stormwater Management Plan (SWMP) is on file in Wiepking-Fullerton Energy, L.L.C. office.</p> <p>Spill Prevention, Control and Countermeasure Plan is on file in Wiepking-Fullerton Energy, L.L.C. office.</p>

**S/AV:** \_\_\_\_\_ **Comment:** \_\_\_\_\_

**CA:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Stormwater:**

**Comment:** \_\_\_\_\_

**Staking:**

**On Site Inspection (305):**

**Surface Owner Contact Information:**

Name: \_\_\_\_\_ Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

**Operator Rep. Contact Information:**

Landman Name: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Date Onsite Request Received: \_\_\_\_\_ Date of Rule 306 Consultation: \_\_\_\_\_

Request LGD Attendance: \_\_\_\_\_

**LGD Contact Information:**

Name: \_\_\_\_\_ Phone Number: \_\_\_\_\_ Agreed to Attend: \_\_\_\_\_

**Summary of Landowner Issues:**

--

**Summary of Operator Response to Landowner Issues:**

--

Inspector Name: COSTA, RYAN

Onsite Inspection Memorandum Summarizing Discussions at Inspection as Attachment:

**Facility**

Facility ID: 424865 Type: WELL API Number: 073-06459 Status: DA Insp. Status: DA

**Environmental**

**Spills/Releases:**

Type of Spill: Description: Estimated Spill Volume:

Comment:

Corrective Action: Date:

Reportable: GPS: Lat Long

Proximity to Surface Water: Depth to Ground Water:

**Water Well:**

DWR Receipt Num: Owner Name: GPS : Lat Long

**Field Parameters:**

Sample Location:

Emission Control Burner (ECB):

Comment:

Pilot: Wildlife Protection Devices (fired vessels):

**Reclamation - Storm Water - Pit**

**Interim Reclamation:**

Date Interim Reclamation Started: Date Interim Reclamation Completed:

Land Use: RANGELAND

Comment:

1003a. Debris removed? CM

CA CA Date

Waste Material Onsite? CM

CA CA Date

Unused or unneeded equipment onsite? CM

CA CA Date

Pit, cellars, rat holes and other bores closed? CM

CA CA Date

Guy line anchors removed? CM

CA CA Date

Guy line anchors marked? CM

CA CA Date

1003b. Area no longer in use? Production areas stabilized ?

Inspector Name: COSTA, RYAN

1003c. Compacted areas have been cross ripped? \_\_\_\_\_

1003d. Drilling pit closed? \_\_\_\_\_ Subsidence over on drill pit? \_\_\_\_\_

Cuttings management: \_\_\_\_\_

1003e. Areas no longer needed for drilling or subsequent operations for have been re-vegetated to 80% of pre-existing? \_\_\_\_\_

Production areas have been stabilized? \_\_\_\_\_ Segregated soils have been replaced? \_\_\_\_\_

**RESTORATION AND REVEGETATION**

Cropland

Top soil replaced \_\_\_\_\_ Recontoured \_\_\_\_\_ Perennial forage re-established \_\_\_\_\_

Non-Cropland

Top soil replaced \_\_\_\_\_ Recontoured \_\_\_\_\_ 80% Revegetation \_\_\_\_\_

1003 f. Weeds Noxious weeds? \_\_\_\_\_

Comment: \_\_\_\_\_

Overall Interim Reclamation \_\_\_\_\_

**Final Reclamation/ Abandoned Location:**

Date Final Reclamation Started: \_\_\_\_\_ Date Final Reclamation Completed: \_\_\_\_\_

Final Land Use: RANGELAND

Reminder: \_\_\_\_\_

Comment: \_\_\_\_\_

Well plugged \_\_\_\_\_ Pit mouse/rat holes, cellars backfilled Pass

Debris removed \_\_\_\_\_ No disturbance /Location never built \_\_\_\_\_

Access Roads Regraded \_\_\_\_\_ Contoured \_\_\_\_\_ Culverts removed Pass

Gravel removed Pass

Location and associated production facilities reclaimed Fail Locations, facilities, roads, recontoured Pass

Compaction alleviation \_\_\_\_\_ Dust and erosion control \_\_\_\_\_

Non cropland: Revegetated 80% Fail Cropland: perennial forage \_\_\_\_\_

Weeds present Fail Subsidence Pass

Comment: **The location is predominantly covered with weeds (russian thistle, kochia). The fence around the location is down and needs to be fixed to prevent livestock from entering location. SEE ATTACHED PHOTOS**

Corrective Action: **Provide a reclamation plan to COGCC by the corrective action date. SEE COGCC COMMENTS** Date **02/20/2015**

Overall Final Reclamation Fail Well Release on Active Location ☐ Multi-Well Location ☐

<b><u>Storm Water:</u></b>						
Loc Erosion BMPs	BMP Maintenance	Lease Road Erosion BMPs	Lease BMP Maintenance	Chemical BMPs	Chemical BMP Maintenance	Comment

S/A/V: \_\_\_\_\_ Corrective Date: \_\_\_\_\_

Comment: \_\_\_\_\_

CA: \_\_\_\_\_

**Pits:** ☐ NO SURFACE INDICATION OF PIT

**COGCC Comments**

Comment	User	Date
Establish vegetation with total perennial non-invasive plant cover of at least eighty (80) percent of pre-disturbance or reference area levels. Use a seed mixture that matches the adjacent pastureland or a seed mixture requested by the landowner.	CostaR	12/01/2014
Site does not meet the Final Reclamation rules of 1004. Another final reclamation/bond release inspection will not be conducted by COGCC until a form 4 is sent in for this location with the following attachments; 1. An invoice and/or documentation showing that all work has been completed on the site that directly relates to the actions required on this inspection. 2. Photographs of the vegetation in four cardinal directions as well as one close up of the plant community. 3. Vegetation monitoring information conducted by a vegetation expert showing that the vegetation community meets the 80% standard in the rule. 4. Failure to complete the corrective actions as indicated in a prompt manner may result in enforcement actions.	CostaR	12/01/2014
Fix and maintain the fence around the location. Control weed growth. Reseed the location and stabilize the soils. Continue to monitor and manage this site until Final Reclamation has Passed. Complete reclamation before the next growing season (April 3, 2015).	CostaR	12/01/2014

**Attached Documents**

You can go to COGCC Images (<https://cogcc.state.co.us/weblink/>) and search by document number:

Document Num	Description	URL
673501883	Site Photos	<a href="http://ogccweblink.state.co.us/DownloadDocumentPDF.aspx?DocumentId=3499870">http://ogccweblink.state.co.us/DownloadDocumentPDF.aspx?DocumentId=3499870</a>

## **ACTION REQUIRED**

**ANY ACTION REQUIRED** items listed on this report indicate that the oil and gas facility or the oil and gas operations listed on the report may be in violation of the rules and regulations of the Colorado Oil and Conservation Commission (“COGCC”) and corrective action is required.

There is reasonable cause to believe that a violation of the Oil and Gas Conservation Act, or of any rule, regulation, or order of the Commission, or of any permit issued by the Commission, has occurred. The Operator’s compliance with this Inspection Report is required to resolve these alleged violations. This document requires the Operator to timely respond to the COGCC and to comply with directives as listed by the **Corrective Action Deadline Date**. Failure to do so will result in the issuance of a Notice of Alleged Violation and initiation of enforcement proceedings in which COGCC will seek monetary penalties for the alleged violations pursuant to § 34-60-121, C.R.S. and Rule 523, COGCC Rules of Practice and Procedure, 2 CCR 404-1. (Please note that the COGCC's penalty authority was recently increased to a maximum of \$15,000 per day and penalties are no longer capped at a maximum of \$10,000 per violation.)