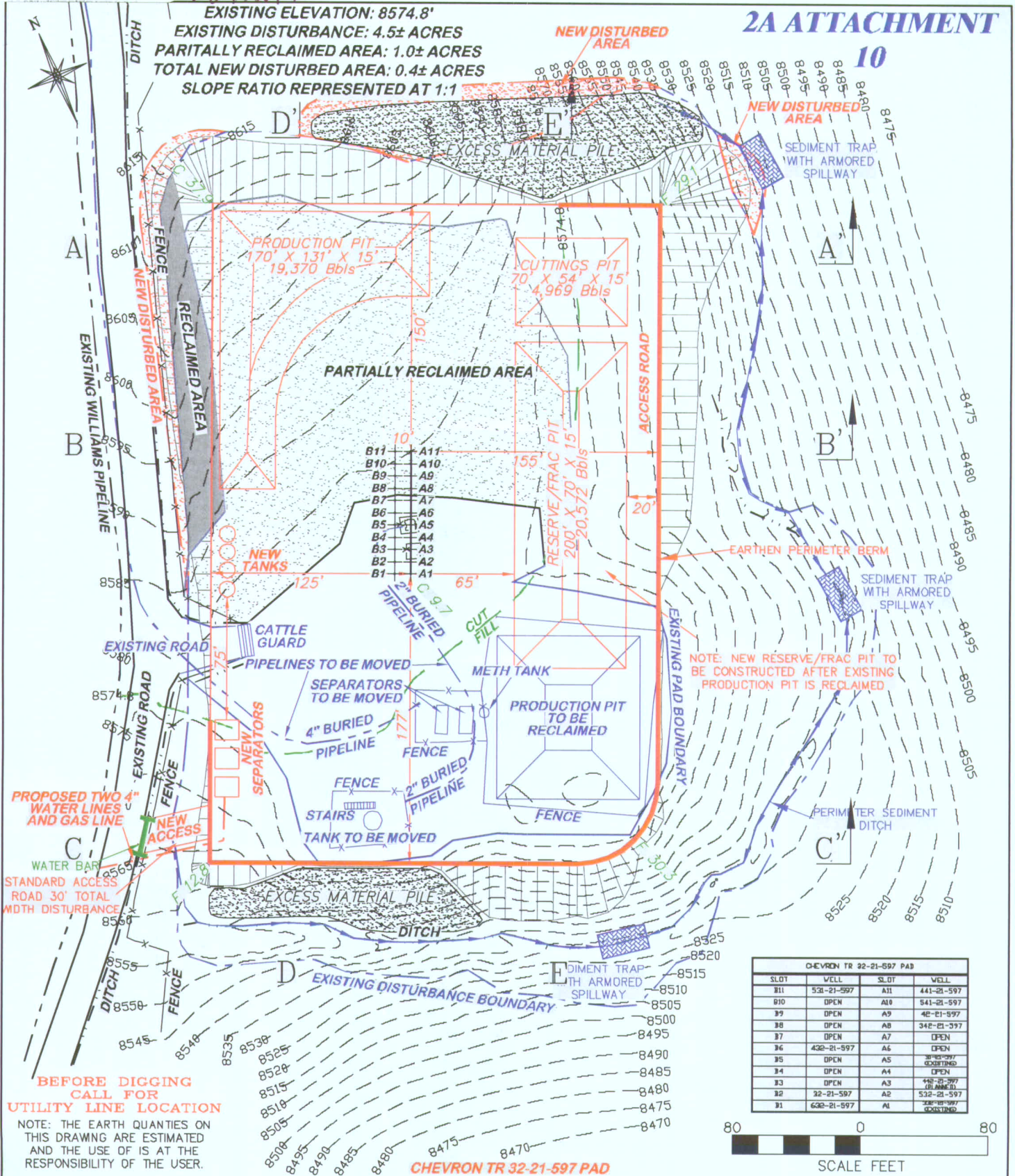




Proposed BMPs
2095275

1 of 8





Site Specific Conditions and Storm Water Management Plan

SITE DESCRIPTION:

Project/Site Name: Chevron TR 32-21-597

Field Name: Trail Ridge

Location: Section 21, Township 5 South, Range 97 West

CDPS Permit #: COR-03A116

CDPS Permit Date: 05/16/06

Site Type: Well Pad

Estimated Disturbance: ~5.2 Acres

SWMP Administrator: Mike Gardner

Inspection Type: 14 day upon construction; 30 day upon interim reclamation

SOIL AND VEGETATION DESCRIPTION:

Soil Types: Parachute-Irigul complex, 5 to 30 percent slopes
Parachute-Irigul-Rhone association, 25 to 50 percent slopes

Soil Erosion Potential: Moderate – Severe (Erodibility 0.50 – 0.75; USDA-NRCS WSS)

Existing Vegetation Description:

Shrubland – sage, serviceberry, oak – with assorted grasses

Pre-Disturbance Vegetative Cover: ~40%

Seed Mix for Interim Reclamation: Chevron BLM Oil Shale Test

Final Stabilization Date: TBD

RECEIVING WATERS

Name of Receiving Waters: Pearl Creek

Distance to Receiving Waters: ~0.12 Miles

Non-Storm Water Discharges: None Anticipated

Description of Potential Pollution Sources: Refer to Trail Ridge Field Wide SWMP

PHASED BMP IMPLEMENTATION*:

BMPs will be installed prior to, during, and immediately following construction as practicable with consideration given to safety, access, and ground conditions at the time of construction. Due to the nature of the topography at the site, any number of BMP combinations may be utilized at any phase of the project. Constant efforts will be employed to limit the extent of vegetative disturbance at the time of soil exposure during all construction activities and structural BMP implementation.

Through all phases of the project native vegetation will be preserved to the extent possible and utilized as a BMP to filter storm water and eliminate the possibility of pollutant laden storm water from reaching live water. As practicable, all topsoil stockpiles will be located as to divert run-on and will be temporary seeded to maintain soil structure, microbial activity, soil fertility, establishment of invasive species and protect from erosion.

For BMP descriptions and installation details, refer to the Trail Ridge Field Wide SWMP and the "Storm Water and 404 Handbook of Best Management Practices (BMPs), January 2006."

Construction Phase:

A perimeter earthen berm will be constructed around the edge of the pad during well pad construction to prevent the potential offsite transport of pollutant laden storm water. A perimeter sediment ditch will be constructed along the outside edge of the well pad to prevent offsite transport of any potential pollutants carried via storm water runoff. Several sediment traps will be implemented along the perimeter sediment ditch on the western and southern regions of the well pad to eliminate sediment transport off location by increasing residence time of the storm water and therefore settling of suspended sediment. All fill slopes will utilize native rock armoring to stabilize the slope and reduce erosion potential during the construction phase. The use of redundant BMPs is employed to alleviate the potential of sediment or other pollutant laden storm water from migrating offsite due to failure of one or more of the sequential BMPs implemented.

Additional structural BMPs will be installed as necessary to ensure site stabilization and to protect surface water quality.

Interim Reclamation Phase:

After the well pad has been constructed, drilling and completions are completed, with production facilities in operation, the site will be graded to reduce cut and fill slopes to minimize the overall size of the well pad. Where practicable, the topsoil stockpile will be spread onto the re-contoured surface. Any remaining topsoil will be seeded to maintain stabilization and continued nutrient cycling. The well pad will be re-seeded upon completed grading activities. Permanent structural BMPs will be installed and maintained as necessary to assist in site stabilization during interim reclamation.

Final Stabilization Phase:

After all wells have been plugged and abandoned, and production facilities are removed, the well pad will be graded to restore pre-disturbance contours. Any remaining topsoil will be spread onto the re-contoured surface. The well pad will be re-seeded upon completed grading activities. Storm water inspections will continue until the site has reached a stabilization level of 70% of pre-disturbance conditions. Once the site reached final stabilization, a post construction storm water management program will be implemented per COGCC Final Amended Rules (December 17, 2008), Rule 1002 (f) (3).

***NOTE:**

This document is intended to serve as a preliminary plan to document proposed stormwater management practices for this project. Any additional/alternative site stabilization and/or reclamation efforts may be employed in reflection of unforeseen site conditions or resource availability, and will be updated into the Trail Ridge Field Wide SWMP per requirements of CDPS Permit COR-03A116, regulated by the Colorado Department of Health and Environment's (CDPHE) General Permit No. COR-03000.

RECEIVED

JAN 29 2010

COGCC

2A ATTACHMENT 10

Proposed BMP's

Williams Production RMT (*Operator #96850*)
Chevron TR 32-21-597 Pad (*Location #335603*)
SWNE Sec 21, T5S-R97W, 6th P.M.

Williams is in the process of working with our surface partner, Chevron, to establish operational guidelines which incorporate measures recommended by the CDOW for protection of Greater Sage Grouse. For all well pads that are located within Greater Sage Grouse RSO lek areas, Williams and Chevron will be entering into a separate Wildlife Mitigation Agreement, which could include additional measures above and beyond those laid forth in the Surface Damage Agreement for protection of Greater Sage Grouse Habitat.

- Maximize the use of directional drilling to minimize habitat loss/fragmentation.
- Phase and concentrate development activities, so that large areas of undisturbed habitat for wildlife remain.
- Maintain undeveloped areas within development boundaries sufficient to allow wildlife to persist within development boundaries during all phases of construction, drilling, and production.
- Minimize rig mobilization and demobilization where practicable by completing or recompleting all wells from a given well pad before moving rigs to a new location.
- To the extent practicable, share and consolidate new corridors for pipeline rights-of-way and roads to minimize surface disturbance.
- Engineer new pipelines to reduce field fitting and reduce excessive right-of-way widths and therefore subsequent reclamation requirements.
- Plan new transportation networks and new oil and gas facilities to minimize surface disturbance and the number and length of oil and gas roads through the utilization of common roads, rights of way, and access points to the extent practicable.
- Post speed limits and caution signs to the extent allowed by surface owners, Federal and state regulations, local government, and land use policies, as appropriate.
- Use remote monitoring of well production to the extent practicable.
- Use wildlife-appropriate fencing where acceptable to the surface owner.
- Install and utilize bear-proof dumpsters and trash receptacles for food-related trash at all facilities that generate such trash.
- Construct habitat improvement projects as practical.
- Commensurate with the language set forth on the Surface Damage Agreement, interim and final reclamation shall be performed as early as practical and to the greatest extent possible.
- Use wildlife appropriate seed mixes wherever allowed by surface owners and regulatory agencies.
- Mow or brushhog vegetation where appropriate, leaving root structure intact, instead of scraping the surface, where allowed by the surface owner.
- Apply an aggressive, integrated, noxious and invasive weed management plan. Utilize an adaptive management strategy that permits effective response(s) to monitored findings and reflects local site geography and conditions. Strip and segregate topsoil prior to construction.

Appropriately configure topsoil piles and seed as immediate as practicable to control erosion, prevent weed establishment and maintain soil microbial activity.

- Perform interim reclamation on all disturbed areas not needed for active support of production operations consistent with applicable timing restrictions and requirements.
- Control weeds in areas surrounding reclamation areas, as reasonable, in order to reduce weed competition.
- Educate employees and contractors about weed issues.
- Maintain pre and post development site inspection records and monitor operations for compliance.
- Utilize GIS technologies to assess the initial and final extent of disturbance and document reclamation progression.
- Ensure that staging, refueling, and chemical storage areas are established outside of riparian zones and floodplains, as appropriate.
- Use minimum practical construction widths for new rights-of-way where pipelines cross riparian areas, streams, and critical habitats where possible.
- Store and stage emergency spill response equipment at strategic locations so that it is available to expedite effective spill response.
- Treat waste water pits and any associated pit containing water that provides a medium for breeding mosquitoes with Bti (*Bacillus thuringiensis v. israelensis*) or other similar products, or take other effective action to control mosquito larvae that may spread West Nile Virus to wildlife, especially grouse.
- Construct fluid pit fences and nets that are capable of withstanding animal pressure and environmental conditions and that are appropriately sized for the wildlife encountered.
- Skim and eliminate oil from produced water ponds and fluid pits at a rate sufficient to prevent oiling of birds or other wildlife that could gain access to the pit and as consistent with COGCC skimming requirements.
- Reclaim reserve pits as quickly as practical after drilling and completions to ensure that pit contents do not offer the possibility of unnecessary environmental liability to the environment or local biota.
- Install and retrofit, as practical, dual pit liners beneath pits which may contain fluids to provide added protection groundwater, riparian and wetland resources in the immediate and adjacent area(s).
- Install and maintain adequate measures to exclude birds and big game from all fluid pits to the greatest extent possible (e.g. fencing, netting, and other appropriate exclusionary measures).
- Perform routine inspections of netting and pit liner systems to ensure proper function and condition for preventative maintenance and incident deterrence.

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