

**CONSTRUCTION OF THE BEEBE, GARY GU A NO. 2WELL PAD  
Supplemental STORM WATER MANAGEMENT PLAN (SWMP)**

15 April 2011

**1.0 SITE AND PROJECT INFORMATION**

Project Name: Beebe, Gary GU A #2

Project Location: The project is located on private lands located in Sec 25;  
T34N, R07W SUL La Plata County, Colorado N.M.P.M.  
Well Head GU A#2: 37°09'33.382" N 107°33'44.538" W

Owner Name and Address: BP America Production Company  
380 Airport Road  
Durango, CO 81301

Facility Contact and Telephone Number: Dan Fauth  
(970) 247-6800

**Project Specifics**

a. Description of the Construction Activity: Construction of a natural gas well pad ~260' x 195' and associated access road 55' in length.

b. Sequence of Major Construction Activities:

- . Access Road Clearing, grading, and construction
- . Well Pad Construction
- . Well Drilling and Completion
- . Interim Pad Reclamation
- . Access Road interim reclamation

c. Estimated Total Area of Site disturbance ~1.32 Acres

d<sub>a</sub>. Estimated Runoff Coefficient, Before and After

<b>Resource:</b>	<b>Before:</b>	<b>After</b>
Pinon Juniper	0.40	0.40/0.75

d<sub>b</sub>. Existing Soil Data:

Soil:	Area:	Erosion:
Arboles Clay	Western ~50% of pad	Moderate
Zyme Clay Loam	Eastern ~50% of pad	High

e. Description of Existing Vegetation and Estimate of Percent Aerial Cover:

Pinon Juniper~80 %

- f. Description of Potential Pollution Sources: 1) Diesel fuel and gasoline for equipment and vehicles; 2) Lubricating oil 3) Drilling mud (bentonite -based viscous fluid); 4) Casing cement.
- g. Description of Anticipated Non-storm water Discharges: None Anticipated
- h. Name of Receiving Water and Type of Outfalls: Irrigation ditches & ephemeral drianages via overland flow

## **2.0 SITE MAPS**

The attached maps (Exhibit C) illustrate the approximate location of the well pad, access road, and pipeline. Construction activities and areas of cut and fill and soil disturbance are limited to the area surveyed for the location. The maps illustrate the features required by the CDPS General Permit for field wide construction activities on fee lands under the field wide permit. There are no point-source outfall structures; runoff enters the receiving watersheds and water bodies by overland flow.

## **3.0 BEST MANAGEMENT PRACTICES FOR STORMWATER POLLUTION PREVENTION**

The Best Management Practices (BMP) to be employed during the construction of this access road, well site and pipeline project are outlined in the field wide Storm Water Management Plan. Specific BMPs to be implemented during the proposed project are described in Exhibit B.

## **4.0 INSPECTION AND MAINTENANCE**

Inspections of the project site and maintenance of BMPs installed shall be conducted in accordance with the CDPHE CDPS permit and the field wide plan.

## **5.0 TERMINATION**

At this time no formal permit termination is necessary as the PHASE II rule under the CDPHE is covered under a field wide permit. Upon final stabilization of the site covered under this supplemental plan, the plan and its associated inspections should be kept for at least three years following the date of final stabilization.

**EXHIBIT A**  
Implementation Responsibility Transfer Log

By signing below, I certify under penalty of law that I understand and am responsible for the maintenance and implementation of the terms and conditions of the general Colorado Discharge Pollutant System (CDPS) permit and measures identified by the above site specific Storm Water Management Plan (SWMP) that may authorize the storm water discharges associated with my activities from the construction site identified in Section 6.0 of this site specific SWMP.

Site Responsibilities:

Name and Title (type or print):\_\_\_\_\_

Signature:\_\_\_\_\_

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

By signing below, I certify under penalty of law that I understand and am responsible for the maintenance and implementation of the terms and conditions of the general Colorado Discharge Pollutant System (CDPS) permit and measures identified by the above site specific Storm Water Management Plan (SWMP) that may authorize the storm water discharges associated with my activities from the construction site identified in Section 6.0 of this site specific SWMP.

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

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Site Responsibilities:

Name and Title (type or print): \_\_\_\_\_

Signature: \_\_\_\_\_

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

**EXHIBIT B**  
Detailed BMPs & BMP Alterations Log

## **BMPs**

### **Identified Implementation Locations:**

#### **1. Access Road Construction**

BMPs: 3, 24, 24, & 40

- Implement wattles where shown on map.
- Install 12" D Steel Line pipe as a culvert where shown on the maps, install wattles as inlet and outlet protection.
- Avoid clearing and leveling ROW to the maximum extent practicable to retain existing vegetation.

#### **2. Drilling Pad Construction (See attached Figure 1)**

BMPs: 2, 14, 24 & 40

- Implement structural best management practices (i.e. wattles) where shown on maps prior to ground disturbing activities.
- Store Top soil as shown on map on abandoned location to the west of the proposed well pad.
- Construct Diversion Dike around top of cut slope to convey water around slopes. Install rip rap rock at outlet on eastern side to reduce velocity and speed of water release.
- Establish sub-base to route surface water as sheet flow off the west edge of location.
- Establish base lift gravel to accommodate level drilling operations and stabilize pad surface.

#### **3. Drilling and Completion Operations**

BMPs: Spill and Contaminated Soil Management

- Fuel, Mud Products, drill cutting spoils, Trailer Septic Tanks, etc. that may contribute to storm water run-off shall be maintained within the graveled well pad area and contained in proper containers and/or sheltered from exposure.
- Any equipment maintenance shall be avoided during drilling and completion—in the event maintenance must occur, it shall be conducted within the graveled pad area, fluids shall be captured within spill proof containers, and absorbent mats shall be utilized beneath maintenance operations.
- Contaminated soil should be collected and disposed of at an appropriate soil farm or similar facility.

#### **4. Interim Pad Reclaim (See attached Figure 2)**

BMPs: 2, 24, & 34

- Reclaim cut/fill slopes to 3:1 or less. Use excess spoil material as initial reclamation of cut slopes.
- Install Rip Rap rock as inlet and outlet protection (D50=6"-) at culvert in access road.
- Trench and bury remaining drill cuttings when material is 95-100% dry.
- Spread top-soil over fill slopes & blend to existing grade areas where sloping meets pre-disturbance grade.
- Reclaim (seed and mulch) fill and cut slopes of access road.
- Repair, replace, or install pad wattles if necessary or as shown.

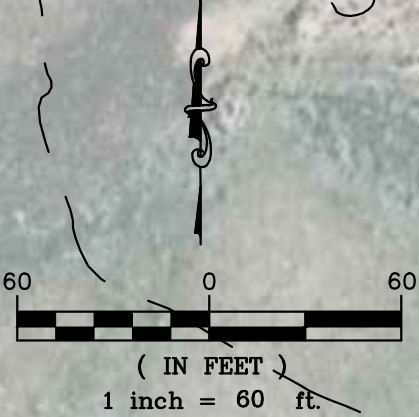
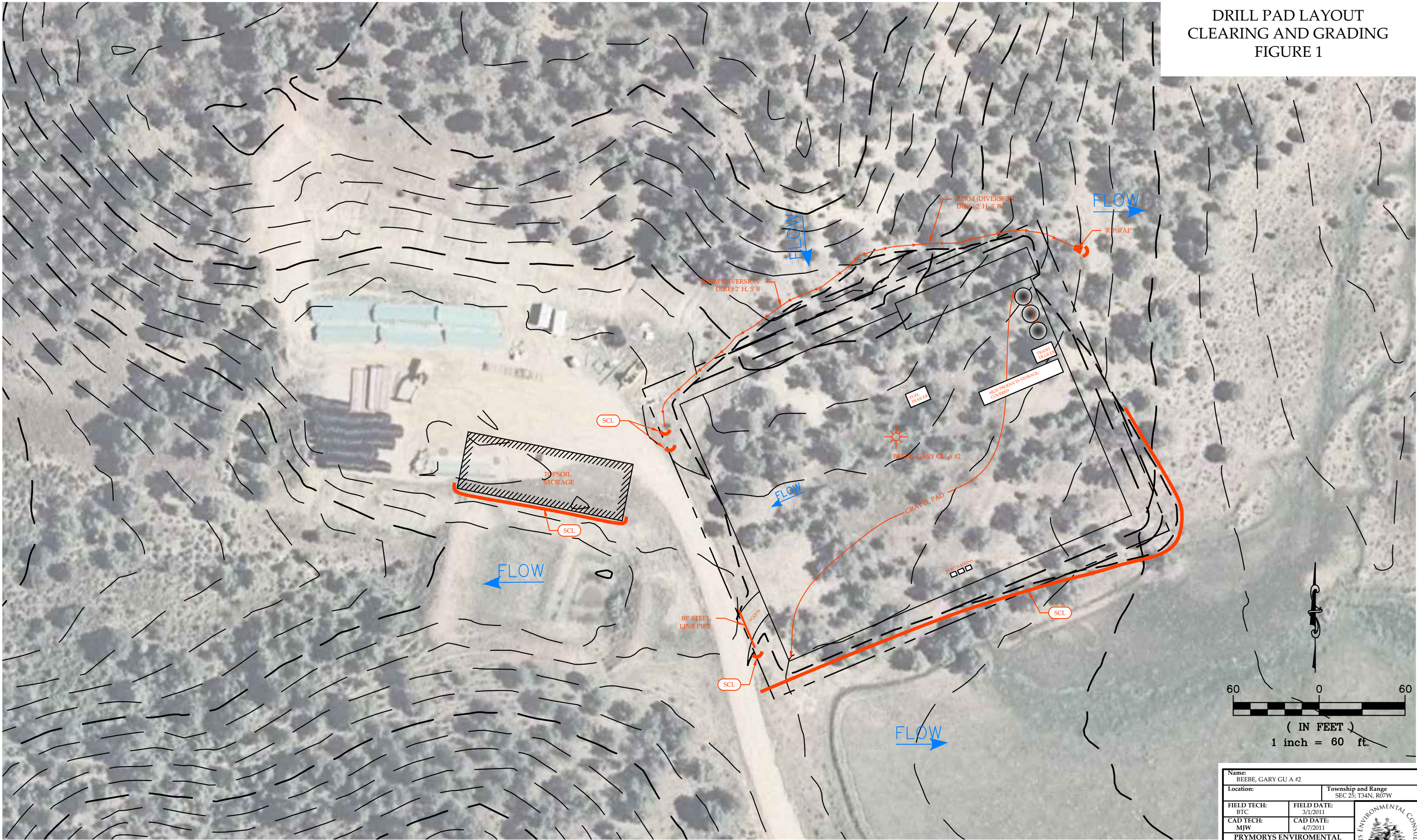
#### **5. Re-seeding & BMP Removal**

- Re-seed as soon as possible following reclamation of pad-provided season and weather permits and cover with 2 tons/acre of weed free straw mulch. Tackify or crimp the mulch to the exposed soil surfaces.


- Cut/Fill Slopes & Top-Soil Storage Area.
- Seed mix should implement an annual cover or triticales.
  - Seed Mixture = G-P
- Upon 70% Re-Vegetation across site, remove wattles and any other temporary erosion and sediment control BMP.

**EXHIBIT C**  
Maps

DRILL PAD LAYOUT  
CLEARING AND GRADING  
FIGURE 1



Legend Limits of Disturbance FLOW Flow Direction Top Soil Storage SCL Sediment Control Log Diversion Ditch

Name: BEEBE, GARY GU A #2			
Location:		Township and Range SEC 25; T34N, R07W	
FIELD TECH: BTC	FIELD DATE: 3/1/2011	PRYMORS ENVIROMENTAL CONSULTING INC. PO BOX 4470 DURANGO, CO 81302	
CAD TECH: MJW	CAD DATE: 4/7/2011		

STORM WATER CONTROL MAP  
INTERIM RECLAIM  
FIGURE 2

