



Proposed BMPs  
2557019 (2A)

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APPENDIX LO 5 Oct 2008 revised 23 March 2010

**EXPANSION OF THE PHILLIPS GUA #1 FOR THE A #3R WELL**  
**Supplemental STORM WATER MANAGEMENT PLAN (SWMP)**  
for small construction activities on private lands (CDPHE)

**1.0 SITE AND PROJECT INFORMATION**

Project Name: BP Durango Phillips GUA #3R; Well Pad Expansion

Project Location: The project is located on private lands located in Sec 33;  
T34N, R09W SUL La Plata County, Colorado N.M.P.M.  
Lat/Long: 37°08'44.088" N 107°49'35.580" 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: Expansion of a well pad for a natural gas well on a 260' x 195'  
level well pad.

b. Sequence of Major  
Construction Activities: . Drilling Pad Expansion  
. Access Road and Pipeline Installation  
. Well Drilling and Completion  
. Interim Pad Reclamation

c. Estimated Total Area  
of Site disturbance ~1.28 Acres

d<sub>a</sub>. Estimated Runoff Coef-  
ficient, Before and After

Resource:	Before:	After:
Level Pad Area	0.75	0.75
Grasslands		0.35

0.35/0.75

Pinon and Juniper 0.40 0.40/0.75

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

Soil:	Area:	Erosion:
Falfa Clay Loam	Entire Pad	Moderate

e. Description of Existing  
Vegetation and Estimate of  
Percent of Ground Cover: Level Pad Area ~5%  
Grasslands ~ 80%  
Pinion Juniper ~70%

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:          | Intermittent stream via Overland Flow  |

## **2.0 SITE MAPS**

The attached maps (Exhibit B) illustrate the approximate location of the well pad. 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 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 A.

## **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.

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**EXHIBIT A**  
Implementation Responsibility Transfer Log

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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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**EXHIBIT B**

Detailed BMPs & BMP Alterations Log

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**BMPs**

**Identified Implementation Locations:**

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

BMPs: 2, 14, 24 & 40

- Implement wattles where shown on map.
- Establish sub-base to route surface water to the south—daylight to natural grade.
- Establish base lift gravel to accommodate level drilling operations and stabilize pad surface.

**2. Access Road and Pipeline Clearing and Grading (See attached Figure 1)**

BMPs: 2, 14, 24 & 40

- Implement wattles where shown on map.
- Implement CMPs where access crosses irrigation ditch (if ditch is to remain in-use following project) and near its south re-entry to the existing access to pass pad run-off.

**3. Drilling and Completion Operations (See attached Figure 1)**

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 east and west fill slopes to 3:1 or less, and north and east cut slopes to 3:1 or less.
- 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.
- Repair or replace drilling pad wattles if necessary.

**4. Finishing Access and Reclamation of Pipeline ROW (See attached Figure 2)**

BMPs: 2, 24, & 34

- Establish non-erosive road base and establish road crown to carry surface water to access borrows.
- Establish SCL (Wattle) in a horseshoe fashion around the entrance and outlet of irrigation ditch CMP.
- Establish crown at a maximum of 1 ft over the trench-way to counteract subsidence.
- Prevent compaction on ROW.

**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.
- Upon 70% Re-Vegetation across site, remove wattles and any other temporary erosion and sediment control BMP.

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**EXHIBIT C**

Maps

# STORM WATER CONTROL MAP-DRILL PAD LAYOUT & ACCESS ROAD CLEARING AND GRADING

Figure 1



NOTES:

1. THIS LAYOUT IS A PRELIMINARY DESIGN. ANY CHANGES TO THE LAYOUT MUST BE APPROVED BY THE CLIENT AND THE ENGINEER.
2. THIS LAYOUT IS BASED ON THE INFORMATION PROVIDED BY THE CLIENT. THE ENGINEER DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED.

Sec 36.1, 36.2, 36.3, 36.4, 36.5, 36.6, 36.7, 36.8, 36.9, 36.10, 36.11, 36.12, 36.13, 36.14, 36.15, 36.16, 36.17, 36.18, 36.19, 36.20, 36.21, 36.22, 36.23, 36.24, 36.25, 36.26, 36.27, 36.28, 36.29, 36.30, 36.31, 36.32, 36.33, 36.34, 36.35, 36.36, 36.37, 36.38, 36.39, 36.40, 36.41, 36.42, 36.43, 36.44, 36.45, 36.46, 36.47, 36.48, 36.49, 36.50, 36.51, 36.52, 36.53, 36.54, 36.55, 36.56, 36.57, 36.58, 36.59, 36.60, 36.61, 36.62, 36.63, 36.64, 36.65, 36.66, 36.67, 36.68, 36.69, 36.70, 36.71, 36.72, 36.73, 36.74, 36.75, 36.76, 36.77, 36.78, 36.79, 36.80, 36.81, 36.82, 36.83, 36.84, 36.85, 36.86, 36.87, 36.88, 36.89, 36.90, 36.91, 36.92, 36.93, 36.94, 36.95, 36.96, 36.97, 36.98, 36.99, 36.100



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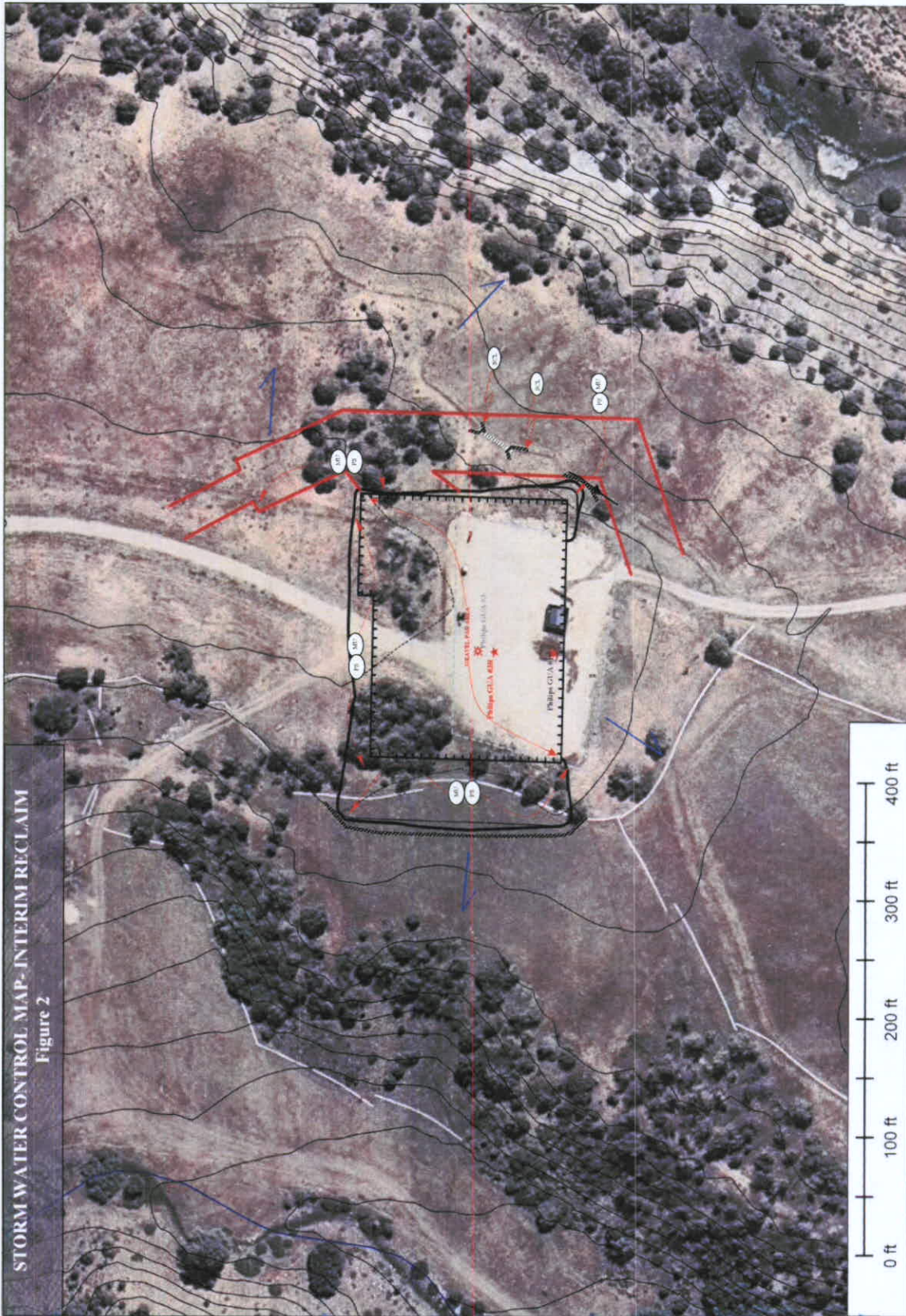
LEGEND
Proposed Well Pad Access
Generalized Water Flow Pattern
Conveyed Metal Pipe (Conduit)
Inversion (Black Dimples)
Sediment Control Log (White)
Limit of Disturbance

5 CMT 2500  
Rev 27 March  
2010

Environmental Consulting, Inc.



**STORM WATER CONTROL MAP-INTERIM RECLAIM**  
**Figure 2**



**NOTES:**  
 1. THIS MAP IS A PRELIMINARY DESIGN. ALL INFORMATION IS FOR INFORMATIONAL PURPOSES ONLY.  
 2. THIS MAP IS NOT TO BE USED FOR ANY OTHER PURPOSES WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.  
 3. THE ENGINEER ASSUMES NO LIABILITY FOR ANY DAMAGE OR INJURY TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS MAP.

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See 33.7 UN ROW  
 33.7 UN ROW  
 (LAWRENCE COUNTY, GA)

**LEGEND**

	Limit of Disturbance
	Sediment Control Log (Wattle)
	Matchline (Stress - 2 hour away)
	Permanent Seeding
	Generalized Water Flow Pattern
	Proposed Well Pad Access

5 MAY 2008  
 10:00 AM  
 2008



**Primoris Environmental Consulting, Inc.**  
 Consulting Engineers & Scientists