

State of Colorado
Oil and Gas Conservation Commission



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#8506

FOR OGCC USE ONLY

RECEIVED
6/25/2014

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): _____

OGCC Employee:

Spill Complaint
 Inspection NOAV

Tracking No:

OGCC Operator Number: <u>10071</u>	Contact Name and Telephone: <u>Scott Ghan</u>
Name of Operator: <u>BILL BARRETT CORPORATION</u>	No: <u>970.876.1959</u>
Address: <u>112 Red Feather Trail</u>	Fax: <u>970.876.0981</u>
City: <u>Silt</u> State: <u>CO</u> Zip: <u>81652</u>	

API Number: <u>436479 (Facility ID)</u>	County: <u>GARFIELD</u>
Facility Name: <u>MDP</u>	Facility Number: <u>4</u>
Well Name: <u>NA</u>	Well Number: <u>415116 (Location ID)</u>
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SENE, SEC 32, T6S, R91W, 6PM</u>	Latitude: <u>39.48656</u> Longitude: <u>-107.56818</u>

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Multi-well pit. Production: Produced

Site Conditions: Is location within a sensitive area (according to Rule 901e)? Y N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Villa Grove-Zoltay loams, 15 to 30 percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Surface water: 292 feet south

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input type="checkbox"/> Soils	<u>Any identified impacts will be detailed in the</u>	<u>Any identified impacts will be detailed in the</u>
<input type="checkbox"/> Vegetation	<u>required Form 19.</u>	<u>required Form 19.</u>
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

REMEDIAL WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):
See attached narrative.

Describe how source is to be removed:
See attached narrative.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:
See attached narrative.



Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

Page 2
REMEDIATION WORKPLAN (Cont.)

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

See attached narrative.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

See attached narrative.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? Y N If yes, describe:

See attached narrative.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

See attached narrative.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: TBD Date Site Investigation Completed: TBD Date Remediation Plan Submitted: 6/25/2014
Remediation Start Date: TBD Anticipated Completion Date: TBD Actual Completion Date: TBD

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Scott Ghan Signed: *Scott Ghan*

Title: Senior Environmental Specialist Date: 6/25/2014

OGCC Approved: _____ Title: _____ Date: _____

MDP / #4 Pit Closure (Form 27)
(Facility ID – 436479)
(Location ID – 415116)

This Form 27 (Site Investigation and Remediation Workplan) was prepared for the purpose of generating a remediation project number in support of pit (Facility ID – 436479) closure efforts on the MDP #4 well pad (Location ID – 415116) in Bill Barrett Corporation's (BBC's) Mamm Creek area of operation in Garfield County.

This document includes a topographic location map illustrating the site location (Figure 1). Project-specific information related to remediation activities, if required, will be provided in the Form 19 (Spill / Release Report) and/or Form 4 (Notification of Completion).

TECHNICAL CONDITIONS

Is location within a sensitive area (according to Rule 901e)?

Yes, based on distance to surface water. There is an intermittent surface water approximately 292 feet south of the site location.

REMEDATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

The following activities have been or will be carried out in support of pit closure activities conducted in support of this project:

- 905.b(2) – All fluids were removed from the pit by February, 2013 and the pit has been out of service since. The fluids were disposed of in one of BBC's injection wells.
- 905.b(3) – The liners are still remain in place and will be cleaned, removed, bailed and sent by a subcontractor to a recycling facility with the appropriate receipts and manifests.
- 905.b(4) – Representative grab samples will be collected from the pit bottom and will be analyzed for compliance with COGCC Table 910-1 concentration levels.
- 905.c – If constituents of concern are detected in excess of Table 910-1 concentration levels and above background concentrations, a Form 19 (Spill/Release Report) will be submitted.

Describe how source is to be removed:

As noted, all water has been removed and disposed of or recycled at an appropriate facility. The liners still remain in place and will be removed and disposed of or recycled at an appropriate facility. If soil impacts exceed Table 910-1 concentration levels, impacted material will be

MDP / #4 Pit Closure (Form 27)
(Facility ID – 436479)
(Location ID – 415116)

evaluated and based on extent would be remediated in-situ or removed using heavy equipment for onsite remediation or offsite disposal at an approved disposal facility documented with appropriate receipts and manifesting. Remediation will be demonstrated through sample collection and laboratory analysis. Any remediation or disposition of remediated material will be provided in a Form 4 (Report of Work Completed or Notification of Completion).

Describe how remediation of existing impact is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

The selected remediation approach will vary based on economic and technical feasibility. In-situ remediation is the preferred approach for most pit closure projects. However, in some situations petroleum impacted material would be removed and remediated onsite or transported offsite to an approved disposal facility. Remediation activities will be verified with sample collection and laboratory analysis conducted in accordance with COGCC Rule 910. The selected remediation approach and final disposition of material, if required will be provided in a Form 4 (Report of Work Completed or Notification of Completion).

If groundwater has been impacted, described proposed monitoring plan(# of wells or sample points, sampling schedule, analytical methods, etc.):

In the event that impacts to groundwater are identified, the vertical and lateral extent would be determined by a third party contractor and an appropriate in-situ remediation and monitoring plan would be prepared and submitted to the COGCC.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeded program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

Upon COGCC authorization of this remediation plan and laboratory sample confirmation, BBC will backfill the former pit. The former pit location will be recontoured and seeded. Because the pit is part of an active well pad and ongoing production activities, the reclaimed area will be managed under BBC's surface management programs such as stormwater and weed management.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing. Is further site investigation required? If yes, describe:

All analytical data collected in support of this remediation project will be provided to the COGCC in a Form 19 (Spill / Release Report) and/or in the Form 4 (Notification of Completion). A site diagram showing the location of collected samples will also be provided.

MDP / #4 Pit Closure (Form 27)

(Facility ID – 436479)

(Location ID – 415116)

Final disposition of E&P waste (land treated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Water was disposed of in one or more of the following injection facilities - GGU Rodreick (Facility 159176); Specialty 13A-28-692 SWD (Facility 159212); Circle B Land 33A-35-692 (Facility 159277); or Scott 41D-36-692 SWD (Facility 159159). The liner was cleaned, bailed and sent to the Holcim/Geocycle recycling facility in Morgan, UT. BBC has waste manifests and certificates of destruction from Holcim/Geocycle to verify appropriate disposition of the liners. Final disposition of any other E&P waste would be detailed in the Form 4 (Notification of Completion) submitted following successful completion of pit closure activities.

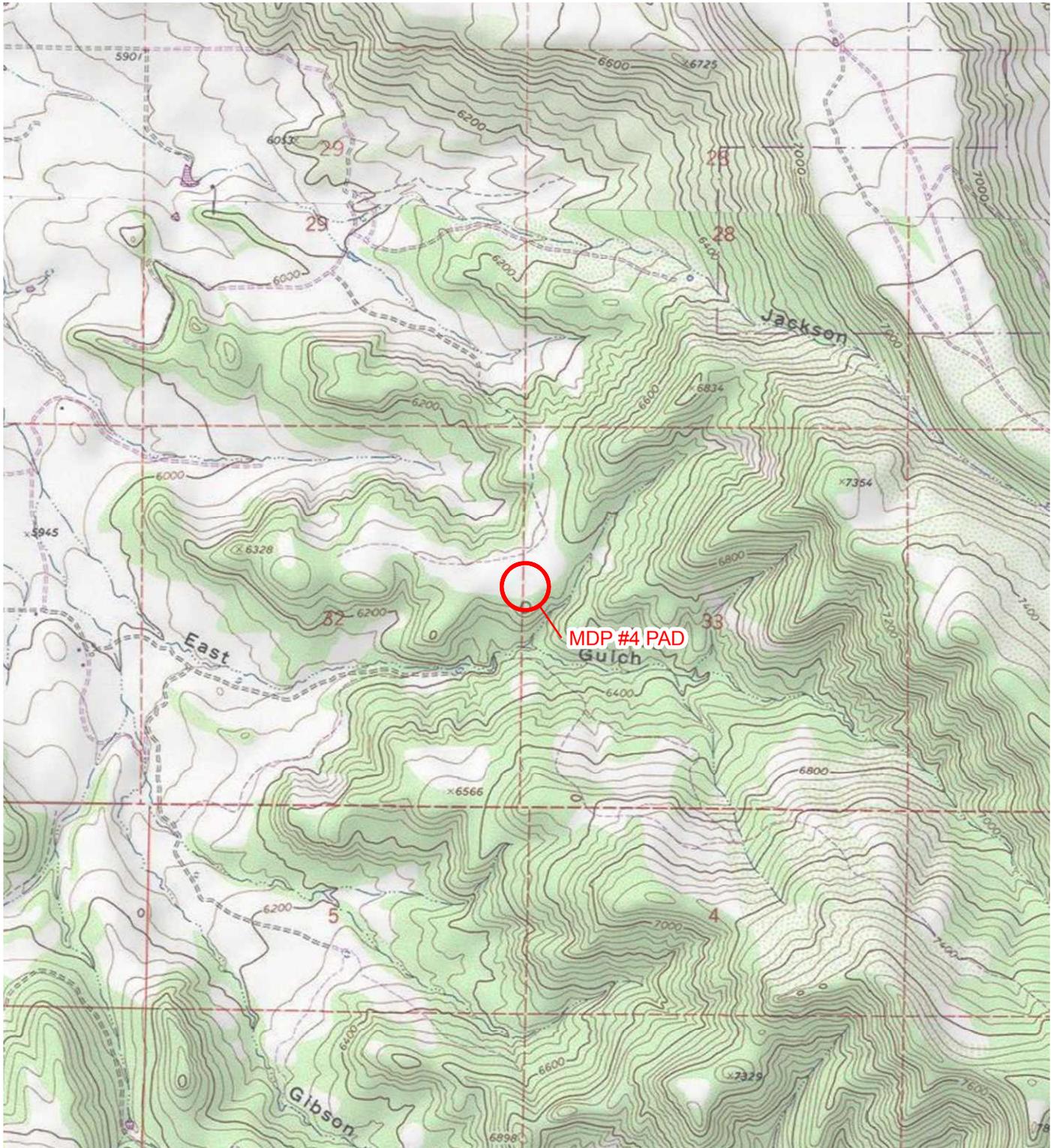


IMAGE COURTESY OF ESRI/USGS

LEGEND

 SITE LOCATION

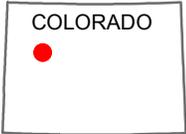
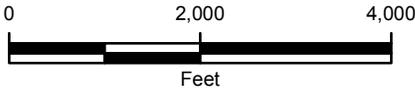


FIGURE 1
SITE LOCATION MAP
MDP #4 PAD
SENE SEC 32-T6S-R91W
GARFIELD COUNTY, COLORADO
BILL BARRETT CORPORATION

