FORM 27 Rev 6/99

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

#6138

FOR OGCC USE ONLY

RECEIVED 7/21/2011

OGCC Employee:
☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV
Tracking No:

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): Lined Earthen Pit Investigation

OGCC Operator Number: 100185
Name of Operator: Encana Oil & Gas (USA) Inc.
Address: 2717 County Road 215, Suite 100
City: Parachute State: CO Zip: 81635

Contact Name and Telephone:
Chris Hines
No: 970.285.2653
Fax: 970.285.2705

API Number: 335800 (Location ID)
County: Garfield
Facility Name: N.PARACHUTE-65S96W (Location Name)
Facility Number: 15NENE (Location Number)
Well Name: A15 (Well Pad)
Well Number: NA
Location: (QtrQtr, Sec, Twp, Rng, Meridian): NENE, Sec 15, T5S-R96W, 6th
Latitude: 39.621576 Longitude: -108.149069

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Produced water was stored in lined pit

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: Rock outcrop - Torriorthents complex, very steep

Potential receptors (water wells within 1/4 mi, surface waters, etc.): see attached

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

Impacted Media (check):	Extent of Impact:	How Determined:
☐ Soils	Unknown - the liner is still in place.	Any identified impacts will be detailed in a Form 19
☐ Vegetation	Pit dimensions were identified in the pit permit	and supplement to this Form 27.
☐ Groundwater	(Form 15) submitted for this location.	
☐ Surface Water		

REMEDIATION WORKPLAN

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

See attached.

Describe how source is to be removed:

See attached.

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.

Submit Page 2 with Page 1

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Page 2

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

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.

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.

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.

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

See attached.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: NA	Date Site Investigation Completed: TBD	Date Remediation Plan Submitted: 05/17/2011
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: Christopher C. Hines Signed:

Title: Environmental Field Coordinator Date: 05/17/2011

OGCC Approved: Title: For Chris Canfield Date: 09/09/2011

FPS NW Region

NARRATIVE ATTACHMENT
FORM 27 (SITE INVESTIGATION AND REMEDIATION WORKPLAN)

A15 Pit Closure (N.PARACHUTE-65S96W / 15NENE)
Document Date – 05/12/2011

TECHNICAL CONDITIONS

Is location within a sensitive area (according to Rule 901e)?
Based on distance to surface water and depth to groundwater, this location is found in a sensitive area.

Potential receptors (water wells within ¼ mi, surface waters, etc.):
According to the COGCC GIS OnLine mapping service, there is one stream (West Fork Parachute Creek), no monitoring wells and no permitted water wells within ¼ mile of the well pad.

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):
This Form 27 is being submitted to initiate the document trail for closure of the lined earthen pit on Encana's A15 well pad. A site diagram and topographic location map were included in the Form 15 submitted for permit of this pit. All activities conducted in support of this pit closure project will be carried out in accordance with COGCC Rules 905, 907, and 909 for conducting a site investigation in support of pit closures.

The following discussion was prepared to present general procedures for Encana's approach to pit closures and any associated remediation and documentation. This form is being submitted prior to the initiation of pit closure activities on this location. All subsequent data gathered in support of this project will be submitted to the COGCC as required in a Form 19 (Spill/Release Report), Notification of Completion, or Form 4 (Sundry Notice), and will reference the COGCC assigned Remediation Project number.

With approval of this Form 27, and in compliance with COGCC rules governing the closure of pits, Encana will initiate the pit closure project with the following activities:

- 905.b(2) & 905.b(4) – All above-liner fluids and solids will be removed from the pit and will be reused or disposed of at a permitted disposal facility under manifest.
- 905.b(3) – Liners will be removed, and reused/recycled or disposed of at a permitted disposal facility under manifest.
- 905.b(4) – Discrete representative samples will be collected from the pit bottom following removal of the pit liner and will be analyzed for compliance with COGCC Table 910-1.
    - One full suite (Table 910-1) discrete sample will be collected from the lowest point in the pit. Additional discrete samples will be collected from the pit bottom, and if necessary pit walls, and analyzed for the organic constituents listed in Table

910-1. The number of additional samples collected will be adequate to represent the size and/or impacts present below the liner.
    - Sample results will be provided to the COGCC in supplementary submission(s) for this remediation project.
- 905.c – In the event that levels of the constituents of concern found below the liner are in excess of Table 910-1 allowable concentrations and above background concentrations, a Form 19 (Spill/Release Report) will be submitted to document the failure of the pit liner and subsequent release of fluids.
    - If below-liner concentrations are above Table 910-1 allowable concentrations, but below background no Form 19 will be submitted. However, a Form 4 (Sundry Notice) will be submitted to document the onsite disposal of material in excess of the allowable concentrations identified in Table 910-1.

Describe how source is to be removed:
Any impacted material identified below the liner would be evaluated upon discovery and depending upon severity would be removed using heavy equipment and remediated onsite, or disposed of offsite at a permitted disposal facility. The effectiveness of excavation efforts and removal of impacts will be verified through sample collection and laboratory analysis conducted in accordance with COGCC Rule 910, and to reflect the procedures described above. These activities would be described in the Notification of Completion for this remediation project.

Any impacts identified below the liner would be documented and reported on a Form 19 (Spill/Release Report).

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.:
In the event that below-liner impacts are identified, a Form 19 would be prepared and submitted to the COGCC, and the following approaches to remediation would be utilized:

- In most cases impacted material would be removed and remediated onsite through blending and natural attenuation, and then returned to the excavation upon successful remediation of impacts. Complete removal of impacted materials and successful remediation of impacts will be demonstrated through sample collection and laboratory analysis.
    - Occasionally due to operational considerations the pit may need to be closed after impacted material has been removed. Excavated material would then need to be remediated and disposed of independently of the pit closure, and any onsite disposal of that material would be carried out in accordance with COGCC Rule 907 and documented on a Form 4 (Sundry Notice)

  - If cuttings are present on location, an effort will be made to utilize the below-grade capacity of the pit and dispose of the cuttings during the pit closure. Any disposal of cuttings in this fashion would be conducted in accordance with Rule 907 and demonstrated through sample collection and laboratory analysis carried out in accordance with Rule 910. Utilization of this disposal option would be identified in the Notification of Completion, and if necessary in a Form 4 (Sundry Notice)
- In the event that groundwater contamination is identified, or the depth of contamination makes removal of impacted material through conventional excavation impractical, the vertical and lateral extent of contamination would be determined by a third party contractor and an appropriate insitu remediation and monitoring plan would be developed and submitted to the COGCC for prior approval.

All remediation activities are verified with sample collection and laboratory analysis, conducted in accordance with COGCC Rule 910, and when necessary under an approved monitoring plan and analytical suite. These activities would be described in the Notification of Completion for this remediation project.

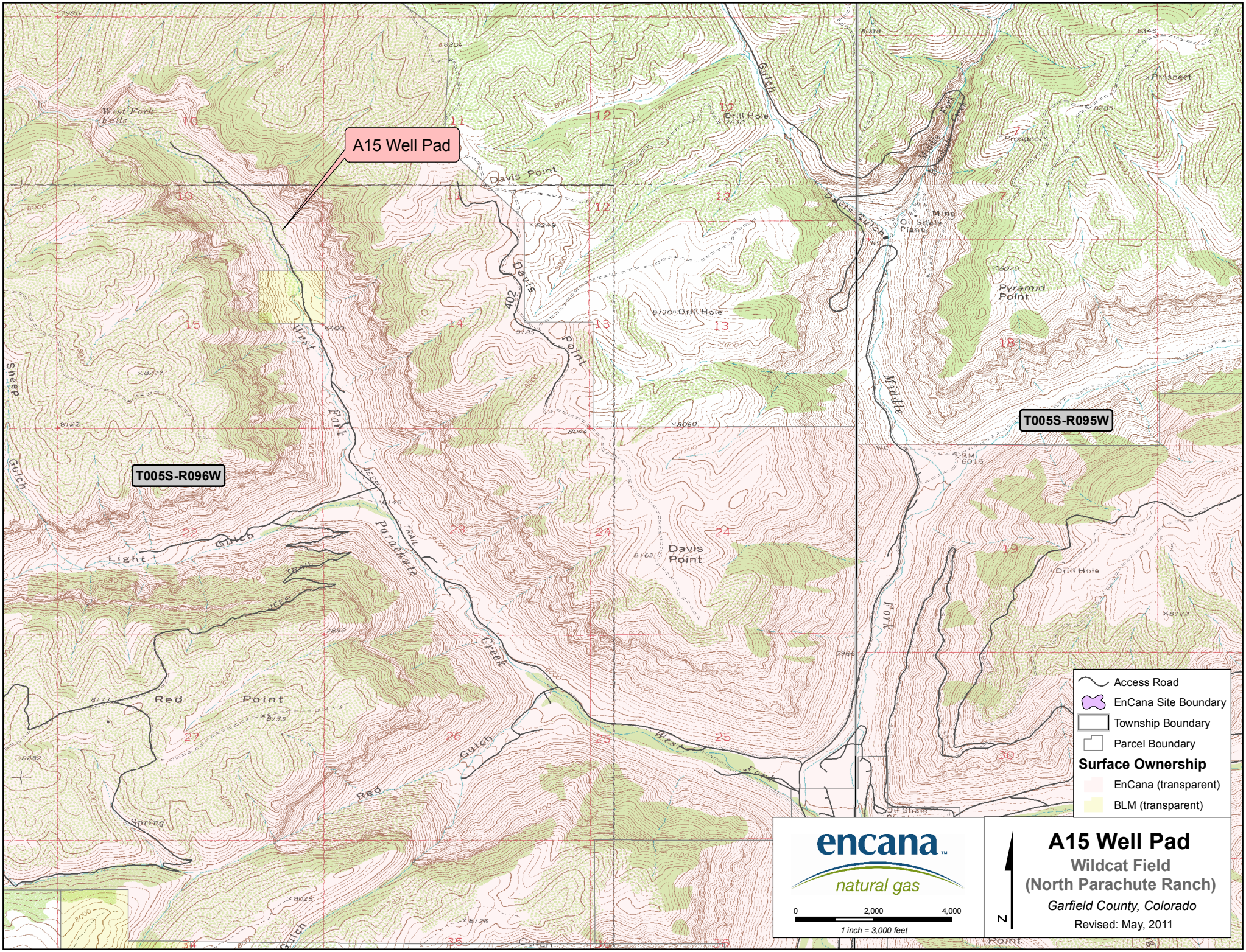
If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):
In the event that impacts to groundwater are identified, a vertical and lateral extent would be determined by a third party contractor and an appropriate insitu remediation and monitoring plan would be prepared and submitted to the COGCC for prior approval.

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.
The footprint for the backfilled pit occurs within the pad boundary for this location. During interim reclamation the backfilled pit may be part of the pad's working surface and/or covered by recontoured and reseeded slopes installed to meet reclamation objectives. Interim and final reclamation activities will be carried out in accordance with COGCC 1000 Series requirements.

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:
The site investigation for this project will be carried out as described above. All analytical data collected in support of this remediation project will be provided to the COGCC in the Notification of Completion. A site diagram showing the location of collected samples will also be provided in the notification of completion.

In the event that groundwater contamination is identified, or the depth of contamination makes removal of impacted material through conventional excavation impractical, the vertical and lateral extent of contamination would be determined by a third party contractor and an appropriate insitu remediation and monitoring plan would be developed and submitted to the COGCC for prior approval.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):
Final onsite disposition of E&P waste would be detailed in the Notification of Completion, and if necessary in a Form 4 (Sundry Notice). Documentation of offsite disposal of E&P waste generated during this project would be kept on record at Encana's Parachute Field Office and would be available upon request.


A15 Well Pad
T005S-R096W
T005S-R095W
Davis Point
Pyramid Point
Red Point
Access Road
EnCana Site Boundary
Township Boundary
Parcel Boundary
Surface Ownership
EnCana (transparent)
BLM (transparent)
encana
natural gas
0
2,000
4,000
1 inch = 3,000 feet
N
A15 Well Pad
Wildcat Field
(North Parachute Ranch)
Garfield County, Colorado
Revised: May, 2011