

# 2015/16 Orphan Site Reclamation Fund Annual Report

BC Oil and Gas Commission



## Table of Contents

About the BC Oil and Gas Commission	2
Introduction to Orphan Site Reclamation Fund	3
OSRF Spending Breakdown	3
Well Decommissioning	4
Facility and Pipeline Decommissioning	4
Site Investigation	5
Site Remediation	6
Site Reclamation	7
General Orphan Expenditures	7
Summary	8
Appendix 1	9

About the

## BC Oil and Gas Commission

The BC Oil and Gas Commission (Commission) is the single window regulatory agency with responsibilities for regulating oil and gas activities in British Columbia, including exploration, development, pipeline transportation and reclamation.

The Commission's core services include reviewing and assessing applications for industry activity, consulting with First Nations, cooperating with partner agencies, and ensuring industry complies with provincial legislation and all regulatory requirements. The public interest is protected by ensuring public safety, respecting those affected by oil and gas activities, conserving the environment and ensuring equitable participation in production.



### Mission

We regulate oil and gas activities for the benefit of British Columbians.

We achieve this by:

- Protecting public safety,
- Respecting those affected by oil and gas activities,
- Conserving the environment, and
- Supporting resource development.

Through the active engagement of our stakeholders and partners, we provide fair and timely decisions within our regulatory framework.

We support opportunities for employee growth, recognize individual and group contributions, demonstrate accountability at all levels, and instill pride and confidence in our organization.

We serve with a passion for excellence.

### Vision

To provide oil and gas regulatory excellence for British Columbia's changing energy future.

### Values

Respectful

Accountable

Effective

Efficient

Responsive

Transparent

## Introduction to Orphan Site Reclamation Fund

In British Columbia oil and gas sites such as wells, facilities, pipelines and/or sites affected by oil and gas activities, where the operator is insolvent or cannot be located, may be designated as an orphan site by the BC Oil and Gas Commission.

Once sites have been designated as orphans, the Commission may use the Orphan Site Reclamation Fund (OSRF) to decommission and restore the site to obtain a Certificate of Restoration (CoR). The CoR provides assurance to stakeholders that the site has been restored in accordance with current standards and requirements, and that all known contamination risks or other hazards have been mitigated.

During the 2015/16 fiscal year, the OSRF spent \$1.2 million on orphan site decommissioning and restoration work. At the end of the fiscal year, the orphan fund balance consisted of \$4.8 million in current assets, with an estimated liability of \$7.0 million for future restoration of designated sites. Total oil and gas levies from the fiscal year was \$1.4 million.

At the beginning of the fiscal year, there were a total of 45 orphan sites, including nine sites that have received CoRs and two designated Flathead Valley wells. Since the preparation of the 2014/2015 annual report, four sites were designated.

## OSRF Spending Breakdown

Work on orphan sites is completed under five main categories, and general orphan expenditures. Spending in the 2015/16 fiscal year has been broken down by costs associated with each category below:

Well Decommissioning	\$328,360
Facility and/or Pipeline Decommissioning	\$82,900
Site Investigation	\$409,500
Site Remediation	\$197,600
Site Reclamation	\$135,400
General Orphan Expenditures	\$28,800

## Well Decommissioning

Orphan sites that have not been properly decommissioned require plugging, as well as cut and cap activities, as part of the closure process. Well decommissioning activities include the permanent plugging of the producing zone(s) within a well to prevent production fluid and gasses from travelling up the wellbore to the surface. Well decommissioning activities may also include repairing well integrity issues, such as surface casing vent flow and gas migration.

Three wells (a-075-F/094-A-14, b-070-L/094-P-04 and d-071-I/094-P-03) were plugged and decommissioned during the fiscal year. At the end of the 2015/2016 fiscal year, there were four remaining wells that require plugging.



b-070-L/094-P-03 Well was plugged and capped in February 2016.

## Facility and Pipeline Decommissioning

Orphan sites with permitted surface and subsurface facilities require the safe removal and disposal of such facilities prior to completing any intrusive soil and groundwater quality assessments. Decommissioning activities also include the removal of all facility flow lines, piles, concrete and debris on site. Pipelines require proper purging before being removed to the site's boundary and are cut and capped below grade.

Three sites had facilities and/or pipelines decommissioned during this fiscal year: a-075-F/094-A-14, b-070-L/094-P-04 and d-071-I/094-P-03 and one orphan pipeline. At the end of the 2015/2016 fiscal year there were three sites that required surface facility and/or pipeline decommissioning.



a-075-F/094-A-14 Site equipment and associated pipeline were decommissioned in November 2015.



## Site Investigation

A site investigation is required as part of the issuance of CoR. The CoR process is divided into two parts. Part I is the soil and groundwater investigation and, if required, site remediation to confirm that the soil and/or groundwater quality is suitable for final land use. Site remediation may also confirm that the site does not pose a significant risk to human health or the environment. Investigation at each site is subject to areas of potential environmental concern that are identified during a historical file review. Results of the investigation determine if the site is suitable for closure or if remediation is required.

File reviews were completed on two sites to support a Cor Part I site investigation (06-24-085-17 and a-079-A/094-P-04). Site investigations were completed at the following sites:



a-041-D/ 094-A-15 Site investigation completed in July 2015.

Site Location	Result of Investigation
d-054-F/094-A-14	Investigation identified contamination in soil requiring remediation before the site would be considered suitable for a CoR Part I.
a-075-F/094-A-14	Investigation determined that the site was suitable for CoR Part I.
a-041-D/094-A-15	Investigation identified contamination in soil requiring remediation.
b-070-L/094-P-03	Investigation identified contamination in soil and groundwater requiring further investigation to determine if remediation or risk assessment would be required to ensure the site was suitable for a CoR Part I.
d-071-I/094-P-04	Investigation identified contamination in soil and groundwater requiring further investigation to determine if remediation or risk assessment would be required to ensure the site was suitable for a CoR Part I.
16-03-086-14	Investigation identified that further investigation was required to ensure the site was suitable for a CoR Part I.
09-03-086-14	Investigation identified that further investigation was required to ensure the site was suitable for a CoR Part I.

## Site Remediation

If a site investigation identifies contamination, then remediation is required prior to the application and acceptance of a CoR Part I. Remediation may include the excavation, transport and subsequent disposal of contaminated soil at a licensed facility, or treatment of the soil and subsequent use as backfill for the excavation (concentrations of contaminants of concern are less than the applicable provincial standards).

Remediation was completed at b-008-K/094-I-12 where contamination was identified in a previous site investigation. Contaminated soils were excavated and transported to an oilfield waste disposal facility and final confirmatory sampling indicated that the site contamination risks had been removed. A CoR Part I application was submitted for this site following the completion of the remediation.



b-008-K/094-1-12 Site remediation completed in January 2016.



Surface re-contouring of b-008-K/094-I-12 as part of initial reclamation.

## Site Reclamation

Part II of the CoR process is to ensure the land has been properly reclaimed so it meets appropriate land use productivity standards. Surface reclamation commonly includes surface contouring, topsoil replacement, re-vegetation, and monitoring to return the site to pre-disturbance conditions.

While no orphan sites received a CoR Part II in the 2015/2016 fiscal year two sites had CoR Part II applications submitted before the end of the fiscal (05-21-085-15, d-071-D/094-P-12) and have since received CoRs. Several were undergoing reclamation monitoring and should be ready for a CoR Part II in the 2016/2017 fiscal year. Site reclamation, including site contouring, was completed at the b-008-K/094-I-12 site following remediation.

## General Orphan Expenditures

The OSRF is also responsible for managing orphaned pipelines through the BC One Call system. All orphaned pipelines are registered with BC One call following designations and the Commission responds to calls regarding ground disturbance near orphaned pipelines. For work that is identified to be within proximity to orphan pipelines, the Commission will pay to have the pipelines marked out for the proponent(s) as per the membership responsibilities to BC One Call. Other general expenditures may include Commission expenses for the management of designated orphan sites which may include, but are not limited to, signage as per Section 15(1) of the *Drilling and Production Regulation* and site visits.

## Summary

At the end of the 2015/2016 fiscal year three sites were ready for a CoR Part I and three sites were suitable for CoR Part II's, while one additional site required no additional work. Going into the 2016/2017 fiscal year the OSRF will have outstanding work on 32 sites in the following categories:

- Well and facility decommissioning – four sites
- File review – three sites
- Site investigation – five sites
- Supplemental site investigation and data collection – four sites
- Remediation – two sites
- Reclamation – five sites
- Reclamation monitoring (including weed control) – seven sites



## More Information

For specific questions or enquiries regarding this document or the OSRF please contact [ogc.communications@bcogc.ca](mailto:ogc.communications@bcogc.ca). For general information about the Commission, please visit [www.bcogc.ca](http://www.bcogc.ca) or phone 250-794-5200.



## Appendix 1

Table 1: Designated Orphan Sites

Orphan Site Name and Location	Permit #	Site Status and Scope of Work	Orphan Site Name and Location	Permit #	Site Status and Scope of Work
ORPHAN POCKETKNIFE d-033-I/094-G-06	1393	Requires a file review	ORPHAN W. BEATTON b-041-L/094-H-02	6691	No work scheduled. Requires site investigation
ORPHAN WOLF d-014-G/094-A-15	2062	CoR issued in 2011, no further work required	ORPHAN W. BEATTON d-041-L/094-H-02	6727	No work scheduled. Requires site investigation
ORPHAN SUNRISE 10-08-079-16 W6M	2538	CoR issued in 2013, no further work required	ORPHAN E. RIGEL b-028-K/094-A-09	6870	Reclamation monitoring
ORPHAN SUNRISE 11-06-079-16 W6M	2560	Reclamation monitoring	ORPHAN GRASSEY b-A095-D/094-G-07	7465	CoR issued in 2013, no further work required
ORPHAN SUNRISE 11-09-79-16 W6M	2564	CoR issued in 2010, no further work required	ORPHAN FLATROCK 06-24-085-17	7683	File review
ORPHAN SUNRISE 11-04-079-16 W6M	2569	CoR issued in 2011, no further work required	ORPHAN RIGEL d-027-J/094-a-10	8475	No work scheduled. Requires decommissioning
ORPHAN SUNRISE 07-12-079-17 W6M	2772	CoR issued in 2010, no further work required	ORPHAN PARADISE 05-21-085-15	9361	Reclamation monitoring
ORPHAN SUNRISE A11-06-079-16 W6M	2878	Reclamation monitoring	ORPHAN RIGEL 02-29-088-17 (includes FAC#7668 and P#7624)	9452	No work scheduled. Requires decommissioning
ORPHAN SEXTET c-022-K/094-I-12	2884	No scheduled work. Requires reclamation	ORPHAN ELLEH c-008-K/094-I-12	9702	No work scheduled. Requires further investigation and reclamation
ORPHAN SUNRISE 06-07-079-16 W6M	2983	CoR issued in 2011, no further work required	ORPHAN RIGEL 08-29-088-17 (includes FAC#3272)	10504	No work scheduled. Requires decommissioning
ORPHAN SUNRISE 10-05-079-16 W6M	2998	CoR issued in 2010, no further work required	ORPHAN RIGEL 07-30-088-17	11057	No work scheduled. Requires file review
ORPHAN SUNRISE 11-02-079-17 W6M	3360	CoR issued in 2011, no further work required	ORPHAN COMOX c-042-I/092-F-11	14607	Reclamation monitoring
ORPHAN N. BUICK d-054-F/094-A-14	3995	Site investigation	ORPHAN TH QUESNEL N. a-00-A/093-G-01	15594	No work scheduled. Requires file review
ORPHAN N. BUICK a-075-F/094-A-15	4121	Decommissioning and site investigation	ORPHAN DILLY b-040-K/094-P-12	20506	Site reclamation
ORPHAN ELLA b-008-K/094-I-12	4343	Site remediation	ORPHAN TSEA d-071-D/094-P-12	20522	Reclamation monitoring
ORPHAN BUICK a-041-D/094-A-15	4446	Further investigation	ORPHAN CRUSH d-B096-C/094-A-16	20629	No work scheduled. Requires reclamation
ORPHAN LOUSIE b-070-L/094-P-03	4799	Requires decommissioning and site investigation	ORPHAN CURRANT d-A056-C/094-A-16	20634	Reclamation monitoring
ORPHAN LOUISE d-071-I/04-P-04	5156	Requires decommissioning and site investigation	ORPHAN PETITOT a-002-D/094-P-13	21051	Site reclamation
ORPHAN WENDY c-073-G/094-H-06	5625	No work scheduled. Requires site investigation	ORPHAN DRAKE c-A088-K/094-H-01	22305	No work scheduled. Requires reclamation
ORPHAN BOUNDARY 08-17-084-13	5712	No work scheduled. Requires site investigation	ORPHAN GUNNEL a-079-A/094-P-04	23749	File review
ORPHAN BOUNDARY 16-03-086-14	6325	Site investigation	PIPELINE FROM b-050-C/094-A-14 to d-037-C/094-A-14	P# 2790	Pipeline abandonment
ORPHAN BOUNDARY 09-03-086-14 W6	6651	Site investigation	FLATHEAD VALLEY SITES	Not Applicable	No work scheduled. Risk management planning

