Orphan Well Association: Dealing with Oil and Gas Orphans in Alberta

SPE - Calgary Section Luncheon
Bow Valley Club, Lecky Room
3rd Floor, 250 – 6 Ave SW, Calgary AB
June 20, 2017
Orphan Well Association

Overview

1. Orphan Well Association
   - Background, funding, expenditures

2. Challenges
   - Growing orphan inventory

3. Opportunities
   - Additional funding

4. Summary
Is this an orphan well?

Canadian Industrial Gas Limited
00/07-35-055-25W4/0
Is this an orphan well?

Tallgrass Energy Corp 02/13-23-040-12W4
What is an orphan?

Orphan properties can be wells, pipeline segments, facilities or associated sites.

The AER has committed to first investigating potential orphan properties for legally responsible and/or financially viable parties before it designates a property as an orphan.

The Orphan Well Association requires the AER to designate a property as an orphan (which gives the OWA the proper legal authority) before it can work on an orphan property.
1. **Orphan Well Association**

- The Orphan Well Association, OWA is a **non-profit organization**.
- Our funding comes from the upstream oil and gas industry.
- We operate under the **delegated authority** of the provincial government.
  - Provincial legislation: Orphan Fund Delegated Administration Regulation AR45/2001. OWA is a DAO, Delegated Administration Organization, similar to the *Alberta Beverage Container Recycling Corporation*.
  - We operate financially and legally separate from the AER.
  - We sublease office space and computer services from AER.
Our mandate is to manage the abandonment of Alberta upstream oil and gas orphan wells, pipelines and facilities and the reclamation of their associated orphan sites.
Funding

- Our funding comes from an annual Orphan Fund levy issued by the AER to the upstream oil and gas industry.
- Each company pays its proportionate share of industry’s total deemed liability.
- Annual Levy
  
<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$12 M</td>
</tr>
<tr>
<td>2013</td>
<td>$15 M</td>
</tr>
<tr>
<td>2014</td>
<td>$15 M</td>
</tr>
<tr>
<td>2015</td>
<td>$30 M</td>
</tr>
<tr>
<td>2016</td>
<td>$30 M</td>
</tr>
<tr>
<td>2017</td>
<td>$30 M</td>
</tr>
</tbody>
</table>
Funding

Graph showing funding levels from 2008/09 to 2016/17:
- GoA Grant Funding
- Interest + Other
- FTL and BDT Fees
- Orphan Fund Levy

Thousands of dollars on the y-axis, years on the x-axis.
Expenditures

- Well Abandonment
- Facility Decommissioning
- Pipeline Abandonment
- Site Reclamation
- AER Enf Activities/WIP

Thousands of Dollars

Years: 08/09 to 16/17
Expenditures - Well Abandonments

Sunrise Energy Ltd   00/01-17-011-05W4/0
### Well Abandonment Count

#### Fiscal Year

<table>
<thead>
<tr>
<th>Fiscal Year (Apr 1 to Mar 31)</th>
<th>Prior Years</th>
<th>08/09</th>
<th>09/10</th>
<th>10/11</th>
<th>11/12</th>
<th>12/13</th>
<th>13/14</th>
<th>14/15</th>
<th>15/16</th>
<th>16/17</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Abd OWA</td>
<td>406</td>
<td>5</td>
<td>7</td>
<td>17</td>
<td>8</td>
<td>14</td>
<td>18</td>
<td>43</td>
<td>185</td>
<td>232</td>
<td>935</td>
</tr>
<tr>
<td>Well Abd ENF</td>
<td>139</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>27</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td>186</td>
</tr>
<tr>
<td>Well Abd Count</td>
<td>545</td>
<td>5</td>
<td>7</td>
<td>17</td>
<td>9</td>
<td>23</td>
<td>45</td>
<td>51</td>
<td>187</td>
<td>232</td>
<td>1121</td>
</tr>
</tbody>
</table>
Expenditures

Pipeline Abandonments

Facility Decommissioning
Expenditures - Site Reclamation

Before

After
**Expenditures - Rec Certificates Received**

<table>
<thead>
<tr>
<th>Fiscal Year (Apr 1 to Mar 31)</th>
<th>Prior Years</th>
<th>08/09</th>
<th>09/10</th>
<th>10/11</th>
<th>11/12</th>
<th>12/13</th>
<th>13/14</th>
<th>14/15</th>
<th>15/16</th>
<th>16/17</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sites RC Received</td>
<td>180</td>
<td>29</td>
<td>44</td>
<td>55</td>
<td>35</td>
<td>33</td>
<td>32</td>
<td>36</td>
<td>9</td>
<td>150</td>
<td>603</td>
</tr>
<tr>
<td>Sites Handled</td>
<td>52</td>
<td>16</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>92</td>
</tr>
<tr>
<td>Site Reclamation Closure Count</td>
<td>232</td>
<td>45</td>
<td>48</td>
<td>55</td>
<td>41</td>
<td>35</td>
<td>33</td>
<td>37</td>
<td>10</td>
<td>159</td>
<td>695</td>
</tr>
</tbody>
</table>
More Information www.orphanwell.ca

Alberta Oil and Gas Orphan Abandonment and Reclamation Association

Welcome to the Orphan Well Association

The Orphan Well Association or OWA is a non-profit organization unique in the province of Alberta.

Our mandate is to manage the abandonment of upstream oil and gas orphan wells, pipelines, facilities and the remediation and reclamation of their associated sites.

Phone Toll free during office hours 310-0000, ask for AER switchboard (403) 297-8311, then ask for the Orphan Well Association
Phone: (403) 297-6416
Fax: (403) 297-8981

24 Hour Emergency Phone: 1-844-440-0144

Mailing Address
1000, 250 - 5th Street SW
Calgary, AB T2P 0R4

Associated Links

- AER - Alberta Energy Regulator
- AEP - Alberta Environment and Parks
- CAPP - Canadian Association of Petroleum Producers
- EPAC - Explorers and Producers Association of Canada
- SRB - Alberta Surface Rights Board
- CLRA - Canadian Land Reclamation Association
- PRAO - Property Rights Advocate Office, Alberta

Before vs. After

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Logo and site design by Texas Highway Dog
2. Challenges
## Increasing Orphan Inventory

<table>
<thead>
<tr>
<th>Count as of Mar 31</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wells</td>
<td>74</td>
<td>162</td>
<td>705</td>
<td>768</td>
<td>1391 (1088 Lexin)</td>
</tr>
<tr>
<td>Facilities</td>
<td>N.A.</td>
<td>13</td>
<td>53</td>
<td>67</td>
<td>154</td>
</tr>
<tr>
<td>Pipelines</td>
<td>N.A.</td>
<td>121</td>
<td>730</td>
<td>856</td>
<td>1721</td>
</tr>
<tr>
<td>Sites</td>
<td>387</td>
<td>416</td>
<td>451</td>
<td>760</td>
<td>683</td>
</tr>
</tbody>
</table>

Cost estimate to address existing orphan inventory is just under half a billion dollars.
Map of Orphan Wells and Sites

LEGEND
- Wells to be abandoned
- Wells for suspension
- Sites to be reclaimed

March 2017
New Challenges

- Pressure to work cost effectively, need to work safely,
- Higher risk inventory with sour wells and pipelines, and aging infrastructure,
- Dealing with landowners blocking access,
- Increasing theft and vandalism on orphan properties,
- Handling orphan wells capable of production,
- Abandoning orphan pipelines tied into operating wells,
- Increasing legal activity: Receiverships, Redwater and Lexin,
- Dealing with media,
- Emergency Response.
Tallgrass Energy Corp.  00/07-27-040-12W4/0

July 29, 2015

May 18, 2016
Lexin Resources Ltd.
(1125 wells for suspension)

16-08-018-29W4 (1.21% H₂S)
16-20-020-27W4 (15.29% H₂S)
11-24-022-29W4 (34.74% H₂S)
Taking Orphans (acquiring an orphan well)

- The OWA is given the authority to abandon and reclaim orphan wells and does not become the licensee of orphan wells.
- This means that the orphan well license stays in the name of the defunct licensee, so the OWA does not have the ability to 'sell' orphan wells.
- A company can apply to the AER to transfer orphan well, facility and pipeline licenses from the defunct licensee to itself.
- This process is called a Regulator Directed Transfer or RDT.
Process to Acquire an Orphan Well
Regulator Directed Transfer or RDT

Interested Party in taking an orphan well MUST

Obtain Mineral Rights Agreement from the Crown/Freehold/Lessee of an active mineral rights agreement

Obtain Surface Lease with Landowner/Crown

Interested Party (now Applicant) applies to AER for an RDT to transfer orphan well/pipeline/facility license to itself and notifies the OWA to stop the abandonment

Applicant MUST qualify for an RDT with AER by:
- Obtaining mineral tenure to orphan well zone of interest
- Obtaining surface lease to access orphan well of interest
- Being a qualified licensee to hold well licenses with AER
- Being in compliance with AER requirements
- Meeting AER well license transfer requirements

AER reviews, decides, transfers orphan licenses to Applicant (now Licensee) and notifies OWA to remove orphans from inventory

Licensee applies to Crown for approval to use a vested orphan wellbore (owned by the Crown) or Licensee negotiates with defunct operator/owner for wellbore

Licensee can produce orphan
May 18, 2017

- Alberta Premier Rachel Notley with Minister of Energy Margaret McCuaig-Boyd announced $235 million of surge funding to the energy industry to accelerate the cleanup of orphan properties.

- The loan will be paid back over ten years by industry using the existing orphan levy paid by industry.

- The plan is to use the $30 million announced by the federal government to cover the interest costs of the loan.
### 3. Opportunities

<table>
<thead>
<tr>
<th></th>
<th>Draft 2017/18</th>
<th>Draft 2018/19</th>
<th>Draft 2019/20</th>
<th>Three Year Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orphan Fund Levy through the AER</td>
<td>30,000</td>
<td>45,000</td>
<td>60,000</td>
<td>135,000</td>
</tr>
<tr>
<td>GoA Borrowed Surge Funding</td>
<td>50,000</td>
<td>100,000</td>
<td>85,000</td>
<td>235,000</td>
</tr>
<tr>
<td>Revenue (thousands of dollars)</td>
<td>80,000</td>
<td>145,000</td>
<td>145,000</td>
<td>370,000</td>
</tr>
</tbody>
</table>
3. Opportunities

- This new funding will allow the OWA to significantly address over three years, the abandonment of its existing well, pipeline and facility inventory.
- This funding will also allow OWA to move forward on reclamation work (especially remediation) previously on hold.
3. **Opportunities**

- Funding will provide an opportunity to put Albertans back to work in the oilfield service and environmental sectors.
Opportunities to deal with orphans

- **Prioritize**
  - Public health and safety and environmental impacts.
  - Stakeholder (landowners) and regulatory concerns.
  - Chronological - backlog.

- **Efficiencies**
  - Working in projects by area.
  - Obtaining competitive pricing.

- **Learnings**
  - Learnings from dealing with a higher volume of problem wells and sites.
  - Applying new technologies.
4. Summary

Challenges

- Rapid growth in orphan inventory due to energy industry insolvencies from low commodity pricing.
- Changes in orphan inventory, with higher risk orphans and more complicated scenarios, such as Lexin insolvency.

Opportunities

- Alberta provincial loan to industry of $235M surge funding for orphans.
- Opportunity to use funding to clean up orphans and employ more Albertans.
Joffre Oils Ltd.  00/14-35-014-01W5/0 - Remediation
Joffre Oils Ltd.  00/14-35-014-01W5/0
Reclamation Certificate Obtained
Dealing with Oil and Gas Orphans in Alberta

Thank you!
Pat Payne, P.Eng.
Manager