

Asset Retirement: A Far Future Problem or Near Future Reality?

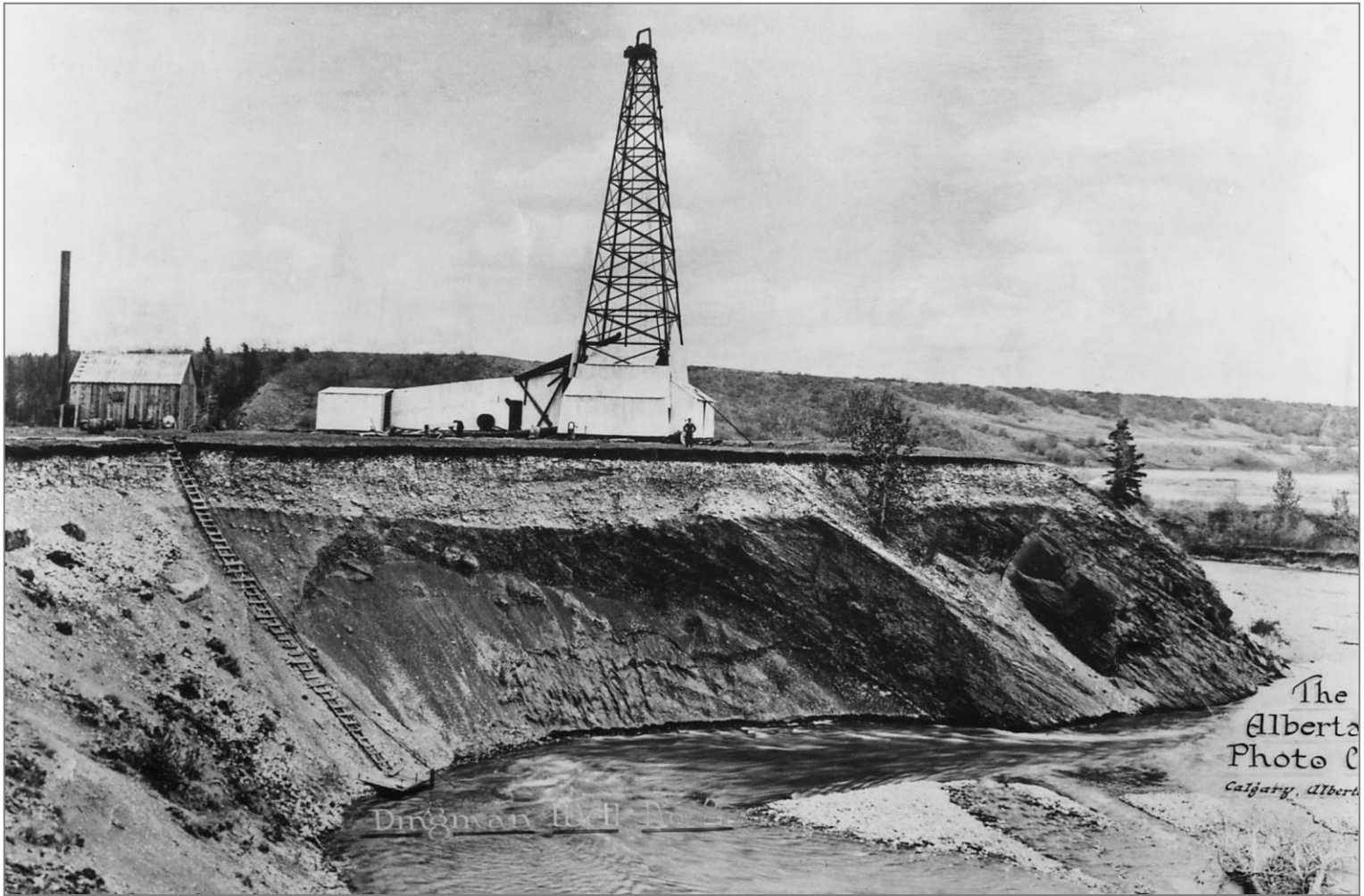
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Agenda

- 1. The Issue of Age**
- 2. Liability Risk**
- 3. Innovation to the End : Cenovus Pilot**

“If you **live** to be
one hundred, you've got it
made. Very few people die **past**
that age.”

- George Burns

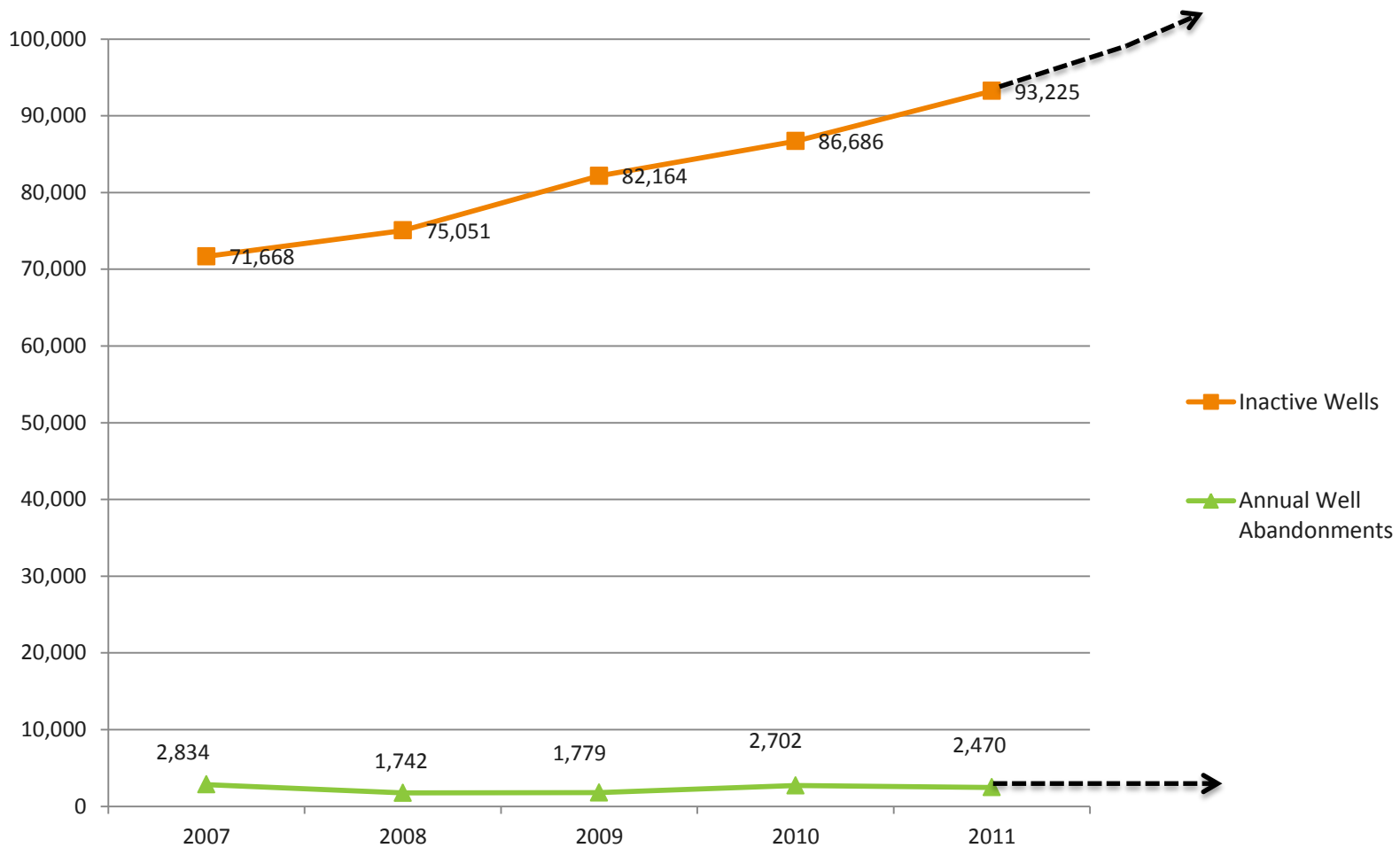


The Road to Retirement



Well Abandonment

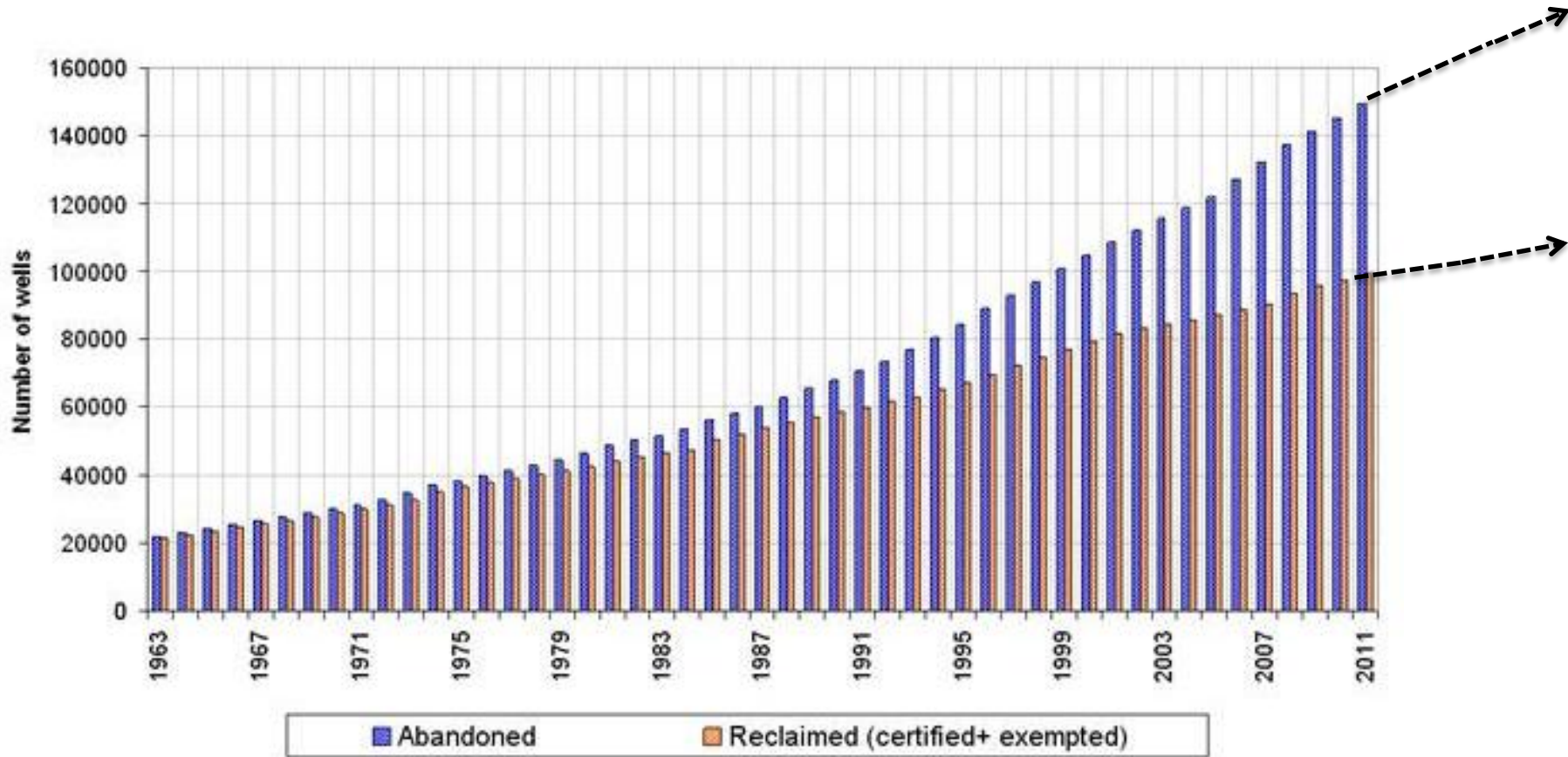
100,000 inactive sites in Canada



Source : CAPP RCE 2012
report : WCSB statistics

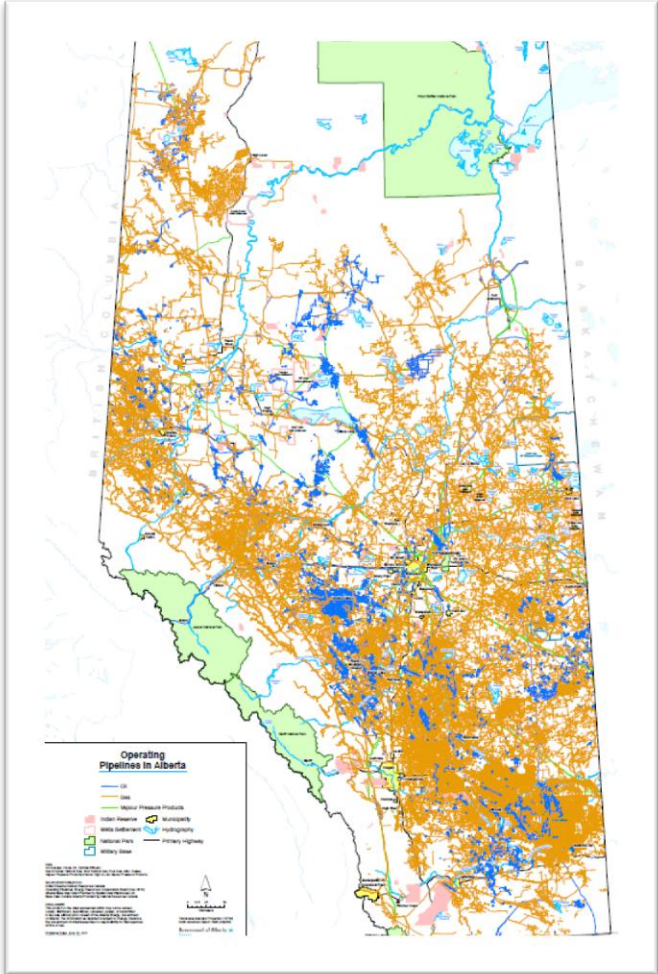
Site Reclamation

50,000 backlogged sites in Alberta



Source:
Alberta Energy Regulator

Aging Infrastructure





Turner Valley grapples with energy past

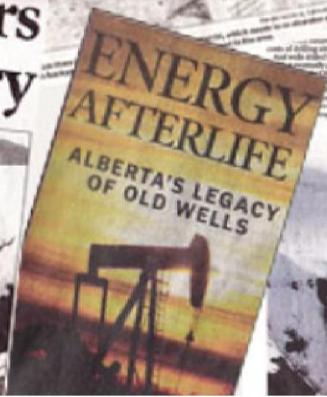
TURNING OLD WELLS IN ALBERTA INTO A TIME-AND-MOTION MACHINE. KELLY CRYDERMAN, CA

Old wells bring fresh pain for Alberta homeowners

Leaking, hidden wells cause havoc in Calgary subdivision



Healing historic scars after the wells run dry



Critics worry environmental liability looms for taxpayers

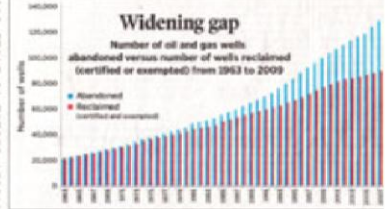
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The industry is prepared to accept liability for the cleanup of old wells, but critics worry that taxpayers will be on the hook for the cleanup of old wells. The industry is prepared to accept liability for the cleanup of old wells, but critics worry that taxpayers will be on the hook for the cleanup of old wells. The industry is prepared to accept liability for the cleanup of old wells, but critics worry that taxpayers will be on the hook for the cleanup of old wells.



CRITICS WORRY ABOUT THE COST OF CLEANING UP OLD WELLS.

Back Rowland and his son have spent tens of thousands of dollars on the cleanup of an old well on his farm near Calgary. Rowland has been pushing to get it cleaned up for years. Photo: Kelly Cryderman





Reclaiming Tomorrow Today

*Regulatory timing for
abandonment and
reclamation of well sites in Alberta*

*March, 2013
Jason Unger*



Regulatory Action



“...the ERCB (now AER) established a comprehensive upstream oil and gas legacy initiative to address end-of-lifecycle infrastructure and activities.”

AER

Over the last five years, the total well count (active plus inactive wells) in Western Canada has increased by 14 per cent (36,843 wells), which means industry is drilling new wells at a faster rate than it is reclaiming existing wells.

CAPP

“While owners of wells and facilities are responsible for their cleanup, there is a risk that taxpayers will end up paying for some of these cleanup costs.”

Saskatchewan Auditor General

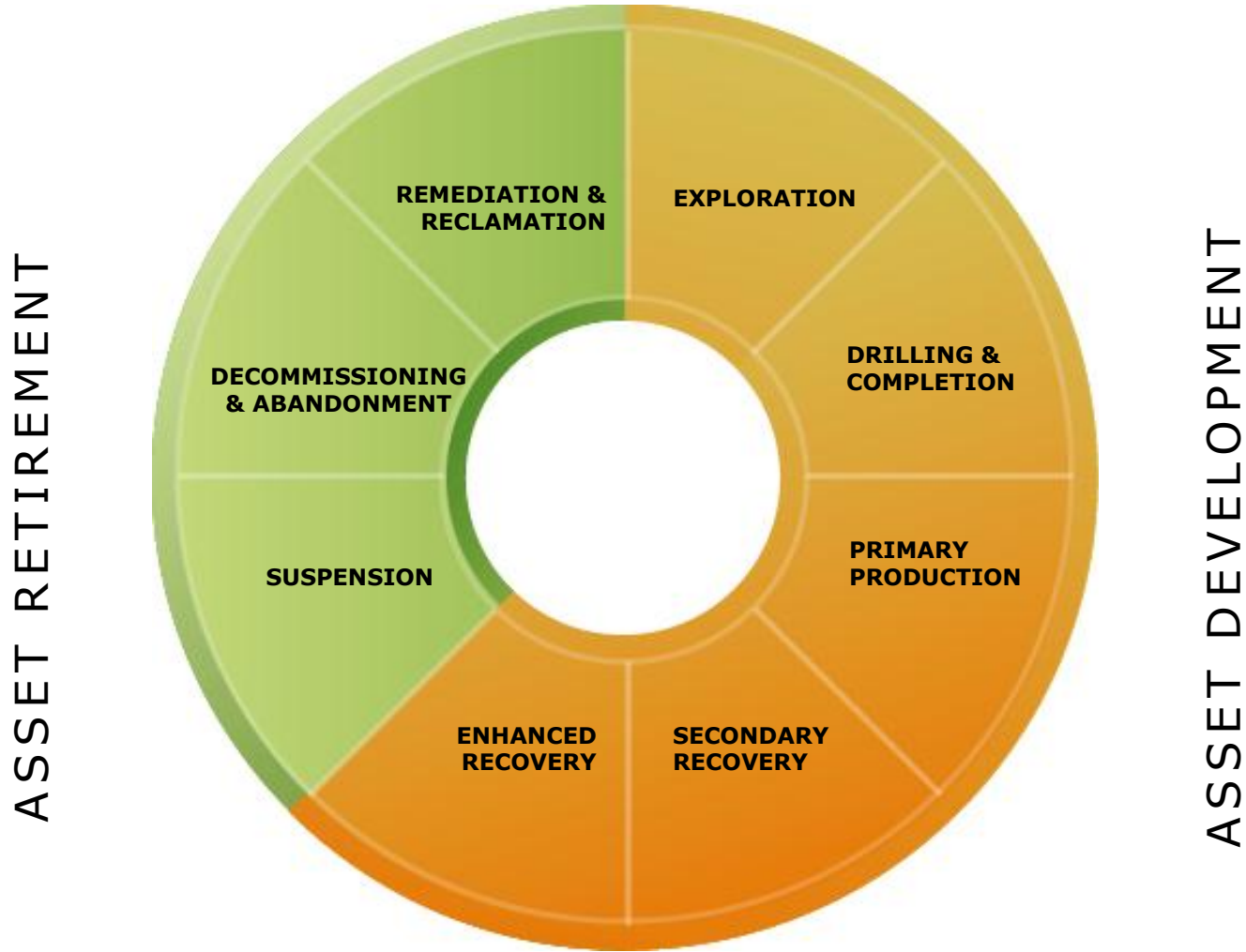




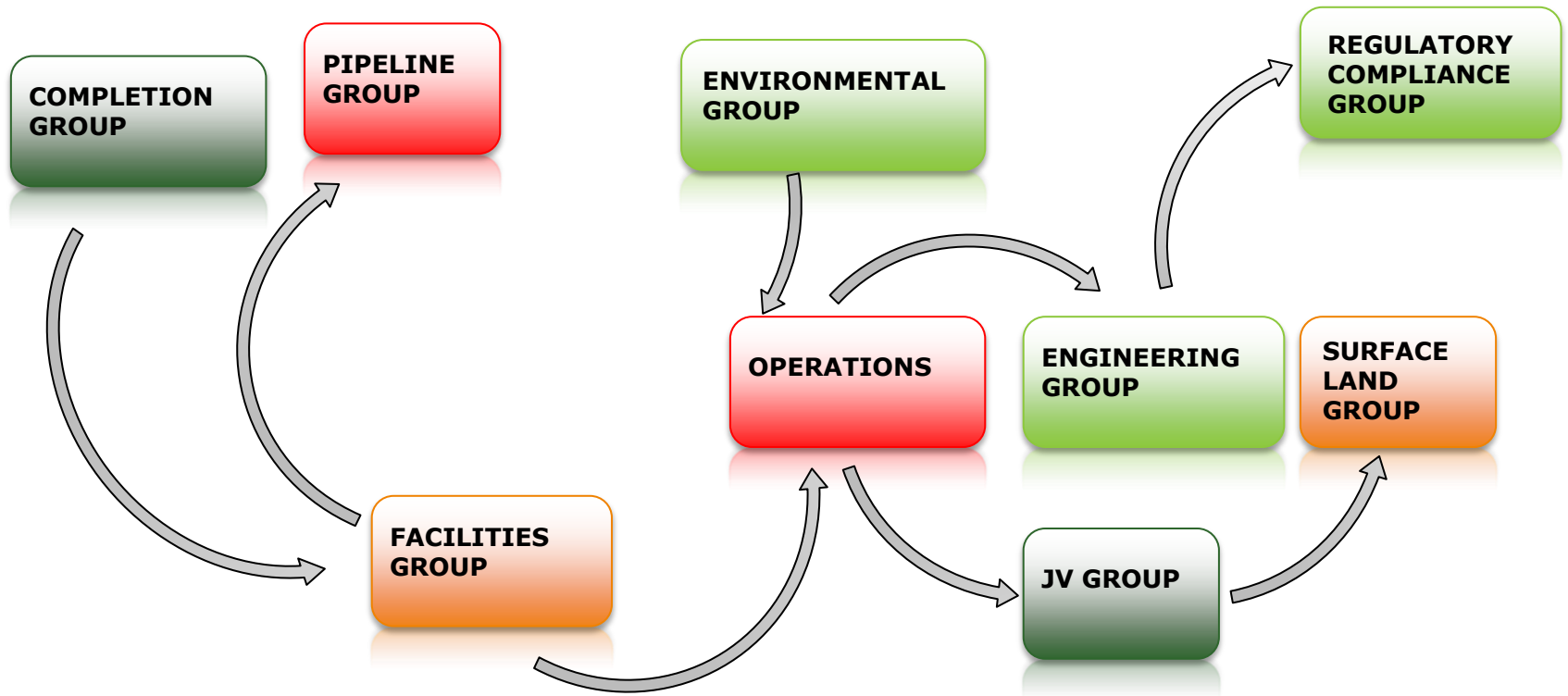
We need safe, cost-effective and efficient management of the entire end-of-life process for wells, pipelines and facilities that restores the land to a natural state, meeting or exceeding regulatory standards.



Social License to Operate



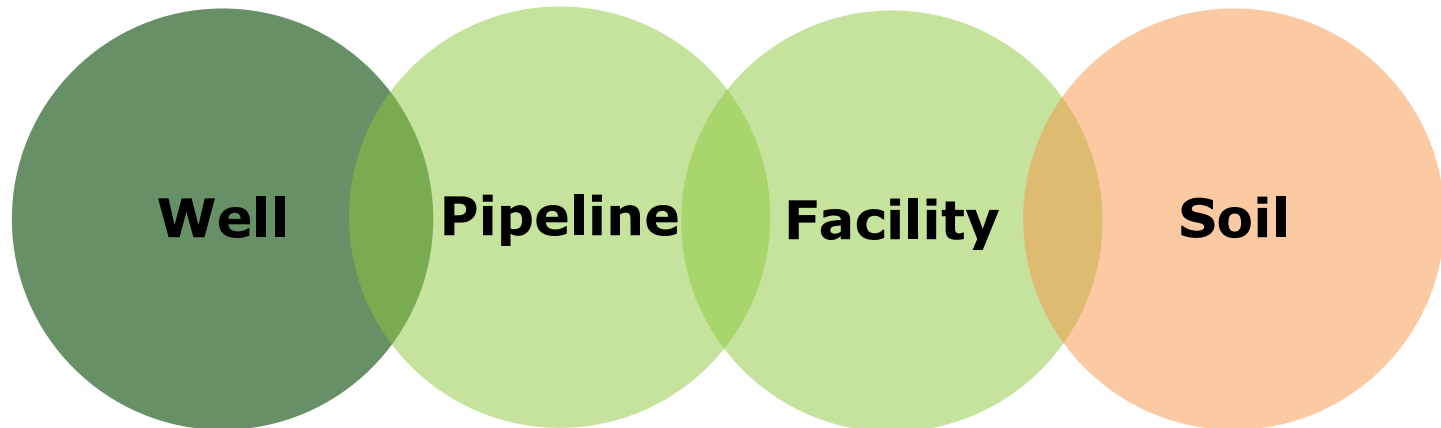
Breaking Down Barriers



Streamline Retirement



Drive a New Approach



Design with the End in Mind





Case Study: Cenovus ARC Pilot

Goal: To retire 10 conventional wellsites in Southeastern Alberta using an *unconventional* method.



Why is an **oilsands** company

Cenovus in the oil sands

The oil we produce is drilled and pumped to the surface using specialized technology like steam-assisted gravity drainage (SAGD).



doing an **asset retirement** pilot?



We Need a Plan



Increasing Decommissioning Liability (ARO)

Decreasing LMR

Fact : Cenovus currently operates 30,000+ conventional wells. Under current market conditions, many may reach end of production life within 15-20 years.



Cenovus Long Range Liability Management Plan



Plan developed and endorsed by Board (10/2012)

Early engagement will allow flexibility

Increase expertise and efficiencies around
abandonment and reclamation

Build internal and external capacities

Gradually increase pace of abandonments in a
controlled and sustainable manner

Key: use external resources to increase number of annual abandonments.



Starting Point : a Pilot



Countess area - south of Brooks, AB

10 well pilot

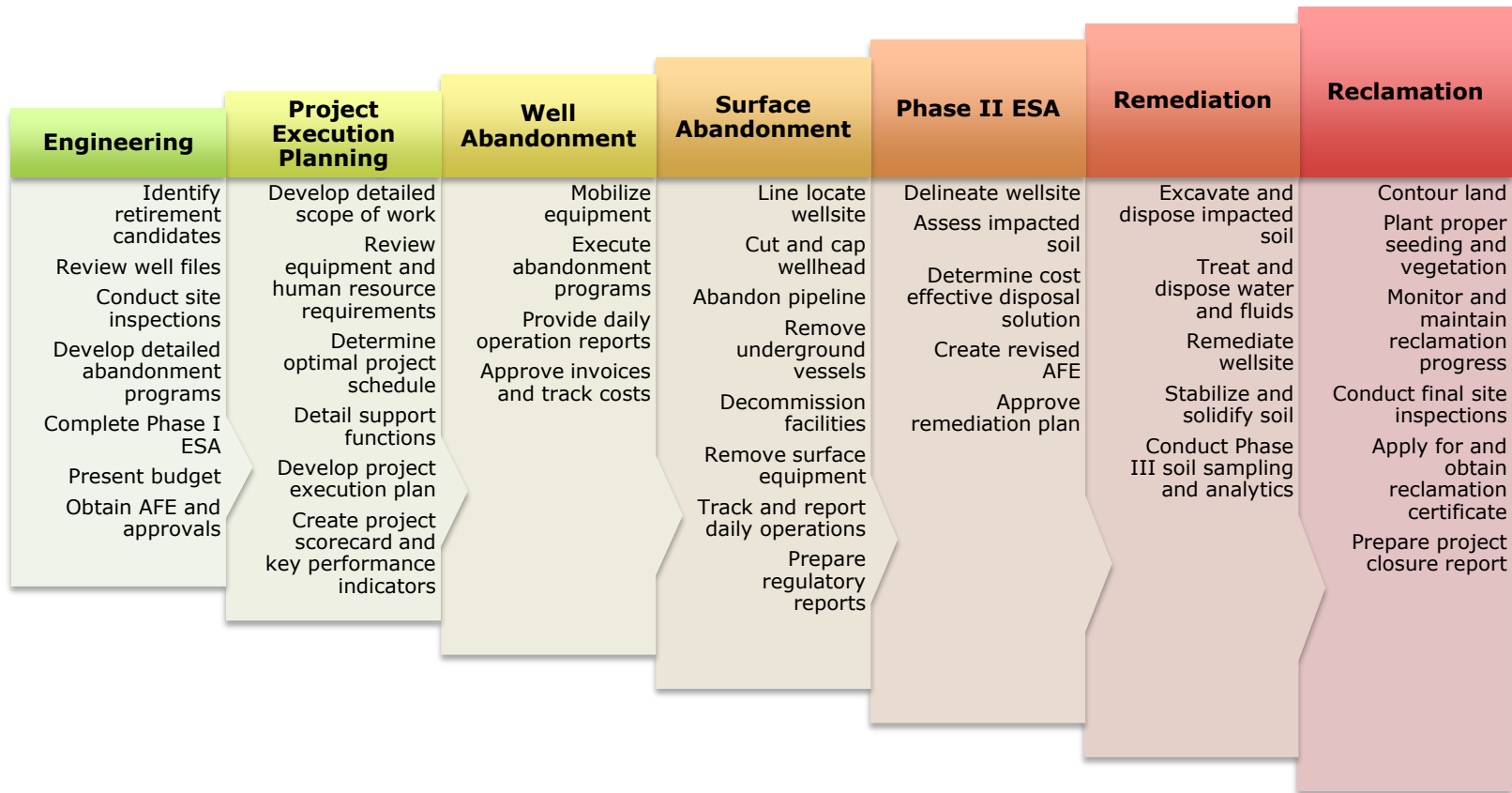
Early 70's vintage shallow gas wells

Will allow both companies to iron out
processes for turn-key approach

Additional tool in the tool box



Integrated Process



Expectations



Old Way

Work safely
Prove scalability
Reduce Cost
Shorten time
Prepare for future
Manage liability



New Way



We Can't Turn Back Time



But We Can Lead by Example

“you may delay, but **time** will not.”

- Benjamin Franklin

“if you don't have time to do it **right**,
when will you have time to do it **over?**”

- John Wooden



Innovation Takes Teamwork



**Asset
Retirement:
Definitely a Near
Future Reality.**

