Oil & gas and financial information

Oil & gas information
The estimates of reserves were prepared effective December 31, 2019. All estimates of reserves were prepared by independent qualified reserves evaluators, based on definitions contained in the Canadian Oil and Gas Evaluation Handbook and in accordance with National Instrument 51-101 Standards of Disclosure for Oil and Gas Activities. Additional information with respect to pricing and additional reserves and other oil and gas information, including the material risks and uncertainties associated with reserves estimates, is contained in our AIF and Form 40-F for the year ended December 31, 2019 available on SEDAR at www.sedar.com, EDGAR at www.sec.gov and on our website at cenovus.com.

Certain natural gas volumes have been converted to barrels of oil equivalent (BOE) on the basis of one barrel (bbl) to six thousand cubic feet (Mcf). BOE may be misleading, particularly if used in isolation. A conversion ratio of one bbl to six Mcf is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent value equivalency at the well head.

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Advisory

This presentation contains information in compliance with:

*R A E R* Directive 054 - *Performance Presentations, Auditing, and Surveillance of In Situ Oil Sands Schemes*

This document contains forward-looking information prepared and submitted pursuant to Alberta regulatory requirements and is not intended to be relied upon for the purpose of making investment decisions, including without limitation, to purchase, hold or sell any securities of Cenovus Energy Inc.
Subsection 4.1 1
Introduction
## Cenovus at a glance

<table>
<thead>
<tr>
<th>**TSX, NYSE</th>
<th>CVE**</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2020F production</strong></td>
<td><strong>2019 proved &amp; probable reserves</strong></td>
</tr>
<tr>
<td>Oil Sands</td>
<td>375 Mbbls/d</td>
</tr>
<tr>
<td>Deep Basin</td>
<td>84 MBOE/d</td>
</tr>
<tr>
<td><strong>Reserve life index</strong></td>
<td><strong>Refining capacity</strong></td>
</tr>
<tr>
<td>42 years</td>
<td>248 Mbbls/d net</td>
</tr>
</tbody>
</table>

Note: Values are approximate. Forecasted production based on the midpoint of April 1, 2020 guidance. 2019 proved & probable reserves as at December 31, 2019. Reserve life index based on 2019 proved plus probable reserves and 2019 production before royalties, which was impacted by mandatory curtailment. Refining capacity represents net capacity to Cenovus.
Area map
Recovery process

Christina Lake Thermal Project
Uses the dual-horizontal well SAGD (steam-assisted gravity drainage) process to recover oil from the McMurray formation
• Two horizontal wells one above the other approximately 5 m apart
• Steam is injected into the upper well where it heats the oil and allows it to drain into the lower well
• Oil and water emulsion pumped to the surface and treated
Subsection 4.2 2-7
Subsurface
Performance: full historical

Subsection 4.2 2 (a) & (b)
Scheme Map: Christina Lake
SAGD Pay Isopach Map (Main Zone)
SAGD Pay Isopach Map (Upper Zone)
SAGD Top Gas Isopach

(2m contour interval)

3 main gas pockets:

• ‘Sec 15’
  • centered over Section 15
• ‘11-14’
  • centered over Section 11
• ‘Southern’
  • centered over Section 2
McMurray Water Isopach Map

Subsection 4.2.3 (c)
DFIT Wells

- CVE recognizes that tensile and shear failure are two possible ways for integrity to be compromised.

- DFIT data gives insight about failure mechanisms and stress magnitudes.

* This well was drilled in 2018. T21 is the caprock. Tested @328.25m, Closure Pressure 17.70 kPa/m
3D Seismic within Project Area

No 3D acquired in 2019
2006-2019 3D in Blue
4D Seismic within Project Area

Subsection 4.2 3 (e)

2020 4D (Pink Outline)
2019 4D (Green Outline)

2020 4D Pad Coverage:
L09, L05, L03, H01, H03, J01, J03 B07b,
Cross-section (structural): north

Subsection 4.2 4 (a) to (c)
Cross-section (structural): mid

Injector Level (est.)
Producer Level (est.)

Subsection 4.2 4 (a) to (c)
Cross-section (structural): south

WBSK (T21)
T11
MCMR
SAGD Pay
SAGD Base
Water Top
Paleo

Producer Level (est.)
Injector Level (est.)

Subsection 4.2 4 (a) to (c) © 2020 Cenovus Energy Inc.
September 30, 2020
OBIP Volumes

- Project Area OBIP
  - 755 MMm³

- Development Area OBIP
  - 746 MMm³

- Combined Active Well Patterns OBIP
  - 166 MMm³

- Cumulative % Recovery
  - 49%
Reservoir properties

<table>
<thead>
<tr>
<th>Reservoir Characteristics</th>
<th>Christina Lake Project Area</th>
<th>Kirby East Project Area</th>
<th>Approved Development Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reservoir Depth (m subsea)</td>
<td>170 - 245</td>
<td>170 - 245</td>
<td>170 - 245</td>
</tr>
<tr>
<td>Average SAGD Pay Thickness (m)</td>
<td>Up to 45+</td>
<td>Up to 25+</td>
<td>Up to 35+</td>
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<tr>
<td>Porosity (%)</td>
<td>31%</td>
<td>29%</td>
<td>30%</td>
</tr>
<tr>
<td>Horizontal Permeability (D)</td>
<td>Up to 10</td>
<td>Up to 8</td>
<td>Up to 10</td>
</tr>
<tr>
<td>Vertical Permeability (D)</td>
<td>Up to 7</td>
<td>Up to 6</td>
<td>Up to 7</td>
</tr>
<tr>
<td>Oil Saturation (%)</td>
<td>~80%</td>
<td>~75%</td>
<td>~80%</td>
</tr>
<tr>
<td>Water Saturation (%)</td>
<td>~20%</td>
<td>~25%</td>
<td>~20%</td>
</tr>
<tr>
<td>Original Reservoir Pressure (kPa)</td>
<td>~2500</td>
<td>~2500</td>
<td>~2500</td>
</tr>
<tr>
<td>Original Reservoir Temperature (°C)</td>
<td>12°C</td>
<td>12°C</td>
<td>12°C</td>
</tr>
<tr>
<td>Pad</td>
<td>Area (m²)</td>
<td>Height (m)</td>
<td>Porosity (%)</td>
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<tr>
<td>----------</td>
<td>-----------</td>
<td>------------</td>
<td>--------------</td>
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<tr>
<td>A01 PAD</td>
<td>514,091</td>
<td>26</td>
<td>33%</td>
</tr>
<tr>
<td>A02 PAD</td>
<td>174,295</td>
<td>31</td>
<td>32%</td>
</tr>
<tr>
<td>B01 PAD</td>
<td>644,031</td>
<td>38</td>
<td>32%</td>
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<tr>
<td>B02 PAD</td>
<td>329,864</td>
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<td>32%</td>
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<tr>
<td>B02C PAD</td>
<td>320,629</td>
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<td>33%</td>
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<tr>
<td>B03 PAD</td>
<td>677,534</td>
<td>41</td>
<td>32%</td>
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<tr>
<td>B04 PAD</td>
<td>652,375</td>
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<tr>
<td>B05 PAD</td>
<td>731,534</td>
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<tr>
<td>B06 PAD</td>
<td>605,196</td>
<td>37</td>
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<tr>
<td>B07 PAD</td>
<td>642,341</td>
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<tr>
<td>B07B PAD</td>
<td>884,240</td>
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<tr>
<td>B08 PAD</td>
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<tr>
<td>B09 PAD</td>
<td>558,380</td>
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<tr>
<td>B10 PAD</td>
<td>595,522</td>
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<tr>
<td>B11 PAD</td>
<td>640,668</td>
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<tr>
<td>B13 PAD</td>
<td>836,206</td>
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<tr>
<td>F01 PAD</td>
<td>700,230</td>
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<td>H01 PAD</td>
<td>773,342</td>
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<td>H03 PAD</td>
<td>658,249</td>
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<td>J01 PAD</td>
<td>600,387</td>
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<td>J03 PAD</td>
<td>561,900</td>
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<td>J07 PAD</td>
<td>848,871</td>
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<td>J09 PAD</td>
<td>758,451</td>
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<td>32%</td>
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<tr>
<td>J15 PAD</td>
<td>991,475</td>
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<tr>
<td>L02 PAD</td>
<td>980,071</td>
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<td>33%</td>
</tr>
<tr>
<td>L03 PAD</td>
<td>716,007</td>
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<td>34%</td>
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<tr>
<td>L05 PAD</td>
<td>469,077</td>
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<td>29%</td>
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<tr>
<td>L09 PAD</td>
<td>715,617</td>
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<td>30%</td>
</tr>
<tr>
<td>Total CL</td>
<td>18,148,253</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*As of December 31st, 2019*
Map of co-injection wells

Non-condensable gas
• NCG injected in 6-15 well, and wells on A01, A02, B01, B02, B02C, B03, B04, B05, B06, B07, B07b, B08, B09, B11 and B13 pads

Solvent
• No solvent injection at CL, currently.
Injection Strategy and Impacts

NCG Injection commencement is based on:
- Pads with high RF
- Pads with high SOR/declining oil rates

Steam cuts are typically made in 25% increments.

Impact of co-injection:
- High gas production. Trials underway to determine if produced gas may be decreased.
- Production declines and RFs cannot be reasonably compared as they may be impacted by trials/facility limitations, and re-development wells.
Subsection 4.3 8
Surface
Overall plot plan
Source Water Infrastructure

Fresh water source wells – Empress Aquifer:
• Two wells at 09-17-076-06W4M (TDS ~440-560 mg/L)
• One well at 06-16-076-06W4M (TDS ~380-650 mg/L)

Brackish water source wells – Clearwater B Aquifer:
• CW1-A 1F1/13-35-075-06W4/00 TDS ~ 7,400 mg/L
• CW1-C 1F1/13-35-075-06W4/00 TDS ~ 5,700 mg/L
• CW1-B 1F1/15-27-075-06W4/00 TDS ~ 4,600 mg/L
• CW2-A 1F1/16-03-076-06W4/00 TDS ~ 5,580 mg/L
• CW3-A 100/04-35-075-06W4/00 TDS ~ 9,730 mg/L
• CW3-B 100/13-27-075-06W4/00 TDS ~ 9,830 mg/L
• CW-3C 100/02-07-076-06W4/00 TDS ~ 11,700 mg/L
• CW4-A 1F1/13-35-075-06W4 TDS ~ 3,000 mg/L
• CW4-B 1F1/06-01-076-06W4 TDS ~ 4,300 mg/L
• CW4-C 1F1/07-07-076-05W4 TDS ~ 8,400 mg/L
• MW1-DC 1F1/07-18-076-05W4 TDS ~ 16,880 mg/L

McMurray water source wells (Online Q4 2016):
• MW1-A 1F1/07-18-076-05W4 TDS ~ 16,880 mg/L
• MW1-B 1F1/03-07-076-05W4 (not in use) TDS ~ 16,520 mg/L
• MW1-C 1F1/09-07-076-05W4 TDS ~ 16,420 mg/L
• MW4-A 1F3/11-09-076-06W4 TDS ~ 10,850 mg/L
• MW4-C 1F1/16-08-076-06W4 TDS ~ 10,990 mg/L
• CW4-C 1F1/01-36-075-06W4 TDS ~ 18,600 mg/L
• MWH 1F1/01-01-077-04W4 (not in use) MWH TDS ~ 13700-16800 mg/L
• MWH 1F1/02-01-077-04W4 (not in use)
• MWH 1F1/01-01-077-04W4 (not in use)
• MWH 1F1/02-15-36-076-04W4 (not in use)
• MWH 1F1/01-36-076-04W4 (not in use)
• MWH 1F1/16-36-076-04W4 (not in use)
• MWH 1F2/16-36-076-04W4 (not in use)
McMurray water disposal wells

Existing Water Disposal Wells
RD1 Pad
102/15-35-76-4W4
103/15-35-76-4W4
104/15-35-76-4W4
105/15-35-76-4W4
106/15-35-76-4W4
107/15-35-76-4W4

Existing Disposal Wells
RD2 Pad
100/13-34-76-3W4
102/13-34-76-3W4
103/13-34-76-3W4
104/13-34-76-3W4
105/13-34-76-3W4
100/04-03-77-3W4
100/12-34-76-3W4

100/04-16-76-6W4
Former Water Disposal
100/03-16-76-6W4
Converted to water prod well
1F5/03-16-76-6W4

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September 30, 2020
Facility summary

- **Phase G Start-up – 2019:**
  - Steam Plant – February
  - Water Plant – March
  - Process/De-oiling – end of April

- **Production curtailment (January – August) limited inlet production rates**
  - Fresh water TDL’s utilized for steam production to maintain well health/operation

- **Phase CDE Turnaround – April/May**

- **Approval of New Directive 081 Disposal Regulation**
  - CL will meet new allowable disposable ratio (<100%)
Plant performance

Steam

- System capacity increased to 82,560 m³/d of steam (23% increase)*
- 2019 average flowrate of 62,970 m³/d | 76% of Capacity
- System capacity increase due to start-up of Phase G OTSGs (Q1, 2019)
- Phase A to H approved steam capacity is 92,618 m³/d

Oil

- System capacity increased to 43,880 m³/d of oil (276,000 bbl/d) (20% increase)*
- 2019 average flowrate of 30,957 m³/d (194,807 bbl/d) | 71% of Capacity
- System capacity increase due to start-up of Phase G Process Treating (Q2 2019)
- Phase A to H approved annual average bitumen capacity is 49,284 m³/d (310,000 bbl/d)

*Capacity values are based on proven best 7 day averages
Pad Abandonments

- No pad abandonments are currently planned at Christina Lake in the next 5 years.
Well patterns with active blow-down or ramp-down
## 2019 Regulatory application/approval summary

<table>
<thead>
<tr>
<th>Act</th>
<th>Application No.</th>
<th>Application Description</th>
<th>Approval Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSCA</td>
<td>1920148</td>
<td>Well Pad B07B and B13 Natural Gas Co-injection</td>
<td>2019-04-22</td>
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<tr>
<td>OSCA</td>
<td>1921704</td>
<td>Well Pad E01 Trajectory Update</td>
<td>2019-06-13</td>
</tr>
<tr>
<td>OSCA</td>
<td>1922184</td>
<td>Butane Blending Project Application</td>
<td>2019-07-10</td>
</tr>
<tr>
<td>OSCA</td>
<td>1922415</td>
<td>TriCanter Trial - 6 month extension</td>
<td>2019-07-15</td>
</tr>
<tr>
<td>OSCA</td>
<td>1925206</td>
<td>ID 2001-03 Sulphur Variance Waiver for 2020</td>
<td>2019-11-07</td>
</tr>
<tr>
<td>EPEA</td>
<td>028-48522</td>
<td>Short-term variance to SO$_2$ emission limit (3 months)</td>
<td>2019-02-01</td>
</tr>
<tr>
<td>EPEA</td>
<td>029-48522</td>
<td>Short-term variance to SO$_2$ emission limit (to year-end 2020)</td>
<td>2019-10-18</td>
</tr>
</tbody>
</table>
Facility modifications

• Phase G plant expansion:
  • Start-up - 2019:
  ○ Steam Plant – February
  ○ Water Plant – March
  ○ Process/De-oiling – end of April
Emulsion treatment

Process Treating Area:

• Reduced inlet emulsion rates due to production apportionment resulted in:
  • minimal OIW excursions
  • little process cooling limitations
  • execution of opportunistic maintenance

• Phase G Start-Up (April 2019) added capacity/flexibility for:
  • treating
  • maintenance outages/turn-arounds
Produced Water treatment

De-oiling Area:

• Reduced produced water rates during the production apportionment resulted in minimal oil and grease excursions

• Phase G Start-Up (April 2019) added capacity/flexibility for:
  • Treating
  • Maintenance outages/Turn-around

• Post curtailment, issues in de-oiling were:
  • On-going monitoring of oil-in-water excursions
Water treatment

• Reduced produced water rates due to production apportionment resulted in lack of sufficient boiler feed water to generate the steam required to maintain well health/operation:
  • Fresh water TDL (temporary diversion license) provided the ability to utilize additional fresh water to increase steam production by ~2,120 Sm³/d
• Phase G water plant start-Up (March 2019) added capacity/flexibility for:
  • Necessary maintenance outages / turn-around activities
  • Distribution of water treatment during off-spec / excursion events to limit impacts to downstream equipment (ion exchange trains & OTSGs / HRSGs)
• Equipment reliability issues, process upsets and unplanned outages occasionally continued to limit total water plant capacity through 2019
Steam generation

• Reduced produced water rates due to production apportionment resulted in lack of sufficient boiler feed water to generate the steam required to maintain well health/operation
  • Fresh water TDL (temporary diversion license) provided the ability to bring in additional fresh water to increase steam by ~2,120 Sm³/d (per previous slide)
• Phase G steam plant start-Up (April 2019) added capacity/flexibility for:
  • Generating additional steam to manage well health during apportionment
  • Maintenance outages/turn-around
Pilots/technical innovations

Butane Blending Project – displace diluent volumes to reduce Opex

- Phase 1 of trial started September 2019:
  - Positive results however economics are not as prolific as originally projected due to pricing driver degradation
- Phases 2/3 of trial to commence Nov/Dec 2020
  - Instrumentation improvements and increased injection capacity changes have been completed to enable next set of trials

Tricanter Project – recycle slop water/slop oil

- Operated Nov 2018 – Oct 2019
- Encountered treating issues due to the quality of slop – addition of sales oil helped process fluids
- Proven economical on short-term basis when the facility produced higher than normal off-spec process fluids
- Review will continue in 2020-2021 to determine if a permanent Tricanter system will be pursued
## 2019 Non-compliance summary - AER

<table>
<thead>
<tr>
<th>Date</th>
<th>Non compliance/Self Disclosure</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-01-15</td>
<td>Pipeline Inspection @ 4-16-76-6W4 P35664. Discontinued pipeline not left in a safe condition, notification to the AER of a pipeline leak.</td>
<td>Complete, response letter and action plan submitted June 12, 2019.</td>
</tr>
<tr>
<td>2019-11-20</td>
<td>Well Site Inspection @ 02-14-076-06W4. 5 suspended wells located immediately behind operational wells do not have signs identifying the wells.</td>
<td>Complete, response letter submitted January 29, 2020.</td>
</tr>
</tbody>
</table>
## 2019 Non-compliance Summary – EPEA

<table>
<thead>
<tr>
<th>Date</th>
<th>Non compliance</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-02-11</td>
<td>EDGE Ref# 349409. CEMS unit B-2100 failed to meet 90% availability on flow meter due to a faulty connector.</td>
<td>Replaced faulty connector.</td>
</tr>
<tr>
<td>2019-03-30</td>
<td>EDGE Ref# 351744. CEMS unit B-3100 failed to meet 90% availability on the temperature probe due to a faulty loop isolator.</td>
<td>Faulty loop isolator was replaced.</td>
</tr>
<tr>
<td>2019-07-24</td>
<td>EDGE Ref# 356907. Failed RATA on B-3460 due to drift on NO₂ channel.</td>
<td>Unit was re-calibrated and second RATA passed.</td>
</tr>
<tr>
<td>2019-11-01</td>
<td>EDGE Ref# 360806. CEMS unit B-3500 failed to meet 90% availability on flow meter as the flowsic malfunctioned.</td>
<td>Replaced flowsic. Data backfill performed using approved AER method.</td>
</tr>
<tr>
<td>2019-11-16</td>
<td>EDGE Ref# 0361130. Failure of B05 Pad produced water tank gate valve seal.</td>
<td>Spilled volume cleaned up and tank replaced.</td>
</tr>
<tr>
<td>2019-12-07</td>
<td>EDGE Ref# 361853. SO₂ limit exceedance. H₂S analyzer drifted to 0 ppm resulting in additional by-pass of the scavenger system.</td>
<td>Manual H₂S sampling in place to verify analyzer readings.</td>
</tr>
<tr>
<td>2019-12-31</td>
<td>EDGE Ref# 362198. Failed to perform second CGA on B-3460 due to expired CGA gas and extended downtime of B-3460.</td>
<td>Additional procedures put in place to check audit gas expiry dates.</td>
</tr>
</tbody>
</table>
Future plans

Potential Future Applications

• Diluent Solvent Aided Process
• Brackish Water Debottleneck
• Phase H Amendment
• Produced Gas Cooler Debottleneck

Future Plant Activity

• Due to the COVID-19 pandemic, there were no plans/activities that affected plant operation in Q1-Q3 2020
• Phases A-E plant turnaround scheduled for Sept/Oct 2020
Planned development

Drilled Pads
Locked Down Pads
Future Pads

Strat Wells Per Section
- 0-4
- 5-6
- 7-18
- 19-24
- 25-31
- 32+