Docket No. CC-2025-OGR-01-003

Drilling and Testing Program Overview for Cascade Exploration's Stratigraphic Test Well

This exhibit summarizes the anticipated drilling and testing operations for Cascade Exploration's stratigraphic test well. The well will be drilled and evaluated strictly to gather geological data and then plugged and abandoned without production. Key elements of the program are outlined below.

Well Type.

- **Vertical Stratigraphic Test:** The test well will be drilled vertically (no directional or horizontal sections) to ~12,000 feet total vertical depth (TVD). It is designed purely for data acquisition (stratigraphic and geological information) and will not be completed as a producing well. After reaching TD and collecting data, the well will be plugged and abandoned.

Casing Program. A conventional casing design will be implemented to safely drill to 12,000 ft and protect all formations and groundwater. The planned casing program is:

- **Conductor Casing:** Estimated to be 80' in depth, typically a 20" hole size and cased with 16" pipe. Fully cemented and provides the initial wellbore stability near surface.
- **Surface Casing:** Estimated to be 800' in depth, planned as a 14-3/4" hole and cased with 13-3/8" casing. This casing is intended to also add wellbore stability but more importantly isolates and protects freshwater aquifers. This string will be fully cemented from total depth to surface.
- **Intermediate Casing:** Estimated to be 3,900' in depth, planned as a 12-1/4" hole and cased with 9-5/8" casing. This casing is for wellbore stability. We will cement this casing into the surface casing by 100'.
- **Production Casing:** No production casing will be installed in this well. There will be no perforations or stimulation because there will be no casing.

Well Tests. As a stratigraphic test, the well will undergo downhole evaluation and sampling to collect geological data, which may include:

- **Open-Hole Geophysical Logging:** A suite of wireline logs will be run in the uncased (open) hole after reaching TD on the intermediate and production hole sections. Logs delineate lithology, porosity, and fluid content of the formations penetrated, providing detailed petrophysical information needed to characterize potential reservoir zones.
- **Coring and Sampling:** The program includes obtaining physical core samples of important formations. Cores will be extracted, preserved, and catalogued for laboratory analysis. The core samples will allow direct measurement of rock properties (porosity, permeability, mineralogy) and observation of any fluids in the pores.
- **Drill Stem Testing (DST):** If favorable indications are found in a particular zone (e.g. shows of gas or abnormal pressure), a drill stem test may be conducted to measure formation pressure and fluid content.

Equipment Onsite. The following major equipment is expected on site for the drilling and testing operations of a 12,000-ft stratigraphic test well:

- **Drilling Rig:** A conventional land drilling rig capable of reaching 12,000 ft depth will be used.
- **Pusher Cabin:** This unit provides housing for an onsite drilling manager for the drilling contractor. It houses back-up tools and or equipment as well as accommodations for the manager.
- **Blowout Preventer (BOP) Stack:** A BOP stack will be installed on the wellhead after surface casing is set, to provide well control. The BOP (consisting of hydraulically operated preventers such as an annular preventer and ram preventers) allows the well to be sealed in the event of a pressure kick.
- **Solids Control:** Used for drilling fluid and solids management, this is a closed loop system, no earthen pit will be utilized.
- **Mud Engineering Unit:** Used by mud specialists to monitor the "health" of the mud/fluid system. They run mud checks, monitoring weight, viscosity, yield strength, pH, fluid loss, etc.
- **Logging Units (Wireline & VSP):** Mobile wireline logging trucks will be on site to perform the open-hole wireline logs and any vertical seismic profiling. These units house the winch, logging tools, and surface recording instruments.
- **Mud Logging Unit:** A mud logging cabin will be present to continuously monitor drilling returns. Mud loggers will collect and examine drill cuttings and use gas detectors to analyze gases in the drilling mud.
- **Core Handling Equipment:** If coring is conducted, the necessary equipment will be on site to handle core retrieval and preservation.
- **DST Tools and Testing Package:** In anticipation of possible drill stem tests, specialized DST tools and related surface equipment will be available. The DST tool string (with packers, valves, and pressure gauges) is run on drill pipe to execute a formation test.

Estimated Timeline:

- **Drilling Phase: ~30 days** (approximately 4 weeks) is estimated for the drilling phase. This is the anticipated time to drill from surface to ~12,000 ft TD, including setting all casing strings, cementing and logging.
- **Testing & Data Acquisition Phase: ~90 days** (up to 3 months) after drilling may be dedicated to comprehensive testing and data gathering. Many of the data acquisition activities (wireline logging, VSP, coring, DSTs) will occur immediately upon reaching TD.