



Closed Loop Gas Capture

Ophelia 27 #1H

Q4 2022 Report

1. Introduction

NMOCD Order R-21747, Paragraph 16, requires quarterly project status updates from EOG Resources on the Ophelia 27 #1H (30-025-41114) Closed Loop Gas Capture (CLGC) well. The following document outlines the activities that have taken place since the previous update submitted September 12, 2022.

2. Project Activity Summary

EOG decreased usage of the Ophelia 27 #1H CLGC system back to Q2 2022 levels since the previous report. This was due to reduced market upsets during the report period. Injection occurred on 11 days. Additionally, EOG attempted to mimic the intermediate casing pressure responses observed on the Caballo 23 Fed #2H, but did not have success. Volume data (Table 1) and discussion of the intermediate casing pressure are included in Section 3 of this report.

CLGC continues to make an appreciable impact on production uptime and flare prevention. An analysis of this is included in Section 4.

3. Injection Data

Table 1 summarizes the daily injection totals for the dates that injection took place during the report period. The market upsets ranged from a few hours to three days. After ceasing injection, production resumed above the type curve as injected gas was recovered.

EOG was unable to recreate the exact behavior seen on the Caballo 23 Fed #2H intermediate casing pressure. The Ophelia 27 #1H did exhibit a sinusoidal trend consistent with gas temperature variation, but not to the same magnitude as the Caballo 23 Fed #2H. This can likely be attributed to the injected gas rate as the Ophelia 27 #1H can only support half as much as the Caballo 23 Fed #2H.

Date	Injection Volume [MSCF]	Injection Time [hours]
09/09/2022	711	10.74
09/10/2022	774	23.41
09/11/2022	7	0.18
10/03/2022	1,670	16.74
10/04/2022	127	2.38
10/21/2022	555	4.05
10/22/2022	574	9.58
10/23/2022	216	3.41
11/03/2022	120	0.94
11/04/2022	243	3.37
11/23/2022	734	5.35
Total	5,731	80.15

Table 1: Injection Volume Data for Report Period

Month	Est. Associated Oil Volume [BBL]	Est. Flare Emissions Avoided [MT CO _{2e}]
September	426	124
October	898	262
November	313	91
Total	1,637	477

Table 2: Ophelia 27 #1H CLGC Associated Impact Data for Report Period

4. Operations Review

EOG's deployment of the Ophelia 27 #1H CLGC system once again had a material impact on flare emissions and production curtailment during market disruptions/outages during the report period, totaling an estimated 477 MT CO₂e in avoided flare emissions and an estimated 1,637 BBL of produced oil not shut-in, as broken down by month in Table 2.

5. Conclusion

Since the previous report submitted September 12, 2022, EOG utilized the Ophelia 27 #1H for CLGC injection on 11 days. The CLGC system made a material impact during market disruptions/outages during the report period, preventing an estimated 477 MT CO₂e in flare emissions and avoiding the curtailment of an estimated 1,637 BBL of produced oil.

For the next report period, EOG will continue the regular use of the Ophelia 27 #1H as a CLGC injection well with ongoing data capture. Injected gas recovery and well behavior will continue to be monitored.

6. Contacts

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