



**Verified Carbon
Standard**

ASSOCIATED GAS RECOVERY AND UTILIZATION AT KHAMILAH OIL FIELD AREA AT BLOCK-27 IN WILAYAT LBRI OF THE SULTANATE OF OMAN

Document Prepared by Vitol SA

Project Title	Associated Gas Recovery and Utilization at Khamilah oil field area at Block-27 in Wilayat lbri of the Sultanate of Oman
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1 PROJECT DETAILS

1.1 Summary Description of the Project

Associated Gas Recovery and Utilization at Khamilah oil field area at Block-27 in Wilayat Ibri of the Sultanate of Oman (hereafter referred as “the proposed project”) consists of the recovery and utilization of natural gas found in association with oil at Khamilah oil field at Block-27, Wilayat Ibri of Al- Dhahirah Governorate, the Sultanate of Oman. The purpose of the project activity is to deliver recovered gas to the national gas pipeline to meet energy needs of end-users, and also to reduce local air pollution due to flaring.

The recovered associated gas by the project will be collected and processed at Khamilah station. The recovery process comprises three main stages including the separation stage where gas is separated from oil and water, the compression stage where gas is compressed for transportation to gas plant, and the processing stage where gas is processed to fit with conditions of gas pipeline for further transportation to end-users. Main equipment necessary for the proposed project activity comprises electric motor-driven reciprocating and screw compressors installed on site, and a network of pipelines for gas transportation.

The scenario existing prior to the start of the implementation of the proposed project activity is flaring of associated gas at the oil production site, the operation of the existing oil and gas infrastructure without processing of any recovered associated gas, and the use of gas-lift gas from the same source and quantity as under the project activity in the gas-lift system. The baseline scenario is the same as the scenario existing prior to the start of implementation of the proposed project activity. The project reduces greenhouse gases emissions as the utilization of recovered gas displaces the use of non-associated gas or other fossil sources at end-users.

The total estimated amount of associated gas to be recovered during crediting period is about 2.20 billion m³ while average methane content is estimated at about 78%. The project is expected to have an annual average of 473,826 tCO₂ emission reduction over the crediting period. The estimated emission reductions are 4,738,260 tCO₂ over a fixed 10-year crediting period.

1.2 Sectoral Scope and Project Type

Scope 10: Fugitive emissions from fuels (solid, oil and gas)

The project is not a grouped project.

1.3 Project Eligibility

As per the page 67 of VCS standard v4.3:

Projects registered under another GHG program, with activities that are included within the scope of the VCS Program (see Section 2.1), shall only be eligible to complete a gap validation and/or transfer to the VCS Program where the following applies:

a) For a project that does not include afforestation and/or reforestation activities:

- i) The project shall have an original project crediting period start date on or after 1 January 2016 with another GHG program; or*
- ii) Where the project has an original project crediting period start date from 1 January 2013 to 31 December 2015, the project shall have issued credits during the period 1 January 2016 to 5 March 2021, or shall have a status of “issuance requested” on the relevant GHG program registry by 5 March 2021.*

The project reduces greenhouse gases emissions as the utilization of recovered gas displaces the use of non-associated gas or other fossil sources at end-users, which reduces the emissions of CO₂, and falls into the category of the six Kyoto Protocol greenhouse gases. CDM methodology AM0009/Version 07.0: “Recovery and utilization of gas from oil fields that would otherwise be flared or vented” is adopted, which is the methodology approved under a VCS approved GHG program and is eligible for VCS by Verra.

The project activity is to recover and utilize the associated gas extracted from Khamilah oil field area at Block-27 in Wilayat Ibri of the Sultanate of Oman, which would be flared in the absence of the project activity. Apparently, the project does not generate GHG emissions primarily for the purpose of their subsequent reduction, removal or destruction.

The project belongs to Scope 10: Fugitive emissions from fuels (solid, oil and gas), and does not fall into the excluded project activities list of section 2.1.1 of VCS standard version 4.3.

Therefore, the project is eligible under the scope of VCS program.

The project has been registered as a CDM project (CDM PA10584), with the crediting period started on 03 Aug 2020, which is after 10 January 2016. Thus, the project meets the criteria set out by VCS standard version 4.3.

Thus, the project activity is eligible to complete a gap validation and/or transfer to the VCS Program.

1.4 Project Design

n.a.

1.5 Project Proponent

Organization name

OQ Trading Limited

Contact person	Mr. Said Al Maawali
Title	Executive Director Middle East
Address	Muscat Grand Mall, PO Box 241, PC 118, Muscat
Telephone	+968 9137 0000
Email	said.almaawali@oq.com

1.6 Other Entities Involved in the Project

Organization name	Vitol SA
Role in the project	VCS account manager
Contact person	Mr. Michael Ivanovitch
Title	Verra account manager
Address	Place des Bergues 3, 1201 Geneva, Switzerland
Telephone	+41 22 322 1111
Email	MXI@vitol.com

1.7 Ownership

The Government of the Sultanate of Oman, represented by Ministry of Energy and Minerals is the project owner, and OQ Trading Limited is the buyer of the carbon credits. The project owner, the Government of the Sultanate of Oman, represented by Ministry of Energy and Minerals could be evidenced by the approval letter, and the CDM LOA. Below is the chain of the ownership of carbon credits, which could be supported by relevant documents and records.

Date	Events
Nov 2010	ERPA was signed between the Government of the Sultanate of Oman, represented by the Ministry of Oil & Gas (seller) and Oman Trading International (Buyer)
03/09/2018	The environmental permit granted to the operator for the Exploration & Production of Oil & Gas was issued by Ministry of Environment and Climate Affairs
13/04/2020	Oman Trading International Limited was officially changed to OQ Trading Limited

07/06/2020	The DNA of Oman, Ministry of Environment and Climate Affairs, issued Letter of Approval (LoA)
Aug 2020	Name of the Ministry of Oil and Gas was amended to the Ministry of Energy and Minerals
Oct 2021	Amendment Agreement signed between OQ Trading Limited and The Government of the Sultanate of Oman, represented by the Ministry of Energy and Minerals
24/11/2021	Communications agreement signed between OQ Trading Limited and Vitol SA, Vitol SA is acting on behalf OQ Trading Limited, to manage the project at Verra and receiving the credits to be issued.

1.8 Project Start Date

The project started operation on 05/01/2020, thus the project start date is 05/01/2020.

1.9 Project Crediting Period

05/01/2020 – 04/01/2030, the crediting period is 10 years fixed from the project start date.

1.10 Project Scale and Estimated GHG Emission Reductions or Removals

Project Scale	
Project	
Large project	√

The project is expected to have an annual average of 473,826 tCO₂ emission reduction over the crediting period. The estimated emission reductions are 4,738,260 tCO₂ over a fixed 10-year crediting period.

Year	Estimated GHG emission reductions or removals (tCO ₂ e)
05/01/2020-31/12/2020	703,773
01/01/2021-31/12/2021	711,550
01/01/2022-31/12/2022	690,203
01/01/2023-31/12/2023	690,203

01/01/2024-31/12/2024	533,662
01/01/2025-31/12/2025	426,930
01/01/2026-31/12/2026	355,775
01/01/2027-31/12/2027	284,620
01/01/2028-31/12/2028	177,887
01/01/2029-31/12/2029	163,656
01/01/2030-04/01/2030	0
Total estimated ERs	4,738,260
Total number of crediting years	10 years
Average annual ERs	473,826

The project started operation since 05/01/2020, and the designed project lifetime is 10 years . Therefore, the emission reduction is zero for period 01/01/2030-04/01/2030.

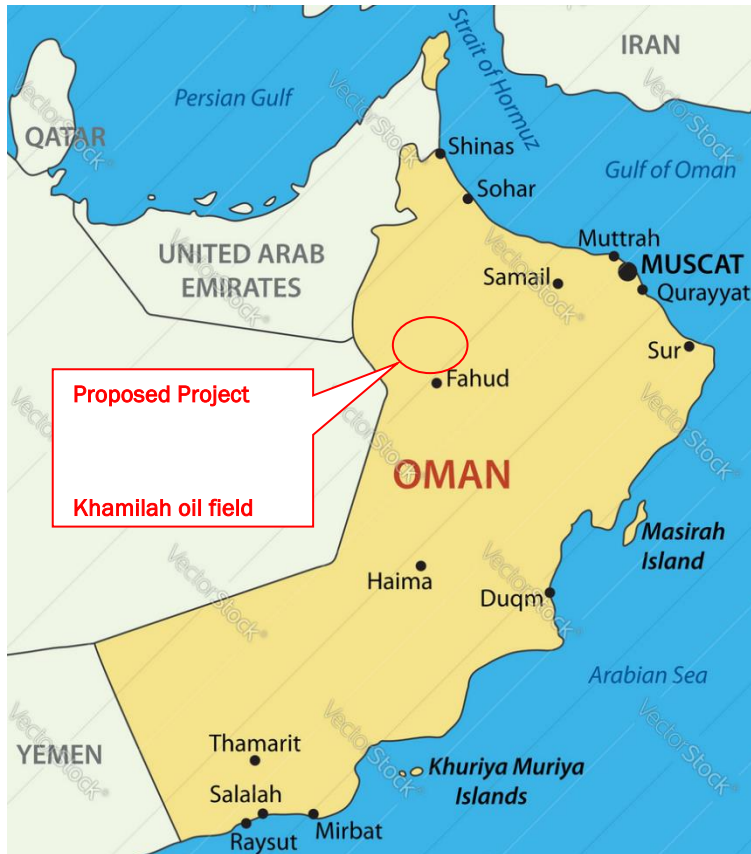
1.11 Description of the Project Activity

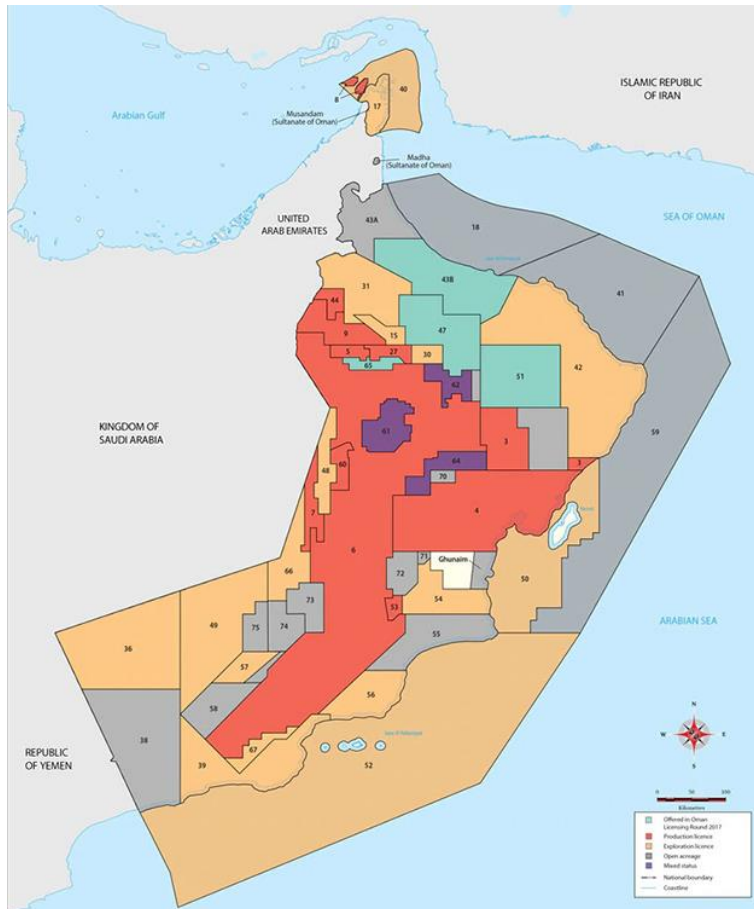
n.a.

1.12 Project Location

The project will collect associated gas from Khamilah oil field at Block-27, Wilayat Ibri of Al-Dhahirah Governorate, the Sultanate of Oman. The recovered gas will be collected and processed at Khamilah station. Al-Dhahirah Region is in the Northern Oman.

Approximate coordinates of Khamilah station are east longitude of 56° 14'38" and north latitude of 22° 43'01". Figure A.1 shows the location of the project.





1.13 Conditions Prior to Project Initiation

The baseline scenario is the same as the conditions existing prior to the project initiation, i.e. flaring of associated gas at the oil production site, the operation of the existing oil and gas infrastructure without processing of any recovered associated gas, and the use of gas-lift gas from the same source and quantity as under the project activity in the gas-lift system.

1.14 Compliance with Laws, Statutes and Other Regulatory Frameworks

The project complies with all relevant laws and regulations by the Sultanate of Oman. Mainly include:

1. Ministerial Decision 5/86 of May 17 1986
2. Law on Conservation of Environment and Prevention of Pollution promulgated by Royal Decree No. 114/2001
3. Regulations for Air Pollution Control from Stationary Sources
4. Oil and Gas Regulation in Oman

The project obtained environmental permit and CDM LOA from Ministry of Environment and Climate Affairs, which approvals well demonstrate that government permits the construction of the project. Consequently, the project is compliance with laws, status and other regulatory frameworks.

1.15 Participation under Other GHG Programs

Projects Registered (or seeking registration) under Other GHG Program(s)

1.15.1 The project has been registered under CDM under AM0009, the CDM reference number is 10584. The crediting period under CDM is 03/08/2020 – 02/08/2030 (Fixed).

The project has not been, and will not seek registration under other GHG Programs, except for CDM and VCS.

Projects Rejected by Other GHG Programs

1.15.2 n.a.

1.16 Other Forms of Credit

1.16.1 Emissions Trading Programs and Other Binding Limits

Oman has not launched any mandatory carbon emission scheme, and GHG emission reduction scheme, thus GHG emission reductions and removals generated by the project has no way in legislation to be used for compliance in Oman.

The project has not been and will not apply for any other GHG emission reduction scheme, such as GCC, GS, etc, and is not in the project data base of these schemes.

1.16.2 The project proponent has signed declaration on not being used for the compliance and no double counting claiming of the credits. The project is not involved in an emission trading program or any other mechanism that includes GHG allowance trading.

Other Forms of Environmental Credit

The project has not sought or received another form of GHG-related environmental credit.

1.17 Sustainable Development Contributions

The project activity will contribute to the sustainable development through the following ways:

Job creation

Implementation of the Project will generate employment opportunities for local contractors and suppliers, while operation and maintenance of the plant will create additional long-term employment opportunities for skilled professionals. For the Project operation PP is planning to employ a number of skilled workers, while more additional jobs were created by sub-contractors for construction of the Project.

Thus, the project achieved **SDG 8 Decent Work and Economic**.¹

Reduction in GHG emissions

The project reduces greenhouse gases emissions as the utilization of recovered gas displaces the use of non-associated gas or other fossil sources at end-users. Without the project, all the associated gas would have been flared without or utilization, the gas used by end-users would have been the non-associated gas from fossil fuel. The project is expected to have an annual average of 4,738,260tCO₂e emission reduction over the crediting period. The estimated emission reductions are 473,826tCO₂e over a fixed 10-year crediting period.

Thus, the project achieved **SDG 13 Climate Action**.²

Reduction of fossil fuel use

The project will reduce the consumption of the fossil fuels of the gas pipeline, which will contribute to increasing Oman's energy security.

Thus, the project achieved **SDG 7 Affordable and Clean Energy**.³

1.18 Additional Information Relevant to the Project

Leakage Management

No leakage management as the project is not an AFOLU project;

Commercially Sensitive Information

No commercially sensitive information has been excluded from the public version of the project description.

Further Information

¹ <https://sdgs.un.org/goals/goal8>

² <https://sdgs.un.org/goals/goal13>

³ <https://sdgs.un.org/goals/goal7>

There is no additional relevant legislative, technical, economic, sectoral, social, environmental, geographic, site-specific and/or temporal information that may have a bearing on the eligibility of the project, the net GHG emission reductions or removals, or the quantification of the project's net GHG emission reductions or removals.

2 SAFEGUARDS

2.1 No Net Harm

n.a.

2.2 Local Stakeholder Consultation

n.a.

2.3 Environmental Impact

n.a.

2.4 Public Comments

This project was open for public comment from 31/05/2022 to 30/06/2022. No comments received during the public comment period.

2.5 AFOLU-Specific Safeguards

n.a.

3 APPLICATION OF METHODOLOGY

3.1 Title and Reference of Methodology

The project activity uses the baseline and monitoring methodology AM0009/Version 07.0: “Recovery and utilization of gas from oil fields that would otherwise be flared or vented”.

Any other methodological tools to which the selected methodology AM0009/Version 07.0 refer:

(a) “Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation (Version 03.0)”;

(b) “Tool for the demonstration and assessment of additionality (Version 07.0.0)”;

(c) “Combined tool to identify the baseline scenario and demonstrate additionality” (Version 7.0);

<https://cdm.unfccc.int/methodologies/DB/ET4NXMVXFQ5C2EJ5L10F8YZIEVLVDA>

3.2 Applicability of Methodology

The baseline and monitoring methodology AM0009 Version 07.0 is applicable to the proposed project; because the project meets all the applicability criteria stated in the methodology.

The detail demonstration of the applicability of the methodology has been displayed in section B.2. of the CDM PDD.

<https://cdm.unfccc.int/filestorage/C/W/S/CWSZBTI4LGOQRU37M2PJOKYE1XN9HA/PDD.pdf?t=Tkt8cjhpcTJxfDag0S6r5yS3R0H2Uwhus3IF>

3.3 Project Boundary

The project boundary encompasses:

- The project oil reservoir and oil wells at at Khamilah oil field area at Block-27, where the associated gas is collected;
- The site where the associated gas was flared in the absence of the project activity;
- The gas recovery, pre-treatment, processing and transportation infrastructures, and compressors;
- The source of gas-lift gas

The greenhouse gases and emission sources included in or excluded from the project boundary have been presented in Section B.3 of the CDM PDD.

<https://cdm.unfccc.int/filestorage/C/W/S/CWSZBTI4LGOQRU37M2PJOKYE1XN9HA/PDD.pdf?t=Tkt8cjhpcTJxfDag0S6r5yS3R0H2Uwhus3IF>

3.4 Baseline Scenario

The scenario existing prior to the start of the implementation of the proposed project activity is flaring of associated gas at the oil production site, the operation of the existing oil and gas infrastructure without processing of any recovered associated gas, and the use of gas-lift gas from the same source and quantity as under the project activity in the gas-lift system. The baseline scenario is the same as the scenario existing prior to the start of implementation of the proposed project activity.

Baseline scenario has been identified in detail in Section B.4 of the CDM PDD.

<https://cdm.unfccc.int/filestorage/C/W/S/CWSZBTI4LG0QRU37M2PJ0KYE1XN9HA/PDD.pdf?t=Tkt8cjhpcTJxfDAgOS6r5yS3R0H2Uwhus3IF>

3.5 Additionality

The additionality has been demonstrated in Section B.5 of the CDM PDD.

<https://cdm.unfccc.int/filestorage/C/W/S/CWSZBTI4LG0QRU37M2PJ0KYE1XN9HA/PDD.pdf?t=Tkt8cjhpcTJxfDAgOS6r5yS3R0H2Uwhus3IF>

3.6 Methodology Deviations

There is no methodology deviations applied for the project.

4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

4.1 Baseline Emissions

n.a.

4.2 Project Emissions

n.a.

4.3 Leakage

n.a.

4.4 Net GHG Emission Reductions and Removals

n.a.

5 MONITORING

5.1 Data and Parameters Available at Validation

n.a.

5.2 Data and Parameters Monitored

n.a.

5.3 Monitoring Plan

n.a.

APPENDIX

n.a.