



IMPACT ASSESSMENT MATRIX FOR MOTUOANE PRODUCTION RIGHT EIA

Identifier	Discipline	Impact	Activity / Alternative	Phase	Event	Pre-Nature	Pre-Extent	Pre-Duration	Pre-Magnitude	Pre-Reversibility	Consequence	Pre-Probability	Pre-Mitigation Significance Score	Pre-Mitigation Significance	Post-Nature	Post-Extent	Post-Duration	Post-Magnitude	Post-Reversibility	Consequence2	Post-Probability	Post-mitigation Significance Score	Post-Mitigation Significance	Confidence	Cumulative Impact	Irreplaceable loss	Priority Factor	Final score	Final Significance
1.1.1	Drilling / Survey	Interference with agriculture and general farming activities	Drilling / Survey	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	2	2	1,25	-7,50	Medium to low -
1.1.2	Drilling		Rotary-Per percussion Drilling	Construction / Operation	Normal operations or events	-1	3	3	4	4	-3,5	4	-14	High -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	2	2	1,25	-7,50	Medium to low -
1.1.3	Drilling		Percussion Drilling	Construction / Operation	Normal operations or events	-1	3	3	4	4	-3,5	4	-14	High -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	2	2	1,25	-7,50	Medium to low -
1.1.4	Drilling		Diamond Core Drilling	Construction / Operation	Normal operations or events	-1	3	3	4	4	-3,5	4	-14	High -	-1	2	2	3	3	-2,5	2	-5	Medium to low -	Medium	2	2	1,25	-6,25	Medium to low -
1.1.5	Survey		Vibroseis Survey	Construction / Operation	Normal operations or events	-1	2	1	3	2	-2	3	-6	Medium to low -	-1	1	1	2	2	-1,5	2	-3	Low -	Medium	1	1	1,00	-3,00	Low -
1.1.6	Survey		AWD / MT Survey	Construction / Operation	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	1	1	1	2	-1,25	2	-2,5	Low -	Medium	1	1	1,00	-2,50	Low -
1.1.7	Production		Production (Gas Plant, Wells & Pipelines)	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	2	-4	Low -	Medium	2	2	1,25	-5,00	Medium to low -
1.1.8	Production		Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	2	2	3	3	-2,5	3	-7,5	Medium to low -	-1	1	2	3	3	-2,25	2	-4,5	Medium to low -	Medium	1	1	1,00	-4,50	Medium to low -
1.1.9	Production		Production (Gas Plant, Wells & Pipelines)	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	2	1,25	-4,38	Medium to low -
1.1.10	Drilling / Survey		Drilling / Survey	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	2	1,25	-4,38	Medium to low -
1.2.1	Drilling / Survey	Impacts related to interference with existing and planned renewable energy land uses for Alternative L1 (co-existence with renewable energy developments)	Drilling / Survey	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	2	2	1,25	-7,50	Medium to low -
1.2.2	Drilling		Rotary-Per percussion Drilling	Construction / Operation	Normal operations or events	-1	3	3	3	3	-3	4	-12	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	2	2	1,25	-7,50	Medium to low -
1.2.3	Drilling		Percussion Drilling	Construction / Operation	Normal operations or events	-1	3	3	3	3	-3	4	-12	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	2	2	1,25	-7,50	Medium to low -
1.2.4	Drilling		Diamond Core Drilling	Construction / Operation	Normal operations or events	-1	3	3	3	3	-3	4	-12	Medium to high -	-1	2	2	3	3	-2,5	2	-5	Medium to low -	Medium	2	2	1,25	-6,25	Medium to low -
1.2.5	Survey		Vibroseis Survey	Construction / Operation	Normal operations or events	-1	2	1	3	2	-2	3	-6	Medium to low -	-1	1	1	2	2	-1,5	2	-3	Low -	Medium	1	1	1,00	-3,00	Low -
1.2.6	Survey		AWD / MT Survey	Construction / Operation	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	1	1	1	2	-1,25	2	-2,5	Low -	Medium	1	1	1,00	-2,50	Low -
1.2.7	Production		Production (Gas Plant, Wells & Pipelines)	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	2	1	1,13	-6,75	Medium to low -
1.2.8	Production		Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	2	2	3	3	-2,5	3	-7,5	Medium to low -	-1	1	2	2	3	-2	3	-6	Medium to low -	Medium	2	1	1,13	-6,75	Medium to low -
1.2.8	Production		Production (Gas Plant, Wells & Pipelines)	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	1	1,13	-3,94	Low -
1.2.10	Drilling / Survey		Drilling / Survey	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	2	1,25	-4,38	Medium to low -
1.3.1	Drilling / Survey	of impacts related to interference with existing and planned renewable energy land uses for Alternative L2 (excluding directly affected renewable energy developments)	Drilling / Survey	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.3.2	Drilling		Rotary-Per percussion Drilling	Construction / Operation	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.3.3	Drilling		Percussion Drilling	Construction / Operation	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.3.4	Drilling		Diamond Core Drilling	Construction / Operation	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.3.5	Survey		Vibroseis Survey	Construction / Operation	Normal operations or events	-1	3	2	3	2	-2,5	3	-7,5	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.3.6	Survey		AWD / MT Survey	Construction / Operation	Normal operations or events	-1	2	2	2	2	-2	3	-6	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.3.7	Production		Production (Proposed Layout & Pipeline)	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.3.8	Production		Production (Proposed Layout & Pipeline)	Operation / Production	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.3.9	Production		Production (Alternative Layout & Pipeline)	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	1	1	1,00	-6,00	Medium to low -
1.3.10	Production		Production (Alternative Layout & Pipeline)	Operation / Production	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.3.11	Production		Production (Proposed Layout & Pipeline)	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
1.3.12	Production		Production (Alternative Layout & Pipeline)	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
1.3.13	Drilling / Survey		Drilling / Survey	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
1.4.1	Drilling / Survey	I to interference with existing and planned mining activities	Drilling / Survey	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.4.2	Drilling		Rotary-Per percussion Drilling	Construction / Operation	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.4.3	Drilling		Percussion Drilling	Construction / Operation	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.4.4	Drilling		Diamond Core Drilling	Construction / Operation	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.4.5	Survey		Vibroseis Survey	Construction / Operation	Normal operations or events	-1	3	2	2	3	-2,5	3	-7,5	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.4.6	Survey		AWD / MT Survey	Construction / Operation	Normal operations or events	-1	2	2	2	2	-2	3	-6	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.4.7	Production		Production (Proposed Layout & Pipeline)	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.4.8	Production		Production (Proposed Layout & Pipeline)	Operation / Production	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.4.9	Production		Production (Alternative Layout & Pipeline)	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
1.4.10	Production		Production (Alternative Layout & Pipeline)	Operation / Production	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -



Identifier	Discipline	Impact	Activity / Alternative	Phase	Event	Pre-Nature	Pre-Extent	Pre-Duration	Pre-Magnitude	Pre-Reversibility	Consequence	Pre-Probability	Pre-Mitigation Significance Score	Pre-Mitigation Significance	Post-Nature	Post-Extent	Post-Duration	Post-Magnitude	Post-Reversibility	Consequence2	Post-Probability	Post-mitigation Significance Score	Post-Mitigation Significance	Confidence	Cumulative Impact	Irreplaceable loss	Priority Factor	Final score	Final Significance
1.4.11	Production	Impacts related	Production (Proposed Layout & Pipeline)	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
1.4.12	Production		Production (Alternative Layout & Pipeline)	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
1.4.13	Drilling / Survey		Drilling / Survey	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
2.1	Drilling / Survey	Impacts related to interference with existing services and infrastructure	Drilling / Survey	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	1	1	1,00	-6,00	Medium to low -
2.2	Drilling		Rotary-Per percussion Drilling	Construction / Operation	Normal operations or events	-1	3	3	4	4	-3,5	4	-14	High -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	1	1	1,00	-6,00	Medium to low -
2.3	Drilling		Percussion Drilling	Construction / Operation	Normal operations or events	-1	3	3	4	4	-3,5	4	-14	High -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	1	1	1,00	-6,00	Medium to low -
2.4	Drilling		Diamond Core Drilling	Construction / Operation	Normal operations or events	-1	3	3	4	4	-3,5	4	-14	High -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	1	1	1,00	-6,00	Medium to low -
2.5	Survey		Vibroseis Survey	Construction / Operation	Normal operations or events	-1	3	2	2	3	-2,5	3	-7,5	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
2.6	Survey		AWD / MT Survey	Construction / Operation	Normal operations or events	-1	2	2	2	2	-2	3	-6	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
2.7	Production		Production (Proposed Layout & Pipeline)	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
2.8	Production		Production (Proposed Layout & Pipeline)	Operation / Production	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
2.9	Production		Production (Alternative Layout & Pipeline)	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
2.10	Production		Production (Alternative Layout & Pipeline)	Operation / Production	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
2.11	Production		Production (Proposed Layout & Pipeline)	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
2.12	Production		Production (Alternative Layout & Pipeline)	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
2.13	Drilling / Survey		Drilling / Survey	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
3.1	Drilling / Survey	Landownership and displacement of landowners and livestock	Drilling / Survey	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	2	-4	Low -	Medium	2	1	1,13	-4,50	Medium to low -
3.2	Drilling		Rotary-Per percussion Drilling	Construction / Operation	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	2	1	1,13	-6,75	Medium to low -
3.3	Drilling		Percussion Drilling	Construction / Operation	Normal operations or events	-1	2	2	3	2	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	2	1	1,13	-6,75	Medium to low -
3.4	Drilling		Diamond Core Drilling	Construction / Operation	Normal operations or events	-1	2	2	3	2	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	2	1	1,13	-6,75	Medium to low -
3.5	Survey		Vibroseis Survey	Construction / Operation	Normal operations or events	-1	2	2	4	2	-2,5	4	-10	Medium to high -	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	Medium	2	1	1,13	-5,91	Medium to low -
3.6	Survey		AWD / MT Survey	Construction / Operation	Normal operations or events	-1	2	2	4	2	-2,5	4	-10	Medium to high -	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	Medium	2	1	1,13	-5,91	Medium to low -
3.7	Production		Production (Proposed Layout & Pipeline)	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	2	-4	Low -	Medium	2	1	1,13	-4,50	Medium to low -
3.8	Production		Production (Proposed Layout & Pipeline)	Operation / Production	Normal operations or events	-1	2	2	4	3	-2,75	4	-11	Medium to high -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	1	1,13	-3,94	Low -
3.9	Production		Production (Alternative Layout & Pipeline)	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	2	-4	Low -	Medium	2	1	1,13	-4,50	Medium to low -
3.10	Production		Production (Alternative Layout & Pipeline)	Operation / Production	Normal operations or events	-1	2	2	4	3	-2,75	4	-11	Medium to high -	-1	1	1	1	2	-1,25	2	-2,5	Low -	Low	2	1	1,13	-2,81	Low -
3.11	Production		Production (Proposed Layout & Pipeline)	Decommissioning & Rehab	Normal operations or events	-1	2	1	3	2	-2	3	-6	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Low	2	1	1,13	-3,94	Low -
3.12	Production		Production (Alternative Layout & Pipeline)	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Low	2	1	1,13	-3,94	Low -
3.13	Drilling / Survey		Drilling / Survey	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	1	1,13	-3,94	Low -
4.1	Drilling / Survey	Nuisance and impact on sense of place	Drilling / Survey	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
4.2	Drilling		Rotary-Per percussion Drilling	Construction / Operation	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	1	1	1,00	-6,00	Medium to low -
4.3	Drilling		Percussion Drilling	Construction / Operation	Normal operations or events	-1	2	2	3	3	-2,5	4	-10	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	1	1	1,00	-6,00	Medium to low -
4.4	Drilling		Diamond Core Drilling	Construction / Operation	Normal operations or events	-1	2	2	4	4	-3	4	-12	Medium to high -	-1	2	2	3	2	-2,25	3	-6,75	Medium to low -	Medium	1	1	1,00	-6,75	Medium to low -
4.5	Survey		Vibroseis Survey	Construction / Operation	Normal operations or events	-1	2	2	4	2	-2,5	4	-10	Medium to high -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
4.6	Survey		AWD / MT Survey	Construction / Operation	Normal operations or events	-1	2	2	4	2	-2,5	4	-10	Medium to high -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
4.7	Production		Production (Proposed Layout & Pipeline)	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
4.8	Production		Production (Proposed Layout & Pipeline)	Operation / Production	Normal operations or events	-1	3	4	4	3	-3,5	4	-14	High -	-1	2	4	2	2	-2,5	3	-7,5	Medium to low -	Medium	1	1	1,00	-7,50	Medium to low -
4.9	Production		Production (Alternative Layout & Pipeline)	Establishment / Planning	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
4.10	Production		Production (Alternative Layout & Pipeline)	Operation / Production	Normal operations or events	-1	3	4	4	3	-3,5	4	-14	High -	-1	2	4	2	2	-2,5	3	-7,5	Medium to low -	Low	1	1	1,00	-7,50	Medium to low -
4.11	Production		Production (Proposed Layout & Pipeline)	Decommissioning & Rehab	Normal operations or events	-1	2	1	3	2	-2	3	-6	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Low	1	1	1,00	-4,00	Low -
4.12	Production		Production (Alternative Layout & Pipeline)	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Low	1	1	1,00	-4,00	Low -
4.13	Drilling / Survey		Drilling / Survey	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
5.1	All	Daytime transport of people, equipment, material and drilling cores	All	Establishment / Planning	Normal operations or events	-1	2	1	1	1	-1,25	1	-1,25	Low -	-1	2	1	1	1	-1,25	1	-1,25	Low -	Medium	1	1	1,00	-1,25	Low -
5.2	All	Daytime transport of people, equipment, material and drilling cores	All	Construction / Development	Normal operations or events	-1	2	1	1	1	-1,25	1	-1,25	Low -	-1	2	1	1	1	-1,25	1	-1,25	Low -	Medium	1	1	1,00	-1,25	Low -



Identifier	Discipline	Impact	Activity / Alternative	Phase	Event	Pre-Nature	Pre-Extent	Pre-Duration	Pre-Magnitude	Pre-Reversibility	Consequence	Pre-Probability	Pre-Mitigation Significance Score	Pre-Mitigation Significance	Post-Nature	Post-Extent	Post-Duration	Post-Magnitude	Post-Reversibility	Consequence2	Post-Probability	Post-mitigation Significance Score	Post-Mitigation Significance	Confidence	Cumulative Impact	Irreplaceable loss	Priority Factor	Final score	Final Significance
5.3	All	Various daytime site preparation activities raising noise levels	All	Construction / Development	Normal operations or events	-1	2	1	2	1	-1,5	2	-3	Low -	-1	2	1	2	1	-1,5	2	-3	Low -	Medium	1	1	1,00	-3,00	Low -
5.4	All	Seismic surveys raising noise levels during the day	All	Construction / Development	Normal operations or events	-1	2	1	2	1	-1,5	2	-3	Low -	-1	2	1	2	1	-1,5	2	-3	Low -	Medium	1	1	1,00	-3,00	Low -
5.5	All	Trenching activities raising noise levels during the day	All	Construction / Development	Normal operations or events	-1	2	1	1	1	-1,25	2	-2,5	Low -	-1	2	1	1	1	-1,25	2	-2,5	Low -	Medium	1	1	1,00	-2,50	Low -
5.6	All	Daytime drilling of boreholes (drilling, generator, compressor)	All	Construction / Development	Normal operations or events	-1	2	1	2	1	-1,5	4	-6	Medium to low -	-1	2	1	2	1	-1,5	2	-3	Low -	Medium	1	1	1,00	-3,00	Low -
5.7	Production	Daytime drilling of boreholes (drilling, generator, compressor)	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	2	1	2	1	-1,5	4	-6	Medium to low -	-1	2	1	2	1	-1,5	2	-3	Low -	Medium	1	1	1,00	-3,00	Low -
5.8	Production	Daytime transport of people, equipment, material and product	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	2	4	1	1	-2	1	-2	Low -	-1	2	4	1	1	-2	1	-2	Low -	Medium	1	1	1,00	-2,00	Low -
5.9	Production	Night-time transport of people, equipment, material and product	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	3	4	1	1	-2,25	1	-2,25	Low -	-1	3	4	1	1	-2,25	1	-2,25	Low -	Medium	1	1	1,00	-2,25	Low -
5.10	Production	Daytime plant operations (generator, compressors, fans, etc.)	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	2	4	1	1	-2	1	-2	Low -	-1	2	4	1	1	-2	1	-2	Low -	Medium	1	1	1,00	-2,00	Low -
5.11	Production	Night-time plant operations (generator, compressors, fans, etc.)	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	3	4	1	1	-2,25	1	-2,25	Low -	-1	3	4	1	1	-2,25	1	-2,25	Low -	Medium	1	1	1,00	-2,25	Low -
5.12	Production	Emergency release or flaring of gas	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Abnormal or unplanned events	-1	3	4	3	1	-2,75	3	-8,25	Medium to low -	-1	3	4	3	1	-2,75	2	-5,5	Medium to low -	Low	1	1	1,00	-5,50	Medium to low -
5.13	All	Dismantling of equipment and infrastructure (daytime)	All	Decommissioning & Rehab	Normal operations or events	-1	2	1	1	1	-1,25	1	-1,25	Low -	-1	2	1	1	1	-1,25	1	-1,25	Low -	Medium	1	1	1,00	-1,25	Low -
5.14	All	Rehabilitation activities (daytime)	All	Decommissioning & Rehab	Normal operations or events	-1	2	1	1	1	-1,25	1	-1,25	Low -	-1	2	1	1	1	-1,25	1	-1,25	Low -	Medium	1	1	1,00	-1,25	Low -
6.1	All	Potential air quality impacts due to the project activities	All	Establishment / Planning	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	1	-1,5	2	-3	Low -	Medium	1	1	1,00	-3,00	Low -
6.3	Drilling		Rotary-Percussion Drilling	Construction / Operational	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	Medium	1	1	1	-6,75	Medium to low -
6.4	Drilling		Percussion Drilling	Construction / Operational	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	Medium	1	1	1	-6,75	Medium to low -
6.5	Drilling		Diamond Core Drilling	Construction / Operational	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	Medium	1	1	1	-6,75	Medium to low -
6.6	Drilling		Rotary-Percussion Drilling	Construction / Operational	Abnormal or unplanned events	-1	3	3	5	4	-3,75	3	-11,25	Medium to high -	-1	2	2	3	3	-2,5	3	-7,5	Medium to low -	Low	1	1	1	-7,5	Medium to low -
6.7	Drilling		Percussion Drilling	Construction / Operational	Abnormal or unplanned events	-1	3	3	5	4	-3,75	3	-11,25	Medium to high -	-1	2	2	3	3	-2,5	3	-7,5	Medium to low -	Low	1	1	1	-7,5	Medium to low -
6.8	Drilling		Diamond Core Drilling	Construction / Operational	Abnormal or unplanned events	-1	3	3	5	4	-3,75	3	-11,25	Medium to high -	-1	2	2	3	3	-2,5	3	-7,5	Medium to low -	Low	1	1	1	-7,5	Medium to low -
6.9	Survey		Vibroseis Survey	Construction / Operational	Normal operations or events	-1	2	1	3	2	-2	3	-6	Medium to low -	-1	2	1	2	1	-1,5	2	-3	Low -	Medium	1	1	1	-3	Low -
6.10	Survey		AWD / MT Survey	Construction / Operational	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	1	-1,5	2	-3	Low -	Low	1	1	1	-3	Low -
6.11	Production		Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	2	1	3	2	-2	3	-6	Medium to low -	-1	2	1	2	1	-1,5	2	-3	Low -	Medium	1	1	1	-3	Low -
6.12	Production		Production (Gas Plant, Wells & Pipelines)	Operation / Production	Abnormal or unplanned events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	1	-1,5	2	-3	Low -	Low	1	1	1	-3	Low -
6.13	Production		Production (Gas Plant, Wells & Pipelines)	Decommissioning & Rehab	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	2	2	1,25	-5	Medium to low -
6.14	Production		Production (Gas Plant, Wells & Pipelines)	Decommissioning & Rehab	Abnormal or unplanned events	-1	3	2	4	3	-3	2	-6	Medium to low -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Low	2	2	1,25	-5,625	Medium to low -
6.15	Drilling		Drilling	Decommissioning & Rehab	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	2	2	1,25	-5	Medium to low -
6.16	Drilling		Drilling	Decommissioning & Rehab	Abnormal or unplanned events	-1	3	2	4	3	-3	2	-6	Medium to low -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Low	2	2	1,25	-5,625	Medium to low -
6.17	Survey		Survey (Vibroseis / AWD / MT)	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	1	1	2	1	-1,25	2	-2,5	Low -	Medium	1	1	1	-2,5	Low -
6.18	Survey		Survey (Vibroseis / AWD / MT)	Decommissioning & Rehab	Abnormal or unplanned events	-1	2	2	4	3	-2,75	2	-5,5	Medium to low -	-1	1	2	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1	-3,5	Low -
7.1	All	Impact of Climate Change Manifestations on the Project	All	All	Normal operations or events	-1	3	5	2	1	-2,75	3	-8,25	Medium to low -	-1	2	5	2	1	-2,5	1	-2,5	Low -	Medium	1	2	1,125	-2,8125	Low -
7.2	All		All	All	Abnormal or unplanned events	-1	3	5	4	4	-4	2	-8	Medium to low -	-1	2	5	3	3	-3,25	1	-3,25	Low -	Medium	1	2	1,125	-3,65625	Low -
7.3	All	Impact of the Project on Climate Change Adaptation or Resilience	All	All	Normal operations or events	-1	3	5	2	3	-3,25	3	-9,75	Medium to high -	-1	2	5	2	1	-2,5	2	-5	Medium to low -	Medium	1	2	1,125	-5,625	Medium to low -
7.4	All		All	All	Abnormal or unplanned events	-1	3	5	4	4	-4	2	-8	Medium to low -	-1	2	5	3	3	-3,25	2	-6,5	Medium to low -	Medium	1	2	1,125	-7,3125	Medium to low -
7.5	All	Impact of Project on Greenhouse Gas Emissions	All	All	Normal operations or events	-1	3	5	3	4	-3,75	3	-11,25	Medium to high -	-1	2	5	2	3	-3	2	-6	Medium to low -	Medium	1	2	1,125	-6,75	Medium to low -
7.6	All		All	All	Abnormal or unplanned events	-1	3	5	4	4	-4	2	-8	Medium to low -	-1	2	5	3	3	-3,25	2	-6,5	Medium to low -	Medium	1	2	1,125	-7,3125	Medium to low -



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8.1.1	All	Site clearing and vegetation removal may cause increased turbidity and sediment loads in groundwater. Sediment loads may potentially be transported by drainages systems regionally, however will only last for the construction phase of the project. This impact will potentially be reversible only by incurring significant time and costs and has a low probability (pre-mitigation) and improbable probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	4	2	2	3	-2,75	2	-5,5	Medium to low -	-1	3	1	2	2	-2	1	-2	Low -	Medium	2	3	1,375	-2,75	Low -
8.1.2	All	Groundwater deterioration and siltation due to contaminated stormwater run-off from the construction area as well as drilling pads into recharge areas. Contaminated stormwater may potentially be transported by drainages systems regionally, however will only last for the construction phase of the project. This impact will potentially be reversible only by incurring significant time and costs and has a medium probability (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	4	2	2	3	-2,75	3	-8,25	Medium to low -	-1	3	1	2	2	-2	2	-4	Low -	Medium	2	3	1,375	-5,5	Medium to low -
8.1.3	All	Poor quality leachate including sewage and domestic wastewater emanating from the construction camp may have a negative impact on groundwater quality. Contaminants originating from domestic wastewater and sewage may potentially reach the local, potable water aquifer, however will only last for the construction phase of the project. This impact will potentially be reversible without incurring significant time and costs and has a medium probability (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	2	2	3	2	-2,25	3	-6,75	Medium to low -	-1	1	2	2	1	-1,5	2	-3	Low -	Medium	2	3	1,375	-4,125	Low -



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8.1.4	All	Mobilisation and maintenance of heavy vehicles, drilling rig as well as associated machinery on-site may cause hydrocarbon contamination of groundwater resources. Hydrocarbon pollutants originating from heavy vehicles and drilling rigs may potentially reach the regional, potable water aquifer, however will only last for the construction phase of the project. The reversibility of this impact may potentially be prohibitively high time and cost and has a medium probability (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	4	2	3	4	-3,25	3	-9,75	Medium to high -	-1	3	2	2	2	-2,25	2	-4,5	Medium to low -	Medium	2	3	1,375	-6,1875	Medium to low -
8.1.5	All	Borehole drilling can introduce various potential contaminants including drilling muds/additives and hydrocarbons into host-aquifers which may have a detrimental effect on the water quality. These contaminants may reach the local potable water aquifer however will only last for the construction phase of the project. The reversibility of this impact may potentially be prohibitively high time and cost and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	3	2	3	4	-3	4	-12	Medium to high -	-1	2	1	2	3	-2	3	-6	Medium to low -	Medium	2	3	1,375	-8,25	Medium to low -
8.1.6	All	Drilling activities can disturb sediments and may result in silt formation in groundwater and can cause siltation within the potable water aquifer. These sediments may reach the local potable water aquifer however will only last for the construction phase of the project. This impact will potentially be reversible only by incurring significant time and costs and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	3	2	2	3	-2,5	4	-10	Medium to high -	-1	2	1	2	3	-2	3	-6	Medium to low -	Medium	2	3	1,375	-8,25	Medium to low -



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8.1.7	All	Encountering of major water strikes and blow-out during the drilling process may reduce local groundwater levels. Removal of water from storage may negatively impact on the local potable water aquifer however will only last for the construction phase of the project. This impact will potentially be reversible only by incurring significant time and costs and has a medium probability (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated low as there is a low probability that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	3	1,375	-4,8125	Medium to low -
8.1.8	All	Groundwater pollution as a result of produced formation water or wastewater spills and seepage from drilling sumps. Contaminants originating from wastewater spills and drilling sumps may potentially reach the local, potable water aquifer, however will only last for the construction phase of the project. The reversibility of this impact may potentially be prohibitively high time and cost and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	3	2	3	4	-3	4	-12	Medium to high -	-1	2	1	2	3	-2	3	-6	Medium to low -	Medium	2	3	1,375	-8,25	Medium to low -
8.1.9	All	Handling of borehole drilling chips may pose a risk to groundwater contamination. Contaminants originating from the drilling chips may potentially reach the site, potable water aquifer, however will only last for the construction phase of the project. This impact will potentially be reversible without incurring significant time and costs and has a medium (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	2	2	2	3	-2,25	3	-6,75	Medium to low -	-1	1	1	1	2	-1,25	2	-2,5	Low -	Medium	2	3	1,375	-3,4375	Low -



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8.1.10	All	Borehole construction in terms of casing installation and concrete works might have a negative impact on groundwater quality. Contaminants originating from the concrete works may potentially reach the local, potable water aquifer, however will only last for the construction phase of the project. This impact will potentially be reversible without incurring significant time and costs and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	3	2	3	3	-2,75	4	-11	Medium to high -	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	Medium	2	3	1,375	-7,21875	Medium to low -
8.1.11	All	Poor storage and management of hazardous chemical substances on-site may cause groundwater pollution. Contaminants originating from hazardous chemical substances may potentially reach the local, potable water aquifer, however will only last for the construction phase of the project. This impact will potentially be reversible without incurring significant time and costs and has a medium probability (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	3	2	3	3	-2,75	3	-8,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	3	1,375	-4,8125	Medium to low -
8.1.12	All	Anthropogenic activities and movement related to the construction phase can cause potential groundwater pollution. Contaminants originating from anthropogenic activities may potentially reach the regional, potable water aquifer, however will only last for the construction phase of the project. This impact will potentially be reversible without incurring significant time and costs and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	4	2	3	3	-3	4	-12	Medium to high -	-1	2	1	1	2	-1,5	3	-4,5	Medium to low -	Medium	2	3	1,375	-6,1875	Medium to low -



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8.1.13	All	Groundwater pollution as a result of contact with drilling fluids, additives and lubricants. Contaminants originating from drilling fluids and additives may potentially reach the local, potable water aquifer, however will only last for the construction phase of the project. The reversibility of this impact may potentially be prohibitively high time and cost and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Normal operations or events	-1	3	2	3	4	-3	4	-12	Medium to high -	-1	3	1	3	3	-2,5	3	-7,5	Medium to low -	Medium	2	3	1,375	-10,3125	Medium to high -
8.1.14	All	Groundwater pollution as a result of unforeseen events such as saline water encountered during well blow-out. Contaminants originating from saline water may potentially reach the local, potable water aquifer, however will only last for the construction phase of the project. This impact will potentially be reversible without incurring significant time and costs and has a high probability (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Abnormal or unplanned events	-1	3	2	3	3	-2,75	4	-11	Medium to high -	-1	2	1	2	3	-2	3	-6	Medium to low -	Medium	1	3	1,25	-7,5	Medium to low -
8.1.15	All	Unplanned releases of formation water. Contaminants originating from deeper, formation water may potentially reach the local, potable water aquifer, however will only last for the construction phase of the project. This impact will potentially be reversible without incurring significant time and costs and has a low probability (pre-and post mitigation) of occurring. The cumulative impact is rated low as it is improbable that formation water will be encountered simultaneously. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Abnormal or unplanned events	-1	2	2	3	3	-2,5	2	-5	Medium to low -	-1	1	1	2	2	-1,5	2	-3	Low -	Medium	1	3	1,25	-3,75	Low -



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8.1.16	All	Unplanned event such as well explosion can release saline formation water and gasses. Contaminants originating from deeper, formation water may potentially reach the local, potable water aquifer, however will only last for the construction phase of the project. This impact will potentially be reversible without incurring significant time and costs and has a low probability (pre-and post mitigation) of occurring. The cumulative impact is rated low as it is improbable that formation water will be encountered simultaneously. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Construction / Development	Abnormal or unplanned events	-1	2	2	3	3	-2,5	2	-5	Medium to low -	-1	1	1	2	2	-1,5	2	-3	Low -	Medium	1	3	1,25	-3,75	Low -
8.2.1	All	Inadequate casing or cementing can create a vertical flow pathway between different aquifers/ hydrostratigraphical units or between the production zone and potable aquifer. Contaminants originating from the deeper, saline aquifer may potentially reach the local, potable water aquifer which can last for the duration of the operational phase of the project. The reversibility of this impact may potentially be prohibitively high time and cost and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated high as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	3	4	3	4	-3,5	4	-14	High -	-1	2	3	2	3	-2,5	3	-7,5	Medium to low -	Medium	3	3	1,5	-11,25	Medium to high -
8.2.2	All	Migration of saline groundwater or groundwater with a different chemical composition originating from the deep, fractured aquifer to the overlying, potable aquifer(s) during the gas production phase can cause mixing between aquifers. Contaminants originating from wastewater spills and drilling sumps may potentially reach the local, potable water aquifer, which can last for the duration of the operational phase of the project. The reversibility of this impact may potentially be prohibitively high time and cost and has a high probability of occurring. The cumulative impact is rated high as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	3	4	3	4	-3,5	4	-14	High -	-1	2	3	2	2	-2,25	2	-4,5	Medium to low -	Medium	3	3	1,5	-6,75	Medium to low -



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8.2.3	All	Upward migration of stray formation gas from the deep, fractured aquifer to the overlying, potable aquifer(s) during the gas production phase can cause mixing between aquifers. Stray gas originating from the deep aquifer may potentially reach the local, potable water aquifer which can last for the duration of the operational phase of the project. The reversibility of this impact may potentially be prohibitively high time and cost and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	3	4	3	4	-3,5	4	-14	High -	-1	2	3	3	2	-2,5	3	-7,5	Medium to low -	Medium	3	3	1,5	-11,25	Medium to high -
8.2.4	All	Multiple gas wells can collectively affect groundwater levels, quality and hydraulic connectivity over a larger area. This impact can last for the duration of the operational phase of the project. This impact will potentially be reversible without incurring significant time and costs and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated high as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	4	4	3	3	-3,5	4	-14	High -	-1	3	3	2	2	-2,5	3	-7,5	Medium to low -	Medium	3	3	1,5	-11,25	Medium to high -
8.2.5	All	Gas production can alter pressure differences and alter hydraulic gradients between different hydrostratigraphical units resulting in modification of local groundwater flow pathways. This impact can last for the duration of the operational phase of the project. The reversibility of this impact may potentially be prohibitively high time and cost and has a high probability (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated high as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	3	4	3	4	-3,5	4	-14	High -	-1	2	3	2	3	-2,5	3	-7,5	Medium to low -	Medium	3	3	1,5	-11,25	Medium to high -



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8.2.6	All	Poor quality leachate may emanate from the gas production zone which may have a negative impact on groundwater quality. Contaminants originating from the gas production zone may potentially reach the local, potable water aquifer which can last for the duration of the operational phase of the project. This impact will potentially be reversible without incurring significant time and costs and has a medium probability (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	3	4	3	3	-3,25	3	-9,75	Medium to high -	-1	2	3	2	2	-2,25	2	-4,5	Medium to low -	Medium	2	3	1,375	-6,1875	Medium to low -
8.2.7	All	Poor storage and management of hazardous chemical substances on-site may cause groundwater pollution. Contaminants originating from hazardous chemical substances may potentially reach the local, potable water aquifer which can last for the duration of the operational phase of the project. This impact will potentially be reversible without incurring significant time and costs and has a medium probability (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	3	4	3	3	-3,25	3	-9,75	Medium to high -	-1	2	3	2	2	-2,25	2	-4,5	Medium to low -	Medium	2	3	1,375	-6,1875	Medium to low -
8.2.8	All	Operation and maintenance of heavy vehicles as well as associated machinery on-site may cause hydrocarbon contamination of groundwater resources. Hydrocarbon pollutants originating from heavy vehicles and drilling rigs may potentially reach the regional, potable water aquifer which can last for the duration of the operational phase of the project. This impact will potentially be reversible without incurring significant time and costs and has a medium probability (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	4	4	3	3	-3,5	3	-10,5	Medium to high -	-1	3	3	2	2	-2,5	2	-5	Medium to low -	Medium	2	3	1,375	-6,875	Medium to low -



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8.2.9	All	Leaking pipelines may cause contamination of groundwater resources. Pollutants originating from the pipeline infrastructure may potentially reach the regional, potable water aquifer however which will last for teh duration of the operational phase of the project. The reversibility of this impact may potentially be prohibitively high time and cost and has a medium probability (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	4	4	3	3	-3.5	3	-10,5	Medium to high -	-1	3	3	2	2	-2,5	2	-5	Medium to low -	Medium	2	3	1,375	-6,875	Medium to low -
8.3.1	All	Poorly plugged and sealed decommissioned production boreholes can create preferred groundwater flow pathways causing migration of saline groundwater or groundwater with a different chemical composition originating from the deep, fractured aquifer to the overlying, potable aquifer(s) during the decommissioning phase can cause mixing between aquifers. Saline water may potentially reach the regional, potable water aquifer which may have a long term impact and will continue through the decommissioning phase. The reversibility of this impact may potentially be prohibitively high time and cost and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated high as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Decommissioning & Rehab	Normal operations or events	-1	3	4	3	4	-3.5	4	-14	High -	-1	2	3	2	3	-2,5	3	-7,5	Medium to low -	Medium	3	3	1,5	-11,25	Medium to high -



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8.3.2	All	Poorly plugged and sealed decommissioned production boreholes can create preferred groundwater flow pathways causing an upward migration of stray formation gas from the deep, fractured aquifer to the overlying, potable aquifer(s) during the decommissioning phase can cause mixing between aquifers. Formation gas may potentially reach the regional, potable water aquifer which may have a long term impact and will continue through the decommissioning phase. The reversibility of this impact may potentially be prohibitively high time and cost and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated high as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Decommissioning & Rehab	Normal operations or events	-1	3	4	3	4	-3,5	4	-14	High -	-1	2	3	2	3	-2,5	3	-7,5	Medium to low -	Medium	3	3	1,5	-11,25	Medium to high -
8.3.3	All	Multiple gas wells can collectively affect groundwater levels, quality and hydraulic connectivity over a larger area. This impact may potentially have a negative effect on the regional, potable water aquifer which may have a long term impact and will continue through the decommissioning phase. The reversibility of this impact may potentially be prohibitively high time and cost and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated high as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Decommissioning & Rehab	Normal operations or events	-1	3	4	3	4	-3,5	4	-14	High -	-1	2	3	2	3	-2,5	3	-7,5	Medium to low -	Medium	3	3	1,5	-11,25	Medium to high -
8.3.4	All	Poor quality leachate may emanate from production zone footprint areas which may have a negative impact on groundwater quality. Poor quality leachate may potentially reach the regional, potable water aquifer which may have a long term impact and will continue through the decommissioning phase. The reversibility of this impact may potentially be prohibitively high time and cost and has a medium probability (pre-mitigation) and a low probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Decommissioning & Rehab	Normal operations or events	-1	3	4	3	3	-3,25	3	-9,75	Medium to high -	-1	2	3	2	2	-2,25	2	-4,5	Medium to low -	Medium	2	3	1,375	-6,1875	Medium to low -



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8.3.5	All	De-mobilisation of heavy vehicles, drilling rig as well as associated machinery on-site may cause hydrocarbon contamination of groundwater resources. Hydrocarbon pollutants originating from heavy vehicles and drilling rigs may potentially reach the regional, potable water aquifer however will only last for the de-mobilisation period of the decommissioning phase of the project. The reversibility of this impact may potentially be prohibitively high time and cost and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Decommissioning & Rehab	Normal operations or events	-1	4	2	3	4	-3,25	4	-13	Medium to high -	-1	3	1	2	3	-2,25	2	-4,5	Medium to low -	Medium	2	3	1,375	-6,1875	Medium to low -
8.3.6	All	Site de-establishment and removal of infrastructure can potentially cause increased turbidity and sediment loads in groundwater. Sediment loads may potentially be transported by drainages systems regionally, however will only last for the de-establishment period of the decommissioning phase of the project. This impact will potentially be reversible only by incurring significant time and costs and has a high probability (pre-mitigation) and a medium probability (post-mitigation) of occurring. The cumulative impact is rated medium as it is probable that this impact may result in a spatial and temporal cumulative change. The value of the resource being impacted on is rated as high due to the shallow aquifer being used to supply 50% or more of domestic water for a given area, and for which there are no reasonable available alternative sources should the aquifer be impacted upon.	Exploration & Production	Decommissioning & Rehab	Normal operations or events	-1	2	2	2	3	-2,25	4	-9	Medium to high -	-1	1	1	1	2	-1,25	3	-3,75	Low -	Medium	2	3	1,375	-5,15625	Medium to low -
9.1.1	Survey	Altered surface flows from soil compaction and creation of preferential flow paths leading to erosion and sedimentation	Survey (Vibroseis / AWD / MT)	Construction / Operation	Normal operations or events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	1	1	3	2	-1,75	2	-3,5	Low -	High	1	1	1	-3,5	Low -
9.1.2	Survey	Soil compaction leading to increased risk of erosion and sedimentation	Survey (Vibroseis / AWD / MT)	Construction / Operation	Normal operations or events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	1	1	3	2	-1,75	2	-3,5	Low -	High	1	1	1	-3,5	Low -
9.1.3	Survey	Disturbance to wetland vegetation and soil leading to proliferation of alien invasive plants	Survey (Vibroseis / AWD / MT)	Construction / Operation	Normal operations or events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	1	2	3	2	-2	2	-4	Low -	High	1	1	1	-4	Low -
9.1.4	Survey	Impaired water quality from hydrocarbon spills and leaks and associated contaminated runoff	Survey (Vibroseis / AWD / MT)	Construction / Operation	Abnormal or unplanned events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	1	1	3	2	-1,75	2	-3,5	Low -	Low	1	1	1	-3,5	Low -
9.1.5	Survey	Impaired water quality from hydrocarbon spills and leaks and associated contaminated runoff from rehabilitation activities	Survey (Vibroseis / AWD / MT)	Decommissioning & Rehab	Abnormal or unplanned events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	1	1	3	2	-1,75	2	-3,5	Low -	Low	1	1	1	-3,5	Low -
9.1.6	Survey	Continued degradation of wetlands from improper post-exploration rehabilitation	Survey (Vibroseis / AWD / MT)	Decommissioning & Rehab	Normal operations or events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	1	1	3	2	-1,75	2	-3,5	Low -	Low	1	1	1	-3,5	Low -
9.1.7	Survey	Improvement in wetland functionality from successful rehabilitation	Survey (Vibroseis / AWD / MT)	Decommissioning & Rehab	Normal operations or events	1	1	1	2	2	1,5	2	3	Low +	1	2	2	4	1	2,25	3	6,75	Low to medium +	Low	1	1	1	6,75	Medium to low +



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9.2.1	Production	Altered surface and shallow subsurface flow patterns from trench excavation, backfilling, and compaction, leading to erosion and sedimentation	Production (Gas Gathering Pipelines)	Construction / Development	Normal operations or events	-1	2	2	4	3	-2,75	4	-11	Medium to high -	-1	1	2	3	2	-2	3	-6	Medium to low -	High	2	1	1,125	-6,75	Medium to low -
9.2.2	Production	Soil disturbance and compaction along the trench corridor leading to increased erosion and sedimentation risk	Production (Gas Gathering Pipelines)	Construction / Development	Normal operations or events	-1	2	2	4	3	-2,75	4	-11	Medium to high -	-1	1	2	3	2	-2	3	-6	Medium to low -	High	2	1	1,125	-6,75	Medium to low -
9.2.3	Production	Disturbance to wetland vegetation and soils within the pipeline corridor leading to habitat degradation and proliferation of alien invasive plants	Production (Gas Gathering Pipelines)	Construction / Development	Normal operations or events	-1	2	2	4	3	-2,75	4	-11	Medium to high -	-1	1	2	3	2	-2	3	-6	Medium to low -	High	2	1	1,125	-6,75	Medium to low -
9.2.4	Production	Impaired water quality from sediment-laden runoff, trench water, and contaminated runoff associated with construction activities	Production (Gas Gathering Pipelines)	Construction / Development	Normal operations or events	-1	2	2	4	3	-2,75	4	-11	Medium to high -	-1	1	2	3	2	-2	3	-6	Medium to low -	High	2	1	1,125	-6,75	Medium to low -
9.2.5	Production	Impaired water quality from accidental spills and leaks of fuels, oils, and other hazardous substances associated with machinery and construction activities	Production (Gas Gathering Pipelines)	Construction / Development	Normal operations or events	-1	2	2	4	3	-2,75	4	-11	Medium to high -	-1	1	2	3	2	-2	3	-6	Medium to low -	High	2	1	1,125	-6,75	Medium to low -
9.2.6	Production	Temporary obstruction or diversion of overland flow due to topsoil stripping, spoil stockpiling, and placement of construction materials	Production (Gas Gathering Pipelines)	Construction / Development	Normal operations or events	-1	2	2	4	3	-2,75	4	-11	Medium to high -	-1	1	2	3	2	-2	3	-6	Medium to low -	High	2	1	1,125	-6,75	Medium to low -
9.2.7	Production	Altered surface and shallow subsurface flow patterns from poorly managed trenching, collapse, or storm-related failure of trench sections leading to erosion and sedimentation	Production (Gas Gathering Pipelines)	Construction / Development	Abnormal or unplanned events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Medium	2	1	1,125	-5,06	Medium to low -
9.2.8	Production	Severe erosion and sedimentation resulting from intense rainfall on open trenches, exposed soils, and stockpiles	Production (Gas Gathering Pipelines)	Construction / Development	Abnormal or unplanned events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Medium	2	1	1,125	-5,06	Medium to low -
9.2.9	Production	Disturbance to wetland vegetation and soils leading to accelerated alien invasive plant establishment following failed rehabilitation or excessive disturbance	Production (Gas Gathering Pipelines)	Construction / Development	Abnormal or unplanned events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Medium	2	1	1,125	-5,06	Medium to low -
9.2.10	Production	Significant water quality deterioration from major hydrocarbon spills, chemical leaks, or contaminated runoff entering wetlands or drainage features	Production (Gas Gathering Pipelines)	Construction / Development	Abnormal or unplanned events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Medium	2	1	1,125	-5,06	Medium to low -
9.2.11	Production	Altered overland flow and localised erosion at poorly reinstated pipeline crossings and maintenance access points	Production (Gas Gathering Pipelines)	Operation / Production	Normal operations or events	-1	2	2	2	2	-2	2	-4	Low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	1	1,125	-3,94	Low -
9.2.12	Production	Disturbance to wetland-edge vegetation from routine maintenance access and associated proliferation of alien invasive plant species	Production (Gas Gathering Pipelines)	Operation / Production	Normal operations or events	-1	2	2	2	2	-2	2	-4	Low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	1	1,125	-3,94	Low -
9.2.13	Production	Impaired water quality from accidental pipeline leakage or maintenance-related hydrocarbon contamination	Production (Gas Gathering Pipelines)	Operation / Production	Abnormal or unplanned events	-1	2	2	2	2	-2	2	-4	Low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	1	1,125	-3,94	Low -
9.2.14	Production	Persistent erosion, altered drainage, and water quality impairment resulting from inadequate rehabilitation of the trench corridor and disturbed wetland crossings	Production (Gas Gathering Pipelines)	Decommissioning & Rehab	Normal operations or events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	2	1	3	2	-2	3	-6	Medium to low -	Medium	2	1	1,125	-6,75	Medium to low -
9.2.15	Production	Continued proliferation of alien invasive plants and reduced wetland habitat quality due to failed revegetation of disturbed gathering line servitudes	Production (Gas Gathering Pipelines)	Decommissioning & Rehab	Normal operations or events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	2	1	3	2	-2	3	-6	Medium to low -	Medium	2	1	1,125	-6,75	Medium to low -
9.2.16	Production	Improvement in wetland functionality from successful rehabilitation	Production (Gas Gathering Pipelines)	Decommissioning & Rehab	Normal operations or events	1	2	1	2	2	1,75	2	3,5	Low +	1	2	2	4	2	2,5	2	5	Low to medium +	Medium	2	1	1,125	5,63	Medium to low +
9.3.1	Production	Site clearance, earthworks and establishment of the Gas Plant footprint may result in the loss of native vegetation, soil disturbance, erosion, sediment mobilisation and indirect impacts to nearby wetlands and drainage features.	Production (Gas Plant)	Construction / Development	Normal operations or events	-1	2	4	4	3	-3,25	3	-9,75	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	High	1	1	1	-6,00	Medium to low -
9.3.2	Production	Storage and handling of fuels, oils, chemicals and construction materials may result in impaired water quality due to contaminated runoff, accidental spills or leaks reaching nearby wetlands and drainage features.	Production (Gas Plant)	Construction / Development	Normal operations or events	-1	3	4	3	3	-3,25	3	-9,75	Medium to high -	-1	1	1	2	2	-1,5	2	-3	Low -	High	1	1	1	-3,00	Low -
9.3.3	Production	Routine operation of the Gas Plant may result in altered runoff patterns, increased stormwater volumes, localised erosion, and contaminated runoff from hardened surfaces, reducing the quality of adjacent freshwater habitat.	Production (Gas Plant)	Construction / Development	Normal operations or events	-1	2	2	3	3	-2,5	2	-5	Medium to low -	-1	1	2	2	2	-1,75	2	-3,5	Low -	High	1	1	1	-3,50	Low -



Identifier	Discipline	Impact	Activity / Alternative	Phase	Event	Pre-Nature	Pre-Extent	Pre-Duration	Pre-Magnitude	Pre-Reversibility	Consequence	Pre-Probability	Pre-Mitigation Significance Score	Pre-Mitigation Significance	Post-Nature	Post-Extent	Post-Duration	Post-Magnitude	Post-Reversibility	Consequence2	Post-Probability	Post-mitigation Significance Score	Post-Mitigation Significance	Confidence	Cumulative Impact	Irreplaceable loss	Priority Factor	Final score	Final Significance
9.3.4	Production	Routine maintenance activities, vehicle movement and disturbance within and around the Gas Plant may result in vegetation disturbance, soil compaction and the establishment or spread of alien invasive plant species in adjacent disturbed areas.	Production (Gas Plant)	Operation / Production	Normal operations or events	-1	2	2	3	3	-2.5	2	-5	Medium to low -	-1	1	1	2	2	-1.5	2	-3	Low -	Low	1	1	1	-3,00	Low -
9.3.5	Production	A major release of hydrocarbons, condensate, chemicals or other hazardous substances at the Gas Plant or associated production infrastructure could result in contamination of nearby wetlands through runoff, infiltration or accidental discharge, thereby reducing water quality and habitat condition.	Production (Gas Plant)	Operation / Production	Abnormal or unplanned events	-1	3	3	4	3	-3,25	3	-9,75	Medium to high -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	High	1	1	1	-4,50	Medium to low -
9.3.6	Production	Failure of produced water or process water containment systems could result in discharge of contaminated water to surrounding wetland areas, causing salinisation, chemical contamination and impairment of wetland ecological functioning	Production (Gas Plant)	Operation / Production	Abnormal or unplanned events	-1	3	4	4	3	-3,5	3	-10,5	Medium to high -	-1	2	3	3	2	-2,5	2	-5	Medium to low -	High	1	1	1	-5,00	Medium to low -
9.3.7	Production	A fire or explosion at the Gas Plant may result in direct damage to adjacent habitat and secondary wetland impacts through contaminated runoff, firefighting activities and emergency access disturbance.	Production (Gas Plant)	Operation / Production	Abnormal or unplanned events	-1	2	3	4	4	-3,25	3	-9,75	Medium to high -	-1	2	2	3	3	-2,5	2	-5	Medium to low -	High	1	1	1	-5,00	Medium to low -
9.3.8	Production	Failure of sewage, sanitation or waste handling infrastructure at the Gas Plant or associated support facilities may lead to the release of untreated effluent or waste into nearby wetland systems, causing contamination and habitat degradation	Production (Gas Plant)	Operation / Production	Abnormal or unplanned events	-1	3	3	4	3	-3,25	3	-9,75	Medium to high -	-1	2	1	3	2	-2	2	-4	Low -	Low	1	1	1	-4,00	Low -
9.3.9	Production	Failure of stormwater management infrastructure at the Gas Plant during abnormal rainfall or operational upset conditions may cause sediment-laden or contaminated runoff to enter wetlands, resulting in reduced water quality and altered wetland functioning.	Production (Gas Plant)	Operation / Production	Abnormal or unplanned events	-1	3	3	4	3	-3,25	3	-9,75	Medium to high -	-1	2	1	3	2	-2	2	-4	Low -	Medium	1	1	1	-4,00	Low -
9.3.10	Production	Inadequate rehabilitation and closure of the Gas Plant footprint may result in persistent erosion, altered runoff patterns, establishment of alien invasive species and reduced recovery of freshwater-sensitive habitat.	Production (Gas Plant)	Decommissioning & Rehab	Normal operations or events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	1	1	2	2	-1,5	2	-3	Low -	Medium	1	1	1	-3,00	Low -
9.3.11	Production	Successful rehabilitation of the Gas Plant footprint and associated disturbed areas may improve local habitat condition and support the recovery of freshwater ecosystem functioning over the longer term.	Production (Gas Plant)	Decommissioning & Rehab	Normal operations or events	-1	2	2	4	3	-2,75	3	-8,25	Medium to low -	-1	1	1	1	1	-1	2	-2	Low -	Medium	1	1	1	-2,00	Low -
10.1	Drilling / Survey	cultural Potential (Loss of Cultivated Lands, Soil Compaction, Soil Erosion & Soil Contamination)	Drilling / Survey	Establishment / Planning	Normal operations or events	-1	2	1	2	1	-1,5	4	-6	Medium to low -	-1	2	1	2	1	-1,5	2	-3	Low -	Medium	2	2	1,25	-3,75	Low -
10.2	Drilling		Rotary-Perccussion Drilling	Construction / Development	Normal operations or events	-1	2	3	3	4	-3	5	-15	High -	-1	2	2	3	2	-2,25	3	-6,75	Medium to low -	Medium	3	2	1,38	-9,28	Medium to high -
10.3	Drilling		Perccussion Drilling	Construction / Development	Normal operations or events	-1	2	3	3	4	-3	5	-15	High -	-1	2	2	3	2	-2,25	3	-6,75	Medium to low -	Medium	3	2	1,38	-9,28	Medium to high -
10.4	Drilling		Diamond Core Drilling	Construction / Development	Normal operations or events	-1	2	3	3	4	-3	5	-15	High -	-1	2	2	3	2	-2,25	3	-6,75	Medium to low -	Medium	3	2	1,38	-9,28	Medium to high -
10.5	Drilling		Rotary-Perccussion Drilling	Construction / Development	Abnormal or unplanned events	-1	2	3	4	4	-3,25	4	-13	Medium to high -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Low	3	2	1,38	-6,19	Medium to low -
10.6	Drilling		Perccussion Drilling	Construction / Development	Abnormal or unplanned events	-1	2	3	4	4	-3,25	4	-13	Medium to high -	-1	2	2	3	3	-2,5	2	-5	Medium to low -	Low	3	2	1,38	-6,88	Medium to low -
10.7	Drilling		Diamond Core Drilling	Construction / Development	Abnormal or unplanned events	-1	2	3	4	4	-3,25	4	-13	Medium to high -	-1	2	2	3	3	-2,5	2	-5	Medium to low -	Low	3	2	1,38	-6,88	Medium to low -
10.8	Survey		Vibroseis Survey	Construction / Operational	Normal operations or events	-1	2	1	3	2	-2	3	-6	Medium to low -	-1	1	1	2	2	-1,5	2	-3	Low -	Medium	3	2	1,38	-4,13	Low -
10.9	Survey		AWD / MT Survey	Construction / Operational	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	1	1	1	2	-1,25	2	-2,5	Low -	Medium	3	2	1,38	-3,44	Low -
10.10	Survey		Vibroseis Survey	Construction / Operational	Abnormal or unplanned events	-1	2	1	4	2	-2,25	2	-4,5	Medium to low -	-1	1	1	2	2	-1,5	2	-3	Low -	Low	3	2	1,38	-4,13	Low -
10.11	Survey		AWD / MT Survey	Construction / Operational	Abnormal or unplanned events	-1	2	1	3	2	-2	2	-4	Low -	-1	1	1	1	2	-1,25	2	-2,5	Low -	Low	3	2	1,38	-3,44	Low -
10.12	Production		Production (Gas Plant, Wells & Pipelines)	Establishment / Planning	Normal operations or events	-1	2	1	2	1	-1,5	4	-6	Medium to low -	-1	2	1	2	1	-1,5	2	-3	Low -	Medium	2	2	1,25	-3,75	Low -
10.13	Production		Production (Gas Plant, Wells & Pipelines)	Construction / Development	Normal operations or events	-1	2	3	3	4	-3	4	-12	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	2	2	1,25	-7,50	Medium to low -
10.14	Production		Production (Gas Plant, Wells & Pipelines)	Construction / Operation	Abnormal or unplanned events	-1	2	3	4	4	-3,25	3	-9,75	Medium to high -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Medium	2	2	1,25	-5,63	Medium to low -
10.15	Production		Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	2	3	4	4	-3,25	4	-13	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	2	2	1,25	-7,50	Medium to low -
10.16	Production		Production (Gas Plant, Wells & Pipelines)	Operation / Production	Abnormal or unplanned events	-1	2	4	5	4	-3,75	3	-11,25	Medium to high -	-1	2	3	4	3	-3	2	-6	Medium to low -	Medium	2	2	1,25	-7,50	Medium to low -



Identifier	Discipline	Impact	Activity / Alternative	Phase	Event	Pre-Nature	Pre-Extent	Pre-Duration	Pre-Magnitude	Pre-Reversibility	Consequence	Pre-Probability	Pre-Mitigation Significance Score	Pre-Mitigation Significance	Post-Nature	Post-Extent	Post-Duration	Post-Magnitude	Post-Reversibility	Consequence2	Post-Probability	Post-mitigation Significance Score	Post-Mitigation Significance	Confidence	Cumulative Impact	Irreplaceable loss	Priority Factor	Final score	Final Significance
10.17	Production	Soils and Agric	Production (Gas Plant, Wells & Pipelines)	Decommissioning & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	3	2	-2	2	-4	Low -	Medium	2	1	1,13	-4,50	Medium to low -
10.18	Survey		Survey (Vibroseis / AWD / MT)	Decommissioning / Closure & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	1	1,13	-3,94	Low -
10.19	Drilling		Drilling	Decommissioning / Closure & Rehab	Normal operations or events	-1	2	1	3	2	-2	3	-6	Medium to low -	-1	2	1	3	2	-2	2	-4	Low -	Medium	2	1	1,13	-4,50	Medium to low -
11.1.1	All	Destruction, further loss and fragmentation of the vegetation community	Exploration & Production	Construction / Operation	Normal operations or events	-1	3	4	3	3	-3,25	4	-13	Medium to high -	-1	1	2	2	2	-1,75	3	-5,25	Medium to low -	High	1	1	1,00	-5,25	Medium to low -
11.1.2	All		Exploration & Production	Construction / Operation	Normal operations or events	-1	2	4	3	3	-3	4	-12	Medium to high -	-1	1	2	2	2	-1,75	2	-3,5	Low -	High	1	1	1,00	-3,50	Low -
11.1.3	All		Exploration & Production	Construction / Operation	Normal operations or events	-1	3	4	4	3	-3,5	4	-14	High -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	1	1	1,00	-6,00	Medium to low -
11.1.4	All		Exploration & Production	Construction / Operation	Normal operations or events	-1	3	3	4	4	-3,5	4	-14	High -	-1	2	2	2	2	-2	2	-4	Low -	High	1	1	1,00	-4,00	Low -
11.1.5	All		Exploration & Production	Decommissioning & Rehab	Normal operations or events	-1	3	4	3	3	-3,25	3	-9,75	Medium to high -	1	1	2	2	2	1,75	2	3,5	Low +	Medium	2	2	1,25	4,38	Medium to low +
11.1.6	All		Exploration & Production	Decommissioning & Rehab	Normal operations or events	-1	3	4	3	3	-3,25	3	-9,75	Medium to high -	1	1	2	2	2	1,75	2	3,5	Low +	Medium	2	2	1,25	4,38	Medium to low +
11.2.1	Drilling / Survey	Impacts on natural habitat (Habitat clearing and ecological corridor disruption, Encroachment into sensitive habitats and ecological corridors, Temporary habitat disturbance and fragmentation, Destruction, loss and fragmentation of natural habitats & Permanent habitat transformation and loss of ecological function)	Drilling / Survey	Planning	Normal operations or events	-1	3	2	3	3	-2,75	4	-11	Medium to high -	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	Medium	2	2	1,25	-6,56	Medium to low -
11.2.2	Drilling		Rotary-Per percussion Drilling	Construction / Operational	Normal operations or events	-1	4	3	4	3	-3,5	4	-14	High -	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	Medium	2	2	1,25	-6,56	Medium to low -
11.2.3	Drilling		Per cussion Drilling	Construction / Operational	Normal operations or events	-1	4	3	4	3	-3,5	4	-14	High -	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	Medium	2	2	1,25	-6,56	Medium to low -
11.2.4	Drilling		Diamond Core Drilling	Construction / Operational	Normal operations or events	-1	4	3	4	3	-3,5	4	-14	High -	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	Medium	2	2	1,25	-6,56	Medium to low -
11.2.5	Survey		Vibroseis Survey	Construction / Operational	Normal operations or events	-1	3	3	3	3	-3	3	-9	Medium to high -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	1	1,13	-3,94	Low -
11.2.6	Survey		AWD / MT Survey	Construction / Operational	Normal operations or events	-1	3	3	2	2	-2,5	3	-7,5	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	1	1,13	-3,94	Low -
11.2.7	Production		Production (Gas Plant, Wells & Pipelines)	Construction / Development	Normal operations or events	-1	3	3	3	3	-3	4	-12	Medium to high -	-1	2	1	3	2	-2	3	-6	Medium to low -	Medium	2	2	1,25	-7,50	Medium to low -
11.2.8	Production		Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	3	3	2	3	-2,75	3	-8,25	Medium to low -	-1	2	1	3	2	-2	3	-6	Medium to low -	Medium	2	2	1,25	-7,50	Medium to low -
11.2.9	Production		Production (Gas Plant, Wells & Pipelines)	Decommissioning & Rehab	Normal operations or events	-1	3	1	2	2	-2	3	-6	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
11.2.10	Survey		Survey (Vibroseis / AWD / MT)	Decommissioning / Closure & Rehab	Normal operations or events	-1	3	1	2	2	-2	3	-6	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
11.2.11	Drilling		Drilling	Decommissioning / Closure & Rehab	Normal operations or events	-1	3	1	3	3	-2,5	3	-7,5	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Low	1	1	1,00	-3,50	Low -
11.3.1	Drilling / Survey	Impacts on Vegetation and Flora species (Encroachment into sensitive habitats and protected flora areas, Vegetation disturbance and habitat fragmentation, Destruction, further loss and fragmentation of vegetation communities, Loss of protected flora species, & introduction and spread of alien invasive species)	Drilling / Survey	Establishment / Planning	Normal operations or events	-1	3	2	4	3	-3	4	-12	Medium to high -	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	Medium	2	2	1,25	-6,56	Medium to low -
11.3.2	Drilling		Rotary-Per cussion Drilling	Construction / Operational	Normal operations or events	-1	3	4	4	3	-3,5	4	-14	High -	-1	2	2	3	2	-2,25	3	-6,75	Medium to low -	Medium	2	2	1,25	-8,44	Medium to low -
11.3.3	Drilling		Per cussion Drilling	Construction / Operational	Normal operations or events	-1	3	4	4	3	-3,5	4	-14	High -	-1	2	2	3	2	-2,25	3	-6,75	Medium to low -	Medium	2	2	1,25	-8,44	Medium to low -
11.3.4	Drilling		Diamond Core Drilling	Construction / Operational	Normal operations or events	-1	3	4	4	3	-3,5	4	-14	High -	-1	2	2	3	2	-2,25	3	-6,75	Medium to low -	Medium	2	2	1,25	-8,44	Medium to low -
11.3.5	Survey		Vibroseis Survey	Construction / Operational	Normal operations or events	-1	3	3	3	3	-3	3	-9	Medium to high -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	1	1,13	-3,94	Low -
11.3.6	Survey		AWD / MT Survey	Construction / Operational	Normal operations or events	-1	3	3	2	2	-2,5	3	-7,5	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	2	1	1,13	-3,94	Low -
11.3.7	Production		Production (Gas Plant, Wells & Pipelines)	Construction / Development	Normal operations or events	-1	3	4	4	3	-3,5	4	-14	High -	-1	2	2	3	2	-2,25	3	-6,75	Medium to low -	Medium	2	2	1,25	-8,44	Medium to low -
11.3.8	Production		Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	3	4	3	3	-3,25	3	-9,75	Medium to high -	-1	2	1	3	2	-2	3	-6	Medium to low -	Medium	2	2	1,25	-7,50	Medium to low -
11.3.9	Production		Production (Gas Plant, Wells & Pipelines)	Decommissioning & Rehab	Normal operations or events	-1	3	1	3	3	-2,5	3	-7,5	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Low	1	1	1,00	-3,50	Low -
11.3.10	Survey		Survey (Vibroseis / AWD / MT)	Decommissioning / Closure & Rehab	Normal operations or events	-1	3	1	2	2	-2	3	-6	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
11.3.11	Drilling		Drilling	Decommissioning / Closure & Rehab	Normal operations or events	-1	3	1	3	3	-2,5	3	-7,5	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Low	1	1	1,00	-3,50	Low -
11.4.1	Drilling / Survey	Impacts on sensitive habitats, movement corridors, movement of mammals, reptiles, amphibians and birds, mortality of fauna resulting from vehicle collisions, mortality of fauna through vegetation clearing, disturbance of ecological life cycles (breeding, feeding, migration), Loss of SCC and protected fauna species, habitat modification, Mortality of fauna and habitat incidents, Long-term disturbance and short-term disturbance and maintenance activities & Temporary disturbance activities	Drilling / Survey	Establishment / Planning	Normal operations or events	-1	2	2	4	3	-2,75	4	-11	Medium to high -	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	Medium	2	2	1,25	-6,56	Medium to low -
11.4.2	Drilling		Rotary-Per cussion Drilling	Construction / Development	Normal operations or events	-1	3	4	4	3	-3,5	4	-14	High -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Medium	2	2	1,25	-5,63	Medium to low -
11.4.3	Drilling		Per cussion Drilling	Construction / Development	Normal operations or events	-1	3	4	4	3	-3,5	4	-14	High -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Medium	2	2	1,25	-5,63	Medium to low -
11.4.4	Drilling		Diamond Core Drilling	Construction / Development	Normal operations or events	-1	3	4	4	3	-3,5	4	-14	High -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Medium	2	2	1,25	-5,63	Medium to low -
11.4.5	Drilling		Rotary-Per cussion Drilling	Construction / Development	Abnormal or unplanned events	-1	3	4	5	4	-4	4	-16	High -	-1	2	2	4	3	-2,75	2	-5,5	Medium to low -	Low	2	2	1,25	-6,88	Medium to low -
11.4.6	Drilling		Per cussion Drilling	Construction / Development	Abnormal or unplanned events	-1	3	4	5	4	-4	4	-16	High -	-1	2	2	4	3	-2,75	2	-5,5	Medium to low -	Low	2	2	1,25	-6,88	Medium to low -
11.4.7	Drilling		Diamond Core Drilling	Construction / Development	Abnormal or unplanned events	-1	3	4	5	4	-4	4	-16	High -	-1	2	2	4	3	-2,75	2	-5,5	Medium to low -	Low	2	2	1,25	-6,88	Medium to low -
11.4.8	Survey		Vibroseis Survey	Construction / Operational	Normal operations or events	-1	2	3	3	3	-2,75	4	-11	Medium to high -	-1	2	2	2	2	-2	2	-4	Low -	Medium	2	1	1,13	-4,50	Medium to low -



Identifier	Discipline	Impact	Activity / Alternative	Phase	Event	Pre-Nature	Pre-Extent	Pre-Duration	Pre-Magnitude	Pre-Reversibility	Consequence	Pre-Probability	Pre-Mitigation Significance Score	Pre-Mitigation Significance	Post-Nature	Post-Extent	Post-Duration	Post-Magnitude	Post-Reversibility	Consequence2	Post-Probability	Post-mitigation Significance Score	Post-Mitigation Significance	Confidence	Cumulative Impact	Irreplaceable loss	Priority Factor	Final score	Final Significance
11.4.9	Survey	Impacts on Fauna species (Disturbance and displacement of fauna wetlands and breeding areas, Disturbance and temporary displacement of fauna due to vehicle movement, noise and vibration, Direct mortality and disturbance of nesting, breeding and refuge sites, Direct mortality and disturbance of nesting, excavations and vehicle movement, Disturbance of earthworks, trenching, excavations and vehicle movement, Disturbance of migration and nesting) due to noise, vibration, lighting and dust through disturbance, poaching, trapping, road mortalities and degradation of habitat resulting from contamination and pollution, displacement of fauna resulting from operational well infrastructure disturbance and displacement of fauna associated with decommissioning and displacement of fauna associated with decommissioning	AWD / MT Survey	Construction / Operational	Normal operations or events	-1	2	3	2	2	-2,25	4	-9	Medium to high -	-1	2	2	2	2	-2	2	-4	Low -	Medium	2	1	1,13	-4,50	Medium to low -
11.4.10	Survey		Vibroseis Survey	Construction / Operational	Abnormal or unplanned events	-1	2	3	5	4	-3,5	2	-7	Medium to low -	-1	2	2	4	2	-2,5	2	-5	Medium to low -	Low	2	2	1,25	-6,25	Medium to low -
11.4.11	Survey		AWD / MT Survey	Construction / Operational	Abnormal or unplanned events	-1	2	3	4	3	-3	2	-6	Medium to low -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Low	2	2	1,25	-5,63	Medium to low -
11.4.12	Production		Production (Gas Plant, Wells & Pipelines)	Establishment / Planning	Normal operations or events	-1	2	2	4	3	-2,75	4	-11	Medium to high -	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	Medium	2	2	1,25	-6,56	Medium to low -
11.4.13	Production		Production (Gas Plant, Wells & Pipelines)	Construction / Development	Normal operations or events	-1	3	4	4	3	-3,5	4	-14	High -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Medium	2	2	1,25	-5,63	Medium to low -
11.4.11	Production		Production (Gas Plant, Wells & Pipelines)	Construction / Development	Abnormal or unplanned events	-1	3	4	5	4	-4	4	-16	High -	-1	2	2	4	3	-2,75	2	-5,5	Medium to low -	Low	2	2	1,25	-6,88	Medium to low -
11.4.15	Production		Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	3	4	4	3	-3,5	4	-14	High -	-1	2	2	3	2	-2,25	2	-4,5	Medium to low -	Medium	2	2	1,25	-5,63	Medium to low -
11.4.16	Production		Production (Gas Plant, Wells & Pipelines)	Operation / Production	Abnormal or unplanned events	-1	3	4	5	4	-4	4	-16	High -	-1	2	2	4	3	-2,75	2	-5,5	Medium to low -	Low	2	2	1,25	-6,88	Medium to low -
11.4.17	Production		Production (Gas Plant, Wells & Pipelines)	Decommissioning & Rehab	Normal operations or events	-1	2	1	3	3	-2,25	3	-6,75	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Low	1	1	1,00	-3,50	Low -
11.4.18	Survey		Survey (Vibroseis / AWD / MT)	Decommissioning / Closure & Rehab	Normal operations or events	-1	2	1	2	2	-1,75	3	-5,25	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
11.4.19	Drilling		Drilling	Decommissioning / Closure & Rehab	Normal operations or events	-1	2	1	3	3	-2,25	3	-6,75	Medium to low -	-1	2	1	2	2	-1,75	2	-3,5	Low -	Medium	1	1	1,00	-3,50	Low -
12.1	All	Destruction of disturbance of structures older than 60 years and associated material culture Potential disturbance of an identified LSA site	Exploration & Production	Construction / Operation	Normal operations or events	-1	1	5	2	5	-3,25	2	-6,5	Medium to low -	-1	1	1	1	1	-1	1	-1	Low -	Medium	1	1	1,00	-1,00	Low -
12.2	All	Destruction or disturbance of identified graves	Exploration & Production	Construction / Operation	Normal operations or events	-1	2	5	3	5	-3,75	2	-7,5	Medium to low -	-1	1	1	1	1	-1	2	-2	Low -	High	1	2	1,13	-2,25	Low -
12.3	All	Destruction or disturbance of undiscovered below-ground heritage features.	Exploration & Production	Construction / Operation	Normal operations or events	-1	1	5	4	5	-3,75	3	-11,25	Medium to high -	-1	1	1	2	3	-1,75	3	-5,25	Medium to low -	Medium	1	2	1,13	-5,91	Medium to low -
12.4	Production	Disturbance / Destruction of Heritage Features	Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	2	5	3	5	-3,75	3	-11,25	Medium to high -	-1	1	1	2	2	-1,5	2	-3	Low -	Medium	1	2	1,13	-3,38	Low -
12.5	All		Exploration & Production	Decommissioning & Rehab	Normal operations or events	-1	1	5	2	5	-3,25	2	-6,5	Medium to low -	-1	1	1	2	2	-1,5	2	-3	Low -	Medium	1	2	1,13	-3,38	Low -
13.1	Survey	Loss of fossil Heritage	Survey (Vibroseis / AWD / MT)	Construction / Operation	Normal operations or events	-1	1	1	2	2	-1,5	2	-3	Low -	-1	1	1	2	2	-1,5	1	-1,5	Low -	High	1	1	1,00	-1,50	Low -
13.2	Drilling		Drilling	Construction / Development	Normal operations or events	-1	1	5	5	5	-4	4	-16	High -	-1	1	5	5	5	-4	2	-8	Medium to low -	High	3	3	1,50	-12,00	Medium to high -
13.3	Production		Production (Gas Plant, Wells & Pipelines)	Operation / Production	Normal operations or events	-1	1	5	5	5	-4	4	-16	High -	-1	1	5	5	5	-4	2	-8	Medium to low -	High	3	3	1,50	-12,00	Medium to high -
13.4	All		Exploration & Production	Decommissioning & Rehab	Normal operations or events	-1	1	5	5	5	-4	3	-12	Medium to high -	-1	1	5	5	5	-4	1	-4	Low -	Medium	3	3	1,50	-6,00	Medium to low -
14.1	Exploration / Production	Catastrophic well failure (Jet fires, 1% fatality ≤4 m)	Exploration & Production Wells	Construction / Operation	Abnormal or unplanned events	-1	2	2	3	2	-2,25	3	-6,75	Medium to low -	-1	2	2	2	1	-1,75	2	-3,5	Low -	Low	1	1	1,00	-3,50	Low -
14.2		Rupture / Jet fires / Flash fires (1% fatality ≤68 m)	Gas Gathering Pipelines	Construction / Operation	Abnormal or unplanned events	-1	3	3	3	3	-3	3	-9	Medium to high -	-1	3	3	2	2	-2,5	2	-5	Medium to low -	Low	2	2	1,25	-6,25	Medium to low -
14.3		Catastrophic failure (Asphyxiant cloud, 1% fatality ≤62 m)	Gas Plant & Associated Facilities	Operation / Production	Abnormal or unplanned events	-1	3	2	3	2	-2,5	3	-7,5	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Low	2	2	1,25	-5,00	Medium to low -
14.4		Catastrophic failure (1% fatality ≤44 m)	Gas Plant & Associated Facilities	Operation / Production	Abnormal or unplanned events	-1	3	2	3	2	-2,5	3	-7,5	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Low	2	2	1,25	-5,00	Medium to low -
14.5		Surge tank failure (PAC-2 = 3 032 m, PAC-3 = 699 m, 1% fatality = 255 m)	Gas Plant & Associated Facilities	Operation / Production	Abnormal or unplanned events	-1	5	3	4	3	-3,75	4	-15	High -	-1	4	2	3	2	-2,75	3	-8,25	Medium to low -	Low	3	3	1,50	-12,38	Medium to high -
14.6		Catastrophic tanker failure (Flash fires ≤206 m, VCE ≤125 m)	Gas Plant & Associated Facilities	Operation / Production	Abnormal or unplanned events	-1	4	2	4	3	-3,25	4	-13	Medium to high -	-1	3	2	2	3	-2,5	3	-7,5	Medium to low -	Low	2	2	1,25	-9,38	Medium to high -
14.7		Instantaneous tank failure (Flash fires ≤206 m, VCE ≤117 m)	Gas Plant & Associated Facilities	Operation / Production	Abnormal or unplanned events	-1	4	3	4	3	-3,5	4	-14	High -	-1	3	3	3	3	-3	3	-9	Medium to high -	Low	3	3	1,50	-13,50	Medium to high -
14.8		Instantaneous tanker failure (Flash fires ≤214 m, VCE ≤110 m)	Gas Plant & Associated Facilities	Operation / Production	Abnormal or unplanned events	-1	4	3	4	3	-3,5	4	-14	High -	-1	3	3	3	3	-3	3	-9	Medium to high -	Low	3	3	1,50	-13,50	Medium to high -
15.1	Exploration / Production	Impact on farming livelihoods and interference with existing land uses	Exploration & Production	Construction / Operation	Normal operations or events	-1	3	3	4	3	-3,25	4	-13	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	High	1	1	1,00	-6,00	Medium to low -
15.2		Water contamination and groundwater safety	Exploration & Production	Construction / Operation	Normal operations or events	-1	3	3	4	4	-3,5	3	-10,5	Medium to high -	-1	2	2	2	3	-2,25	2	-4,5	Medium to low -	Medium	1	1	1,00	-4,50	Medium to low -
15.3		Damage to farm roads, services and infrastructure	Exploration & Production	Construction / Operation	Normal operations or events	-1	3	2	4	3	-3	4	-12	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	High	1	1	1,00	-6,00	Medium to low -
15.4		Uncertainty around servitudes, property values and land-use rights	Exploration & Production	Construction / Operation	Normal operations or events	-1	3	4	3	3	-3,25	3	-9,75	Medium to high -	-1	2	3	2	2	-2,25	2	-4,5	Medium to low -	Medium	1	1	1,00	-4,50	Medium to low -
15.5		Impacts on safety and security of local residents	Exploration & Production	Construction / Operation	Normal operations or events	-1	3	3	3	3	-3	4	-12	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	High	1	1	1,00	-6,00	Medium to low -
15.6		Increase in poaching incidents and stock theft	Exploration & Production	Construction / Operation	Normal operations or events	-1	3	3	3	3	-3	4	-12	Medium to high -	-1	3	2	2	2	-2,25	2	-4,5	Medium to low -	Medium	1	1	1,00	-4,50	Medium to low -
15.7		Veld fire risk	Exploration & Production	Construction / Operation	Normal operations or events	-1	3	2	4	3	-3	3	-9	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	Medium	1	1	1,00	-6,00	Medium to low -
15.8		Nuisance factors (dust, noise, visual intrusion and sense of place)	Exploration & Production	Construction / Operation	Normal operations or events	-1	2	2	2	2	-2	3	-6	Medium to low -	-1	1	2	2	1	-1,5	2	-3	Low -	High	1	1	1,00	-3,00	Low -
15.9		Community perceptions and fears regarding gas safety	Exploration & Production	Operation / Production	Normal operations or events	-1	3	3	3	2	-2,75	3	-8,25	Medium to low -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
15.10		Social pathologies associated with a temporary workforce and contractor behaviour	Exploration & Production	Construction / Development	Normal operations or events	-1	3	3	3	3	-3	3	-9	Medium to high -	-1	2	2	2	2	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -



Identifier	Discipline	Impact	Activity / Alternative	Phase	Event	Pre-Nature	Pre-Extent	Pre-Duration	Pre-Magnitude	Pre-Reversibility	Consequence	Pre-Probability	Pre-Mitigation Significance Score	Pre-Mitigation Significance	Post-Nature	Post-Extent	Post-Duration	Post-Magnitude	Post-Reversibility	Consequence2	Post-Probability	Post-mitigation Significance Score	Post-Mitigation Significance	Confidence	Cumulative Impact	Irreplaceable loss	Priority Factor	Final score	Final Significance
15.11		Overlapping land use and cumulative impacts with renewable energy projects	Exploration & Production	All	Normal operations or events	-1	4	3	3	3	-3,25	4	-13	Medium to high -	-1	3	2	2	3	-2,5	3	-7,5	Medium to low -	Medium	1	1	1,00	-7,50	Medium to low -
15.12		Distrust arising from previous development projects	Exploration & Production	Establishment / Planning	Normal operations or events	-1	3	2	3	3	-2,75	4	-11	Medium to high -	-1	2	2	2	2	-2	3	-6	Medium to low -	High	1	1	1,00	-6,00	Medium to low -
15.13		Gender and social inclusion impacts	Exploration & Production	Construction / Operation	Normal operations or events	-1	3	2	3	2	-2,5	3	-7,5	Medium to low -	-1	3	2	2	1	-2	2	-4	Low -	Medium	1	1	1,00	-4,00	Low -
15.14		Job creation, local procurement and economic expectations	Exploration & Production	Construction / Operation	Normal operations or events	1	3	3	2	2	2,5	3	7,5	Low to medium +	1	3	4	3	3	3,25	4	13	Medium to high +	High	1	1	1,00	13,00	Medium to high +