



ZERØSIX

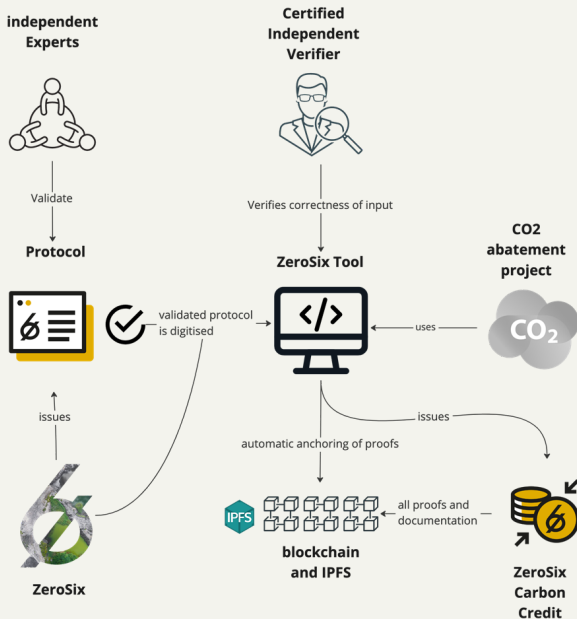
Production Reserves Carbon Offset Protocol

Methodology for the generation of carbon credit offsets from the avoided GHG emissions of oil and gas proved developed reserves

15 May 2023

ZeroSix // v.1.0





2. Eligibility

1. Imminent production of hydrocarbons
2. Verifiable supporting information
3. Mechanism for legal protection of retired reserves
4. Regulatorily compliant
5. Business as usual production forecast
6. Justification for expectation of geologic permanence

2.6 Additionality

Regulatory Test

Common Practice Test

SEC Compliant 3rd Party Reserve Report

Can any third party engineering be utilized for reserves determination, or is Ryder Scott the only firm approved?

Yes, any engineer or firm meeting the SEC criteria for a qualified person can generate the reserves report. Ryder-Scott provides independent verification of the report and the supporting documentation. They are also highly qualified to generate 3rd party reserve reports, and have been doing so for decades. Ryder-Scott have strong internal fire walls to be able to provide independent third party reports and permanence justification for project owners and deliver independent verification for the Zerofox Protocol.

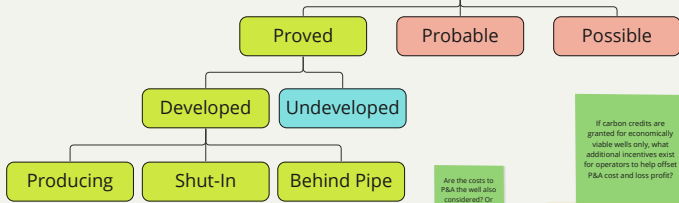
Can you please confirm that carbon credits can be generated by PDP, PDSI and PDBP? What about PUDs?

Yes, currently credits are issued for highest three categories of proved developed reserves. The Zerofox Protocol requires these categories to deliver additionality of the carbon credits. Undeveloped reserves would fall into the avoidance category and may be part of the future demand for engineered credits at which time, Zerofox will integrate them into a digitized methodology.

Financial Barrier Test

Economically Producing Reserve

Reserves

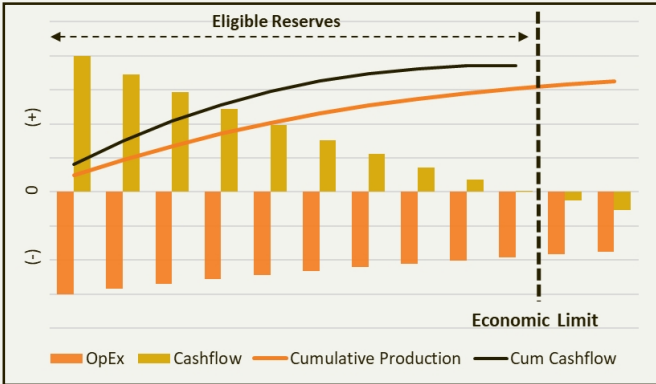


Are the costs to P&A the well also considered? Or just their reserves and economics?

The breakeven price factors in the cost to P&A the well. This is critical, because the process of generating credits is the abandonment of well abandonment requirements. Carbon credits generate to delay and discount P&A expenditures to present value. When this consideration, we find the calculated breakeven price for most projects are very reasonable based on current reported production values for engineered credits.

If carbon credits are granted for economically viable wells only, what additional incentives exist for operators to help offset P&A cost and loss profit?

Carbon credit assets can offset the P&A liability and add value through the arbitrage between the market value of carbon credits and the profit margin of the producing assets. By retiring wells early the operator is also reducing their operational risk and expenses, and can drastically improve their overall operating efficiency and reduce P&A liability.



What price forecast is used to determine the economic limit of the well?

SEC guidelines, arithmetic average of the first of the month pricing for the past 12 months

3. Accuracy

Fuel Cycle	Fuel Cycle Emissions	Scope 1	Scope 2	Scope 3
Downstream	65-80%			End use of Produced Oil, Gas, and NGLs (Sec 3.1 & 3.2)
Refining	5-15%			Refining of Produced Oil (Sec 3.3)
Upstream	15-20%	Fugitive Methane Emissions (Sec 3.4) Flaring (Sec 3.4) Venting (Sec 3.4) Onsite Combustion Operating Producing Facilities	Purchased Energy Materials Acquired	Fugitive Methane during Transportation (Sec 3.4) Transportation and Distribution Purchased Goods and Services Waste Capital Goods

Do you also calculate reduction of scope 1 emissions for prevented activities (for example cancelling a workover / refrac) in your avoidance numbers?

In this initial version of the protocol we do not factor in operational emission abatement, as that is very project specific. As industry standards are adopted, such as the Stanford OPGEE methodology, we will integrate consideration for incremental emissions into our crediting protocol.

3rd Party Reserves Report (SEC)

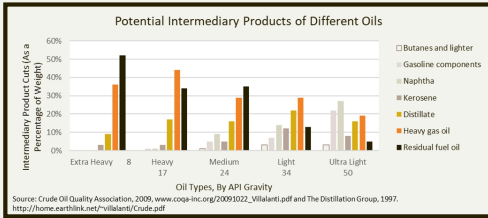
Gas Analysis Report

Oil Sales Receipts

$$GHG_{Total} = GHG_{oil} + GHG_{refining} + GHG_{gas\ comb.} + GHG_{gas\ vent.} + GHG_{NGL}$$

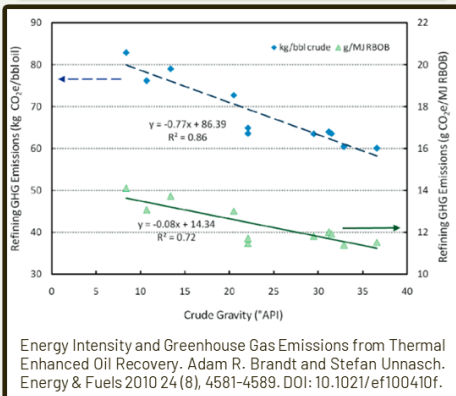
Scope 3: Intrinsic Oil Phase Emissions

$$GHG_{oil} = [-0.9656 * API + 458.95] * V_{oil}$$



Scope 3: Oil Phase Refining

$$GHG_{refining} = [-0.77 * API + 86.39] * V_{oil}$$



Scope 1&3: Methane

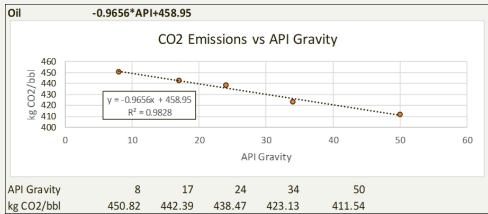
$$GHG_{gas\ comb.} = 52.91 * GHV * (1 - FE) * V_{gas}$$

Scope 1&3: Fugitive Methane

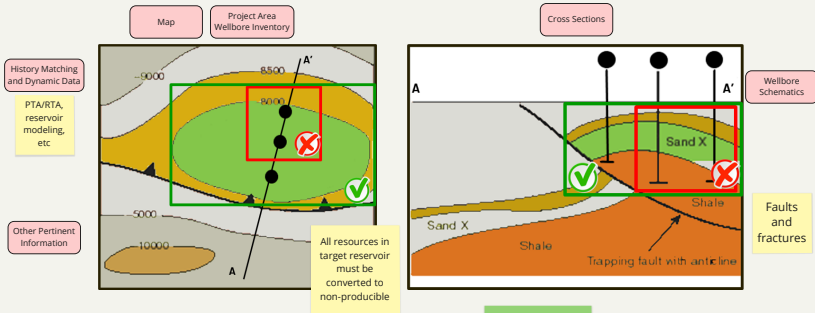
$$GHG_{vent} = 52.91 * GWP_{CH_4} * FE * V_{gas}$$

Scope 3: NGL

$$GHG_{NGL} = [x_{ethane} * 170.1 + x_{propane} * 240.24 + x_{butane} * 280.14 + x_{pentane} * 323.4] * V_{NGL}$$



2.7 Geologic



6.1 Operational

- No new permit applications
- For duration of Land Reclamation Period
- Future automated monitoring of activity by platform, through regulatory filings database

P&A Execution

Is reservoir simulation required for marginal well's certification of permanence?

Reservoir simulation is not mandatory; it is a suggestion of possible technical analysis to establish permanence.

Is having those restrictive covenants not making ZeroSix's approach less competitive?

2.8 Legal

- Legal barriers to future development and extraction of credited reserves
- Declaration of Restrictive Covenants

Government controlled

Private Mineral Owner Compensation

Owned by operator

A buffer pool of 1% (1/10th of forestry protocols) is suggested to account for impermanence, reversal risk, internal leakage, and uncertainty? What formula was used to determine this low of a number?

We used a comprehensive matrix to assess risks of reversal, over-leakage, and leakage. We address many of these risks in the protocol such as using P&A exercises to quantify uncertainties, operational specifications, performance requirements, and we address many of the reversal risks. Also the cost of reversal of these projects is extremely low compared to for example a forestry project, which can burn down and be replaced in a matter of hours, whereas O&G projects take decades to build. The reserves with any credit penalty being everything they can to accelerate that process. Furthermore, the right regulatory course in the O&G industry provides further support and protection against operational leakage risk. This when combined using the same quantitative process used in forestry projects and CC, we arrived at a reversal percentage of 1% to account for impermanence.

We believe having a legal barrier in place against future development is foundational to being able to claim long term permanence. This sentiment is voiced by many of our buyers. While it is an additional step for the operator, having this protection in place makes YOUR credits (created through the ZeroSix Platform) much more competitive in the market.

So, just to be clear, you have no allowance for leakage, correct?

The ZeroSix protocol and platform account for operational leakage (Project Impermanence) through a buffer account which is held and administered by ZeroSix post the minting of Tokens.

2.9 Buffer Account



8. Transparency

3rd Party Independent Verification

Document Title	Issuer
Oil Sales Receipt with API Gravity Test	3rd Party Oil Offtake Agent
Gas Analysis Report with Gas Heating Value and NGL Composition	3rd Party Gas Analysis Laboratory
Project Reserves Report - Field Monthly Forecast	Project Operator
Project Reserves Report - Well Level Volumes	Project Operator
List of All Well Penetrations Into/Through the Project Reservoir	Project Operator
Qualified Third Party Reserves Report	Licensed 3rd Party Engineering Firm
Third Party Reserves Report LOS and Financial Model Support document (xls)	Project Operator
Third Party Reserves Report Historical Production and Forecast Plots (pdf)	Project Operator
Mineral Ownership Schedule	Licensed Legal Entity
Working Interest Ownership Schedule	Licensed Legal Entity
Monitoring plan (as required by Regulations for wellbore emissions and land reclamation)	Project Operator
Permanence Report	Project Operator
P&A Plan and Regulator Permit Issuance	State Regulator
Land Reclamation Plan and Permit Issuance as Required by Regulator	State Regulator
Post-operations Report and Emissions Measurement as required by regulatory agency	Project Operator
Before and After Project Photographic or Video Documentation	Project Operator
Signatures	
Document Establishing a Legal Barrier to Future Extraction of Hydrocarbons	Licensed Legal Entity
P&A Operations Report and Regulatory Witness and Sign-off	State Regulator
Verifier Report and Certification Statement	Certified 3rd Party Verifier

InterPlanetary File System (IPFS)

ERC-1155 Token

Fungible

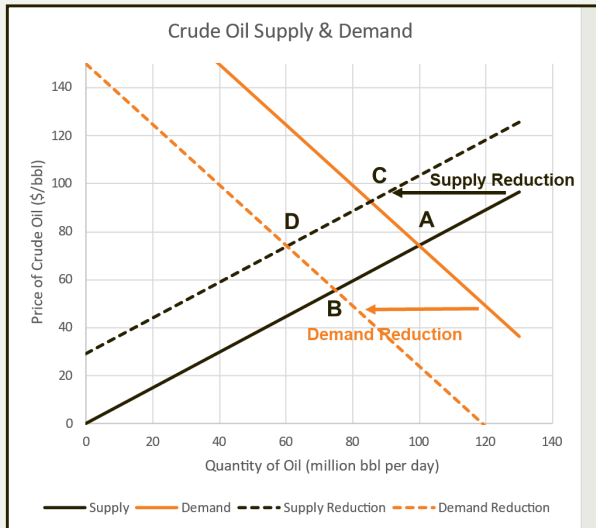
non-Fungible

Do you anticipate tokens to sell at different prices then based on the NFT?

There may be a differentiation based on the co-benefits narrative documented in the NFT function of the generated credits. This can best be leveraged in a direct to buyers sales model, where a specific project is marketed and contracted at a specific price agreed upon with the buyer.

2.10 Leakage

Supply vs Demand



How do you account for internal leakage? If you remove my asset retirement obligation, I imagine I would use those newly available resources to rework or increase production on another well? Is this not the reason why Verra couldn't accredit this?

We interpret this question to be directed to Market Leakage (not Operational Leakage, previously addressed). With the credibility hit of nature based credits this past year, companies are looking for an alternative. Engineered credits are rapidly impacting the growth and expansion across the Voluntary Carbon Market. Nature based credits have been found insufficient to deliver accuracy, additionality, permanence and transparency for long lived sustainability in the marketplace. Engineered credits generated through the ZeroSix protocol and digital solution will address these key concerns. With respect to pure market leakage, the entire energy spectrum will benefit from the reduction of production reliance on inefficient wells/operations, and will improve capital efficiency and reliability by prematurely abandoning the large volume of wells that contribute .2% of the US production and generate 11% of the emissions.

	Project Eligibility Criteria	Project Boundary	Permanence			Project Execution Specifications	Carbon Offset Ownership Guidance	Additionality		Monitoring		Transparency				Quantification		Sustainable Development Goals	Contribute to Net Zero Transition
			Carbon Lockup	Legal Protection	Buffer Account			Tests	Intrinsic	Project Execution	Post-Execution	Independent 3rd Party Verification	Public Project Documentation	Immutable Tracking	Double Counting Protections	Robust Methodology	Uncertainty Evaluation		
ZeroSix Compliance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		EPA Class VI	EPA Class VI	Legal Contract	CARB	State O&G Regulator	Legal Contract		SEC	State O&G Regulator	State O&G Regulator	State Licensing	Immutable Blockchain	Immutable Blockchain	Immutable Blockchain	SEC	SEC	UNSDG	
ICVCM Core Carbon Principle	✓	✓			✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓
			6.	6.	6.			5.	5.	4.	6.	4.	3.	2.	8.	7.	7.	9.	10.
CARB LCFS	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓		✓	✓
ACR	✓	✓			✓	✓	✓	✓		✓	✓	✓		✓	✓	✓		✓	✓

Implementing the ZeroSix solution for the early retirement of Oil & Gas wells



Secure Verifiers of Carbon Credits
—
Ryder-Scott partnership

Assemble Development Team
—
O&G and blockchain experts, executive leadership

Brand Launch
—
November 2022

Platform
—
MVP launch January 2023 & technology audit report

Protocol and Credit Validation
—
BeZero Ratings and Peer Review of Methodology

Pilot Projects Onboarding
—
Secured and execution scheduled for July 2023

1st Sale
—
August 2023
1st Carbon Credits minted and sold

Resolved Questions

Can you compare and contrast direct carbon storage tax credits vs your token.

The 45Q credits apply to specific projects that are designated by the US government, and must meet strict regulations in order to be compliant. They are also only valid as long as the legislation is in place, which may be dependent on the administration. The ZeroSix credits are designed for the Voluntary Carbon Market, which allows for development of new and more impactful solutions to the climate crisis. These products are ultimately validated by the buyers, and higher quality products command a higher price, independent of government policy. That being said, ZeroSix is actively pursuing compliance markets in several jurisdictions through our current pilot projects, and the next protocol development.

What should an operator anticipate in terms of out of pocket cost to evaluation their assets?

This depends on the complexity of the project, but it would be the usual cost of a 3rd party reserves report, which many operators might already have. The permanence report can be generated internally at no additional cost, or outsourced to an engineering firm such as Ryder-Scott who are very familiar with the requirements of establishing project geologic permanence. There is also a small fixed project registration fee, to compensate for the independent verification and credit rating. ZeroSix designed our operating model to support all sizes of assets and operators.

Is the ZeroSix methodology compatible with the ACR AOOG V1.0?

The ZeroSix methodology is a bit more complex as it has to address the accurate quantification, permanence, and additionality of subsurface oil and gas volumes. Both protocols are similar in that they address similar core principles for high quality carbon credits. ZeroSix delivers more transparency (for buyers) through the full integration of the digital solution.

It appears that there may be glut of voluntary carbon credits on the market, with posted prices coming down rather rapidly this year. Can you speak to the buyer market at this point?

There has been turbulence in the VCM this year, due to the revelations around the credibility of many nature based credits and the registry system that has facilitated them. Particularly foreign forestry credits, which is where the largest growth in credit supply has been in the past few years. Buyers are now way more open to innovative solutions that can deliver high quality credits with clear positive impacts, through engineered solutions, and in jurisdictions with a strong track record of regulation and business ethics, such as the US, and the credit prices reflect this reality. The ZeroSix projects are based in the United States, and many of the key elements rely on existing regulations and oversight, creating technically and procedurally trusted offsets which we expect will deliver premium pricing in the market.

What is ZeroSix's revenue model? Where does your platform add to the cost, to producers or buyers or other?

How is Zerosix compensated?

The ZeroSix platform has a small project registration fee based on the size of the operation in order to compensate the verifiers and keep the process independent of the outcome of the verification, maintaining credibility. Beyond this the ZeroSix platform isn't compensated until credits are issued, at which point 15% of credits are credited to ZeroSix as the minting fee.

Does the operator sell the credits or does ZeroSix sell the credits? Have you sold any credits and what will the price be?

ZeroSix can help facilitate the credit sale through our broker partnerships or specific end buyer. We have ongoing conversations at the C-suite level with most of the largest credit buyers, and there are clear pathways to a sale upon generation of credits which is slated for Q4 this year. The target price for the initial sale is between \$20 and \$50/tCO2e.

Understanding the webinar is being recorded, will the slide deck also be made available?

How can I get a pdf copy of the Miro board?

Yes, the Miro board will be sent out in pdf format

ZERØSIX

**A digital solution for obtaining and managing
verifiable high-quality carbon credits**

zerosix.co

Learn More

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