

NOVEMBER 2023



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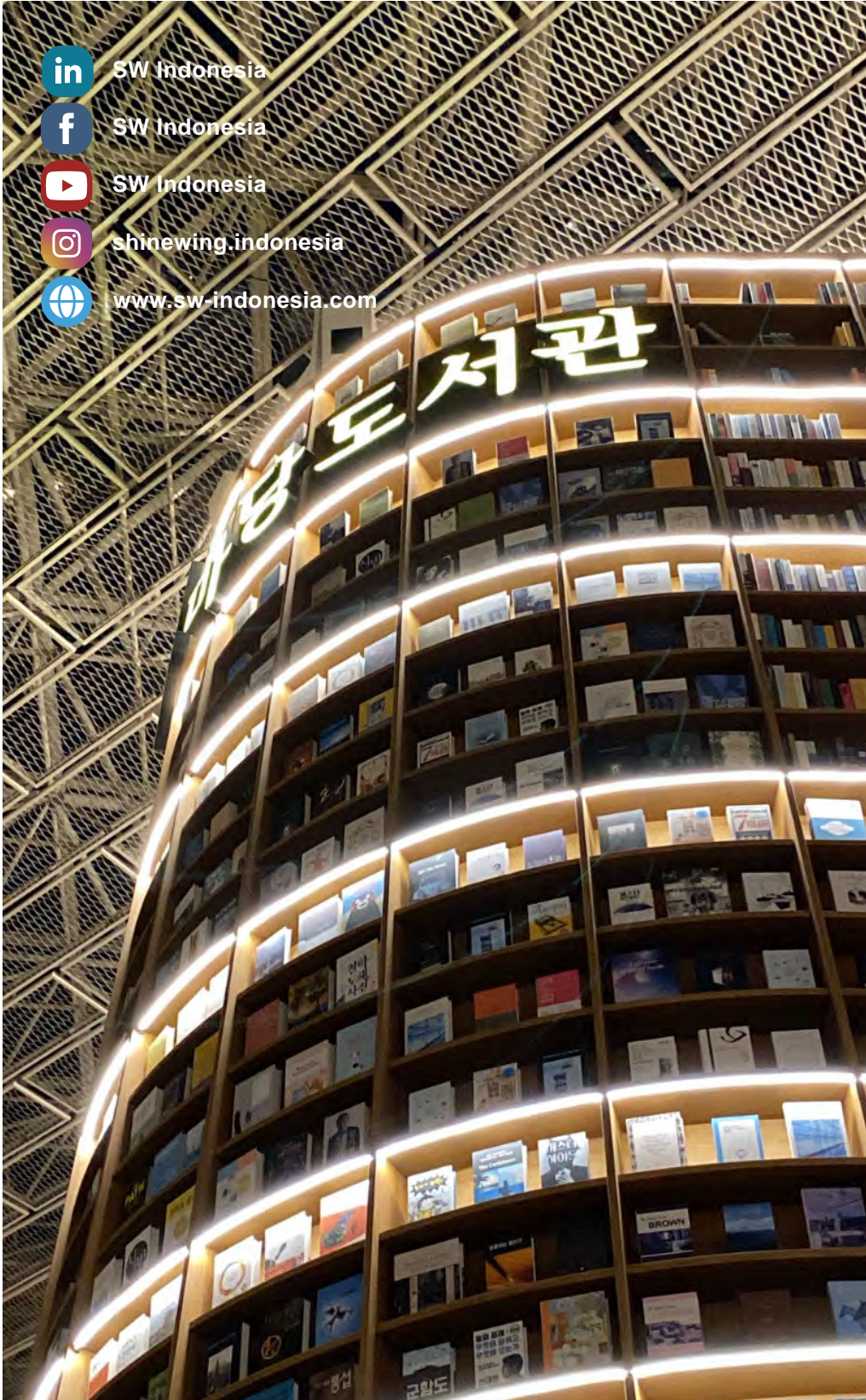


Catalyst for success

OIL & GAS

ACCOUNTING CHARACTERISTIC, AUDIT EMPHASIS,
INDUSTRY AND LISTED COMPANY IN INDONESIA

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 Hanok Bukchon Village, Korea

Oil and Gas Industry

Geologically, Indonesia is located along the "Ring of Fire," a tectonic plate boundary marked by fault lines and volcanoes. This ring stretches for approximately 40,000 kilometers across equatorial countries like Peru, Chile, Tonga, Japan, the Philippines, and Indonesia.

According to the United States Geological Survey, about 81 percent of the world's largest earthquakes occur along this ring. The movement of tectonic plates towards each other is one of the causes of earthquakes. The converging tectonic plates create subduction zones, leading to the formation of mountains, folds, and basins of sedimentary rock deposit. These sediment basins serve as sources of crude oil deposits, formed from the remains of microorganisms that lived millions of years ago, carried by rivers and mud, and then settled on the ocean floor under high pressure and temperature.

Indonesia is one of the world's largest producers of oil and natural gas. As of 2022, Indonesia ranks 24th globally in terms of oil production. It continues to hold the top position in Southeast Asia for both oil production and oil reserves.

Currently, Indonesia's daily oil production ranges from 610,000 to 620,000 barrels per day, while its daily oil consumption stands at approximately 1,550,000 to 1,600,000 barrels per day. This means that Indonesia still needs to import oil to meet its daily consumption needs.

In terms of natural gas production, Indonesia produced 54.86 billion cubic meters of natural gas in 2022. According to the Ministry of Energy and Mineral Resources (ESDM), the domestic consumption of natural gas in Indonesia has reached 68%. The majority of natural gas usage is directed towards industrial needs, accounting for 29.25%. The government is committed to further increasing the use of gas for domestic purposes.

The government has set a target to reach a daily oil production of 1 million barrels by 2030 to meet domestic needs. To achieve this, the government encourages the development of cutting-edge technologies capable of increasing domestic oil production and reserves. The government has also introduced policies to support responsible utilization.

As an example, the implementation of Enhanced Oil Recovery (EOR) techniques on aging wells has the potential to significantly increase Indonesia's oil reserves. EOR methods are estimated to raise Indonesia's hydrocarbon reserves from 2.4 billion BOEPD to 3 billion BOEPD. EOR is a method employed to enhance hydrocarbon production, specifically from oil reservoirs where primary and secondary recovery methods are no longer efficient in extracting oil from wells.

EOR involves injecting a substance from outside the reservoir. "EOR is typically used for tertiary recovery. In some cases, EOR can be applied at the primary recovery stage, especially when dealing with heavy crude oil. For instance, in the Duri Field, conventional production methods are insufficient, necessitating the injection of steam to boost production," explained Tutuka Ariadji, General Director of Oil and Gas.


Selecting the appropriate EOR method for a specific field requires preliminary studies on the process timeline and implementation. "We assess which method is suitable, whether it's chemical injection, CO2 injection, or steam injection, and then we apply it. The study also involves modeling before implementation, so the process can be somewhat time-consuming," added Tutuka.

Apart from EOR, various efforts are being undertaken to reach the 2030 production target. These include optimizing current field production, expediting the transformation of resources into production by developing new and delayed fields, and intensifying oil and gas exploration. The government is also exploring collaborations with international research institutions to enhance data quality through reprocessing and reinterpretation in the search for new oil sources.

Additionally, the government has issued Regulation No. 12 of 2020 (Permen ESDM No. 12 Tahun 2020), which clarifies the implementation of various types of Cooperation Contracts (Kontrak Kerja Sama or KKS) and provides flexibility in KKS contract forms. This flexibility allows investors to select and calculate their expected profits more comfortably, considering their company portfolios. The government also offers incentives to contractors, such as DMO (Domestic Market Obligation) holidays, investment credits, and accelerated depreciation for PSC Cost Recovery, as well as revenue sharing and upstream business activity incentives based on economic considerations for PSC Gross Split.

In addition to efforts to increase oil production, the Indonesian government is taking steps to reduce dependence on oil. Indonesia has integrated renewable energy into its energy mix and aims to achieve a 21% contribution from renewable energy to the total national energy consumption.



 Gyeongbokgung Palace, Korea

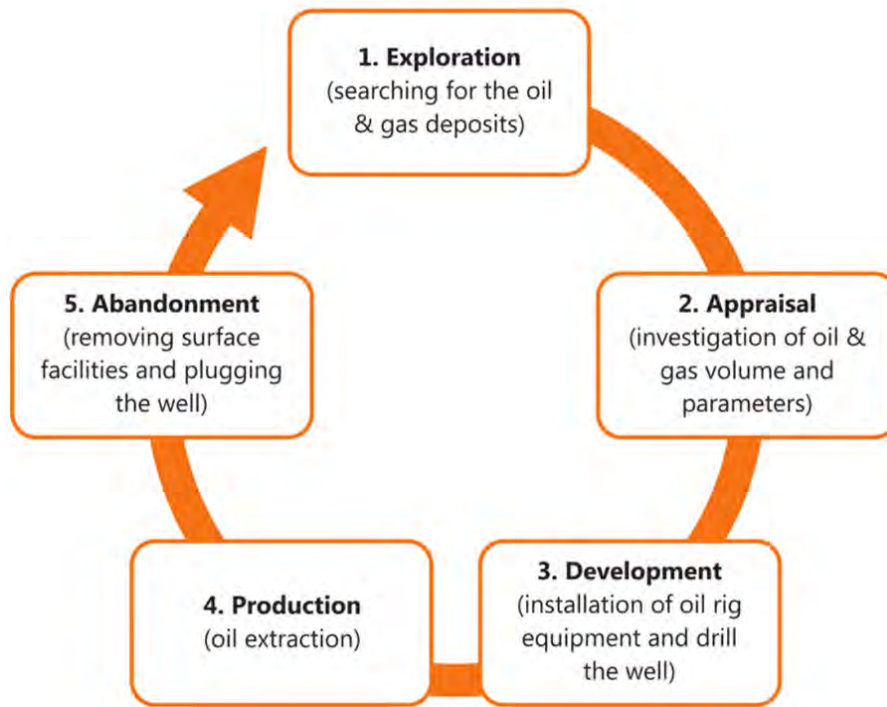
Accounting Characteristic in Oil and Gas Company

Indonesia's crude oil production declined over the last decade due to the natural decline of producing oil fields combined with a slower reserve replacement rate and decreased exploration and investment. With few significant oil discoveries in Western Indonesia over the last ten years, Indonesia still relies upon the mature oil fields in those areas that continue to decline in production. The government of Indonesia has targeted that by the year 2030 Indonesia reach the target production of one million barrel oil per day (bopd) and 12 billion standard cubic feet per day (Bscfd) of gas.

The target is very challenging for the Indonesian upstream oil and gas industry which need to make extra effort for attracting investor interest and expand exploration efforts for increasing the oil and gas reserves. Based on publication from SKK Migas, the average daily oil production in 2022 is 612,300 BOPD. This is below its 2022 target and also below the actual oil production in 2021. While the oil production target for 2023 is 660,000 BOPD. The daily gas production in 2022 is 5,35 Bscfd. This is below its 2022 target and also below the actual gas production in 2021. The gas production target is 6,16 Bscfd in 2023.

As of 2022, there are 128 oil and gas reservoir basins located in Indonesia. There are 68 unexplored basins, while 20 basins have already entered the production phase and 8 basins have been drilled and are in the appraisal stage.

Upstream Oil and Gas Industry Lifecycle



Some terms & conditions that should be take into account when assessing Indonesian Production Sharing Contract (“PSC”):

- The period for exploration phase is six (6) years and may be extended for once for maximum four (4) years.
 - If commercial oil and or gas is found, the contract could be 30 years.
 - FTP (First Tranches Petroleum), is a certain percentage that should be deducted from gross production before cost recovery (only apply in PSC cost recovery). This will be shared between Government and Contractor.
 - At the time the first Plan of Development (“POD”) is approved by government, Contractor shall have obligation to offer ten percent (10%) Participating Interest to Local Government Owned Company (LGO) to be designated by the Local Government within which the Contract Area is administratively located.
 - Indirect taxes will be treated as costs, of course, there will be tax facilities that may be applied.
 - Domestic Market Obligation (“DMO”), obligation to supply local market from contractor’s share.
 - Several incentives are available to oil and gas companies: investment credit, indefinite carry forward of prior year unrecovered costs (only for cost recovery PSC), and exemption from importation tax and duties on certain equipment and assets.
- Indonesia is currently implementing two contract schemes namely cost recovery and gross split PSC, each with its advantages, providing flexibility in contract selection.



Cost Recovery PSC*

- Fixed profit split at the beginning of contract, the split normally vary for each area;
- FTP deducted after gross production, shared between contractor and state;
- Operating cost deducted after FTP;
- Need work program & budget authorization;
- Tax facilities: land & building tax reduction, VAT exemption during exploration period, import duties;
- Other incentives: investment credit, DMO fee holiday, accelerated depreciation.

Gross Split PSC*

- Base split at the beginning of contract, Contractors split for oil = 43% and 48% for gas (before tax).
- At POD, additional variable split will be given to contractor based on actual condition (working area status, field location, reservoir depth, supporting facilities availability, reservoir type, reservoir depth, CO₂ & H₂S content, HC API gravity, local content, production phase, oil & gas price and cumulative production).
- Operating cost included in the contractor's split.
- No need budgetary authorization.
- Self procurement process.
- Tax incentives: land & building tax reduction, vat exemption during exploration period, import duty.
- Other incentives: additional split based on economic.

The Uniqueness of Accounting for Upstream Oil and Gas Companies

The oil and gas industry has a number of specific uniqueness when it comes to accounting.

These uniqueness can include but are not limited to:

- Reserves and Resources: Although reserves do not appear directly on oil companies' balance sheets, these figures are used for a number of key accounting applications. These include depreciation, impairment valuation, calculation of the provision for abandonment of facilities, and purchase price allocation for business combination.

Reserve that has the highest level of probability is usually known as proved reserves; the category with the next highest probability (often 50:50) is usually known as probable reserves and the lowest, but still feasible, number may be called possible reserves or contingent.

For depreciation, depletion and amortization ("DD&A) method, IFRS/PSAK's do not prescribe what basis should be used for the Unit of Production ("UOP") calculation. Many entities use only proved developed reserves; others use total proved or both proved and probable. Proved developed reserves are those that can be extracted without further capital expenditure. The basis of the UOP calculation is an accounting policy choice and should be applied consistently. If an entity does not use proved developed reserves, then an adjustment is made to the calculation of the amortisation charge to include the estimated future development costs to access the undeveloped reserves.

The estimated production used for DD&A of assets that are subject to a lease or licence should be restricted to the total production expected to be produced during the licence/lease term. Renewals of the licence/lease are only assumed if there is evidence to support probable renewal at the choice of the entity without significant cost.

- **Exploration and Evaluation costs:** Based on PSAK 64 Exploration for and Evaluation of Mineral Resources, Exploration and evaluation of mineral resources which consists of geological and geophysical costs, costs of drilling exploratory wells, including the costs of drilling exploratory-type stratigraphic test wells, and other costs in relation to evaluating the technical feasibility and commercial viability of extracting oil and gas, starts when the legal rights to explore have been obtained. Expenditure incurred before obtaining the legal right to explore is generally expensed; an exception to this would be separately acquired intangible assets such as payment for an option to obtain legal rights. Evaluation costs are incurred to assess the technical feasibility and commercial viability of the resources found.

The accounting treatment of exploration and evaluation (“E&E”) expenditures (capitalising or expensing) can have a significant impact on the financial statements and reported financial results, particularly for entities at the exploration stage with no production activities.

- **Oil and Gas Properties:** Oil and gas properties are stated at cost, less accumulated depletion/depreciation and accumulated impairment losses. The costs of drilling of development wells and development-type stratigraphic test wells, platforms, well equipment and related production facilities, are capitalized as uncompleted wells, equipment and facilities. Such costs are transferred to wells and related equipment and facilities upon completion. Much development expenditure results in assets that meet the recognition criteria in PSAK 16 (Fixed Assets)
- **Revenue recognition in upstream:** Revenue recognition, particularly for upstream activities, can present challenging issues. Production often takes place in joint ventures or through concessions, and entities need to analyse the facts and circumstances to determine when and how much revenue to recognise. Many joint ventures (JV) share the physical output, such as crude oil, between the joint venture partners. Each JV partner is responsible for either using or selling the oil it takes. Overlift and underlift are in effect a sale of oil at the point of lifting by the underlifter to the overlifter. The criteria for revenue recognition are considered to have been met. Overlift is therefore treated as a purchase of oil by the overlifter from the underlifter.

Issue:

How is revenue in a Production Sharing Arrangement (“PSA”) which consist of Private Co as Operator with profit share/participating interest of 60% and State Owned Enterprise (“SOE”) with participating interest of 40% split between the parties/contractor?



Solution:

The example below sets out how the revenue from a PSA is split between the operator, State Owned Enterprise (SOE) and the taxation authorities. The government's FTP is 20% of production, the operator (Private Co) has a profit share of 60% and SOE's share is 40%. Any unrecovered costs can be carried forward to future years.

Cost oil components in order of priority are:

- 1) operating expenses (share based on profit share);
- 2) exploration costs (all incurred by the operator);
- 3) development costs (share based on profit share percentage);

Assumptions:

Oil Revenue	\$6,540,000
Exploration costs incurred	\$900,000
Development costs incurred in Y1	\$500,000
Operating costs in Y1	\$1,000,000
FTP 20% and Government Tax 44%	

(in US\$,000)	Total	Gol	Private Co	SOE
Revenue Oil (100%)	6.540.000			
First Tranche Petroleum	1.308.000	1.308.000		
Remaining balance	5.232.000			
Cost Recovery				
- Operating	1.000.000		600.000	400.000
- Exploration	900.000		900.000	
- Development	500.000		300.000	200.000
Total Cost Recovery	2.400.000		1.800.000	600.000
Equity to be Split	2.832.000		1.699.200	1.132.800
Government Tax (44%)		1.246.080	747.648	498.432
Total Revenue shares	6.540.000	2.554.080	2.751.552	1.234.368

The above issue is a simple example of the allocation methodology of revenue in the upstream oil and gas production block, excluding the Domestic Market Obligation ("DMO") portion as usually stated in the PSC Contract.

The above list is by no means exhaustive; there are numerous other challenges that businesses may face when dealing with their accounts in this sector, i.e recognition of deferred tax assets from unrecovered/sunk cost, impairment of E&E expenditures and abandonment of Oil and Gas Properties, purchase price allocation from business combination, Accounting treatment for various contracts between Gol and investors (PSC, PSC-Joint Operating Body, Technical Assistant Contract (TAC), Unitisation contract, etc) and Joint Operating Arrangement between Contractors which need to determine the use of equity method accounting or proportionate consolidation and revenue recognition for Gross Split Contract. It's important for business owners to stay up to date on the latest regulations and best practices so they can ensure they are always compliant while still maximizing profits whenever possible.



Emphasis Audit Upon Oil and Gas Company

The financial audit process involves having auditors evaluate the financial transactions and statements of oil and gas company. In general, an audit of the financial statements of an oil and gas company is the same as the phases of an audit of the financial statements of companies in other industries. A typical business financial audit has four main phases: planning, setting internal controls, testing, and reporting. Risk-based audit remains a general audit approach as regulated in audit standards.

There are some audit considerations when conducting oil and gas company. Revenue recognition, inventory valuation, impairment analysis, also reserve of oil and gas measurement will be the primary audit considerations. The other considerations including exploration and evaluation, royalty, also depreciation, amortisation, and depletion.

In auditing, to enable providing value added services to the client, there are several matters need to be considered for the external auditors as follows:

1. Auditor Skills and Experience

Auditors who audit oil and gas companies must have sufficient knowledge and experience in this industry. They must understand the technical and operational aspects of the oil and gas business, as well as applicable regulations.

2. Understanding of Risk

Auditors must have an in-depth understanding of the risks faced by oil and gas companies and must be able to identify potential risks that could affect the company's operations.

3. Use of the Latest Technology

The oil and gas industry is increasingly adopting the latest technology and data analysis to increase efficiency and monitor operations. Auditors must understand and mitigate risks in this technology by carrying out a series of procedures and involving the IT specialist if needed.

4. Involvement of Reserve Specialist

Reserve information is used as a basis for calculating depreciation and impairment valuation in the oil and gas companies. The estimating and auditing of Reserve Information is predicated upon certain historically developed principles of petroleum engineering and evaluation, which are in turn based on principles of physical science, mathematics and economics. Although these generally accepted petroleum engineering and evaluation principles are predicated on established scientific concepts, the application of such principles involves extensive judgments and is subject to changes in (i) existing knowledge and technology, (ii) economic conditions, (iii) applicable statutory and regulatory provisions and (iv) the purposes for which the Reserve Information is to be used. The management need to consider the involvement of specialist to evaluate those reserves. External auditors will perform the procedures related to work of specialist and may involve auditor's specialist to help the review of the valuation if needed.

5. Abandonment and Site Restoration

An oil or gas well is plugged and abandoned when it reaches the end of its useful life or becomes a dry hole. In addition, for the facilities associated with oil and gas production, the operators must make sure that they are safely and properly shut down. Management calculates the provision for assets restoration and abandonment and capitalized it as ARO assets. The calculation may involve technical experts. External auditors need to have sufficient knowledge and experience related to the calculation and may involve the auditor's expert to assist in the preparation of audit procedures.

A company that operates in oil and gas usually has many unique business model or condition related to its business. Some key issues may be discovered by the auditor on a case-by-case basis. These key issues include side tracks, suspended wells, overlifts and underlifts, line fill and cushion gas, farm outs, unitisation agreement, production sharing agreement, decommissioning liabilities, and joint activities.

It is important to remember that the emphasis on auditing in Oil and Gas companies is not just about issuing the audit opinion, but it can also provide value added services by ensuring regulatory compliance, managing risk and achieving greater efficiency. By carrying out audits carefully and paying attention to the key factors mentioned, auditor can maintain and build strong relationship with client management.



📍 Nami Island, Korea

🔥 Listed Companies at Oil and Gas in Indonesia

Over the past three years, several companies operating in the energy sector have achieved successful initial public offerings (IPOs) on the Indonesia Stock Exchange (IDX). In the specific sub-sector of oil and gas storage and distribution, notable entries include PT Humpuss Maritim International Tbk (HUMI), PT GTS International Tbk (GTSI), and PT Indah Prakarsa Sentosa Tbk (INPS). Furthermore, apart from those that went public in the last three years, there are at least five other companies listed in the same sub-sector. In the production and oil refining sub-sector, we see the presence of key players such as PT Medco Energi Internasional Tbk (MEDC), PT Sugih Energy Tbk (SUGI), PT Energi Mega Persada Tbk (ENRG). The most recent entrant in this sub-sector is PT Super Energy Tbk (SURE), which conducted its IPO in 2018.

These companies have opted to expand by becoming publicly listed entities on the Indonesian capital market, which has achieved noteworthy records compared to other Southeast Asian capital markets over the past three years. Companies within the energy sector are included in the IDXENERGY index, a sector that has exhibited a positive trend since the stock exchange entered the post-COVID-19 recovery phase. IDXENERGY has witnessed substantial growth, soaring from a closing price of 740.68 in January 2021 to 2034.88 in August 2023. This translates to IDXENERGY achieving a Compound Annual Growth Rate (CAGR) exceeding 50%. Such remarkable performance is underpinned by the global economic recovery and the prevailing commodity boom.

Date	IDXESGL		IDXENERGY		IDX BASIC		IDXINDUST		IDXNONCYC		IDXCYCLIC		IDKHEALTH		IDKFINANCE		IDKPROPRT		IDKTECHNO		IDKINFRA	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Jan-21	137,284		740,682		1,260,186		958,933		737,657		714,858		1,255,875		1,297,043		881,284		2,157,776		828,125	
Feb-21	139,553	1.65%	767,943	3.68%	1,344,092	6.71%	931,754	-2.84%	753,733	2.18%	740,831	3.63%	1,310,505	4.35%	1,419,877	9.47%	916,997	4.05%	3,216,440	49.06%	912,991	10.25%
Mar-21	132,745	-4.88%	712,962	-7.16%	1,231,988	-8.07%	938,311	0.70%	758,162	0.59%	721,134	-2.66%	1,275,315	-2.69%	1,336,911	-5.84%	903,666	-1.45%	2,962,400	-11.63%	883,291	-3.25%
Apr-21	131,552	-0.90%	764,548	4.43%	1,346,131	8.80%	958,241	2.12%	756,406	-1.06%	747,884	3.70%	1,277,466	0.17%	1,327,735	-0.69%	878,400	-2.79%	3,146,542	12.07%	884,881	-0.16%
May-21	131,105	-0.19%	737,214	-0.99%	1,267,308	-6.33%	971,248	1.36%	729,148	-2.79%	746,318	-1.01%	1,275,275	-0.17%	1,330,800	0.23%	927,018	-5.85%	3,793,119	19.08%	913,883	3.54%
Jun-21	123,004	-6.32%	719,669	-2.35%	1,169,677	0.21%	988,015	-1.36%	704,410	-3.39%	740,425	0.01%	1,342,325	5.26%	1,330,312	-0.79%	981,169	-5.54%	10,709,238	182.16%	900,086	-1.42%
Jul-21	120,208	-2.27%	760,073	5.58%	1,063,651	-0.52%	926,250	-3.32%	669,997	-6.31%	801,199	8.21%	1,338,118	1.17%	1,353,818	2.54%	903,932	2.91%	11,732,894	9.62%	931,505	3.50%
Aug-21	126,370	5.54%	752,716	-0.97%	1,175,541	1.02%	994,982	7.42%	651,869	0.28%	806,544	0.67%	1,339,199	-1.36%	1,397,870	3.24%	908,913	0.25%	1,086,088	-6.32%	936,755	0.56%
Sep-21	129,628	2.17%	996,292	32.30%	1,224,863	-4.31%	1,081,812	8.73%	673,911	1.82%	853,047	6.01%	1,358,338	1.47%	1,414,809	1.23%	819,907	1.74%	9442,682	-14.09%	973,863	4.17%
Oct-21	140,342	8.30%	1000,369	0.41%	1,194,810	6.20%	1,038,968	-0.08%	689,993	2.39%	852,059	-0.35%	1,404,008	3.29%	1,537,885	8.70%	865,930	5.61%	9404,993	-0.40%	986,629	1.10%
Nov-21	138,444	-1.39%	1046,540	4.62%	1,201,860	0.59%	1,028,721	-4.83%	675,067	-2.16%	813,176	-2.21%	1,403,636	3.68%	1,526,502	-0.74%	816,791	-5.73%	8972,266	-5.66%	987,234	0.06%
Dec-21	136,081	-1.71%	1,193,499	8.88%	1,234,381	2.72%	1,036,932	0.77%	664,131	-1.62%	900,421	8.07%	1,420,068	-2.44%	1,526,859	0.02%	773,062	-5.30%	3,994,439	1.38%	858,268	-2.83%
Jan-22	135,334	-0.55%	1,296,892	13.64%	1,318,391	-1.30%	1,031,806	-0.47%	657,654	-1.07%	886,647	-1.60%	1,451,071	2.18%	1,600,193	2.18%	712,502	-7.83%	7,899,518	-12.26%	818,883	-4.19%
Feb-22	139,601	3.20%	1,324,380	2.28%	1,252,280	2.78%	1,076,828	4.33%	649,291	-1.18%	940,692	6.17%	1,412,788	-2.64%	1,620,768	4.27%	720,124	1.07%	8,040,747	2.52%	1,000,097	8.81%
Mar-22	143,682	3.57%	1,481,342	11.85%	1,323,187	6.14%	1,149,544	6.78%	690,579	1.12%	952,424	1.25%	1,401,801	-0.78%	1,603,042	-0.17%	736,812	2.25%	9,037,546	6.76%	973,386	-2.67%
Apr-22	149,823	3.44%	1,618,908	9.29%	1,363,012	2.55%	1,268,597	1.36%	605,086	1.30%	919,014	-1.41%	1,472,342	5.05%	1,635,542	0.71%	739,323	-0.95%	8,702,954	0.76%	1,011,196	3.88%
May-22	146,451	-2.12%	1,750,717	8.14%	1,401,904	2.83%	1,302,131	2.64%	710,480	6.83%	924,511	-1.54%	1,500,775	1.92%	1,519,643	-5.90%	715,121	-1.95%	7,711,138	-11.40%	855,944	-5.46%
Jun-22	136,579	-6.74%	1,608,184	-6.43%	1,320,978	-12.89%	1,240,402	-7.04%	723,264	1.80%	891,846	-3.53%	1,519,088	1.27%	1,437,318	-6.61%	678,898	-5.07%	7,885,794	2.26%	965,409	1.01%
Jul-22	139,636	2.24%	1,857,723	13.40%	1,283,906	5.14%	1,308,513	8.10%	700,589	-2.86%	903,348	1.29%	1,453,47	-4.37%	1,489,816	4.35%	689,661	1.59%	7,714,309	-2.17%	988,707	2.39%
Aug-22	144,384	3.40%	1,899,493	2.25%	1,298,479	1.16%	1,323,131	1.12%	707,616	0.71%	887,584	-1.75%	1,436,717	-1.15%	1,515,895	1.07%	701,248	1.68%	7,816,569	1.33%	1,049,112	5.50%
Sep-22	144,487	0.07%	1,920,303	1.10%	1,313,971	-4.66%	1,276,778	-3.96%	656,461	-1.58%	849,770	-4.26%	1,497,389	4.26%	1,486,185	-1.96%	686,808	-2.05%	6,918,835	-10.96%	880,901	-5.96%
Oct-22	148,309	2.65%	2,069,100	7.77%	1,308,228	2.44%	1,273,956	0.25%	735,319	5.58%	908,543	2.21%	1,504,123	0.42%	1,501,362	1.02%	693,673	0.99%	6451,366	-7.31%	840,060	-4.16%
Nov-22	148,498	0.13%	2,078,751	0.45%	1,284,282	1.27%	1,246,267	-2.17%	744,986	1.32%	894,722	3.01%	1,537,024	2.19%	1,569,338	0.53%	718,296	3.55%	5,886,105	-8.61%	894,063	-4.89%
Dec-22	140,280	-5.53%	2,279,547	9.66%	1,316,126	-5.31%	1,174,318	-5.77%	716,557	-3.82%	850,400	-4.90%	1,564,975	1.82%	1,414,405	-6.26%	711,205	-0.98%	5,102,041	-12.45%	868,641	-2.84%
Jan-23	138,176	-0.79%	2,173,304	-4.75%	1,258,917	-3.52%	1,170,560	-0.32%	738,864	3.08%	801,235	-3.49%	1,545,533	-1.22%	1,412,981	-0.14%	707,787	-0.56%	5,441,792	6.19%	853,886	-1.93%
Feb-23	140,934	1.26%	2,050,214	-3.23%	1,343,313	-1.25%	1,198,307	2.41%	742,113	0.47%	845,280	2.93%	1,569,075	1.24%	1,406,256	-0.83%	699,138	-1.15%	5,340,853	-1.75%	844,570	-0.86%
Mar-23	139,960	-1.40%	2,103,041	0.12%	1,183,752	-4.78%	1,180,578	-1.10%	731,693	-1.41%	802,100	-2.72%	1,540,654	-1.56%	1,385,825	-1.10%	686,881	-1.75%	5,100,726	-5.29%	808,838	-4.23%
Apr-23	141,087	1.53%	2,094,864	-0.42%	1,171,069	-1.06%	1,207,234	1.83%	730,007	-0.68%	810,827	-1.40%	1,541,666	0.07%	1,385,526	-0.02%	700,229	1.94%	4,937,066	-3.21%	822,051	1.63%
May-23	146,628	3.93%	2,098,548	-18.39%	903,564	-16.02%	1,127,434	-6.61%	737,387	1.47%	855,863	5.55%	1,517,49	-5.46%	1,318,303	-1.24%	711,795	1.65%	3,405,892	3.42%	823,719	0.20%
Jun-23	143,552	-2.78%	1,717,964	1.66%	993,017	0.96%	1,182,668	3.07%	742,810	0.68%	876,223	2.38%	1,481,617	1.66%	1,417,704	3.61%	727,649	2.14%	4,780,316	-6.38%	850,497	3.25%
Jul-23	142,942	0.98%	1,924,102	10.71%	1,094,170	10.19%	1,219,938	4.88%	758,720	2.20%	927,714	5.88%	1,528,833	3.16%	1,437,87	1.42%	752,542	3.51%	4,697,359	-1.73%	857,993	0.88%
Aug-23	141,911	-1.41%	2,034,880	5.70%	1,201,548	9.81%	1,172,102	-3.90%	755,660	-0.40%	903,684	-2.70%	1,476,98	-3.37%	1,420,029	-1.24%	754,446	0.25%	4,424,546	-5.81%	911,543	6.24%

(Movement of the closing price index of the Indonesian Stock Exchange)

Being listed on the capital market signifies a commitment to adhere to the regulations of the stock exchange and the Financial Services Authority (OJK), which includes meeting the expectations of stock investors. One of the ways to comply with regulatory requirements is by fulfilling the obligation to report annual financial statements, as mandated by OJK Regulation No. 29/POJK.04 since 2016. The primary objective of annual reports is to reflect on the social responsibility of listed companies in their business activities. Oversight and sanctions encompass the enforcement of provisions, ranging from written warnings to registration cancellations. The listed companies are presented in the following table:



OIL & GAS LISTED COMPANIES IN INDONESIA

For Oil & Gas Production & Refinery (A111) & Oil & Gas Storage & Distribution (A112)

Company Name	Company Code	IPO Date	Price	Outstanding Shares	Market Capitalization (IDR Million)	Latest Rights Issue	Ratio
AKR Corporindo Tbk.	AKRA	3 Oct 2014	1,400	20,073,474,600	28,102,864	4 Feb 2010	5:1
Buana Lintas Lautan Tbk.	BULL	23 May 2011	178	14,117,801,449	2,512,969	3 Jul 2019	8:3
Energi Mega Persada Tbk.	ENRG	7 Jun 2004	294	24,821,230,250	7,297,442	6 Jul 2021	100:140
GTS Internasional Tbk.	GTSI	8 Sep 2021	53	15,819,142,767	838,415	-	-
Humpuss Intermoda Transportasi Tbk.	HITS	15-Des-1997	366	7,101,084,801	2,598,997	-	-
Humpuss Maritim Internasional Tbk.	HUMI	09-Agu-2023	100	18,046,450,000	1,804,645	-	-
Indah Prakasa Sentosa Tbk.	INPS	6 Apr 2018	1,180	650,000,000	767,000	-	-
Mitra Energi Persada Tbk.	KOPI	23 Apr 2001	620	697,266,668	432,305	-	-
Logindo Samudramakmur Tbk.	LEAD	11-Des-2013	68	4,049,616,328	275,374	11 Jul 2017	7:4
Medco Energi Internasional Tbk	MEDC	12-Okt-1994	1,015	25,136,231,252	25,513,275	14 Sep 2020	5:2
Mitra Investindo Tbk.	MITI	16 Jul 1997	170	3,540,735,503	601,925	6 Dec 2022	500:319
Capitalinc Investment Tbk.*	MTFN	16 Apr 1990	50	31,842,082,852	1,592,104	15 Apr 2014	18:125
Perusahaan Gas Negara Tbk.	PGAS	15-Des-2003	1,760	24,241,508,196	42,665,054	-	-
Rukun Raharja Tbk.	RAJA	19 Apr 2006	1,045	4,227,082,500	4,417,301	14 May 2012	500:250
Sillo Maritime Perdana Tbk.	SHIP	16 Jun 2016	880	2,719,790,000	2,393,415	-	-
Soechi Lines Tbk.	SOCI	03-Des-2014	181	7,059,000,000	1,277,679	-	-
Sugih Energy Tbk.*	SUGI	19 Jun 2002	50	24,811,541,414	1,240,577	-	-
Super Energy Tbk.*	SURE	05-Okt-2018	1,720	1,497,576,771	2,575,832	-	-

*Under authorities monitoring/suspension

Apart from compliance, annual reports also serve as a means of communication and maintaining relationship with investors. These reports reveal trends and conditions in the relevant company sector, particularly concerning energy transition issues. During the ASEAN seminar held in Jakarta in 2023, Indonesia reaffirmed its commitment to energy transition through the development of concepts, long-term roadmaps, regional electric interconnectivity pathways, and efforts to bridge the gap between policies and the realization of investments in the renewable energy sector in Indonesia.

However, in the short term, the energy transition does not pose a threat to the oil and gas sector. According to the OPEC World Oil Outlook 2022, it was noted that the demand for oil as a primary fuel and gas will continue to rise until 2045. This is attributed to the projected global economic growth, expected to double, an increase in the world population by 1.6 billion people by 2045, urbanization rates, and the spending power of the middle-class population in developing countries. Although the renewable energy industry is forecasted to grow significantly each year, reaching 7.1% by 2045, it cannot replace the role of oil in meeting global energy needs.

In support of these positive trends, SW Indonesia, through its SW Business Advisory division, stands ready to be a financial advisor in facilitating the IPO process for companies, whether in the energy sector or others. Pre-IPO services and restructuring planning support the decisions of company stakeholders in executing the IPO process.



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Minyak dan Gas di Indonesia

Secara geologi, Indonesia terletak di jalur ‘cincin api’ (ring of fire) yang merupakan jalur patahan dan gunung api. Jalur cincin api ini membentang sepanjang Samudera Pasifik sejauh 40.000km melewati negara-negara yang terletak di khatulistiwa seperti Peru, Chile, Tonga, Jepang, Filipina, termasuk Indonesia.

Menurut Survei Badan Geologi Amerika Serikat, sekitar 81 persen gempa bumi terbesar terjadi di jalur ini. Pergerakan lempeng bumi yang saling mendekat merupakan salah satu penyebab gempa bumi. Lempeng bumi yang bergerak saling mendekat menciptakan zona subduksi yang menghasilkan pegunungan, lipatan dan cekungan pengendapan batuan sedimen. Cekungan sedimen menjadi sumber deposit minyak bumi, yang terbentuk dari jasad renik yang sudah mati jutaan tahun, lalu terbawa air sungai dan lumpur, kemudian mengendap di dasar laut di bawah tekanan dan temperatur tinggi.

Indonesia merupakan salah satu negara penghasil minyak dan gas bumi terbesar di dunia. Menurut data tahun 2022, secara global Indonesia menduduki peringkat ke-24 sebagai negara penghasil minyak bumi terbesar di dunia. Indonesia masih menempati ranking pertama sebagai negara penghasil dan negara dengan cadangan minyak bumi terbesar di Asia Tenggara.

Saat ini, produksi minyak bumi Indonesia berada pada kisaran 610.000-620.000 barrel per hari. Kebutuhan harian minyak bumi Indonesia berada pada level 1.550.000-1.600.000 barrel per hari, artinya Indonesia masih harus mengimpor minyak bumi dari negara lain untuk mencukupi kebutuhan harian minyak bumi.

Dari sisi produksi gas alam, Indonesia memproduksi 54,86 milyar kubik meter gas alam pada tahun 2022. Dilansir dari kementerian Energi dan Sumber Daya Mineral (ESDM), saat ini penyerapan produksi gas alam Indonesia sudah mencapai 68%. Sebagian besar penggunaan gas alam digunakan untuk memenuhi kebutuhan industri, yakni sebesar 29,25%. Pemerintah berkomitmen untuk terus meningkatkan penggunaan gas untuk keperluan domestik.

Pemerintah menargetkan produksi minyak bumi dapat mencapai 1 juta barel pada tahun 2030 untuk mencukupi kebutuhan dalam negeri. Untuk itu pemerintah mendorong upaya pengembangan teknologi-teknologi terkini, yang mampu meningkatkan produksi dan cadangan minyak bumi dalam negeri. Pemerintah juga mengeluarkan kebijakan-kebijakan yang mendukung pemanfaatan yang bertanggung jawab.

Sebagai contoh, penerapan Teknik Enhance Oil Recovery (EOR) terhadap sumur-sumur tua yang dapat meningkatkan cadangan minyak bumi Indonesia. Teknik EOR dihitung dapat meningkatkan cadangan migas Indonesia dari 2,4 miliar BOEPD menjadi 3 miliar BOEPD. Teknik EOR adalah sebuah metode yang diterapkan untuk meningkatkan produksi (recovery) hidrokarbon, dari reservoir minyak apabila metode primary recovery dan secondary recovery sudah tidak efisien dalam proses pengurusan minyak dari sumur.

Teknik EOR diterapkan dengan menginjeksikan suatu zat yang berasal dari luar reservoir. "Pada umumnya EOR digunakan untuk tertiary recovery. EOR bisa langsung dilakukan di tingkat primary recovery apabila minyak tergolong dalam jenis minyak berat. Seperti di Lapangan Duri, proses produksi biasa tidak dapat dilakukan sehingga perlu diinjeksikan uap untuk meningkatkan produksi," papar Tutuka Ariadji, Direktur Jenderal Minyak dan Gas Bumi.


Penentuan metode EOR yang tepat untuk suatu lapangan, memerlukan studi terlebih dulu tentang interval waktu proses hingga implementasinya. "Kita seleksi di mana (lapangan) yang cocok, misalkan injeksi chemicals atau CO2 atau cocok juga dengan uap, baru kita terapkan. Dalam studi, juga (dilakukan) modelling sebelum implementasi. Jadi tahapannya agak lama," papar Tutuka.

Selain EOR, berbagai upaya yang dilakukan pemerintah untuk mencapai target produksi 1 juta barel di tahun 2030 adalah dengan optimasi produksi pada lapangan saat ini, percepatan transformasi resources to production dengan mempercepat pengembangan lapangan baru dan lapangan yang tertunda, dan intensifikasi eksplorasi migas. Pemerintah juga sedang melakukan peninjakan kerja sama dengan institusi riset internasional untuk meningkatkan kualitas data melalui reprocessing dan re-interpretasi untuk menemukan giant discovery dalam eksplorasi sumber-sumber minyak baru.

Selain itu pemerintah menetapkan Permen ESDM No. 12 Tahun 2020, yang merupakan penegasan pemberlakuan bentuk Kontrak Kerja Sama (KKS) dan fleksibilitas opsi bentuk KKS. Fleksibilitas itu akan memberikan kenyamanan bagi investor untuk bisa memilih dan menghitung sebelumnya kira-kira keuntungannya berapa, dikaitkan dengan portofolio perusahaan. Pemberian sejumlah insentif juga diterapkan oleh pemerintah bagi kontraktor berupa DMO holiday, investment credit, dan depresiasi dipercepat untuk PSC Cost Recovery, serta besaran bagi hasil dan insentif kegiatan usaha hulu dalam rangka pemanfaatan BMN berdasarkan pertimbangan keekonomian untuk PSC Gross Split.

Selain berusaha meningkatkan jumlah produksi minyak bumi, Pemerintah Indonesia melakukan berbagai upaya untuk mengurangi ketergantungan terhadap kebutuhan minyak bumi. Indonesia telah menambahkan energi terbarukan kedalam bauran energi dan mencanangkan untuk mencapai angka 21% kontribusi energi terbarukan dari total penggunaan energi nasional.



 Gyeongbokgung Palace, Korea

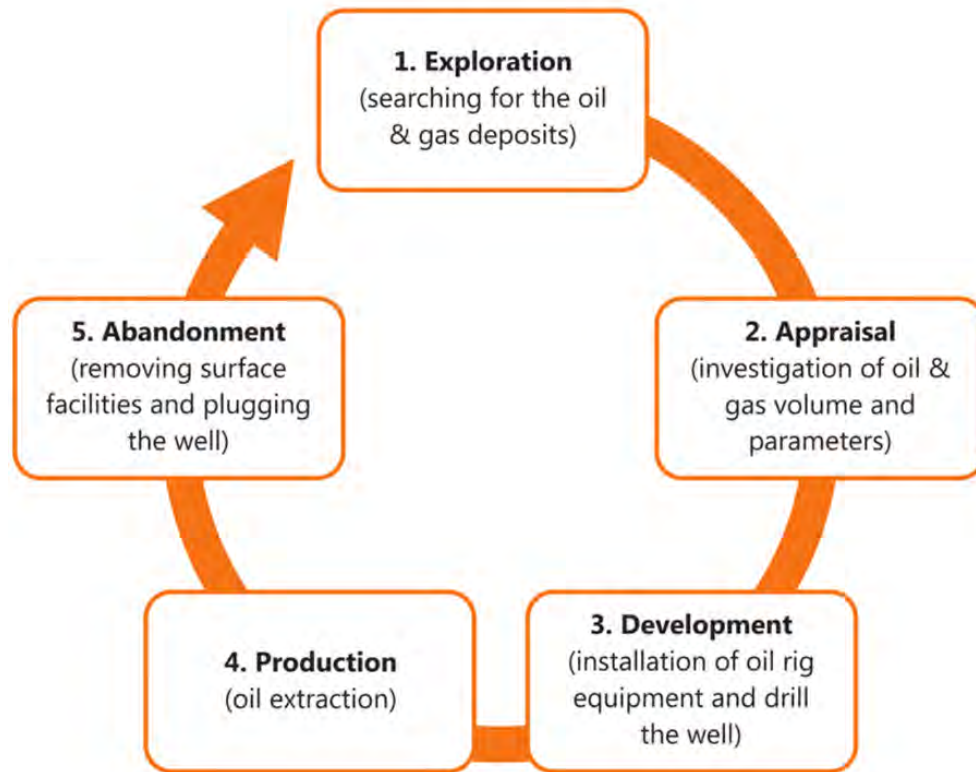
Karakteristik Akuntansi di Perusahaan Minyak dan Gas

Produksi minyak mentah Indonesia mengalami penurunan selama dekade terakhir ini, disebabkan oleh penurunan alami produksi minyak bumi dari tambang-tambang minyak, ditambah dengan laju penggantian cadangan yang lebih lambat dan penurunan eksplorasi serta investasi. Mengingat minimnya penemuan minyak signifikan di Indonesia Barat selama sepuluh tahun terakhir, Indonesia terus bergantung pada tambang minyak di daerah tersebut yang sekarang mengalami penurunan produksi. Pemerintah Indonesia telah menetapkan target agar negara ini mencapai produksi sebesar satu juta barel minyak per hari (bopd) dan produksi gas sebanyak 12 miliar kubik per hari (Bscfd) pada tahun 2030.

Target ini sangat menantang bagi industri hulu minyak dan gas Indonesia yang perlu melakukan upaya ekstra untuk menarik minat investor dan memperluas upaya eksplorasi guna meningkatkan cadangan minyak dan gas. Berdasarkan publikasi dari SKK Migas, produksi minyak harian rata-rata pada tahun 2022 adalah 612.300 BOPD. Angka ini berada di bawah target yang ditetapkan untuk tahun 2022 dan juga lebih rendah dibandingkan dengan produksi minyak aktual pada tahun 2021. Sementara target produksi minyak untuk tahun 2023 adalah 660.000 BOPD. Produksi gas harian pada tahun 2022 adalah 5,35 Bscfd. Angka tersebut berada di bawah target tahun 2022 dan juga di bawah produksi gas aktual pada tahun 2021. Target produksi gas untuk tahun 2023 adalah 6,16 Bscfd.

Pada tahun 2022, terdapat 128 cekungan reservoir minyak dan gas bumi yang terletak di Indonesia. Terdapat 68 cekungan yang belum dieksplorasi, sementara 20 cekungan telah memasuki fase produksi dan 8 cekungan telah dibor dan berada dalam tahap penilaian.

Siklus Industri Hulu Minyak dan Gas Bumi



Beberapa syarat dan ketentuan yang perlu diperhitungkan saat menilai Kontrak Bagi Hasil Produksi Indonesia ("PSC"):

- Fase eksplorasi berlangsung selama enam (6) tahun dan dapat diperpanjang sekali maksimal selama empat (4) tahun.
- Jika minyak dan/atau gas komersial ditemukan, kontrak dapat diperpanjang hingga 30 tahun.
- FTP (First Tranches Petroleum) adalah persentase tertentu yang harus dikurangkan dari produksi kotor sebelum pemulihan biaya (hanya berlaku dalam PSC pemulihan biaya). Ini akan dibagi antara Pemerintah dan Kontraktor.
- Setelah persetujuan Rencana Pengembangan Pertama ("POD") oleh pemerintah, Kontraktor wajib menawarkan sepuluh persen (10%) Minat Berpartisipasi kepada Perusahaan Milik Pemerintah Daerah (LGOC) yang ditunjuk oleh Pemerintah Daerah di dalam batas administratif Wilayah Kontrak.
- Pajak tidak langsung akan diperlakukan sebagai biaya. Alaminya, mungkin ada fasilitas pajak yang dapat diterapkan.
- Kewajiban Pasar Dalam Negeri ("DMO"), kewajiban untuk memasok pasar lokal dari bagian kontraktor.
- Beberapa insentif tersedia untuk perusahaan minyak dan gas, termasuk kredit investasi, penundaan biaya yang belum terbayar dari tahun sebelumnya (hanya berlaku untuk PSC pemulihan biaya), dan pembebasan dari pajak dan bea impor pada peralatan dan aset tertentu.



Indonesia saat ini menerapkan dua skema kontrak: pemulihan biaya dan PSC pembagian bruto, masing-masing dengan keunggulannya sendiri, menawarkan fleksibilitas dalam pemilihan kontrak.

Kontrak Pembagian Hasil PSC*

- Pemisahan keuntungan tetap pada awal kontrak, pemisahan ini biasanya bervariasi untuk setiap area;
- FTP (First Tranches Petroleum) dikurangkan setelah produksi kotor dan dibagi antara kontraktor dan pemerintah.
- Biaya operasional dikurangkan setelah FTP.
- Program kerja dan izin anggaran diperlukan.
- Fasilitas pajak termasuk pengurangan pajak tanah dan bangunan, pembebasan PPN selama periode eksplorasi dan bea masuk.
- Insentif lainnya mencakup kredit investasi, pembebasan biaya DMO dan penurunan depresiasi yang dipercepat.

Kontrak Pembagian Bruto PSC*

- Pemisahan dasar pada awal kontrak untuk minyak adalah 43% dan untuk gas adalah 48% (sebelum pajak).
- Pada POD (Plan of Development) tambahan, pemisahan variabel akan diberikan kepada kontraktor berdasarkan kondisi aktual, termasuk status area kerja, lokasi lapangan, kedalaman reservoir, ketersediaan fasilitas pendukung, jenis reservoir, kandungan CO₂ & H₂S, gravitasi API HC, konten lokal, fase produksi, harga minyak dan gas, serta produksi kumulatif.
- Biaya operasional termasuk dalam pemisahan kontraktor.
- Tidak diperlukan izin anggaran.
- Proses pengadaan sendiri diterapkan.
- Insentif pajak mencakup pengurangan pajak tanah dan bangunan, pembebasan PPN selama periode eksplorasi dan bea masuk.
- Insentif lainnya ditentukan berdasarkan faktor-faktor ekonomi.

Keunikan Akuntansi untuk Perusahaan Minyak dan Gas Hulu

Industri minyak dan gas bumi memiliki beberapa aspek yang unik dalam hal akuntansi. Aspek-aspek ini meliputi, namun tidak terbatas pada:

- Cadangan dan Sumber Daya: Cadangan, meskipun tidak muncul langsung di neraca perusahaan minyak, memainkan peran penting dalam berbagai aplikasi akuntansi. Ini mencakup depresiasi, penilaian penurunan nilai, penyediaan untuk pembuangan fasilitas, dan alokasi harga beli untuk penggabungan bisnis.

Kategori cadangan dengan probabilitas tertinggi dikenal sebagai cadangan terbukti, lalu ada cadangan kemungkinan (biasanya 50:50), dan di kategori terendah, namun masih layak, bisa disebut cadangan mungkin atau cadangan kontingen.

Untuk metode depresiasi, depleksi dan amortisasi (DD&A), IFRS/PSAK tidak menentukan dasar perhitungan Unit Produksi (UOP). Banyak entitas menggunakan cadangan terbukti yang sudah dikembangkan, sementara yang lain menggunakan total terbukti atau kombinasi terbukti dan mungkin. Cadangan terbukti yang sudah dikembangkan adalah yang dapat diekstraksi tanpa pengeluaran modal tambahan. Dasar perhitungan UOP adalah pilihan kebijakan akuntansi dan harus diterapkan secara konsisten. Jika entitas tidak menggunakan cadangan terbukti yang sudah dikembangkan, maka dilakukan penyesuaian dalam perhitungan biaya amortisasi untuk memasukkan perkiraan biaya pengembangan masa depan untuk mengakses cadangan yang belum dikembangkan.

Produksi perkiraan yang digunakan untuk DD&A dari aset yang tunduk pada sewa atau lisensi harus dibatasi pada produksi total yang diharapkan akan diproduksi selama jangka waktu sewa/lisensi. Perpanjangan sewa/lisensi hanya dianggap jika ada bukti mendukung perpanjangan yang mungkin dipilih oleh entitas tanpa biaya signifikan.

- **Biaya Eksplorasi dan Evaluasi:** Menurut PSAK 64 Eksplorasi dan Evaluasi Sumber Daya Mineral, eksplorasi dan evaluasi sumber daya mineral, termasuk biaya geologi dan geofisika, pengeboran sumur eksplorasi dan biaya terkait dengan mengevaluasi kelayakan teknis dan komersial ekstraksi minyak dan gas bumi, dimulai saat hak eksplorasi yang sah diperoleh. Biaya yang dikeluarkan sebelum memperoleh hak eksplorasi biasanya diakui sebagai biaya (expensed), kecuali jika biaya-biaya tersebut terkait dengan aset tak berwujud yang diperoleh secara terpisah, seperti pembayaran untuk opsi memperoleh hak yang sah. Biaya evaluasi mengkaji kelayakan teknis dan komersial sumber daya yang ditemukan. Perlakuan akuntansi untuk biaya eksplorasi dan evaluasi (E&E), apakah dikapitalisasi atau diakui sebagai biaya, dapat berdampak signifikan pada laporan keuangan, terutama untuk entitas yang berada dalam tahap eksplorasi tanpa aktivitas produksi.
- **Properti Minyak dan Gas Bumi:** Properti minyak dan gas bumi dilaporkan berdasarkan biaya, dikurangkan dengan penurunan nilai, depresiasi, dan kerugian penurunan nilai yang terakumulasi. Biaya yang terkait dengan pengeboran sumur pengembangan, sumur uji stratigrafi tipe pengembangan, platform, peralatan sumur dan fasilitas produksi terkait dikapitalisasi sebagai sumur yang belum selesai, peralatan dan fasilitas. Biaya-biaya tersebut dialihkan ke sumur dan peralatan yang terkait saat selesai, dengan banyaknya pengeluaran pengembangan memenuhi kriteria pengakuan yang diuraikan dalam PSAK 16 (Aset Tetap).
- **Pengakuan Pendapatan di Hulu:** Pengakuan pendapatan, terutama untuk kegiatan hulu, dapat menimbulkan isu-isu yang kompleks. Produksi seringkali terjadi dalam kemitraan usaha bersama atau melalui konsesi, dan entitas harus menganalisis fakta dan keadaan untuk menentukan kapan dan berapa banyak pendapatan yang harus diakui. Dalam banyak kemitraan usaha bersama (JV), output fisik, seperti minyak mentah, dibagi di antara mitra. Setiap mitra bertanggung jawab baik menggunakan atau menjual minyak yang diambil. Overlift (pengangkutan lebih) dan underlift (pengangkutan kurang) pada dasarnya merupakan penjualan minyak pada saat pengangkutan yang dilakukan oleh underlifter (pemungut yang kurang) kepada overlifter (pemungut yang lebih). Kriteria pengakuan pendapatan dianggap terpenuhi, dan overlift diperlakukan sebagai pembelian minyak oleh overlifter dari underlifter.

Masalah:

Bagaimana pendapatan dalam Kontrak Bagi Hasil Produksi ("PSA") yang melibatkan Perusahaan Swasta sebagai Operator dengan bagian keuntungan/kepentingan berpartisipasi sebesar 60% dan Badan Usaha Milik Negara ("BUMN") dengan kepentingan berpartisipasi sebesar 40% dibagi antara pihak/kontraktor?



Solusi:

Contoh di bawah ini menjelaskan bagaimana pendapatan dari PSA dibagi antara operator, Badan Usaha Milik Negara (BUMN), dan otoritas perpajakan. FTP pemerintah adalah sebesar 20% dari produksi, operator (Perusahaan Swasta) memiliki bagian keuntungan sebesar 60%, dan bagian BUMN adalah sebesar 40%. Biaya yang belum dipulihkan dapat dibawa ke tahun-tahun mendatang.

Komponen minyak berdasarkan prioritas adalah:

- 1) biaya operasional (dibagi berdasarkan bagian keuntungan);
- 2) biaya eksplorasi (seluruhnya dikeluarkan oleh operator);
- 3) biaya pengembangan (dibagi berdasarkan persentase bagian keuntungan); dan

Asumsi:

Pendapatan Minyak	\$6.540.000
Biaya eksplorasi yang dikeluarkan	\$900.000
Biaya pengembangan yang dikeluarkan tahun ke-1	\$500.000
Biaya operasional tahun ke-1	\$1,000,000
FTP 20% dan Pajak Pemerintah 44%	

(in US\$,000)	Total	Gol	Private Co	SOE
Revenue Oil (100%)	6.540.000			
First Tranche Petroleum	1.308.000	1.308.000		
Remaining balance	5.232.000			
Cost Recovery				
- Operating	1.000.000		600.000	400.000
- Exploration	900.000		900.000	
- Development	500.000		300.000	200.000
Total Cost Recovery	2.400.000		1.800.000	600.000
Equity to be Split	2.832.000		1.699.200	1.132.800
Government Tax (44%)		1.246.080	747.648	498.432
Total Revenue shares	6.540.000	2.554.080	2.751.552	1.234.368

Masalah di atas adalah contoh sederhana dari metodologi alokasi pendapatan dalam sektor produksi hulu minyak dan gas bumi, yang tidak termasuk bagian Kewajiban Pasar Dalam Negeri ("DMO") yang biasanya diuraikan dalam Kontrak Bagi Hasil Produksi ("PSC").

Daftar ini sama sekali tidak lengkap; berbagai tantangan lain mungkin dihadapi oleh perusahaan ketika mengelola akun mereka di sektor ini. Tantangan-tantangan ini mencakup pengakuan aset pajak tangguhan yang muncul akibat biaya yang belum dipulihkan/hilang, menilai penurunan nilai biaya eksplorasi dan pengabaian Aset Minyak dan Gas, melakukan alokasi harga beli selama penggabungan bisnis, dan menangani perlakuan akuntansi untuk berbagai kontrak antara Pemerintah Republik Indonesia (Gol) dan investor (PSC, Badan Usaha Bersama PSC, Kontrak Asisten Teknik (TAC), kontrak Unitisasi, dll), serta Perjanjian Operasi Bersama antara Kontraktor yang memerlukan penentuan antara menggunakan metode akuntansi ekuitas atau konsolidasi proporsional. Selain itu, ada kompleksitas terkait dengan pengakuan pendapatan untuk Kontrak Pembagian Bruto. Penting bagi pemilik bisnis untuk tetap up to date dengan regulasi terbaru dan praktik terbaik, memastikan kepatuhan sekaligus memaksimalkan profitabilitas bila memungkinkan.



📍 Seoul View City, Korea

Penekanan Audit atas Perusahaan Minyak dan Gas

Proses audit keuangan melibatkan auditor dalam mengevaluasi transaksi keuangan dan laporan perusahaan Anda. Secara umum, audit laporan keuangan perusahaan minyak dan gas sama dengan tahapan audit laporan keuangan perusahaan di industri lain. Audit keuangan bisnis yang tipikal memiliki empat tahap utama: perencanaan, penetapan kontrol internal, pengujian, dan pelaporan. Pendekatan audit berbasis risiko tetap menjadi praktik umum sesuai dengan standar audit.

Dalam mengaudit perusahaan minyak dan gas, ada beberapa penekanan audit khusus yang perlu diperhatikan. Ini termasuk pengakuan pendapatan, penilaian persediaan, analisis penurunan nilai, serta pengukuran cadangan minyak dan gas sebagai penekanan audit utama. Penekanan lain meliputi eksplorasi dan evaluasi, royalti, serta depresiasi, amortisasi, dan penurunan.

Dalam mengaudit Perusahaan Minyak dan Gas, untuk memberikan layanan bernilai tambah kepada klien, terdapat beberapa hal yang perlu dipertimbangkan oleh auditor eksternal sebagai berikut:

1. Keterampilan dan Pengalaman Auditor

Auditor yang mengaudit perusahaan minyak dan gas harus memiliki pengetahuan dan pengalaman yang mencukupi dalam industri ini. Mereka harus memahami aspek teknis dan operasional bisnis minyak dan gas, serta peraturan yang berlaku.

2. Pemahaman Risiko

Auditor harus memiliki pemahaman mendalam tentang risiko yang dihadapi oleh perusahaan minyak dan gas dan harus dapat mengidentifikasi potensi risiko yang dapat memengaruhi operasi perusahaan.

3. Penggunaan Teknologi Terbaru

Industri Minyak dan Gas semakin mengadopsi teknologi terbaru dan analisis data untuk meningkatkan efisiensi dan memantau operasi. Auditor harus memahami dan mengatasi risiko dalam teknologi ini dengan menjalankan serangkaian prosedur dan melibatkan spesialis TI jika diperlukan.

4. Keterlibatan Spesialis Cadangan

Informasi cadangan digunakan sebagai dasar perhitungan depresiasi dan penilaian penurunan nilai dalam perusahaan minyak dan gas. Estimasi dan audit Informasi Cadangan didasarkan pada prinsip-prinsip historis yang dikembangkan dalam teknik perminyakan dan evaluasi, yang pada gilirannya didasarkan pada prinsip-prinsip ilmu fisika, matematika, dan ekonomi. Meskipun prinsip-prinsip evaluasi perminyakan dan teknik umumnya diterima didasarkan pada konsep ilmiah yang mapan, penerapan prinsip-prinsip tersebut melibatkan penilaian yang ekstensif dan dapat berubah sesuai dengan (i) pengetahuan dan teknologi yang ada, (ii) kondisi ekonomi, (iii) ketentuan perundang-undangan dan regulasi yang berlaku, dan (iv) tujuan penggunaan Informasi Cadangan tersebut. Manajemen perlu mempertimbangkan keterlibatan spesialis untuk mengevaluasi cadangan tersebut. Auditor eksternal akan menjalankan prosedur yang terkait dengan pekerjaan spesialis dan mungkin melibatkan spesialis auditor untuk membantu dalam peninjauan penilaian jika diperlukan.

5. Pembekuan dan Restorasi Situs

Sumur minyak atau gas dibungkus dan ditinggalkan saat mencapai akhir umur yang berguna atau menjadi lubang kering. Selain itu, untuk fasilitas yang terkait dengan produksi minyak dan gas, operator harus memastikan bahwa fasilitas tersebut ditutup dengan aman dan benar. Manajemen menghitung penyediaan restorasi aset dan pembekuan dan mengkapitalisasi sebagai aset ARO. Perhitungan ini dapat melibatkan ahli teknis. Auditor eksternal perlu memiliki pengetahuan dan pengalaman yang mencukupi terkait dengan perhitungan ini dan mungkin melibatkan ahli auditor untuk membantu dalam penyusunan prosedur audit.

Perusahaan yang beroperasi dalam bidang minyak dan gas biasanya memiliki banyak model bisnis atau kondisi unik terkait bisnis mereka. Beberapa masalah kunci dapat ditemukan oleh auditor secara kasus per kasus. Masalah-masalah ini meliputi jalur samping, sumur yang ditanggihkan, overlifts dan underlifts, pengisian saluran dan gas penyangga, farm out, perjanjian unitisasi, perjanjian bagi hasil produksi, kewajiban pemusnahan, dan kegiatan bersama.

Penting untuk diingat bahwa penekanan pada audit di perusahaan minyak dan gas tidak hanya tentang penerbitan pendapat audit, tetapi juga dapat memberikan layanan bernilai tambah dengan memastikan kepatuhan terhadap regulasi, pengelolaan risiko, dan pencapaian efisiensi yang lebih besar. Dengan melakukan audit dengan cermat dan memperhatikan faktor-faktor



📍 Nami Island, Korea

Perusahaan Minyak dan Gas Tercatat di Pasar Modal Indonesia

Dalam tiga tahun terakhir, beberapa perusahaan sektor energi telah berhasil melaksanakan penawaran saham perdana (IPO) di Bursa Efek Indonesia (BEI). Untuk sub-sektor penyimpanan dan distribusi minyak dan gas, tercatat PT Humpuss Maritim International Tbk (HUMI), PT GTS International Tbk (GTSI) dan PT Indah Prakarsa Sentosa Tbk (INPS). Selain mereka yang IPO dalam tiga tahun terakhir, sekurangnya ada lima perusahaan terdaftar lain di sub-sektor yang sama. Sedangkan dalam sub-sektor produksi dan penyulingan minyak dan gas, tercatat PT Medco Energi Internasional Tbk (MEDC), PT Sugih Energy Tbk (SUGI), PT Energi Mega Persada Tbk (ENRG) dan yang terakhir IPO dalam sub-sektor ini adalah PT Super Energy Tbk (SURE), yang melaksanakan IPO di tahun 2018.

Perusahaan-perusahaan tersebut memilih bertumbuh sebagai perusahaan terdaftar di pasar modal Indonesia, yang banyak mencapai rekor positif di antara pasar modal dalam kawasan Asia Tenggara selama tiga tahun terakhir. Perusahaan-perusahaan di sektor energi termasuk dalam indeks IDXENERGY, dimana sektor ini merupakan salah satu sektor yang memiliki tren positif sejak bursa memasuki masa pemulihan COVID-19. IDXENERGY telah bertumbuh dari closing price pada Bulan Januari tahun 2021 sebesar 740,68 menuju 2034,88 pada Bulan Agustus tahun 2023. Hal ini berarti IDXENERGY memiliki Compound Annual Growth Rate (CAGR) melebihi 50%, didukung juga dengan pemulihan aktivitas perekonomian dan commodity boom secara global.

Date	IDXESGL		IDXENERGY		IDX BASIC		IDXINDUST		IDXNONCYC		Closing Price		IDXCYCLIC		IDXHEALTH		IDXFINANCE		IXKP ROBERT		IDXTECHNO		IDXINFRA	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Jan-21	137.284		740.082		1260.186		958.953		737.657		714.858		1255.875		1297.043		881.284		2157.776		828.125			
Feb-21	139.553	1.65%	707.948	-3.68%	1384.092	6.71%	911.754	-2.84%	752.733	2.18%	740.811	3.63%	1310.565	-4.35%	1419.877	9.47%	916.997	4.05%	3216.440	49.06%	912.991	10.25%		
Mar-21	132.745	-4.88%	712.962	-7.16%	1216.189	-8.07%	938.311	0.70%	758.162	0.59%	721.134	-2.66%	1275.105	-2.69%	1316.811	-5.84%	903.662	-1.45%	2942.400	-11.63%	883.291	-3.25%		
Apr-21	131.552	-0.90%	744.548	4.43%	1286.131	0.80%	938.241	2.12%	750.161	-1.06%	787.854	3.70%	1277.466	0.17%	1327.735	-0.69%	878.400	-2.79%	3185.542	12.07%	888.583	-0.16%		
May-21	131.100	-0.19%	737.214	-0.99%	1367.269	-6.33%	971.248	1.36%	728.148	-2.79%	746.112	-1.01%	1275.275	-0.17%	1330.800	0.23%	827.048	-5.85%	3793.319	19.08%	913.083	3.54%		
Jun-21	127.004	-6.32%	719.880	-2.35%	1169.677	0.21%	958.010	-1.36%	704.410	-3.39%	740.425	0.01%	1342.385	5.26%	1300.013	-0.79%	781.168	-5.54%	10708.238	182.16%	900.068	-1.42%		
Jul-21	120.208	-2.27%	700.073	5.58%	1163.681	-0.52%	926.290	-3.32%	698.997	-6.31%	801.199	8.21%	1338.118	1.17%	1353.818	2.54%	903.932	2.91%	11732.894	9.62%	931.505	3.05%		
Aug-21	126.370	5.54%	752.716	-0.97%	1176.541	1.02%	994.982	7.42%	661.869	0.28%	806.544	0.67%	1319.138	-1.36%	1397.870	3.24%	805.913	0.25%	10900.08	-6.32%	936.755	0.56%		
Sep-21	129.628	2.17%	996.252	32.36%	1124.863	-4.31%	1081.317	8.73%	673.911	1.82%	855.047	6.01%	1359.338	1.47%	1414.805	1.23%	819.907	1.74%	9443.602	-14.09%	973.803	4.17%		
Oct-21	140.392	8.30%	1000.369	0.41%	1194.810	6.20%	1080.968	-0.08%	689.985	2.39%	852.039	-0.35%	1404.068	3.29%	1537.885	8.70%	965.930	5.61%	9404.792	-0.40%	986.629	1.10%		
Nov-21	138.441	-1.39%	1046.545	4.62%	1201.660	0.59%	1028.721	-4.83%	675.057	-2.16%	821.478	-2.21%	1435.650	3.68%	1526.503	-0.74%	816.091	-5.73%	8872.256	-5.66%	987.234	0.06%		
Dec-21	130.061	-1.71%	1139.493	8.88%	1274.381	2.72%	1036.892	0.77%	664.131	-1.62%	900.821	8.07%	1426.016	-2.44%	1526.859	0.02%	773.062	-5.30%	8894.389	1.38%	858.766	-2.83%		
Jan-22	135.334	-0.55%	1294.892	13.64%	1216.391	-1.30%	1031.866	-0.47%	657.024	-1.07%	886.647	-1.60%	1451.071	2.18%	1560.185	2.18%	712.500	-7.83%	7889.536	-12.26%	918.083	-4.19%		
Feb-22	139.601	3.20%	1324.380	2.28%	1252.280	2.78%	1076.624	4.33%	689.281	-1.18%	940.682	6.17%	1412.788	-2.64%	1626.704	4.27%	720.124	1.07%	8090.747	2.52%	1000.047	8.81%		
Mar-22	144.662	3.57%	1481.342	11.85%	1329.147	6.14%	1189.844	6.78%	650.579	1.12%	923.434	1.25%	1410.806	-0.78%	1623.012	-0.17%	736.312	2.25%	8637.546	6.76%	873.388	-2.67%		
Apr-22	149.623	3.44%	1618.908	9.29%	1363.012	2.55%	1268.897	10.36%	605.080	1.03%	935.013	-1.41%	1472.342	5.05%	1635.542	0.71%	779.313	-0.95%	8702.954	0.76%	1011.196	3.88%		
May-22	146.441	-2.12%	1750.717	8.14%	1401.204	2.83%	1302.131	2.64%	716.480	6.83%	824.511	-1.54%	1500.739	1.92%	1518.141	-5.90%	715.121	-1.95%	8771.128	-1.40%	855.541	-5.46%		
Jun-22	136.578	-6.74%	1638.182	-6.43%	1320.870	-12.89%	1238.807	-7.04%	723.264	1.80%	891.843	-3.53%	1518.98	1.27%	1437.319	-6.61%	678.898	-5.07%	7880.704	2.26%	966.609	1.01%		
Jul-22	139.636	2.24%	1857.723	13.40%	1283.006	5.14%	1308.513	8.10%	700.588	-2.86%	913.348	1.29%	1413.47	-4.37%	1499.836	4.35%	689.661	1.59%	7714.029	-2.17%	988.707	2.39%		
Aug-22	144.384	3.40%	1899.493	2.25%	1298.479	1.16%	1323.151	1.12%	707.016	0.71%	887.504	-1.75%	1436.727	-1.15%	1515.898	1.07%	701.248	1.68%	7816.509	1.33%	1049.117	5.05%		
Sep-22	144.867	0.07%	1920.303	1.10%	1313.971	-4.66%	1270.719	-3.96%	696.464	-1.58%	845.770	-4.26%	1497.839	4.26%	1488.145	-1.96%	686.800	-2.05%	6818.839	-10.96%	880.267	-5.96%		
Oct-22	148.369	2.65%	2068.500	7.77%	1268.228	2.44%	1273.956	0.25%	735.315	5.58%	868.543	2.21%	1504.123	0.42%	1501.362	1.02%	683.673	0.99%	6451.366	-7.31%	940.060	-4.16%		
Nov-22	148.498	0.13%	2078.751	0.45%	1284.282	1.27%	1246.257	-2.17%	744.886	1.32%	884.732	3.01%	1537.024	2.19%	1509.338	0.53%	718.296	3.55%	5886.165	-8.61%	894.063	-4.89%		
Dec-22	140.283	-5.53%	2279.547	9.66%	1216.126	-5.31%	1174.334	-5.77%	716.067	-3.82%	850.800	-4.90%	1564.975	1.82%	1404.835	-6.26%	711.245	-0.98%	5162.643	-12.45%	868.641	-2.84%		
Jan-23	139.176	-0.79%	2374.301	-4.75%	1258.917	3.52%	1170.560	-0.32%	738.361	3.08%	821.215	-3.49%	1445.533	-1.22%	1412.987	-0.14%	697.767	-0.56%	5481.750	6.19%	851.888	-1.93%		
Feb-23	160.934	1.26%	2024.214	-3.23%	1243.213	-1.25%	1189.307	2.41%	762.113	0.47%	845.260	2.93%	1565.036	1.24%	1400.256	-0.83%	686.139	-1.15%	1310.853	-1.75%	844.120	-0.86%		
Mar-23	138.893	-1.40%	2103.641	0.12%	1181.783	-4.78%	1189.574	-1.10%	733.635	-1.41%	824.190	-2.72%	1540.669	-1.56%	1385.825	-1.10%	686.891	-1.75%	5100.720	-5.29%	808.838	-4.23%		
Apr-23	141.087	1.53%	2084.864	-0.42%	1171.186	-1.06%	1207.234	1.83%	726.607	-0.68%	810.827	-1.40%	1541.664	0.07%	1385.039	-0.02%	700.229	1.94%	4937.686	-3.21%	822.051	1.63%		
May-23	146.628	3.93%	2088.548	-18.39%	983.564	-16.02%	1127.132	-6.61%	737.382	1.47%	855.853	5.55%	1457.445	-5.46%	1368.303	-1.24%	711.795	1.65%	3105.892	3.42%	823.719	0.20%		
Jun-23	142.552	-2.78%	1717.968	1.66%	993.017	0.96%	1162.048	3.07%	742.410	0.68%	876.222	2.38%	1481.617	1.66%	1417.704	3.61%	727.049	2.14%	4795.309	-6.38%	850.497	3.25%		
Jul-23	143.942	0.88%	1924.102	10.71%	1094.170	10.19%	1219.938	4.98%	738.720	2.20%	927.744	5.88%	1528.431	3.16%	1437.817	1.42%	752.542	3.51%	4697.389	-1.73%	857.993	0.88%		
Aug-23	141.971	-1.41%	2034.880	5.76%	1201.648	9.81%	1172.110	-3.90%	750.060	-0.40%	802.684	-2.70%	1476.98	-3.37%	1420.029	-1.24%	754.446	0.25%	4428.546	-5.81%	911.543	6.24%		

(Tabel pergerakan closing price indeks Bursa Efek Indonesia)

Perusahaan tercatat di pasar modal berarti telah berkomitmen untuk patuh pada peraturan penyelenggara bursa dan Otoritas Jasa Keuangan (OJK), termasuk reflektif pada ekspektasi investor saham. Salah satu bentuk kepatuhan pada regulator yaitu dengan memenuhi kewajiban pelaporan tahunan, termasuk laporan keuangan. Kewajiban ini diatur dalam Peraturan Otoritas Jasa Keuangan (POJK) Nomor 29/POJK.04 sejak tahun 2016. Salah satu tujuan laporan tahunan yaitu untuk merefleksikan tanggung jawab sosial perusahaan terdaftar dalam aktivitas usaha. Pengawasan dan peneraan sanksi meliputi peneraan pelanggaran ketentuan, mulai dari peringatan tertulis hingga pembatalan pendaftaran. Adapun perusahaan-perusahaan terdaftar tersebut disajikan dalam tabel sebagai berikut:



OIL & GAS LISTED COMPANIES IN INDONESIA

For Oil & Gas Production & Refinery (A111) & Oil & Gas Storage & Distribution (A112)

Company Name	Company Code	IPO Date	Price	Outstanding Shares	Market Capitalization (IDR Million)	Latest Rights Issue	Ratio
AKR Corporindo Tbk.	AKRA	3 Oct 2014	1,400	20,073,474,600	28,102,864	4 Feb 2010	5:1
Buana Lintas Lautan Tbk.	BULL	23 May 2011	178	14,117,801,449	2,512,969	3 Jul 2019	8:3
Energi Mega Persada Tbk.	ENRG	7 Jun 2004	294	24,821,230,250	7,297,442	6 Jul 2021	100:140
GTS Internasional Tbk.	GTSI	8 Sep 2021	53	15,819,142,767	838,415	-	-
Humpuss Intermoda Transportasi Tbk.	HITS	15-Dec-1997	366	7,101,084,801	2,598,997	-	-
Humpuss Maritim Internasional Tbk.	HUMI	09-Agu-2023	100	18,046,450,000	1,804,645	-	-
Indah Prakasa Sentosa Tbk.	INPS	6 Apr 2018	1,180	650,000,000	767,000	-	-
Mitra Energi Persada Tbk.	KOPI	23 Apr 2001	620	697,266,668	432,305	-	-
Logindo Samudramakmur Tbk.	LEAD	11-Dec-2013	68	4,049,616,328	275,374	11 Jul 2017	7:4
Medco Energi Internasional Tbk	MEDC	12-Okt-1994	1,015	25,136,231,252	25,513,275	14 Sep 2020	5:2
Mitra Investindo Tbk.	MITI	16 Jul 1997	170	3,540,735,503	601,925	6 Dec 2022	500:319
Capitalinc Investment Tbk.*	MTFN	16 Apr 1990	50	31,842,082,852	1,592,104	15 Apr 2014	18:125
Perusahaan Gas Negara Tbk.	PGAS	15-Dec-2003	1,760	24,241,508,196	42,665,054	-	-
Rukun Raharja Tbk.	RAJA	19 Apr 2006	1,045	4,227,082,500	4,417,301	14 May 2012	500:250
Sillo Maritime Perdana Tbk.	SHIP	16 Jun 2016	880	2,719,790,000	2,393,415	-	-
Soechi Lines Tbk.	SOCI	03-Dec-2014	181	7,059,000,000	1,277,679	-	-
Sugih Energy Tbk.*	SUGI	19 Jun 2002	50	24,811,541,414	1,240,577	-	-
Super Energy Tbk.*	SURE	05-Okt-2018	1,720	1,497,576,771	2,575,832	-	-

*Under authorities monitoring/suspension

Selain dari sisi kepatuhan, laporan tahunan juga bermanfaat sebagai media komunikasi dan pengelolaan relasi dengan investor. Laporan ini menunjukkan tren dan kondisi dari sektor perusahaan terkait, terutama terkait isu transisi energi. Dalam seminar ASEAN yang diadakan di Jakarta pada tahun 2023, Indonesia menyatakan komitmen dalam transisi energi melalui pengembangan konsep, peta jalan dalam jangka panjang, jalur interkoneksi listrik regional dan upaya mengatasi kesenjangan antara kebijakan dan realisasi investasi sektor energi terbarukan di Indonesia.

Namun, transisi energi tidak menjadi ancaman sektor minyak dan gas dalam jangka pendek. Berdasarkan OPEC World Oil Outlook 2022, disampaikan bahwa permintaan minyak sebagai bahan bakar primer dan gas akan terus meningkat hingga tahun 2045. Hal ini disebabkan oleh pertumbuhan ekonomi dunia yang diramalkan akan meningkat hingga dua kali lipat, penambahan penduduk dunia hingga 1.6 miliar orang pada tahun 2045, tingkat urbanisasi dan pengeluaran masyarakat kelas menengah di negara-negara berkembang. Meskipun industri energi terbarukan diramalkan terus bertumbuh signifikan tiap tahunnya, mencapai 7.1% hingga tahun 2045, tidak dapat menggantikan peran minyak dalam memenuhi kebutuhan energi dunia.

Mendukung tren positif tersebut, SW Indonesia, melalui divisi SW Business Advisory, siap menjadi financial advisor dalam menyukseskan proses IPO Perusahaan, baik untuk sektor energi maupun sektor lainnya. Jasa pre-IPO dan perencanaan restrukturisasi mendukung keputusan stakeholder Perusahaan dalam eksekusi proses IPO.


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印度尼西亚的石油和天然气

从地质学上讲，印度尼西亚位于“火环”沿线，这是一个以断层线和火山为标志的板块构造边界。这个环绵延约4万公里，横跨秘鲁、智利、汤加、日本、菲律宾和印度尼西亚等赤道国家。

根据美国地质调查局的数据，世界上约81%的大地震都发生在这一地震带上。构造板块的相互运动是地震的原因之一。构造板块的交汇形成了俯冲带，导致山脉、褶皱和沉积岩沉积盆地的形成。这些沉积盆地是原油蕴藏的源头，由数百万年前的微生物遗骸形成，被河流和泥浆携带，然后在高压和高温下沉淀在海底。

印度尼西亚是世界上最大的石油和天然气生产国之一。截至2022年，印度尼西亚的石油产量在全球排名第24位。在东南亚地区，印度尼西亚的石油产量和石油储量仍居首位。

目前，印度尼西亚的石油日产量为61万至62万桶，而石油日消耗量约为155万至160万桶。这意味着印度尼西亚仍然需要进口石油来满足其日常消费需求。

在天然气产量方面，印度尼西亚2022年的天然气产量为548.6亿立方米。根据印度尼西亚能源和矿产资源部（ESDM）的数据，印度尼西亚国内天然气消费量已达到68%。大部分天然气用于满足工业需求，占29.25%。政府致力于进一步增加家用天然气的使用量。

政府制定了到2030年石油日产量达到100万桶以满足国内需求的目标。为实现这一目标，政府鼓励研发能够提高国内石油产量和储量的尖端技术。政府还出台了支持责任制利用的政策。

例如，对老化油井采用强化采油（EOR）技术就有可能大幅增加印度尼西亚的石油储量。据估计，EOR方法可将印度尼西亚的碳氢化合物储量从24亿日产石油桶当量（BOEPD）提高到30亿日产石油桶当量（BOEPD）。EOR是一种用于提高碳氢化合物产量的方法，特别是在一次采油和二次采油的方法无法从油井中有效开采石油的油藏中。

EOR是指从储层外部注入一种物质。“EOR通常用于三次采油。在某些情况下，EOR可用于一次采油阶段，特别是在处理重质原油时。例如，在Duri油田，传统的生产方法无法满足需要，因此需要注入蒸汽来提高产量”石油和天然气公司总经理Tutuka Ariadji解释说。


为特定油田选择合适的 EOR 方法，需要对工艺时间表和实施进行初步研究。Tutuka 补充说：“我们会评估哪种方法合适，是化学注入法、二氧化碳注入法还是蒸汽注入法，然后进行应用，研究还涉及到实施前的建模，因此这个过程可能会比较耗时”。

除了EOR之外，还在采取各种措施来实现2030年的生产目标。这些措施包括优化现有油田的生产，通过开发新油田和延迟的油田加快资源向生产的转化，以及加强石油和天然气勘探。政府还在探索与国际研究机构的合作，通过再处理和再阐释来提高数据质量，以寻找新的石油来源。

此外，政府还颁布了2020年第12号法规（Permen ESDM No. 12 Tahun 2020），明确了各类合作合同（Kontrak Kerja Sama或KKS）的实施，并为KKS合同形式提供了灵活性。这种灵活性使投资者能够在考虑其公司投资组合的情况下，更轻松地选择和计算预期利润。政府还为承包商提供激励措施，如DMO（国内市场义务）假期、投资信贷和PSC成本回收的加速折旧，以及基于经济考虑的收入分成和上游业务活动激励措施（用于PSC产量分成）。

除了努力增加石油产量外，印度尼西亚政府还采取措施减少对石油的依赖。印度尼西亚已将可再生能源纳入其能源结构，目标是使可再生能源占全国能源消费总量的21%。



 Gyeongbokgung Palace, Korea

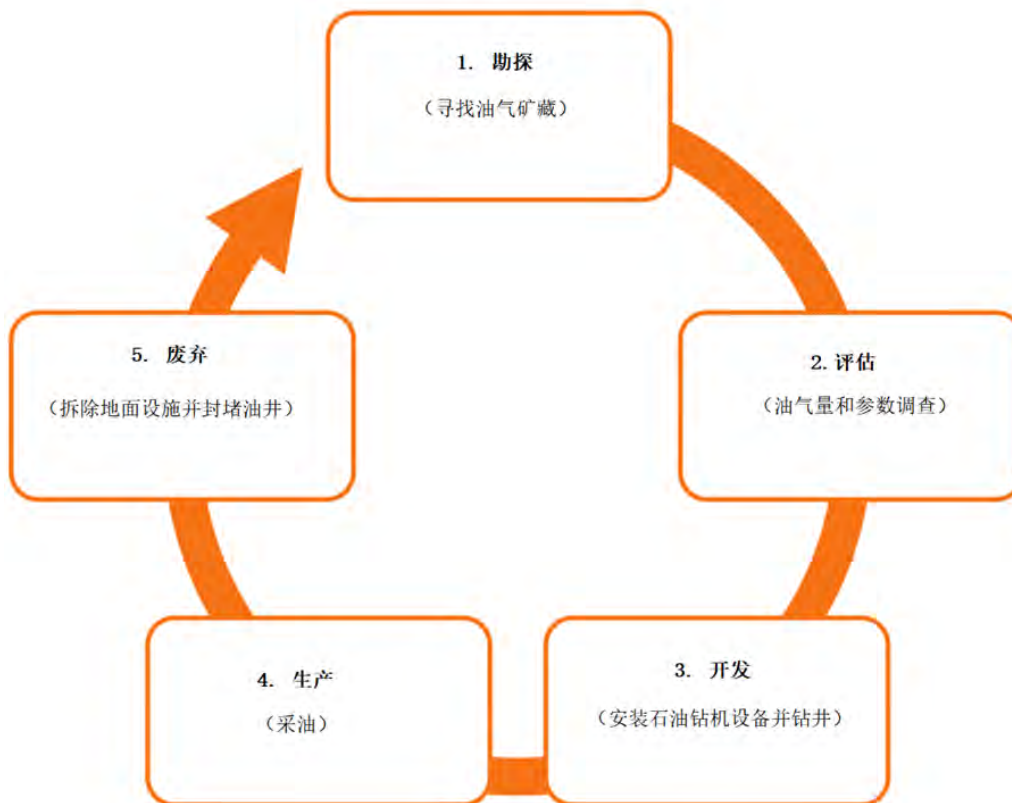
石油天然气公司会计特征

过去十年间，印度尼西亚的原油产量有所下降，原因是油田产量自然递减、储量替代速度放缓以及勘探和投资减少。在过去十年中，印度尼西亚西部几乎没有重大的石油发现，印度尼西亚依赖的依然是这些地区的成熟油田，而这些油田的产量在持续下降。印度尼西亚政府的目标是，到2030年，印度尼西亚的石油产量达到每天一百万桶，天然气产量达到每天120亿标准立方英尺。

这一目标对印度尼西亚上游石油和天然气行业而言极具挑战性，该行业需要加大力度吸引投资者的兴趣，并加大勘探力度以增加石油和天然气储量。根据印度尼西亚油气上游业特别机构(SKK Migas)发布的数据，印度尼西亚2022年的日均石油产量为61.23万桶，这低于其2022年的目标，也低于2021年的实际石油产量。2023年的石油产量目标为每天66万桶。2022年的天然气日产量为53.5亿标准立方英尺。这低于其2022年的目标，也低于2021年的实际天然气产量。2023年的天然气产量目标为每天61.6亿标准立方英尺。

截至2022年，印度尼西亚共有128个油气藏盆地。未勘探的盆地有68个，20个盆地已进入生产阶段，8个盆地已钻探完毕并处于评估阶段。

上游石油和天然气行业生命周期



评估印度尼西亚产量分成合同（PSC）时应考虑的一些条款和条件：

- 勘探阶段的期限为六（6）年，可延长一次，延长最多不超过四（4）年。
- 如果发现了商业性石油或天然气，合同期可长达30年。
- 首批石油（FTP）是在成本回收之前应从总产量中扣除的一定比例的石油（仅适用于产量分成合同成本回收）。这笔费用将由政府和承包商共同分担。
- 在第一个开发计划（POD）获得政府批准时，承包商有义务向合同区行政所在地的地方政府指定的地方政府所有公司（LGOC）提供百分之十（10%）的参与权益。
- 间接税将被视为成本，当然，可能有相关的税收优惠。
- 国内市场义务（DMO），是指从承包商的分成供应当地市场的义务。
- 石油和天然气公司可享受若干项激励措施：投资抵免、上一年未收回成本的无限期结转（仅适用于成本回收型产量分成合同），以及某些设备和资产的进口税和关税的豁免。



印度尼西亚目前正在实施两种合同方案，即成本回收型和总分成型产量分成合同，每种方案都有自己的优点，可灵活选择。

成本回收型产量分成合同*

- 利润分成从合同开始已固定，各个地区的分成通常各不相同；
- 从总产量中扣除首批石油（FTP），由承包商和国家共同分担；
- 在FTP之后扣除作业成本；
- 需要工作计划和预算授权；
- 税收优惠：土地和建筑税减免、勘探期间增值税减免、进口税减免；
- 其他激励措施：投资抵免、免收国内市场义务（DMO）费用、加速折旧。

总分成型产量分成合同*

- 合同开始时的基本分成，石油承包商分成 = 43%，天然气承包商分成 = 48%（税前）。
- 在开发计划（POD）期间，将根据实际情况（工作区状况、油田位置、储层深度、配套设施可用性、储层类型、CO₂和H₂S含量、HC API重力、国产化率、生产阶段、油气价格和累计产量）向承包商提供额外的可变分成。
- 作业成本包括在承包商分成中。
- 无需预算授权。
- 自主采购程序。
- 税收优惠：土地和建筑税减免、勘探期间增值税减免、进口税减免；
- 其他激励措施：根据经济情况的额外分成。

*资料来源：印度尼西亚能源和矿产资源部

上游石油和天然气公司会计核算的独特性

石油和天然气行业在会计方面有许多独特性。

这些独特性包括但不限于：

- 储量和资源：虽然储量不会直接出现在石油公司的资产负债表上，但相关数字会被用于一些重要的会计应用，其中包括折旧、减值评估、设施废弃的计提以及企业合并的购买价格分配。

确定性最高的储量通常被称为探明储量；确定性次之（通常为50:50）的储量通常被称为概略储量，确定性最低但仍然可能的储量称为可能储量或者或有储量。

对于折旧、损耗和摊销方法，《国际财务报告准则》(IFRS)/《财务会计准则公告》(PSAK)没有规定产量单位(UOP)计算应使用什么基础。很多实体只使用探明可开采储量，有些实体使用探明总储量，有些则同时使用探明储量和概略储量。探明可开采储量是指无需进一步资本支出即可开采的储量。产量单位(UOP)计算的基础是一项会计政策选择，应始终如一地应用。如果一个实体不使用探明可开采储量，那么在计算摊销费用时要进行调整，以涵盖获取未开发储量的预计未来开发成本。

用于受租约或许可证约束的资产的折旧、损耗和摊销的预计产量应仅限于许可证/租约期内预计的生产总产量。只有当有证据证明实体可能在没有重大成本的情况下选择续期时，才假定许可

- 勘探和评估支出：根据《财务会计准则公告第64号》（PSAK 64），矿产资源的勘探和评估从获得合法勘探权时开始，包括地质和地球物理成本、探井钻探成本（包括勘探型地层测试井钻探成本），以及与评估开采石油和天然气的技术可行性和商业可行性有关的其他成本。在获得合法勘探权之前发生的支出一般计为费用；但单独获得的无形资产除外，例如为获得合法权利的选择权而支付的费用。评估费用用于评估所发现资源的技术可行性和商业可行性。

勘探和评估支出的会计处理（资本化或费用化）会对财务报表和报告的财务结果产生重大影响，对于处于勘探阶段、没有生产活动的实体来说尤其如此。

- 油气资产：油气资产按成本减去累计损耗/折旧和累计减值损失列报。开发井和开发型地层测试井的钻探成本，及平台、钻井设备和相关生产设施的成本作为未完井、设备和设施资本化。这些费用在完工后转入油井及相关设备和设施。许多开发支出所产生的资产符合《财务会计准则公告第64号》（PSAK 64，固定资产）的确认标准。
- 上游收入确认：收入确认，尤其是上游活动的收入确认，可能面临一些挑战。通常由合资企业或以特许权方式进行生产，各实体需通过分析事实和情况来确定收入确认的时间和金额。许多合资企业（JV）将原油等实物产出分配给合资伙伴，而每一合资伙伴对各自分成的石油负有石油使用和销售责任。超采和欠采实际上是开采时欠采方向超采方出售石油。鉴于已经满足收入确认条件，因此认为超采是超采方向欠采方购买石油。

问题：

倘若产量分成协议（"PSA"）规定私营企业是作业方且利润分成/参与权益为 60%，国有企业（"SOE"）参与权益为 40%，那么参与方/承包商应如何分配收入？



解决方案:

以下示例阐述了如何在作业方、国有企业 ("SOE") 和税务机关之间分配PSA收入。政府享有产量的 20%作为首批石油, 作业方 (私营企业) 享有的利润分成占比 60%, 国有企业占比 40%。任何未收回的成本均可结转至以后年度。

成本油的构成按优先顺序排列如下:

- 1) 作业费用 (根据利润分成分摊);
- 2) 勘探成本 (全部由作业方承担);
- 3) 开发成本 (根据利润分成比例分摊);

假设:

石油收入	\$6,540,000
勘探成本发生额	\$900,000
Y1开发成本发生额	\$500,000
Y1作业成本	\$1,000,000
首批石油20% 和政府税 44%	

(in US\$,000)	Total	Gol	Private Co	SOE
Revenue Oil (100%)	6.540.000			
First Tranche Petroleum	1.308.000	1.308.000		
Remaining balance	5.232.000			
Cost Recovery				
- Operating	1.000.000		600.000	400.000
- Exploration	900.000		900.000	
- Development	500.000		300.000	200.000
Total Cost Recovery	2.400.000		1.800.000	600.000
Equity to be Split	2.832.000		1.699.200	1.132.800
Government Tax (44%)		1.246.080	747.648	498.432
Total Revenue shares	6.540.000	2.554.080	2.751.552	1.234.368

以上是上游石油和天然气生产区块收入分配方法的简单示例, 不包括 PSC 合同通常规定的国内市场义务 ("DMO") 部分。

上述清单并非详尽无遗。企业在处理该行业账目时还可能面临诸多其他挑战, 例如就未收回/沉没成本确认递延所得税资产、勘探和评估支出减值和油气资产弃置、企业合并的购买价格分摊、印度尼西亚政府与投资者之间各种合同的会计处理 (PSC、PSC-联合作业机构、技术助理合同 (TAC)、单元化合同等) 以及承包商之间的联合作业安排, 这些合同需要确定使用权益法核算还是按比例合并, 以及总收入分成合同的收入确认。对于企业主来说, 了解最新法规和最佳实践非常重要, 以确保其在尽可能实现利润最大化的同时始终保持合规。



Seoul View City, Korea

石油和天然气公司的审计考虑事项

审计师对石油和天然气公司的财务审计包括对其财务交易和报表的评估。一般来说，对石油和天然气公司财务报表的审计与对其他行业公司财务报表的审计阶段相同。典型的企业财务审计包括四个主要阶段：计划阶段、建立内部控制阶段、测试阶段和报告阶段。风险导向审计仍是审计准则中规定的一般审计方法。

在对石油和天然气公司进行审计时，有一些审计考虑事项。主要的审计考虑事项包括收入确认、存货估值、减值分析以及油气储量测量。其他考虑事项包括勘探和评估、特许权使用费以及折旧、摊销和损耗。

在审计过程中，为了向客户提供增值服务，外部审计师需要考虑以下几个问题：

1. 审计师的技能和经验

对石油和天然气公司进行审计的审计师必须具有足够的行业知识和经验。他们必须了解石油和天然气业务的技术和运营，以及适用的法规。

2.了解风险

审计师必须深入了解石油和天然气公司面临的风险，并且必须能够识别可能影响公司运营的潜在风险。

3.最新技术的使用

石油和天然气行业越来越多地采用最新技术和数据分析来提高效率和监控运营。审计师必须通过执行一系列程序并在必要时让信息技术专家参与进来，以了解并降低这种技术带来的风险。

4.储备专家的参与

储量信息是石油和天然气公司计算折旧和减值估值的依据。储量信息的估算和审计以历史上形成的石油工程和评估原则为基础，而这些原则又以物理科学、数学和经济学原则为基础。虽然这些公认的石油工程和评估原则是以既定的科学概念为基础，但这些原则的应用涉及大量判断，并受以下方面变化的影响：（1）现有知识和技术；（2）经济条件；（3）适用的法律和法规规定；以及（4）储量信息的使用目的。管理层需要考虑让专家参与评估这些储量信息。外部审计师将执行与专家工作相关的程序，必要时可能会请审计专家协助审查估值。

5.弃置和场地修复

油井或气井的使用寿命结束或成为干井时，就会被封堵和废弃。此外，对于与石油和天然气生产相关的设施，运营商必须确保其安全、正确关闭。管理层计算资产修复和弃置准备金，并将其资本化为资产弃置义务(ARO)资产。计算过程可能涉及技术专家参与。外部审计师需要具备足够的与计算相关的知识和经验，并可请审计专家协助审计程序的准备工作。

从事石油和天然气业务的公司通常有许多与其业务相关的独特业务模式或条件。审计师可能会具体案例中发现一些关键问题。这些关键问题包括侧钻井、悬挂井、上举升和下举升、灌泥浆管线和缓冲气、售出权益、一体化协议、产量分成协议、除役负债和联合活动。

重要的是要记住，在对石油和天然气公司进行审计时，审计的重点不仅仅在于出具审计意见，还在于通过确保合规性、降低管理风险以及提高效率来提供增值服务。通过审慎开展审计工作并关注上述关键因素，审计师可以与客户管理层建立并保持稳固的关系。



📍 Nami Island, Korea

在印度尼西亚资本市场上市的石油和天然气公司

过去三年来，多家能源行业公司在印度尼西亚证券交易所（IDX）成功首次公开募股（IPOs）。包括 PT Humpuss Maritim International Tbk (HUMI)、PT GTS International Tbk (GTSI) 和 PT Indah Prakarsa Sentosa Tbk (INPS)在内的石油和天然气储存与分销子行业进入者尤为引人注目。此外，除了在过去三年上市的公司外，至少还有其他五家公司在同一子行业上市。PT Medco Energi Internasional Tbk (MEDC)、PT Sugih Energy Tbk (SUGI)、PT Energi Mega Persada Tbk (ENRG) 等公司是生产和炼油子行业的主要参与者。作为该子行业的最新进入者，PT Super Energy Tbk (SURE)于2018年进行了首次公开募股。

与其他东南亚资本市场相比，这些公司选择通过在印度尼西亚资本市场公开上市实现扩张，在过去三年取得了显著成绩。能源行业公司被纳入 IDXENERGY指数，该行业自证券交易所进入疫情后复苏阶段以来一直呈现积极的发展趋势。IDXENERGY指数实现了大幅增长，从2021年1月的收盘价740.68飙升至2023年8月的2034.88。这意味着 IDXENERGY指数的复合年均增长率（CAGR）超过了50%，这一出色表现得益于全球经济复苏和大宗商品繁荣。

OIL & GAS LISTED COMPANIES IN INDONESIA

For Oil & Gas Production & Refinery (A111) & Oil & Gas Storage & Distribution (A112)

Company Name	Company Code	IPO Date	Price	Outstanding Shares	Market Capitalization (IDR Million)	Latest Rights Issue	Ratio
AKR Corporindo Tbk.	AKRA	3 Oct 2014	1,400	20,073,474,600	28,102,864	4 Feb 2010	5:1
Buana Lintas Lautan Tbk.	BULL	23 May 2011	178	14,117,801,449	2,512,969	3 Jul 2019	8:3
Energi Mega Persada Tbk.	ENRG	7 Jun 2004	294	24,821,230,250	7,297,442	6 Jul 2021	100:140
GTS Internasional Tbk.	GTSI	8 Sep 2021	53	15,819,142,767	838,415	-	-
Humpuss Intermoda Transportasi Tbk.	HITS	15-Dec-1997	366	7,101,084,801	2,598,997	-	-
Humpuss Maritim Internasional Tbk.	HUMI	09-Agu-2023	100	18,046,450,000	1,804,645	-	-
Indah Prakasa Sentosa Tbk.	INPS	6 Apr 2018	1,180	650,000,000	767,000	-	-
Mitra Energi Persada Tbk.	KOPI	23 Apr 2001	620	697,266,668	432,305	-	-
Logindo Samudramakmur Tbk.	LEAD	11-Dec-2013	68	4,049,616,328	275,374	11 Jul 2017	7:4
Medco Energi Internasional Tbk.	MEDC	12-Oct-1994	1,015	25,136,231,252	25,513,275	14 Sep 2020	5:2
Mitra Investindo Tbk.	MITI	16 Jul 1997	170	3,540,735,503	601,925	6 Dec 2022	500:319
Capitalinc Investment Tbk.*	MTFN	16 Apr 1990	50	31,842,082,852	1,592,104	15 Apr 2014	18:125
Perusahaan Gas Negara Tbk.	PGAS	15-Dec-2003	1,760	24,241,508,196	42,665,054	-	-
Rukun Raharja Tbk.	RAJA	19 Apr 2006	1,045	4,227,082,500	4,417,301	14 May 2012	500:250
Sillo Maritime Perdana Tbk.	SHIP	16 Jun 2016	880	2,719,790,000	2,393,415	-	-
Soechi Lines Tbk.	SOCI	03-Dec-2014	181	7,059,000,000	1,277,679	-	-
Sugih Energy Tbk.*	SUGI	19 Jun 2002	50	24,811,541,414	1,240,577	-	-
Super Energy Tbk.*	SURE	05-Oct-2018	1,720	1,497,576,771	2,575,832	-	-

*Under authorities monitoring/suspension

除了确保合规性，年度报告也是与投资者沟通和保持关系的一种手段。这些报告揭示了相关公司部门的趋势和状况，特别是在能源转型问题上。在雅加达举行的2023年东盟研讨会上，印度尼西亚通过制定概念、长期路线图、区域电力互联互通路径以及努力弥合政策与可再生能源领域投资实现之间的差距，重申了其对于能源转型的承诺。

不过，在短期内，能源转型并不会对石油和天然气行业构成威胁。石油输出国组织(OPEC)《世界石油展望(2022年版)》指出，在2045年之前，作为主要燃料的石油和天然气，其需求量将继续上升。这归因于全球经济预计翻一番的增长、到2045年世界人口将增加16亿、城市化率上升以及发展中国家中产阶级人口的消费能力增强。虽然可再生能源产业预计每年都将大幅增长(到2045年将达到7.1%)，但它无法取代石油在满足全球能源需求方面的作用。

为了支持这些积极趋势，信永中和印度尼西亚(通过其商业咨询部门)非常乐意成为企业在能源领域或其他领域进行首次公开募股(IPO)的财务顾问。上市前基金(Pre-IPO)服务和重组规划有助于公司利益相关者在首次公开募股过程中做出决策。

SCAN BARCODE



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SW Indonesia Goes to Batu



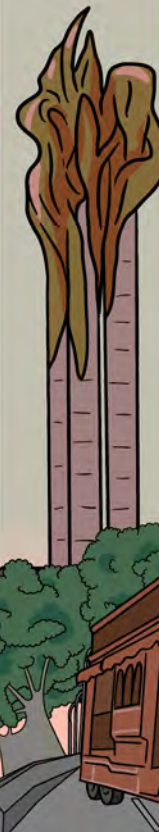
27
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SW Indonesia Goes to Bandung



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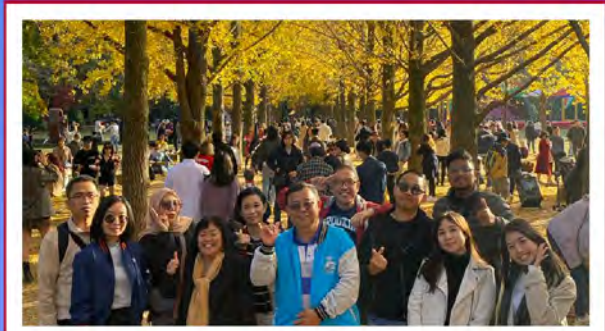
SW Indonesia's Visit to Yeil Accounting Corporation in Korea



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TANGERANG	Unity Building 3rd Floor Jl. Boulevard Gading Serpong M5/21 15810	T. (+6221) 22220200
JAKARTA	UOB Plaza 34th Floor Jl. MH Thamrin Kav.8-10, Jakarta Pusat 10230	T. (+6221) 29932172
SURABAYA	Spazio Building 5th Floor Jl. Mayjen Yono Suwoyo Kav.3, Surabaya 60226	T. (+6231) 99141222
BALI	Benoa Square 2nd Floor Jl. Bypass Ngurah Rai No. 21A, Kuta, Bali 80361	T. (+62361) 200 3298



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