0883 HK gideon lens

CNOOC Limited (0883.HK) - Gideon-Lens Equity Research

Date: 2026-06-30. Analyst: Codex ER2. Ticker: 0883.HK / HKEX 00883. Price basis: HKD 20.24, translated at HKD/CNY 0.8657 to CNY 17.52. Market cap basis: approximately HKD 961bn from FMP quote. Fiscal year end: December 31.

Dashboard Summary

Field	Value
Verdict	PASS
Management gate	YELLOW
Moat gate	FAIL; 2046 test FAIL
P/E <= 15 gate	PASS; base-case cushion 147.2%
Audited Compounder Score	48 / 100; Reject
Audited Business Quality Score	42 / 80
Audited 20% Return UW Score	6 / 20
Core reason	Cheap and cash-generative, but not a Gideon-grade compounder

VERDICT BLOCK

Verdict: PASS

Scorecard:

Gate	Result	Notes
Management	YELLOW	Strong execution, but SOE control and leadership reset remain unresolved
Moat	FAIL	Cost/reserve advantages, but 2046 test fails commodity dependence
P/E <= 15 on confident EPS at TTM + 5 calendar years	PASS	Base-case cushion 147.2% versus required RMB1.17 EPS
Compounder Score	Audited 48 / 100	Reject; diagnostic only, not a separate ER2 gate
Business Quality Score	Audited 42 / 80	Quality evidence capped by commodity exposure and proxy-heavy ROIIC
20% Return UW Score	Audited 6 / 20	Current price does not underwrite 20% without rerating

One-line thesis (or reason to pass): CNOOC is a low-cost, net-cash, high-cash-return upstream oil company that looks cheap on five-year EPS, but it fails the Gideon compounder test because the moat and 2046 durability depend too much on commodity prices, state control, and undisclosed project economics.

Kill / trigger criteria:

- BUY trigger: no price-only BUY trigger; a research re-open below HKD 12.00 would still require a repaired moat case, stable related-party governance, and evidence that no-expansion returns can clear 20%.
- PASS triggers: all-in cost above US$35/boe for two reported periods, reserve life below 9 years, or annual capex persistently outside the RMB112-122bn budget corridor without offsetting reserve growth.
- Upgrade to BUY conditions: management and moat must both reach PASS, including clearer through-cycle ROIIC, project-level returns, reserve replacement at attractive cost, and reduced governance/related-party uncertainty.

Position sizing if bought: 0% of equity book today; this may be a value/income candidate for a different mandate, but it is not a Gideon compounder allocation.

Stage 0 - Time Anchor

Today is 2026-06-30. CNOOC Limited's fiscal year ends December 31. The most recently reported quarter is Q1 2026, period ended 2026-03-31, released 2026-04-28. The TTM anchor is Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026, giving a TTM period ending 2026-03-31. For periods where separate quarterly P&L was not directly disclosed, the quant foundation bridged Q2 2025 from H1 less Q1 and Q4 2025 from FY less 9M, then QFR independently verified the bridge. The forward horizon is TTM + 5 calendar years, so all FY+5 references in this report mean 2031-03-31, not fiscal 2031 by shortcut.

Stage 1 - Disqualifier Sweep

ROIC and cash conversion are green in an accounting sense: CNOOC generates large profits and cash from a low-cost reserve base, with TTM net income attributable of RMB124.7bn and FCF around RMB92.4bn. Balance sheet is green because leverage is not the constraint; the business has a net-cash or very conservative debt profile in the data package. End-market stability is yellow: hydrocarbons remain necessary and China offshore assets are strategic, but oil and gas demand, realized prices, and policy risk are not stable compounder inputs. Governance is yellow because CNOOC Group control, large connected-party flows, and a 2025-2026 leadership reset matter to minority owners. AI disruption exposure is green, since this is physical upstream production rather than a replaceable workflow. Pricing power is red/yellow: CNOOC can be low cost, but it does not set oil prices. The sweep permits analysis to proceed, but it foreshadows the final PASS.

Management Summary

Management receives a YELLOW. The operating record is credible: production growth, reserves, reserve life, costs, balance sheet discipline, and dividends all point to a competent operator. FY2025 production was 777.3 mmboe, Q1 2026 production was 205.1 mmboe, and the official plan points to 780-800 mmboe in 2026 and 810-830 mmboe in 2027. The company also gives minority holders a real cash-return policy, including a dividend floor of at least 45% for 2025-2027. The problem is not operational incompetence; it is control and agency. The chairman, CEO, and CFO roles have all seen recent changes, with CEO Huang in-seat from March 20, 2026. CNOOC Group controls roughly 62.13%, and FY2025 sales to CNOOC Group and associates were about 59% of revenue. Those facts do not make the company uninvestable, but they prevent a clean Gideon PASS for management until the new team has a longer record and connected-party economics remain clearly minority-friendly.

Moat Summary

Moat is a hard FAIL. CNOOC has real advantages: a large offshore reserve base, 7.773bn BOE of proved reserves, about 10 years of reserve life, strong reserve replacement, all-in cost around US$27.90/boe, and strategic access to China offshore resources. Those are valuable. They are not, by themselves, the sort of customer-level pricing power, reinvestment runway, and protectable economics required by the Gideon 2046 test. Upstream E&P returns remain a function of realized oil and gas prices, fiscal terms, capex intensity, decline rates, and project execution. The company can be a durable strategic producer and still fail as a 20-year compounder. The moat appendix therefore separates survival durability from compounding durability: CNOOC can likely survive and produce, but the evidence does not support high returns protected independent of the commodity cycle.

Stage 5 Synthesis - Headline Numbers

The synthesis passed the valuation gate cleanly. At the current price basis of CNY17.52 per share, the required FY+5 EPS for a P/E of 15 is only RMB1.17. The base-case synthesis produces FY+5 EPS of RMB2.89, implying a 147.2% cushion to the P/E 15 gate. Base-case FY+5 revenue is RMB468.1bn, accounting operating income proxy is RMB194.9bn, CNOOC segment contribution is RMB137.3bn, and net income is RMB137.2bn. The segment work gets there through a modeled China offshore core, a modeled overseas E&P growth sleeve, and a trading/marketing/corporate bridge that explicitly avoids double-counting E&P economics embedded in trading revenue.

Case	FY+5 Revenue	FY+5 NI	FY+5 EPS	P/E 15 Gate
Bear	Lower than base; commodity and cost pressure	Below base	Above required only if cycle not severe	Fragile pass / watch
Base	RMB468.1bn	RMB137.2bn	RMB2.89	PASS; 147.2% cushion
Bull	Higher production and margins	Higher than base	RMB3.69 noted by red team as optimistic	PASS but not quality-proof

The synthesis also passed 11/11 tie-out checks, but three checks carry explicit disclosure caveats because quarterly segment splits and regional/project P&L are not disclosed. That caveat matters. The valuation pass is real under the available model, but the model is proxy-heavy in exactly the places that would prove or disprove a superior reinvestment engine. The audited diagnostic score captures this split: the P/E 15 gate passes, but the 20% return underwriting score is only 6/20 because a no-expansion 20% case is not supported at today's price.

Red Team Summary

The red team's strongest point is that CNOOC can hit production targets and still fail as a compounder if reserve replacement requires rising capex or cost while earnings remain commodity- and state-control-exposed. The most dangerous optimistic base input is not the bull EPS of RMB3.69, which is visibly aggressive, but the base EPS of RMB2.89 because it relies on proxy-heavy OI and net-income bridges. The red team also rejects any shortcut that treats the 147.2% P/E 15 cushion as a 20% return case; the audited base no-expansion IRR is only about 8.5%. The monitorable exit signal is clear: all-in cost above US$35/boe over the next two reported periods without reserve life at or above 9 years and capex inside the RMB112-122bn annual budget corridor.

Kill / Trigger Criteria

- Maintain PASS if moat remains a commodity-cost advantage rather than a protected reinvestment advantage.
- Maintain PASS if related-party flows stay large and opaque enough that minority economics cannot be independently underwritten.
- Re-open only if CNOOC demonstrates through-cycle ROIIC, project-level economics, reserve replacement, and cost discipline strong enough to turn Moat from FAIL to PASS.
- Treat HKD 12.00 or lower as a valuation research trigger, not a BUY trigger, unless the qualitative gates also improve.
- Exit any non-Gideon value position if all-in cost exceeds US$35/boe for two reported periods, reserve life falls below 9 years, or capex materially outruns the RMB112-122bn corridor without reserve and production payoff.

Analyst Flags

FMP annual income ties the official FY2025 source well enough for a cross-check, but FMP product segmentation is empty, quarterly income is misperiodized for this issuer, and foreign annual report JSON returned no useful data. Official CNOOC/HKEX reports therefore control. Segment appendices are analytical sleeves, not disclosed P&L segments: China offshore and overseas E&P economics are modeled from official production, reserve, cost, and project disclosures, while trading/marketing/corporate is a bridge. The data package explicitly flags missing quarterly segment revenue/profit, missing China-versus-overseas profit split, missing project-level economics, and approximate ROIIC because commodity prices distort capital-return inference. These flags do not break the valuation pass, but they are central to the PASS verdict under the Gideon framework.

Appendix A - Company Primer

CNOOC Limited - Company Primer

Stage 0 anchor

- Today: 2026-06-30.
- Fiscal year ends December 31.
- Latest reported quarter: Q1 2026 ended 2026-03-31.
- TTM: Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026 -> TTM ending 2026-03-31.
- Forward horizon: 2031-03-31.

Source base and role of this appendix

This primer is an orientation document for the CNOOC Limited ER2 run. It explains what the company owns, how the barrels and gas molecules become revenue and profit, what the state-ownership structure means, and where the main investor debate should focus. All financial figures are anchored to `quant_foundation.md`, which QFR has cleared. CNOOC is a Hong Kong and Shanghai listed foreign/local-exchange issuer, so official CNOOC annual, interim, quarterly, presentation, FAQ, and press-release materials control where FMP is stale, empty, or poorly mapped. FMP live pulls were already incorporated into the quantitative foundation, including quote, profile, annual and quarterly income statements, balance sheet, cash flow, product segmentation, and an HKD/CNY FX quote. The critical result for this primer is that CNOOC's official source material, not FMP product segmentation, controls the product and operating KPI picture.

The most important source limitation is also important to the investment case. CNOOC provides a rich operating disclosure set: production by geography and product, annual and interim reportable segment revenue/profit, reserves, cost per barrel, capex, dividend policy, and project updates. It does not provide a complete quarterly reportable-segment roll-forward for Q3 2025 or Q1 2026. Therefore this primer uses the official TTM consolidated bridge for current revenue, net income, EPS, production, cash flow, and free cash flow, while using FY 2025 and H1 2025 segment disclosure to explain the economic architecture. No quarterly E&P/trading/corporate segment allocation is fabricated.

Key live source files used for qualitative context were saved under `raw\A_live_20260630`, including CNOOC's 2025 annual-results presentation, Q1 2026 results presentation, official FAQ, 2025 business strategy release, Q1 2026 press release, 2025 annual-results press release, and Buzios6 project press release. The core financial base remains the cleared `quant_foundation.md` and the official source pack under `raw\`.

Business overview

CNOOC Limited is an upstream oil and gas company. It explores for, develops, produces, and sells crude oil, liquids, and natural gas. It is not primarily a refiner, utility, petrochemical producer, or merchant trading house. The core economic engine is finding offshore resources, converting discoveries into reserves, building offshore production systems, lifting barrels and gas at competitive cost, and selling production into China and international markets at commodity-linked prices. The company describes itself as the largest producer of offshore crude oil and natural gas in China and one of the largest independent oil and gas exploration and production companies globally.

The company has a simple headline business but a more complicated accounting structure. Operationally, the profit pool is exploration and production. Accounting-wise, CNOOC reports E&P, trading business, corporate, and eliminations. A large portion of oil and gas produced by E&P is sold through the trading business, and the official segment note explains that some oil and gas produced by the E&P segment are sold via the trading business, while the chief operating decision maker reclassifies those revenues back to E&P for segment-performance assessment. That is why external revenue appears heavily in trading, but the fundamental underwriting question is still the reserve base, production profile, realized prices, lifting/development cost, and capital intensity of the E&P portfolio.

The customer set follows the physical product. Crude oil produced in China is sold mainly into the domestic market, including through related and state-linked channels as well as refinery buyers. Natural gas is sold into a combination of contracted and domestic markets, including CNOOC Gas and Power Group and other customers. Overseas crude is sold into international

and domestic markets through CNOOC International Trading and related trading entities. The customer does not buy a differentiated software product or a branded consumer item. The customer buys hydrocarbons, and CNOOC earns a spread between realized commodity prices and the full cost of finding, developing, lifting, transporting, taxing, and decommissioning those resources.

This makes the company a state-influenced, reserve-and-cost compounder rather than a classic high-pricing-power compounder. The business can compound if CNOOC keeps replacing reserves, increases production, holds all-in cost low versus peers, maintains disciplined capex, and returns excess cash through dividends. The business can disappoint if commodity prices fall, decline rates and water cut rise, development projects slip, host-government terms worsen, or state objectives pull capital away from minority-shareholder returns.

Revenue architecture

For FY 2025, the cleared quantitative foundation reports total revenue of RMB398.220 billion. Product revenue was dominated by oil and gas sales of RMB335.652 billion, made up of crude/liquids revenue of RMB279.786 billion and natural-gas revenue of RMB55.866 billion. Marketing revenue was RMB53.684 billion and other revenue was RMB8.884 billion. On this product view, roughly 84% of FY 2025 revenue came from oil and gas sales, with crude/liquids alone about 70% of total company revenue. That product mix is the cleanest way to understand commodity exposure.

The official segment view looks different because of the trading route. In FY 2025, E&P had external revenue of RMB86.183 billion, intersegment revenue of RMB258.014 billion, total segment revenue of RMB344.197 billion, and segment profit of RMB122.170 billion. Trading business had external revenue of RMB311.578 billion, negative intersegment revenue of RMB257.740 billion, total segment revenue of RMB53.838 billion, and segment profit of RMB4.467 billion. Corporate had small revenue but RMB4.807 billion of segment profit, and eliminations reduced segment profit by RMB9.296 billion. Consolidated segment profit was RMB122.148 billion. The apparent mismatch between trading external revenue and E&P profit is not a thesis inconsistency; it is how the official report separates external sales routes from E&P economics.

FY 2025 view	Revenue basis	Revenue RMBm	Profit RMBm	Economic meaning
Oil and gas sales	Product revenue	335,652	N/D	Core commodity revenue
Marketing revenue	Product revenue	53,684	N/D	Trading/sales flow
Other revenue	Product revenue	8,884	N/D	Ancillary revenue
E&P	Segment total revenue	344,197	122,170	Core upstream profit pool
Trading business	Segment total revenue	53,838	4,467	Sales and marketing channel
Corporate	Segment total revenue	1,612	4,807	Treasury/corporate items
Eliminations	Segment total revenue	-1,427	-9,296	Intercompany cleanup

The TTM financial base is stronger than FY 2025 alone because Q1 2026 was a record quarter. The cleared TTM bridge uses Q2 2025, Q3 2025, Q4 2025, and Q1 2026. It totals revenue of RMB407.445 billion, net income attributable of RMB124.663 billion, EPS of RMB2.62, and production of 793.6 million BOE. TTM free cash flow before acquisitions/investments was RMB92.354 billion, calculated from CFO of RMB206.916 billion less cash capex/acquisition of fixed and long-term assets of RMB114.562 billion. This means the company is not merely profitable on paper; in the most recent TTM period it generated large cash flow while still spending heavily to expand and maintain the asset base.

China offshore core

CNOOC's domestic engine is offshore China. The company's core China operating areas are Bohai, the Western South China Sea, the Eastern South China Sea, the East China Sea, and onshore China. Bohai is the largest crude oil production base in China and remains central to both reserve replacement and production stability. The South China Sea contributes a mix of gas and oil growth, including deepwater and smart-field initiatives. In 2025, the company also continued to develop unconventional natural gas resources onshore China, but the investor should still think of the company as principally an offshore China producer with a growing overseas sleeve.

The China base matters because it supplies scale, operational control, and strategic relevance. At the end of 2025, China net proved reserves were 5,015.7 million BOE, while overseas net proved reserves were 2,757.4 million BOE. China accounted for roughly 69.1% of FY 2025 net production, with total China net oil and gas production of about 536.9 million BOE. Overseas accounted for 240.4 million BOE. Q1 2026 kept the mix similar but with a strong overseas growth rate: China production was 140.0 million BOE, up 7.0% year over year, and overseas production was 65.1 million BOE, up 12.3% year over year.

Operating KPI	FY 2025	Q1 2026	Primer implication
Total net production	777.3 mmboe	205.1 mmboe	Scale producer, still growing
China production	536.9 mmboe	140.0 mmboe	Domestic offshore core
Overseas production	240.4 mmboe	65.1 mmboe	Growth sleeve and diversification
Net proved reserves	7,773 mmboe	N/D	Long-life reserve base
FY 2025 all-in cost	USD27.90/boe	USD28.41/boe	Low-cost claim is central

The domestic reserve story is not only "more wells." CNOOC emphasizes value-driven exploration, integrated rolling exploration, improved recovery, decline-rate control, and offshore engineering. In 2025, it reported six new oil and gas discoveries and 28 appraised oil and gas-bearing structures. The FAQ says new reserves came mainly from Bohai oilfields in China and projects in South America. The annual-results release identifies domestic discoveries/appraisals such as Longkou 25-1 and Qinhuangdao 29-6 as evidence of the remaining potential in Bohai. The Q1 2026 release adds Luda 16-1 in the Liaozhong depression and appraisal of Enping 20-5 as examples of continued exploration momentum.

The domestic portfolio also carries a policy and governance overlay. China National Offshore Oil Corporation, CNOOC Group, is the controlling shareholder, with the FAQ stating that it holds approximately 62.13% of CNOOC Limited's shares. The annual report says CNOOC Group has the exclusive right to cooperate with foreign enterprises in the exploration, development, production, and sale of petroleum resources in offshore China open to foreign cooperation. For minority shareholders this is two-sided. It gives CNOOC Limited privileged strategic positioning in China's offshore sector, but it also means related-party transactions, state objectives, and the parent relationship must be treated as core to underwriting, not as a footnote.

Overseas growth assets: Guyana, Brazil, and broader portfolio

The overseas portfolio is the second leg of the primer. CNOOC owns assets across Asia excluding China, Oceania, Africa, North America, South America, and Europe. The headline growth assets in current official materials are in South America, especially Guyana and Brazil. The 2025 annual report says South America is a significant source of production growth, and the FAQ names Guyana and Brazil as the main overseas production-growth contributors in 2025. These assets are valuable because they provide exposure to globally competitive deepwater developments and diversify the company's reserve and production base beyond China.

Guyana is centered on the Stabroek Block, one of the most successful offshore discoveries of the past decade. CNOOC's official materials state that Yellowtail was put into production in 2025 and that four projects had commenced production in the block by year-end. The 2025 annual-results release also notes successful appraisal of Lukanani and Ranger in Stabroek, further consolidating the resource base. In Q1 2026, the press release says production growth was partly attributable to the Yellowtail Project in Guyana. For ER2, Guyana is a growth and duration asset, but it is also a partner-operated asset with host-government, project execution, depletion, and geopolitical risk.

Brazil is centered on deepwater pre-salt assets such as Mero and Buzios. The annual report says CNOOC holds interests in the Mero and Buzios oilfields. Mero4 was put into production in 2025, with four phases of Mero then in production. Buzios7 also started production in 2025. In January 2026, the official Buzios6 release stated that Buzios is the largest deepwater pre-salt oilfield in the world, that Buzios6 became the seventh commissioned project of the oilfield, and that Buzios installed capacity would reach 1.15 million barrels per day with Buzios6 onstream. CNOOC Petroleum Brasil holds a 7.34% interest in the Buzios Shared Reservoir, while Petrobras is the operator with 88.99%.

The overseas sleeve is therefore not a random collection of mature assets. It includes world-scale deepwater projects, but CNOOC's interests are often minority positions. That shapes the economics and governance. Minority stakes in high-quality projects can be capital-efficient and lower operating burden, but CNOOC is not always the project operator. It may have less direct control over timing, capex, development sequencing, and operational practices than it has in its domestic independent operations. The primer takeaway is that overseas growth improves reserve duration and project quality, but the ER2 model should not treat every overseas barrel as operationally equivalent to CNOOC-operated China offshore barrels.

Production, reserves, and cost structure

CNOOC's value creation begins with reserve replacement and production growth. In 2025 net production was 777.3 million BOE, up 7.0% year over year. Crude and liquids production was 599.7 million barrels, and natural gas production was 1,037.3 bcf. The annual-results presentation says crude oil production grew 5.8% and natural gas production grew 11.6%. Q1 2026

production reached 205.1 million BOE, up 8.6% year over year, with China up 7.0% and overseas up 12.3%. The 2026 production target is 780-800 million BOE, supported by a capex budget of RMB112-122 billion.

The reserve base is substantial. End-2025 net proved reserves were approximately 7.77 billion BOE. On FY 2025 production of 777.3 million BOE, that implies roughly ten years of proved reserve life before considering future discoveries, revisions, acquisitions, divestitures, and development conversion. This is not a long-duration royalty stream; it is a capital-intensive operating business that must continuously drill, develop, and appraise. But the combination of a large reserve base, repeated new discoveries, and official five-year production CAGR of about 8% suggests CNOOC has not yet entered a simple harvest mode.

The cost structure is one of the most important parts of the CNOOC thesis. CNOOC reported FY 2025 all-in cost of USD27.90 per BOE, down 2.2% year over year, and Q1 2026 all-in cost of USD28.41 per BOE. The official FAQ says the company has a comprehensive cost-management system covering the entire production process and aims to maintain relative cost competitiveness rather than pursue absolute cost reductions at the expense of safety. This distinction matters. A low all-in cost gives earnings resilience across commodity cycles, but cost will move with tax, exchange rates, service costs, development mix, water cut, decline management, and offshore safety requirements.

Capital intensity is high. FY 2025 segment capex was RMB121.967 billion, almost all in E&P. TTM cash capex/acquisition of fixed and long-term assets was RMB114.562 billion. Q1 2026 capex was approximately RMB33.02 billion, with the official Q1 press release attributing the spend to accelerated exploration and adjustment wells and production-capacity construction. The 2026 capex budget of RMB112-122 billion is designed to support exploration, development, production workload, and medium-to-long-term development. CNOOC is therefore not a low-reinvestment cash cow. The attraction is that high reinvestment appears to be paired with low cost and growing production; the risk is that reinvestment must remain productive for shareholder returns to compound.

Commodity exposure and cash-flow mechanics

CNOOC's revenue and profit are exposed to global oil prices, Chinese and regional gas pricing, FX, taxes, and realized sales mix. The company does not have software-like pricing power. It has cost-position power, resource-access power, scale, and project-execution power. In the cleared quant foundation, FY 2025 oil and gas sales were RMB335.652 billion and TTM net income attributable was RMB124.663 billion. The company can earn very high profits when oil prices are favorable because the revenue line reprices quickly while a portion of cost is fixed or semi-fixed. Conversely, falling oil prices can pressure earnings, impair reserves, and reduce cash available for dividends and development.

Natural gas is strategically important even though crude/liquids still dominate revenue. In FY 2025 gas revenue was RMB55.866 billion, much smaller than crude/liquids revenue of RMB279.786 billion, but gas production grew faster and supports China's energy-security and transition policy goals. The annual-results release highlights gas production growth as a contributor to profit resilience. Gas projects such as Shenhai-1 and South China Sea development can improve the mix, but for a shareholder the model remains heavily oil-linked.

Cash conversion is strong but not frictionless. TTM CFO was RMB206.916 billion against net income of RMB124.663 billion and capex of RMB114.562 billion. That produced TTM free cash flow before acquisitions/investments of RMB92.354 billion. The balance sheet is conservative: Q1 2026 total assets were RMB1.151563 trillion, total liabilities RMB311.987 billion, equity attributable RMB837.102 billion, and total shareholders' equity RMB839.576 billion. Debt items are modest relative to the asset and earnings base. This matters because offshore oil and gas is risky, cyclical, and capital intensive; a low-leverage balance sheet gives CNOOC capacity to fund projects and dividends through weaker commodity periods.

Governance, state ownership, and related-party architecture

CNOOC Limited is not a founder-led independent E&P in the U.S. shale sense. It is a listed subsidiary within a state-owned enterprise system. CNOOC Group is the controlling shareholder and, according to official FAQ, holds approximately 62.13% of the shares. The annual report identifies CNOOC Group as a state-owned enterprise and discloses extensive connected transactions, including services, production support, sales, FPSO leases, financial services, deposits, and borrowings involving CNOOC Group or associates. The annual report also states that sales to CNOOC Group and associates accounted for 59% of revenue.

This structure can be a source of advantage. CNOOC Limited benefits from the parent group's position in offshore China, national energy-security relevance, procurement and service ecosystem, and access to large development opportunities. It can pursue projects that align with long-term national resource objectives and may have more staying power than a more

leveraged private-sector peer during downcycles.

The same structure is also an ER2 diligence item. Minority investors must underwrite whether capital allocation is governed primarily by shareholder value, production targets, state energy policy, employment and supplier ecosystems, or some combination. Related-party pricing, parent influence over dividends and board decisions, connected services, and state-owned bank relationships require monitoring. The annual report states that connected transactions are intended to be on arm's-length or normal commercial terms, but ER2 should treat this as something to test, not simply accept.

Capital allocation and dividends

CNOOC's capital allocation has three visible priorities: fund reserves and production growth, preserve cost competitiveness and balance-sheet strength, and return cash through dividends. The 2025 strategy release said annual payout ratio for 2025-2027 is expected to be no less than 45%, subject to shareholder approval and changes in market conditions. The 2025 annual results delivered a 45% dividend payout ratio and annual dividend of HKD1.28 per share, including a final dividend of HKD0.55 per share and interim dividend of HKD0.73 per share. The official FAQ reiterates twice-yearly dividends and the no-less-than-45% expected payout ratio for 2025-2027.

The dividend is material because CNOOC's current valuation often looks inexpensive on earnings, but the more durable shareholder-return case depends on cash distribution plus profitable reinvestment. A high payout ratio alone is not enough if production growth requires excessive capex or if project economics degrade. Conversely, if CNOOC can sustain production growth, keep all-in cost around the high-20s USD/boe, and pay out at least 45% of earnings, minority shareholders can receive both yield and per-share value creation. The ER2 work should stress test whether this is a commodity-cycle windfall or a durable capital-allocation framework.

The ER2 investor question

The central CNOOC question is not "is this a cheap oil company?" It probably screens cheap on simple TTM earnings: the quant foundation's live FMP quote translated the HKD20.24 share price to about CNY17.52, versus TTM EPS of RMB2.62, implying a rough TTM P/E of 6.7x. That is only a starting point. ER2's question is whether CNOOC can deliver a confident FY+5 EPS base that supports a P/E of 15 or below at the current price while still satisfying Gideon's long-duration compounder bar.

The bull case is clear. CNOOC owns a privileged offshore China position, a large 7.77 billion BOE proved reserve base, growing production, world-class overseas exposure in Guyana and Brazil, a low reported all-in cost, a conservative balance sheet, and an explicit dividend payout floor for 2025-2027. Q1 2026 was strong, with production and profit growth despite a capital-intensive program. If the company sustains 780-800 million BOE production in 2026 and continues replacing reserves, the current earnings base may be more durable than the market implies.

The bear case is also clear. This is a commodity producer with limited product pricing power, high reinvestment needs, offshore project and safety risks, heavy related-party activity, state ownership, and exposure to host-government and geopolitical risk. Overseas growth is attractive but often partner-operated and minority-owned. The domestic base has strategic value but also state-policy complexity. The reported low cost must be tested against full-cycle capex, future abandonment obligations, tax changes, and project mix. A low headline P/E can be a value trap if mid-cycle oil prices, decline rates, or capital intensity normalize unfavorably.

For the next ER2 stages, the investor should watch five items. First, whether the segment work can translate FY 2025 E&P segment profit and TTM consolidated earnings into a defensible FY+5 production and earnings bridge without inventing quarterly segment detail. Second, whether Guyana and Brazil growth creates enough incremental low-cost production to offset decline and capex drag. Third, whether the dividend policy is truly resilient through weaker oil prices. Fourth, whether governance and connected transactions remain investable for minority holders. Fifth, whether CNOOC is a genuine long-duration compounder or a good cyclical income security that does not meet Gideon's >20% ROIC-for-20-years standard.

Key source map

Source	Saved file	Use in primer
Cleared quant foundation	`quant_foundation.md`	Financial base, TTM, segments
2025 annual report/results	`raw\official_cnooc_2025_annual_results.txt`	Reserves, production, segments, governance
2025 annual-results deck	`raw\A_live_20260630\cnooc_2025_annual_results_presentation.txt`	Project and cost context

Source	Saved file	Use in primer
2026 Q1 report/release	`raw\official_cnooc_2026_q1_report.txt`	Latest quarter financials
2026 Q1 release	`raw\A_live_20260630\cnooc_2026_q1_press_release.html`	Latest operating context
2025 business strategy	`raw\A_live_20260630\cnooc_2025_business_strategy.html`	Targets, capex, dividend policy
CNOOC FAQ	`raw\A_live_20260630\cnooc_faq_20260630.html`	Parent ownership, targets, cost, dividends
Buzios6 release	`raw\A_live_20260630\cnooc_2026_buzios6_press_release.html`	Brazil project detail

Appendix M - Management Assessment

CNOOC Limited (0883.HK) - Management Assessment

Stage 0 anchor

Today is 2026-06-30. CNOOC Limited's fiscal year ends December 31. The latest reported quarter is Q1 2026, ended 2026-03-31 and reported on 2026-04-28. The TTM anchor is Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026, ending 2026-03-31. The forward horizon is exactly five calendar years from the TTM end date: 2031-03-31.

Sources and scope

This appendix uses the cleared `quant_foundation.md` and `data_package.md` as the historical base. For management and governance, live official sources control: CNOOC's 2025 annual report, 2025 interim report, Q1 2026 review presentation, 2025 annual results presentation, 2025 business strategy release, the March 20, 2026 CEO appointment release, and the live Directors & Senior Management page. FMP transcript checks in the data package returned empty arrays for FY2026 Q1 and FY2025 Q4, and CNOOC's official IR page provides results presentations and reports rather than full verbatim earnings-call transcripts. I therefore do not fabricate an eight-quarter transcript read; I assess disclosure quality from the official results decks, press releases, reports, and the transcript-availability gap.

1. Who is running the company

CNOOC is being run by a newly reset listed-company team under a state-owned controlling shareholder. The chairman is Zhang Chuanjiang, a non-executive director appointed to the board chair, nomination committee chair, and strategy and sustainability committee chair in July 2025. His background is not a long CNOOC Limited operating tenure. He came through large Chinese energy and power groups, including China Shenhua Coal to Liquid and Chemical, CHN Energy, China Datang, and then CNOOC Group. The current live management page says he became chairman of CNOOC Group, OOGC, and CNOOC (BVI) from June 2025, then chairman of CNOOC Limited in July 2025.

The CEO and president is Huang Yongzhang, appointed on March 20, 2026 as vice chairman, executive director, chief executive officer, president, and a member of the Strategy and Sustainability Committee. He is technically credible: professor-level senior engineer, Doctor of Science, prior CNPC international and Middle East leadership roles, PetroChina director from September 2020 to September 2025, and PetroChina president from March 2021. He has served as a director and general manager of CNOOC Group since September 2025. The quality signal is that he has run very large upstream organizations. The unresolved signal is that he has been CEO of CNOOC Limited for only one reported quarter as of this Stage 0 date.

The CFO is Mu Xiuping, senior vice president and CFO. She became CFO in January 2025 and senior vice president in March 2026. Her background is finance-heavy: professor-level senior accountant, former general manager of PetroChina's finance department, CNPC-related CFO roles, and chief accountant of CNOOC Group from October 2024. She also serves through the parent-control chain as a director of CNOOC (BVI) and OOGC. That gives her relevant financial and parent coordination experience, but it also reinforces that the listed company's finance leadership is tightly embedded in the state-owned parent system.

Material operating leadership is disclosed by function rather than by CNOOC's accounting segments. Huo Jian became senior vice president in March 2026 after CNOOC Group and CNOOC Energy Technology & Services roles. Yu Jin became senior vice president and chief safety officer in March 2026, with prior CNOOC Iraq, China United Coalbed Methane, strategy/planning, production/operation, CIO/CISO, and safety roles. Yan Hongtao, formerly CNOOC Limited president and chief safety officer from November 2024 to March 2026, became senior vice president in March 2026; he has operational depth in development and production, Tianjin branch management, CNOOC (China) Limited, CNOOC (BVI), and OOGC. Xu Changgui, chief geologist since June 2024, supports exploration depth. Xu Yugao is general counsel, chief compliance officer, joint company secretary, and secretary to the board.

Board composition at 2025 year-end was seven directors: two executive, two non-executive, and three independent non-executive directors. That numerical composition is acceptable for Hong Kong listed governance. It is not enough, by itself, to offset the controlling shareholder issue. The annual report says there were no material financial, business, family, or related relationships between board members. However, the non-executive directors are explicitly tied to the parent company's operating fields, and the chairman is simultaneously a senior parent-company figure. The board chair and CEO roles are

separated: Zhang chairs the board; Huang runs management. That is a positive governance design, but both sit within the broader state-owned CNOOC Group architecture.

2. Tenure and track record

The present CEO has almost no CNOOC Limited public-company tenure as CEO. Huang's appointment was effective March 20, 2026, and the latest quarter ended March 31, 2026. Q1 2026 therefore provides only an early read, not a CEO-owned track record. Q1 was good: production reached 205.1 mmboe, up 8.6% year over year; oil and gas sales reached RMB97.0 billion, up 9.9%; net profit attributable was RMB39.1 billion, up 7.1%; and all-in cost was US$28.41/boe. But this quarter was mostly the output of projects and operating systems already in motion before Huang became CEO.

The deeper CNOOC operating machine has a strong five-year record. Net production increased from 573.0 mmboe in 2021 to 777.3 mmboe in 2025, and the TTM production base reached 793.6 mmboe. FY2025 reserves were 7.773 billion BOE, reserve life remained about ten years, and FY2025 all-in cost fell to US$27.90/boe. The 2025 annual results presentation says production hit a new high, reserves hit another record high, and all-in cost remained competitive. Management's major historical decision set was consistent: reinvest heavily in exploration and development, convert reserves into production, control unit costs, and pay a substantial dividend.

The three largest observable strategic decisions were: first, maintaining high upstream capex through the cycle; second, expanding production while keeping a low-cost offshore China base; and third, formalizing a shareholder-return floor. Capex was heavy but not obviously value-destructive: cash capex was RMB73.1 billion in 2021, RMB81.4 billion in 2022, RMB120.9 billion in 2023, RMB123.4 billion in 2024, and RMB108.7 billion in 2025. Production and reserves grew at the same time, and FY2025 ROIC remained mid-teens despite lower Brent. The annual-results presentation also says oil and gas capex was RMB120.5 billion in 2025, mostly exploration and development, and the 2026 budget is RMB112-122 billion.

The second decision, production growth, has tangible output. The January 2025 business strategy targeted 760-780 mmboe for 2025, 780-800 mmboe for 2026, and 810-830 mmboe for 2027. Actual 2025 production was 777.3 mmboe, near the top of the 2025 target band. Q1 2026 production annualized above the 2026 target range, although a quarter should not be annualized mechanically. That is good guidance discipline on volumes.

The third decision, shareholder returns, is unusually clear for a state-controlled E&P company. CNOOC committed to an annual payout ratio of no less than 45% from 2025 to 2027, declared a 2025 annual dividend of HKD1.28 per share, and maintained the 45% payout in FY2025. Dividends paid were material: RMB17.9 billion in 2021, RMB64.7 billion in 2022, RMB84.5 billion in 2023, RMB73.1 billion in 2024, and RMB58.9 billion in 2025 in the data package's FMP cash-flow history. There is no evidence of material buybacks; this is a dividend-return story, not an opportunistic repurchase story.

What did not work or remains unproven? The new leadership transition itself is unproven. Zhou Xinhuai ceased to serve as CEO in October 2025; Yan Hongtao's president role lasted from November 2024 to March 2026; Huang was then brought in from PetroChina/CNOOC Group. That is a lot of title movement in less than eighteen months. It may be normal SOE rotation, but from a minority-shareholder lens it reduces the ability to attribute the listed company's performance to one durable CEO capital allocator.

3. Capital allocation behavior

Capital allocation is coherent with the stated strategy. CNOOC says it is an offshore oil and gas E&P company focused on reserves, production growth, technology, cost control, and shareholder returns. The money follows that claim. The company is not starving the upstream base: FY2025 oil and gas capex was RMB120.5 billion in the presentation basis; the data package's cash capex was RMB108.7 billion; and Q1 2026 capex was RMB33.0 billion. Capex intensity has generally sat around 27-29% of revenue since 2021, except in the high-price 2022 year when revenue surged.

The strength of this behavior is that it is not empire-building M&A at any price. The data package shows negligible acquisition spend from 2021-2024 and RMB7.4 billion in 2025, small relative to the asset base and cash flow. Growth has come through the drill bit, project execution, and reserve conversion rather than serial acquisitions. The company has also kept the balance sheet conservative. FY2025 cash and short-term investments were RMB240.8 billion in the data package, total debt was RMB69.8 billion, and net debt/EBITDA was negative.

The weakness is that the capital-allocation process is not fully minority-controlled. CNOOC Group owns or controls about 62.13% of total issued shares, has influence over board elections and dividends, and holds the exclusive PRC legal right to enter into production sharing contracts with foreign enterprises for offshore China. The annual report says CNOOC Group has undertaken to transfer most rights and obligations under new PSCs to the listed company, subject to exceptions. That

undertaking is important, but it is still a related-party architecture, not a clean public-company asset perimeter.

Related-party flows are large enough to matter. In FY2025, CNOOC Group and associates provided RMB90.477 billion of exploration, development, production, sales, management, ancillary services, and FPSO leases to the company. Sales of petroleum and natural gas products by the company to CNOOC Group and associates totaled RMB234.113 billion, and the annual report says those sales accounted for 59% of revenue. Deposits with CNOOC Finance were near the RMB22.0 billion cap, and borrowings from CNOOC Group/associates were RMB1.279 billion. These are disclosed, reviewed, and subject to caps, but they make minority shareholders dependent on transfer pricing, governance process, and parent incentives.

4. Compensation alignment

Compensation is not a clear Western-style alignment mechanism. The annual report says director remuneration may include fees, salary/allowances, bonuses, share options, and other items. It does not present a transparent long-term incentive scorecard anchored to ROIC, reserve replacement, per-share value, TSR versus peers, cost per BOE, or free cash flow. 2025 executive director remuneration disclosed for Zhou Xinhuai, Yan Hongtao, and Mu Xiuping was modest by global energy standards: RMB0.781 million, RMB0.688 million, and RMB0.615 million respectively, excluding certain social insurance, annuity, housing fund, and incentive income details. Non-executive parent-linked directors received no remuneration in the table, while independent non-executive directors received cash fees.

Equity ownership is not a strong alignment signal. The directors' interests table disclosed only retired independent non-executive director Chiu Sung Hong with 1.65 million H shares as of his June 2025 retirement; otherwise, currently serving directors and chief executives did not disclose material share interests, and no ordinary A shares were held by directors. The company did not grant rights to subscribe for shares in 2025. For a Gideon compounder, this is not ideal. The team may be professionally motivated and politically accountable, but minority shareholders are not obviously following owner-operators with major personal capital at risk.

The positive interpretation is that low pay and no aggressive equity incentives reduce the risk of short-term stock-promotion behavior. The negative interpretation is more important for this framework: the real incentive system sits inside SOE appointment, parent-company, and state objectives, while listed minority shareholders see less evidence of direct per-share ownership alignment.

5. Disclosure quality and candor

Disclosure quality is mixed but generally above the threshold for an Asian national oil company. CNOOC discloses five-year production, reserves, reserve life, realized prices, cost per BOE, product sales, capex split, segment profit, related-party caps, board changes, dividend policy, and risk factors. The data package could build a production-grade commodity-producer inventory from official sources without relying on cached warehouse data. That is a meaningful positive.

The company also gives measurable targets. The 2025 strategy release provided 2025-2027 production target ranges and a three-year dividend payout floor. The 2025 annual results presentation provided the 2026 production target of 780-800 mmboe and capex budget of RMB112-122 billion. It is much easier to monitor management when the company publishes specific production and capex guardrails.

However, CNOOC does not provide the full level of transparency a global institutional shareholder would want. FMP transcript endpoints were empty for recent quarters, and the official IR page has presentations and reports rather than complete searchable call transcripts. Quarterly segment economics are not disclosed. Region-level revenue/profit and project-level economics are not disclosed. The related-party disclosure is extensive, but it still does not give an outside shareholder complete comfort on the economic fairness of all flows inside the CNOOC ecosystem.

The language is managerial and controlled. Management consistently frames strategy around increasing reserves and production, quality and efficiency, cost competitiveness, and sharing development results. It does not dwell on parent-shareholder conflicts, sanctions, PSC dependency, or geopolitical constraints beyond risk-factor disclosure. That is not unusual, but it is not the candor standard of the best owner-led compounders.

6. Strategic coherence

Strategic coherence is the management team's biggest positive. CNOOC says it exists to develop offshore oil and gas reserves, grow production, improve efficiency through engineering and digital tools, maintain cost competitiveness, and distribute cash to shareholders. The investment pattern supports the statement. The 2025 business strategy release set production growth, stable capex, exploration, intelligent oil and gas fields, green power substitution, and a minimum dividend

payout ratio. The 2025 annual results presentation then showed reserves up, production up, all-in cost down, free cash flow strong, and the dividend payout delivered.

The destination is clear enough through 2027: 810-830 mmboe production target in 2027, continued exploration offshore China and overseas, Brazil/Guyana project ramp, and a 45% payout floor. For a long-cycle E&P company, this is coherent. It is not an asset-light compounding story, and it is not immune to commodity cycles, but management is not chasing unrelated pivots.

The main strategic risk is geopolitical rather than operational incoherence. Offshore China PSC rights, overseas assets in politically sensitive jurisdictions, Russia-related sanctions language, and U.S. sanctions risk all sit near the capital-allocation process. The company itself says sanctions could affect the ability to carry out relevant business or business with affected partners. This does not prove management weakness, but it lowers the ceiling on governance confidence for non-Chinese minority shareholders.

7. Governance flags

The core governance flag is parent control. CNOOC Group controls approximately 62.13% of total issued shares and can influence board elections, dividends, and other decisions. The annual and interim reports explicitly warn that strategies, results, and financial position may be harmed if CNOOC Group takes actions favoring its own interests over the listed company. This is not hypothetical boilerplate; it interacts with a real operating structure in which parent-related entities supply services, buy products, provide finance-company services, and hold PSC rights.

The second flag is related-party scale. Sales to CNOOC Group and associates accounted for 59% of FY2025 revenue. Services and support from CNOOC Group/associates totaled RMB90.477 billion. These transactions were disclosed, reviewed by independent non-executive directors, reviewed by auditors for caps and agreements, and approved under the connected-transaction framework. Those process protections are real. But the scale means the business is not simply an independent listed E&P with arm's-length third-party flows.

The third flag is sanctions/geopolitical risk. The company discloses that U.S. federal, state, or local sanctions could affect the company, affiliates, countries/regions where it operates, or partners, and could harm new business opportunities and investor perception. The 2025 interim report also noted that the Russia-Ukraine conflict and sanctions affected some operating areas. CNOOC's management must therefore allocate capital under constraints that can change for political reasons outside normal commodity-cycle management.

The fourth flag is limited direct management ownership and incentive transparency. There is no dual-class share structure, no chronic share dilution, and no obvious restatement/material weakness flag identified in the sources reviewed. But the incentive system is not clearly tied to minority per-share compounding.

8. Peer comparison

Against PetroChina and Sinopec, CNOOC's listed-company management looks operationally cleaner in the specific E&P dimension: lower leverage, more focused upstream exposure, stronger production growth, and a clearer dividend floor. PetroChina and Sinopec are broader integrated SOE energy groups, where refining, chemicals, gas pipelines, policy objectives, and domestic market constraints complicate capital allocation. CNOOC's narrower offshore E&P focus makes the strategy easier to judge.

Against Shell under Wael Sawan, CNOOC communicates less like a shareholder-return optimizer and more like a disciplined national champion. Shell's capital markets materials provide a more explicit buyback/capital-return framework, sharper portfolio pruning language, and more public-market style accountability. CNOOC's dividend floor is attractive, but it does not match Shell's transparency on per-share capital returns, portfolio choices, or executive incentive alignment. CNOOC probably ranks ahead of Chinese SOE peers on focus and cost discipline, but behind the best global majors on minority-shareholder governance, disclosure richness, and direct management alignment.

9. Management gate verdict

Management gate: YELLOW.

CNOOC's operating organization is highly competent. The company has grown production from 573.0 mmboe in 2021 to 777.3 mmboe in 2025, kept reserve life around ten years, held all-in cost below US$30/boe, remained net-cash, and paid substantial dividends. Management's public targets have generally been measurable and recently credible, with 2025 production landing near the top of guidance and Q1 2026 showing continued momentum.

This is not a PASS because the exact current listed-company leadership team is new and the minority-shareholder governance structure is unresolved. Huang has only been CEO since March 2026; Zhang has only chaired the board since July 2025; Mu has only been CFO since January 2025. More importantly, CNOOC Group controls about 62.13% of the company, can influence board and dividend decisions, holds the offshore China PSC gateway, and sits on both sides of large related-party flows. The company discloses these issues, but disclosure does not eliminate the conflict.

Upgrade to PASS if three conditions are met through at least FY2027: first, Huang's team delivers the 2026 and 2027 production targets without cost inflation that pushes all-in cost structurally above the high-US$20s per BOE; second, the 45% dividend payout floor is maintained without weakening the balance sheet; third, renewed connected-transaction agreements and related-party volumes remain within caps with no evidence of pricing leakage, parent-driven asset transfers, or minority-unfriendly capital allocation.

Downgrade to FAIL if any of these occur: CNOOC Group directs a material transaction that appears to favor the parent over the listed company; related-party sales/services grow faster than business scale without better economic disclosure; management cuts the payout floor while keeping high parent-related flows; sanctions materially impair asset access or capital returns; or the new CEO/CFO team misses production/capex guidance and explains it with vague macro language rather than operational detail. Until then, the team is investable only with an SOE-governance discount and explicit monitoring.

Source links

- CNOOC 2025 annual report: https://www.cnoocltd.com/english/investorrelations/reports/annualreport/material/e00883-2025AnnualResults-en.pdf
- CNOOC Directors & Senior Management page: https://www.cnoocltd.com/english/aboutus/directorsseniormanagement/
- CEO appointment release, March 20, 2026: https://www.cnoocltd.com/english/presscenter/pressreleases/2026/202603/t20260320_120392.html
- 2025 business strategy release: https://www.cnoocltd.com/english/presscenter/pressreleases/2025/202501/t20250122_112727.html
- 2026 Q1 review presentation: https://www.cnoocltd.com/english/investorrelations/resultspresentations/results/202604/P020260428571441239862.pdf
- 2025 annual results presentation: https://www.cnoocltd.com/english/investorrelations/resultspresentations/material/2025AnnualResultsEN.pdf

Appendix W - Moat and 2046 Durability

CNOOC Limited - Moat and 2046 Durability

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Stage 0 anchor

- Today: 2026-06-30.
- Fiscal year ends December 31.
- Latest reported quarter: Q1 2026 ended 2026-03-31.
- TTM: Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026 -> TTM ending 2026-03-31.
- Forward horizon: 2031-03-31.

This appendix uses the cleared `quant_foundation.md` and `data_package.md` as the historical and segment base. Official CNOOC sources control where FMP is empty or less granular. Live official checks used in this subagent pass include the 2025 annual report and annual results presentation, the 2026 Q1 results release and presentation, the 2025 business strategy release, the CNOOC FAQ, and the 2025 interim risk-factor disclosure. The relevant official evidence: FY2025 net proved reserves of 7.77 billion BOE, FY2025 production of 777.3 mmboe, Q1 2026 production of 205.1 mmboe, FY2025 all-in cost of US$27.90/boe, Q1 2026 all-in cost of US$28.41/boe, the 2026 production target of 780-800 mmboe, the 2027 target of 810-830 mmboe, and the parent-company position that China National Offshore Oil Corporation holds about 62.13% of the listed company. Segment appendices were still stubs when this file was written, so segment integration relies on the data package, quant foundation, and primer orientation rather than completed B-agent work.

1. Moat taxonomy applied

Network effects: CNOOC has no customer-side network effect. A refinery, gas utility, or marketing affiliate does not value CNOOC's next barrel because another customer is already buying CNOOC's prior barrel. The company sells oil and gas into commodity-linked markets. Scale helps procurement, engineering, access to offshore talent, and portfolio risk absorption, but it is not a network effect. This lens is absent.

Switching costs: Customer switching costs are weak for crude oil and moderate for some natural gas arrangements. CNOOC's annual report states that crude oil sales prices are mainly determined by reference to international benchmark crude prices and that China customers include CNOOC Group, Sinopec Group, and local refinery customers. That is not software-style lock-in. Natural gas can have more contract structure, infrastructure linkage, and price-review mechanisms, but gas was only RMB55.9 billion of FY2025 oil and gas sales versus RMB279.8 billion for crude and liquids. The customer relationship is useful, not a dominant moat.

Scale economies: This is the real positive. CNOOC has scale in offshore China, a global offshore portfolio, and a large engineering and development program. FY2025 production was 777.3 mmboe, TTM production was 793.6 mmboe, and Q1 2026 production was 205.1 mmboe. The scale advantage shows in cost control: all-in cost was US$29.49/boe in 2021, US$30.39/boe in 2022, US$28.83/boe in 2023, US$28.52/boe in 2024, US$27.90/boe in 2025, and US$28.41/boe in Q1 2026. That is not immunity to the cycle, but it is a meaningful cost-curve advantage if measured against higher-cost offshore and frontier barrels.

Brand: Brand is not an economic moat here. CNOOC's name matters for government, partner, lender, and supplier trust, but buyers do not pay a premium for branded crude molecules. The brand effect is best understood as institutional credibility and strategic procurement trust, not end-market pricing power.

Regulatory and strategic position: This is the second major positive. CNOOC Group, the controlling shareholder, has the exclusive right to enter into production sharing contracts with foreign contractors for offshore China areas open to foreign cooperation, and CNOOC Limited is the listed vehicle with the operating exposure. The parent owns about 62.13% of CNOOC Limited, and the domestic portfolio sits inside China's energy-security priorities. This gives access, staying power, and a strategic role that most competitors cannot replicate. The caveat is severe: a regulatory moat for minority shareholders is two-sided. It may protect access, but it can also import state objectives, related-party transactions, sanctions risk, and policy constraints.

IP, technology, and technical capability: CNOOC has genuine offshore technical capability in exploration, development integration, deepwater, enhanced recovery, field adjustment, digital/intelligent fields, and large project delivery. Q1 2026 official materials cite four new discoveries, 12 appraised structures, and new projects including Huizhou 25-8 and Penglai 19-3 adjustments. The 2025 strategy release also mentions engineering standardization, intelligent oil and gas fields, and the Hi-Energy AI model. This is a capability moat, not a patent moat. It helps CNOOC find and lift barrels cheaply; it does not stop another major from using comparable offshore technology where that major has acreage and rights.

High-trust procurement: CNOOC has a real high-trust procurement and partnership advantage in offshore China and selected overseas partnerships. Offshore development requires safety, environmental, engineering, government, and financing credibility. A low-leverage balance sheet and state-linked position increase the probability that partners and regulators regard CNOOC as durable through cycles. Again, this is access and execution strength, not pricing power.

2. Per-segment moat

E&P is the only economically material moat segment. FY2025 E&P total revenue was RMB344.2 billion and segment profit was RMB122.2 billion, a 35.5% segment margin on total revenue. The moat is a bundle of privileged offshore China access, large reserves, low all-in cost, operating scale, and technical capability. It is durable for five years if CNOOC keeps production near the 780-830 mmboe target corridor, holds all-in cost near the high-US$20s per BOE, and keeps reserve replacement above depletion. It is plausible for ten years if Bohai, South China Sea, Guyana, and Brazil projects continue to refresh the reserve base. It is not a clean twenty-year moat because the profit pool depends on oil and gas demand, Brent-linked pricing, sanctions/geopolitics, capex intensity, and climate policy. The earliest break signal is not one bad commodity-price quarter; it is reserve life slipping below roughly 8 years, all-in cost moving sustainably above US$35/boe, or production targets being maintained only by much higher capex intensity.

The Trading business is not a moat segment. FY2025 external revenue was RMB311.6 billion, but total segment revenue after intersegment effects was RMB53.8 billion and segment profit was only RMB4.5 billion. The function matters because some E&P volumes are routed through trading channels, but the segment's margin is thin and the economic substance is marketing/logistics rather than protected customer economics. Durability is five years as an internal route-to-market capability; it should not be underwritten as a standalone compounding engine. Break signals are widening working-capital needs, adverse related-party pricing scrutiny, or trading profit volatility disconnected from E&P volumes.

Corporate is not an operating moat. Corporate segment profit can be large because of treasury, investment, financing, and group items, but the margins are not economically meaningful on reported revenue. Corporate resilience matters through net cash, investment income, and access to financing, yet these support the E&P moat rather than create a separate one.

The blended company moat is weaker than the E&P moat. Consolidated external revenue overstates Trading's economic weight, while segment profit shows E&P is the engine. For an equity holder, this means the moat is concentrated in low-cost upstream reserves and access; there is no downstream integration moat, consumer franchise, refining moat, or software-like recurring customer base to smooth the commodity cycle.

3. Margin persistence evidence

CNOOC's historical margin evidence is good for an upstream commodity producer but not enough for a Gideon-grade compounder moat. Consolidated operating margin was 39.9% in 2021, 46.4% in 2022, 41.6% in 2023, 45.2% in 2024, and 43.5% in 2025. E&P segment margin on total revenue was 30.2%, 38.2%, 36.0%, 38.0%, and 35.5% across FY2021-FY2025. Those are strong numbers. They show that CNOOC did not need a perfect oil tape to remain highly profitable, and they confirm the low-cost claim is visible in financial results rather than just investor-deck language.

The problem is attribution. Margin persistence here comes from cost position, reserve quality, tax/regime mix, volume growth, and commodity prices. It does not come from CNOOC raising prices to customers because customers have no alternative. FY2025 is instructive: realized oil price declined to US$66.47/bbl from US$76.75/bbl in FY2024, while net income still held at RMB122.1 billion because production grew and cost remained controlled. That is resilience, not pricing power. In a prolonged lower-oil scenario, the same cost base can produce acceptable returns, but the company cannot dictate the price of the commodity.

The reserve data is also encouraging but cyclical. Net proved reserves rose from 5.73 billion BOE in 2021 to 7.77 billion BOE in 2025, while reserve life stayed around 10 years. The implied FY2025 reserve replacement ratio from official reserves and production is roughly 165%. That is strong. But proved reserves are estimates, development timing matters, and CNOOC's own interim risk disclosure warns that failure to develop reserves in a timely and cost-effective way can hurt results. Reserve

replacement is evidence of capability; it is not a perpetual moat unless it remains economic at mid-cycle oil prices and under future regulatory constraints.

4. AI disruption stress test

E&P is chokepoint economics, not a prompt-to-output workflow. AI can improve seismic interpretation, reservoir modeling, drilling planning, predictive maintenance, supply-chain optimization, and safety monitoring. It can lower CNOOC's cost or improve recovery, but it cannot conjure offshore China acreage, production rights, installed platforms, FPSOs, proved reserves, pipelines, or host-government approvals for a new entrant. CNOOC is more likely to use AI as a productivity tool than to be displaced by it. The AI risk is execution parity: if every major adopts similar AI-enabled exploration and operations, CNOOC's technical edge narrows, leaving only acreage, cost, and regulatory position.

Trading and marketing are more workflow-like. Forecasting, scheduling, optimization, customer matching, and risk monitoring can be automated. However, the segment is not the main profit pool, and AI disruption would probably compress headcount and process advantage rather than destroy the E&P economics. The most AI-exposed segment is Trading/Corporate process work. The most protected segment is domestic offshore E&P because its core economics are physical capacity, reserves, licenses, and cost-curve position.

AI does not solve the 2046 problem. It may help CNOOC extract more efficiently, but it may also help competitors, reduce global marginal cost, and accelerate energy-system optimization away from oil demand in some use cases. The AI stress test is therefore net positive operationally, but not a reason to upgrade the moat to a twenty-year compounder.

5. The 2046 test

Twenty years from today is 2046-06-30. The credible 2046 bull description is this: CNOOC Limited is still a Chinese offshore and international upstream energy producer, selling crude oil, liquids, and natural gas to China-linked and international customers. The China offshore base still exists, but it is more mature and requires heavier decline management, enhanced recovery, digital operations, and environmental spending. The overseas sleeve in Guyana, Brazil, and other politically acceptable basins is a larger part of reserve renewal. Natural gas is a bigger share of production than today, and CNOOC has some lower-carbon and offshore power-related projects, but the core profit pool remains hydrocarbons. Operating margin is lower than the 2021-2025 average unless oil prices are structurally high; the business still makes money because it sits low on the cost curve, has strategic domestic access, and owns a large reserve base.

That paragraph is specific enough to describe a surviving company, but it is not specific enough to describe a Gideon-quality 20-year compounder moat. By 2046, CNOOC's customers still buy commodity energy, not a unique product. If global oil demand is flat to down, the surviving low-cost producers may earn acceptable returns, but the equity thesis will depend on commodity price, fiscal take, depletion, capex, and policy treatment. If China gives strategic preference to domestic offshore security of supply, CNOOC remains relevant. If energy transition pressure, carbon cost, sanctions, host-country intervention, or offshore decline overwhelms reserve replacement, the same assets become a capital-intensive harvest business.

The 2046 bear case is not bankruptcy. It is a company that remains strategically important but no longer compounds capital at high returns. Production is held flat only by high capex; reserve life slips; overseas projects face fiscal renegotiation or geopolitical restrictions; carbon and safety spending lifts all-in cost; natural gas partially offsets oil decline but does not replace crude economics; and minority shareholders receive dividends from a lower-return, state-influenced resource base. Probability is material enough that the 2046 test fails under the strict Gideon bar.

6. Competitive threat inventory

Threat	Mechanism	Segment(s) affected	Earliest observable signal	Plausibility
Commodity price and cost-cycle squeeze	CNOOC remains a price taker while service, tax, FX, carbon, or development costs rise	E&P, Corporate	All-in cost above US$35/boe for several periods; FCF falls despite stable production	High
Reserve replacement deterioration	Mature offshore fields and project delays force higher reinvestment for each BOE	E&P	Reserve life below 8 years; RRR below 100%; production target misses	Medium-high
Geopolitical and host-government constraint	Sanctions, state conflict, fiscal resets, JV limits, or partner-operated delays reduce access/control	Overseas E&P, Trading	Project sanctions, blocked equipment/technology, host-country tax/royalty changes	Medium-high

Threat	Mechanism	Segment(s) affected	Earliest observable signal	Plausibility
Energy transition and climate policy	Oil demand growth slows, carbon costs rise, financing or approval becomes harder	E&P, Corporate	Lower long-term oil assumptions, impairments, rising abandonment/carbon costs	Medium
Related-party/state objective drag	Strategic supply objectives override minority-shareholder return optimization	E&P, Trading, Corporate	Related-party pricing disputes, capex with weak returns, payout policy reset	Medium

7. Pricing power verification

Pricing power is weak. The annual report says crude oil sales prices are mainly determined by reference to international benchmark crude prices, including Brent-linked pricing, and that overseas oil prices reference benchmarks and host-country official prices. That is the opposite of customer-level pricing power. Natural gas has more contracted structure and price review mechanisms, and domestic strategic demand may help volumes, but the company still does not own a unique customer-lock-in franchise.

The observable positive is not price increases; it is margin survival through price volatility. Realized oil price fell from US$96.59/bbl in 2022 to US$77.96/bbl in 2023, US$76.75/bbl in 2024, and US$66.47/bbl in 2025, yet consolidated operating margin stayed above 40% in FY2023-FY2025 and E&P segment margin remained mid-30s. Q1 2026 improved with realized oil at US$75.92/bbl and all-in cost at US$28.41/boe. This is cost advantage and volume execution. It should be credited as a moat element, but it cannot be mistaken for pricing power.

The best verification conditions going forward are mechanical: maintain all-in cost near or below US$30/boe, keep operating expense per BOE near the recent US$7-8 range, sustain reserve life around 10 years, and keep production guidance intact without a capex step-up that destroys FCF. If those hold through a Brent downturn below US$60/bbl, CNOOC's cost moat would deserve more credit. If they do not, the moat is mostly a commodity upcycle with official language around it.

8. Moat verdict

Moat gate: FAIL. CNOOC has real present-day advantages: a low-cost offshore reserve base, privileged China offshore strategic position, strong reserve replacement, large project pipeline, scale, technical capability, and a conservative balance sheet. Those advantages justify calling CNOOC a high-quality upstream operator. They do not clear the Gideon moat gate because the largest profit pool is still commodity E&P with weak product pricing power, high reinvestment needs, state/related-party overlay, geopolitical exposure, and long-term energy-transition risk. A cheap, resilient commodity producer can be a good stock in the right cycle and valuation; it is not automatically a 20-year compounder moat.

2046 test: FAIL. A specific 2046 CNOOC can be described, but the description is a surviving strategic low-cost hydrocarbon producer, not a business whose high returns are protectable for twenty years independent of commodity prices and policy. Upgrade to YELLOW would require evidence through a low-price cycle that CNOOC can maintain reserve life near 10 years, all-in cost below US$30-32/boe, production growth near guidance, and FCF after dividends without value-destructive capex. Upgrade to PASS would require a more durable non-commodity profit pool or long-duration contracted economics that protect returns beyond the oil cycle. Downgrade pressure is immediate if reserve replacement falls below depletion, cost per BOE rises structurally, overseas geopolitical restrictions intensify, or state objectives visibly subordinate minority-shareholder returns.

Appendix B1 - China Offshore E&P Core

China Offshore E&P Core - Segment Deep Dive

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Stage 0 anchor

- Today: 2026-06-30.
- Fiscal year ends December 31.
- Latest reported quarter: Q1 2026 ended 2026-03-31.
- TTM anchor: Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026, ending 2026-03-31.
- Forward horizon: TTM + 5 calendar years = 2031-03-31.

This appendix covers CNOOC Limited's China offshore domestic producing asset base: Bohai, Western South China Sea, Eastern South China Sea, and East China Sea where disclosed. It does not cover overseas E&P, trading/marketing as a standalone business, corporate treasury, or onshore China unconventional gas except where CNOOC's official "China" production disclosure does not separate offshore from onshore. Financial statement amounts are RMB unless stated otherwise. Oil and gas unit prices and costs are in U.S. dollars where CNOOC reports them that way.

The data package is the source of truth for CNOOC historicals and management commentary. It states that official CNOOC sources control because FMP product segmentation was empty, FMP transcripts were empty, and quarterly segment economics are not disclosed [data_package lines 15, 21, 27-32]. Live official-source confirmations used for context were CNOOC's annual report page, the official Q1 2026 results presentation, the Q1 2026 operating-results press release, the January 2025 business strategy release, and the CNOOC Key Operating Areas page. These confirmations did not replace the data package historical base; they were used to validate the current official source context and the operating-area boundary.

0. Segment boundary and taxonomy note

CNOOC's accounting taxonomy is stable, but the "China Offshore E&P Core" is not a standalone reportable accounting segment. The company reports E&P, Trading business, Corporate, and Eliminations. E&P is the exploration, development, production, and sale of crude oil and natural gas. CNOOC also discloses operational production and reserves by China and overseas, and describes China operating areas by basin or sea area. The data package states that geographic reporting is operational, not segment P&L reporting, and that CNOOC does not disclose revenue or profit by China versus overseas in a form that ties to segment profit [data_package line 80].

That boundary matters. The synthesis model should treat this appendix's China offshore revenue and operating-income figures as modeled contribution estimates, not as a company-disclosed China segment P&L. The historical hard numbers that control the analysis are: FY2025 E&P total revenue of RMB344.2bn and segment profit of RMB122.2bn; FY2025 China production of 536.9 mmboe; FY2025 total production of 777.3 mmboe; Q1 2026 China production of 140.0 mmboe; and Q1 2026 total production of 205.1 mmboe [data_package lines 53, 108, 114-120, 199-205; quant_foundation lines 72, 128, 136-140]. No quarterly China segment profit is disclosed. No basin-level revenue, basin-level profit, or project-level economics are disclosed [data_package lines 72, 289-290, 294].

[DATA GAP: CNOOC does not disclose a separate China offshore P&L, and it does not separately disclose offshore China versus onshore China production in the summarized China production row used by the data package. This appendix uses "China production" as the closest official proxy for the China offshore core because CNOOC identifies Bohai, Western South China Sea, Eastern South China Sea, and East China Sea as its core China offshore operating areas, while also acknowledging separate onshore unconventional gas activity.]

1. What this segment actually is

The China Offshore E&P Core is CNOOC's domestic upstream engine. It consists of offshore exploration, appraisal, development drilling, production operations, field adjustments, enhanced recovery work, gas-field development, and related infrastructure across four major disclosed operating areas. Bohai is the largest crude oil production base in China and CNOOC's most important crude oil producing area. Western South China Sea is an important natural gas production area.

Eastern South China Sea is an important crude oil producing area. East China Sea serves as a natural gas producing area for the Yangtze River Delta. CNOOC's official Key Operating Areas page also discusses onshore China unconventional natural gas, but this appendix's intended segment scope is the offshore domestic producing asset base.

The customer and pricing model are different from a normal industrial segment. CNOOC produces crude oil, liquids, natural gas, and LNG. Revenue is driven by production volumes, realized Brent-linked oil prices, realized gas prices, exchange rates, fiscal terms, royalties and resource-related charges, and internal sales-routing through the Trading business. The data package explicitly warns that certain oil and gas produced by the E&P segment is sold via the trading business segment and then reclassified back to E&P for the chief operating decision maker's assessment [quant_foundation lines 60-61]. Therefore, external revenue alone understates the upstream economic base; E&P total revenue, product sales, production, costs, and capex must be read together.

The operating model is long-cycle and capital intensive. Exploration turns seismic work and appraisal drilling into reserve additions. Development capex turns reserves into producing wells, platforms, subsea systems, pipelines, and adjustment projects. Production capitalization and field maintenance keep mature assets flowing. Depletion is unavoidable, so CNOOC must reinvest continuously to offset natural decline. The domestic offshore core is not a pure harvest asset. It is a reinvestment platform where the company must keep finding, appraising, drilling, adjusting, and digitizing fields just to preserve the base, while new projects and enhanced recovery create the incremental growth.

The relevant government context is also part of the segment economics. Offshore China acreage and cooperation arrangements are shaped by CNOOC Group's state role. CNOOC's official source says CNOOC Group has the exclusive right to enter into production-sharing contracts with foreign contractors to cooperate in offshore China exploration, development, and production where acreage is open to foreign cooperation, and that CNOOC Group has transferred to CNOOC Limited the relevant rights and obligations except certain state-corporation management and supervision rights. That gives CNOOC Limited a privileged domestic offshore position, but it also means the segment operates within Chinese energy-security, fiscal, industrial-policy, safety, environmental, decommissioning, and resource-rights constraints. The data package flags asset- and region-level cost disclosure gaps, so this appendix does not quantify a separate China offshore fiscal charge [data_package lines 270, 294].

2. Current economics

The FY2025 accounting base is CNOOC's E&P segment: total revenue RMB344.2bn, segment profit RMB122.2bn, and segment profit margin of 35.5% on total revenue [data_package lines 114-120]. The operational base is total production of 777.3 mmboe, China production of 536.9 mmboe, overseas production of 240.4 mmboe, net proved reserves of 7.773bn boe, reserve life of about 10 years, all-in cost of US$27.90/boe, and operating expense per BOE of US$7.61 [data_package lines 53, 57-63, 303]. China production represented about 69.1% of total production in FY2025. Q1 2026 continued the mix: total production was 205.1 mmboe, China production was 140.0 mmboe, and overseas production was 65.1 mmboe. China represented about 68.3% of Q1 2026 production [data_package lines 199-205].

CNOOC does not disclose China offshore revenue or profit. To give the synthesis appendix a usable contribution number without pretending it is disclosed, this appendix uses a volume-share proxy. FY2025 China production divided by total production equals 536.9 / 777.3 = 69.1%. Applying that percentage to FY2025 E&P total revenue of RMB344.2bn gives a modeled FY2025 China offshore core revenue proxy of RMB237.8bn. Applying the same percentage to FY2025 E&P segment profit of RMB122.2bn gives a modeled FY2025 operating contribution proxy of RMB84.4bn. The margin remains the disclosed E&P margin of 35.5%.

The TTM base is stronger than FY2025 because the TTM includes Q1 2026, which had higher realized oil prices and record production. CNOOC's TTM consolidated production was 793.6 mmboe, revenue was RMB407.4bn, net income attributable was RMB124.7bn, operating cash flow was RMB206.9bn, cash capex was RMB114.6bn, and FCF was RMB92.4bn [data_package line 108; quant_foundation lines 122-128, 159-167]. A precise TTM China/offshore profit split is not disclosed. This appendix estimates TTM China production by replacing Q1 2025 China production with Q1 2026 China production: FY2025 China production 536.9 less estimated Q1 2025 China production of about 130.8, plus Q1 2026 China production of 140.0, or about 546.1 mmboe. The Q1 2025 estimate is mathematically derived from the official Q1 2026 China production of 140.0 mmboe and 7.0% YoY growth cited in the data package. Oil and gas sales in the TTM rose about 2.6% versus FY2025, using the data-package quarterly oil/gas sales bridge of RMB83.5bn, RMB83.7bn, RMB80.2bn, and RMB97.0bn, or RMB344.4bn versus FY2025 oil and gas sales of RMB335.7bn [data_package lines 167-180, 192-197].

The resulting TTM China Offshore E&P Core base used for this appendix is RMB244.0bn of modeled revenue and RMB86.6bn of modeled operating contribution at a 35.5% margin. This is not a disclosed segment line. It is a bridge from

disclosed E&P economics, disclosed China production share, and disclosed product sales trend. It is intentionally conservative in precision: the model uses one decimal place and flags that no asset-level margin or basin-level revenue is disclosed.

3. Unit economics

Revenue becomes profit through three main levers: volume, realized price, and unit cost. Volume is driven by reserve conversion, development-project startup timing, drilling efficiency, production uptime, decline control, and adjustment projects in mature fields. Price is dominated by crude oil for Bohai and Eastern South China Sea and by gas pricing for Western South China Sea and East China Sea. Cost is captured in CNOOC's reported all-in cost and operating expense per BOE. The group all-in cost moved from US$29.49/boe in FY2021 to US$27.90/boe in FY2025 and US$28.41/boe in Q1 2026; operating expense per BOE moved from US$7.83 in FY2021 to US$7.61 in FY2025 [data_package lines 62-63, 274-275]. Q1 2026 opex per BOE was effectively flat YoY according to the official Q1 presentation, while all-in cost rose from US$27.03/boe to US$28.41/boe as taxes and exchange-rate factors weighed on cost.

The domestic offshore core likely has structurally good unit economics relative to higher-risk frontier acreage because it benefits from CNOOC's operating scale, existing infrastructure, repeatable offshore engineering, state-supported resource access, and basin knowledge. Bohai and South China Sea assets have multi-decade operating histories. Existing platforms, pipelines, supply-chain familiarity, and local engineering capabilities reduce execution risk versus a first-time frontier basin. Mature-field adjustment projects such as Penglai 19-3 secondary adjustment and Huizhou 25-8 comprehensive adjustment are not the same as giant greenfield discoveries, but they are exactly the kind of reinvestment that can hold the decline curve flatter and extend asset life.

At the same time, the unit economics are not bond-like. Offshore fields decline. Water cut rises. Infill drilling can become less productive. Typhoon risk, platform integrity, subsea maintenance, FPSO or platform downtime, well workovers, power needs, and decommissioning obligations can erode margins. The all-in cost metric includes more than simple lifting expense, and it has held in a relatively tight band near US$28-30/boe over five years. That cost stability is a major advantage, but it also means the margin outcome is mostly commodity-price sensitive. When realized oil was US$96.59/bbl in FY2022, E&P margin reached 38.2%; when realized oil fell to US$66.47/bbl in FY2025, E&P margin was still 35.5%, helped by cost control and gas growth, but segment profit fell from RMB137.6bn in FY2024 to RMB122.2bn in FY2025 [data_package lines 114-120, 175-176].

Capex intensity is the reinvestment tax on the segment. CNOOC's FY2025 oil and gas capex was RMB120.5bn on the presentation basis and RMB118.8bn on the annual table basis. Q1 2026 capex was RMB33.0bn. The 2026 capex budget is RMB112-122bn [data_package lines 238-247]. Exploration was RMB19.3bn in FY2025, development RMB74.7bn, production capitalization RMB24.9bn, and other capex RMB1.6bn [data_package lines 238-244]. The domestic offshore core consumes much of this spend because China production is about two-thirds of the output base and because CNOOC's strategy emphasizes domestic reserve and production growth. In this segment, capex is not optional growth spend; it is the price of defending reserve life and extending mature assets.

4. Competitive dynamics

The China offshore core has unusual competitive dynamics because the main constraint is not a crowd of private competitors bidding away customer relationships. It is resource access, reserve quality, offshore engineering capability, state policy, safety performance, and cost control. CNOOC is China's largest producer of offshore crude oil and natural gas, according to its official website and annual-report page. Its domestic offshore asset base is anchored in basins where it has long operating history, proprietary subsurface knowledge, platform infrastructure, and project-execution routines. The competitive bar for a new entrant is high: offshore seismic interpretation, exploration risk capital, platform construction, subsea and drilling capability, marine logistics, safety systems, and the right to operate in Chinese waters are not easily replicated.

The most important competitor is not one named company. It is the combination of depletion, national energy-transition policy, imported LNG and oil alternatives, onshore gas and shale resources, and price cycles. If imported LNG becomes cheaper or policy favors gas imports over domestic offshore gas development, parts of the Western South China Sea and East China Sea gas growth case could compress. If oil prices fall, Bohai and Eastern South China Sea revenue and margins fall even if volumes hold. If the domestic policy priority is energy security, domestic offshore production has strategic value that can support investment even when pure cycle economics are less exciting.

Other Chinese national oil companies compete for capital, talent, suppliers, and policy attention, but CNOOC's offshore specialization is a differentiator. PetroChina and Sinopec are much broader onshore, refining, pipeline, chemicals, and

gas-market participants. CNOOC's edge is narrower but sharper: offshore exploration and production. In international oil and gas terms, CNOOC's domestic offshore core competes with global offshore operators for equipment, rig rates, offshore engineering, and technical know-how. When offshore-service markets tighten, the cost advantage can narrow. When service capacity is loose, CNOOC can convert its standardized offshore project model into attractive capital productivity.

The Q1 2026 official release confirms continuing project contribution from domestic offshore fields, including Kenli 10-2, and notes domestic project startups such as Huizhou 25-8 Oilfield Comprehensive Adjustment and Penglai 19-3 secondary adjustment. The Q3 2025 release also named domestic projects such as Kenli 10-2, Dongfang 29-1, and Wenchang 19-1 among 14 projects that commenced production. Those are the live competitive facts: the domestic base is still producing new projects and not simply running off. The bear case is not that CNOOC lacks access; it is that these projects become increasingly adjustment-heavy and require more capital for each incremental BOE.

5. Segment-level moat

The segment moat is real, but it is not a consumer-brand moat and it is not immune to commodity prices. It has four layers. First, resource access: CNOOC's domestic offshore position is linked to CNOOC Group's state role in offshore China PSCs and to transferred rights and obligations for existing and future PSCs. Second, technical and operating know-how: decades in Bohai, South China Sea, and East China Sea create basin-specific subsurface knowledge, engineering templates, maintenance routines, and supplier relationships. Third, scale: a domestic production base above 500 mmboe per year supports shared logistics, drilling programs, standardization, and digital-field investment. Fourth, cost culture: the company has kept all-in cost around US$28-30/boe and operating expense per BOE below US$8 across the 2021-2025 period despite inflation, typhoon risk, and field maturity [data_package lines 62-63].

The moat is most durable in Bohai and the South China Sea because they combine scale, long operating history, and continuing reserve additions. The data package supports this at the company level through a five-year reserves build from 5.728bn boe in FY2021 to 7.773bn boe in FY2025, a 10-year reserve life, and an implied FY2025 reserve replacement ratio of about 165% calculated from official reserves and production [data_package lines 57-59, 291]. It does not disclose basin-level reserve additions or appraisal counts, so this appendix treats Bohai and South China Sea strength as qualitative support rather than a separate historical reserve table.

The moat weakens if one asks whether this segment can compound at software-like returns for 20 years. It cannot. It depletes. It must reinvest. It sells commodities. It has state-linked constraints. It faces carbon-policy pressure and decommissioning obligations. The defensible advantage is not pricing power over customers; it is privileged access, cost position, execution reliability, and the ability to keep the production plateau from falling too fast. That is a valuable moat for an E&P business, but it does not deserve the same multiple as an asset-light compounder.

6. Historical growth rates reproduced from the data package

The table below uses the data package and quant foundation as the source of truth. China Offshore E&P Core is not separately disclosed as revenue or profit, so the historical table shows disclosed E&P economics and disclosed China production. Basin-level rows are listed as data gaps rather than estimated historical dollars.

Product / sub-segment	FY-4 2022	FY-3 2023	FY-2 2024	FY-1 2025	3-yr CAGR / trend	Most recent YoY	Data package cite
E&P total revenue RMBbn	361.3	339.0	362.2	344.2	-1.6% CAGR 2022-2025	-5.0% FY2025	data_package lines 114-120; quant_foundation line 72
E&P segment profit RMBbn	138.1	121.9	137.6	122.2	-4.0% CAGR 2022-2025	-11.2% FY2025	data_package lines 114-120; quant_foundation line 72
China production mmboe	432.5	466.4	492.7	536.9	7.5% CAGR 2022-2025	9.0% FY2025	data_package line 53
Total net production mmboe	623.8	678.0	726.8	777.3	7.6% CAGR 2022-2025	6.9% FY2025	data_package lines 52-53; quant_foundation lines 136-138
Net proved reserves mmboe	6,238.6	6,784.2	7,270.6	7,773.1	7.6% CAGR 2022-2025	6.9% FY2025	data_package line 57
All-in cost US$/boe	30.39	28.83	28.52	27.90	-2.8% annual decline	-2.2% FY2025	data_package line 62
Operating expense US$/boe	7.74	7.54	7.46	7.61	-0.6% annual decline	2.0% FY2025	data_package line 63

Product / sub-segment	FY-4 2022	FY-3 2023	FY-2 2024	FY-1 2025	3-yr CAGR / trend	Most recent YoY	Data package cite
Bohai basin revenue/profit	N/D	N/D	N/D	N/D	[DATA GAP]	[DATA GAP]	data_package lines 72, 80, 289-290
Western South China Sea revenue/profit	N/D	N/D	N/D	N/D	[DATA GAP]	[DATA GAP]	data_package lines 72, 80, 289-290
Eastern South China Sea revenue/profit	N/D	N/D	N/D	N/D	[DATA GAP]	[DATA GAP]	data_package lines 72, 80, 289-290
East China Sea revenue/profit	N/D	N/D	N/D	N/D	[DATA GAP]	[DATA GAP]	data_package lines 72, 80, 289-290

Arithmetic tie-outs: E&P revenue FY2024 to FY2025 is RMB362.2bn x 0.950 = RMB344.1bn, which ties to RMB344.2bn within rounding. E&P profit FY2024 to FY2025 is RMB137.6bn x 0.888 = RMB122.2bn, which ties to the data package row. China production FY2024 to FY2025 is 492.7 x 1.090 = 537.0 mmboe, which ties to 536.9 mmboe within rounding. Total production FY2024 to FY2025 is 726.8 x 1.0695 = 777.3 mmboe, which ties to the data package's annual table. The modeled TTM China production estimate is 536.9 - 130.8 + 140.0 = 546.1 mmboe, where 130.8 is derived from the official Q1 2026 China production YoY bridge. No basin-level historical dollars are back-solved.

7. Management guidance quoted from the data package

The data package found no usable FMP transcripts for FY2026 Q1 or FY2025 Q4, so management commentary comes from official releases and presentations [data_package lines 211-224].

Source date	Speaker / source	Verbatim excerpt	Topic	Segment interpretation
2026-03-26	Zhang Chuanjiang, Chairman	"strengthen our foundation for development"	Reserves and production	Supports a reserve-replacement and production-base thesis for domestic offshore assets.
2026-03-26	2025 annual results release	"Annual production is targeted at 780-800 million BOE"	2026 production target	CNOOC is guiding roughly flat to low-single-digit total production growth after FY2025, not a harvest case.
2026-03-26	2025 annual results release	"capital expenditure budget for 2026 at RMB112-122 billion"	2026 capex	Domestic offshore growth must be funded inside a capex envelope near FY2025 levels, so productivity matters.
2026-04-28	Huang Yongzhang, CEO and President	"step up efforts in oil and gas exploration and development"	Growth execution	Confirms continued exploration and development emphasis after record Q1 output.
2025-10-30	Yan Hongtao, President	"advanced project construction in an orderly manner"	Project execution	Supports use of ongoing domestic startup and adjustment projects in the base case.
2025-01-22	Business strategy release	"annual payout ratio will be no less than 45%"	Shareholder returns	The segment cannot consume all cash flow; dividend policy constrains reinvestment flexibility.
2026-03-26	Annual results presentation	"780-800 Million boe"	Production target	The production target is repeated in the deck and should anchor FY+1 assumptions.
2026-03-26	Annual results presentation	"112-122 RMB billion"	Capex budget	The capex budget is the near-term reinvestment guardrail.

The direct modeling read-through is simple. Management is asking investors to believe in reserves and production growth, not margin expansion from a new commercial model. The January 2025 strategy release also gave a 2027 production target of 810-830 mmboe [data_package line 226; official strategy release]. That implies continued growth beyond 2026, but not a step change. For the China offshore core, the base case should therefore assume low-single-digit production growth, stable to modestly better reserve conversion, and no heroic pricing uplift. The bull case can assume domestic offshore continues to outperform because Bohai and South China Sea projects ramp well. The bear case should assume the production target is met only at the group level because overseas projects carry more of the growth, while domestic offshore mature-field decline absorbs more capital.

8. Forward growth assumptions

The forward horizon is exactly TTM ending 2026-03-31 to 2031-03-31. The TTM China Offshore E&P Core modeled revenue base is RMB244.0bn, and the modeled operating contribution base is RMB86.6bn at a 35.5% margin. The model does not assume a separate disclosed basin P&L. It uses production and project evidence to underwrite the aggregate proxy revenue CAGR, then applies margin assumptions in Section 9. The basin rows below are directional operating levers only; they are not separate disclosed revenue lines and are not summed in Section 10.

Base case: domestic offshore stays a growth platform, but the growth rate moderates. TTM China production proxy is about 546.1 mmboe. A 2.0% production CAGR takes it to about 603.0 mmboe at the horizon. Revenue grows at 2.5% CAGR because modest volume growth and a slightly higher gas mix offset mature-oil decline, while oil prices are treated as broadly cycle-normal rather than bullish.

Product / sub-segment	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM to TTM+5y	Justification
China offshore core proxy revenue	China production 7.5%; E&P revenue -1.6%	Q1 China production +7.0%	Group 2026 production 780-800 mmboe	2.5%	Production keeps growing, but commodity pricing and mature-field mix prevent a 7% revenue CAGR.
Bohai oil core	Not revenue-disclosed	Kenli and Bohai projects contributing	Project startups and appraisals continue	2.0% volume / 2.0% revenue	Bohai remains the largest crude base; growth shifts from big discoveries to adjustment and recovery work.
Western South China Sea gas and liquids	Not revenue-disclosed	Gas growth positive at group level	Gas reserve growth emphasized	3.5% volume / 4.0% revenue	Gas fields and Lingshui/Dongfang projects support above-core growth, but no basin P&L is disclosed.
Eastern South China Sea oil	Not revenue-disclosed	Panyu/Xijiang projects cited for 2025	No separate basin guide	1.5% volume / 1.5% revenue	Oil base grows slower as mature decline offsets new projects.
East China Sea gas	Not revenue-disclosed	Stable production language	No separate basin guide	0.5% volume / 1.0% revenue	Modeled as stable gas supply to the Yangtze River Delta, not a major growth engine.

Bull case: the domestic offshore project queue converts more efficiently, gas growth is stronger, and cost control keeps realized economics high. Production CAGR rises to 3.0-3.5% and revenue CAGR to 4.5%. This is not a commodity supercycle case; it is a good-execution case with flat-to-mildly-positive realized prices.

Product / sub-segment	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
China offshore core proxy revenue	China production 7.5%; E&P revenue -1.6%	Q1 China production +7.0%	Group 2027 target 810-830 mmboe	4.5%	Domestic offshore retains more of the recent production momentum and gas mix improves realized resilience.
Bohai oil core	Not revenue-disclosed	Bohai discoveries and Kenli project	No basin guide	3.5% volume / 4.0% revenue	Kenli, Qinhuangdao, Penglai, Luda and adjustment wells extend plateau better than base.
Western South China Sea gas and liquids	Not revenue-disclosed	Lingshui and Dongfang projects cited	Gas reserve growth emphasized	5.0% volume / 5.5% revenue	Gas projects and deepwater gas appraisal create the strongest domestic growth line.
Eastern South China Sea oil	Not revenue-disclosed	Lufeng/Panyu/Xijiang activity cited	No basin guide	2.5% volume / 3.0% revenue	Project execution and infill drilling outperform the decline curve.
East China Sea gas	Not revenue-disclosed	Stable production language	No separate basin guide	1.0% volume / 1.5% revenue	Smart-field and unmanned-platform work protects stable gas output.

Bear case: production growth slows sharply because domestic offshore decline and maintenance needs absorb more capex, while weaker oil prices reduce revenue per BOE. Group targets may still be partly met through overseas projects or gas, but the China offshore core contributes less incremental profit. Revenue falls at a 1.5% CAGR from the modeled TTM base.

Product / sub-segment	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
China offshore core proxy revenue	China production 7.5%; E&P revenue -1.6%	Q1 China production +7.0%	Group 2026 production 780-800 mmboe	-1.5%	Price weakness and mature-field decline more than offset modest volume additions.
Bohai oil core	Not revenue-disclosed	Kenli and Penglai projects contributing	No basin guide	-1.0% volume / -2.0% revenue	Mature oilfields require more adjustment capex and realized oil prices fall.
Western South China Sea gas and liquids	Not revenue-disclosed	Gas growth positive at group level	Gas reserve growth emphasized	1.0% volume / 0.5% revenue	Gas volumes rise, but pricing and project timing disappoint.
Eastern South China Sea oil	Not revenue-disclosed	New projects cited	No basin guide	-1.5% volume / -2.5% revenue	Mature oil decline and maintenance outages dominate.
East China Sea gas	Not revenue-disclosed	Stable production language	No separate basin guide	-0.5% volume / -0.5% revenue	Stable-field language proves optimistic as mature gas assets drift lower.

The deceleration is intentional. China production grew at a 7.5% CAGR from FY2022 to FY2025, but management's 2026 and 2027 group targets imply only low-single-digit total growth from the FY2025 base. The domestic offshore core is large; maintaining a 7% production CAGR for five more years would require a level of reserve conversion and capital productivity that management has not guided to. The base case therefore uses a lower rate, with the bull case reserved for unusually strong gas and adjustment-project execution.

9. Forward operating margin assumptions

The current margin anchor is the FY2025 E&P segment profit margin of 35.5% on total revenue [data_package lines 114-120]. H1 2025 E&P margin was 38.9%, but the data package explicitly warns against creating a quarterly segment split for Q3 2025 or Q1 2026 [quant_foundation lines 77, 140]. This appendix uses the FY2025 E&P margin for the TTM modeled China offshore contribution because it is the latest full-year segment margin that ties to the audited annual report.

Case	Current margin anchor	TTM+5y margin	Change	Mechanism
Bear	35.5%	27.0%	-850 bps	Lower oil price, mature-field decline, higher maintenance and depreciation burden, and less efficient capex.
Base	35.5%	34.0%	-150 bps	Cost control largely holds, but all-in cost and depreciation rise modestly as the base matures.
Bull	35.5%	37.0%	+150 bps	Better gas mix, higher uptime, scale benefits, and stronger project execution offset field maturity.

Base margin is slightly below FY2025 because the segment must keep reinvesting. The official all-in cost has been stable, but Q1 2026 all-in cost rose to US$28.41/boe from US$27.03/boe in Q1 2025, while all-in cost is affected by taxes and exchange-rate factors [official Q1 presentation; data_package lines 62, 274]. A 34.0% horizon margin still assumes CNOOC remains a very efficient offshore operator; it does not punish the segment for commodity cyclicality beyond a modest normalization.

Bear margin uses 27.0%, not because CNOOC loses its operating skill, but because offshore oil margins are operationally leveraged to realized prices. The data package records realized oil price of US$66.47/bbl in FY2025 and US$75.92/bbl in Q1 2026 [data_package lines 175-176, 204]. If realized oil weakens while cost per BOE remains near US$28-30, margin compression is mechanical. Higher field-adjustment capex, decommissioning provisions, mineral-rights charges, typhoon downtime, or service-cost inflation would make the compression worse.

Bull margin uses 37.0%, modestly below the FY2024 margin of 38.0% and below the FY2022 high-price margin of 38.2%. It assumes CNOOC's domestic offshore unit cost advantage persists, gas projects grow, and digital/integrated field management slows decline. It does not assume a sustained Brent supercycle; a true oil-price bull case would create much higher operating income, but that belongs in a commodity sensitivity rather than the base segment underwriting.

10. Segment rollup

The rollup starts from modeled TTM China Offshore E&P Core revenue of RMB244.0bn and modeled operating contribution of RMB86.6bn. Aggregate proxy revenue is grown by each case's CAGR for exactly five calendar years from 2026-03-31 to 2031-03-31. Operating contribution equals horizon revenue multiplied by the case margin. No basin sub-lines are summed because the data package discloses production by region but not China offshore revenue, China offshore profit, or basin-level P&L. The arithmetic is deliberately simple so the synthesis appendix can audit it.

Case	TTM base revenue RMBbn	Revenue CAGR	TTM+5y revenue RMBbn	TTM+5y margin	TTM+5y operating contribution RMBbn	Probability
Bear	244.0	-1.5%	226.2	27.0%	61.1	25%
Base	244.0	2.5%	276.1	34.0%	93.9	50%
Bull	244.0	4.5%	304.0	37.0%	112.5	25%

Weighted expected horizon contribution is RMB90.4bn, calculated as 25% x RMB61.1bn + 50% x RMB93.9bn + 25% x RMB112.5bn. The base case adds about RMB7.3bn of operating contribution versus the modeled TTM base of RMB86.6bn, despite higher revenue, because the model allows margin to soften by 150 bps. That is the right shape for a mature but still advantaged offshore production core: volumes and revenue can compound slowly, but depletion and reinvestment consume some of the benefit.

The base case segment contribution to CNOOC's FY+5 model should therefore be RMB276.1bn of revenue and RMB93.9bn of operating contribution. If the synthesis model prefers to avoid regional allocation entirely, it should use this appendix only as a production/capex/reserve support file and keep E&P as a single reportable segment. If it chooses to use segment appendices for a bottoms-up sum, it should label this line as a modeled China offshore contribution rather than a disclosed segment.

11. Depletion, reinvestment, fiscal context, and key risks

Depletion is the first risk. A 10-year reserve life is strong for an E&P company, and the implied FY2025 reserve replacement ratio is about 165%, calculated from official reserves and production rather than disclosed as a clean table value [data_package lines 57-59, 291]. But reserve replacement is not the same as free cash flow compounding. It requires exploration and development spend. If reserve additions become smaller, deeper, more technically complex, or more gas-heavy with lower netbacks, the segment can keep production flat while returns decline.

Reinvestment is the second risk. The company is funding a heavy upstream capex program while maintaining a dividend payout floor of at least 45% [data_package lines 220, 247, 280]. In a low-oil-price environment, the company may protect strategic domestic production and dividends at the same time, leaving less room for discretionary growth or requiring lower FCF. The domestic offshore core can be strategically important and still be a mediocre incremental-return project if the next barrel is expensive.

Fiscal and government context is the third risk and also part of the moat. CNOOC's privileged offshore position is tied to state policy and CNOOC Group's rights in offshore China PSCs. That lowers acreage-access risk, but it also exposes the company to policy objectives beyond minority-shareholder returns. Domestic energy security may support production. Environmental regulation, mineral-rights proceeds, safety standards, decommissioning rules, state-owned-customer relationships, and gas pricing policy may cap upside or raise costs. This is not a fatal issue, but it means the segment's moat is partly policy-derived, not purely market-derived.

Commodity price is the fourth risk. The segment has cost advantage but not pricing control. If Brent or realized gas prices fall, revenue and margin fall. The data package's five-year history shows production rising while E&P revenue and profit still moved with price. FY2022 was the high-price profit year; FY2025 had higher production but lower realized oil and lower segment profit [data_package lines 114-120, 167-176].

Project execution is the fifth risk. The base and bull cases rely on steady execution of Kenli, Penglai, Huizhou, Dongfang, Wenchang, Lingshui, Bozhong, and other domestic projects or field adjustments. The Q1 2026 and Q3 2025 official releases show progress, but project-level economics are not disclosed [data_package lines 274, 280, 289]. If the project queue is mostly smaller adjustment work, headline production can grow but capital productivity can fade. Conversely, if appraisal success in Bohai and South China Sea converts into commercially attractive reserves, the bull case becomes plausible.

Technology and energy-transition risk are manageable over the five-year horizon but real over a 10- to 20-year horizon. CNOOC is applying digital and intelligent technologies, unmanned and minimally manned platforms, green power, CCUS, and low-carbon production methods, according to official releases and ESG materials. These can reduce operating risk and

support uptime, but they do not eliminate commodity exposure. Longer term, carbon policy can change cost of capital, development approvals, and demand for oil. Gas is more resilient, which is why the Western South China Sea and East China Sea gas components matter.

Summary table

Case	Segment TTM+5y Revenue	Segment TTM+5y Op Margin	Segment TTM+5y Op Income	Probability
Bear	RMB226.2bn	27.0%	RMB61.1bn	25%
Base	RMB276.1bn	34.0%	RMB93.9bn	50%
Bull	RMB304.0bn	37.0%	RMB112.5bn	25%

Key unresolved data issues are not cosmetic. CNOOC does not disclose China offshore revenue, China offshore operating profit, basin-level margins, asset-level lifting cost, or project-level capital productivity. The segment is economically central and strongly supported by official production, reserves, project, and cost evidence, but its financial contribution must be modeled by proxy. The base case uses the proxy because the domestic offshore core is too important to ignore; it labels the proxy clearly because the official P&L does not exist.

Appendix B2 - Overseas E&P Growth Assets

Overseas E&P Growth Assets - Segment Deep Dive

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Stage 0 anchor

- Today: 2026-06-30.
- Fiscal year ends December 31.
- Latest quarter: Q1 2026 ended 2026-03-31.
- TTM: Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026, ending 2026-03-31.
- Forward horizon: 2031-03-31, exactly five calendar years after the TTM end date.

0. Segment boundary and taxonomy note

This appendix covers CNOOC Limited's overseas E&P growth assets as an operating and economic sleeve, not as a separate official accounting segment. The controlling data package states that CNOOC reports four operating segments: E&P, Trading business, Corporate, and Eliminations, and that China versus overseas is disclosed as an operational production and reserve geography, not as a revenue or profit segment. Therefore, historical revenue, operating margin, and operating income for this sleeve cannot be presented as company-reported segment figures. The appendix uses company-reported overseas production, overseas reserves, overseas asset share, and project commentary as the hard historical base; where a revenue or profit number is required for synthesis, it is labeled as an analytical proxy derived from official E&P revenue/profit per BOE and disclosed overseas production. [DATA GAP: CNOOC does not disclose region-level revenue or profit by China versus overseas, and does not disclose project-level revenue, capex, reserves, or profit.]

The taxonomy is stable across FY2021-FY2025, but the analytical boundary is deliberately narrower than CNOOC's official E&P segment. Official E&P includes China and overseas upstream production and certain production that is sold through the trading segment but reclassified back to E&P for chief operating decision maker assessment. Overseas E&P growth assets include South America deepwater, led by Guyana/Stabroek and Brazil/Mero/Buzios, plus mature or developing overseas assets in Canada, Iraq, Uganda, Nigeria, Indonesia, the United Kingdom, the United States, and other countries where the official annual report and current IR pages identify CNOOC interests. The most important current-growth assets are Guyana and Brazil because CNOOC's own FAQ says 2025 overseas production growth was primarily attributable to projects in Guyana and Brazil, while the Q1 2026 release names Yellowtail in Guyana as a contributor to the 12.3% YoY overseas production increase.

1. What this segment actually is

Overseas E&P Growth Assets are CNOOC's non-China upstream reserves, production, and project pipeline. This is not a refinery, trading desk, or marketing business. It is a portfolio of oil and gas interests outside China, mostly operated with partners under production sharing contracts, joint ventures, technical service contracts, or concession-style arrangements. The customer ultimately buys crude oil, natural gas, LNG-linked volumes, or associated upstream output, but CNOOC's economic exposure is mainly to reserve replacement, production ramp, operating cost per BOE, development capex, fiscal terms, and realized oil/gas prices.

The sleeve has three economic functions. First, it diversifies CNOOC away from offshore China basins while preserving the upstream character of the company. The data package hard base is production: FY2025 overseas production was 240.4 mmboe, or 30.9% of group production of 777.3 mmboe. That makes overseas assets too material to treat as a footnote, even though CNOOC does not disclose separate overseas P&L. Second, the sleeve supplies growth optionality from high-quality deepwater projects, especially Stabroek in Guyana and Brazil's pre-salt assets. The data package supports the qualitative claim that Guyana/Brazil are the named growth provinces through the Q1 2026 Yellowtail reference, the Buzios6 start-up, and the 2025 project list; it does not support project-level production, reserve, capex, or profit modeling. Third, overseas assets create execution and geopolitical complexity that China offshore assets do not carry to the same degree. The 2025 annual report's risk section explicitly identifies regime, policy, fiscal, tax, sanctions, political instability, HSSE, reserve-development, and joint-venture control risks.

The pricing model is commodity-linked. The company reports realized oil price, realized gas price, oil and gas sales, all-in cost, operating expense per BOE, production by region, and proved reserves. It does not disclose asset-level netbacks. For this sleeve, revenue is a function of production volume multiplied by realized prices and product mix. Segment profit is a function of realized price less operating expense, depreciation/depletion, taxes and fiscal take, transportation, and development-cost recovery. Because CNOOC does not publish regional P&L, the model uses an average E&P profit-per-BOE proxy rather than pretending Guyana, Brazil, Canada, Iraq, and Uganda all have the same margin structure.

2. Current economics: FY2025 and TTM bridge

The hard current base is production. FY2025 overseas production was 240.4 mmboe, up from 234.0 mmboe in FY2024 and 191.3 mmboe in FY2023, using the data package KPI table. The FY2025 annual report gives the product split: overseas crude and liquids production of 197.9 mmbbls and overseas natural gas production of 237.9 bcf, totaling 240.4 mmboe. The data package tabulates group proved reserves of 7,773.1 mmboe and a group reserve life of about 10 years, but it does not tabulate the numerical overseas reserve split. This appendix therefore uses reserves as qualitative durability evidence and does not assign an overseas reserve-life calculation.

Q1 2026 is stronger than FY2025 as a growth datapoint. Data package Section 5 reports Q1 2026 total production of 205.1 mmboe, including China production of 140.0 mmboe and overseas production of 65.1 mmboe. The official Q1 2026 press release says overseas production rose 12.3% YoY to 65.1 mmboe, and attributes the increase mainly to fields including Yellowtail in Guyana. If Q1 2025 overseas production was approximately 58.0 mmboe, the approximate TTM overseas production bridge is FY2025 overseas production of 240.4 mmboe plus Q1 2026 overseas production of 65.1 mmboe less Q1 2025 overseas production of about 58.0 mmboe, or roughly 247.5 mmboe. This is a production bridge, not an official segment P&L bridge.

The revenue and profit base has to be handled with discipline. FY2025 official E&P total revenue was RMB344.2bn and segment profit was RMB122.2bn, for a 35.5% segment profit margin on total E&P revenue. On FY2025 group production of 777.3 mmboe, that is about RMB443 of E&P revenue per BOE and RMB157 of segment profit per BOE. Applying those average E&P economics to the FY2025 overseas volume of 240.4 mmboe gives an analytical overseas revenue proxy of about RMB106.5bn and an analytical segment profit proxy of about RMB37.8bn. This is useful for synthesis sizing, but it is not company-disclosed regional revenue or profit. It should not be used to compare Guyana margin against China margin or to claim project-level economics.

Capital intensity is high. The data package shows FY2025 oil and gas capex of RMB120.5bn on the presentation basis and RMB118.8bn on the annual-report table basis, with Q1 2026 capex of RMB33.0bn and a 2026 capex budget of RMB112-122bn. The official 2025 business strategy release said 2025 capex would remain flat and that the development category would be the largest share. The overseas growth sleeve therefore consumes capital before it produces visible cash flow, especially for deepwater FPSO developments. The segment's economics are best thought of as long-cycle, high operating leverage, high reserve optionality, and high partner dependency.

3. Unit economics

The unit economics start with barrels, not reported dollars. Overseas production is the numerator of the segment story: 162.3 mmboe in FY2021, 170.8 mmboe in FY2022, 191.3 mmboe in FY2023, 234.0 mmboe in FY2024, and 240.4 mmboe in FY2025. That is a four-year CAGR of about 10.3%, but the path is lumpy. FY2024 was the large step-up, helped by overseas project ramp including Guyana. FY2025 was a smaller gain in annual volume, while Q1 2026 re-accelerated on Yellowtail. A production model that simply extrapolates 10% annual growth through 2031 would overstate the case because deepwater ramps occur in steps, projects plateau, and older assets decline.

Revenue per BOE is mostly commodity price and mix. In FY2025, group realized oil price fell to US$66.47/bbl from US$76.75/bbl in FY2024, while realized gas price rose to US$7.95/mcf from US$7.72/mcf. Oil and gas sales fell 5.6% despite production rising 7.0% at group level. That tells the model what matters: volume growth does not automatically produce revenue growth if Brent or realized oil differentials compress. Q1 2026 partly reversed this because data package Section 5 says Q1 oil and gas sales rose 9.9% YoY, crude/liquids sales rose 11.3% YoY, realized oil price rose 4.5% YoY, and overseas production rose 12.3% YoY.

Profit per BOE depends on cost control and fiscal terms. CNOOC's all-in cost was US$27.90/boe in FY2025 and US$28.41/boe in Q1 2026. Operating expense per BOE was US$7.61/boe in FY2025. Those are strong cost figures for a global upstream producer, but the overseas sleeve is not uniform. Guyana/Stabroek is a partner-operated deepwater development with large FPSO phases. Brazil/Mero/Buzios are pre-salt assets with operator dependency. Canada includes oil

sands and other North America exposure that historically carries different operating cost and emissions intensity. Iraq and Uganda carry fiscal, political, security, infrastructure, and partner-execution risks. Using one margin for all of these would be false precision.

The base-case mechanism is volume-led growth with roughly stable average E&P economics. If overseas volumes grow from roughly 247.5 mmboe on the TTM bridge to about 294 mmboe by 2031-03-31, while revenue per BOE is roughly RMB445 and segment profit margin is around 34%, the sleeve contributes about RMB131bn of analytical revenue proxy and RMB44.5bn of analytical segment profit proxy. The bear case is not that the assets are worthless; it is that commodity prices normalize lower, partner-operated projects slip, fiscal take rises, and mature assets offset Stabroek/Brazil growth. The bull case is that Stabroek, Mero, and Buzios ramp on or ahead of plan while cost per BOE remains controlled and Brent remains supportive.

4. Competitive dynamics

CNOOC does not operate in a consumer market where brand or switching cost protects pricing. It competes for reserves, acreage, partner access, engineering capacity, FPSO slots, talent, government approvals, and capital. Its overseas competitors are the major integrated oil companies, national oil companies, and independent E&P companies active in deepwater and frontier basins. In Guyana, CNOOC is not the operator; ExxonMobil leads the Stabroek consortium and Hess is the other major partner. In Brazil's pre-salt, Petrobras is the dominant operator, including for Buzios. In Uganda, Iraq, Canada, and other assets, partner and government relationships matter as much as pure technical capability.

The strongest competitive advantage is access to advantaged reservoirs through consortia. Stabroek is one of the highest-profile global offshore discoveries of the last decade, and CNOOC's 25% interest is strategically valuable because it gives the company exposure to a multi-phase, low-cost deepwater growth platform without requiring sole operatorship. Brazil's Mero and Buzios exposures give CNOOC participation in large pre-salt developments with long reserve tails. Canada provides scale and reserves but with more environmental, cost, and commodity-differential sensitivity. Iraq and Uganda provide reserve and development optionality, but with higher geopolitical, fiscal, infrastructure, and partner risk.

Pricing power is weak in the literal sense. CNOOC sells commodity oil and gas into global or local price systems. The company cannot set Brent. The moat is not price control; it is cost position, reserve life, capital discipline, partner access, and the ability to convert reserves into production at returns above the cost of capital. CNOOC's group all-in cost below US$30/boe gives it resilience, but overseas assets can deviate materially from group average. The official annual report warns that project returns depend on price judgments and that deviations in price predictions can materially affect the company. That is an unusually direct reminder that upstream "quality" is still commodity exposed.

Substitution risk is long-dated but real. Oil demand is not disappearing by 2031, and high-quality deepwater barrels can remain competitive if cost and fiscal terms are attractive. However, the annual report's climate and energy-transition risk section is relevant to this sleeve because many overseas developments are long-cycle and carbon-intensive. If host countries tighten fiscal terms, require higher local content, impose carbon costs, or delay approvals, CNOOC may earn lower returns even if oil demand remains healthy. The sleeve's near-term competitive posture is good; the 20-year compounder posture is more fragile because it depends on repeated resource renewal and commodity cycles.

5. Moat at the segment level

The overseas growth sleeve has an asset-access moat, not a pricing moat. Its moat comes from reserve positions already secured in high-quality basins, long development lead times that make replacement difficult, technical learning in offshore engineering, and relationships with operators and host governments. Stabroek and Brazil are the core of that moat because not every upstream company can buy into such assets at attractive terms today. Once large FPSO systems are sanctioned and producing, they create multi-year production visibility and economies of scale.

The moat is partly borrowed from partners. Stabroek's execution depends heavily on ExxonMobil as operator. Buzios depends heavily on Petrobras. CNOOC's smaller ownership stakes in several overseas projects mean it receives exposure to growth but has limited direct control over development cadence, cost overruns, reservoir management, procurement, and local stakeholder management. The 2025 annual report flags this exact risk: a portion of operations are conducted through partnerships or joint operations, and limited ability to influence operations or future development can adversely affect returns. That means the moat is real but not fully controlled by CNOOC.

The reserve base is durability evidence, but the hard numerical anchor in the data package is group-level rather than regional. CNOOC reported group proved reserves of 7,773.1 mmboe and a reserve life of about 10 years in FY2025, while the data package separately confirms that overseas production is a material operating geography. That is favorable but not enough to

model country-level reserve life or project-level economics. The segment-level moat is therefore "credible but cyclical": asset quality and reserve life protect production visibility, while commodity price, fiscal take, and partner control limit pricing power and return certainty.

6. Historical growth rates

The table below reproduces disclosed operating KPIs from data package Section 0a and Section 5, not a company-reported regional P&L. The analytical revenue/profit proxy is shown only to give synthesis a consistent order of magnitude. It uses FY2025 E&P average revenue per BOE and segment profit per BOE from data package Section 3 and QF P2. The proxy is not a disclosed historical regional result.

Product / sub-segment	FY-3 rev or volume	FY-2 rev or volume	FY-1 rev or volume	Shown-period CAGR	Most recent YoY	Data package cite
Overseas production mmboe	191.3	234.0	240.4	12.1%	Q1 2026 +12.3%	data_package Section 0a KPI table row Production overseas; Section 5 Q1 trend
Group proved reserves mmboe	6,784.2	7,270.6	7,773.1	7.0%	FY2025 +6.9%	data_package Section 0a KPI table row Reserves
South America growth projects	N/D	Payara ramp noted	Guyana and Brazil growth noted	N/D	Yellowtail named in Q1 2026	data_package Section 9; official Q1 2026 release; FAQ
E&P total revenue RMBbn	339.0	362.2	344.2	0.8%	Quarterly segment N/D	data_package Section 3 E&P table
E&P segment profit RMBbn	121.9	137.6	122.2	0.1%	Quarterly segment N/D	data_package Section 3 E&P table
Analytical overseas E&P revenue proxy RMBbn	95.7	116.5	106.5	5.5%	Q1 proxy not disclosed	Derived from overseas production times FY2025 E&P revenue per BOE; [DATA GAP]
Analytical overseas E&P profit proxy RMBbn	34.0	41.7	37.8	5.4%	Q1 proxy not disclosed	Derived from overseas production times FY2025 E&P profit per BOE; [DATA GAP]

Internal arithmetic checks: FY2025 overseas production of 240.4 mmboe divided by FY2024 overseas production of 234.0 mmboe equals 2.7% YoY, which matches the slower annual growth after the FY2024 step-up. Q1 2026 overseas production of 65.1 mmboe and 12.3% YoY implies Q1 2025 overseas production of approximately 58.0 mmboe, consistent with the Q1 2025 base in the official presentation. E&P FY2025 segment profit margin equals RMB122.2bn divided by RMB344.2bn, or 35.5%, matching the data package. The analytical overseas FY2025 revenue proxy equals 240.4 mmboe times about RMB443/boe, or about RMB106.5bn. The profit proxy equals 240.4 mmboe times about RMB157/boe, or about RMB37.8bn. These are sizing bridges, not disclosed segment facts.

The historical pattern is important. Overseas production compounded quickly from FY2021 to FY2025, but the most recent annual step was modest because the portfolio is already large and because individual project ramps are uneven. The Q1 2026 acceleration is a useful signal that Yellowtail and other projects are contributing, but one quarter does not justify a straight-line 10% five-year production CAGR. The correct base case is continued growth at a lower rate than the FY2021-FY2025 history, with upside if Stabroek and Brazil execute better than expected and downside if partner-operated developments slip or commodity prices reset lower.

7. Management guidance and official commentary

Source date	Source	Verbatim excerpt	Topic	Interpretation
2026-06-30 source package	Data package Section 6	"Annual production is targeted at 780-800 million BOE"	2026 production	Total company guidance is roughly flat to low-single-digit growth from FY2025, so overseas growth must be balanced against China growth and declines elsewhere.
2025-01-22	CNOOC business strategy release	"810 million to 830 million BOE in 2027"	2027 production	Management gives a two-year growth path beyond FY2025; base case should not assume immediate production decline.

Source date	Source	Verbatim excerpt	Topic	Interpretation
2025-01-22	CNOOC business strategy release	"the production from China and overseas accounts for approximately 69% and 31%"	2025 production mix target	Overseas is intended to be roughly one-third of production, consistent with actual FY2025 overseas production share of 30.9%.
2025-01-22	CNOOC business strategy release	"Yellowtail Project in Guyana and Buzios7 Project in Brazil"	2025 new projects	Management identified the core overseas growth projects before they entered the production base.
2026-04-28	Q1 2026 official release	"Overseas net production rose by 12.3% YoY"	Q1 overseas growth	The segment had a strong recent growth datapoint, explicitly tied to Yellowtail contribution.
2026-01-03	Buzios6 official release	"commenced production safely"	Brazil startup	Brazil remains an active production ramp, though CNOOC owns only 7.34% of the Buzios Shared Reservoir.
2026-03-26	Annual results release	"build competitive advantages through international development"	Strategic emphasis	The chairman frames international development as part of the long-term competitive agenda, not just opportunistic portfolio diversification.
2025 annual report	Risk section	"limited capability to influence and control"	Partner dependency	Management acknowledges that joint ventures and partner-operated assets can impair target returns.

The guidance points to measured growth, not a shale-style production surge. CNOOC guided to 780-800 mmboe in 2026 and previously to 810-830 mmboe in 2027, after 777.3 mmboe in FY2025. The overseas sleeve can outgrow the group if Stabroek and Brazil ramp while China matures, but the group guidance constrains how aggressive the segment model should be. If the overseas sleeve reached a mid-30s production share by 2031, that would be a meaningful contribution, but it would still be inside a company whose consolidated production growth is likely measured in low-to-mid single digits.

The official commentary also makes clear which projects matter. The data package identifies Guyana and Brazil-linked projects as the primary overseas growth evidence through the Q1 2026 Yellowtail reference, the Buzios6 start-up, and the 2025 strategy/project list. These sources support the base case that the overseas sleeve continues to grow through 2031, but not the unsupported claim that all growth converts one-for-one into profit at current margins or that project-level production can be modeled from disclosed data.

8. Forward growth assumptions

The forecast starts from an approximate TTM overseas production base of 247.5 mmboe, derived from FY2025 overseas production plus Q1 2026 less implied Q1 2025. Revenue and profit are modeled with an analytical E&P average economics proxy because CNOOC does not disclose overseas revenue or profit. The growth assumption is volume-led; the revenue assumption also reflects realized price per BOE.

Base case

Product	Historical CAGR / trend	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM to TTM+5y	Justification
South America deepwater	N/D project dollars	Positive in 2025	Yellowtail and Buzios7 in 2025 plan	6.0% volume	Stabroek and Brazil are the named growth drivers; growth decelerates as FPSO ramps mature.
Canada and North America	N/D dollars	N/D	No specific 2026 guide	0.5% volume	Treat as mature reserve support, not a major growth engine; Canada adds durability but not high growth.
Asia, Africa, Europe and other	N/D dollars	N/D	Overseas exploration in Belt and Road	1.5% volume	Iraq, Uganda, Indonesia, Nigeria and other assets provide optionality but face execution and fiscal risk.
Overseas total	12.1% production CAGR FY2022-FY2025	Q1 2026 +12.3%	Group 2026 780-800 mmboe	3.5% volume	Blends strong South America ramp with mature assets and group guidance.

Product	Historical CAGR / trend	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Revenue per BOE	N/D	Q1 oil/gas sales +9.9%	No price guide	0.1% price/mix	Uses roughly stable FY2025 E&P revenue per BOE; no heroic commodity price uplift.

Bear case

Product	Historical CAGR / trend	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
South America deepwater	N/D project dollars	Positive in 2025	Yellowtail and Buzios7 in 2025 plan	2.0% volume	FPSO or subsea delays, fiscal friction, or reservoir performance reduce ramp speed.
Canada and North America	N/D dollars	N/D	No specific 2026 guide	-2.0% volume	Mature decline and higher-cost assets offset new wells if commodity prices weaken.
Asia, Africa, Europe and other	N/D dollars	N/D	Overseas exploration in Belt and Road	-1.0% volume	Iraq, Uganda, Nigeria and other regions face geopolitical or infrastructure slippage.
Overseas total	12.1% production CAGR FY2022-FY2025	Q1 2026 +12.3%	Group 2026 780-800 mmboe	0.0% volume	Growth projects merely offset mature declines and delays.
Revenue per BOE	N/D	Q1 oil/gas sales +9.9%	No price guide	-2.1% price/mix	Lower Brent or discounts reduce realized revenue per BOE by about 10% over the horizon.

Bull case

Product	Historical CAGR / trend	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
South America deepwater	N/D project dollars	Positive in 2025	Stabroek and Brazil ramp	8.0% volume	Stabroek reaches multi-project cadence and Brazil units ramp with fewer delays.
Canada and North America	N/D dollars	N/D	No specific 2026 guide	1.5% volume	Stable operations and selective investment offset natural decline.
Asia, Africa, Europe and other	N/D dollars	N/D	Belt and Road exploration focus	3.0% volume	Uganda, Iraq, Indonesia and other projects convert more smoothly than base.
Overseas total	12.1% production CAGR FY2022-FY2025	Q1 2026 +12.3%	Group 2027 810-830 mmboe	5.5% volume	Growth remains below recent history but above group guidance, driven by South America.
Revenue per BOE	N/D	Q1 oil/gas sales +9.9%	No price guide	1.4% price/mix	Realized prices and mix improve modestly versus FY2025, without assuming a 2022 oil-price repeat.

The base-case production path is intentionally below the recent FY2022-FY2025 overseas production CAGR and below the latest Q1 2026 YoY growth rate. That is because FY2024 and Q1 2026 contain visible project steps, while 2031 requires five years of development, plateau, decline management, and partner execution. The model does not assume the 2025-2027 guidance is extended at the same pace forever. It assumes CNOOC's overseas assets keep growing because Stabroek and Brazil are live growth platforms, but it forces that growth through a commodity and execution filter.

9. Forward operating margin assumptions

The starting margin is the FY2025 official E&P segment profit margin of 35.5% on total E&P revenue. This is not an overseas margin; it is the best official upstream margin anchor available. The overseas sleeve may have higher or lower margins depending on project fiscal terms, depletion, partner cost, mix, and local taxes. For synthesis, the model uses a blended analytical segment profit margin rather than a false country-by-country netback.

Case	Current proxy margin	TTM+5y margin	Change	Mechanism
Bear	35.5%	28.0%	-750 bps	Lower realized oil price, higher fiscal take, partner delays, cost inflation, and mature-asset decline pressure.

Case	Current proxy margin	TTM+5y margin	Change	Mechanism
Base	35.5%	34.0%	-150 bps	South America growth helps mix, but depreciation, Brazil/Guyana ramp costs, and non-operated project costs offset scale.
Bull	35.5%	38.0%	+250 bps	High-utilization FPSO ramps, stable cost per BOE, stronger realized prices, and better mix lift profit per BOE.

The base case slightly reduces margin because the current group E&P margin is already strong and because overseas growth is not cost-free. The data package confirms Buzios6 commenced production safely and that CNOOC holds only a 7.34% interest in the Buzios Shared Reservoir; it does not disclose project-level revenue, profit, capex, or reserve conversion. That is enough to support a qualitative Brazil ramp, but not enough to assign project-level economics. The bull case requires both volume and cost discipline. The bear case requires neither an oil crash nor operational disaster; a combination of lower Brent, higher service cost, and several months of project delay is enough to compress the analytical margin.

10. Segment rollup

The rollup uses an approximate TTM overseas production base of 247.5 mmboe. The revenue-per-BOE base is about RMB443/boe, derived from FY2025 E&P total revenue divided by FY2025 group production. The base case assumes 294.0 mmboe of overseas production by 2031-03-31 and roughly RMB445/boe of revenue. The bear case assumes flat overseas production at 247.5 mmboe and RMB399/boe of revenue. The bull case assumes 323.5 mmboe and RMB475/boe of revenue. Operating income means CNOOC segment profit proxy for this analytical sleeve, not official region-level operating income.

Case	Overseas production mmboe	Revenue / BOE proxy RMB	Segment TTM+5y revenue proxy RMBbn	Segment profit margin	Segment TTM+5y operating income proxy RMBbn
Bear	247.5	399	98.8	28.0%	27.7
Base	294.0	445	130.8	34.0%	44.5
Bull	323.5	475	153.7	38.0%	58.4

Rollup check	Bear	Base	Bull
Production CAGR from TTM base	0.0%	3.5%	5.5%
Revenue proxy CAGR from FY2025 proxy	-1.5%	4.2%	7.6%
Operating income proxy CAGR from FY2025 proxy	-6.0%	3.3%	9.1%
Implied share of FY2025 group production	31.8%	37.8%	41.6%
Reconciles to product-level assumptions	Yes	Yes	Yes

The most decision-useful number is the base-case profit proxy of roughly RMB44.5bn at the 2031-03-31 horizon. That is about RMB6.7bn above the FY2025 analytical proxy and roughly one-third of FY2025 CNOOC net income attributable. It is meaningful, but it is not transformational enough to rescue the equity if consolidated commodity prices, capital intensity, management quality, moat durability, or valuation fail elsewhere in the ER2 chain. In the bull case, overseas assets become a much larger profit driver and can materially support EPS. In the bear case, overseas growth assets still produce material cash flow, but the incremental profit contribution disappears and capex may consume the expected value creation.

11. Key risks and wildcards

Partner/operator dependency is the most important segment-specific risk. CNOOC's highest-quality overseas growth assets are largely non-operated or partner-operated. Stabroek depends on ExxonMobil-led execution. Buzios depends on Petrobras. CNOOC benefits from partner expertise, but the annual report's joint venture risk language is directly applicable: limited ability to influence operations can impair target returns. This risk mostly affects the bear and base cases, because the bull case assumes partners execute well.

Commodity sensitivity is the second key risk. The data package shows oil and gas sales falling in FY2025 despite production growth because realized oil price fell. The segment's growth story can be true while revenue and profit disappoint. This affects

all cases, but it is the center of the bear case. A lower oil-price deck reduces revenue per BOE, reserve economic limits, impairment risk, and reinvestment appetite.

Geopolitical and fiscal risk is unusually relevant overseas. The annual report cites countries' political and economic instability, regime change, fiscal and tax changes, war, terrorism, sanctions, and diplomatic shifts. Russia/Arctic LNG 2 is already flagged as somewhat adversely affected by sanctions stemming from the Russia-Ukraine conflict, although the report says other overseas projects were not directly affected by that conflict as of the report date. Iraq, Uganda, Nigeria, Guyana, Brazil, Canada, and other countries all carry different regulatory, local-content, environmental, fiscal, and stakeholder regimes. This primarily affects the bear case, but it also caps the base-case margin.

Execution and reserve-conversion risk matter because the growth assets are long-cycle. The annual report says undeveloped reserves carry construction, operational, geophysical, geological, and regulatory risks, and that failure to develop reserves in a timely and cost-effective manner could adversely affect results. This is exactly the risk in a portfolio that relies on FPSOs, subsea systems, drilling campaigns, injectors, approvals, and partner-operated project schedules. It affects both production volumes and margins.

Environmental and climate policy risk is not a distant abstraction. Deepwater and oil sands assets face emissions scrutiny, methane/flaring rules, carbon pricing, permitting hurdles, and physical climate risk. CNOOC's annual report says climate-transition and physical risks can increase investment and operating costs and reduce main business income. Brazil's Buzios6 FPSO includes closed flare and heat recovery devices, which is positive, but it also shows that environmental performance is now part of project design rather than an optional overlay.

The upside wildcard is Stabroek scale. The source set supports Stabroek/Guyana and Brazil as the named overseas growth provinces, but the data package does not disclose project-level production or economics. If that qualitative cadence holds, and if Brazil units continue ramping, overseas production share can move from about 31% toward the high 30s or low 40s of the current group production base by 2031. That would make overseas assets the most visible growth component of the company. The downside wildcard is that the same concentration in a few partner-operated mega-projects increases exposure to a small number of development systems, host-country fiscal decisions, and operator schedules.

Summary table

Case	Segment TTM+5y Revenue	Segment TTM+5y Op Margin	Segment TTM+5y Op Income	Probability
Bear	RMB98.8bn	28.0%	RMB27.7bn	25%
Base	RMB130.8bn	34.0%	RMB44.5bn	50%
Bull	RMB153.7bn	38.0%	RMB58.4bn	25%

The base-case FY+5 segment contribution is roughly 294 mmboe of overseas production and RMB44.5bn of analytical segment profit proxy by 2031-03-31. This is a material growth asset for CNOOC, but the confidence interval is wide because CNOOC does not disclose overseas revenue/profit, project-level economics, or asset-level costs. The synthesis should treat the base case as a disciplined order-of-magnitude contribution, not as a company-reported segment forecast.

Source notes

- Data package: `C:\Users\Admin\OneDrive\GPT\ER 2.0\CNOOC Limited\data_package.md`, especially Sections 0a, 1, 3, 5, 6, 9, 10, and Downstream-use summary.
- Quant foundation: `C:\Users\Admin\OneDrive\GPT\ER 2.0\CNOOC Limited\quant_foundation.md`, especially P2 and P4.
- Official CNOOC Q1 2026 release: https://www.cnoocltd.com/english/presscenter/pressreleases/2026/202604/t20260428_121081.html
- Official CNOOC Buzios6 release: https://www.cnoocltd.com/english/presscenter/pressreleases/2026/202601/t20260103_118948.html
- Official CNOOC 2025 business strategy release: https://www.cnoocltd.com/english/presscenter/pressreleases/2025/202501/t20250122_112727.html
- Official CNOOC Key Operating Areas page: https://www.cnoocltd.com/english/aboutus/keyoperatingareas/
- Official CNOOC FAQ page: https://www.cnoocltd.com/english/aboutus/faq/

Appendix B3 - Trading, Marketing, and Corporate Bridge

Trading, Marketing, and Corporate Bridge - Segment Deep Dive

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Stage 0 anchor

Today is 2026-06-30. CNOOC Limited's fiscal year ends December 31. The latest reported quarter is Q1 2026, ended 2026-03-31 and released on 2026-04-28. The TTM anchor is Q2 2025 plus Q3 2025 plus Q4 2025 plus Q1 2026, ending 2026-03-31. The forward horizon is exactly five calendar years from that TTM end date, so the FY+5 or TTM+5y endpoint used in this appendix is 2031-03-31.

0. Segment boundary and taxonomy note

This appendix covers CNOOC's Trading business, marketing revenue bridge, Corporate segment, eliminations, FX/currency bridge, and dividend/capital-allocation bridge. The taxonomy is stable across the FY2021-FY2025 segment notes, but the economics are easy to misread because the disclosed external revenue does not equal the economic profit pool. The data package states that CNOOC reports E&P, Trading business, Corporate, and Eliminations, and that some E&P-produced oil and gas are sold via the trading business and reclassified back to E&P for chief operating decision-maker assessment [data_package lines 74-80; quant_foundation lines 56-64]. Therefore this appendix does not treat Trading external revenue of RMB311.6bn in FY2025 as a separate upstream moat. It treats Trading and Corporate as the reconciliation bridge between product revenue, reportable-segment economics, consolidated revenue, consolidated earnings, Hong Kong dollar shareholder returns, and RMB statements.

The boundary is not a restatement boundary. It is a classification boundary. E&P owns the reserve base, production decisions, all-in cost, and upstream commodity economics. Trading and marketing show how customer-facing sales and intersegment flows appear in the financial statements. Corporate captures treasury, investment, headquarters, and other unallocated effects. Eliminations remove internal revenue/profit effects. Synthesis should use this appendix to avoid two common mistakes: first, double-counting oil and gas sales as both E&P economics and Trading economics; second, ignoring Corporate and Eliminations because they are small by revenue even though they can swing reported segment profit.

1. What this bridge actually is

This is not a customer segment in the usual sense. The customer-facing product sold by CNOOC is oil and gas. The operating asset that creates economic value is the offshore E&P portfolio. The Trading business is the sales and marketing route through which a large portion of those hydrocarbons reaches external customers. It handles the movement from produced crude, liquids, natural gas, and marketing revenue into consolidated reported revenue. Its headline external revenue is large because it faces customers; its reported total segment revenue and segment profit are small because large intersegment reclassifications strip out internal upstream sales economics before consolidation.

The practical go-to-market model is: CNOOC produces oil and gas, sells some oil and gas externally or internally through its trading route, records oil and gas sales by product, records marketing revenue separately, and then uses segment eliminations so that the consolidated income statement shows one set of external sales. The official FY2025 product note ties consolidated revenue as oil and gas sales of RMB335.652bn, marketing revenue of RMB53.684bn, and other revenue of RMB8.884bn, totaling RMB398.220bn [quant_foundation lines 47-52 and 146-148]. The official segment note ties consolidated revenue another way: E&P external revenue of RMB86.183bn, Trading business external revenue of RMB311.578bn, Corporate external revenue of RMB459m, and no external eliminations, again totaling RMB398.220bn [quant_foundation lines 70-76].

The gap between those two presentations is the heart of this appendix. Product revenue answers what was sold: crude/liquids, gas, marketing, and other. Segment revenue answers where the sale sat in the management reporting route: E&P, Trading business, Corporate, and Eliminations. For a synthesis model, the cleaner economic construction is E&P total revenue plus Trading total revenue plus Corporate total revenue plus Eliminations, because this sum ties to consolidated revenue while preserving the E&P profit engine. In FY2025 that construction is RMB344.197bn of E&P total revenue, RMB53.838bn of Trading total revenue, RMB1.612bn of Corporate total revenue, and negative RMB1.427bn of Eliminations, totaling RMB398.220bn [quant_foundation lines 70-76].

The customer, product, and pricing drivers are therefore indirect. Trading revenue depends mostly on the same commodity-price and volume variables that drive CNOOC's oil and gas sales: production, realized oil price, realized gas price, sales mix, and the volume routed through trading. Trading profit depends on the spread captured in marketing and trading activities after intersegment flows, working-capital timing, logistics, procurement, and risk-management costs. Corporate profit depends on treasury income, investment income, headquarters expense, and unallocated items. Eliminations depend on the mechanics of internal sales and do not have an independent commercial customer.

2. Current economics

The current accounting base is FY2025 because quarterly segment economics are not disclosed. The TTM bridge provides consolidated revenue, net income, EPS, production, operating cash flow, capex, and FCF, but the data package explicitly warns not to invent a Q1 2026 segment split [data_package lines 188-207 and 300-304]. FY2025 Trading business had external revenue of RMB311.6bn, total revenue of RMB53.8bn after intersegment effects, segment profit of RMB4.5bn, and an 8.3% segment margin on total revenue [data_package lines 122-128]. Corporate had external revenue of RMB0.5bn, total revenue of RMB1.6bn, segment profit of RMB4.8bn, and a not-economically-meaningful 298.2% margin because the profit line is treasury/investment/unallocated driven rather than a sales margin [data_package lines 130-136]. Eliminations had total revenue of negative RMB1.4bn and a loss of RMB9.3bn [data_package lines 138-144].

The combined Trading plus Corporate plus Eliminations bridge was therefore almost earnings-neutral in FY2025. Trading profit of RMB4.467bn plus Corporate profit of RMB4.807bn less Eliminations loss of RMB9.296bn equals negative RMB0.022bn, while E&P segment profit of RMB122.170bn accounts for effectively all consolidated segment profit of RMB122.148bn [quant_foundation lines 70-76 and 146-153]. This is the key economic fact: the bridge moves a lot of reported revenue around but contributes essentially no durable consolidated profit in FY2025.

On capital intensity, the bridge is light in physical capex. FY2025 Trading business segment assets were RMB44.756bn, liabilities were RMB28.146bn, and capital expenditure was only RMB13m. Corporate assets were RMB586.318bn, liabilities were RMB122.497bn, and capital expenditure was RMB984m. E&P, by contrast, had RMB605.932bn of assets and RMB120.970bn of capital expenditure [quant_foundation lines 83-95]. Trading is working-capital and logistics heavy but not reserve-replacement heavy. Corporate is balance-sheet heavy but not operating-asset heavy; much of its importance is treasury, cash, deposits, funding, investment income, and dividend capacity.

The latest TTM consolidated base is revenue of RMB407.445bn, net income attributable of RMB124.663bn, EPS of RMB2.62, production of 793.6 mmboe, operating cash flow of RMB206.916bn, cash capex of RMB114.562bn, and FCF of RMB92.354bn [quant_foundation lines 118-128 and 157-167]. TTM product revenue shows oil and gas sales of roughly RMB344.4bn across Q2 2025 through Q1 2026: RMB83.5bn in Q2, RMB83.7bn in Q3, RMB80.2bn in Q4, and RMB97.0bn in Q1 [data_package lines 192-197]. The residual between TTM consolidated revenue and TTM oil/gas sales is about RMB63.0bn, but the company does not disclose a quarterly split of marketing revenue and other revenue for every TTM quarter. I use that residual only as a reconciliation clue, not as an official TTM marketing line.

3. Unit economics

The unit economics of this bridge are deliberately different from E&P unit economics. E&P economics begin with reserves, well productivity, development capex, production volume, realized oil/gas price, operating expense per BOE, all-in cost, taxes, and depreciation. Trading and marketing economics begin after hydrocarbons exist. Trading collects a small spread or fee-like margin around customer sales, logistics, procurement, timing, and the internal transfer from E&P to customer-facing sales. Corporate collects or pays treasury and unallocated items. Eliminations then strip out internal flows so the group does not report itself as a customer.

The historical margin record confirms this lower-quality, lower-moat profile. Trading business segment margin on total revenue was 11.6% in FY2021, 3.6% in FY2022, 5.3% in FY2023, 7.2% in FY2024, and 8.3% in FY2025 [data_package lines 122-128]. This is a respectable spread business in good years, but it is not the source of CNOOC's high group returns. Trading segment profit was RMB4.5bn in FY2025 against consolidated net income attributable of RMB122.1bn [data_package lines 122-128 and 94-104]. Even before Corporate and Eliminations, Trading contributed less than 4% of consolidated segment profit.

Corporate unit economics should not be expressed as a margin on revenue. A Corporate segment with RMB1.6bn of total revenue and RMB4.8bn of profit is not a supernormal operating business; it is an accounting bucket for treasury, headquarters, financing, investment, and other unallocated items [data_package lines 130-136]. The right forecast unit is not "Corporate revenue margin." The right forecast unit is a normalized RMB profit contribution and a capital-allocation constraint:

cash, debt, deposits, FX translation, investment income, interest expense, and the dividend payout floor.

Eliminations are a control account. They are not a product line. In FY2025, eliminations removed RMB1.427bn of total revenue and RMB9.296bn of profit/loss effects [quant_foundation lines 70-76]. In H1 2025, eliminations were negative RMB621m of total revenue and a loss of RMB8.428bn [quant_foundation lines 77-81]. The loss line can be material relative to Trading profit, but it is not a standalone economic activity. In a consolidated model it should be treated as a normalizing deduction attached to internal sales-routing and corporate allocations.

Working capital is the main balance-sheet channel. Trading external revenue can be very large because it is customer-facing, but Trading capital expenditure was only RMB13m in FY2025 [quant_foundation lines 83-95]. The working-capital intensity of physical commodity marketing can still be meaningful, especially when commodity prices move and receivables/inventories shift, but the data package does not provide a separate working-capital bridge by segment. Because that disclosure is absent, this appendix does not forecast segment working capital separately. It flags the direction for Synthesis: do not attribute upstream capital productivity to Trading, and do not allocate CNOOC's heavy capex budget to Trading.

4. Competitive dynamics

The competitive set for this bridge is broad but not analytically decisive for CNOOC's moat. In oil and gas marketing, the direct competitors are large Chinese national energy groups, regional gas and crude marketers, integrated oil companies, commodity traders, and infrastructure-connected buyers and sellers. PetroChina, Sinopec, and international majors or trading houses can all compete in marketing, logistics, procurement, and customer relationships. However, CNOOC's trading route has an advantaged captive supply relationship with its own upstream production, and that is more important than brand-level customer differentiation.

Pricing power in this bridge is limited. Hydrocarbon prices are set by commodity markets, realized price formulas, regional supply/demand, contract terms, and state or market structures. The bridge can influence timing, channel, logistics execution, credit, and perhaps contract mix, but it cannot turn commodity oil and gas into a software-like recurring revenue stream. The data package shows realized oil prices moved from US$96.59/bbl in FY2022 to US$66.47/bbl in FY2025, while gas prices moved from US$8.58/mcf to US$7.95/mcf over the same period [data_package lines 60-61]. Trading cannot insulate consolidated revenue from those movements.

Entry barriers exist, but they are operational rather than compounding moat barriers. A new entrant needs licenses, relationships, logistics, credit capacity, risk controls, and supply access. CNOOC has supply access because it owns upstream production. It has a balance sheet because the group had FY2025 cash and short-term investments of RMB240.8bn and a net cash position of RMB171.0bn on the FMP basis [data_package lines 249-270]. It has a long operating history and customer relationships. Yet those advantages protect execution, not high incremental returns. The trading route is largely a necessary arm of the upstream business.

Substitution risk is also different from E&P. In E&P, substitution risk is energy-transition demand, reserve depletion, development failure, and cost inflation. In the trading bridge, substitution risk is more about route-to-market compression: customers can buy through alternative marketers, domestic market structure can change, logistics or price transparency can compress spreads, and internal sales routing can shift between E&P and Trading accounting lines. The bridge's low profit share means those risks are not likely to break the group thesis alone, but they can distort revenue growth if Synthesis reads external revenue too literally.

The most relevant competitive conclusion is therefore negative: this bridge does not create a separate investment case. If CNOOC is a compounder, it is because the upstream portfolio can replace reserves, grow production, hold cost per BOE, and return cash through cycles. Trading and Corporate help monetize and distribute that value. They do not independently compound capital at high rates for 20 years.

5. Segment-level moat

The segment-level moat for Trading, Marketing, and Corporate is weak to moderate, and mostly derivative of E&P. The strongest protection is captive upstream supply. CNOOC's oil and gas production gives the trading route real volumes, and the official segment note says certain E&P-produced oil and gas are sold via Trading and reclassified back to E&P for performance assessment [quant_foundation lines 56-64]. That captive relationship makes the trading route stable, but it also proves that the economic moat belongs primarily to the reserve and production base, not to Trading.

The second protection is balance-sheet and institutional capacity. Commodity marketing requires credit, settlement, risk controls, logistics, and the ability to absorb price and working-capital volatility. CNOOC's net cash balance and low leverage

support that function [data_package lines 249-270]. Corporate treasury also helps translate RMB earnings, HKD traded equity, HKD dividends, USD-linked commodity prices, and funding decisions into a shareholder-return policy. This is valuable, but it is a support moat rather than a customer lock-in moat.

The third protection is disclosure discipline and accounting clarity. That sounds mundane, but for this appendix it matters. The company discloses enough segment information to show that Trading external revenue is not the core profit pool, and enough product information to reconcile crude/liquids, natural gas, marketing, and other revenue [quant_foundation lines 43-76]. The moat analysis benefits from that transparency because it prevents a false thesis built on external revenue share.

Durability over five to ten years is tied to the upstream engine. If production rises from the 2025 level of 777.3 mmboe toward management's 2026 target of 780-800 mmboe and 2027 target of 810-830 mmboe, the trading route should remain relevant [data_package lines 215-226 and 274-280]. If upstream production stalls or realized prices fall, Trading will not rescue group economics. If Corporate treasury earns more on a large cash balance, that can cushion results temporarily, but it does not create durable customer value.

The segment moat verdict is therefore: useful, necessary, and operationally advantaged because of captive CNOOC volumes, but not a standalone economic moat. Synthesis should treat the bridge as a low-probability source of upside and a higher-probability source of accounting confusion.

6. Historical growth rates reproduced from the data package

The table below uses data_package Section 3 and Section 4. Trading "total revenue" is the segment total revenue after intersegment effects, not the customer-facing external revenue. Marketing revenue is the product revenue note line. Corporate and Eliminations are included because Synthesis needs the whole non-E&P bridge.

Product / sub-segment	FY-3 rev	FY-2 rev	FY-1 rev	3-yr CAGR	Most recent YoY	Data package cite
Trading external revenue	RMB323.4bn [DP 124]	RMB314.8bn [DP 124]	RMB311.6bn [DP 124]	-0.9% from FY2022 base	-1.0%	data_package Section 3 line 124
Trading total revenue	RMB79.3bn [DP 125]	RMB55.3bn [DP 125]	RMB53.8bn [DP 125]	-3.8% from FY2022 base	-2.6%	data_package Section 3 line 125
Marketing revenues	RMB79.3bn [DP 162]	RMB55.1bn [DP 162]	RMB53.7bn [DP 162]	-3.9% from FY2022 base	-2.5%	data_package Section 4 line 162
Trading segment profit	RMB4.2bn [DP 127]	RMB4.0bn [DP 127]	RMB4.5bn [DP 127]	27.0% from FY2022 base	11.8%	data_package Section 3 line 127
Corporate total revenue	RMB0.7bn [DP 133]	RMB1.4bn [DP 133]	RMB1.6bn [DP 133]	7.2% from FY2022 base	14.8%	data_package Section 3 line 133
Corporate segment profit	RMB2.9bn [DP 135]	RMB14.1bn [DP 135]	RMB4.8bn [DP 135]	12.2% from FY2022 base	-66.0%	data_package Section 3 line 135
Eliminations total revenue	Negative RMB2.4bn [DP 141]	RMB1.7bn [DP 141]	Negative RMB1.4bn [DP 141]	N/M	N/M	data_package Section 3 line 141
Eliminations profit/loss	Negative RMB4.9bn [DP 143]	Negative RMB17.6bn [DP 143]	Negative RMB9.3bn [DP 143]	N/M	Loss narrowed 47.2%	data_package Section 3 line 143
Combined bridge revenue	RMB77.6bn	RMB58.4bn	RMB54.0bn	-3.9% from FY2022 base	-7.5%	Sum of DP lines 125, 133, 141
Combined bridge profit	RMB2.2bn	RMB0.5bn	Negative RMB0.0bn	N/M	N/M	Sum of DP lines 127, 135, 143

Arithmetic checks: Trading total revenue FY2024 to FY2025 is RMB55.3bn x 0.974 = RMB53.9bn, matching the RMB53.8bn reported within rounding. Marketing revenue FY2024 to FY2025 is RMB55.1bn x 0.974 = RMB53.7bn, matching the data-package line. Corporate total revenue FY2024 to FY2025 is RMB1.4bn x 1.148 = RMB1.6bn, matching the rounded data-package line. Combined bridge revenue FY2025 equals Trading total revenue RMB53.8bn plus Corporate total revenue RMB1.6bn less Eliminations revenue RMB1.4bn, or roughly RMB54.0bn; this reconciles with consolidated revenue when added to E&P total revenue of RMB344.2bn [data_package lines 114-152].

There is no back-solved product dollar table in this appendix. The data package explicitly says no back-solved product dollars are used and that Q2/Q4 figures are derived only when cumulative arithmetic is explicit [data_package line 186]. The only estimated current bridge used later is an explicitly labeled TTM bridge estimate based on FY2025 segment proportions, because quarterly segment economics are not disclosed.

7. Management guidance quoted from data package Section 6

The bridge has no standalone Trading or Corporate guidance. Management commentary is about production, capex, project execution, reserves, and dividends. That absence is analytically important: Trading and Corporate are not being managed publicly as separate growth engines.

Data package row	Verbatim excerpt	Topic	Interpretation for this bridge
DP line 215	"strengthen our foundation for development"	Reserves and production	The foundation is the upstream reserve/production base; Trading benefits if volumes exist but is not the foundation itself.
DP line 216	"Annual production is targeted at 780-800 million BOE"	2026 production target	Marketing/trading activity should have adequate physical volume support; base case should not assume a near-term volume collapse.
DP line 217	"capital expenditure budget for 2026 at RMB112-122 billion"	Capex budget	Capital allocation priority remains upstream reinvestment. Trading capex is minimal; Corporate must fund capex and dividends.
DP line 218	"step up efforts in oil and gas exploration and development"	Growth execution	New CEO messaging reinforces that the economic engine is E&P, not trading spreads.
DP line 219	"advanced project construction in an orderly manner"	Project execution	More project starts support production volumes and thus route-to-market activity.
DP line 220	"annual payout ratio will be no less than 45%"	Shareholder returns	Corporate bridge must reserve cash for dividends; the distribution floor constrains retained cash.
DP line 221	"commenced production safely"	Brazil startup	Overseas production adds volume, but CNOOC's 7.34% Buzios interest should not be converted into project-level trading dollars.
DP line 222	"780-800 Million boe"	Production target	Presentation repeats the 2026 volume target; it is the best near-term physical anchor.
DP line 223	"112-122 RMB billion"	Capex budget	The official 2026 budget is the capex guardrail for Corporate cash planning.
DP line 224	"2025 annual dividend payout ratio of 45%"	Dividend discipline	FY2025 met the payout floor; Corporate must model dividends as a recurring use of cash.

The forward commentary synthesis in the data package says the 2026 target implies roughly flat to low-single-digit production growth from FY2025, while the January 2025 strategy release gave a 2027 target of 810-830 mmboe [data_package lines 226 and 280]. For this appendix, that translates into moderate support for marketing/trading volumes, not a structural acceleration in trading profit. The capex budget and dividend payout floor are the more important Corporate bridge variables.

8. Forward growth assumptions

Because quarterly segment economics are not disclosed, the forward model uses FY2025 official segment economics as the accounting base and an estimated TTM bridge only to keep the horizon anchored. The estimated TTM bridge applies FY2025 segment-total proportions to TTM consolidated revenue of RMB407.445bn. That produces an estimated TTM Trading total revenue base of RMB55.1bn, Corporate total revenue of RMB1.65bn, Eliminations revenue of negative RMB1.46bn, and combined bridge revenue of RMB55.3bn. This is not official segment disclosure; it is a Synthesis bridge to avoid using stale FY2025 revenue against a TTM horizon.

Base case: Trading grows with production and marketing activity but with no separate pricing power. Corporate grows slowly as treasury/balance-sheet activity remains material. Eliminations remain a small negative revenue line.

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Trading total revenue	-3.8%	-2.6%	Production target 780-800 mmboe	2.0%	Volume support from production growth offsets weak price/mix history, but no standalone spread moat is assumed.

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Base CAGR TTM to TTM+5y	Justification
Corporate total revenue	7.2%	14.8%	No direct guide	3.0%	Corporate activity grows with balance sheet and treasury scale, but revenue is not economically meaningful.
Eliminations revenue	N/M	N/M	No direct guide	1.0% negative line	Internal routing remains stable; negative revenue grows only modestly with group scale.
Combined bridge revenue	-3.9%	-7.5%	Production and dividend framework	2.0% approx.	The combined bridge should track low-single-digit volume/currency/routing growth, not external revenue optics.

Bull case: stronger production execution, better commodity environment, and higher marketing throughput expand the bridge modestly.

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bull CAGR TTM to TTM+5y	Justification
Trading total revenue	-3.8%	-2.6%	Production target 780-800 mmboe	4.5%	Higher realized prices and successful volume growth lift marketing activity; still not modeled as a high-growth platform.
Corporate total revenue	7.2%	14.8%	No direct guide	6.0%	Larger cash/deposit base and treasury activity support more reported corporate revenue.
Eliminations revenue	N/M	N/M	No direct guide	0.0% negative line	Cleaner internal routing keeps eliminations flat in nominal terms.
Combined bridge revenue	-3.9%	-7.5%	Production and project execution	4.7% approx.	Upside comes from volume and price environment rather than competitive share gain.

Bear case: lower commodity prices, weaker trading spreads, or less favorable routing compress revenue.

Product	3-yr historical CAGR	Latest YoY	Mgmt FY+1 guide	Bear CAGR TTM to TTM+5y	Justification
Trading total revenue	-3.8%	-2.6%	Production target 780-800 mmboe	-1.0%	Production may hold, but price/mix and spread compression can shrink reported trading revenue.
Corporate total revenue	7.2%	14.8%	No direct guide	-1.0%	Lower rates, lower treasury income, or adverse FX reduce corporate revenue.
Eliminations revenue	N/M	N/M	No direct guide	4.0% negative line	Internal offsets become more negative as trading route mismatches or allocations widen.
Combined bridge revenue	-3.9%	-7.5%	Dividend floor remains	-1.2% approx.	The bridge shrinks modestly while E&P remains the main risk-bearing engine.

The thesis-consistency check is important. A line with FY2025 Trading external revenue of RMB311.6bn is not modeled from that external revenue base because it would double count E&P product economics. The model uses Trading total revenue of RMB53.8bn and a TTM estimated base of RMB55.1bn because that is the segment-total bridge that consolidates cleanly with E&P total revenue [quant_foundation lines 70-76 and 187-190]. Base-case growth of 2.0% is above the FY2022-FY2025 CAGR because management still guides to production growth and Q1 2026 product sales improved, but it is far below a growth-business assumption because marketing spreads remain commodity-linked.

9. Forward operating margin assumptions

Trading margin is modeled as segment profit over Trading total revenue. Corporate is modeled as a normalized profit line rather than a margin. Eliminations are modeled as a negative profit/loss line. Combined bridge margin is therefore a diagnostic calculation, not a business-quality metric.

Line	Current margin / profit base	Bear TTM+5y margin or profit	Base TTM+5y margin or profit	Bull TTM+5y margin or profit	Mechanism
Trading business	8.3% FY2025 margin	4.5% margin	7.5% margin	9.5% margin	Spread compression in bear; normalized FY2025/H1 style margin in base; stronger mix/logistics in bull.
Corporate	RMB4.8bn FY2025 profit	RMB2.5bn profit	RMB4.5bn profit	RMB6.5bn profit	Treasury/investment income and HQ cost volatility; no revenue-margin framing.
Eliminations	Negative RMB9.3bn FY2025 loss	Negative RMB12.0bn loss	Negative RMB10.2bn loss	Negative RMB8.5bn loss	Internal sales-routing offsets remain a deduction; bull assumes cleaner offset.
Combined bridge	Near zero FY2025 profit	Negative RMB7.1bn	Negative RMB1.1bn	RMB4.5bn	Trading profit is mostly offset by Corporate/Eliminations in base.

The base case uses a 7.5% Trading margin, below FY2025's 8.3% and near the H1 2025 margin of 7.9% [quant_foundation lines 77-81]. That is a deliberate normalization. It recognizes the trading route can earn a positive spread, but it avoids treating the latest annual margin as a new upward trend. The bear case of 4.5% is consistent with the low end of recent history, between FY2022's 3.6% and FY2023's 5.3% [data_package lines 122-128]. The bull case of 9.5% stays below FY2021's 11.6%, because the bridge should not be underwritten on peak spread capture.

Corporate profit is more volatile than revenue. FY2024 Corporate profit was RMB14.1bn, FY2025 profit was RMB4.8bn, and H1 2025 profit was RMB7.0bn [data_package lines 130-136; quant_foundation lines 77-81]. That volatility likely reflects treasury, investment, and unallocated items. The base case uses RMB4.5bn at TTM+5y, roughly in line with FY2025, because higher cash/deposit balances can support income but the dividend and capex program use cash. The bull case uses RMB6.5bn, not the FY2024 peak. The bear case uses RMB2.5bn.

Eliminations are the largest swing item in the combined bridge. FY2024 eliminations loss was RMB17.6bn, FY2025 loss was RMB9.3bn, and H1 2025 loss was RMB8.4bn [data_package lines 138-144; quant_foundation lines 77-81]. Base case uses a negative RMB10.2bn TTM+5y loss, slightly worse than FY2025 because internal routing scales with group activity. Bear uses negative RMB12.0bn. Bull uses negative RMB8.5bn. None of these lines should be read as a market share view; they are consolidation mechanics.

10. Segment rollup

The model below starts with an estimated TTM bridge base, not a disclosed TTM segment table. It is explicitly a bridge for Synthesis. The official data gap is that quarterly segment revenue/profit for Q2 2025, Q3 2025, Q4 2025, and Q1 2026 are not disclosed [data_package lines 282-294]. The estimated TTM base uses FY2025 segment-total proportions applied to TTM consolidated revenue of RMB407.445bn; it does not change the historical record.

Case	Trading revenue	Corporate revenue	Eliminations revenue	Bridge revenue	Trading profit	Corporate profit	Eliminations profit/loss	Bridge operating/profit contribution
Bear	RMB52.4bn	RMB1.6bn	Negative RMB1.8bn	RMB52.2bn	RMB2.4bn	RMB2.5bn	Negative RMB12.0bn	Negative RMB7.1bn
Base	RMB60.8bn	RMB1.9bn	Negative RMB1.5bn	RMB61.2bn	RMB4.6bn	RMB4.5bn	Negative RMB10.2bn	Negative RMB1.1bn
Bull	RMB68.6bn	RMB2.2bn	Negative RMB1.5bn	RMB69.3bn	RMB6.5bn	RMB6.5bn	Negative RMB8.5bn	RMB4.5bn

The revenue arithmetic ties by construction. Base bridge revenue is Trading revenue of RMB60.8bn plus Corporate revenue of RMB1.9bn less Eliminations revenue of RMB1.5bn, or RMB61.2bn. Bear bridge revenue is RMB52.4bn plus RMB1.6bn less RMB1.8bn, or RMB52.2bn. Bull bridge revenue is RMB68.6bn plus RMB2.2bn less RMB1.5bn, or RMB69.3bn.

The profit arithmetic also ties. Base Trading profit is RMB60.8bn times a 7.5% margin, or RMB4.6bn. Adding Corporate profit of RMB4.5bn and subtracting Eliminations loss of RMB10.2bn gives negative RMB1.1bn. Bear Trading profit is RMB52.4bn times a 4.5% margin, or RMB2.4bn; after Corporate and Eliminations the bridge is negative RMB7.1bn. Bull Trading profit is RMB68.6bn times a 9.5% margin, or RMB6.5bn; after Corporate and Eliminations the bridge contributes RMB4.5bn.

For Synthesis, the base case should treat the bridge as roughly earnings-neutral to slightly negative at the FY+5 endpoint. This is consistent with FY2025, when Trading plus Corporate plus Eliminations contributed negative RMB0.022bn, and it avoids crediting the group with a second profit engine. If the E&P appendix forecasts E&P segment profit directly, this

appendix's bridge should be added only once. If Synthesis instead forecasts consolidated net income from product revenue and margins, it should use this appendix to check that the accounting segment bridge does not imply double-counted oil/gas sales.

External revenue reconciliation for Synthesis

The most useful reconciliation table is below. It shows why external revenue does not identify economic ownership.

FY2025 reconciliation view	E&P / oil-gas economics	Trading / marketing route	Corporate / other	Eliminations	Consolidated
Product revenue view	Oil/gas sales RMB335.7bn	Marketing revenue RMB53.7bn	Other revenue RMB8.9bn	N/A	RMB398.2bn
Segment external view	E&P external RMB86.2bn	Trading external RMB311.6bn	Corporate external RMB0.5bn	RMB0.0bn	RMB398.2bn
Segment-total view	E&P total RMB344.2bn	Trading total RMB53.8bn	Corporate total RMB1.6bn	Negative RMB1.4bn	RMB398.2bn
Segment-profit view	E&P profit RMB122.2bn	Trading profit RMB4.5bn	Corporate profit RMB4.8bn	Negative RMB9.3bn	RMB122.1bn

The segment-total view is the best bridge for the ER2 model because it preserves the upstream profit pool without losing the customer-facing marketing line. The product revenue view is the best bridge for commodity sensitivity because it separates crude/liquids and natural gas. The segment external view is the worst standalone valuation input because it makes Trading look like the largest business even though it is not the main source of segment profit.

FX, currency, and dividend bridge

CNOOC statements and EPS are RMB/CNY. The HK-listed shares trade in HKD. The QF live pull recorded a 0883.HK price of HKD20.24, market cap of about HKD962.006bn, and HKD/CNY of 0.8657, translating the share price to about CNY17.52 [quant_foundation lines 108-116]. Oil and gas price drivers are reported in US dollars: FY2025 realized oil was US$66.47/bbl and Q1 2026 realized oil was US$75.92/bbl; FY2025 realized gas was US$7.95/mcf and Q1 2026 realized gas was US$7.69/mcf [data_package lines 60-61 and 175-176]. This creates three currency layers: USD-linked commodity revenue, RMB financial statements and EPS, and HKD traded shares/dividends.

The dividend bridge belongs here because Corporate is the cash-allocation layer. CNOOC's strategy release says the annual payout ratio will be no less than 45%, and FY2025 annual dividend payout ratio was 45% [data_package lines 220 and 224]. FY2025 annual dividend was HKD1.28/share, down from HKD1.40/share in 2024 [data_package lines 238-245]. The company paid RMB58.9bn of dividends in FY2025, compared with RMB108.7bn of cash capex and RMB96.9bn of free cash flow [data_package lines 230-247]. That means dividends are meaningful but not currently debt-funded under normal conditions.

At the FY+5 endpoint, Synthesis should not capitalize the dividend as if it were a separate growth segment. The dividend is a claim on consolidated cash flow. In the base case, if CNOOC maintains roughly RMB125bn of net income and a 45% payout, annual dividends would remain around RMB56bn before FX/share-count effects. If E&P profits grow materially, the dividend rises. If Brent falls and E&P profits compress, Corporate can use the balance sheet to smooth but should not be assumed to violate the payout floor without explicit stress-case logic. FX matters because a RMB profit pool converted into HKD dividends can move with HKD/CNY, and the listed share's P/E test must translate HKD price to RMB EPS consistently.

11. Key risks and wildcards

Bear-case risks are mostly accounting and commodity linked. The first risk is spread compression: Trading can report large external revenue but earn less margin if logistics, procurement, customer pricing, or internal transfer terms move against it. The second risk is eliminations volatility: a negative elimination loss can offset all Trading and Corporate profit, as it nearly did in FY2025 and more than did in FY2024. The third risk is FX mismatch: USD-linked commodity prices, RMB accounts, and HKD dividends can make shareholder returns look different from reported operating performance.

Base-case risks are mostly disclosure risks. Quarterly segment economics are not disclosed, so the TTM bridge uses FY2025 proportions. If the actual Q1 2026 route-to-market mix changed materially, this appendix will not capture it until the next interim/annual segment note. Product-level oil and gas sales are disclosed, but marketing and other revenue are not fully split across every TTM quarter. The model therefore keeps the bridge conservative.

Bull-case wildcards are modest. Trading margin could stay closer to 9-10% if stronger production volumes, higher oil prices, better logistics, and favorable timing lift marketing spreads. Corporate profit could be higher if the large cash/deposit base earns more income, if FX moves favorably, or if investment income improves. Eliminations could become less negative if

internal routing and offsets normalize. Even in that bull case, the bridge contributes only RMB4.5bn of FY+5 profit in my model, which is small relative to CNOOC's TTM net income of RMB124.7bn.

The largest thesis risk is not that this bridge is bad. The largest risk is that an analyst overreads it. Trading external revenue was 78.2% of consolidated external revenue in FY2025 [data_package lines 82-88], but Trading profit was only RMB4.5bn. A valuation model that applies an upstream margin to Trading external revenue would double count E&P economics and inflate FY+5 earnings. A model that ignores Corporate and Eliminations would also overstate profit because Trading profit is partly offset by consolidation mechanics. The correct use of this appendix is as a guardrail.

Ending summary table

Case	Segment TTM+5y Revenue	Segment TTM+5y Op Margin	Segment TTM+5y Op Income	Probability
Bear	RMB52.2bn	-13.6%	Negative RMB7.1bn	25%
Base	RMB61.2bn	-1.8%	Negative RMB1.1bn	55%
Bull	RMB69.3bn	6.5%	RMB4.5bn	20%

The base-case FY+5 bridge contribution is negative RMB1.1bn of segment profit on RMB61.2bn of bridge revenue. That is intentionally close to neutral because FY2025 Trading plus Corporate plus Eliminations was effectively neutral to consolidated segment profit. The appendix's purpose is not to create a second source of moat; it is to let Synthesis reconcile external revenue, E&P total revenue, trading/marketing revenue, corporate items, FX, dividends, and eliminations without double-counting the same oil and gas economics.

Appendix S - Synthesis (Combined Earnings Model)

CNOOC Limited - Synthesis (Combined Earnings Model)

This appendix is the combined earnings model for CNOOC Limited, ticker 0883.HK / HKEX 00883. It uses the cleared quantitative foundation, data package, three reviewed segment appendices, management appendix, and moat appendix as the source of truth. It does not fetch new market data. The market price and FX anchor are the QF values: HKD20.24 per share, HKD/CNY 0.8657, and CNY17.52 per share after translation.

The most important modeling caveat is the same one repeated in the data package and segment appendices: CNOOC does not disclose quarterly segment economics, region-level revenue, region-level profit, basin-level revenue, basin-level profit, or project-level economics. The China Offshore E&P Core and Overseas E&P Growth Assets appendices therefore produce analytical contribution proxies from official production and E&P economics rather than company-reported regional P&L. The Trading, Marketing, and Corporate Bridge appendix uses official segment revenue, corporate, and eliminations mechanics to avoid double-counting oil and gas economics. This synthesis keeps those caveats visible rather than smoothing them away.

The second caveat is the income-statement bridge. CNOOC's official segment note uses "segment profit/loss," and QF explicitly warns that this is not the same as U.S.-style operating income. The FY2025 segment-profit sum of RMB122.148bn ties to consolidated profit in the official segment note, while FMP consolidated operating income for FY2025 is RMB173.4bn and net income attributable is RMB122.082bn. To satisfy the required revenue, OI, NI, and EPS build without inventing undisclosed line items, this appendix shows both the segment contribution sum and an accounting operating-income proxy. The accounting OI proxy scales the segment-profit contribution by the FY2025 accounting OI to official segment-profit relationship. Net income then uses the FY2025 net-income to accounting-OI conversion. The result keeps the segment appendices intact and avoids double-taxing a line that already behaves like profit.

1. Anchors

Stage 0 anchor:

- Today: 2026-06-30.
- Fiscal year end: December 31.
- Latest quarter: Q1 2026, ended 2026-03-31 and released 2026-04-28.
- TTM anchor: Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026, ending 2026-03-31.
- Latest completed FY label for historical tie-out: FY2025.
- Horizon date: 2031-03-31.
- Compounding span: exactly 5.0 calendar years from the TTM end date.
- Current price: HKD20.24 per share.
- Currency bridge: HKD/CNY 0.8657, so current price is CNY17.52 per share.
- TTM diluted share count: approximately 47.53bn shares, using QF's disclosed 47,529,953,984 share-capital base and TTM EPS bridge.

The QF TTM base is revenue RMB407.445bn, net income attributable RMB124.663bn, EPS RMB2.62, production 793.6 mmboe, operating cash flow RMB206.916bn, cash capex RMB114.562bn, and free cash flow RMB92.354bn. FY2025 reported revenue was RMB398.220bn, FMP operating income was RMB173.4bn, net income attributable was RMB122.082bn, and official segment profit summed to RMB122.148bn.

2. Segment-Level Forward Assumptions

The table below reproduces the reviewed segment appendices. "Operating contribution" means the contribution line used by each appendix, not a clean company-disclosed regional operating-income line. For China and Overseas, the appendices explicitly state that the numbers are modeled contribution proxies because CNOOC does not disclose China-versus-overseas P&L. For the bridge, the number is the combined Trading, Corporate, and Eliminations profit contribution.

Segment	TTM revenue base	Bear TTM+5y revenue	Base TTM+5y revenue	Bull TTM+5y revenue	Bear margin	Base margin	Bull margin	Source
China Offshore E&P Core	RMB244.0bn	RMB226.2bn	RMB276.1bn	RMB304.0bn	27.0%	34.0%	37.0%	`appendix_B_china_offshore_ep_core.md` sections 8-10
Overseas E&P Growth Assets	RMB109.7bn proxy	RMB98.8bn	RMB130.8bn	RMB153.7bn	28.0%	34.0%	38.0%	`appendix_B_overseas_ep_growth_assets.md` sections 8-10
Trading, Marketing, and Corporate Bridge	RMB55.3bn estimate	RMB52.2bn	RMB61.2bn	RMB69.3bn	-13.6%	-1.8%	6.5%	`appendix_B_trading_marketing_corporate_bridge.md` sections 8-10

The China sleeve uses a TTM base of RMB244.0bn and grows revenue at -1.5%, 2.5%, and 4.5% in bear, base, and bull cases. Its base case is intentionally below the recent China production CAGR because management's 2026 and 2027 production targets imply low-single-digit group growth, not a straight-line continuation of the 2022-2025 growth rate. The overseas sleeve starts from an approximate TTM overseas production base and uses a revenue-per-BOE proxy. Its base case assumes 294.0 mmboe of overseas production by 2031-03-31 and roughly RMB445 per BOE of revenue. The bridge uses FY2025 segment proportions applied to the TTM consolidated revenue base because quarterly segment revenue and profit are not disclosed.

3. Combined Revenue Build

The combined revenue build is the sum of the three reviewed segment appendices. There is no extra corporate elimination added in this section because the Trading, Marketing, and Corporate Bridge appendix already includes the negative eliminations line inside its bridge revenue. Adding another elimination would double count it.

Line	Bear	Base	Bull
China Offshore E&P Core	RMB226.2bn	RMB276.1bn	RMB304.0bn
Overseas E&P Growth Assets	RMB98.8bn	RMB130.8bn	RMB153.7bn
Trading, Marketing, and Corporate Bridge	RMB52.2bn	RMB61.2bn	RMB69.3bn
Sum of segment TTM+5y revenue	RMB377.2bn	RMB468.1bn	RMB527.0bn
Additional corporate eliminations	RMB0.0bn	RMB0.0bn	RMB0.0bn
Combined TTM+5y revenue	RMB377.2bn	RMB468.1bn	RMB527.0bn
Implied TTM to TTM+5y CAGR	-1.5%	2.8%	5.3%

The base case grows consolidated revenue from RMB407.445bn at the TTM anchor to RMB468.1bn by 2031-03-31, a 2.8% CAGR. That is a modest revenue model for a company with recent production growth, but it is appropriate because realized oil and gas prices dominate revenue and management has not guided to a production step-change. The bear case is not a collapse case; it is a lower-price, slower-volume, and weaker-margin case that leaves revenue below the TTM anchor. The bull case assumes successful domestic offshore execution, better overseas project ramp, and a supportive commodity environment without underwriting a full commodity supercycle.

4. Combined Operating Income Build

The first table shows the contribution sum directly from the segment appendices. This is the core ER2 segment model. The second table translates that contribution into an accounting operating-income proxy using the FY2025 relationship between FMP operating income and official segment profit. FY2025 FMP operating income of RMB173.4bn divided by official segment profit of RMB122.148bn equals 1.420x. Applying that scalar to the horizon contribution sum is an imperfect but transparent way to show an OI line while preserving the official-source caveat.

Line	Bear	Base	Bull
China Offshore E&P Core contribution	RMB61.1bn	RMB93.9bn	RMB112.5bn
Overseas E&P Growth Assets contribution	RMB27.7bn	RMB44.5bn	RMB58.4bn

Line	Bear	Base	Bull
Trading, Marketing, and Corporate Bridge contribution	-RMB7.1bn	-RMB1.1bn	RMB4.5bn
Segment contribution sum	RMB81.7bn	RMB137.3bn	RMB175.4bn
Contribution margin on revenue	21.7%	29.3%	33.3%

Accounting OI bridge	Bear	Base	Bull
Segment contribution sum	RMB81.7bn	RMB137.3bn	RMB175.4bn
FY2025 accounting OI / official segment profit scalar	1.420x	1.420x	1.420x
Accounting operating income proxy	RMB116.0bn	RMB194.9bn	RMB249.0bn
Accounting OI margin on revenue	30.8%	41.6%	47.2%

The base case operating-income proxy is above FY2025 FMP operating income because the model has higher revenue, holds E&P economics reasonably well, and keeps the non-E&P bridge close to neutral. This is not a margin-expansion thesis at the segment-contribution level. Base contribution margin is 29.3%, below the FY2025 official segment-profit margin of 30.7%. The higher accounting OI proxy mostly reflects translating the contribution sum to the FMP operating-income presentation, not inventing a hidden operating segment.

5. Net Income and EPS Build

Net income uses the FY2025 net-income to accounting-OI conversion. FY2025 net income attributable of RMB122.082bn divided by FY2025 FMP operating income of RMB173.4bn equals 70.4%. This conversion embeds the historical effect of tax, finance income/expense, minority items, and below-the-line items without requiring a fabricated project-level tax or interest schedule.

Line	Bear	Base	Bull
Accounting operating income proxy	RMB116.0bn	RMB194.9bn	RMB249.0bn
Net interest / other / tax conversion	70.4% of accounting OI	70.4% of accounting OI	70.4% of accounting OI
Net income attributable	RMB81.7bn	RMB137.2bn	RMB175.3bn
Diluted share count at TTM+5y	47.53bn	47.53bn	47.53bn
EPS at TTM+5y	RMB1.72	RMB2.89	RMB3.69

The base EPS of RMB2.89 is above the TTM EPS of RMB2.62 but not by much. That shape is important. The valuation result is strong because the current share price is low relative to current earnings, not because the model assumes a five-year EPS explosion. Base net income rises from TTM RMB124.7bn to RMB137.2bn, a roughly 1.9% annualized increase. The model is therefore conservative on earnings growth but still clears the valuation gate by a wide margin.

6. Share Count Path

CNOOC is modeled with a flat share count because the cleared data package shows no material buybacks in 2021-2025 and because the QF share-count table shows stable total share capital around 47.53bn. This is not an unexplained shortcut: the path explicitly assumes zero buyback retirements and zero material SBC issuance because the upstream files did not identify a recurring repurchase program or recurring stock-compensation dilution. The dividend, not the buyback, is the capital-return mechanism.

Year	Starting share count	Buyback amount	Avg price assumed	Shares retired	SBC / issuance	Ending share count
TTM start	47,530M	RMB0.0bn	N/A	0M	0M	47,530M
Year 1	47,530M	RMB0.0bn	N/A	0M	0M	47,530M
Year 2	47,530M	RMB0.0bn	N/A	0M	0M	47,530M
Year 3	47,530M	RMB0.0bn	N/A	0M	0M	47,530M
Year 4	47,530M	RMB0.0bn	N/A	0M	0M	47,530M
Year 5	47,530M	RMB0.0bn	N/A	0M	0M	47,530M

The dividend constraint is much more important than buybacks. The data package records a policy of no less than a 45% annual payout ratio over the strategy period and FY2025 dividends paid of RMB58.9bn. In the base case, a 45% payout on RMB137.2bn of net income would be roughly RMB61.8bn before FX and timing differences. That is broadly consistent with recent dividend cash usage and with a company that continues to fund a large capex program.

7. P/E 15 Test

The P/E test must compare RMB EPS with a RMB share price. The QF market bridge is HKD20.24 multiplied by HKD/CNY 0.8657, or CNY17.52 per share. Required FY+5 EPS for a 15x P/E is therefore CNY17.52 divided by 15, or RMB1.17.

Case	EPS at TTM+5y	EPS x 15	Current CNY price	Cushion	Pass?
Bear	RMB1.72	RMB25.77	RMB17.52	47.1%	PASS
Base	RMB2.89	RMB43.31	RMB17.52	147.2%	PASS
Bull	RMB3.69	RMB55.32	RMB17.52	215.7%	PASS

The base case is the controlling test. It clears by a very wide margin: RMB2.89 of base EPS versus RMB1.17 required EPS. The interpretation is not that CNOOC automatically becomes a Gideon BUY. The moat appendix is a FAIL and the 2046 test is a FAIL. The valuation gate says the stock is inexpensive relative to a conservative FY+5 earnings model. It does not turn a commodity producer with state-linked governance, weak pricing power, and long-term energy-transition risk into a quality compounder.

8. Reflexivity Check

The model must tie back to the current financial base. QF and the data package already prove the FY2025 segment tie: E&P total revenue RMB344.197bn plus Trading total revenue RMB53.838bn plus Corporate total revenue RMB1.612bn less Eliminations RMB1.427bn equals consolidated revenue RMB398.220bn. The FY2025 official segment profit tie is also clean: RMB122.170bn plus RMB4.467bn plus RMB4.807bn less RMB9.296bn equals RMB122.148bn of consolidated profit in the official segment note.

The TTM problem is disclosure, not arithmetic. CNOOC does not disclose Q2 2025, Q3 2025, Q4 2025, and Q1 2026 segment profit by reportable segment. QF explicitly states that no product-to-segment allocation has been fabricated. The segment appendices solve this by using the FY2025 segment table as the hard accounting base and the TTM consolidated revenue, net income, production, and oil/gas sales data as the current-period bridge.

Tie item	Hard source	Amount	Result
FY2025 segment revenue to consolidated revenue	QF P2 and P5	RMB398.220bn	PASS
FY2025 segment profit to consolidated profit	QF P2 and P5	RMB122.148bn	PASS
TTM consolidated revenue	QF P4	RMB407.445bn	PASS
TTM consolidated net income	QF P4	RMB124.663bn	PASS
TTM segment split	Official disclosure	N/D quarterly	Flagged data limitation

Because the company does not disclose TTM segment split, the strict "sum of segment TTM revenue versus consolidated TTM revenue" test cannot be run from official quarterly segment data. The model does not fail silently; it documents that limitation and uses the reviewed segment appendices as the authorized bridge.

9. In-Progress FY Reconciliation

Stage 0 does not treat FY2026 as effectively complete. The anchor is TTM through Q1 2026, not a full-year FY2026 run-rate. Q1 2026 is still useful as a recency check. CNOOC reported Q1 2026 revenue of RMB116.079bn and net profit attributable of RMB39.144bn. Annualizing Q1 mechanically would produce revenue of roughly RMB464.3bn and net income of roughly RMB156.6bn, but the data package warns not to annualize Q1 mechanically because the TTM still includes a weaker Q4 2025 profit quarter and commodity prices are volatile.

The base 2031 revenue of RMB468.1bn is close to the annualized Q1 2026 revenue run-rate, but it is reached after five years rather than assumed immediately. On the TTM base, the base revenue CAGR is only 2.8%. On the TTM net-income base, base net income rises from RMB124.7bn to RMB137.2bn over five years. This is a controlled model, not an in-progress FY

extrapolation.

10. Sensitivity

The sensitivity table shows that commodity-linked revenue and upstream margin matter far more than the share count. There is no buyback program in the base model, so share-count sensitivity is mechanical rather than strategic.

Sensitivity	EPS downside	EPS base	EPS upside	Comment
China Offshore revenue CAGR +/- 200 bps, base margin held	RMB2.69	RMB2.89	RMB3.09	Biggest single segment by contribution; commodity and domestic offshore execution both matter
Overseas E&P margin +/- 200 bps, base revenue held	RMB2.83	RMB2.89	RMB2.94	Material but smaller than China because revenue base is lower
Share count +/- 5%	RMB2.75	RMB2.89	RMB3.04	No buyback thesis; dilution or issuance would matter but is not the core driver
Net-income conversion +/- 300 bps	RMB2.77	RMB2.89	RMB3.01	Tax, finance income, and other below-the-line items are second-order versus commodity economics

The most important variable is not a spreadsheet plug. It is the realized commodity price and cost curve embedded in China and Overseas E&P margins. A sustained lower Brent environment with all-in cost moving above the high-US$20s per BOE would compress both revenue and contribution. The second variable is reserve conversion and project timing: if domestic offshore decline or overseas partner-operated delays consume more capex than expected, the base revenue growth path becomes too generous. The share count is not a thesis driver unless management changes capital allocation and begins material buybacks or issuance.

11. Combined Earnings Summary

Case	Revenue	Accounting OI proxy	OI margin	Net income	EPS	Probability	EPS x 15	Vs. current CNY price
Bear	RMB377.2bn	RMB116.0bn	30.8%	RMB81.7bn	RMB1.72	25%	RMB25.77	47.1%
Base	RMB468.1bn	RMB194.9bn	41.6%	RMB137.2bn	RMB2.89	50%	RMB43.31	147.2%
Bull	RMB527.0bn	RMB249.0bn	47.2%	RMB175.3bn	RMB3.69	25%	RMB55.32	215.7%
Probability-weighted EPS	N/A	N/A	N/A	N/A	RMB2.80	100%	RMB41.93	139.3%

Probability weights are 25% bear, 50% base, and 25% bull. That is not a neutral 33/33/34 split. The base receives the highest weight because CNOOC's production execution, reserve life, and cost record are strong, while the moat and management appendices still require a discount for commodity exposure, state-linked governance, and long-term durability risk. The bear and bull cases are kept symmetric because commodity outcomes can move quickly in either direction.

Tie-Out Checks

- Reported-financial tie-out: PASS with a TTM segment-disclosure limitation. FY2025 segment revenue and segment profit tie to official consolidated figures within rounding. TTM consolidated revenue and NI tie through QF P4. Quarterly TTM segment split is not disclosed, so the model explicitly uses reviewed appendices rather than inventing a quarterly segment allocation.

- NI / shares = EPS: PASS. Bear RMB81.7bn divided by 47.53bn shares equals RMB1.72. Base RMB137.2bn divided by 47.53bn shares equals RMB2.89. Bull RMB175.3bn divided by 47.53bn shares equals RMB3.69.

- Segment sum tie-out at horizon: PASS. Bear revenue RMB226.2bn plus RMB98.8bn plus RMB52.2bn equals RMB377.2bn. Base revenue RMB276.1bn plus RMB130.8bn plus RMB61.2bn equals RMB468.1bn. Bull revenue RMB304.0bn plus RMB153.7bn plus RMB69.3bn equals RMB527.0bn. Additional corporate eliminations are zero because eliminations are already inside the bridge appendix.

- Product-to-segment rollup: PASS with disclosure caveat. The China and Overseas appendices do not sum basin or project revenue lines because those dollars are not disclosed. The bridge appendix reconciles Trading, Corporate, and Eliminations by construction. Each appendix states the rollup method and avoids fabricated product P&L.

- Weighted margin check: PASS with caveat. The China and Overseas sleeves are single aggregate modeled contribution proxies, so no multi-product weighted-margin table exists. The bridge appendix calculates Trading profit, Corporate profit, and Eliminations loss explicitly and ties the combined contribution in Section 10.

- Share count path: PASS. Starting shares of 47,530M plus zero modeled SBC issuance minus zero modeled buyback retirements equals 47,530M ending shares over exactly five years. The flat share count is evidence-based: the data package shows no buybacks and the QF share-count table shows stable share capital.

- Growth plausibility: PASS. Base China revenue CAGR of 2.5% is below recent China production growth and is justified by management's low-single-digit group target. Base Overseas production growth of 3.5% is below recent overseas growth and below the Q1 2026 acceleration. Base bridge growth of roughly 2.0% is modest relative to production guidance and avoids treating Trading external revenue as a separate growth engine.

- Historical arithmetic: PASS. China base RMB244.0bn compounded at 2.5% for five years equals RMB276.1bn. Overseas base uses the appendix's production and revenue-per-BOE rollup to reach RMB130.8bn. Bridge base revenue ties to Trading revenue RMB60.8bn plus Corporate revenue RMB1.9bn less Eliminations revenue RMB1.5bn, or RMB61.2bn.

- Recency anchor: PASS. The base case starts from the TTM consolidated revenue base of RMB407.445bn and compounds to RMB468.1bn over exactly five years. A one-year smooth interpolation implies roughly RMB418.9bn of first-forward-year revenue, only about 2.8% above TTM and inside the 10% guardrail. Q1 2026 annualized revenue is higher, but the model does not use that as the immediate base.

- Management and capex consistency: PASS. The base model does not require a capex collapse. The data package and management appendix show 2026 capex budget of RMB112-122bn and a 45% payout floor. Base net income of RMB137.2bn can support an approximate RMB61.8bn payout at 45%, while the balance sheet remains net cash. The model still flags that production and reserve replacement must be monitored because heavy capex is structurally required.

- Currency, P/E, probability, and table arithmetic: PASS. The HKD20.24 price is translated to CNY17.52 before comparing with RMB EPS. Required EPS is RMB1.17. Base EPS of RMB2.89 times 15 equals RMB43.31, giving a 147.2% cushion. Probability weights sum to 100%, probability-weighted EPS is RMB2.80, and the required Markdown sections use valid pipe tables.

Synthesis Readout

CNOOC clears the mechanical P/E 15 gate in all three cases, including the bear case. That is unusual and should not be overinterpreted. The valuation pass is driven by a low current share price relative to current and modeled earnings, not by a heroic growth forecast. The base case assumes only 2.8% revenue CAGR and roughly 1.9% net-income CAGR from the TTM base to 2031-03-31. It does not need a commodity supercycle, a buyback program, or a new high-margin business line to clear the price test.

The reason the appendix does not become a clean BUY signal is quality. Management is YELLOW because the operating organization is capable but the current listed-company leadership reset is new and parent-company control remains a real minority-shareholder issue. Moat is FAIL because CNOOC's largest profit pool is still commodity E&P with weak product pricing power, high reinvestment requirements, state and related-party overlay, geopolitical exposure, and energy-transition risk. The 2046 test is also FAIL because a surviving strategic hydrocarbon producer is not the same thing as a 20-year compounder with protectable high returns independent of commodity prices and policy.

The base model's most fragile assumption is that CNOOC can keep the E&P profit engine resilient while funding high capex and dividends. If all-in cost moves structurally above US$35 per BOE, reserve life falls materially below 10 years, or the

2026-2027 production targets require much higher capex intensity, the base-case segment contribution should be cut. Conversely, if CNOOC delivers production targets, keeps all-in cost near the high-US$20s, maintains reserve life around ten years, and holds the payout floor without balance-sheet stress, the valuation cushion gives the stock room even without a Gideon-grade moat.

The appropriate synthesis conclusion is therefore narrow. On price, CNOOC passes. On compounder quality, it does not. A final ER2 verdict should not ignore the valuation evidence, but the moat FAIL and 2046 FAIL are hard constraints under the Gideon framework.

Appendix CS - Compounder Score

CNOOC Limited - Compounder Score

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1. Executive Verdict

CNOOC Limited is a cheap, cash-generative, low-cost offshore oil and gas producer. It is not a Gideon-style compounder under the diagnostic CompounderScorer rubric. The evidence supports a strong current earnings base, a conservative balance sheet, real reserves, good production execution, and a dividend framework that gives shareholders a meaningful cash return. The evidence does not support a high-confidence claim that CNOOC can compound capital at high incremental returns for 20 years independent of commodity prices, state policy, reserve depletion, reinvestment intensity, and geopolitical risk.

The diagnostic score is **55 / 100**, made up of **49 / 80** for Business Quality and **6 / 20** for Valuation / 20% Return Underwriting. The score-implied classification is **Reject** under this rubric. That does not mechanically override the ER2 verdict. It means the compounder lens refuses to treat a low current P/E as proof of a long-duration 20% annualized shareholder-return opportunity.

This score is capped for three reasons. First, the moat appendix already reaches a **Moat gate: FAIL** and **2046 test: FAIL**. The current advantages are real: offshore China access, cost position, reserves, technical execution, scale, and a net-cash balance sheet. But the largest profit pool is still commodity E&P. Crude and liquids do not have customer-level pricing power, and natural gas contract structure is not large enough to transform the company into a differentiated recurring-revenue business. Second, the incremental-return evidence is cyclical. Five-year ROIC is good for an upstream producer, but recent profit history is heavily affected by realized oil prices. Production and reserves grew while FY2025 E&P revenue and profit fell from FY2024 because price mattered more than volume. Third, the 20% return case needs a rerating or a much lower entry price. The synthesis appendix shows the P/E 15 valuation gate passes with a 147.2% base-case cushion, but the CS rubric asks whether a 20% annualized return works without terminal multiple expansion. At the current translated CNY price of 17.52 per share, it does not.

The right interpretation is narrow. CNOOC may be an attractive value or income security at the right commodity-price deck and governance discount. It is not an "investable now under the compounder rubric" security because a high score under this rubric requires both business quality and a 20% underwriting case that does not depend on a valuation multiple normalizing upward.

2. Data Source Map

The score uses the ER2 verified source chain. No new live fetches were required because the run files already contain the live FMP pulls, official-source overrides, official CNOOC reports, and reviewed segment/synthesis work needed for this appendix.

Evidence item	Controlling run source	Use in score
Price, market cap, FX	`quant_foundation.md` P3	HKD20.24 price, HKD/CNY 0.8657, translated CNY17.52 price, HKD962.0bn market cap
TTM financial base	`quant_foundation.md` P4 and P6	Revenue RMB407.445bn, net income RMB124.663bn, EPS RMB2.62, CFO RMB206.916bn, FCF RMB92.354bn
Five-year consolidated history	`data_package.md` Section 2	Revenue, operating income, net income, EPS, capex, FCF, ROIC history
Segment economics	`quant_foundation.md` P2 and `data_package.md` Section 3	FY2025 E&P, Trading, Corporate, Eliminations revenue and profit
Production, reserves, cost	`data_package.md` Section 0a and Section 5	Production CAGR, reserves, reserve life, all-in cost, operating expense per BOE
Segment forward cases	`appendix_B_china_offshore_ep_core.md`, `appendix_B_overseas_ep_growth_assets.md`, `appendix_B_trading_marketing_corporate_bridge.md`	Segment revenue, margin, and contribution assumptions through 2031-03-31
Management quality	`appendix_management.md`	Management gate YELLOW, governance positives and parent-control risks

Evidence item	Controlling run source	Use in score
Moat and 2046 durability	`appendix_moat.md`	Moat FAIL, 2046 FAIL, pricing power and durability assessment
Valuation and earnings build	`appendix_synthesis.md`	Bear/base/bull EPS, P/E 15 cushion, tie-out checks, share count, dividend context

Key source caveats are carried through the score. CNOOC does not disclose quarterly segment revenue/profit for the full TTM period. It does not disclose China versus overseas revenue and profit in a way that ties to official segment profit. It does not disclose project-level revenue, capex, profit, reserves, or asset-level lifting costs. The segment appendices therefore use reviewed, labeled proxies for China Offshore E&P and Overseas E&P. That is acceptable for directional scoring, but it lowers precision and prevents an aggressive ROIIC score.

3. Key Financial and Quality Metrics

The historical numbers show a better-than-average upstream operator, not a non-cyclical compounder. Revenue rose from RMB246.1bn in FY2021 to RMB398.2bn in FY2025, but that path includes the 2022 commodity spike. Net income attributable rose from RMB70.3bn in FY2021 to RMB122.1bn in FY2025. Operating cash flow and free cash flow are real: the latest TTM produced CFO of RMB206.916bn and FCF before acquisitions/investments of RMB92.354bn.

Metric	Evidence	Scoring read-through
TTM revenue	RMB407.445bn	Large, current base tied by QF
TTM net income attributable	RMB124.663bn	Strong current earnings base
TTM EPS	RMB2.62	Current translated P/E about 6.7x
TTM CFO	RMB206.916bn	Cash earnings support reported profits
TTM FCF	RMB92.354bn	FCF yield around 11% on translated market cap
FY2025 ROIC	14.3% per FMP key metrics in data package	Good for upstream, not elite
Five-year ROIC median	About 16.9% using FY2021-FY2025 data-package ROIC series	Supports mid-teens quality, not >30% compounder quality
FY2025 all-in cost	US$27.90/boe	Real cost advantage
Q1 2026 all-in cost	US$28.41/boe	Still controlled but not falling every period
FY2025 production	777.3 mmboe	Scale and growth evidence
TTM production	793.6 mmboe	Current base above FY2025
FY2025 reserves	7.773bn BOE	About ten-year reserve life
Net debt / EBITDA	Negative per data package	Balance sheet is a positive
Share count	About 47.53bn shares	Stable; no buyback thesis
Dividend policy	At least 45% payout ratio for 2025-2027	Cash return helps but is not a moat

The most important metric conflict is ROIC versus ROIIC. Reported ROIC is respectable: 11.6%, 21.6%, 16.9%, 17.5%, and 14.3% across FY2021-FY2025. But the incremental-return picture is much less clean. From FY2022 to FY2025, E&P revenue moved from RMB361.3bn to RMB344.2bn and E&P profit moved from RMB138.1bn to RMB122.2bn despite continued heavy capex and production growth. That does not mean the investments were bad; it means a commodity producer's incremental returns cannot be read without the price deck. Production and reserves can grow while profit falls.

For scoring, I treat five-year ROIIC as positive but not proven to be high. A rough acquisition-inclusive lens uses rising NOPAT/profit over the FY2021-FY2025 period against cumulative cash capex of more than RMB500bn plus modest acquisition spend. That points to low-teens incremental returns, with a wide error band because the period begins before the 2022 oil-price spike and ends in a lower realized-oil environment. The three-year ROIIC lens is worse because the FY2022 starting point was unusually profitable. Therefore, CNOOC earns credit for efficient, reserve-replacing reinvestment, but it does not earn a high ROIIC score.

4. Rubric Scorecard

Category	Score	Max	Rationale
Incremental returns on capital	16	25	Mid-teens ROIC, strong cash conversion, and asset-heavy accounting support the score; ROIIC is capped by commodity cyclicality and lower FY2025 profit versus FY2022/FY2024 despite capex
Reinvestment runway	13	20	Reserve life, China offshore access, Guyana/Brazil growth, and production targets support runway; depletion, high capex, and limited project-level economics cap it
Durability of moat	5	15	Cost/access moat exists, but moat gate and 2046 test fail; pricing power is weak and the profit pool remains commodity E&P
Accounting and financial quality	8	10	Cash flow supports earnings, balance sheet is net cash, disclosures are broad; quarterly/region/project data gaps and related-party flows prevent a perfect score
Capital allocation discipline	7	10	Capex is coherent, dividends are explicit, acquisitions are modest, leverage is low; limited buybacks, SOE parent control, and incentive opacity cap the score
Price and 20% return underwriting	6	20	P/E 15 gate passes easily, but the 20% case requires terminal multiple expansion or a much lower entry price
Total	**55**	**100**	Cheap and cash-generative, but not a high-confidence compounder

Detailed subscore logic:

Subcategory	Score	Max	Comment
1A. Normalized ROIC is high	3	5	Five-year median around 16.9%, good but not 20-30% or >30%
1B. ROIIC is high	2	8	Incremental returns are hard to isolate and appear low-teens, not >25%
1C. ROIIC is not deteriorating sharply	2	3	Production/reserves grew, but profits are price-sensitive
1D. Unit economics support returns	3	3	All-in cost below US$30/boe is real evidence
1E. Cash conversion is real	3	3	CFO and FCF support earnings over several years
1F. ROIC is not an accounting artifact	3	3	Asset-heavy producer with real invested capital, not tiny denominator optics
2A-2F. Reinvestment runway	13	20	Large remaining reserves and overseas projects, offset by depletion and capex intensity
3A-3F. Moat durability	5	15	Cost/access moat but no strong pricing power, customer lock-in, or 2046 compounder durability
4A-4F. Accounting/financial quality	8	10	Strong balance sheet and cash conversion; disclosure gaps and SOE flows cap score
5A-5F. Capital allocation	7	10	Rational capex and dividends; minority alignment is not best-in-class
6A-6F. 20% underwriting	6	20	Low current P/E helps, but no-expansion 20% return case fails

5. ROIIC and Reinvestment Analysis

CNOOC's reinvestment profile is the heart of the score. The company is not starving the asset base. Cash capex was RMB73.1bn in 2021, RMB81.4bn in 2022, RMB120.9bn in 2023, RMB123.4bn in 2024, and RMB108.7bn in 2025. The official oil and gas capex basis shows FY2025 oil and gas capex around RMB120.5bn and a 2026 budget of RMB112-122bn. This is a serious reinvestment program.

The positive case is that this reinvestment is producing physical results. Production rose from 573.0 mmboe in FY2021 to 777.3 mmboe in FY2025. Net proved reserves rose from 5.728bn BOE to 7.773bn BOE. Reserve life stayed around ten years. All-in cost improved from US$29.49/boe in FY2021 to US$27.90/boe in FY2025, with Q1 2026 at US$28.41/boe. Those facts make it difficult to argue that the company is wasting capital in a simple way.

The skeptical case is that ROIIC is not the same as production growth. CNOOC can spend heavily, add reserves, grow production, and still have lower profit if realized oil prices fall or if new barrels require more capital per BOE. The China offshore appendix explicitly notes that capex is not optional growth spend; it is the price of defending reserve life and extending mature assets. The overseas appendix adds that the attractive growth assets are often partner-operated, which reduces CNOOC's direct control over timing, cost, and development cadence.

The scoring conclusion is therefore mixed. CNOOC gets credit for an unusually credible upstream reinvestment machine. It does not get credit for a high-confidence, >25-35% ROIIC engine. Under the CS rubric, a high ROIIC score requires proof that incremental capital is generating high returns through the cycle. The current evidence proves competence and cost advantage. It does not prove high incremental returns independent of oil prices.

6. Runway Analysis

The runway is visible over five years. Management guidance targets 780-800 mmboe of production in 2026 and 810-830 mmboe in 2027. The synthesis base case is deliberately modest: consolidated revenue grows from RMB407.445bn to RMB468.1bn by 2031-03-31, a 2.8% CAGR, and base net income grows from RMB124.7bn to RMB137.2bn, about 1.9% annualized. This does not require a heroic production surge.

China Offshore E&P Core is modeled from a TTM revenue base of RMB244.0bn to RMB276.1bn in the base case, with operating contribution rising to RMB93.9bn at a 34.0% margin. Overseas E&P Growth Assets are modeled to RMB130.8bn of revenue and RMB44.5bn of contribution in the base case. The Trading, Marketing, and Corporate Bridge is intentionally close to neutral at negative RMB1.1bn contribution. The combined case is therefore still fundamentally an upstream E&P case, not a hidden trading or corporate-profit case.

The runway score is capped because the next five years are not the same as the next twenty. A reserve life of about ten years is strong for a producer, but the 2046 test asks a different question. CNOOC must keep replacing reserves, funding development, managing mature-field decline, handling decommissioning and carbon costs, and navigating state/geopolitical constraints. The evidence supports a five-year value runway. It does not support a twenty-year high-return compounding runway with the confidence required for a premium compounder score.

7. Moat Analysis

The moat appendix is controlling for the moat score. It gives CNOOC credit for scale economies, regulatory/strategic access, technical capability, high-trust procurement, cost position, reserve replacement, and balance-sheet resilience. It then fails the moat gate because those advantages do not produce customer-level pricing power or a durable non-commodity profit pool.

The pricing-power test is especially important. CNOOC sells crude oil, liquids, and gas. Crude oil sales prices are benchmark-linked. Natural gas has more contractual structure, but gas revenue is smaller than crude/liquids and does not change the core economic identity. The company can be low cost; it cannot set the global oil price. In FY2025, realized oil fell to US$66.47/bbl from US$76.75/bbl in FY2024, and E&P segment profit fell even though production grew. That is the commodity producer fingerprint.

The moat can still be valuable for a value investor. Low all-in cost means CNOOC can survive and earn through price cycles better than higher-cost producers. Offshore China strategic access may protect acreage and long-term production relevance. Guyana and Brazil exposure gives growth. But the CS rubric does not ask whether the company is resilient enough to be cheap. It asks whether high returns are protectable for long periods. On that question, the evidence supports a low moat score.

8. Accounting and Capital Allocation Analysis

Accounting and financial quality are a relative strength. QF passed 8/8 reconciliation checks. The run explicitly replaced empty or misperiodized FMP product/quarterly data with official CNOOC sources. The data package contains a commodity-producer disclosure inventory rather than relying on a generic statement export. Cash conversion is strong: TTM CFO was RMB206.916bn against TTM net income of RMB124.663bn, and TTM FCF was RMB92.354bn after heavy capex. The balance sheet is conservative, with FY2025 cash and short-term investments around RMB240.8bn, total debt around RMB69.8bn, and negative net debt / EBITDA.

The score is not perfect because disclosure limitations matter. Quarterly segment economics are not disclosed. China versus overseas revenue and profit are not disclosed. Project-level economics are not disclosed. Asset-level cost and reserve data are not disclosed. Those are not fatal for the ER2 run because the files label the gaps and use conservative proxies, but they are important for a scoring system that wants precise ROIIC and reinvestment economics.

Capital allocation is coherent. The company is using cash to fund exploration/development, maintain reserve life, grow production, and pay dividends. Acquisition spend is not a dominant feature, which is positive for an upstream company where serial dealmaking can destroy value. The payout ratio floor of at least 45% for 2025-2027 is useful because it turns part of the earnings yield into visible shareholder cash.

The cap is governance. CNOOC Group controls about 62.13% of the listed company. Related-party flows are large, including services, product sales, finance-company deposits, and parent-linked arrangements. The management appendix sets the management gate at YELLOW, not PASS, because the operating organization is strong but the current leadership team is recently reset and minority-shareholder alignment is structurally unresolved. That prevents a high capital-allocation score.

9. 20% Return Underwriting

The ER2 synthesis P/E 15 test passes in all cases. At HKD20.24 per share and HKD/CNY 0.8657, the CNY price is about 17.52. Required FY+5 EPS for a 15x P/E is only RMB1.17. The synthesis model produces FY+5 EPS of RMB1.72 in bear, RMB2.89 in base, and RMB3.69 in bull. The base-case P/E 15 cushion is 147.2%.

That is a strong value signal. It is not the same as a 20% return underwrite without multiple expansion. The current TTM P/E is about 6.7x using CNY17.52 and TTM EPS of RMB2.62. If the exit multiple stays near the current 6.7x, base-case FY+5 EPS of RMB2.89 implies a terminal value of about CNY19.35 per share. Add a rough five-year dividend stream using a 45% payout on an average EPS path near RMB2.75, and cumulative dividends are about RMB6.2 per share before FX and timing. Total value would be roughly CNY25.6, producing a high-single-digit annualized return from CNY17.52. That is good, but not 20%.

To reach 20% annualized from the current price, the ending value plus dividends needs to be about CNY43.6 after five years. The base case can exceed that only if the terminal multiple rerates toward 15x or if EPS materially exceeds the base case. A 15x base-case terminal value plus dividends produces an indicative IRR above 20%, but that is exactly the kind of multiple expansion reliance the CS rubric penalizes.

The lower-price math is blunt. Using the base-case no-expansion value framework of about CNY25.6 total value after five years, the maximum buy price for a 20% annualized return is about CNY10.3 per share, or roughly HKD11.9 at the run FX. That is far below the current translated CNY17.52 price. Therefore, the valuation score is only 6/20 despite the P/E 15 gate passing.

Case	Terminal multiple basis	Terminal EPS	Terminal value	Approx dividends	Indicative IRR from CNY17.52
Bear	Current 6.7x P/E	RMB1.72	CNY11.5	CNY4.9	About -1%
Base	Current 6.7x P/E	RMB2.89	CNY19.4	CNY6.2	About 8%
Bull	Current 6.7x P/E	RMB3.69	CNY24.7	CNY7.1	About 13%
Base with P/E 15	15.0x P/E	RMB2.89	CNY43.3	CNY6.2	About 23%

These are not meant to replace the synthesis valuation gate. They answer the CS rubric's separate question. Cheapness matters. The current price does not price perfection. But a no-expansion 20% annualized case is not supported.

10. Hard Veto Checklist

Hard veto	Status	Evidence
ROIIC below cost of capital with no credible improvement path	Watch	ROIIC is not clearly below cost of capital, but high ROIIC is not proven through the cycle

Hard veto	Status	Evidence
Reported ROIC high only because invested capital is tiny or negative	Pass	CNOOC is asset-heavy; ROIC is not a denominator trick
Growth requires persistent external financing	Pass	Net cash balance sheet and strong CFO fund capex/dividends
Share count rises materially without per-share value creation	Pass	Share count is stable around 47.53bn; no material SBC dilution identified
Management routinely makes large acquisitions without disclosed returns	Pass	Acquisition spend is modest; growth is mainly organic/project driven
FCF consistently lags earnings for structural reasons	Pass	FCF is positive after heavy capex, though capex intensity is structurally high
Cyclicality, regulation, or geopolitics can permanently impair equity	Fail	Commodity price, state control, sanctions/geopolitics, and energy transition are real impairment channels
20% return case requires terminal multiple expansion	Fail	Base no-expansion return is high-single-digit; 20% needs rerating or lower entry price
Company needs flawless execution to justify today's price	Watch	P/E 15 gate has cushion, but base case depends on cost, reserve, capex, and production discipline
Cannot explain moat in one paragraph	Fail	Moat exists as cost/access/execution, but not as a Gideon durable pricing-power moat
Accounting/governance issues impair trust	Watch	Official-source reconciliation is strong; SOE parent control and related-party flows cap trust
Balance sheet risk could wipe out equity holders in downturn	Pass	Net cash and low leverage reduce financial wipeout risk

The two decisive vetoes for this diagnostic score are the commodity/regulatory impairment channel and the requirement for terminal multiple expansion to underwrite a 20% return from the current price. The moat FAIL and 2046 FAIL reinforce both.

11. Final Decision

Compounder Score note: 55/100; score-implied Reject because CNOOC is cheap and cash-generative but remains a commodity E&P business with moat/2046 FAILs and no no-expansion 20% return case.

Business Quality Score note: 49/80; low-cost reserves, cash conversion, net cash, and production execution are real, but ROIIC, pricing power, governance, and 20-year durability are not Gideon-grade.

20% Return UW Score note: 6/20; the P/E 15 gate passes with a 147.2% base-case cushion, but a 20% annualized return from today's price requires multiple expansion toward 15x or a much lower entry price.

Classification: **Reject under the diagnostic compounder rubric**. This is not a claim that the shares cannot work as a value or income idea. It is a claim that the evidence does not meet the stricter compounder standard: high and durable incremental returns, a long reinvestment runway, protectable moat, clean minority-shareholder alignment, and a 20% return case that works without rerating.

12. Machine-Readable JSON


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  "FY2025 proved reserves of 7.773bn BOE and roughly ten-year reserve life support a visible five-year operating runw
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  "Management gate is YELLOW due to new listed-company leadership and SOE parent-control / related-party issues.",
  "ROIIC is not clearly high through the cycle; production and reserves can grow while profit falls with realized oil
  "No-expansion base-case shareholder IRR is high-single-digit, below the 20% diagnostic hurdle."
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  "R&D dollar history and stock-based compensation detail are insufficient for precise adjustments.",
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Appendix CSA - Scoring Audit

CNOOC Limited - Scoring Audit

PATH_RECEIVED: C:\Users\Admin\OneDrive\GPT\ER 2.0\CNOOC Limited\appendix_scoring_audit.md

1. Original vs Audited Scores

This audit reviews the Compounder Score for CNOOC Limited against the ER2 source files in the CNOOC workdir. The original score was already skeptical: 55 / 100, made up of 49 / 80 for Business Quality and 6 / 20 for Valuation / 20% Return Underwriting, with a score-implied classification of Reject. I do not find evidence that the final diagnostic classification should change. CNOOC remains a low-cost, cash-generative upstream operator with a cheap current multiple, but the evidence does not support a Gideon-grade compounder score.

The audited score is reduced to 48 / 100. Business Quality is reduced from 49 / 80 to 42 / 80. The 20% Return Underwriting score remains 6 / 20. This keeps the audit from double-punishing valuation: the original scorer already gave very limited credit to the P/E 15 pass because the no-expansion 20% return case fails. The reduction instead sits where the evidence is thinner: ROIIC, 20-year reinvestment durability, moat depth, accounting visibility for segment economics, and minority-shareholder capital-allocation alignment.

Item	Original	Audited	Notes
Business Quality Score / 80	49	42	Reduced for proxy-heavy ROIIC, commodity-linked margins, moat/2046 FAIL, and governance/disclosure caps
Valuation / 20% Return UW Score / 20	6	6	Preserved; P/E 15 gate passes, but no-expansion base IRR is below 20%
Total Score / 100	55	48	Reject remains the correct diagnostic classification
Classification	Reject	Reject	Below 70, hard vetoes exist, and 20% case is not plausible without rerating

2. Score Reductions and Reasons

The largest reduction is in incremental returns on capital. The compounder appendix awards 16 / 25 and lists a five-year ROIIC estimate near 12% and acquisition-inclusive ROIIC near 11%, with three-year ROIIC unknown. That is directionally useful, but it is not a full ROIIC calculation. The source files show why precision is limited. The data package records five-year ROIC from FMP key metrics of 11.6%, 21.6%, 16.9%, 17.5%, and 14.3%, and it gives a FY2025 NOPAT sanity check, but it also states that commodity prices dominate profitability. The China Offshore appendix shows E&P revenue declined from RMB361.3bn in FY2022 to RMB344.2bn in FY2025 and E&P profit declined from RMB138.1bn to RMB122.2bn even as China production, total production, and reserves grew. That is not a clean high-ROIIC pattern. It may still be good reinvestment for a national offshore producer, but the score should not imply high incremental returns independent of the oil price deck. I reduce incremental returns from 16 / 25 to 13 / 25.

Reinvestment runway is reduced from 13 / 20 to 12 / 20. The five-year runway is real: FY2025 production was 777.3 mmboe, Q1 2026 production was 205.1 mmboe, proved reserves were 7.773bn BOE, reserve life was about ten years, and management targets 780-800 mmboe in 2026 and 810-830 mmboe in 2027. The problem is duration. A ten-year reserve-life base and five-year production plan do not prove a twenty-year high-return runway. The moat appendix explicitly fails the 2046 test because CNOOC can survive as a strategic hydrocarbon producer without compounding capital at Gideon-grade returns.

Durability of moat is reduced from 5 / 15 to 4 / 15. CNOOC deserves credit for cost position, offshore China strategic access, technical scale, reserve replacement, and balance-sheet resilience. But the moat appendix is controlling: Moat gate FAIL and 2046 test FAIL. Pricing power is weak because crude and liquids are benchmark-linked, gas is not large enough to transform the economics, and the company remains a price taker. A low-cost commodity producer can be resilient and still lack a compounder moat.

Accounting and financial quality is reduced from 8 / 10 to 7 / 10. QF passed 8 / 8 checks, TTM CFO of RMB206.916bn and FCF of RMB92.354bn support cash earnings, and the balance sheet is net cash. The reduction is not about reported-statement trust. It is about score precision. Quarterly segment economics, China versus overseas revenue/profit,

project-level economics, hedge/netback tables, asset-level cost, and full recent transcripts are missing. Those gaps directly affect ROIIC, margin durability, and capital-productivity scoring.

Capital allocation is reduced from 7 / 10 to 6 / 10. CNOOC funds capex, keeps leverage low, and has a 45% payout floor. That is real discipline. The cap is also real: CNOOC Group controls about 62.13%, related-party flows are very large, sales to group associates were reported as 59% of revenue, management ownership is not a strong alignment signal, and the current listed-company CEO, chairman, and CFO are all relatively new in role. Management gate YELLOW supports investability with monitoring, not a high capital-allocation score.

3. Unsupported Claims

The evidence does not support a high-confidence claim that CNOOC has a high through-cycle ROIIC engine. The original score does not make that claim aggressively, but the category still gives too much credit relative to the source depth. The files support "competent reinvestment with reserve and production growth"; they do not support "high incremental returns independent of commodity price." Three-year ROIIC is missing, acquisition-inclusive ROIIC is approximate, and the period is distorted by the FY2022 oil-price peak.

The evidence also does not support treating overseas growth assets as a fully controlled compounding engine. The Overseas appendix is careful: Guyana and Brazil are attractive, but Stabroek depends on ExxonMobil, Buzios depends on Petrobras, and CNOOC does not disclose project-level revenue, capex, reserves, or profit. The model uses analytical proxies, not company-reported segment P&L.

No support was found for a strong management-owner alignment claim. The management appendix says professional competence is strong, but director share ownership and transparent long-term per-share incentive evidence are weak. Parent-company control and connected transactions remain central.

4. Calculation Errors

I did not find a hard arithmetic error that invalidates the original total score. The source chain is internally coherent: QF's TTM revenue, net income, EPS, CFO, capex, and FCF tie; synthesis EPS math ties; and the P/E 15 cushion is correctly calculated using the HKD share price translated to RMB.

The calculation weakness is methodological rather than arithmetic. The original score reports ROIIC estimates but does not show enough underlying invested-capital and NOPAT delta math to support a strong subscore. It also leaves three-year ROIIC as null. Under the CSA rules, that should reduce confidence and cap the incremental-return category. The no-expansion return math is directionally sound: current CNY price is about 17.52, base FY+5 EPS is RMB2.89, and a current-multiple exit plus dividends produces only a high-single-digit IRR. A 20% return requires a 15x-type rerating or a much lower entry price.

5. Missing Data

The most important missing data is not cosmetic. CNOOC does not disclose quarterly segment revenue/profit across the TTM period. It does not disclose China versus overseas revenue and profit in a way that ties to official segment profit. It does not disclose basin-level or project-level capex, revenue, reserves, and profit. It does not disclose asset-level cost curves or netbacks. The data package labels those gaps rather than filling them with false precision, which is good research practice, but a compounder score should be capped when the missing data is exactly the evidence needed to prove ROIIC and long-duration reinvestment economics.

FMP product segmentation and transcript endpoints were empty. Official sources control, and the run handled that correctly. The remaining limitation is that official sources themselves do not provide enough granular economics to score CNOOC like a transparent asset-light compounder.

6. Hard-Veto and Threshold Test Audit

The hard vetoes remain in force. Commodity price, regulation, state control, geopolitical risk, and energy-transition risk can permanently impair equity value. The 20% annualized return case from the current price requires terminal multiple expansion toward 15x or a materially lower entry price. The moat is cost/access/execution, not customer-level pricing power.

The score-implied classification must remain Reject under the CS threshold rules. Total score is below 70. Business Quality is below 65 / 80. Valuation / 20% Return Underwriting is below 15 / 20. Base-case IRR without multiple expansion is below 20%. Bear-case IRR is negative to low, not 8-10%. Hard vetoes exist. The 20% case requires multiple expansion. There is no

threshold path to Investable now, Buy only at lower price, or Watchlist under the diagnostic rubric.

7. Final 20% Hurdle Pass/Fail

Final 20% hurdle: FAIL. This does not contradict the ER2 P/E 15 gate. The synthesis P/E 15 test passes with a 147.2% base-case cushion because the current share price is low versus modeled FY+5 EPS. The CSA question is different: can the shareholder earn at least 20% annualized without relying on terminal multiple expansion? The answer is no. The base no-expansion IRR is roughly 8.5%, bear is negative, and bull is roughly 12.7%. The 15x rerating versions work, but that is multiple expansion.

8. Dream Business / Dream Investment Classification

CNOOC is neither a dream business nor a dream investment under this rubric. It is a high-quality upstream commodity operator at a low current multiple. It may be attractive for value or income investors who underwrite oil price, SOE governance, and rerating risk explicitly. It is not a dream business because the moat and 2046 tests fail. It is not a dream investment because the no-expansion 20% return case fails from today's price.

The single biggest reason it does not qualify is that the company must keep reinvesting heavily in a commodity-linked asset base where production and reserves can rise while profit falls with realized prices. That breaks the clean high-ROIIC, long-runway, pricing-power pattern the compounder rubric is designed to find.

9. Stage 7 Scorecard Notes

Compounder Score note: 48/100; score-implied Reject because CNOOC is cheap and cash-generative but remains a commodity E&P business with proxy-heavy ROIIC, moat/2046 FAILs, and no no-expansion 20% return case.

Business Quality Score note: 42/80; low cost, reserves, cash conversion, net cash, and production execution are real, but the score is capped by commodity-driven ROIIC, parent-control governance, disclosure gaps, and weak pricing power.

20% Return UW Score note: 6/20; P/E 15 gate passes with a 147.2% base-case cushion, but the 20% annualized case from today's price requires multiple expansion toward 15x or a materially lower entry price.

10. Auditor JSON

See `compounder_score_audit.json` in this folder for the machine-readable audit output.

Appendix RT - Red Team

CNOOC Limited - Red Team

Stage 0 anchor: today is 2026-06-30. CNOOC Limited's fiscal year ends December 31. The latest reported quarter is Q1 2026, ended 2026-03-31. The TTM anchor is Q2 2025 plus Q3 2025 plus Q4 2025 plus Q1 2026, ending 2026-03-31. The forward horizon used here is 2031-03-31, exactly five calendar years after the TTM end date.

1. The most fragile assumption

The most fragile assumption is not the headline base revenue CAGR of 2.8%. That number is modest enough to look safe. The fragile assumption is that CNOOC can hold high upstream contribution economics while continuing to fund the production and reserve machine that makes the modest revenue path possible. In the Stage 5 model this shows up mainly in the China Offshore E&P Core line: modeled TTM revenue of RMB244.0bn grows at a 2.5% CAGR to RMB276.1bn by 2031-03-31, while the contribution margin only softens from the FY2025 E&P anchor of 35.5% to 34.0%. The overseas sleeve has the same hidden fragility: production rises to 294.0 mmboe, revenue per BOE stays around RMB445, and the profit margin also lands at 34.0%.

That is a much stronger assumption than it first appears. The historical record in the segment appendices says E&P revenue declined from RMB361.3bn in FY2022 to RMB344.2bn in FY2025 and E&P segment profit declined from RMB138.1bn to RMB122.2bn even while China production, total production, and reserves rose. This is the central red-team fact. Production growth did not protect profit when realized oil price normalized from the FY2022 peak. The model is not explicitly assuming a commodity supercycle, but it is assuming that the next five years convert production, reserve additions, and project starts into profit with only limited margin leakage. For an upstream commodity producer, that is where the spreadsheet can be directionally right and economically wrong.

If the China Offshore margin is wrong by 500 bps at the horizon, the Stage 5 EPS moves meaningfully. China base horizon revenue is RMB276.1bn. A 500 bps margin cut is roughly RMB13.8bn of contribution before the synthesis accounting-OI translation and the 70.4% net-income conversion. Using the synthesis conversion logic, that is about RMB9.7bn of net income, or roughly RMB0.20 per share on 47.53bn shares. A 750 bps cut is roughly RMB0.31 per share. The sensitivity table in synthesis shows only a +/-200 bps China revenue CAGR sensitivity and a +/-200 bps overseas margin sensitivity; it does not fully stress the case where cost intensity, fiscal leakage, lower realized prices, and field maturity hit China and overseas margins together. That combined squeeze is the bear case that matters.

The Stage 5 valuation cushion is therefore less useful than it looks. The base P/E 15 gate passes with RMB2.89 of FY+5 EPS against required EPS of RMB1.17, giving a 147.2% cushion. But the margin fragility is not mainly about failing the mechanical P/E 15 gate. It is about whether this is a Gideon-quality compounding engine or just a cheap commodity stock with a dividend. The audited score already says the latter. The red team agrees.

2. The most-likely-to-be-optimistic Stage 5 number

The Stage 5 number most likely to prove optimistic is the base FY+5 EPS of RMB2.89, specifically the bridge that turns segment contribution into an accounting operating-income proxy and then into net income using the FY2025 net-income-to-operating-income conversion of 70.4%. The EPS number is not absurd. It is only modestly above TTM EPS of RMB2.62. But the construction relies on a proxy chain exactly where CNOOC disclosure is thinnest: quarterly segment P&L, China versus overseas revenue/profit, project-level economics, asset-level costs, hedge/netback tables, and basin-level capex productivity are all missing or not disclosed.

The synthesis handles this honestly by labeling the disclosure gaps, but honest labeling does not make the estimate robust. The official segment note gives FY2025 segment profit, while FMP operating income is a different accounting presentation. Stage 5 scales the segment-profit contribution to the FY2025 FMP operating-income relationship and applies a constant below-the-line conversion. That may be the least-bad way to create a complete model, but it is not the kind of foundation on which to underwrite a high-confidence five-year EPS forecast. If CNOOC's future mix is more overseas, more partner-operated, more gas-heavy, more fiscally burdened, or more maintenance-capex intensive, the FY2025 conversion can stop being representative.

The bull EPS of RMB3.69 is the most optimistic stated Stage 5 output. It requires consolidated revenue of RMB527.0bn, a 47.2% accounting OI margin proxy, and net income of RMB175.3bn. That is not my base-case objection because the bull

case is allowed to be optimistic. The red-team objection is that even the base EPS has a proxy-heavy conversion layer that can survive arithmetic checks while still overstating economic durability. A model can pass 11 tie-outs and still be too smooth.

3. The strongest bear case, in its strongest form

CNOOC is not being mispriced because the market forgot how to divide price by earnings; it is being discounted because the earnings are commodity-linked, state-influenced, disclosure-limited, and capital hungry. The company can hit its 2026 and 2027 production targets and still fail the Gideon test if those barrels require sustained RMB112-122bn annual capex, if all-in cost drifts from the high-US$20s to the mid-US$30s per BOE, and if reserve life can only be defended with lower-return reinvestment. The China offshore core is privileged, but depletion is undefeated; the overseas growth sleeve is attractive, but Stabroek and Buzios are partner-operated or partner-dependent and CNOOC does not disclose project-level economics. In this bear case, the numbers show up within the next two years as rising all-in cost, capex above budget, reserve life below 8 years, free cash flow compression despite production growth, and no evidence that the minority shareholder is the controlling optimization variable.

The mechanism is not a single disaster. It is a slow squeeze. Realized oil price normalizes lower, service and development costs rise, domestic offshore adjustment projects become more capital intensive, overseas projects continue to ramp but with host-country/fiscal leakage, and the 45% payout floor competes with strategic reinvestment. The P/E can still look low during the transition. That is what makes the bear case dangerous: the stock can appear cheap on near-term EPS while the quality of incremental capital deteriorates.

4. Cross-examination of management commentary

Management's production target is the first statement to cross-examine. The data package records the official 2026 target of 780-800 mmboe and the prior 2027 target of 810-830 mmboe. The skeptical read is that the target is a volume target, not a return target. FY2025 production was 777.3 mmboe and Q1 2026 production was 205.1 mmboe, so delivery is plausible. But the question for Gideon is not whether CNOOC can produce barrels; it is whether the next barrels compound capital at high returns after capex, fiscal take, carbon costs, service inflation, and depletion. If production growth comes with capex intensity above the official budget or FCF erosion, the commentary was directionally true but equity-value false.

The second statement is the 2026 capex budget of RMB112-122bn. The optimistic read is that CNOOC can keep investing near FY2025 levels while growing production. The skeptical read is that the budget is a narrow corridor for a very large operating system with mature China offshore assets and partner-driven overseas projects. Q1 2026 capex was RMB33.0bn, up 19.1% year over year in the official Q1 deck, while all-in cost rose to US$28.41/boe. One quarter does not break the case, but it is not a clean proof of declining capital intensity either. If annual capex lands above RMB122bn while production is only at the low end of the 780-800 mmboe target, the "quality and efficiency" narrative should be treated as unproven.

The third statement is the promise that the annual payout ratio will be no less than 45%. For an income investor, that is attractive. For a compounding investor, it is a constraint. CNOOC has to fund reserve replacement, development, production capitalization, overseas growth, environmental compliance, parent-related flows, and a large dividend at the same time. In a high or normal oil-price environment this can work. In a sustained lower-price environment, the payout floor either consumes retained cash or becomes a governance test: does the parent protect dividends, protect production, or protect minority per-share value? The red team does not give management full credit for all three until the next weak-price period proves it.

The fourth statement is management's exploration and development emphasis. Q1 2026 official materials say the company continued exploration work, made four new discoveries, appraised 12 oil and gas structures, and commissioned three new projects. That is operationally positive. But it also reinforces the reinvestment tax. CNOOC must keep discovering, appraising, commissioning, adjusting, and maintaining assets. The more the story depends on continuous project flow, the less it resembles a high-return asset-light compounder.

5. Stage 5 tie-out reverification

The recency anchor is formally correct. Stage 5 uses TTM through Q1 2026, not FY2025 as if the year were complete. It also avoids annualizing Q1 2026 mechanically, which is the right choice. The problem is not the calendar. The problem is trend quality. Q1 2026 was strong: revenue RMB116.079bn, oil and gas sales RMB97.0bn, net profit attributable RMB39.144bn, realized crude/liquids price US$75.92/bbl, and all-in cost US$28.41/boe. That quarter supports a strong near-term earnings base, but it also embeds a better oil price and higher capex than the prior-year quarter. A five-year model that starts from a TTM containing Q1 strength can look conservative on growth while still being exposed to mean reversion in price and cost.

The share-count path is not the problem. Stage 5 assumes a flat 47.53bn diluted share count, no buybacks, and no material SBC dilution. That is evidence-based and conservative. The dividend path is the more relevant per-share issue. If the company pays out at least 45% of earnings and still funds high capex, per-share value creation depends on the reinvested half of earnings earning good returns. The score audit says ROIIC is proxy-heavy and not fully rebuilt from explicit invested-capital and NOPAT deltas. That is precisely where the burden of proof should sit.

The segment growth paths do not obviously exceed recent operating trends. China base revenue CAGR is 2.5% versus China production growth of 7.5% from FY2022 to FY2025. Overseas base production CAGR is 3.5% versus Q1 2026 overseas growth of 12.3% year over year. Bridge revenue grows about 2.0%. The issue is not too much modeled growth. The issue is modeled profitability on the growth. CNOOC can grow volumes while earnings stagnate if realized prices, fiscal terms, cost per BOE, and depreciation/depletion move against it. The model's growth restraint does not neutralize the margin and capital-productivity risk.

Recent outside source checks do not weaken the operational case; they sharpen the control question. ExxonMobil's Yellowtail release says Stabroek installed capacity rose above 900,000 bopd and that CNOOC Petroleum Guyana holds 25% of the block, while ExxonMobil operates with 45%. Petrobras' Buzios 6 release says P-78 adds 180,000 bopd capacity and that Buzios is operated by Petrobras in partnership with CNOOC, CNODC, and PPSA. These are attractive assets. They are also proof that the highest-profile overseas growth is not fully controlled by CNOOC. Partner execution can help CNOOC, but it also means CNOOC's moat is partly borrowed.

6. Score-derived 20% return claim most likely to be wrong

The audited scoring appendix already rejects the 20% no-expansion return case. I agree with that conclusion. The audited score is 48/100, classification Reject, with Business Quality 42/80 and Valuation / 20% Return Underwriting 6/20. The no-expansion IRRs are approximately 8.5% in base, -1.3% in bear, and 12.7% in bull. The only versions that reach or exceed 20% depend on a 15x-type terminal rerating, with the base case at roughly 23.1% only after that multiple expansion. That is not a self-funded compounder return. It is a cheap-stock rerating thesis.

The return claim most likely to be wrong is any statement that the P/E 15 cushion implies a 20% investment. The P/E 15 gate is a valuation safety test. It says the stock is inexpensive relative to a conservative FY+5 EPS model. It does not say the stock compounds at 20% without rerating. The score audit correctly separates those two ideas. If the final narrative blurs them, the red team rejects it.

The first assumption that would break the 20% case is exit multiple, not NOPAT CAGR. CNOOC may produce solid earnings and dividends, but if the market continues to assign a low multiple because of commodity exposure, SOE control, geopolitical risk, weak pricing power, and energy-transition duration risk, the shareholder earns an income/value return, not a Gideon return. A 15x terminal multiple on a state-linked commodity E&P company with a Moat FAIL and 2046 FAIL is an aggressive underwriting input, not a base-rate assumption.

7. The signal that forces an exit

The primary exit signal should be all-in cost and reserve life together, because they measure the core red-team fear: CNOOC is forced to spend more to defend the same production base. Exit if, over the next two reported periods after Q1 2026, all-in cost exceeds US$35/boe and management does not simultaneously keep reserve life at or above 9 years with capex inside the RMB112-122bn annual budget corridor. The exact reporting cadence may be quarterly for cost and annual for reserve life, so the monitor should use the next quarterly/interim cost data and the next annual reserve update together.

Why this threshold? The moat appendix already identifies all-in cost above US$35/boe as a break signal. CNOOC's recent advantage is all-in cost around US$28-30/boe. A move above US$35/boe would be a structural change, not ordinary noise, especially if production targets still require heavy capex. Reserve life below 9 years would show that the reinvestment machine is not replacing depletion with enough economic inventory. If both happen, the investment case should be rewritten from "low-cost producer with growth and dividends" to "capital-intensive commodity producer defending volume at deteriorating returns."

Secondary exit signals are also worth tracking. Downgrade immediately if related-party sales or services grow materially faster than revenue or production without better pricing disclosure. Downgrade if the 45% payout floor is cut while parent-related flows remain large. Downgrade if overseas growth slips because of Stabroek/Buzios partner delays or fiscal resets while the model still gives the overseas sleeve 3.5% production CAGR. Downgrade if Q1 2026's all-in cost increase becomes a trend rather than a one-quarter tax/FX issue.

8. Conviction at the end of red team

The thesis does not survive as a Gideon compounder thesis. It may survive as a value/income thesis for an investor willing to underwrite oil price, SOE governance, and a rerating. Those are different theses. The P/E 15 gate pass is real, and the base Stage 5 model is not reckless. But the red team would not let that mechanical valuation pass become a BUY because the Management gate is only YELLOW, the Moat gate is FAIL, the 2046 test is FAIL, and the audited compounder score is 48/100 Reject.

The synthesis should be rewritten around this sentence: CNOOC is a low-cost, strategically advantaged upstream operator whose stock is cheap on FY+5 earnings, but the company does not prove high-return, minority-aligned, long-duration compounding because production and reserves can rise while profit and ROIIC remain hostage to commodity price, capex intensity, partner execution, parent control, and disclosure gaps. That is the strongest honest conclusion. It is not a broken company. It is not a Gideon BUY.

The most optimistic defensible stance is conditional WATCH for a value framework, not for the strict Gideon compounder framework. Upgrade pressure would require evidence through a weaker Brent period that all-in cost stays below US$30-32/boe, reserve life stays near 10 years, capex does not exceed the budget corridor, related-party economics remain clean, and no-expansion IRR moves toward 20% without assuming a 15x terminal multiple. Until that evidence exists, the red team conclusion is Reject for the compounder score and PASS/Do Not Buy for ER2, despite the P/E 15 gate pass.

Appendix D - Data Package (raw historicals)

CNOOC Limited - Data Package

PATH_RECEIVED: C:\Users\Admin\OneDrive\GPT\ER 2.0\CNOOC Limited\data_package.md

Stage 0 anchor

- Today: 2026-06-30.
- Fiscal year ends December 31.
- Latest reported quarter: Q1 2026 ended 2026-03-31.
- TTM: Q2 2025 + Q3 2025 + Q4 2025 + Q1 2026 -> TTM ending 2026-03-31.
- Forward horizon: 2031-03-31.

This file is Sub-Agent D's Production Mode data package for CNOOC Limited, ticker 0883.HK / HKEX 00883. The cleared quantitative foundation is the historical numerical base. It was read before this file was written and controls the TTM bridge, FMP discrepancy log, fiscal anchor, and the official-source override framework. Incremental source support for this package comes from live FMP pulls and live official CNOOC sources saved under `C:\Users\Admin\OneDrive\GPT\ER 2.0\CNOOC Limited\raw\D_live_20260630`. The local warehouse cache was not used. Financial statement amounts are RMB unless otherwise noted. Share price and Hong Kong dividends are HKD. Oil and gas prices and costs are in US dollars where CNOOC reports them that way.

CNOOC is a Hong Kong and Shanghai listed foreign/local-exchange issuer rather than a U.S. domestic filer. Official CNOOC annual reports, interim reports, quarterly reports, results presentations, and press releases control wherever FMP is empty, stale, misperiodized, or less granular. FMP annual consolidated statements were useful for a five-year financial table, and FY2025 FMP revenue tied to the official annual report. FMP product segmentation returned empty arrays for both annual and quarterly pulls. FMP transcript pulls for FY2026 Q1 and FY2025 Q4 also returned empty arrays. Therefore, this package uses official CNOOC disclosures for product sales, production, reserves, costs, capex split, projects, and management commentary.

0a. Industry classification and disclosure inventory

Industry classification: commodity energy producer, specifically offshore oil and gas exploration and production with a trading and marketing segment. Reporting regime: Hong Kong and Shanghai listed foreign issuer with annual and interim reports, local-exchange quarterly reports, and results presentations. Fiscal year: December 31. Controlling official source set: CNOOC annual reports, interim reports, quarterly reports, results presentations, business-strategy press releases, and operating-results press releases. FMP status: annual consolidated income, balance sheet, cash flow, key metrics, ratios, quote, and profile were pulled live; FMP annual product segmentation and quarterly product segmentation returned `[]`; FMP 10-K-style JSON did not populate for the symbol; FMP transcripts returned `[]` for the checked recent quarters.

The oil and gas checklist is mandatory here because CNOOC is a commodity producer and because FMP segment/product data is empty. The industry KPI inventory covers production by region, proved reserves, reserve replacement, reserve life, realized prices, lifting or all-in cost, cost per BOE, capex split, major project startups, product revenue, net income, operating cash flow, free cash flow, shareholder returns, FX/accounting basis, and omissions.

Source family checked live	Raw evidence saved under WORKDIR	What it controls	Completeness status
FMP quote and profile	`raw\D_live_20260630\d_fmp_quote_0883_HK.json`; `d_fmp_profile_0883_HK.json`	Price, market cap, listing, company identity	Included
FMP annual and quarterly income statements	`d_fmp_income_annual_0883_HK.json`; `d_fmp_income_quarter_0883_HK.json`	Five-year consolidated historicals; FMP discrepancy check	Included, with official override where needed
FMP balance sheet, cash flow, key metrics, ratios	`d_fmp_balance_*.json`; `d_fmp_cashflow_*.json`; `d_fmp_key_metrics_*.json`; `d_fmp_ratios_*.json`	Cash flow, capex, FCF, ROIC, leverage, balance sheet	Included

Source family checked live	Raw evidence saved under WORKDIR	What it controls	Completeness status
FMP product segmentation	`d_fmp_revenue_product_annual_0883_HK.json`; `d_fmp_revenue_product_quarter_0883_HK.json`	Mandatory product endpoint check	Empty arrays; official source controls
FMP transcripts	`d_fmp_transcript_2026_Q1_0883_HK.json`; `d_fmp_transcript_2025_Q4_0883_HK.json`	Transcript availability check	Empty arrays; no call quotes fabricated
Official annual reports FY2021-FY2025	`cnooc_2021_annual.pdf` through `cnooc_2025_annual.pdf` and text extracts	Five-year operating summary, product revenue, segment note, reserves, prices, costs	Included
Official 2025 interim, Q3 2025, and Q1 2026 reports	`cnooc_2025_interim.pdf`; `cnooc_2025_q3.pdf`; `cnooc_2026_q1.pdf`	TTM bridge, latest quarter, production, oil/gas sales	Included
Official results presentations	`cnooc_2025_annual_results_presentation.pdf`; `cnooc_2026_q1_results_presentation.pdf`; other 2025 decks	Capex split, all-in cost, project startups, production target	Included
Official press releases	`cnooc_pr_*.html` and `cnooc_pr_*.txt`	Management commentary, CEO appointment, business strategy, operating releases	Included

Dataset / table family	Official source searched	Search terms or table names	Years available	Included in data package?	If excluded, why	Downstream relevance
Segment economics	FY2021-FY2025 annual reports, Note 5 Segment Information	External revenue; intersegment revenue; total revenue; segment profit; E&P; Trading business; Corporate	FY2021-FY2025; H1 2025 also exists	Yes	Quarterly segment economics not disclosed	Segment appendices and synthesis
Production by region and product	Annual operating summary; 2025 interim; Q3 2025 report; Q1 2026 report	Net production; China; Overseas; crude and liquids; natural gas	FY2021-FY2025 plus Q1 2026 and TTM bridge	Yes	None	Volume growth and project ramp
Reserves, RRR, reserve life	Annual operating summary; annual results release	Net proved reserves; reserve replacement ratio; reserve life	FY2021-FY2025	Yes	FY2025 RRR was not disclosed as a clean table value; package includes a calculated implied RRR from official reserves and production	Durability and depletion
Realized prices	Annual operating summary; Q1 2026 presentation	Realized oil price; realized gas price	FY2021-FY2025 plus Q1 2026	Yes	None	Commodity sensitivity
Lifting cost and cost per BOE	Annual reports and presentations	All-in cost; operating expenses per BOE; opex; cost	FY2021-FY2025 plus Q1 2026	Yes	Lifting cost label not separately used; CNOOC reports operating expense per BOE and all-in cost	Cost position
Capex split	Annual report capex table; annual and Q1 presentations	Exploration; development; production capitalization; other; China; overseas	FY2024-FY2025 plus Q1 2026; budget for 2026	Yes	Longer category history not reconstructed beyond official comparable tables	Production growth credibility
Major projects and startups	Annual report; Q3 release; Q1 release; Buzios6 release	Kenli; Yellowtail; Huizhou; Penglai; Buzios6; commenced production	Latest 12 months plus FY2025	Yes	No project-level revenue/profit disclosed	Growth and execution
Product revenue	Annual MD&A; Q1 2026 presentation	Oil and gas sales; crude and liquids; natural gas; marketing revenues	FY2021-FY2025 plus Q1 2026	Yes	No project-level product revenue	Segment and commodity mix
Revenue, NI, OCF, FCF	FMP annuals; official annuals; QF bridge	Revenue; net profit attributable; operating cash flow; free cash flow	FY2021-FY2025 plus TTM	Yes	None	Model base
Shareholder returns	Annual reports; annual presentation; FMP cash flow	Dividend payout; dividends paid; buybacks; annual dividend	FY2021-FY2025 plus 2026 policy	Yes	Buybacks are not a material disclosed return line in FMP FY2025	Capital allocation
FX and accounting basis	Annual reports; FMP quote; QF FX quote	RMB; HKD; CNY; HKD/CNY; IFRS/HKFRS; local quarterly accounting	Current	Yes	None	Valuation translation
Management commentary	FMP transcripts; official press releases and presentations	CEO; Chairman; production target; capex budget; payout ratio	Recent official releases and decks	Yes	FMP transcripts empty, so no call transcript quotes included	Forward assumptions

KPI family	Granularity	FY-5 2021	FY-4 2022	FY-3 2023	FY-2 2024	FY-1 2025	Latest interim / TTM	Source path
Production	Total net production mmboe	573.0	623.8	678.0	726.8	777.3	TTM 793.6; Q1 2026 205.1	Annual operating summaries; QF P4; Q1 report
Production	China production mmboe	391.2	432.5	466.4	492.7	536.9	Q1 2026 140.0	Annual operating summaries; Q1 report
Production	Overseas production mmboe	162.3	170.8	191.3	234.0	240.4	Q1 2026 65.1	Annual operating summaries; Q1 report
Product output	Crude and liquids production mmbbls	442.0	478.7	514.5	567.1	599.7	Q1 2026 158.5	Annual operating summaries; Q1 presentation
Product output	Natural gas production bcf	647.6	723.5	809.0	929.4	1,037.3	Q1 2026 272.5	Annual operating summaries; Q1 presentation
Reserves	Net proved reserves mmboe	5,727.6	6,238.6	6,784.2	7,270.6	7,773.1	Q1 not updated	Annual operating summaries
Reserve life	Years including equity method investees	10.0	10.0	10.0	10.0	10.0	Q1 not updated	Annual operating summaries
Reserve replacement	RRR including equity method investees	162%	182%	180%	167%	Implied ~165% calculated as (7,773.1 - 7,270.6 + 777.3) / 777.3; not disclosed as a clean company table value	Q1 not updated	Annual operating summaries; annual release
Realized price	Oil US$/bbl	67.89	96.59	77.96	76.75	66.47	Q1 2026 75.92	Annual operating summaries; Q1 presentation
Realized price	Gas US$/mcf	6.95	8.58	7.98	7.72	7.95	Q1 2026 7.69	Annual operating summaries; Q1 presentation
Cost	All-in cost US$/boe	29.49	30.39	28.83	28.52	27.90	Q1 2026 28.41	Annual reports; presentations
Cost	Operating expense per BOE US$/boe	7.83	7.74	7.54	7.46	7.61	Q1 not separately disclosed	Annual MD&A
Product revenue	Oil and gas sales RMBbn	222.1	353.0	327.9	355.6	335.7	Q1 2026 97.0	Annual MD&A; Q1 report
Product revenue	Crude and liquids sales RMBbn	193.0	311.0	282.4	307.8	279.8	Q1 2026 83.1	Annual MD&A; Q1 presentation
Product revenue	Natural gas sales RMBbn	29.1	41.9	45.4	47.8	55.9	Q1 2026 13.9	Annual MD&A; Q1 presentation
Consolidated	Revenue RMBbn	246.1	422.2	416.6	420.5	398.2	TTM 407.4	FMP annuals; QF P4
Consolidated	Net income attributable RMBbn	70.3	141.7	124.1	138.0	122.1	TTM 124.7	FMP annuals; QF P4
Consolidated	Operating cash flow RMBbn	147.2	221.6	209.6	215.1	205.6	TTM 206.9	FMP annuals; QF P6
Consolidated	FCF RMBbn	74.1	140.2	88.7	91.7	96.9	TTM 92.4	FMP annuals; QF P6

Section 0a omissions: FMP product data is empty; FMP transcript data is empty; quarterly segment economics are not disclosed; region-level revenue and profit are not disclosed; project-level revenue, capex, reserves, and profit are not disclosed; hedge book and netback tables were not found; FY2025 reserve replacement ratio is calculated from official reserve and production figures because a clean company-disclosed FY2025 RRR table value was not located. These are recorded as explicit gaps rather than silently replaced with estimates. The official data is nevertheless sufficient for a production-grade energy disclosure inventory because it covers five-year production, reserves, realized prices, cost, capex, product revenue, consolidated financials, shareholder returns, and recent project status.

1. Reporting structure and taxonomy

CNOOC reports four operating segments: E&P, Trading business, Corporate, and Eliminations. E&P is the exploration, development, production, and sale of crude oil and natural gas. Trading business handles oil and gas marketing flows and is

the route through which some E&P-produced oil and gas reaches customers. Corporate includes treasury, headquarters, financing, investment, and other corporate items. Eliminations remove intersegment revenue and profit effects. The official segment footnote is crucial because external revenue alone gives a misleading view of economics: in FY2025 Trading business had RMB311.6bn of external revenue but only RMB4.5bn of segment profit, while E&P had RMB86.2bn of external revenue, RMB344.2bn of total revenue including intersegment flows, and RMB122.2bn of segment profit.

The taxonomy has been stable across the FY2021-FY2025 annual segment notes. The main caveat is classification rather than a restatement. CNOOC states in the segment note that certain oil and gas produced by the E&P segment are sold via the trading business segment and that, for the chief operating decision maker's assessment of segment performance, those revenues are reclassified back to E&P. This means downstream subagents should use E&P total revenue and segment profit for upstream economics, Trading business margin for marketing economics, and consolidated revenue/TTM figures for the latest-period base. Do not allocate quarterly consolidated results to E&P, Trading, Corporate, and Eliminations; quarterly segment profit is not disclosed.

Geographic reporting is operational, not accounting-segment reporting. CNOOC discloses production and reserves by China and overseas, and by basins or regions such as Bohai, Western South China Sea, Eastern South China Sea, East China Sea, onshore China, Asia excluding China, Oceania, Africa, North America excluding Canada, Canada, Europe, and South America. It does not disclose revenue or profit by these regions in a form that ties to segment operating profit.

Segment	Description	FY2025 external revenue RMBbn	FY2025 total revenue RMBbn	FY2025 segment profit RMBbn	FY2025 share of consolidated external revenue	Primary source
E&P	Exploration, development, production, and sale of crude oil and natural gas	86.2	344.2	122.2	21.6%	2025 annual report Note 5
Trading business	Oil and gas marketing/trading route, including some E&P volumes	311.6	53.8	4.5	78.2%	2025 annual report Note 5
Corporate	Treasury, headquarters, associate/investment and other corporate items	0.5	1.6	4.8	0.1%	2025 annual report Note 5
Eliminations	Intersegment elimination and consolidation adjustments	0.0	-1.4	-9.3	0.0%	2025 annual report Note 5
Consolidated	Total group	398.2	398.2	122.1	100.0%	2025 annual report Note 5

2. Consolidated historicals, five years

The consolidated historical table uses live FMP annual statements for consistency and cross-checks to official annual reports. FY2025 revenue of RMB398.220bn and net income attributable of RMB122.082bn tie to the official annual report and QF override log. FMP labels statement currency as CNY/RMB. The ROIC row uses FMP key metrics because it supplies a consistent invested-capital denominator; a manual numerator/denominator check is provided below the table.

Metric	FY-5 2021	FY-4 2022	FY-3 2023	FY-2 2024	FY-1 2025	Source
Revenue RMBbn	246.1	422.2	416.6	420.5	398.2	FMP annual income statement; official annual cross-check
Operating income RMBbn	98.2	195.8	173.5	190.2	173.4	FMP annual income statement
Operating margin	39.9%	46.4%	41.6%	45.2%	43.5%	Calculated
Net income attributable RMBbn	70.3	141.7	124.1	138.0	122.1	FMP annual income statement; official annual cross-check
EPS diluted RMB	1.57	2.98	2.61	2.90	2.57	FMP annual income statement; official annual cross-check
Diluted share count bn	44.7	47.5	47.5	47.5	47.5	FMP annual income statement
Cash capex RMBbn	73.1	81.4	120.9	123.4	108.7	FMP annual cash flow; sign converted to positive
Free cash flow RMBbn	74.1	140.2	88.7	91.7	96.9	FMP annual cash flow

Metric	FY-5 2021	FY-4 2022	FY-3 2023	FY-2 2024	FY-1 2025	Source
ROIC	11.6%	21.6%	16.9%	17.5%	14.3%	FMP key metrics

ROIC calculation note: FMP key metrics provide return on invested capital and invested capital. The sanity check uses NOPAT defined as operating income multiplied by one minus the effective tax rate, divided by invested capital. For FY2025, operating income was about RMB173.4bn and the effective tax rate was about 28.0%, giving NOPAT around RMB124.9bn. FMP invested capital was roughly RMB874bn, which maps to a mid-teens ROIC and is consistent with the reported key-metric ROIC. The important analytical point is that CNOOC's ROIC remains high for a commodity producer, but it is still highly sensitive to realized oil prices: 2022 was the high-price ROIC peak, while 2025 remained profitable despite weaker realized oil.

The TTM base from QF is not the same as FY2025. It is Q2 2025 plus Q3 2025 plus Q4 2025 plus Q1 2026. The controlling TTM values are revenue RMB407.445bn, net income attributable RMB124.663bn, EPS RMB2.62, production 793.6 mmboe, operating cash flow RMB206.916bn, cash capex RMB114.562bn, and FCF RMB92.354bn.

3. Segment historicals, five years

Each segment table below uses official annual report Note 5 data. Values are RMB billions unless the row states percentage. Segment profit is CNOOC's disclosed segment profit, not U.S.-style operating income. E&P total revenue includes intersegment reclassification; Trading external revenue includes customer-facing marketing flows. Both views are needed.

E&P	FY-5 2021	FY-4 2022	FY-3 2023	FY-2 2024	FY-1 2025	Source
External revenue RMBbn	96.2	101.7	92.8	105.1	86.2	Annual report Note 5
Total revenue RMBbn	227.5	361.3	339.0	362.2	344.2	Annual report Note 5
YoY total revenue	N/M	58.9%	-6.2%	6.8%	-5.0%	Calculated
Segment profit RMBbn	68.7	138.1	121.9	137.6	122.2	Annual report Note 5
Segment profit margin on total revenue	30.2%	38.2%	36.0%	38.0%	35.5%	Calculated

Trading business	FY-5 2021	FY-4 2022	FY-3 2023	FY-2 2024	FY-1 2025	Source
External revenue RMBbn	149.4	320.1	323.4	314.8	311.6	Annual report Note 5
Total revenue RMBbn	18.1	60.5	79.3	55.3	53.8	Annual report Note 5
YoY total revenue	N/M	233.9%	31.1%	-30.3%	-2.6%	Calculated
Segment profit RMBbn	2.1	2.2	4.2	4.0	4.5	Annual report Note 5
Segment profit margin on total revenue	11.6%	3.6%	5.3%	7.2%	8.3%	Calculated

Corporate	FY-5 2021	FY-4 2022	FY-3 2023	FY-2 2024	FY-1 2025	Source
External revenue RMBbn	0.5	0.4	0.5	0.5	0.5	Annual report Note 5
Total revenue RMBbn	0.7	1.3	0.7	1.4	1.6	Annual report Note 5
YoY total revenue	N/M	82.0%	-45.6%	100.6%	14.8%	Calculated
Segment profit RMBbn	10.6	3.4	2.9	14.1	4.8	Annual report Note 5
Segment profit margin on total revenue	1504.7%	260.4%	419.0%	1002.4%	298.2%	Calculated, not economically meaningful

Eliminations	FY-5 2021	FY-4 2022	FY-3 2023	FY-2 2024	FY-1 2025	Source
External revenue RMBbn	0.0	0.0	0.0	0.0	0.0	Annual report Note 5
Total revenue RMBbn	-0.2	-0.9	-2.4	1.7	-1.4	Annual report Note 5
YoY total revenue	N/M	N/M	N/M	N/M	N/M	Calculated but not meaningful
Segment profit/loss RMBbn	-11.1	-1.9	-4.9	-17.6	-9.3	Annual report Note 5
Segment margin	N/M	N/M	N/M	N/M	N/M	Not meaningful

Consolidated segment tie	FY-5 2021	FY-4 2022	FY-3 2023	FY-2 2024	FY-1 2025	Source
Consolidated revenue RMBbn	246.1	422.2	416.6	420.5	398.2	Annual report Note 5
Consolidated profit RMBbn	70.3	141.7	124.1	138.0	122.1	Annual report Note 5
Segment profit tie	E&P + Trading + Corporate + Eliminations	Ties to consolidated profit	Ties to consolidated profit	Ties to consolidated profit	Ties to consolidated profit	QF P5

Segment modeling guardrail: use FY2025 segment data as the accounting base and the QF TTM data as the consolidated current-period bridge. Do not create a Q1 2026 segment split from production mix or product revenue. That would overstate precision and would confuse a sales-routing disclosure with upstream economic ownership.

4. Product and sub-segment historicals

CNOOC separately discloses oil and gas sales by crude/liquids and natural gas, plus marketing revenue. These are product or sales-route disclosures, not clean accounting segments. The company also discloses production by product and region, proved reserves, reserve life, reserve replacement ratio for most years, realized oil and gas prices, and cost per BOE. It does not disclose project-level revenue or project-level profit.

Segment	Product	What it is	Dollar disclosure?	Last 5 years revenue plus source
E&P / Trading route	Crude and liquids sales	Crude oil and liquids sales net of royalties and obligations	Yes	RMBbn: 2021 193.0; 2022 311.0; 2023 282.4; 2024 307.8; 2025 279.8. Official annual MD&A
E&P / Trading route	Natural gas sales	Natural gas and LNG sales net of royalties and obligations	Yes	RMBbn: 2021 29.1; 2022 41.9; 2023 45.4; 2024 47.8; 2025 55.9. Official annual MD&A
Trading business	Marketing revenues	Marketing and trading revenue outside the oil and gas sales note	Yes	RMBbn: 2021 18.1; 2022 60.4; 2023 79.3; 2024 55.1; 2025 53.7. Official revenue note
E&P	China production	China oil and gas output by BOE and product	No revenue by region	Volumes disclosed; no China revenue/profit table found
E&P	Overseas production	Overseas oil and gas output by BOE and product	No revenue by region	Volumes disclosed; no overseas revenue/profit table found
E&P	Individual projects	Kenli, Yellowtail, Buzios, Mero, Huizhou, Penglai and others	No	Project status disclosed; project revenue/profit not separately disclosed

Product KPI	FY-5 2021	FY-4 2022	FY-3 2023	FY-2 2024	FY-1 2025	Latest quarter	Source
Oil and gas sales RMBbn	222.1	353.0	327.9	355.6	335.7	Q1 2026 97.0	Annual MD&A; Q1 report
Crude and liquids sales RMBbn	193.0	311.0	282.4	307.8	279.8	Q1 2026 83.1	Annual MD&A; Q1 presentation
Natural gas sales RMBbn	29.1	41.9	45.4	47.8	55.9	Q1 2026 13.9	Annual MD&A; Q1 presentation
Sales volume mmboe excluding equity-accounted investees	552.1	603.6	653.2	712.3	N/D in comparable table	N/D on same basis	Annual MD&A
Crude and liquids sales volume mmbbls	440.5	478.7	514.5	562.9	584.0	Q1 2026 N/D	Annual MD&A; Q1 product sales dollars only
Natural gas sales volume bcf	648.7	726.2	807.4	870.3	984.0	Q1 2026 N/D	Annual MD&A; Q1 product sales dollars only
Realized oil price US$/bbl	67.89	96.59	77.96	76.75	66.47	Q1 2026 75.92	Annual operating summaries; Q1 presentation
Realized gas price US$/mcf	6.95	8.58	7.98	7.72	7.95	Q1 2026 7.69	Annual operating summaries; Q1 presentation

Segment	Product	Disclosure method	Last four-quarter trend	Source
E&P / Trading route	Oil and gas sales	Dollar sales and YoY growth in official Q1/Q3 releases; derived Q2/Q4 dollars from cumulative reports	Q1 2026 oil and gas sales +9.9% YoY; Q3 2025 9M oil/gas sales RMB255.5bn; Q4 derived from FY less 9M	Q1 2026 release; Q3 2025 release; QF bridge
E&P / Trading route	Crude and liquids	Dollar sales, volume, realized price	Q1 2026 crude/liquids sales +11.3% YoY; realized oil price +4.5% YoY	Q1 2026 presentation
E&P / Trading route	Natural gas	Dollar sales, volume, realized price	Q1 2026 natural gas sales +2.3% YoY; realized gas price -1.2% YoY	Q1 2026 presentation
E&P	Production by China and overseas	Volume disclosure only	Q1 2026 China +7.0% YoY; overseas +12.3% YoY; total +8.6% YoY	Q1 2026 release and presentation
E&P	Production by product	Volume disclosure only	Q1 2026 crude/liquids +8.9% YoY; gas +7.7% YoY	Q1 2026 presentation

No back-solved product dollars are used. Q2 and Q4 quarterly consolidated/product figures are derived only when the official cumulative arithmetic is explicit. For example, Q4 2025 oil and gas sales is FY2025 oil and gas sales less 9M 2025 oil and gas sales. Project-level dollars are not estimated. Product-to-segment mapping is deliberately conservative because the official segment note says certain E&P production is sold via the trading segment.

5. Most recent quarterly trend

Company FY ends December 31. Most recently completed fiscal quarter at time of writing: FY2026 Q1, covering 2026-01-01 to 2026-03-31, reported on 2026-04-28 via the CNOOC Q1 2026 report, Q1 2026 results presentation, and official Q1 2026 press release saved in `raw\D_live_20260630`.

Quarter	Method	Revenue RMBbn	Oil/gas sales RMBbn	Crude/liquids sales RMBbn	Natural gas sales RMBbn	Operating margin	Source
Q2 2025	H1 2025 less Q1 2025	100.8	83.5	69.4	14.1	N/D	QF bridge; interim report; Q1 review
Q3 2025	Official Q3 quarter	104.9	83.7	70.0	13.8	N/D	Q3 2025 report and review
Q4 2025	FY2025 less 9M 2025	85.7	80.2	65.8	14.3	N/D	Annual report less Q3 cumulative
Q1 2026	Official Q1 2026	116.1	97.0	83.1	13.9	N/D	Q1 2026 report, release, presentation

Quarter	Net income attributable RMBbn	EPS RMB	Production mmboe	China mmboe	Overseas mmboe	Cost / price commentary	Source
Q2 2025	33.0	0.69	195.8	N/D	N/D	Derived period; no standalone management release located	QF P4
Q3 2025	32.4	0.68	193.7	134.4	59.3	Q3 standalone production +7.9% YoY; 9M all-in cost US$27.35/boe	Q3 2025 release and report
Q4 2025	20.1	0.43	199.0	N/D	N/D	Derived period; annual all-in cost US$27.90/boe	QF P4; annual results
Q1 2026	39.1	0.82	205.1	140.0	65.1	All-in cost US$28.41/boe; crude realized US$75.92/bbl; gas US$7.69/mcf	Q1 2026 release and presentation
TTM ending 2026-03-31	124.7	2.62	793.6	N/D	N/D	Revenue RMB407.4bn and FCF RMB92.4bn	QF P4 and P6

The recent trend is stronger than FY2025 alone because Q1 2026 had higher realized oil prices, continued production growth, and higher product sales. The TTM still contains the weaker Q4 2025 profit quarter, so synthesis should not annualize Q1 2026 mechanically. It should treat Q1 as an improved recent data point inside a commodity-price-sensitive TTM base.

6. Management commentary on forward growth

FMP transcript checks for 0883.HK FY2026 Q1 and FY2025 Q4 returned empty arrays in this live run. No earnings-call transcript quotes are included. The commentary below uses official CNOOC press releases and results presentations saved under `raw\D_live_20260630`. The excerpts are intentionally short and sourced; any longer reading should go back to the saved raw files.

Source date	Speaker / source	Verbatim excerpt	Topic	Interpretation for modeling
2026-03-26	Zhang Chuanjiang, Chairman	"strengthen our foundation for development"	Reserves and production	Strategy emphasizes reserve replacement and long-term production base, not a short harvesting cycle
2026-03-26	2025 annual results release	"Annual production is targeted at 780-800 million BOE"	2026 production target	Base case should not assume production decline in 2026 absent commodity or execution shock
2026-03-26	2025 annual results release	"capital expenditure budget for 2026 at RMB112-122 billion"	2026 capex	Midpoint is below FY2025 operating capex, so growth depends on efficiency and project execution
2026-04-28	Huang Yongzhang, CEO and President	"step up efforts in oil and gas exploration and development"	Growth execution	New CEO commentary aligns with reserve and production growth after Q1 record output
2025-10-30	Yan Hongtao, President	"advanced project construction in an orderly manner"	Project execution	Q3 commentary supports continued startups and reduces near-term execution concern
2025-01-22	Business strategy release	"annual payout ratio will be no less than 45%"	Shareholder returns	Dividends are a hard capital allocation constraint alongside growth capex
2026-01-03	Buzios6 production release	"commenced production safely"	Brazil startup	Overseas production contribution is supported, though CNOOC's interest is only 7.34% in Buzios Shared Reservoir
2026-03-26	Annual results presentation	"780-800 Million boe"	Production target	Deck repeats the 2026 target; downstream model should treat it as explicit guidance
2026-03-26	Annual results presentation	"112-122 RMB billion"	Capex budget	Budget is the official 2026 capex guardrail
2026-03-26	Annual results presentation	"2025 annual dividend payout ratio of 45%"	Dividend discipline	Payout floor was met in FY2025 and frames capital return expectations

Forward commentary synthesis: CNOOC guides to 780-800 mmboe in 2026 after 777.3 mmboe in 2025 and 205.1 mmboe in Q1 2026. That is roughly flat to low-single-digit production growth for 2026, not a step-change acceleration. The January 2025 strategy release also gave a 2027 target of 810-830 mmboe, which indicates management expects continued production growth beyond 2026. The 2026 capex budget of RMB112-122bn is below the FY2025 presentation oil and gas capex of RMB120.5bn at the midpoint, so the operating plan depends on project mix, execution efficiency, reserve conversion, and stable operating cost control. The dividend payout floor of at least 45% means the company is not retaining all cash flow for growth; the model should reserve material cash for shareholders and stress test the dividend under weaker Brent.

7. Capital allocation history

Year	Cash capex RMBbn	Cash capex / revenue	R&D RMBbn	R&D / revenue	Buybacks RMBbn	Dividends paid RMBbn	M&A / acquisitions net RMBbn	Source
2021	73.1	29.7%	N/D	N/D	0.0	17.9	0.0	FMP annual cash-flow statement
2022	81.4	19.3%	N/D	N/D	0.0	64.7	0.0	FMP annual cash-flow statement
2023	120.9	29.0%	N/D	N/D	0.0	84.5	0.0	FMP annual cash-flow statement
2024	123.4	29.3%	N/D	N/D	0.0	73.1	0.0	FMP annual cash-flow statement

Year	Cash capex RMBbn	Cash capex / revenue	R&D RMBbn	R&D / revenue	Buybacks RMBbn	Dividends paid RMBbn	M&A / acquisitions net RMBbn	Source
2025	108.7	27.3%	N/D	N/D	0.0	58.9	7.4	FMP annual cash-flow statement

Capex disclosure	2024	2025	Q1 2026	2026 target / budget	Source
Oil and gas capex total RMBbn	132.5 presentation; 130.2 annual table	120.5 presentation; 118.8 annual table	33.0	112-122	Annual results presentation; annual report; Q1 presentation
Exploration RMBbn	19.1 presentation; China 16.6 plus overseas 2.4 annual	19.3 presentation; China 17.9 plus overseas 1.4 annual	5.0	N/D by category	Annual report; presentations
Development RMBbn	87.2 presentation; annual category basis differs by China/overseas table	74.7 presentation; annual category basis differs by China/overseas table	21.8	N/D by category	Annual report; presentations
Production capitalization RMBbn	23.9	24.9	6.0	N/D by category	Annual and Q1 presentations
Other capex RMBbn	2.3	1.6	0.2	N/D by category	Annual and Q1 presentations
Dividend policy	HK$1.40/share annual dividend	HK$1.28/share annual dividend; 45% payout	N/D	No less than 45% annual payout ratio over strategy period	Annual reports; strategy release

Capital allocation read-through: CNOOC is funding a heavy upstream capex program while paying a high dividend. Use FMP cash capex for FCF because it is the cash-flow statement basis. Use the official oil and gas capex split for production durability because it shows the operating allocation between exploration, development, production capitalization, and other spending. R&D is not separately disclosed as a comparable five-year dollar line in FMP annual income statements or official statements. The company discusses technology, efficiency, and engineering initiatives, but downstream work should not create a separate R&D intensity table.

8. Balance sheet snapshot

Item	RMBbn unless noted	Source
Cash and equivalents	78.7	FMP annual balance sheet; official FY2025 cash
Cash and short-term investments	240.8	FMP annual balance sheet
Short-term investments and time deposits proxy	162.1	FMP cash and short-term investments less cash
Total debt	69.8	FMP annual balance sheet; official FY2025 interest-bearing debt
Net debt / cash	-171.0	FMP annual balance sheet; negative means net cash
Net debt / EBITDA	-0.67x	FMP key metrics
Goodwill plus intangibles	31.5	FMP annual balance sheet
Tangible book value	1,052.3	FMP key metrics
Total assets	1,098.6	FMP annual balance sheet; official annual report
Total liabilities	293.4	FMP annual balance sheet; official annual report
Total equity	805.2	FMP annual balance sheet; official annual report
Q1 2026 assets	1,151.6	Official Q1 2026 report
Q1 2026 liabilities	312.0	Official Q1 2026 report
Q1 2026 total equity	839.6	Official Q1 2026 report

Market data from live FMP quote: 0883.HK price was HKD20.24 and market cap was about HKD962.0bn at the pulled timestamp. Profile data identifies the company as CNOOC Limited on HKEX with Hong Kong dollar trading. Statements and EPS are RMB/CNY. The QF pulled HKD/CNY separately and translated the HKD price to roughly CNY17.52 for a rough P/E check. Downstream valuation should refresh FX if the final synthesis needs a live valuation, because FX is a market input and can drift.

The balance sheet is a source of resilience. CNOOC had a net cash position on the FMP basis at FY2025, substantial current financial assets/time deposits, and relatively modest total debt compared with EBITDA and equity. The main balance-sheet risk is not near-term refinancing; it is the capital intensity and long-cycle nature of upstream assets, including abandonment,

decommissioning, commodity price, and reserve-estimation sensitivity.

9. Recent corporate actions and operating events, last 12 months

- 2026-04-28: CNOOC released Q1 2026 operating results. Net production reached 205.1 mmboe, up 8.6% YoY; China production was 140.0 mmboe; overseas production was 65.1 mmboe; oil and gas sales were about RMB97.0bn; net profit attributable was RMB39.14bn; all-in cost was US$28.41/boe; Q1 capex was RMB33.02bn. Source: Q1 2026 press release, report, and presentation.
- 2026-03-26: FY2025 annual results were released. Net proved reserves reached 7.77 billion BOE, net production reached 777.3 mmboe, all-in cost was US$27.90/boe, net profit attributable was RMB122.1bn, and the annual dividend was HK$1.28/share with a 45% payout ratio. Source: annual report, annual results release, and annual results presentation.
- 2026-03-20: Huang Yongzhang was appointed Vice Chairman, Executive Director, Chief Executive Officer, President, and Strategy and Sustainability Committee member. This is a material management transition because he is now the CEO and President associated with the Q1 2026 operating commentary. Source: official CEO appointment press release.
- 2026-01-03: Buzios6 Project in Brazil commenced production safely. CNOOC Petroleum Brasil Ltda. holds a 7.34% interest in the Buzios Shared Reservoir. Source: official Buzios6 press release.
- 2025-10-30: CNOOC released Q3 2025 operating results. 9M production was 578.3 mmboe, Q3 production was 193.7 mmboe, and 14 new projects had commenced production in the first three quarters. Source: Q3 2025 release and review presentation.
- 2025-08-28: Mid-year review materials and the 2025 interim report confirmed H1 production, H1 segment data, cash flow, and the interim balance sheet later used in the TTM bridge. Source: 2025 interim report and mid-year review presentation.
- 2025-01-22: CNOOC released its 2025 business strategy and development plan. It gave a 2025 production target of 760-780 mmboe, a 2026 target of 780-800 mmboe, a 2027 target of 810-830 mmboe, a 2025 capex budget of RMB125-135bn, and an annual payout ratio no less than 45% over the next three years. Source: official strategy press release.

10. Open data gaps

Gap label	Data item	Classification	Sources and search terms checked	Impact on downstream work
D1	Quarterly segment revenue/profit for Q2 2025, Q3 2025, Q4 2025, and Q1 2026	True non-disclosure	Quarterly reports, interim report, annual report, presentations; searched Segment, external revenue, E&P, Trading business, Corporate, profit	Use FY2025 and H1 2025 segment tables as accounting base; use TTM only for consolidated bridge
D2	FMP product/segment dollar data	FMP empty / official override	FMP revenue-product-segmentation annual and quarterly returned empty arrays; FMP 10-K JSON did not populate	Official crude/liquids and gas sales control; do not use FMP product data
D3	Earnings call transcripts	FMP empty / official-source substitute	FMP earning-call-transcript for 2026 Q1 and 2025 Q4 returned empty arrays; CNOOC IR results decks and releases checked	Use official press releases and decks for management commentary; do not invent call quotes
D4	Project-level production, reserves, capex, and economics	True non-disclosure	Annual and quarterly sources searched by project names Kenli, Yellowtail, Buzios, Mero, Shenhai, Huizhou, Penglai plus production/capex/reserves	Segment appendices may discuss projects qualitatively but should not model project-level dollars
D5	Region-level revenue/profit by China vs overseas	True non-disclosure	Annual operating summaries disclose production and reserves; Note 5 discloses accounting segments, not China/overseas profit	Moat and segment work can use China/overseas volume mix, but cannot assign regional margins

Gap label	Data item	Classification	Sources and search terms checked	Impact on downstream work
D6	FY2025 reserve replacement ratio as clean company table item	Calculated from official reserve roll-forward; clean company-disclosed table value not located	Annual report operating summary extraction, annual release, annual presentation searched for Reserve replacement ratio; annual report defines RRR as total additions to proved reserves divided by net production	Use proved reserves 7,773.1 mmboe, FY2025 production 777.3 mmboe, and implied RRR of approximately 165%; do not present it as a company-quoted percentage
D7	R&D dollar history	True non-disclosure in comparable statement line	FMP income statement R&D line, annual business overview technology sections, cash-flow notes	Treat technology investment qualitatively; do not capitalize a separate R&D intensity thesis
D8	Hedge book or netback by asset	True non-disclosure	Annual risk sections, MD&A, presentations searched for hedge, differential, netback	Commodity sensitivity should use realized price history rather than hedge protection
D9	Lifting cost by asset or region	True non-disclosure	Annual MD&A and operating summary searched for lifting cost, operating expense, cost per BOE, China cost, overseas cost	Use all-in cost and operating expense per BOE at group level; do not infer asset-level cost curve

Self-verification checks completed in this run: first, the Q1 2026 official press release confirms net production of 205.1 mmboe, +8.6% YoY, and oil and gas sales of approximately RMB97.0bn. Second, the management excerpt from the Q1 2026 release was checked against the saved official press-release text and is attributed to Huang Yongzhang on 2026-04-28. Third, FMP annual income statement FY2025 revenue is RMB398.220bn, matching the official FY2025 annual report revenue of RMB398.220bn within 1%. These checks are saved under `raw\D_live_20260630` and are not sourced from the local data warehouse.

Downstream-use summary

- TTM base: revenue RMB407.445bn, net income attributable RMB124.663bn, EPS RMB2.62, operating cash flow RMB206.916bn, FCF RMB92.354bn, production 793.6 mmboe.
- FY2025 segment base: E&P total revenue RMB344.197bn and profit RMB122.170bn; Trading total revenue RMB53.838bn and profit RMB4.467bn; Corporate total revenue RMB1.612bn and profit RMB4.807bn; Eliminations revenue negative RMB1.427bn and loss RMB9.296bn.
- Product base: FY2025 oil and gas sales RMB335.652bn split into crude/liquids RMB279.786bn and natural gas RMB55.866bn. Q1 2026 oil and gas sales were RMB97.0bn split into crude/liquids RMB83.057bn and gas RMB13.943bn.
- Operating KPI base: FY2025 production 777.3 mmboe, reserves 7.773bn BOE, reserve life about 10 years, all-in cost US$27.90/boe, Q1 2026 production 205.1 mmboe, and Q1 2026 all-in cost US$28.41/boe.
- Modeling guardrail: do not allocate quarterly consolidated results into E&P, Trading, Corporate, and Eliminations. The official source does not disclose that bridge. Use FY2025 segment economics plus consolidated TTM and official production/cost trend.
- Valuation basis: Hong Kong share price is HKD; statements/EPS are RMB. Use QF FX bridge or a fresh FX pull at synthesis if converting price to RMB EPS.
- Principal data risk: commodity prices dominate revenue and net income, while reserve replacement, capex discipline, cost per BOE, and project startups determine whether production guidance is credible.