الراجحي المالية
Al Rajhi Capital

Key Themes

Improving oil market balance with OECD inventories reaching 7.6% of global demand

Healthy oil prices helped the US shale producers in increasing capex and lowering their debt level, providing room to increase capex and production further

As per our analysis, shale companies require US$49/barrel in Q3 2022 to meet their opex and capex needs as well as interest costs/tax obligations

Overall we believe that oil prices may continue to remain stable

Oil market update

Oil prices to remain healthy on OPEC+ supply shortfall

- ***The oil market balance*** *has improved with the US shale oil coming back to the market, as expected. OECD inventory as a % of global demand slightly increased from 7.1% in Dec 2021 to 7.6% in Oct 2022 (Figure 19), mainly due to higher supply from OPEC+ and the US in recent months, and further aided by lower demand amid the global recession fears.*
- ***Rising capex:*** *Higher oil prices helped US shale producers generate healthy cash flows this year, thereby enabling them to increase spending (~43% y-o-y in 9M 2022) and reduce their debt burden to some extent (~16% YTD). However, the current debt level still remains above the 2018-19 levels for most companies under our sample. Further, despite lower debt levels, interest costs still mostly remained flat due to the rising interest rate environment. Nonetheless, healthy oil prices would continue to encourage the shale producers to increase their capex and set the 2023 production targets higher going forward.*
- ***The cash per barrel of oil required to ensure FCF less interest and tax expenses = 0*** *for shale companies used in our report increased to US$49/bbl in Q3 2022 from US$42/bbl in Q3 2021. The increase was mainly due to higher windfall tax (Figure 2) on O&G companies profits, and further driven by increased capex.*
- ***Supply under check:*** *On the other hand, OPEC+ decision to cut output by 2mmbpd from November and the EU's sanction on seaborne Russian crude (starting from 5th Dec) may fully offset the incremental supply from the US.*
- ***Overall, we expect oil prices to remain mostly stable*** *with limited upside/downside potential, supported by OPEC+'s active role. However, the tight liquidity in the paper market may act as a downside risk.*

Figure 1 Cash required per barrel for major US shale producers (US$/bbl) - for FCF less interest and tax expense to be nil

	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Weight*
Diamondback Energy	32	42	47	51	54	54	39	17%
Pioneer natural Resources	34	47	48	64	45	45	50	26%
Chord Energy^	13	51	45	25	154	32	30	7%
Continental Resources Inc.	16	34	32	90	59	58	54	15%
EOG Resources	31	42	37	39	27	90	55	35%
Weighted average**	**29**	**43**	**42**	**55**	**47**	**65**	**49**	

Source: Company data, Bloomberg, Al Rajhi Capital. * Weights are based on production. ** Calculated based on weighted average production of major shale producers under our sample. ^ New entity formed in Q2 2022 post-merger between Oasis Petroleum Inc. and Whiting Petroleum Corp.

Figure 2 Windfall tax rising while interest costs mostly stable despite lower debt

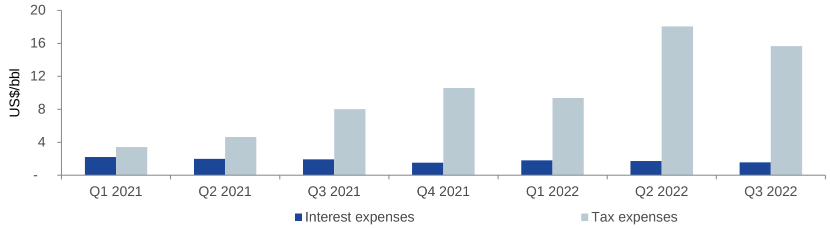

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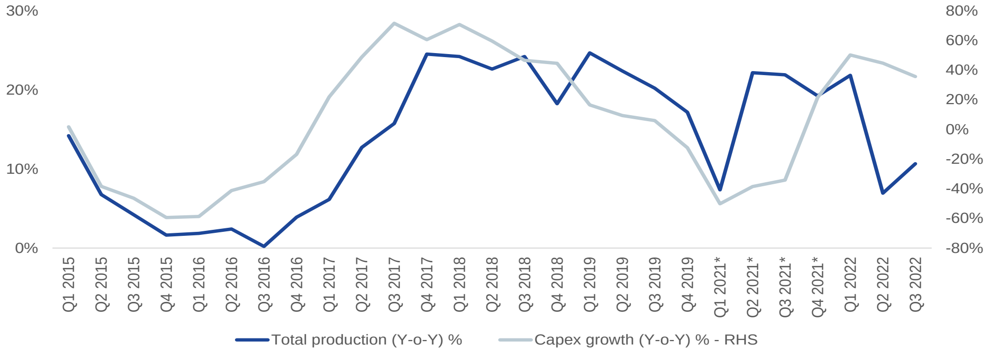
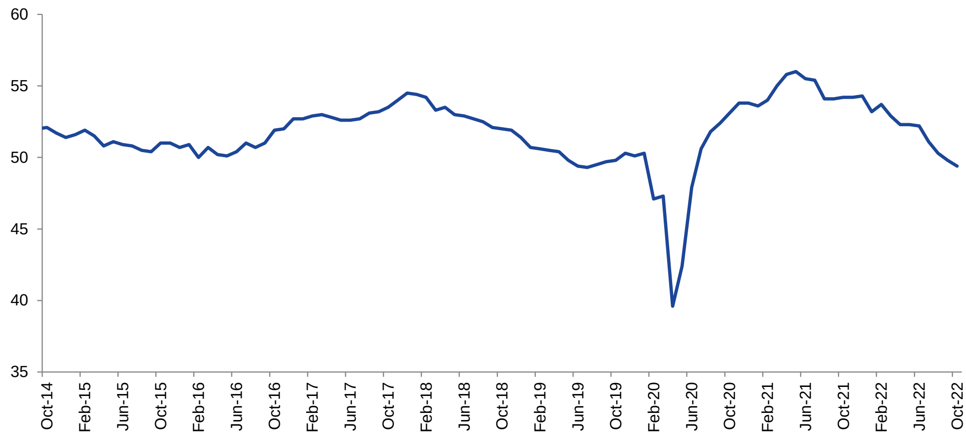
Figure 3 Capex and production growth remain highly correlated **



Source: Bloomberg, Al Rajhi Capital. * Not considered 2020 due to pandemic impact; 2021 y-o-y growth is calculated on 2019 data. ** Based on our sample companies covered in this report

Figure 4 JPM Global manufacturing PMI



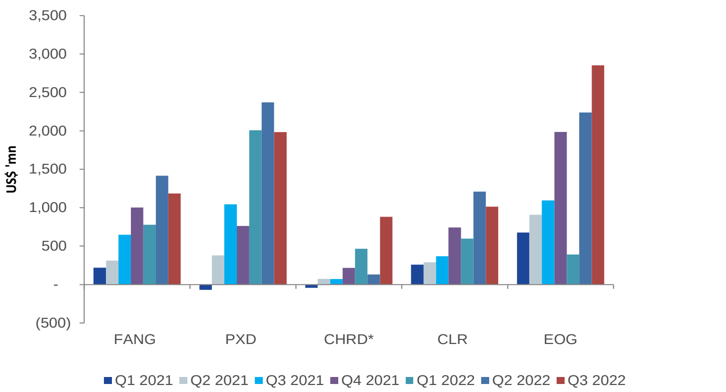
Source: Bloomberg, Al Rajhi Capital

Shale health check up

1. Shale profits and stock performance:

All the US shale companies (in our sample set) continued to witness a significant improvement in net profits in 2022, mainly aided by healthy demand and higher oil prices. Similarly, the average ROA improved notably from 10.4% in Q4 2021 to 20.3% in Q3 2022 (Figure 12). Accordingly, the stock performance of all the shale companies (under our sample) posted strong returns in 2022 YTD.

Figure 5 Quarterly net profit performance of shale firms



Source: Company data, Al Rajhi Capital. ^ New entity formed in Q2 2022 post-merger between Oasis Petroleum Inc. and Whiting Petroleum Corp.

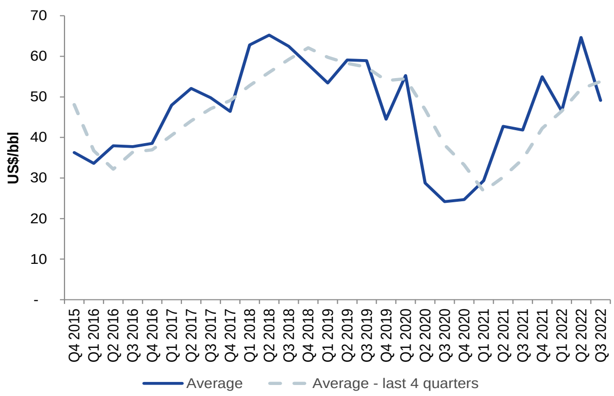
Figure 6 Stock performance of shale firms – 2021/22

Source: Bloomberg, Al Rajhi Capital. * Companies emerged from bankruptcy during the second half of 2020. Hence, stock performance comparison for 2020 was not possible.

2. Cash required to meet expenses increased on increased windfall tax, higher capex/production costs

Our calculations show that the average "Cash required per barrel" increased to ~US$49 per bbl in Q3 2022 from ~US$42/bbl in Q3 2021 (Figures 7 and 8), primarily on account of an increased windfall tax on profits and further driven by higher capital expenditure and increased production costs.

Figure 7 "Cash required per barrel" for major US shale producers (US$/bbl)- for FCF less interest and tax expense to be NIL***



Source: Company data, Bloomberg, Al Rajhi Capital. Weighted average required cash per barrel based on the production of major US shale producers to start generating positive free cash flow. Ex-one-time impact of non-cash tax benefit resulting from the Tax Cuts and Jobs Act in Q4 2017. Also adjusted tax benefits received in 2020.

Figure 8 Cash required per barrel for major US shale producers (US$/bbl) - for FCF less interest and tax expense to be nil

	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Weight*
Diamondback Energy	32	42	47	51	54	54	39	17%
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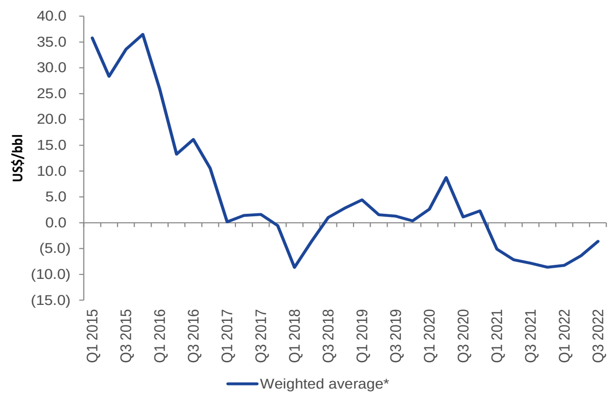
3. Hedging gains/(losses)

Figure 9 US shale producer's average realized gain/losses



Source: Company data, Bloomberg, Al Rajhi Capital. Calculated is based on the weighted average production of major shale producers under our sample.

Figure 10 US shale producer's avg. realized gain / losses (US$/bbl)

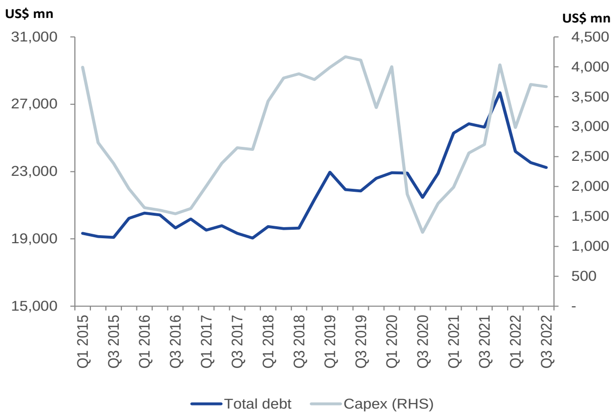
	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022
Diamondback Energy	(10.1)	(13.4)	(14.5)	(15.8)	(13.6)	(11.5)	(2.4)
Pioneer natural Res.	NA	NA	NA	NA	NA	NA	NA
Chord Energy^	(7.0)	(17.8)	(26.3)	(24.3)	(16.1)	(33.1)	(19.8)
Continental Res.	NA	NA	NA	NA	NA	NA	NA
EOG Resources, Inc.	NA	NA	NA	NA	NA	(0.0)	NA
Weighted average*	**(5.1)**	**(7.2)**	**(7.8)**	**(8.6)**	**(8.3)**	**(6.4)**	**(3.6)**

Source: Company data, Bloomberg, Al Rajhi Capital. * Calculated is based on the weighted average production of major shale producers under our sample. ^ New entity formed in Q2 2022 post-merger between Oasis Petroleum Inc. and Whiting Petroleum Corp.

4. Capex and leverage position

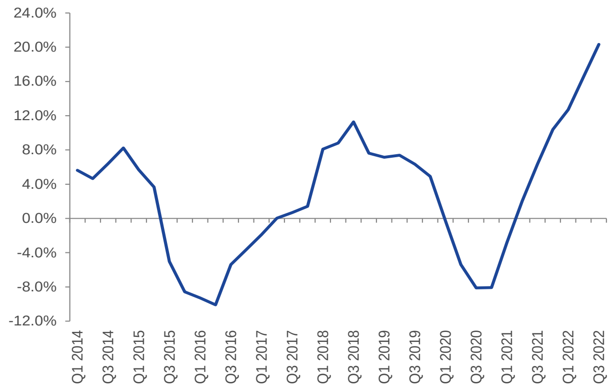
Healthy oil prices and improving shale margins led to higher capital investment, with the total capex of the US shale producers (under our study) rising ~43% y-o-y during 9M 2022 and reaching near pre-COVID levels. Meanwhile, the aggregate debt of the US shale companies (under our study) declined ~16% YTD. However, the current debt level remains above the 2018-19 levels for most companies under our sample. Going forward, we expect shale producers to continue to increase capital investment, backed by higher cash flows amid healthy oil prices and lower DUC well inventory.

Figure 11 Capex and total debt trend



Source: Company data, Bloomberg, Al Rajhi Capital

Figure 12 Weighted avg. ROA of US shale companies *



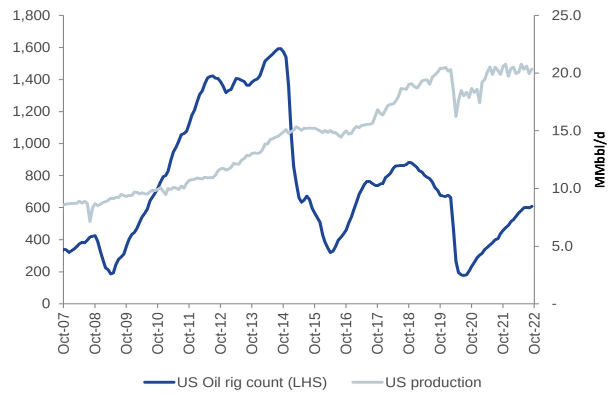
Source: Company data, Bloomberg, Al Rajhi Capital. * Adjusted for the one-time impact of non-cash tax benefit resulting from the Tax Cuts and Jobs Act for Q4 2017.

Figure 13 Market shares

	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Oct-22
OPEC	39.1%	38.5%	38.7%	38.8%	38.3%	36.9%	36.8%	37.0%	35.8%	34.5%	34.2%	33.0%	31.8%	32.8%	29.5%	30.9%	31.6%	31.3%	32.3%	32.8%	33.0%	33.1%	33.6%	33.9%	33.6%
OECD	13.1%	13.5%	12.6%	12.1%	12.2%	12.6%	12.2%	12.0%	12.3%	12.5%	11.7%	12.1%	12.8%	12.7%	13.4%	12.7%	13.4%	13.3%	12.2%	11.5%	12.3%	11.9%	11.4%	11.6%	11.5%
US non-conv.	6.1%	6.7%	6.7%	7.1%	7.8%	8.0%	8.2%	8.9%	9.4%	9.5%	9.8%	10.3%	10.8%	10.5%	9.9%	10.1%	9.7%	9.9%	10.0%	10.0%	9.9%	9.8%	10.0%	10.1%	10.3%
Others	41.7%	41.3%	42.0%	41.9%	41.7%	42.4%	42.8%	42.1%	42.6%	43.6%	44.3%	44.6%	44.7%	44.0%	47.3%	46.4%	45.2%	45.6%	45.6%	45.7%	44.9%	45.1%	45.0%	44.4%	44.7%

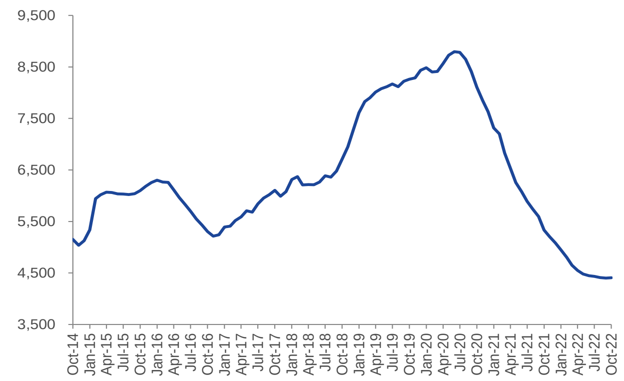
Source: OPEC, EIA, IEA, Al Rajhi Capital

Figure 14 US shale rig count and production*



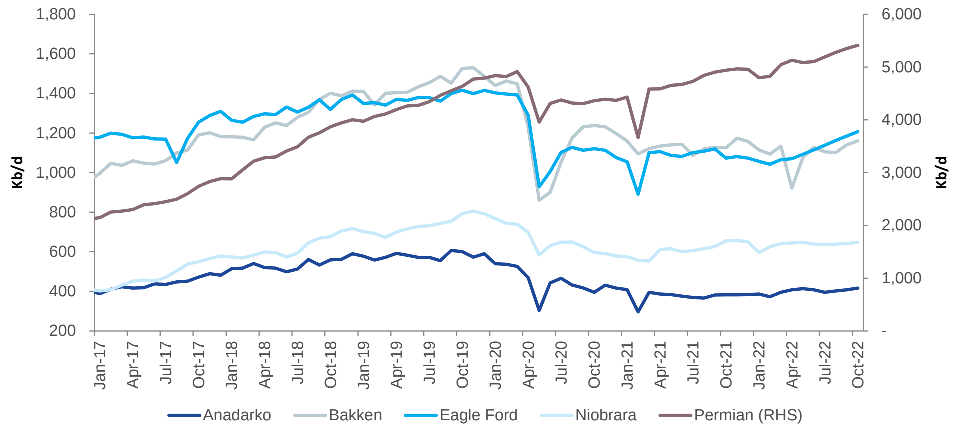
Source: Baker Hughes, EIA, Al Rajhi Capital. * Crude and other condensates

Figure 15 DUC wells trend



Source: EIA, Al Rajhi Capital

Figure 16 Permian remains the most resilient region in terms of production



Source: EIA, Al Rajhi Capital

Figure 17 US inventories level

	2017	2018	2019	2020	2021	2022E*	2023E*
US Commercial inventories (mbbls)	1,229	1,259	1,282	1,343	1,199	1,200	1,224
Average US oil consumption (m b/d)	19.9	20.5	20.5	18.2	19.9	20.4	20.5
% of average US oil consumption	16.9%	16.8%	17.1%	20.2%	16.5%	16.1%	16.4%
Average global oil demand (m b/d)	98.5	100.0	100.8	92.0	97.5	99.8	101.0
US inventory as a % of global demand	3.4%	3.4%	3.5%	4.0%	3.4%	3.3%	3.3%

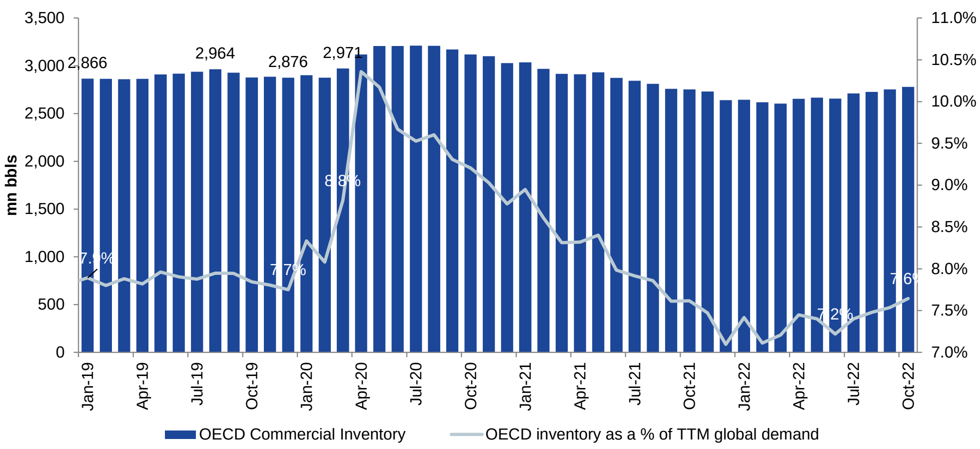
Source: EIA, Al Rajhi Capital. * EIA estimates

Figure 18 OECD inventories level

	2017	2018	2019	2020	2021	2022E*	2023E*
OECD Commercial inventories (mbbls)	2,849	2,859	2,876	3,028	2,640	2,760	2,751
Average OECD consumption (m b/d)	47.5	47.7	47.7	42.1	44.9	46.0	45.8
% of average OECD consumption	16.4%	16.4%	16.5%	19.7%	16.1%	16.4%	16.5%
Average global oil demand (m b/d)	98.5	100.0	100.8	92.0	97.5	99.8	101.0
OECD inventory as a % of global demand	7.9%	7.8%	7.8%	9.0%	7.4%	7.6%	7.5%

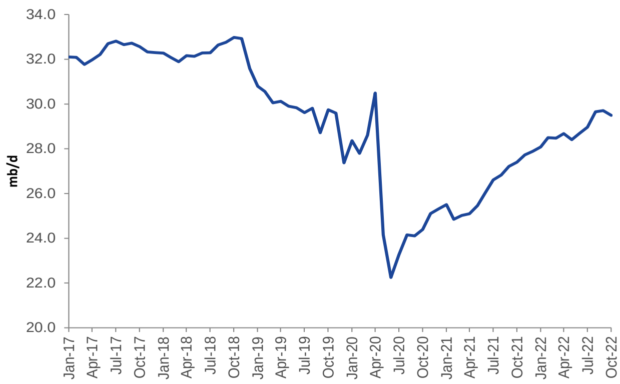
Source: EIA, Al Rajhi Capital. * EIA estimates

Figure 19 Monthly OECD inventory with a % of global demand



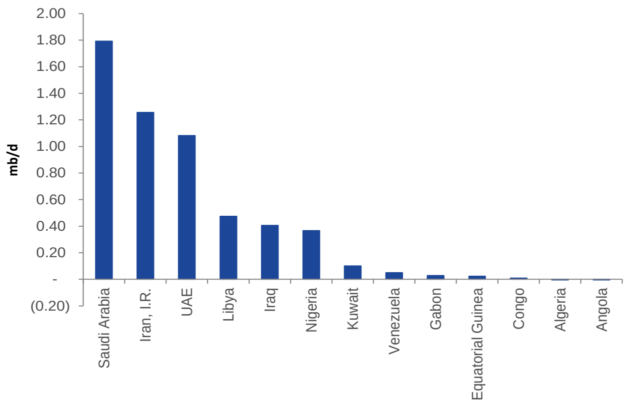
Source: EIA, Al Rajhi Capital

Figure 20 OPEC production



Source: OPEC, Al Rajhi Capital. * Excluding Qatar from Dec 2018 and Ecuador from Jan 2020

Figure 21 OPEC spare capacity*



Source: IEA, Al Rajhi Capital. * Data as of May 2022

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"Underweight": Our target price is more than 10% below the current share price, and we expect the share price to reach the target on a 12 month time horizon.

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