Occidental Petroleum (NYSE:OXY)

Initiation Report – November 11, 2019

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Expensive Anadarko acquisition will slow down drilling

We value Occidental Petroleum (OXY) ***equity value at $33 per share****, which is* ***18% below the current market price*** *(November 8, 2019). Therefore, we have a* ***SELL recommendation****.*

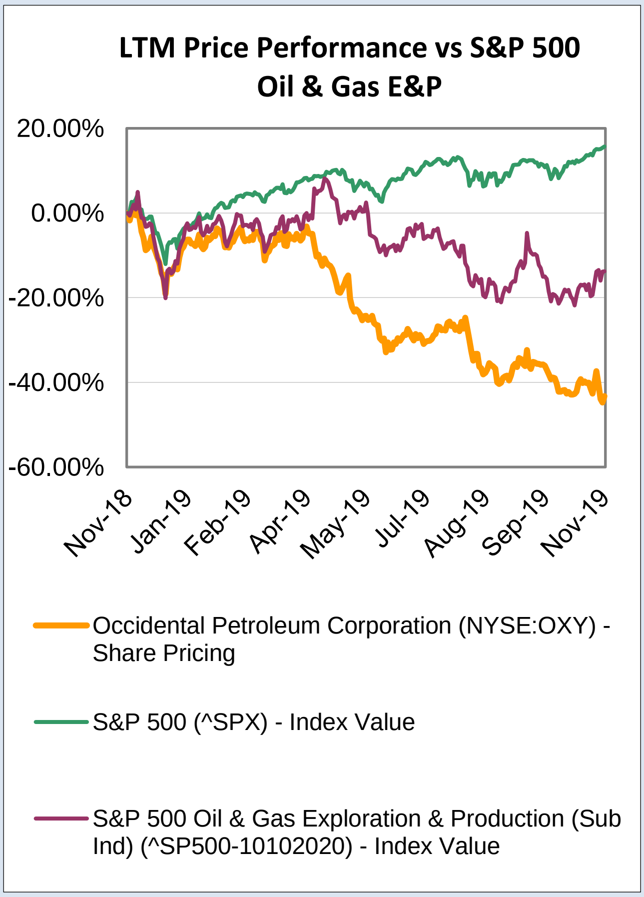
Investment Thesis

- Expensive $38bn acquisition of Anadarko increased Occidental's long-term debt from $10bn in 2Q19 to $48bn in 3Q19, and forced a Capex cut in 2020 from target budget of $9bn to $5bn. As a result, we expect production growth to miss its long-term target of 5% until 2022.
- No overlap in Oil and Gas assets between Occidental and Anadarko significantly limited the synergies opportunities for operational efficiencies. Occidental only announced a modest $1bn synergies in overhead which improves COGS and SG&A by 3% and 2% as a percentage of revenue in 2021-2023, respectively.
- International Oil and Gas production in Latin America and the Middle East is not expected to be a priority for Occidental in the next 5 years. We forecast 0% growth in 2020-2023 as the production trend in these fields is either stable or declining, Capex will be limited, and the corporate strategy shifts to focus on US operations (i.e. Anadarko acquisition).

Recommendation: SELL

Key Figures

Price	$40.1
Price Target	$33.0
Potential Return	-18%
52-Week High/Low	$74.3/$38.4
Market Cap.	$35,822mm
Shares Out. (mm)	893.3
Dividend Yield	7.9%
LTM Revenue	$18,873mm
LTM EBITDA	$8,430mm
LTM EBIT	$3,218mm
Total Debt/EBITDA	6.0x



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Company Overview

Established in 1920 and headquartered in Houston, Occidental Petroleum (NYSE: OXY) is an integrated oil and gas exploration company, with significant operations in the United States, Middle East and Latin America. Occidental also produces and markets basic chemicals, petrochemicals, polymers and specialty chemicals. The company's principal businesses consist of three reporting segments: Oil & Gas, Chemical, Midstream & Marketing. As at 2018, Occidental's proved year-end reserves consisted of 57% oil, 18% NGL and 25% gas, totaling 2.8 billion barrel of oil equivalents (BOE) relative to 2.6 billion BOE at the end of 2017.

Business Segments

Oil & Gas:

This is the core of Occidental's business, contributing 66.8% to revenue as at Q3 2019, exploration and production activities are concentrated in three geographic regions: United States, Middle East, and Latin America.

Chemical:

Headquartered in Dallas, Texas, OxyChem is a leading manufacturer of polyvinyl chloride (PVC) resins, chlorine and caustic soda. This segment contributed 23.6% to Occidental's revenue as at Q3, 2019.

Midstream & Marketing:

This segment purchases, markets, gathers, processes, transports and stores oil, condensate, natural gas liquids (NGLs), natural gas, carbon dioxide (CO2) and power. The segment also provides services to other Occidental segments and third parties, as well as operates gas and CO2 pipeline systems, gas plants, cogeneration facilities and storage facilities. This segment contributes 9.6% to Occidental's revenue as at Q3 2019.

Operational Regions

Permian Basin:

Occidental's U.S. business is focused in the Permian Basin of West Texas and southeast New Mexico, one of the largest and most active oil basins in the United States. Occidental's also has oil and gas assets in the Rockies region of the United States in Colorado, Wyoming and Utah.

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Gulf of Mexico:

Occidental is the fourth largest producer in the deep-water Gulf of Mexico and among the largest independent leaseholders, with expansive infrastructure that includes 10 operated deep-water facilities.

Middle East:

With principal focus in Oman and the United Arab Emirates (UAE), OXY has been an active investor in the Middle East for more than three decades and regarded in this region for its strong performance record, technical expertise and effective working relationships with strategic partners.

Latin America:

Occidental has been an active investor in Colombia for more than four decades. Currently, Occidental has operations in the Llanos Norte Basin in the Department of Arauca and in the Middle Magdalena Basin in the Department Santander. In 2018, Occidental acquired six new prospective blocks near areas where we have operational experience, increasing gross acreage to approximately 2 million.

Africa:

In 2019, Occidental acquired oil and gas assets in Africa as part of its purchase of Anadarko Petroleum. In connection with the merger, Occidental agreed to sell all assets, liabilities, businesses, and operations of Anadarko's in Algeria, Ghana, Mozambique and South Africa for $8.8 billion to Total S.A., subject to certain purchase price adjustments. In August 2019, a purchase and sale agreement was executed for the Africa assets. The transaction is conditioned on the receipt of required regulatory approvals, as well as other customary closing conditions. On September 2019, Occidental completed the sale of Anadarko's Mozambique LNG assets for $4.2 billion. The assets and liabilities for Algeria, Ghana and South Africa, are presented as held for sale at the end of Q3, 2019.

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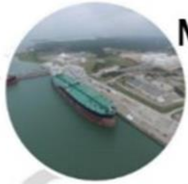
Occidental's Integrated Portfolio – Business Segments and Geographical Regions

Oil & Gas

Exploration and production of crude oil, natural gas liquids (NGL), condensate and natural gas, contributing 62.5% to revenue as at Q3 2019

Chemical

With operations in 22 sites in the U.S., manufactures and markets polyvinyl chloride resins, chlorine and caustic soda. Contribution to revenues came in at 23.6% as at Q3



Midstream & Marketing

Purchases, markets, processes, transports and stores oil, condensate, NGLs, natural gas, carbon dioxide (CO_2) and power. This segment contributed 9.6% to revenue as at Q3

United States

Occidental's U.S. business is focused in the Permian Basin of West Texas and southeast New Mexico, accounting for approx 30 percent of the total U.S. oil production the Permian Basin, with operations focused on the Delaware and Midland basins, as well as the Cention. Other oil and gas assets are in the Rockies region of the United States are in Colorado, Wyoming and Utah. The United States and Gulf of Mexico region contributed 71.9% to revenue in Q3

Gulf of Mexico

Occidental is the fourth largest producer in the deep-water Gulf of Mexico and among the largest independent leaseholders with expansive infrastructure that includes 10 operated deep-water facilities.

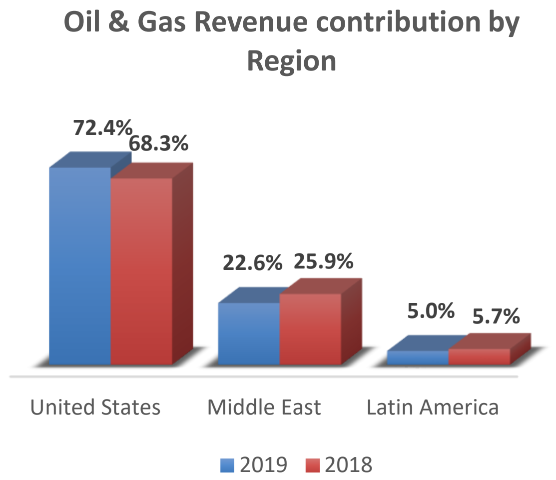
Middle East

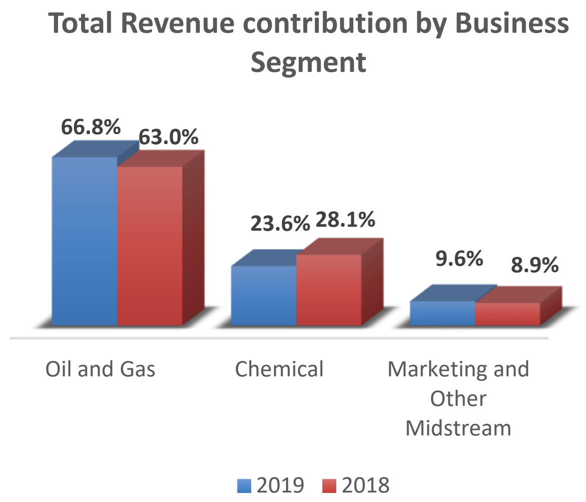
With principal focus in Oman and the United Arab Emirates (UAE), OXY has been an active participant in the Middle East for more than three decades and regarded in this region for its strong performance record, technical expertise and effective working relationships with strategic partners. The middle east region contributed 22.5% to revenue as at Q3

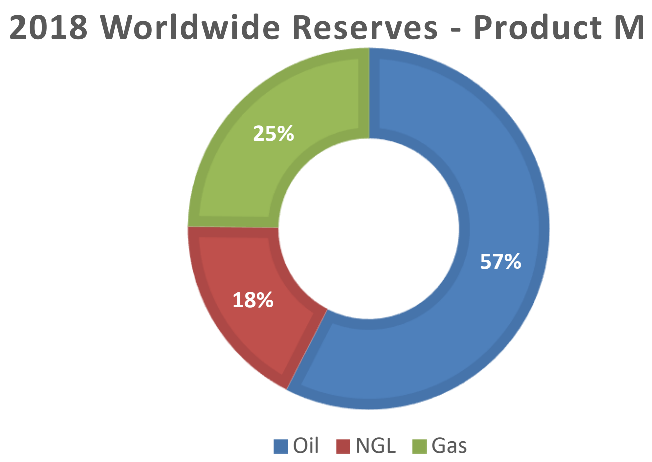
Colombia

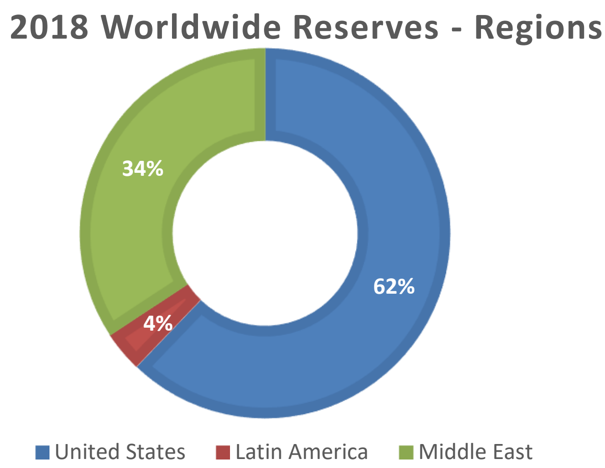
Active participation in Colombia for more than four decades. Acquired six new blocks near areas of operational experience, increasing gross acreage to approximately 2 million in 2018. Contributed approx. 5% to revenue in Q3

Figure 1: Revenue and Reserves Breakdown









Notes: Numbers do not include Anadarko acquisition.

US Oil and Gas Leases

Occidental conducts its domestic operations through land leases. Occidental's domestic oil and gas leases have a primary term ranging from one to ten years, which is extended through the end of. Of the total 3.6 million net acres in which Occidental has interests, approximately 82% is leased, 17% is owned subsurface mineral rights and 1% is owned land with mineral rights. Rental expense for operating leases was $175 million (1% of revenue) in 2018, $278 million (2% of revenue) in 2017 and $237 million (2% of revenue) in 2016. (Note: international assets are subject to production sharing contracts)

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Impact on valuation: we expect expenses of oil and gas leases to remain stable (1-2% of revenue) in the next 5 years and this impact is already embedded in COGS so we did not adjust our valuation for this concept.

Exploration and Discoveries

Occidental constantly adds proved reserves from discoveries, which are dependent on successful exploration programs. However, this number is immaterial to our valuation. In 2017, Occidental spent $67 million (less than 1% of Oil & Gas revenue) in exploration and added through discoveries 5 million BOE in proved reserves. Furthermore, in 2018, Occidental spent $75 million (less than 1% of Oil & Gas revenue) in exploration and added through discoveries 7 million BOE related primarily to the recognition of proved developed reserves. Also, Occidental maintains its proved reserves levels mainly through acquisitions of acreage, which is included in Capex.

Impact on valuation: Exploration expenses are already included in COGS and expected to remain constant at current levels of no more than $100 million. Small changes in these expenses not relevant to our valuation given that they represent less than 1% of Oil & Gas revenue.

Industry Recent Developments

Anadarko Petroleum acquisition

In August 2019, Occidental acquired Anadarko Petroleum for $38 billion, making it the biggest oil and gas deal in the past 4 years, after Chevron stepped out of the bidding process. The transaction was paid 78% cash – raised from an original offer of 50% cash – and 22% shares. To finance the cash used, Occidental had to issue $22 billion of new debt and $10 billion of preferred shares paying 8% dividend and consolidated $18 billion of Anadarko existing debt. Overall, Occidental increased their long-term debt from $10 billion in the second quarter of 2019 to $48 billion in the third quarter. This results in a 6.0x Debt/LTM EBITDA, the highest in the industry compared with the average of 1.7x[1]. We strongly believe Occidental overpaid for Anadarko given that the two companies do not have assets that overlap, significantly limiting synergies in operations. Moreover, Occidental paid a 57% premium (versus the 19% average in the energy industry in 2018[2]) and

[1] Capital IQ
[2] https://www.statista.com/statistics/978494/average-premiums-in-the-united-states-by-industry/

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activist investor Carl Icahn (currently owns 5% of OXY) described the deal as “one of the worst I’ve ever seen”.

Impact on valuation:

- **2020-2023 decreased Capex levels:** Pressure from activist investor Carl Icahn has forced the company to plan to reduce debt levels aggressively. Additional to its huge debt obligations, Occidental must pay annually $800 million on preferred shares, common dividend of $2.4 billion, and Capex. As a result, the Capex budget has been revised from $9 billion to $5 billion in 2020. We expect this level of Capex to remain constant until 2023 as the company struggles to pay its debt and dividends. (Note: Capex is net of asset sales, and these sales have averaged $1.5 billion in the past 3 years and we expect this number to remain constant until 2023 – proceeds will come from $10 billion worth of assets that Occidental is currently trying to sell.)
- **2019 inorganic production growth:** We expect the takeover will approximately double Occidental’s daily output from 0.6 million to 1.3 million barrels of oil equivalent (MMBOE), generating inorganic growth of 101%. (Note: total production output of 1.3 MMBOE will only be accounted in revenue starting August 2019, when the acquisition was approved.)
- **2020-2023 lower production growth:** Occidental has a long-term guidance on production growth of 5-8% but given our forecasted lower Capex levels, we expect the company to only achieve a modest 3% growth in domestic oil and gas until 2021. Our rationale is that Capex is roughly equal to D&A, indicating no organic growth. We used 3% growth only for the US because of the momentum of the large operations in the booming Permian Basin area.
- **2020-2023 overhead synergies:** The acquisition of Anadarko will create overhead synergies of $1 billion based on 2018 levels (according to Occidental synergies analysis) and are expected to be captured in full by 2021. Half of the overhead synergies will impact COGS so we expect COGS as a percentage of revenue to gradually decline to 34% in 2021 and remain constant. The other half of synergies will impact SG&A as a percentage of revenue, in this case the relative expense will decrease to 10% in 2021 and remain constant.

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US Federal Fracking Ban Risk?

Occidental's production in the Permian Basin uses fracking and Elizabeth Warren, one of the frontrunners for the Democratic nomination, has promised to immediately "ban fracking-everywhere" on her first day in office[1]. However, the ban would only be applicable in federal lands by executive order. Occidental currently has approximately 18% of its total output using fracking exposed to Federal acreage. The rest of the production is on State acreage with friendly fracking regulations (Texas, Utah and Colorado). Please see RBC analysis on the fracking ban potential impact on US E&P oil and gas companies in Exhibit 1.

Impact on valuation: We did not consider this factor into our valuation given that if the ban is enacted it would certainly hurt the Company's valuation by instantly erasing 18% of its total output in terms of daily MBOE, and it would strengthen our sell recommendation even further.

Saudi Aramco IPO

Saudi Aramco, the world's biggest oil company, finally launched its long-expected IPO, which is expected to be the largest ever with a valuation of $1-2 trillion dollars. The flotation is expected to happen in December by raising as much as $60 billion with a sale of 2-3% of the company.

Impact on valuation: we don't believe at this stage Aramco's IPO could impact our valuation because the transaction is targeting mainly the local market. According to bankers involved, there is enthusiasm among Saudis for the listing, with domestic investors expected to comprise the bulk of the offering. Local banks are even expected to lend heavily to Saudis to enable them to buy shares[2]. All this means, we don't expect Occidental investors to drop the stock in order to invest in Aramco. Even if this were to happen, it would only hurt Occidental stock price and strengthen our sell recommendation.

[1] https://ftalphaville.ft.com/2019/10/14/1571067464000/Elizabeth-Warren-s-frac-attack/
[2] https://www.ft.com/content/d0eff002-fdf9-11e9-b7bc-f3fa4e77dd47

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Revenue Forecast

Step 1: Commodities Price Forecast

We used Capital IQ consensus for the price per barrel of WTI oil, Brent oil and Natural Gas for the next 5 years. The forecasted prices are based on the average of all available estimates (Figure 2). Regarding NGL prices, given they are highly correlated with the price of Brent oil, NGL prices are calculated as a percentage of the Brent price.

Note on correlation: Oil prices and Natural Gas prices had a correlation of around 25% in the last decade, indicating little similarity between the movement in their prices. However, during the periods of high oil prices (in 2005 and 2008), the correlation coefficient jumped to c.65%[1]. A possible justification for this pattern is that oil and natural gas are close substitutes for each other. If the price of one energy source rises significantly, consumers move to other source of energy. This increases demand for the second energy source and its prices then also rise. This could explain why a follow-up pattern or a cause-and-effect pattern between high oil and natural gas prices has emerged only in cases of very high oil prices. But observations suggest that oil has been the dominating factor in any observed relationship between the price of crude oil and natural gas. In other words, oil prices have a higher tendency to affect natural gas prices rather than the vice versa. The main reason for this is that oil is a global commodity and natural gas remains regional.

Figure 2: WTI Oil, Brent Oil, and Natural Gas Prices Forecast

	2016	2017	2018	2019 E	2020 E	2021 E	2022 E	2023 E
Index Prices								
WTI (US$/Barrel)	$43.32	$50.95	$64.77	$57.51	$56.60	$56.59	$58.41	$58.71
Brent (US$/Barrel)	$45.04	$54.82	$71.53	$64.71	$63.27	$64.54	$65.79	$66.67
Natural Gas (US$/MCF)	$2.42	$3.09	$2.97	$2.63	$2.59	$2.68	$2.75	$2.91

Source: Capital IQ

Notes: MCF stands for a thousand cubic feet.

Step 2: Hedging Impact and Realized Prices

As part of our revenue forecast, we adjusted the projected spot prices (Figure 2) in order to get the actual prices realized by the Company after hedging costs. To get the hedging impact, we calculated the historic

[1] https://www.investopedia.com/articles/active-trading/032515/do-oil-and-natural-gas-prices-rise-and-fall-together.asp

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realized price ratio: dividing realized price by index price. For the 2019 forecast we used the LTM average ratio and for the 2020-2023 period we used the moving average of the past 4 years (Figure 3).

Figure 3: Hedging Impact and Realized Prices Calculation

	2016	2017	2018	2019 E	2020 E	2021 E	2022 E	2023 E
Realized Price Ratios (Realized P./Index P.)								
United States								
WTI (US$/Barrel)	$39.38	$47.91	$56.30	$53.48	$51.63	$51.66	$52.92	$53.74
Ratio	*91%*	*94%*	*87%*	*93%*	*91%*	*91%*	*91%*	*92%*
NGL (US$/Barrel)	$14.72	$23.67	$27.64	$14.88	$21.75	$22.46	$21.52	$20.81
Ratio	*33%*	*43%*	*39%*	*23%*	*34%*	*35%*	*33%*	*31%*
Natural Gas (US$/MCF)	$1.90	$2.31	$1.59	$1.03	$1.59	$1.53	$1.45	$1.53
Ratio	*79%*	*75%*	*54%*	*39%*	*61%*	*57%*	*53%*	*53%*
Latin America								
WTI (US$/Barrel)	$37.48	$48.50	$64.32	$58.66	$54.20	$55.49	$57.70	$57.92
Ratio	*87%*	*95%*	*99%*	*102%*	*96%*	*98%*	*99%*	*99%*
Natural Gas (US$/MCF)	$3.78	$5.08	$6.43	$6.89	$5.17	$5.65	$6.11	$6.51
Ratio	*156%*	*164%*	*216%*	*262%*	*200%*	*211%*	*222%*	*224%*
Middle East / North Africa								
Brent (US$/Barrel)	$38.25	$50.38	$67.79	$62.77	$64.59	$65.89	$66.87	$67.14
Ratio	*102%*	*104%*	*105%*	*97%*	*102%*	*102%*	*102%*	*101%*
NGL (US$/Barrel)	$15.01	$18.05	$23.20	$21.35	$20.83	$21.18	$21.58	$21.92
Ratio	*33%*	*33%*	*32%*	*33%*	*33%*	*33%*	*33%*	*33%*
Natural Gas (US$/MCF)	$1.53	$1.84	$1.62	$1.55	$1.53	$1.56	$1.59	$1.70
Ratio	*63%*	*60%*	*55%*	*59%*	*59%*	*58%*	*58%*	*58%*

Source: Capital IQ

Notes: NGL stands for Natural Gas Liquids; MCF stands for thousand cubic feet.

Step 3: Production Forecast

OXY produces different commodities in different geographies including the US, Latin America and the Middle East. To forecast OXY production levels, we used different approaches. Our following assumptions consider the Anadarko acquisition takes place in august 2019, meaning Anadarko production and revenue is consolidated only for the last 5 months of 2019:

- **2019 worldwide production:** jump in production levels represent the inorganic growth from the Anadarko acquisition. The numbers are based on the 2019 FY Guidance provided in the 3Q 2019 results. We forecasted a total output of 1.33 MMBOE per day, which falls under the lower bound of the guidance range (1.36 – 1.37 MMBOE per day) given our concerns on the announced Capex cut from $9bn to $5bn after the acquisition.

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- **2020-2023 US production:** we expect production growth to remain at 3% in the next 3 years, and then increase to 5% (long-term guidance) in 2022-2023 considering the Company should have decreased its debt burden by then and be able to increase Capex. Occidental announced to slash Capex by half in the US shale of the Permian Basin in order to pay down debt amassed in its acquisition of Anadarko.

- **2020-2023 international production:** we forecast no growth in Latin America and the Middle East in the next 5 years. The production trend in these fields is either stable or declining, and Occidental has not announced any information that could indicate future growth. The Company in most cases participates through JVs with local partners in production sharing contracts, so it does not have ownership of the assets. Furthermore, the Company strategy is to focus on domestic operations (i.e. acquisition of Anadarko and sale of Africa assets) therefore international assets are not considered core assets.

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The following table is a summary of the production forecast for each commodity

Figure 4: Production Forecast by Commodity

	2016	2017	2018	2019 E	2020 E	2021 E	2022 E	2023 E
Average Production per Day								
United States								
OXY Oil (MBBL)	186	200	250	297				
Acquired Oil (MBBL)				293				
Total	186	200	250	590	607	625	657	690
Growth	*2%*	*8%*	*25%*	*136%*	*3%*	*3%*	*5%*	*5%*
OXY NGL (MBBL)	48	53	67	87	90	92	97	102
Acquired NGL (MBBL)				123				
Total	48	53	67	210	216	222	233	245
Growth	*7%*	*10%*	*26%*	*213%*	*3%*	*3%*	*5%*	*5%*
OXY Natural Gas (MMCF)	235	259	327	424	437	450	472	496
Acquired Natural Gas (MMCF)				984				
Total	235	259	327	1,408	1,450	1,493	1,568	1,647
Growth	*19%*	*10%*	*26%*	*331%*	*3%*	*3%*	*5%*	*5%*
Latin America								
Oil (MBBL)	33	31	31	32	32	32	32	32
Growth	*-6%*	*-6%*	*0%*	*3%*	*0%*	*0%*	*0%*	*0%*
Natural Gas (MMCF)	8	7	6	7	7	7	7	7
Growth	*-20%*	*-13%*	*-14%*	*17%*	*0%*	*0%*	*0%*	*0%*
Middle East								
Oil (MBBL)	161	150	138	134	134	134	134	134
Growth	*-2%*	*-7%*	*-8%*	*-3%*	*0%*	*0%*	*0%*	*0%*
NGL (MBBL)	28	31	31	32	32	32	32	32
Growth	*56%*	*11%*	*0%*	*3%*	*0%*	*0%*	*0%*	*0%*
Natural Gas (MMCF)	471	508	511	530	530	530	530	530
Growth	*51%*	*8%*	*1%*	*4%*	*0%*	*0%*	*0%*	*0%*
Total								
Oil (MBBL)	380	381	419	756	773	791	823	856
NGL (MBBL)	76	84	98	242	248	254	265	277
Natural Gas (MBOE)	123	133	146	335	343	350	363	376
TOTAL MBOE	**579**	**598**	**663**	**1,332**	**1,364**	**1,396**	**1,451**	**1,509**
Growth		*3%*	*11%*	*101%*	*2%*	*2%*	*4%*	*4%*

Source: Author calculations

Notes: MBBL stands for thousands of barrels; MMCF stands for millions of cubic feet; MBOE stands for thousands of barrels of oil equivalent.

Step 4: Revenue Calculations

Occidental has 3 different business units: Oil & Gas, Chemical, and Marketing & Midstream. To forecast the revenue breakdown, we used different approaches:

- **2019 Oil and Gas:** we multiplied annual production volumes by the average realized price of each commodity. The acquired production from Anadarko was only factored in the revenue for the last 5 months of 2019 given the acquisition was approved by the board at the beginning of August, thus it started to consolidate results since then.

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- **2020-2023 Oil and Gas:** we multiplied annual production volumes by the average realized price of each commodity.
- **2019 Chemical:** we annualized the revenue from the first 3 quarters of 2019. According to the 2018 10K seasonality is not a primary driver of changes in Occidental's consolidated quarterly results during the year.
- **2020-2023 Chemical:** performance depends on the health of the US economy, specifically in the housing, construction, automotive and durable goods markets. Therefore, we forecasted revenue using the IMF nominal growth rate for the US economy.
- **2019 Marketing & Midstream:** we annualized the revenue from the first 3 quarters of 2019. According to the 2018 10K seasonality is not a primary driver of changes in Occidental's consolidated quarterly results during the year.
- **2020-2023 Marketing & Midstream:** performance depends mainly on the commodity price changes and the volumes transported. Therefore, we forecasted revenue using the same growth rates for the production volumes of oil and gas in the US.

Figure 5: Revenue Breakdown

	2016	2017	2018	2019 E	2020 E	2021 E	2022 E	2023 E
Revenue ($mm)								
Oil				$11,900	$15,234	$15,664	$16,630	$17,484
NGL				$996	$1,956	$2,069	$2,085	$2,118
Natural Gas				$611	$1,138	$1,137	$1,138	$1,249
(+) Total Oil and Gas	$6,377	$7,870	$10,441	$13,506	$18,329	$18,870	$19,852	$20,851
Growth		*23%*	*33%*	*29%*	*36%*	*3%*	*5%*	*5%*
(+) Chemical	$3,756	$4,355	$4,657	$4,191	$4,363	$4,529	$4,692	$4,866
Growth	*-5%*	*16%*	*7%*	*-10.0%*	*4.1%*	*3.8%*	*3.6%*	*3.7%*
(+) Marketing and Midstream	$684	$1,157	$3,656	$3,364	$3,464	$3,568	$3,747	$3,934
Growth	*-23%*	*69%*	*216%*	*-8%*	*3%*	*3%*	*5%*	*5%*
(-) Eliminations	$727	$874	$930	$1,278	$1,588	$1,637	$1,717	$1,800
% of revenue pre-eliminations	*7%*	*7%*	*5%*	*6%*	*6%*	*6%*	*6%*	*6%*
Total Revenue	**$10,090**	**$12,508**	**$17,824**	**$19,782**	**$24,568**	**$25,330**	**$26,574**	**$27,851**

Source: Author calculations

Notes: $mm stands for USD millions.

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Valuation

SELL Recommendation - Investment Thesis

We value Occidental Petroleum (OXY) equity value at $33 per share, which is 18% below the current market price (November 8, 2019). Therefore, we have a SELL recommendation.

- Expensive $38bn acquisition of Anadarko increased Occidental's long-term debt from $10bn in 2Q19 to $48bn in 3Q19, and forced a Capex cut in 2020 from target budget of $9bn to $5bn. As a result, we expect production growth to miss its long-term target of 5% until 2022.
- No overlap in Oil and Gas assets between Occidental and Anadarko significantly limited the synergies opportunities for operational efficiencies. Occidental only announced a modest $1bn synergies in overhead which improves COGS and SG&A by 3% and 2% as a percentage of revenue in 2021, respectively.
- International Oil and Gas production in Latin America and the Middle East is not expected to be a priority for Occidental in the next 5 years. We forecast 0% growth in 2020-2023 as the production trend in these fields is either stable or declining, Capex will be limited, and the corporate strategy shifts to focus on US operations (i.e. Anadarko acquisition).

Unlevered Free Cash Flow

To forecast Unlevered Free Cash Flow we used the traditional approach by projecting Operating Income (EBIT) and adjusting it with the tax impact, D&A, Capex and changes in Net Working Capital. Our assumptions are the following:

- **COGS:** 2019 is based on the 3Q LTM ratio. As a result of the Anadarko acquisition the company is expected to capture in 2021 $500 million in COGS overhead based on 2018 results. The synergies imply COGS of 34% as a percentage of revenue in 2021-2023.
- **SG&A:** 2019 is based on the 3Q LTM ratio. As a result of the Anadarko acquisition the company is expected to capture in 2021 $500 million in SG&A overhead based on 2018 results. The synergies imply SG&A of 10% as a percentage of revenue in 2021-2023.

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- **D&A:** we annualized D&A from the first 3 quarters of 2019. According to the 2018 10K seasonality is not a primary driver of changes in Occidental's consolidated quarterly results during the year.
- **Capex:** in 2019 we annualized D&A from the first 3 quarters of the year. For 2020 and 2021, we used the Company guidance of $5 billion and $6.5 million, respectively. For the 2022-2023 period we expect the company to increase Capex by $500 million per year in order to come back to its "normal" Capex of $9 billion per year.

Figure 6: Unlevered Free Cash Flow

$mm	FY 2016	FY 2017	FY 2018	FY 2019 Est	FY 2020 Est	FY 2021 Est	FY 2022 Est	FY 2023 Est
Revenue	**10,090.0**	**12,508.0**	**17,824.0**	**19,782.4**	**24,568.4**	**25,330.1**	**26,573.7**	**27,850.9**
Growth	*-19%*	*24%*	*43%*	*11%*	*24%*	*3%*	*5%*	*5%*
(-) COGS	5,189.0	5,594.0	6,568.0	7,121.7	8,598.9	8,612.2	9,035.1	9,469.3
% of Revenue	*51%*	*45%*	*37%*	*36%*	*35%*	*34%*	*34%*	*34%*
Gross Profit	**4,901.0**	**6,914.0**	**11,256.0**	**12,660.8**	**15,969.5**	**16,717.8**	**17,538.6**	**18,381.6**
(-) SG&A	1,590.0	1,928.0	2,162.0	2,855.4	2,948.2	2,533.0	2,657.4	2,785.1
% of Revenue	*16%*	*15%*	*12%*	*14%*	*12%*	*10%*	*10%*	*10%*
EBITDA	**3,311.0**	**4,986.0**	**9,094.0**	**9,805.4**	**13,021.3**	**14,184.8**	**14,881.3**	**15,596.5**
(-) Depreciation & Amortization	4,268.0	4,002.0	3,977.0	4,288.1	5,694.5	6,203.3	6,507.9	6,820.7
% of EBITDA	*129%*	*80%*	*44%*	*44%*	*44%*	*44%*	*44%*	*44%*
EBIT	**-957.0**	**984.0**	**5,117.0**	**4,424.6**	**5,108.9**	**5,108.9**	**5,108.9**	**5,108.9**
(-) Taxes	-662.0	17.0	1,477.0	1,238.4	1,430.0	1,430.0	1,430.0	1,430.0
NOPAT	**-295.0**	**967.0**	**3,640.0**	**3,186.1**	**3,678.9**	**3,678.9**	**3,678.9**	**3,678.9**
(+) Depreciation & Amortization	4,268.0	4,002.0	3,977.0	4,288.1	5,694.5	6,203.3	6,507.9	6,820.7
(-) Capex, net of asset sales	4,459.0	3,260.0	3,079.0	4,020.2	3,515.7	5,035.6	5,580.5	5,926.7
% of EBITDA	*135%*	*65%*	*34%*	*41%*	*27%*	*36%*	*38%*	*38%*
(-) Change in NWC	-578.0	526.0	-389.0	486.7	604.5	623.2	653.8	685.2
% of Total Assets	*1%*	*-1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
Unlevered Free Cash Flow	**92.0**	**1,183.0**	**4,927.0**	**2,967.3**	**5,253.2**	**4,223.4**	**3,952.5**	**3,887.7**

Source: Author calculations

WACC Calculations

- **Risk Free Rate:** Most recent yield on the U.S. 10 Year Treasury Note.
- **Market Risk Premium:** Duff and Phelps reported Premium.
- **Levered Beta:** 5-year Beta published by Capital IQ.
- **Cost of Debt:** We calculated a weighted average of the Yield-to-Maturity of all the outstanding Notes of the Company.
- **Tax Rate:** We used the 2018 effective tax rate of the Company.
- **Target Capital Structure:** Based on the industry average.

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Figure 7: WACC

WACC	
Risk Free Rate	1.95%
Market Risk Premium	6.90%
Relevered Beta	0.87
Cost of Equity	**7.9%**
Pre-tax cost of debt	3.1%
Effective Tax Rate	28.0%
Post-tax Cost of Debt	**2.2%**
Cost of Preferred Shares	**8.0%**
Debt / Total Capitalization	20.0%
Equity / Total Capitalization	70.0%
Preferred / Total Capitalization	10.0%
WACC	**6.8%**

Source: Author calculations

Oil and Gas Proved Reserves - Present Value

- **Proved Reserves:** we assumed by 2024 Occidental replaced 100% its proved reserves to 2018 levels, including the ones included in the Anadarko acquisition. From 2016 to 2018, Occidental increased its proved reserves by 14%.
- **Commodity prices:** we calculated a weighted average of the prices by geography and by volume in 2023.
- **Oilfields decline rate:** we used the world average of 5.7% according to the International Energy Agency.[1]
- **Production cost per BOE:** based on most recent one and updated with US long-term inflation of 2%.
- **Present Value of CF:** cash flows discounted using WACC.

[1] http://energyfuse.org/can-oil-industry-continue-lower-decline-rates-mature-fields/

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Figure 8: Oil and Gas Proved Reserves - Present Value

	Oil			NGL			Natural Gas		
	Reserves MMBBL	Production MMBBL	Price $/BBL	Reserves MMBBL	Production MMBBL	Price $/BBL	Reserves MMCF	Production MMCF	Price $/MCF
2024	2,000	284	$56.00	700	80	$21.00	7,000,000	766,500	$1.60
2025	1,716	268	$56.00	620	75	$21.00	6,233,500	722,810	$1.60
2026	1,448	253	$56.00	545	71	$21.00	5,510,691	681,609	$1.60
2027	1,196	238	$56.00	475	67	$21.00	4,829,081	642,758	$1.60
2028	958	225	$56.00	408	63	$21.00	4,186,324	606,120	$1.60
2029	733	212	$56.00	345	59	$21.00	3,580,203	571,572	$1.60
2030	521	200	$56.00	286	56	$21.00	3,008,632	538,992	$1.60
2031	322	188	$56.00	230	53	$21.00	2,469,640	508,269	$1.60
2032	133	133	$56.00	177	50	$21.00	1,961,370	479,298	$1.60
2033	0	0	$56.00	127	47	$21.00	1,482,072	451,978	$1.60
2034	0	0	$56.00	80	44	$21.00	1,030,094	426,215	$1.60
2035	0	0	$56.00	36	36	$21.00	603,879	401,921	$1.60

	Revenue			Total	Production	Tax	Cash	
	Oil $MM	NGL $MM	Nat. Gas $MM	Production MMBOE	Costs $/BOE	Rate	Flows $MM	PV of CF $MM
2024	$15,902	$1,671	$1,226	495.7	$8.65	29%	$10,303.47	$6,939.22
2025	$14,996	$1,576	$1,156	467.4	$8.82	29%	$9,658.75	$6,090.26
2026	$14,141	$1,486	$1,091	440.8	$9.00	29%	$9,052.98	$5,344.34
2027	$13,335	$1,401	$1,028	415.7	$9.18	29%	$8,483.84	$4,689.03
2028	$12,575	$1,321	$970	392.0	$9.36	29%	$7,949.17	$4,113.39
2029	$11,858	$1,246	$915	369.6	$9.55	29%	$7,446.92	$3,607.80
2030	$11,182	$1,175	$862	348.6	$9.74	29%	$6,975.18	$3,163.80
2031	$10,545	$1,108	$813	328.7	$9.94	29%	$6,532.12	$2,773.93
2032	$7,465	$1,045	$767	265.7	$10.13	29%	$4,674.73	$1,858.60
2033	$0	$985	$723	124.8	$10.34	29%	$296.68	$110.44
2034	$0	$929	$682	117.7	$10.54	29%	$262.49	$91.48
2035	$0	$756	$643	105.3	$10.76	29%	$189.43	$61.81
							NPV	**$38,844.11**

Source: Author calculations

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Implied Equity Value

Figure 9: Implied Equity Calculations

Terminal Value	
Chemical EBIT 2023	1,174.0
Exit Multiple	14.0x
Total	16,436.0
Midstream EBIT 2023	2,136.0
Exit Multiple	15.0x
Total	32,040.0
Terminal Value	48,476.00

Equity Value	
Present Value of UFCF	16,682.2
Present Value of TV	34,871.1
Present Value of Oil and Gas Reserves	38,844.1
Enterprise Value	**90,397.4**
Net Debt	45,831.0
Minority Interest	4,925.0
Preferred Shares	9,762.0
Equity Value	**29,879.4**
Shares Outstanding (mm)	894.5
Price Target	33.0
Current Price	40.1
Potential Return	**-18%**

Source: Author calculations

Occidental Petroleum (NYSE:OXY)

Initiation Report – November 11, 2019

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Exhibits

Exhibit 1 - RBC fracking ban analysis

Exhibit 2: Company Composite Score of Federal Exposure (based on 1Q19 production figures)

Composite Score		Oil Production		Gas Production		Total Production		Permitting		Int'l/Other	Score
Company	Ticker	b/d	% of Ttl	Mcf/d	% of Ttl	boe/d	% of Ttl	Total	% of Ttl	% EBITDA	% Exposure
Apache Corporation	APA	12,326	10%	41,250	4%	19,202	7%	8	2%	45%	**3%**
Berry Petroleum	BRY	4,272	17%	3,531	16%	4,860	17%	32	21%	0%	**19%**
Bonanza Creek	BCEI	766	4%	5,751	11%	1,725	6%	8	9%	0%	**8%**
BP plc	BP	115,907	30%	208,511	2%	150,659	7%	85	24%	84%	**3%**
California Resources	CRC	2,213	4%	19,556	6%	5,472	5%	8	5%	0%	**5%**
Centennial Resources	CDEV	2,082	4%	3,404	2%	2,649	3%	31	16%	0%	**10%**
Chesapeake Energy	CHK	13,599	7%	64,879	1%	24,412	3%	50	8%	0%	**6%**
Chevron Corporation	CVX	14,395	6%	106,776	10%	32,191	8%	43	9%	75%	**2%**
Cimarex Energy	XEC	27,782	25%	170,750	14%	56,240	18%	116	43%	0%	**32%**
Concho Resources	CXO	49,442	17%	181,698	19%	79,725	17%	89	19%	0%	**18%**
ConocoPhillips	COP	33,261	7%	98,350	8%	49,653	7%	85	13%	40%	**6%**
Continental Resources	CLR	39,925	16%	77,046	5%	52,766	10%	34	14%	0%	**13%**
Devon Energy	DVN	80,292	36%	208,367	11%	115,020	22%	260	43%	0%	**35%**
Encana Corporation	ECA	17,230	7%	31,646	3%	22,505	6%	12	2%	25%	**3%**
Eni SpA	E	5,657	18%	25,078	62%	9,837	26%	0	0%	95%	**1%**
EOG Resources	EOG	91,178	15%	326,317	16%	145,564	15%	277	17%	4%	**16%**
Equinor	EQNR	72,431	54%	76,400	12%	85,164	35%	1	1%	91%	**2%**
ExxonMobil	XOM	90,773	26%	262,674	6%	134,552	13%	321	30%	90%	**2%**
Hess Corporation	HES	52,111	37%	179,615	48%	82,047	40%	20	17%	38%	**18%**
HighPoint Resources	HPR	2,682	10%	4,694	6%	3,465	9%	41	17%	0%	**13%**
Marathon Oil	MRO	21,166	8%	36,964	4%	27,327	7%	41	10%	19%	**7%**
Matador Resources	MTDR	5,734	15%	15,021	9%	8,237	13%	127	48%	0%	**31%**
Murphy Oil	MUR	104,764	74%	234,954	78%	143,923	75%	0	0%	10%	**34%**
Noble Energy	NBL	4,181	3%	12,232	2%	6,220	2%	4	1%	35%	**1%**
Oasis Petroleum	OAS	5,287	5%	9,217	3%	6,823	4%	22	24%	0%	**14%**
Occidental Petroleum	OXY	170,163	25%	386,740	14%	234,619	21%	297	22%	65%	**7%**
QEP Resources	QEP	2,677	4%	8,163	5%	4,037	4%	0	0%	0%	**2%**
SandRidge Energy	SD	314	2%	3,817	2%	950	2%	0	0%	0%	**1%**
Royal Dutch Shell	RDS	382,607	86%	863,780	100%	526,570	89%	21	16%	90%	**5%**
Talos Energy	TALO	46,339	98%	94,793	93%	62,138	97%	7	100%	0%	**98%**
Total S.A.	TOT	101,993	100%	46,067	100%	109,670	100%	0	0%	97%	**2%**
Ultra Petroleum	UPL	5,953	95%	802,388	94%	139,685	94%	93	62%	0%	**78%**
W&T Offshore	WTI	27,668	100%	99,864	78%	44,312	90%	0	0%	0%	**46%**
Whiting Petroleum	WLL	23,991	18%	72,168	20%	36,019	18%	28	23%	0%	**21%**
WPX Energy	WPX	4,772	4%	30,528	7%	9,860	5%	4	2%	0%	**4%**
Total U.S.		**2,602**	**23%**	**9,306**	**8%**	**4,153**	**14%**	**4,176**	**12%**		**15%**

Source: RBC Capital Markets estimates, Enverus, IHS, company reports, BLM

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