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Magnolia Oil & Gas Investment Thesis

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Background

Business

Magnolia Oil & Gas (NYSE: MGY) is an independent oil producer created by TPG Pace Energy Holdings Corp from the acquisition of the South Texas assets of EnerVest in 2018. **The acquisition value was $2.66 billion** and funded by:

- ★ $650 million cash from the SPAC IPO of TPG Pace Energy
- ★ $355 million PIPE (private equity)
- ★ $300 million Senior Notes
- ★ $1.2 billion retained EnerVest interest
- ★ $500 million senior secured reserve-based revolving credit facility (RBL)

TPG Pace Energy was a special purpose acquisition company (SPAC) founded by TPG Group and Steve Chazen, who was a former CEO of Occidental Petroleum between 2011 and 2015. TPG Place Energy went IPO at $10 per share in May 2017 when the WTI oil price was $45-$50 per barrel. With the acquisition, a new company, Magnolia Oil & Gas, was formed in July 2018, when WTI was above $70. At the time, the investment seemed like a great deal for the SPAC investors. As part of the acquisition, the company entered into a service agreement with EnerVest Operating LLC to operate on the acquired oil assets, primarily in the Karnes County and Giddings Field (more details in **Oil & Gas Assets**).

Employing 45 full-time employees as of 2019, Magnolia Oil & Gas is focused on capital efficiency and free cash flow rather than production growth. From the company's website, its mission is to create value for shareholders by "***extracting value from oil rather than just extracting oil from the ground.***" This central idea has, until recently, differentiated Magnolia from other E&P companies. After the oil price crisis in 2020, Oil & Gas companies pay more attention to free cash flows as opposed to growth for growth's sake.

This idea is demonstrated by their disciplined capital expenditure since inception: maintaining a Cap-Ex around 60% of EBITDA regardless of oil prices. In other words, the company aims to grow by investing within their operating cash flows. Mr. Chazen practiced the same discipline during his tenure as the CEO of Occidental Petroleum. Other oil companies (e.g. DVN, PXD, MTDR) have recently followed this practice: shifting focus from growing production to returning free cash flow to shareholders. For many years, the shale industry has prioritized production growth, which has been considered by financial analysts and company executives as a proxy for success. As Devon's CEO David A. Hager said at a recent conference[1], *"there is finally an understanding in our industry that we have to have a financial model that makes sense for everybody,* [meaning] *production is not a proxy for success of our companies, and that we have to moderate the*

[1] Bank of America Merrill Lynch Global Energy Conference, November 11th 2020.

production growth." Finally, the industry has finally come around to appreciate a more sustainable financial model, which Mr. Chazen has practiced for nearly a decade.

Equity Structure

As of **March 5, 2021**, there were 177,015,444 shares of Class A Common Stock and 66,624,035 shares of Class B Common Stock outstanding for a total of approximately **244 million outstanding shares**. Class A shares are traded on NYSE, and class B shares are not publicly traded and associated with the non-controlling interests in Magnolia LLC. Each share of class A or class B has an equal economic and voting interest. The holders of Class B have the right to exchange each share of class B along with one Magnolia LLC Units (noncontrolling interest) for one share of class A. Class B shares and associated Magnolia LLC Units were originally issued to the Karnes County Contributors.

Magnolia owns 66.1% interest in Magnolia Oil & Gas Parent LLC (Magnolia LLC), which in turn owns oil and gas assets operated by EnerVest Operating LLC.

Oil & Gas Production

The following chart shows the company's average daily production volumes in each quarter since inception along with average WTI oil prices.

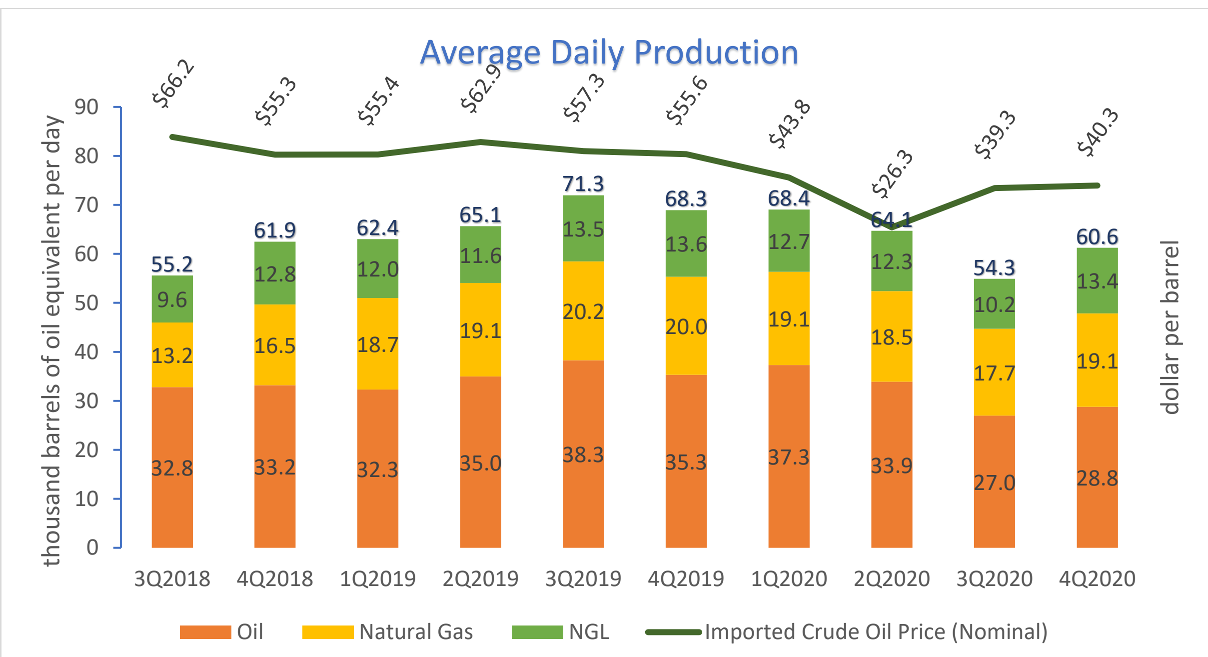

Figure 1 - Average Daily Production

Since the company has set Cap-Ex to approximately 60% of EBITDA and its production typically trails Cap-Ex, you will see that in any given quarter changes in production volume correlate with changes in the average oil prices of the previous quarter. For example, when oil prices declined sharply in Q2-2020, the production volume subsequently had a sharp decline in Q3-2020. The moderate level of reinvestment and a conservative drilling program enable the company to learn more about its new Giddings acreage.

The production in Q3-2020 was particularly disappointing as it declined to the level after the acquisition in Q3-2018. However, as we will show later in the **Valuations** section, the company is expected to grow production substantially in the first half of 2021 while generating significant free cash flows at the current level of oil prices.

Oil & Gas Assets

The company's primary assets include:

- 22k net acres (40k gross acres) in **Karnes County**, core of Eagle Ford Shale, South Texas. The Karnes assets also include part of the Austin Chalk formation overlying the Eagle Ford shale
- 428k net acres (631k gross acres) in **Giddings Field** of the Austin Chalk shale
- 35% membership interest in Ironwood Eagle Ford Midstream LLC

The economics of its wells in Karnes County and Giddings Field are very attractive and somewhat complementary as we will show later. In early periods following the acquisition, most of drilling activities happened in Karnes County, taking advantage of favorable oil prices. Karnes County wells have very short payback periods due to their generally high levels of initial production, but they have a steep base decline. Starting with Q3 2019, their focus has shifted to Giddings, where the wells have lower initial production relative to Karnes wells but a shallower base decline, and they are expected to do well in a low-price environment.

Karnes County

Karnes wells have low break-evens, high initial production rates, but a steeper base decline. According to the company:

- Break-evens at oil price $28-$32 per barrel while other peers break even between $35-$45 (see Figure 3 under Investment Thesis – **Asset Quality** section)
- Lower Eagle Ford IP30 and IP90 were 400 boe/d and 285 boe/d per 1000ft lateral, respectively
- Austin Chalk IP30 and IP90 were 465 boe/d and 400 boe/d per 1000ft lateral, respectively
- Peak production around 30 days

See the following slide, taken from the company's presentation.

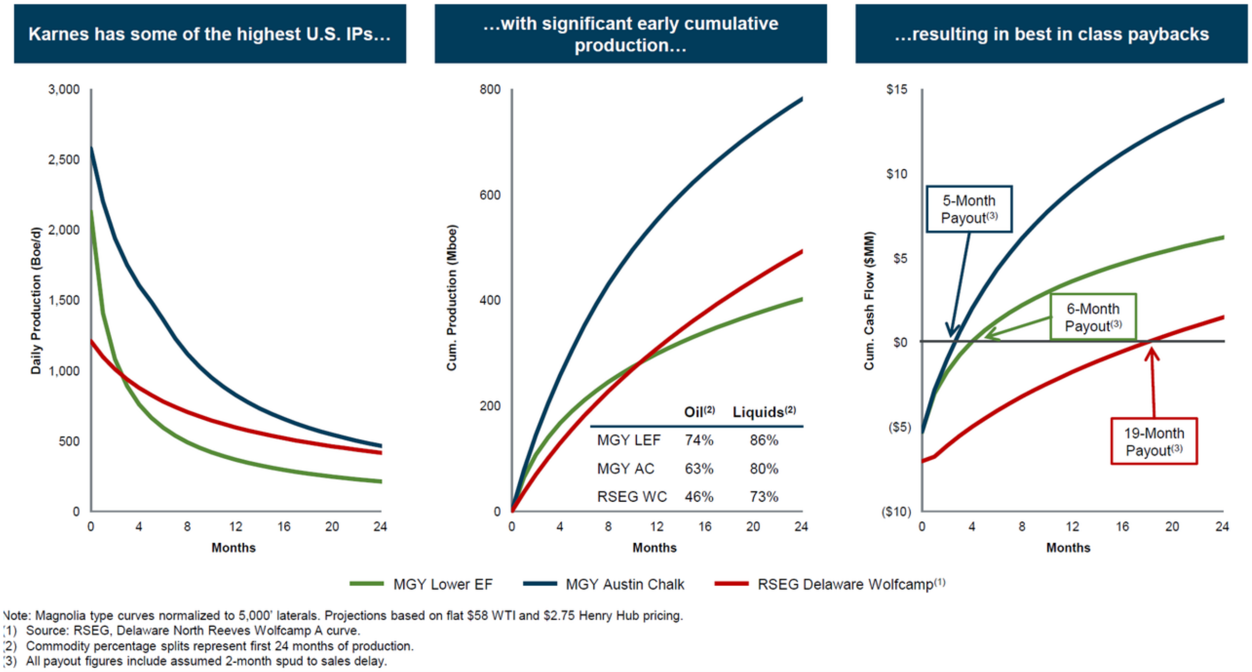

Figure 2 - Karnes County wells' performance

Source: Q3-2020 Earnings Slides

Notes:

- *Lower Eagle Ford and Austin Chalk wells are both in Karnes County.*
- *Eagle Ford and Austin Chalk produce 216k and 332k barrels of oil, respectively, in their first 12 months.*
- *The 3rd graph assumed WTI $58.*

As shown in the second chart, the wells in Lower Eagle Ford have lower drilling costs (~$5.5 million per well) and very short payback time at favorable oil prices. Best time to drill these wells is when oil prices are high such that most production volume is realized in a short period of time. The wells in Austin Chalk formation have more overall production and a much slower decline. This is also true with Giddings Field wells.

Giddings Field

This field has seen two drilling cycles: vertical drilling in 1970-1980 and horizontal drilling in 1990s. With recent improvements in technologies, Magnolia is unlocking new opportunities here. In 2019, the company started to experiment with different drilling locations and learned about the acreage. At the end of 2019, they have located an initial core area of approximately 70,000 acres, where the early results on 20 wells have been very good. The below table shows average daily production of these Giddings wells after 90 days (according to Q4-2020 earnings release):

Quarterly Period	Q4-2020	Q3-2020
Number of wells	20	14
Oil, barrels of oil per day (bopd)	846	783
Natural Gas (MMcf/day)	4.7	4.6
Total (boe/d)	1,621	1,549

Note: The average lateral well length of recent wells is between 6000-7000ft.

Note that these wells take longer to reach peak production after drilling completion (typically 90 days), but as mentioned earlier, they have more overall production and slower base decline. With the current low oil prices, the company has shifted focus from Karnes to Giddings Field development. Their idea is to optimize cashflows by spreading production from each well over a longer period of time. Drilling and Completion (D&C) cost was $6.5 million per well here and the company expects further reduction to under $6 million.

Investment Thesis

The investment thesis for Magnolia consists of 4 main points:

★ **Asset Quality**: low full-cycle cash costs, short payback periods (Karnes County), low base decline rates (Giddings Field)
★ **Organic Growth**: 10+% production growth even with conservative capital expenditure at $40+ oil prices
★ **Management**: Experienced management and strong insider ownership
★ **Valuation**: Attractive valuation with decent upside catalysts in the near term

Asset Quality

Magnolia has been in operation for less than 3 years (late 2018-2020) so it might be too early to draw definitive conclusion on its asset quality, especially wells in Giddings Field. However, Magnolia is one of few companies that provide clear visibility into its operating performance. As the management team provides quarterly updates on new wells, we can gather a clearer outlook of their production. Their wells have been one of the best in North America. Low-cost wells are very important in the current low price environment.

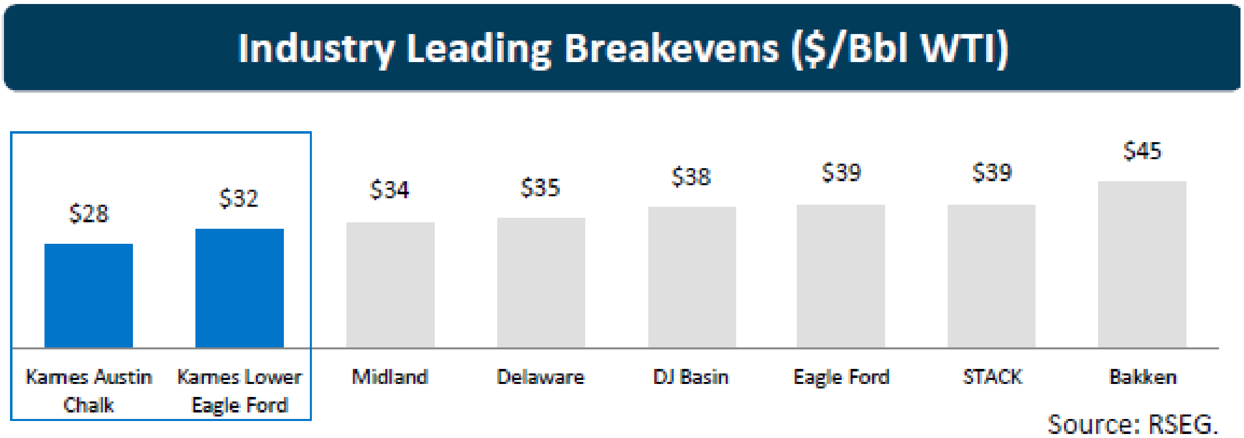

Figure 3 - Oil Industry Breakevens

For example, in Karnes, the D&C cost of well is approximately $5.5 million. At the current oil price (WTI=$40), the company can realize approximately $26 per boe. According to the company press releases, cash cost has been consistently less than $11 per boe (see table below). Thus, the company would generate $12 cash per boe.

Cash Cost per unit of production	FY2019	Q4-2020
Lease Operating Expense	3.85	3.20
Gathering, Transportation & Processing	1.43	1.45
Taxes other than income	2.2	1.50
Exploration Expense	0.52	0.25
General & Administrative Expense	2.85	3.11
Total	$10.85	$9.51

Thus, even in a low-price environment, where WTI is $40 for example, the D&C cost of Karnes wells can be recovered **after ~460K boe or less than 18-20 months**. The Karnes wells also have very high initial production rate, allowing Magnolia to capture significant economic benefits from future spikes in oil prices.

In Giddings Field, drilling is more expensive (~$6.5 million per well), but base decline is much slower. At WTI $40, the D&C cost of Giddings Field wells can be recovered after **~540k boe or less than 14 months**.

Such low production cost allowed the company to generate positive cash flows even with at the lowest level of production. For example, the company generated $46 million in free cash flows at 54.3 Mboe/d in Q3-2020. This free cash flow is more than sufficient to add new wells and grow production if needed.

Note that the company owns 428k acres of Giddings with more than 1000 drilling locations. The core area of 70k acres has approximately 400 locations. It will take many years to drill these locations, ensuring a long and sustained cash flows for shareholders.

Organic Growth

The company strategy is to grow *organically* and *profitably* through efficiency improvements, conservative Cap-Ex, and small bolt-on acquisitions.

- Since inception in late 2018, the company has reduced drilling cost from $8 million to $6.5 million and on track to $6 million per well.
- Target Cap-Ex is maintained around 60% of EBITDA. As we analyzed the asset quality above, the company should have no problem to grow production at low oil prices.

Many shale investors have been disappointed by the industry's inability to generate free cash flow in the last decade. Other companies spend more cash than they generate and grow through use of leverage. These investors should be delighted by Magnolia's conservative Cap-Ex program.

Management

The company has a strong insider ownership. Mr. Chazen, the CEO, owns approximately 2.9% share (as of May 2021), and his total compensation in 2019 and 2020 were $270,000 and $255,462 – far less than any other CEO in the industry. He manages the company conservatively like his own retirement assets. All directors and executive officers collectively own 3.4% of the company.

According to proxy filings, the management compensation is determined based on the following three performance metrics:

- Operating Margin
- Free Cash Flow Percentage
- Other Qualitative Factors such as organic reserves replacement, exploration costs, G&A savings, and acquisition execution

These are in stark contrast with many other oil & gas companies that reward management based on production and EBITDA growth. Growth for its own sake has been partly responsible for disappointing cash returns to shareholders in the shale industry. These goals are also consistent with the company's mission, focusing on capital efficiency.

The CEO has deep experience from Occidental Petroleum and, in our opinion, made some good decisions for Magnolia. For example:

★ Maintaining very low leverage (net debt to EBITDA less than 1.0x). This afforded the flexibility during this crisis as the company was comfortable scaling down its production without any risk of violating any covenant or worrying about debt payments.
★ Prioritizing exploring and testing different parts of Giddings over increasing production volume. The wells were drilled at locations far away from each other with laterals between 6000ft-7000ft. During Q3-2020 earnings call, he said "*if you drill too closely, you're accelerating the production and they interfere with each other. And I think that's a mistake the industry has made over the last few years. So we've got the -- in Giddingss we have enough plenty of acreage that we can space it extremely widely. And the wells productivity if you look at the curves is pretty good. So there is no real reason to do tight spacing at this point or really any point.*"
★ Operating with the right capital discipline from the start, establishing Cap-Ex around 60% of EBITDA (as mentioned in the introduction), and differentiating itself from many other oil producers, who chased unprofitable growth in the last decade. During a presentation in November 2018, he emphasized that this was an "ugly" problem of the oil industry, at least from the perspective of an ordinary investor. The unprecedented oil crisis in 2020 was a wake-up call for the shale industry and other oil producers have started to be more disciplined with their drilling programs.

Based on all above evidence, we believe the company has excellent stewardship.

Valuations

With oil prices in low $40s, the company yields significant cash flow relative to peers as shown by EV/FCF in the below table.

Q4-2020	MGY	MTDR	FANG	PXD	CPE
Market Cap (million $)	2,743	3,073	14,792	33,344	1,726
Enterprise Value (million $)	2,942	4,830	20,503	35,635	4,675
BOE Production Q4-2020 (boepd)	60,617	83,185	298,978	364,482	94,913
EV/EBTIDA (annualized Q4-2020)	7.5	8.0	10.8	13.2	7.0
EV/FCF (annualized Q4-2020)	14.8	11.4	18.8	37.6	39.3

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EV per flowing barrel	133.0	159.1	187.9	267.9	134.9

The company ended 2020 with $192 million cash and $391 million long-term debt. While production was low in Q3-2020, it was intentional as the management reinvested conservatively during the crisis. As the management explained: *"we have the flexibility to adjust our spending… [and] the locations don't go away for us."* Increasing production doesn't make an oil asset worth more. As oil prices stabilize at $40 or higher, the company is expected to increase production and generate substantially more cash flows. Given the solid balance sheet and low-breakeven oil assets, we believe it deserves a premium relative to peers. Yet, its EV/EBITDA is traded at a discount relative to peers.

If we use traditional EV/EBITDA valuation, **we estimate that the company's value to be $2.94 billion ($12.05 per share)** based on our fair value assumption of **EV/EBITDA=8 and WTI oil prices in the low $40s**. We used EV/EBITDA=8 because it was a typical valuation under normal operating conditions.

We believe that our estimate is very conservative because:

- Like other oil producers, the fair value will be significantly higher oil prices go back to a historically normal range ($55 to $65), representing a significant upside and, more importantly, a very low risk. Oil prices will probably stabilize and increase in 2021 with the vaccine and production cuts. As 05-01-2021, WTI oi price was at $63.58 (compared to MGY's realized oil price $40 in Q4-2020).
- While EV/EBITDA is used by many industry analysts, it does not reflect the accurate value of an oil producers. EBITDA ignores the most important cash expense that is Cap-Ex and makes many companies look more profitable than they are. Thus, we also consider EV/FCF. In our opinion, companies with strong free cash flows in a low-price environment should be traded at a premium. This comes back to the idea that we mentioned in the introduction, where many oil companies have started to put more emphasis on free cash flows. The above table shows that Magnolia compares much more favorably relative to peers in term of EV/FCF.

Risks and Catalysts

Risk Factors: In our opinion, two main risks are: the CEO as a single key man and dependency on EverNest as the primary operator. With co-founder Christopher Stavros (CFO), who is also a very experienced veteran from Occidental, we think the key man risk is somewhat mitigated. With recent development of COVID-19 vaccines and gradual increases in weekly rig count[2], we expect lesser pressure on oil service operators in the coming months. Please also consult the 10-K filing for other risks.

Near-term Catalysts. We think that there will be multiple catalysts in 2021:

★ Oil price recovery. As a small E&P, the company stands to benefit the most from oil price recovery as it can increase production significantly without affecting the oil market.

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[2] Source: https://oilprice.com/rig-count

- ★ More positive data on performance of new Giddings wells.
- ★ Expected production increase from DUC and new wells.
- ★ The CEO hinted before that they will have do something about their $200 million cash and that paying off $400 million debt not due until 2026 would not have an impact on the stock price. He also said he liked dividends in general. We are expecting possibility of a special dividend soon in 2021.
- ★ High short interest. Top 20 institution and fund shareholders account for 190 million out of 244 million outstand shares. The last short interest was 13 million shares, representing 8.8% of float. As the energy sector recovers, this short interest will likely come down significantly causing significant share price increase.

Conclusion

Magnolia Oil & Gas (NYSE: MGY) is a small oil producer and a great long-term investment for retail investors and micro funds, who want to not only take advantage of oil price increases in the near future but also look for a long-term addition to their energy portfolio. This investment represents strong and consistent cash flows even at low oil prices with significant upside and somewhat limited downside. We initiated a small long position at prices between $7-$8 and increased our holding substantially when its price dropped to below $6 in 2020. As of end of Q1-2021, we had more than 5% of our net asset in MGY.

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