BEACON

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Desert Mountain Energy Corp. (DME-V)

Standing on a Corner in Helium Arizona

We are initiating coverage of Desert Mountain Energy with a Spec Buy recommendation and a price target of $4.00, which represents a potential return of 147%. Our recommendation is based on the following:

- Desert Mountain is a vertically integrated helium company with 100,000 acres in the Holbrook Basin near Winslow, Arizona. The company has drilled eight wells, all successful, with five wildcat wells and three infill wells finding four helium fields. The company is set to be the first Canadian-listed helium company with meaningful helium production when its McCauley processing facility reaches optimal throughput this summer.
- A considerable advantage that DME has over its peers that are exploring in western Canada and/or Montana is that the helium concentrations in Arizona are generally between 3% and 4% in comparison to 0.5% to 1.1% up north. As such, Desert Mountain will require much lower rates of raw gas to produce a similar amount of helium, which should translate to lower capital and operating costs for processing facilities.
- Helium market fundamentals have tightened to a point that supports elevated helium spot prices, as per market anecdotes. Spot helium has sold for US$750/mcf to over US$2,000/mcf over the past year depending on grade. While we do not model the upper end of that range for Desert Mountain's sales, it may be possible for the company to sell some of its helium at that level.
- Being early to market is important for Desert Mountain to take advantage of the strong helium pricing. At 150 mcf/d from the McCauley field, the company would have a run rate EBITDA of $40 million.
- Post the $23 million equity financing closed last month, the company has sufficient capital to fund its 2023 capital program, including starting throughput at the McCauley plant, drilling helium and hydrogen wells, and ordering equipment/building the next two helium processing facilities.

Conclusion & Recommendation: Desert Mountain should reach an inflection point in late-June/early-July when its McCauley field reaches an optimal level of production. Recent weakness in DME's share price presents an opportunity for investors to own a high growth helium company at less than 1.0x our F2024 estimates. We expect that this sector could trade over 5x when the market is better understood. Our $4.00 price target is based on a 3.5x EV/DACF multiple of our F2024 forecasts.

Initiating Coverage

Spec Buy **$4.00**

Recent/Closing Price	$1.62
12-month Target Price	$4.00
Potential Return	147%
52 Week Price Range	$1.46 - $4.43

Estimates

YE: Sept 30	FY22A	FY23E	FY24E
Helium prod (mcf/d)	0	44	300
Revenue ($M)	$0.2	$17.2	$107.4
EBITDA ($M)	($3.1)	$11.1	$84.6
FFOPS (FD)	($0.04)	$0.12	$0.90
EPS (FD)	($0.10)	$0.09	$0.77

Valuation

YE: Sept 30	FY23E	FY24E
EV/EBITDA	neg	1.0x
EV/MMCFPD	$2,915,704	$291,905
P/E	18.4x	2.1x

Stock Data

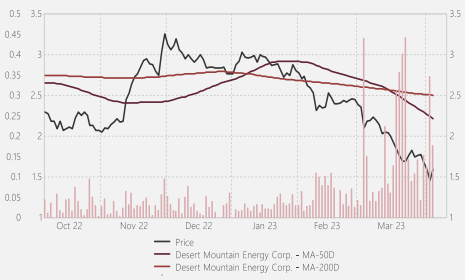
Shares Outstanding	
Basic	89.8
Fully Diluted	110.2
Market Cap (C$M)	
Basic	$145.5
Fully Diluted	$178.5
Net Debt/(Cash) ($M)	$(7.1)
Enterprise Value ($M)	$138.4

About the Company

Desert Mountain Energy is focused on the exploration, development and production of primary helium and noble gases in the U.S. Southwest.

All prices in C$ unless otherwise stated

Stock Performance



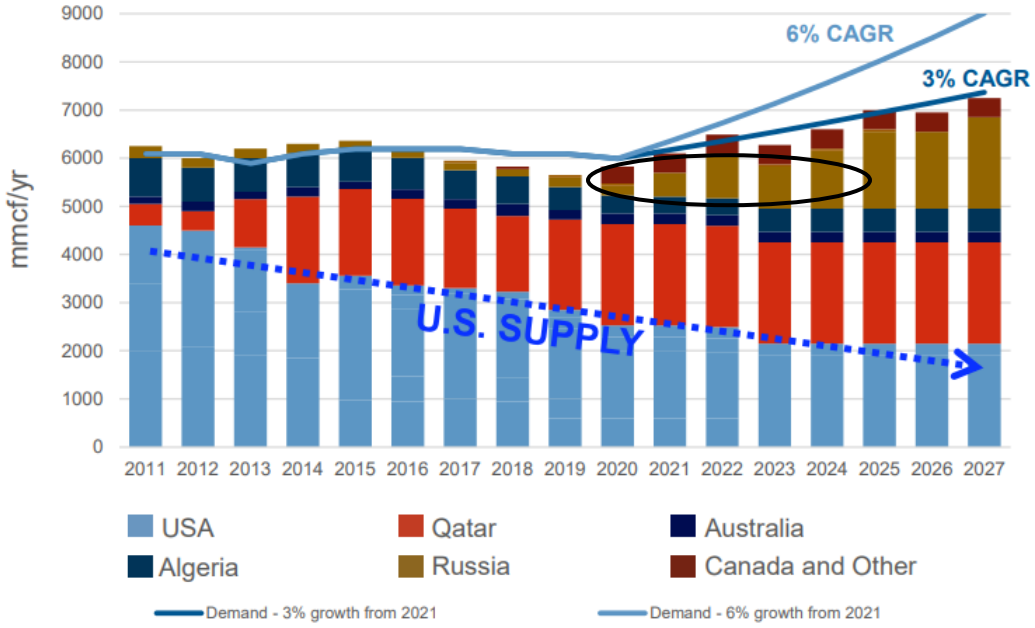
Investment Thesis – Fortune May Favor Early Entrants to Market

Over the past 15 months or so, the helium world has experienced considerable change as the market entered what many call 'Helium Shortage 4.0' in early 2022. Since that time, most helium users in North America have been dealing with allocations from suppliers, which also comes with sharply higher helium prices.

So, what caused the shortage of helium and how long is it expected to last? Well, there are several factors to consider for those questions. A couple of the issues impacting supply in 2022 have been rectified, including the extended outage of the U.S. BLM facilities and maintenance of two of three helium plants in Qatar. A couple of other issues seem longer term in nature, including reduced production from Algeria due to natural gas being diverted to Europe because of the Ukraine war and lower production from a plant at Darwin, Australia. However, it is the situation in Russia that has the largest and, potentially, longest lasting impact.

Gazprom was supposed to start up two helium plants connected to its Amur gas processing plant in eastern Russia, each with capacity of 750 mmcf/yr. Combined these plants were to supply 1.5 bcf per year of liquid helium, equivalent to roughly one-quarter of current worldwide capacity. A 3rd plant is/was to start in 2025. However, in October 2021 there was a fire at the Amur gas plant that was followed by an explosion at the same plant in January 2022. Suffice it to say that Amur is offline and is not expected to be operational until late this year or well into 2024. It could be even longer, depending on the impact of the war in Ukraine.

Exhibit 1: Global Helium Production



Source: Company reports, USGS, Beacon Securities Limited

So, even though the Helium Shortage 4.0 seems to be abating somewhat due to return of BLM volumes, there does not appear to be a near-term solution to the supply side until Amur comes online, although Gazprom recently pushed out its re-start date to June 2023 (from

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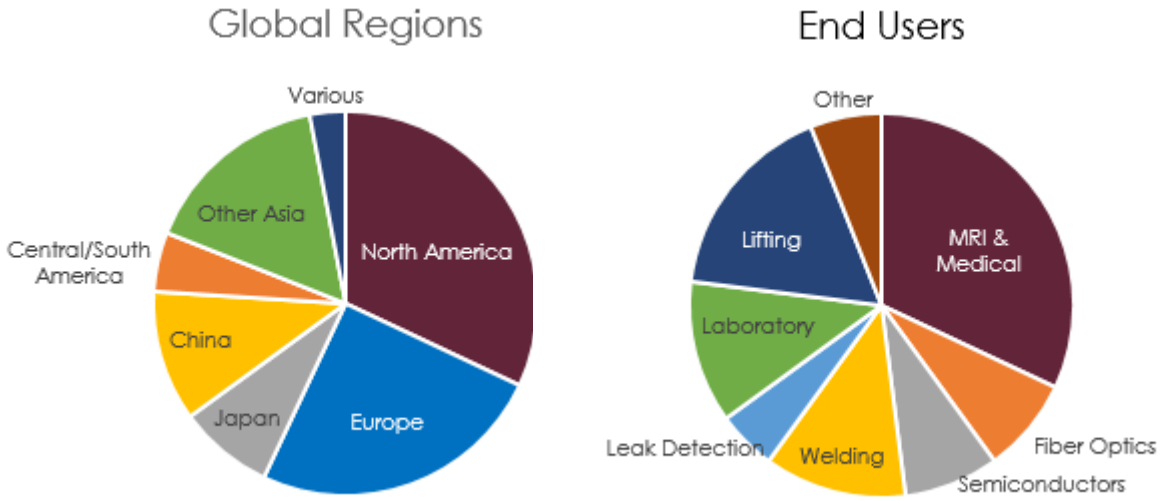
April). That said, most analysts suggest that a late-2023 or 2024 date is more likely. Even when Amur comes online, sourcing containers will be very difficult for Gazprom due to war-related sanctions. Helium volumes are also set to increase from Qatar, but not until 2026/27.

Therefore, the helium market that was to grow at a 3% CAGR for the next few years may be hard pressed to maintain the approximate 6.5 bcf/year level, especially if the Amur gas plant remains offline for a considerable time, as shown under the ellipse in Exhibit 1. This presents a unique opportunity for He exploration in North America, especially in areas on known helium accumulations and in close proximity to market (i.e.: Arizona).

The demand side of the equation is equally compelling as so many new economy sectors rely on helium for what can be a mission critical element in their operations due to the unique characteristics of helium (i.e.: inert, lowest freezing point, size, etc.), which means helium has no substitutes and cannot be synthesized. In addition, western countries and neighbors account for nearly 2/3's of the global demand for helium, making this element very important to those economies.

Exhibit 2: Helium Demand



Source: Company reports, USGS, Beacon Securities Limited

With that encouraging background, we believe getting production onstream as soon as possible is paramount for all helium companies in order to take advantage of premium He prices. Desert Mountain should be leading the Canadian-listed pack in that regard, particularly in any meaningful helium volumes.

Over the next few quarters DME has many potential catalysts, including the ramp-up of gas through its McCauley plant, drilling helium wells, drilling hydrogen wells, commissioning its 2nd and possibly 3rd plants, etc., that should lead to significant EBITDA and FCF (see our forecasts later in this report). In our opinion, investors will not be able to overlook the potential for Desert Mountain for very long. We are initiating coverage of Desert Mountain Energy Corp. (DME or the company) with a SPEC BUY rating and a 12-month price target of $4.00 per share.

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Why We Like Desert Mountain Energy

1. **1st mover advantage**. Desert Mountain has commissioned its McCauley Helium Plant and is going through start-up procedures with the expectation that initial raw gas volumes will flow through the plant this month. As such, DME will be one of the first Canadian-listed helium companies to produce helium and the first with a meaningful level of He production. This should be seen as a major reduction in the specific risk in getting to the production stage.
2. **Compelling macro background**. Helium Shortage 4.0 has set the stage for a prolonged period of tight supplies due in large part to the Amur gas plant issue in Russia. Even if that plant restarts this year (questionable), getting helium to market from there looks very challenging. Add to that a growing demand from virtually all modern technologies means spot helium prices that anecdotally are in the range of US$1,000 – US$2,500 per mcf (even reaching US$6,000/mcf) may have legs.
3. **Premium helium concentrations of primary helium**. By focusing on Arizona where DME's test rates point to a 3%-4% average He concentration, DME looks to produce significantly more helium for a given level of raw gas compared to its peer group that typically has He concentrations of 0.5%-1.1% in western Canada and northern Montana. Also, raw gas composition appears to be 92%-97% nitrogen in the McCauley field, meaning there are minimal other gases to deal with.
4. **Repeatable process**. DME has drilled 8 helium wells to date (5 exploration wells and 3 offsets) with 100% success. With over 100,000 acres in the Holbrook Basin, the company has the assets and the technology (i.e.: proprietary plant design) to repeat its success at the McCauley field. DME plans to pre-order equipment for two additional plants in the near future.
5. **Proprietary facility design**. DME has designed the McCauley helium plant to process raw gas volumes ranging from 0.3 mmcf/d to 10.5 mmcf/d with helium concentrations between 0.03% and 11%. This flexibility is unique and gives the company an advantage to build similar facilities as it requires.
6. **Green helium**. There are several unique factors that make DME's helium "green", including: 1) no hydrocarbons in the McCauley field means no GHG emissions; 2) an 8-acre solar array has been installed and will supply 258 kw of power to run the plant; and 3) the chemicals used in DME's drilling are all organic materials (e.g.: polysaccharides, pectin, gelatin) that can be bought at a local grocery store.
7. **Proven jurisdiction that is close to market**. Arizona has a history of helium production at the Pinta Dome and Navajo Springs fields. The region also has material demand from small to large companies and various government agencies and is poised to grow with the new Intel (INTC-Nasdaq, not rated) and Taiwan Semiconductor Manufacturing (TSM-NYSE, not rated) fabs under construction. DME has lined up 50+ end-users that are to purchase helium directly from the company.
8. **High margin business leads to significant free cash flow**. Even though the price received for its helium may be well over US$1,000/mcf if the grade is sufficient, DME only pays the 12.5% royalty on a US$500/mcf He price, meaning revenue above the US$500/mcf level can be viewed as royalty free. Even so, with opex expected to be less than US$65/mcf due to generating its own power, DME may deliver an operating margin of 65%-80%+, depending on the He price. We forecast over $40 million of FCF in F2024, giving a FCF Yield of 30%.

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9. **Management brings relevant experience.** Under the guidance of Robert Rohlfing (CEO), who has 20 years of experience in exploring the Holbrook Basin, and Don Mosher (president), who brings extensive capital markets experience, DME has assembled a management team and board of directors that have a wide array of knowledge in building and running resource companies in the U.S. Southwest and, in particular, Arizona.
10. **Non-helium revenue covers G&A.** In April 2022, DME purchased a transportation fleet (five heavy haul trucks and three 13-axle low-boy trailers) for approximately US$700k to avoid massive cost escalation in the movement of drilling rigs. DME rents these assets out when not using them (contracted out 24 months) and expects to receive $200k-$225k per quarter. In addition, DME provided a US$1.5 million loan to Drake Drilling in order to have 1st priority on a Drake rig (30-45 days notice). For this loan, DME is to receive US$3,000/day until the loan is paid back and US$1,500/day thereafter until 2027. Combined, DME should have $500k/qtr of non-helium revenue.
11. **Valuation points to a multi-bagger**. As Desert Mountain is at the start of its production life (or soon will be), there is some uncertainty over well performance, although exploration risk has largely been eliminated in the McCauley field. However, if the wells and plants perform as expected DME stands to deliver large amounts of EBITDA and FCF. We believe the helium sector could eventually trade at an EV/EBITDA multiple of over 5x; however, our price target of $4.00 is based only on 3.5x our F2024 forecasts.

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Doing it Their Way

In January 2019, DME hired Robert Rohlfing as VP, Head of Technical Operations to build the company's helium exploration and development on the back of Mr. Rohlfing's 20 years of experience in the Holbrook Basin and surrounding areas. In July 2020, Mr. Rohlfing took over as CEO and has revamped the management team and board of directors, bringing in significant technical experience to both (see Exhibit 3 for a list of each).

Further to the addition of a new CFO (Valorie Farley) who has significant U.S. experience and will initially focus on identifying tax rebates and government grants for solar and hydrogen, DME has stated that it intends to make some revisions to the Board at the upcoming AGM, in order to add more independence.

Exhibit 3. DME Senior Management & Board of Directors

Executive Officers		Board of Directors
Robert Rohlfing	CEO	Robert Rohlfing
Don Mosher	President	Don Mosher
Jessica Davey	VP Land	Jessica Davey
Marta Wasko	VP Geology	Dr. James Cronoble
Dr. James Cronoble	VP Exploration	Dr. Kelli Ward
James Hayes	VP Engineering	Jenaya Rohlfing
Ched Wetz	VP Risk Management	Weldon Stout
Eric Witt	Drilling Manager	
Valorie Farley	CFO	

Source: Company reports, Beacon Securities Limited

The management team and Board of Desert Mountain bring a somewhat unique approach to the emerging Canadian-listed helium sector. For instance:

- The company has focused its asset base in Arizona, which makes a lot of sense as that jurisdiction has a proven history of helium production (more on that below). Nearly all of DME's peer group are exploring for helium in western Canada or Montana.
- As DME recognized the challenges that most of its peers face in terms of securing the equipment and timing to construct helium processing facilities, it undertook a solution to design a proprietary, portable facility that can be built in a relatively short time period and be modified as is required by the various DME fields.
- In order to maximize its revenues, DME plans to sell directly to end-users. That way, the company would not forgo the delta between long-term contracts (typically in the US$450/mcf range or lower) and the spot market, which can reach over US$2,000/mcf (depending on grade).

There is every chance that DME can be an industry leader in terms of realized pricing and helium concentrations, which would be a result of the management team's business plan.

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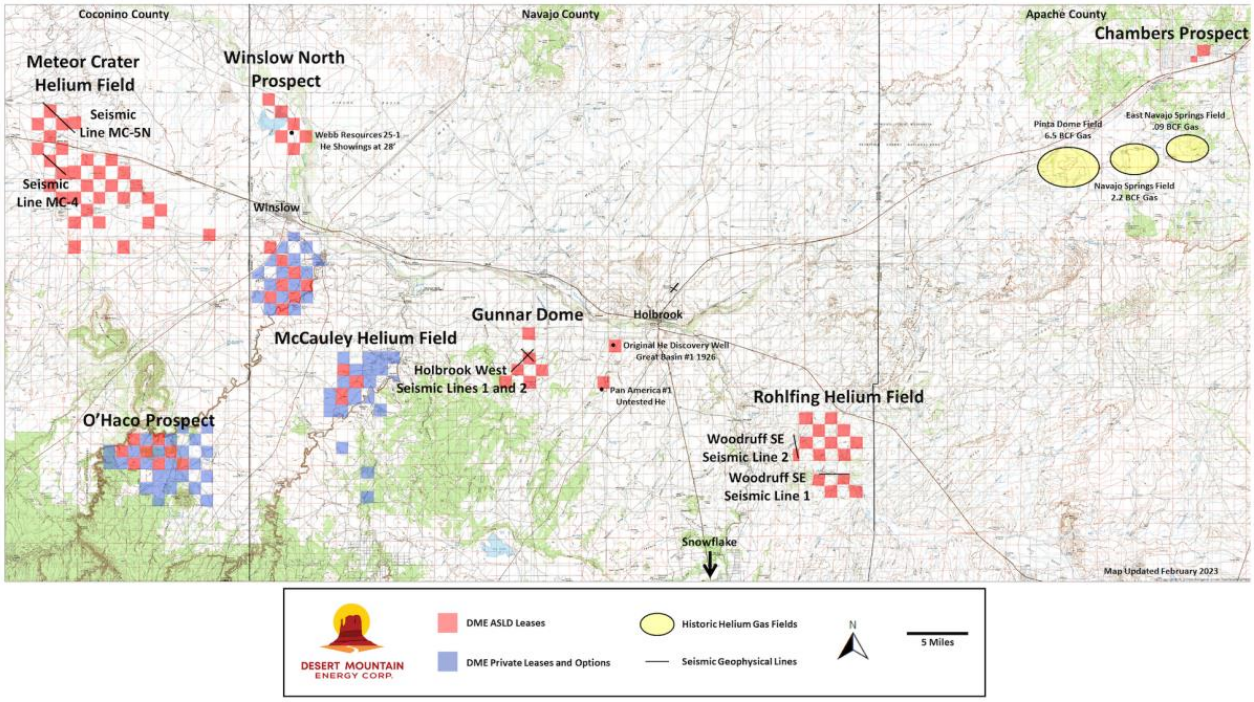
Arizona Has a History of Helium Production

At times, Arizona has been called "The Saudi Arabia of Helium". Whether or not that is true is a debate for another time but suffice it to say that Arizona has a relatively long history of helium production, mainly in the northeast part of the state. It started with the Pinta Dome and Navajo Springs fields in the Holbrook Basin where these fields had some of the highest concentrations of He ever found, ranging from 6%-12%. The Pinta Dome and Navajo Springs fields produced a combined 700 mmcf of helium from 1961-1976 and in all likelihood would have kept producing for a long time if not for the very low price of helium (under US$10/mcf) at the time.

As shown in Exhibit 4, DME's land holdings in the Holbrook Basin are approximately 55 miles southwest of the Pinta Dome field. The company has over 100,000 acres in that area spread across several fields. Desert Mountain also has access to another 250,000 acres in northeast Arizona and Utah (not shown on the map) for review under a deal with PetroSun that was announced in February 2023. The PetroSun deal could set the stage for DME to be a 3rd-party processor. The idea is for DME to install a plant to process helium without the exploration risk of drilling, which would fall on PetroSun's shoulders.

Exhibit 4. Location of Desert Mountain's Land Holdings



Source; Company reports

Unique Drilling Method

Desert Mountain has given considerable thought to being as environmentally conscious as possible. One of the ways it is doing so is through the drilling process. While it is widely known that air drilling is the proven method in the Holbrook Basin in order to prevent formation issues

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(must avoid water-based drill muds that cavitate the formation), DME takes its approach much further by triple-cementing its wells despite the added cost of C$200k. The top of the well is drilled down 20 feet with a steel conductor cemented in place to support the well. DME then installs a steel surface casing down below the Coconino fresh water aquifer and cements this in (back to surface). Then another steel casing is put in place down to a lower zone (below the brackish water) and this intermediate casing is cemented to a 50-foot overlap with the surface casing, which exceeds state requirements. The well is drilled below all possible production zones and the production casing is run back to surface and cemented all the way to surface (also exceeding state requirements) to add additional protection to the brackish and fresh water zones.

As for the completion of the well, the company uses a combination of food-grade additives (i.e.: polysaccharides, pectin, and gelatin) rather than the caustic chemicals used in typical O&G drilling. These are all ingredients that anyone can get off grocery store shelves. While regulations do not call for this level of downhole security, DME has a goal of protecting the aquifers in the Holbrook Basin.

Unique Plant

In order to expeditiously get its operations to the production stage, DME designed a proprietary pressure-temperature swing membrane and cryogenic processing facility for its McCauley field.

Exhibit 5. McCauley Helium Processing Facility and Solar Array

Source; Company reports

Generon built the plant, shown in Exhibit 5, offsite and commissioned it in January 2023. It has several features that should deliver helium at a low cost of operations (i.e.: sub-$25/mcf) and

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is a template for future DME plants:

- It is built in four 40-foot "sea cans" that allows for portability, if ever required.
- The plant can operate at raw gas volumes between 300 mcf/d to 10.5 mmcf/d.
- Pressure swing adsorption (PSA) is used to remove He from other gases.
- The plant only requires 258 kWh of electricity, which will be supplied by an 8-acre solar farm with 3,600 solar panels. As Arizona has ~360 days of sunlight in this part of the desert, there should be plenty of high UV for solar. This also allows DME to be even more carbon neutral as this plant is the 1st solar-powered helium plant in the world.

The McCauley plant, and presumably future plants, will be able to process helium in a full range of grades, from Grade 4 industrial (commonly referred to as Lifting Gas) to Grade 6 that is the highest purity. This flexibility is key to providing end-users with a bespoke helium grade.

Exhibit 6. Helium Grades

Grade	Purity		Uses
Grade 4	99.99%	Industrial Grade	Lifting gas - balloons, some leak detection, air bags
Grade 4.5	99.995%		balloons, push gas for MRI
Grade 4.6	99.996%		weather balloons, blimps, leak detection, shielding gas for welding, coolant in rockets & medical
Grade 4.7	99.997%		Grade A industrial - cryogenic, pressurizing & purging, breathing mixture, leak detection
Grade 4.8	99.998%		Highest Industrial garage - military applications
Grade 5	99.9999%	High Purity	chromatography, mass spectrometry, laboratory research, weather balloons & blimps
Grade 5.5	99.9995%		Research grade - chromatography, semiconductor processing, lab research, MRIs, fiber optics, shielding gas for welding
Grade 6	99.99999%		Pure helium - semiconductor chips, scientific research, laser cutting, MRI, chromatography

Source; Zephyr Solutions; Beacon Securities Limited

100% Drilling Success to Date

Desert Mountain has drilled eight wells in its various fields in the Holbrook Basin each to a depth of approximately 3,900 feet, with all being successful in finding primary helium (i.e.: no material amount of hydrocarbon or CO_2). The key is that DME focuses on the anticlinal highs, which has delivered five wildcat exploration wells and four helium pools.

Focusing on the wells in the McCauley field as that will be the initial field of production, we see they have had very high rates of nitrogen and helium (see Exhibit 7). This is important as it underscores the straightforward process of producing helium from this field. The CO_2 is removed during the dehydration of the raw gas, which should leave only nitrogen to be removed and vented to the atmosphere.

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The 2nd field that we expect to be in production in early-2024 is the Rohlfing field. Two wells have been drilled there with very encouraging data. Helium concentrations have been very high, although the methane and CO_2 will need to be considered. In addition to those gases, the Rohlfing plant will need to have the ability to strip out various noble gases (argon, krypton, xenon, neon), which could provide another revenue stream for the company. DME may also add a liquefaction module to the Rohlfing plant in order to transport liquid helium further distances without a concern for loss of helium that can occur in gaseous form. The company plans to order long-lead equipment for this plant in the near future.

Exhibit 7. Gas Stream Analysis

	Gas Concentrations					
Field & Well	**Helium**	**Nitrogen**	**CO_2**	**Hydrogen**	**Methane**	**Water**
McCauley Field						
Well #2	4.2%	92.0%	0.0%	3.8%	0.0%	none
Well #4	1.1%	94.7%	0.1%	0.0%	3.4%	none
Wells #5-7 avg	3.5%	96.5%	0.0%	0.0%	0.0%	none
Rohlfing Field						
State Well 10-1	7.1%	77.1%	4.0%	0.0%	2.7%	none
State Well 16-1	4.1%	90.3%	0.0%	0.0%	3.6%	none

Source; Company reports; Beacon Securities Limited

Note that Well 3, which was drilled in 2020 but held up in the courts due to a lawsuit from the City of Flagstaff (DME won that case), was recently re-entered in an effort to deepen the well to the Pre-Cambrian Granite. The company intends on testing the well when a completion rig is available. Mass spectrometer readings did show the presence of helium and hydrogen and no sulfur. As this well is in the Meteor Crater field, a successful test could lead to another field to be developed in the future.

2023: The Year of Desert Mountain Helium Production

DME has assembled a $20 million project list for 2023 that includes:

- Drill two exploration helium wells on the South Winslow and O'Haco fields.
- Order lead items for the 2nd and 3rd helium plants with the expectation to take delivery of the 2nd plant for the Rohlfing field by the end of the year.
- Purchase a truck on helium trailer to transport gas from some wells to plants.
- Shoot seismic and drill three hydrogen wells with Beam Earth (50% WI); the 1st of these to spud in June as the company moves to prove up an opportunity in a second project.

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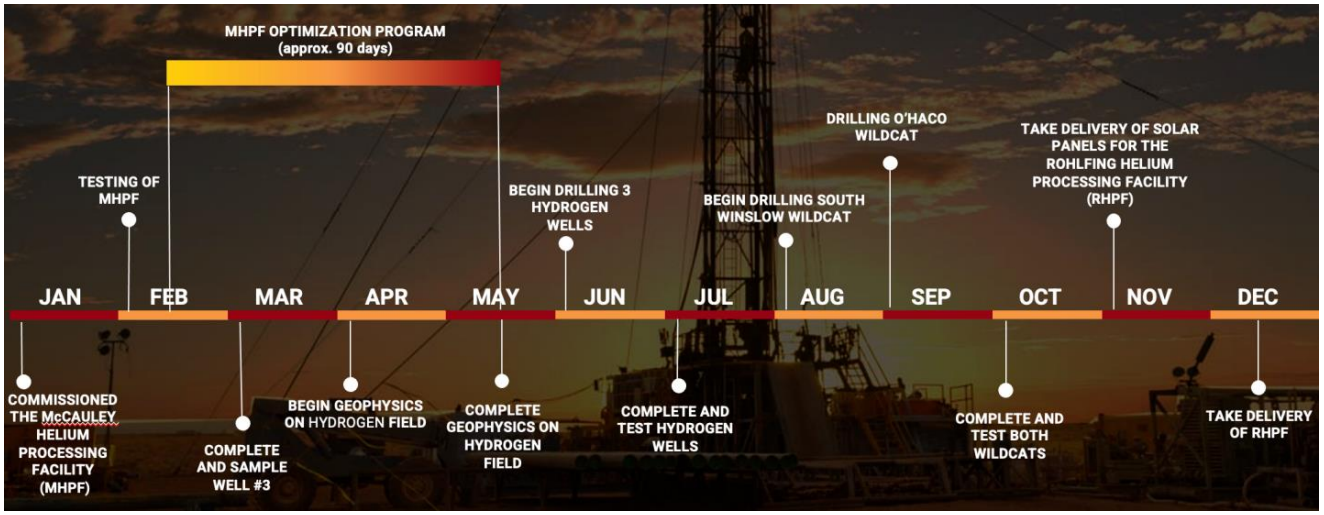
Exhibit 8. DME's 2023 Timeline

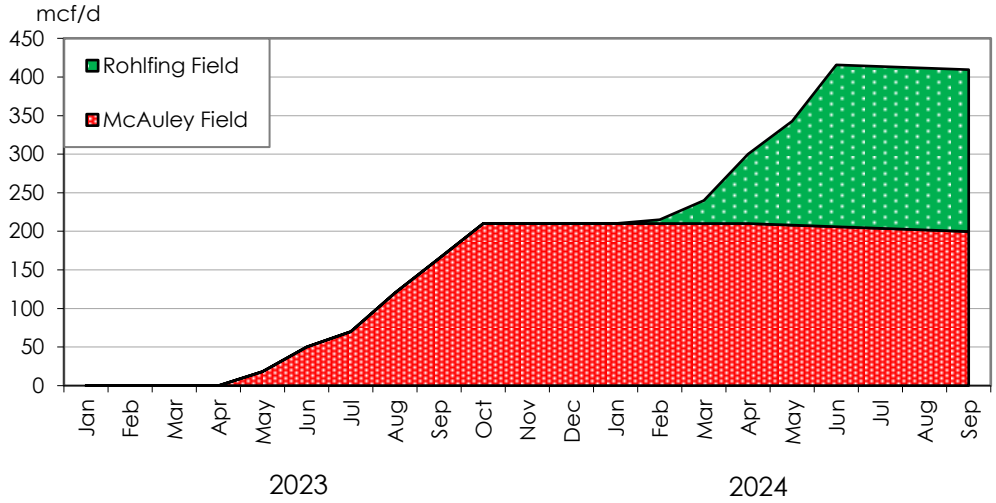


Source: Company presentation

Desert Mountain is working judiciously to begin sending raw gas to the McCauley helium plant, which we expect will begin in late-April or early-May once the company brings a completion rig in to prepare wells 4, 6, and 7 for production. Well 5 is ready to go now. When raw gas is sent to the plant in a continuous flow, DME plans to slowly ramp-up the throughput to "break-in" the plant as well as monitor well performance. We expect that to occur over a 60-to90-day period.

Ergo, the McCauley field should reach an inflection point by late-June/early-July in terms of optimal production. We have modelled the McCauley plant and field to reach an average throughput of 7.0 mmcf/d of raw gas at a 3.0% helium concentration, resulting in 210 mcf/d of He production by FQ1/24 (October-December 2023).

Exhibit 9: Preliminary Production Profile



Source: Company reports, Beacon Securities Limited

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Assuming the equipment and assembly of the Rohlfing plant go as planned, we expect that field to be in operation in February/March 2024. The Rohlfing field is likely to follow a similar process as the McCauley field in terms of a measured start to ensure everything goes according to Hoyle.

The production profile for those two fields can be seen in Exhibit 9. Once both fields are at optimal production levels, DME should be producing approximately 400 mcf/d of helium, which should generate over $100 million of annual EBITDA at a US$750/mcf He price.

For sensitivity sake, if the price of helium that DME receives averages US$500/mcf, the company should still generate EBITDA of approximately $70 million on an annual basis. Relative to the $140 million of enterprise value for Desert Mountain, this level of EBIDA would still make DME's EV/EBITDA multiple well below 2.0x.

As previously outlined, helium prices have increased dramatically in the past year (if the many anecdotes are to be believed as this is an opaque market) due to the supportive supply/demand fundamentals. With that in mind, we present the daily and annual operating netbacks (after cash taxes) for Desert Mountain with the following considerations:

- 90 mcf/d of helium production.
- 340 operating days per year as plant maintenance may be required.
- A 12.5% royalty that is capped at the US$500/mcf helium price.
- An operating cost of US$65/mcf.
- A 6% cash tax rate.
- An Fx rate of 0.75.

Exhibit 10: Arizona Operating Netbacks

Helium grade	4	5	6
Helium price (US$/mcf)	$500	$1,000	$1,500
Daily contribution (C$)			
Revenue	$60,000	$90,000	$135,000
Royalty	($7,500)	($7,500)	($7,500)
Opex	($7,800)	($7,800)	($7,800)
Cash tax	($3,600)	($5,400)	($8,100)
operating netback	$41,100	$69,300	$111,600
Annual contribution (C$mm)			
Revenue	$20.4	$30.6	$45.9
Royalty	($2.6)	($2.6)	($2.6)
Opex	($2.7)	($2.7)	($2.7)
Cash tax	($1.2)	($1.8)	($2.8)
operating netback	$14.0	$23.6	$37.9

Source: Company reports, Beacon Securities Limited

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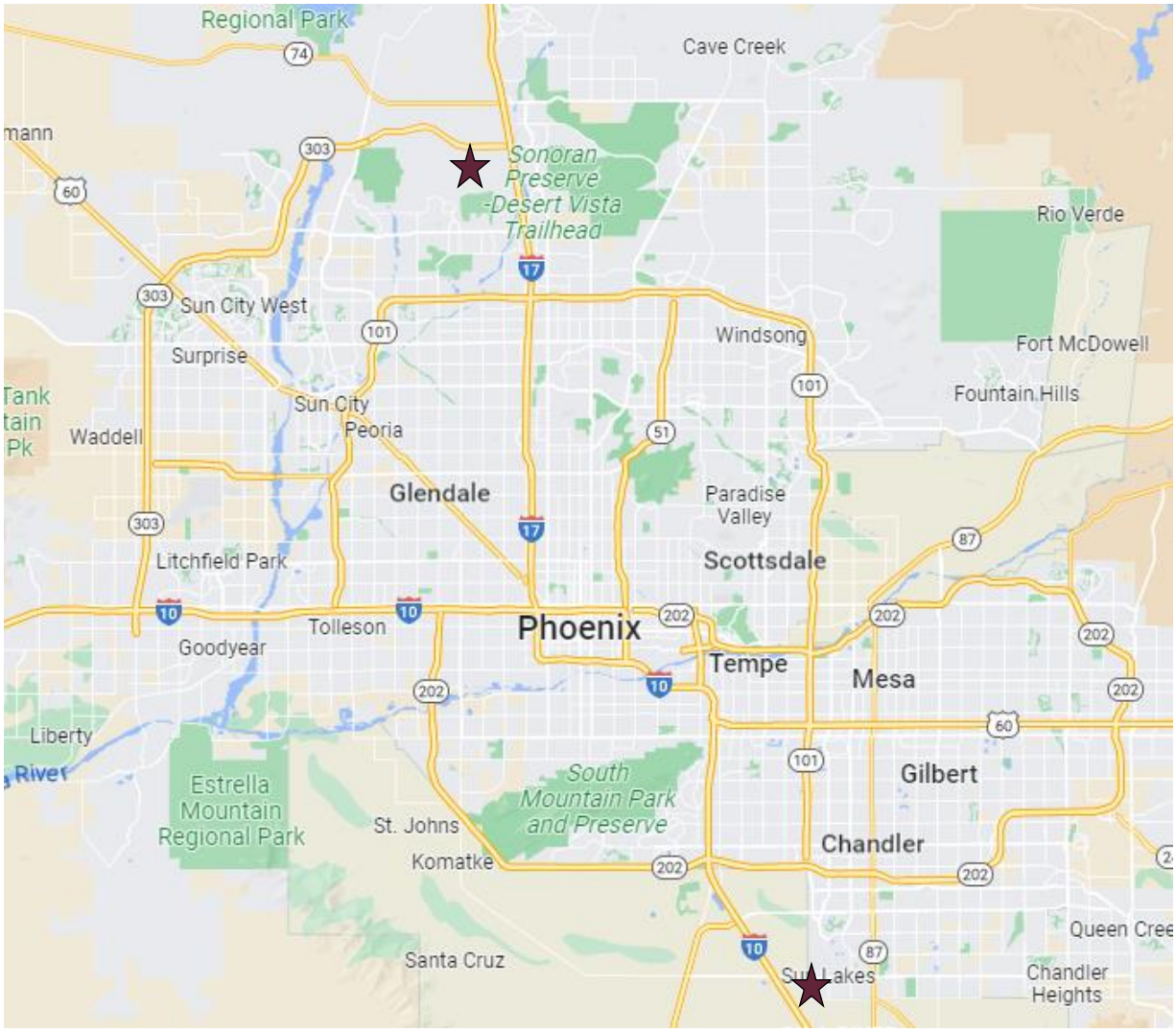
Semiconductor Manufacturing Underpins Local Demand

DME plans to be a vertically integrated helium producer where it will explore, develop, produce, process, and sell the helium in Arizona. While we have covered most of the other components of that chain in this report, here we will focus on the sale of helium.

Desert Mountain plans to sell directly to the end-user in the general Phoenix area and in a broader U.S. Southwest. To date, the company has identified over 50 potential end-users and another 40 or so that have expressed interest in purchasing helium from DME. Part of the rationale for the wide range of interest from helium users is due to the difficulty in accessing helium. Whereas finding He for the various uses of the element used to be relatively straight forward, the tight fundamentals of the market have made accessing He much more difficult.

Exhibit 11: Phoenix Area Semiconductor Plants



Source: Google Maps, Beacon Securities Limited

The helium market in the Phoenix area is about to undergo significant change due to the construction of semiconductor fab shops by both Intel and Taiwan Semiconductor Manufacturing, the locations of which are shown in Exhibit 11. The TWSM facility is actually the

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2nd plant for this company on that site (top star) and increases the overall investment by TWSM to US$40 billion. That fab is to be operational by 2026 and is expected to have helium demand greater than all of the U.S. Southwest.

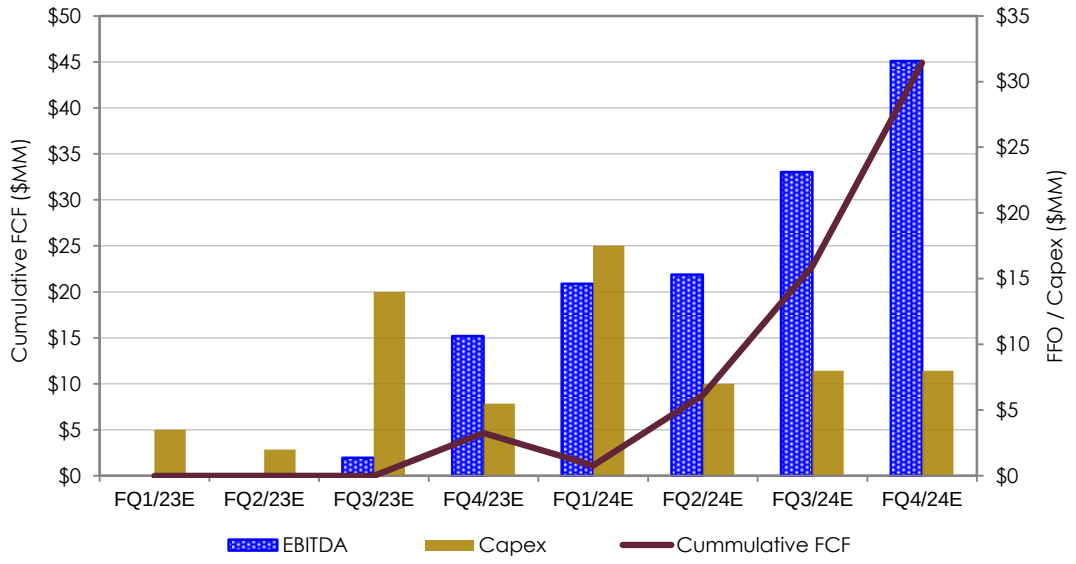
The Intel fab is the bottom star in Exhibit 11 and represents two fabs that are being built for US$20 billion. These fabs are expected to be in operation next year and are sure to have a material impact on the helium demand in the general area.

While Desert Mountain may not sell directly to either of these facilities, the amount of helium that these semiconductor fabs will require is sure to have a material impact in the overall demand in Arizona and the U.S. Southwest. Thus, other end-users may have more difficulty accessing helium, which would presumably work in DME's favor. This scenario gives us confidence that He pricing in the Phoenix area will remain robust for quite some time.

Forecasts

A summary of our forecasts for fiscal 2023 and 2024 is shown in Exhibit 12. Timing of capex will ultimately determine the FCF generation for DME, but we expect that metric to turn positive in FQ4/23.

Exhibit 12: Production and EBITDA Profile



	FQ1/23E	FQ2/23E	FQ3/23E	FQ4/23E	FQ1/24E	FQ2/24E	FQ3/24E	FQ4/24E
He Prod (mcf/d)	0	0	24	150	210	222	325	441
Revenue ($mm)	$0.5	$0.5	$2.6	$13.6	$18.7	$19.9	$29.2	$39.5
EBITDA ($mm)	neg	neg	$1.4	$10.6	$14.6	$15.3	$23.1	$31.6
FCF	**neg**	**neg**	**neg**	**$4.7**	**-$3.5**	**$7.6**	**$14.1**	**$22.1**
Net Income ($mm)	neg	neg	$0.7	$8.8	$11.9	$12.4	$19.0	$26.1
Net Surplus ($mm)	$7.1	$25.6	$13.0	$17.6	$14.1	$21.7	$35.8	$57.9

Source: Company reports, Beacon Securities Limited

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Option Value in Hydrogen

Desert Mountain's land holdings in the Holbrook Basin likely have more value than that associated with the helium opportunity. The company also sees hydrogen in sufficient quantities for a specific play targeting that element. However, DME needs to focus on its He initiatives, so it has partnered with Beam Earth Ltd. on the hydrogen front.

As we pointed out earlier in this report, DME plans to drill three hydrogen wells on a 50/50 basis with Beam Earth starting in June. As the target zone is at shallower depths (1,000-1,200 feet) relative to the helium wells, the drilling costs should be less. Success could lead to many more wells as DME would seek to have 40-acre spacing approved rather than the standard 640-acre spacing.

Early thinking is that hydrogen could be used to create ammonia due to the large amount of nitrogen; however, at this time, we believe it is too early to put a valuation on the hydrogen opportunity until there is credible data. Ergo, we consider the hydrogen play as option value, which may turn out to be very significant.

Capital & Debt Structure

- 88.9 million basic shares outstanding.
  - 7.5 million options at an average strike price of $2.22.
  - 14.5 million warrants with an average strike price of $2.83.
- The 12.2 million warrants issued with the March 2023 financing are exercisable at $2.70 for 24 months and are subject to a forced exercise if the company's share price trades above $4.50/sh for 10 consecutive days.
- On a FD basis, management and director's ownership = 7% with Mr. Rohlfing owning approximately 5%.

Exhibit 13: Share Structure

	Securities (mm)	Strike Price	Expiry Date	Proceeds $mm
Common Shares Outstanding	89.4			
Options	7.5	$2.22	various	$16.6
Warrants issued with September 2022 equity	2.3	$3.50	Sep-25	$8.1
Warrants issued with March 2023 equity	12.2	$2.70	Mar-25	$32.9
Fully Diluted Shares	**111.4**			**$57.6**

Source: Company reports, Beacon Securities Limited

- Net surplus is estimated to be approximately $26 million on March 31, 2023.

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Current Valuation Could Prove to be Too Low

One of the questions we hear the most from investors revolves around the market capitalization / enterprise value for Desert Mountain and if it is supported with its EBITDA generation potential. To that end, we have provided several matrixes below to underscore our contention that DME may actually be undervalued if it is able to deliver on its planned program over the next 12-18 months.

In Exhibit 14, we show potential annual EBITDA figures that may be generated from the company's first plant alone (based on 340 annual operating days). As a reminder, the royalty that DME will pay is based on a US$500/mcf He price and that we estimate the operating costs per mcf of helium produced at US$65. Ultimately, the EBITDA depends on the He volume and price received, which itself depends on the grade of helium, but we believe it is reasonable to expect EBITDA in the range of $50-$100 million each year.

Exhibit 14: Potential Annual EBITDA (C$MM)

Helium production (mcf/d)	Helium Price (US$/mcf)				
	$500	$750	$1,000	$1,250	$1,500
90	$11.2	$21.4	$31.6	$41.8	$52.0
150	$21.3	$38.3	$55.3	$72.3	$89.3
190	$28.0	$49.5	$71.1	$92.6	$114.1
225	$34.0	$59.5	$85.0	$110.5	$136.0
270	$41.6	$72.2	$102.8	$133.4	$164.0

Source: Company reports, FactSet, Beacon Securities Limited

In Exhibits 15 & 16, we show the corresponding EV/EBITDA multiples based on the current fully diluted shares outstanding and our estimate of Mar. 31/23 net surplus. Exhibit 15 is based on only the McAuley plant operating whereas Exhibit 16 considers the 2nd plant operating on similar EBITDA potential to the McCauley plant.

Exhibit 15: EV/EBITDA Multiples Based on McCauley Plant Only

Helium production (mcf/d)	Helium Price (US$/mcf)				
	$500	$750	$1,000	$1,250	$1,500
90	14.5x	7.6x	5.1x	3.9x	3.1x
150	7.6x	4.2x	2.9x	2.2x	1.8x
190	5.8x	3.3x	2.3x	1.8x	1.4x
225	4.8x	2.7x	1.9x	1.5x	1.2x
270	3.9x	2.3x	1.6x	1.2x	1.0x

Source: Company reports, FactSet, Beacon Securities Limited

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The key for us is that under many scenarios DME is trading BELOW 2.0x on an EV/EBITDA basis relative to a sector that we believe will eventually trade somewhere between 5x – 10x once investors get comfortable with the macro drivers and company-specific risks.

Exhibit 16: EV/EBITDA Multiples Based on Two Helium Plants

		Helium Price (US$/mcf)				
		$500	$750	$1,000	$1,250	$1,500
Helium production (mcf/d)	180	7.3x	3.8x	2.6x	1.9x	1.6x
	300	3.8x	2.1x	1.5x	1.1x	0.9x
	380	2.9x	1.6x	1.1x	0.9x	0.7x
	450	2.4x	1.4x	1.0x	0.7x	0.6x
	540	2.0x	1.1x	0.8x	0.6x	0.5x

Source: Company reports, FactSet, Beacon Securities Limited

Valuation & Target Price

We are initiating coverage of Desert Mountain Energy with a Spec Buy rating due to the early-stage nature of its operations. Our 12-month price target of $4.00 per share is generated from a 3.5x EV/DACF multiple applied to our F2024 forecasts.

Desert Mountain is on the cusp of helium production from its McCauley field in Arizona and is headed for an inflection point this summer when that facility reaches an optimal level of production. We contend that the low valuation metrics that the company currently trades at will increase as DME achieves certain milestones.

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Appendix I: Operating & Financial Summary

DESERT MOUNTAIN ENERGY

Recommendation: SPEC BUY **Target price: $4.00**

SHARE INFORMATION	
Price	$1.62
Shares O/S – basic (mm)	89.8
Shares O/S – float (mm)	60.8
Shares O/S – f.d. (mm)	110.2
Market cap ($mm)	$145
Enterprise value ($mm)	$138
52-week range	$1.46 - $4.43
Total projected return	**147%**

VALUATION	F2023E	F2024E
EV/EBITDA	neg	1.0x
P/FFO (diluted)	13.3x	1.8x
P/E	18.4x	2.1x
EV/production ($/mcf/d)	$2,915,704	$291,905
Price/ PDP NAV	-	-
Price/ 1P NAV	-	-
Price/ 2P NAV	-	-

COMMODITY PRICES	F2021A	F2022A	F2023E	F2024E
Helium (US$/mcf)	-	$300	$750	$750
Fx (C$/US$)	$0.80	$0.77	$0.78	$0.78

PRODUCTION	F2021A	F2022A	F2023E	F2024E
Raw Gas (mmcf/d)			1.5	10.0
Avg concentration			3.0%	3.0%
Helium (mcf/d)	**-**	**-**	**44**	**300**
He/MM Basic Shares	-	-	0.5	3.3
Production Growth	-	-	-	584%
Prod Growth Per Share	-	-	-	562%

FINANCIAL ($mm)	F2021A	F2022A	F2023E	F2024E
Revenue	0.0	0.2	17.2	107.4
Royalties	0.0	0.0	(1.4)	(9.5)
Operating	0.0	(0.2)	(1.0)	(9.1)
G&A	(1.2)	(3.2)	(3.7)	(4.2)
EBITDA	**(1.2)**	**(3.1)**	**11.1**	**84.6**
Interest	0.0	0.0	0.0	0.0
DD&A	(0.0)	(0.2)	(1.0)	(5.5)
Taxes	0.0	0.0	(0.5)	(7.7)
Other	(5.7)	(4.3)	(2.0)	(2.0)
Net Income	**($6.9)**	**($7.5)**	**$7.6**	**$69.4**
FFO (mm)	($1.2)	($3.1)	$10.6	$80.7
FFOPS (basic)	($0.02)	($0.04)	$0.12	$0.90
FFOPS (diluted)	**($0.02)**	**($0.04)**	**$0.12**	**$0.90**
EPS Fully Diluted	**($0.11)**	**($0.10)**	**$0.09**	**$0.77**
Net Debt (Surplus)	$0.0	($11.0)	($17.6)	($57.9)
D/EBITDA - trailing	NA	3.5x	NA	NA
D/EBITDA - forward	0.0x	NA	NA	
Borrowing capacity	NA	NA		

CAPITAL PROGRAM	F2021A	F2022A	F2023E	F2024E
Total Capex (mm)	$4	$16	$25	$41
% of cash flow	n.a.	-507%	236%	50%

NETBACKS ($/mcf)	F2021A	F2022A	F2023E	F2024E
Revenue	-	-	$1,074.30	$979.79
Royalties	-	-	($85.44)	($86.54)
Operating & Trans	-	-	($65.00)	($83.28)
Operating Netback	-	-	$923.86	$809.98
G&A	-	-	($231.13)	($37.87)
Interest	-	-	$0.00	$0.00
Other	-	-	($31.32)	($35.19)
Cash Flow Netback	-	-	**$661.40**	**$736.91**
DD&A	-	-	($60.00)	($50.00)
Stock based compensation	-	-	($124.94)	($18.25)
Other non-cash	-	-	$0.00	$0.00
Deferred tax	-	-	$0.00	($35.19)
Earnings Netback	-	-	**$476.47**	**$633.47**

RESERVES (mmcf)	F2021A	F2022A	F2023E
PDP	-	-	-
Proved (1P)	-	-	-
Proved + Probable (2P)	-	-	-
PDP NAV ($/Share)	-	-	-
1P NAV ($/Share)	-	-	-
2P NAV ($/Share)	-	-	-

F2023 QRTLY FORECASTS	Q1E	Q2E	Q3E	Q4E
Helium (mcf/d)	0	0	24	150
Revenue ($MM)	$0.5	$0.5	$2.6	$13.6
EBITDA ($MM)	-$0.4	-$0.5	$1.4	$10.6
FD FFO	-$0.01	-$0.01	$0.01	$0.11
FD EPS	-$0.01	-$0.01	$0.01	$0.10

MANAGEMENT & BOARD	
Robert Rohlfing	CEO & Director
Don Mosher	President & Director
Dr. James Cronoble	VP, Exploration & Director
Jessica Davey	VP, Land & Director
Marta Wasko	VP, Geology
James Hayes	VP, Engineering
Valorie Farley	CFO
Dr. Kelli Ward	Director
Jenaya Rohlfing	Director
Weldon Stout	Director

Source: Company reports, Beacon Securities Limited

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Appendix II: Management & Board

Robert Rohlfing – CEO & Executive Director. Robert is a seasoned oil & gas industry executive with a strong geological background and over 26 years' experience in formulating, conducting and managing successful exploration, drilling, development and production programs for O&G and minerals worldwide, including for helium, hydrocarbons, gold, silver, rare earth metals, diamonds and gemstones. His skill set includes extensive hands-on experience managing and conducting drill programs and production operations for hydrocarbons in the U.S Southwest. He has drilled some 250 wells in his career, with all but two successfully encountering hydrocarbons. He has developed new drilling innovations, including techniques for tight radius shallow under pressure horizontal wells. For many years, he was recognized for his unique expertise drilling horizontal wells, one of which was the shallowest and tightest radius horizontal natural gas well drilled in the United States at the time. He has a thorough understanding of the geology of Arizona's Holbrook Basin and its structural features which serve as potential trapping mechanisms for commercial helium reservoirs. Robert brings a wealth of hands-on experience to DME, conducting and managing oil & gas and lithium operations and exploration, including considerable experience working in the U.S. Southwest.

Don Mosher – President & Director. Don has 35 years of experience in corporate finance, business development, management, and marketing. He has served on boards and management teams of many publicly traded companies, advising companies on marketing, financing, and corporate strategies. He has extensive experience in the resource sector, having been associated with several junior resource companies across the mineral spectrum and in O&G. Most recently, Don was a Director and Vice-President of Capital Markets for Hempco Foods and Fibers where he was instrumental in negotiations resulting in the recently completed merger between Hempco and Aurora Cannabis Inc (ACB-T, Not Rated). Don's capital markets and financial experience provides DME with additional leadership in this strategic arena as the company advances its development and potential production plans.

Dr. James Cronoble – VP, Exploration & Director. James has more than 40 years of exploration and operations experience in the Rocky Mountains and Mid-Continent of the United States. He discovered and/or extended production in the Denver basin of eastern Colorado, the Sedgwick Basin of southeastern Kansas, and the Cherokee Basin of southeastern Kansas and northeastern Oklahoma. These included the Geology of South Baggs-West Side Canal Gas Field, Carbon County, Wyoming and Moffat County, Colorado and the Stratigraphy and Petroleum Potential of the Dakota Group, North Park, Laramie, and Northwest Denver basins, Wyoming, and Colorado.

Jessica Davey – VP, Land & Director. Jessica has international experience in petroleum and mining consulting including geologic studies, economics evaluations, and land and regulatory research. Her main interests include evaluating mature and abandoned fields for current end future potential utilizing new technology and approaches. Jessica is involved in many volunteer roles, including 2021 President of the Board for the Denver Earth Resources Library and 2021 Executive Committee President for the American Institute of Professional Geologists Colorado Section.

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Valorie Farley – CFO. Valorie is a CPA with experience in power generation and distribution, natural resources, regulatory and financial reporting, audits and real estate development.

James Hayes – VP, Engineering. Mr. Hayes brings 13 years of Oil & Gas experience as both an engineer and field supervisor. He has worked in a variety of areas such as Niobrara, Bakken, Permian, Granite Wash, Haynesville Shale, and the North Slope of Alaska. In these regions, he was given the opportunity to work drilling, completion, workover and even coil tubing drilling. In addition to working on all aspects of the life of a well, he developed and designed a Real-Time Operating center that allowed for remote work on wells. This implemented state-of-the-art technologies which allowed a reduction of people required on location while reducing risk.

Marta Wasko – VP, Geology. Marta has development, exploration, and operations experience including the Permian, the Denver Julesburg, the Uinta and Piceance Basins. Additionally, she has regulatory experience in mining, oil & gas, waste water and helium permitting and compliance. Her areas of expertise include reservoir characterization, sedimentology and stratigraphy, waste water disposal and geologic field operations. Her recent experience managing Arizona Oil and Gas regulation gives her unique exposure to historic and current helium development and production and intimate knowledge of federal, state, local and Indigenous jurisdictions regulations.

Jenaya Rohlfing – Director. Jenaya is a Petroleum Engineer who has exhibited exceptional technical, leadership and organizational skills in all facets of drilling operations for O&G in various management positions with ConocoPhillips (COP-NYSE, Not Rated). She has worked in diverse locations in North America including the Bakken, Alaska and the Rockies, and has served as Drilling Engineering Supervisor in the Bakken, Global Wells Planning Coordinator. Currently, she is the Drilling Engineering Supervisor for ConocoPhillips' Kuparuk, Alaska program. Her leadership led to performance improvement for developing & application of new drilling practices, resulting in reduced drilling time and well cost savings of as much as 45%, whilst leading the HSE program and maintaining a commitment to Zero Incident Safety culture.

Dr. Kelli Ward – Director. Dr. Kelli Ward has dedicated herself to medicine, business, public policy and politics for the past 25 years. In 2012, she was elected for the Arizona State Senate and then Chair of the Republican Party of Arizona in 2019 (re-elected in 2021). Dr. Ward is proud to be the first woman to be elected Chair of the State Party in over thirty years. She holds a master's degree in Public Health (MPH) and has been recognized throughout the country for her strong stances supporting growth, liberty, economic freedom, and personal liberties.

Weldon Stout – Director. As an experienced lawyer, Weldon brings his legal experience which includes water and associated component issues along with financial accountability reviews, providing DME with another strong independent Board Director. Weldon recently retired from his position after serving for eight years as a District Court Judge in Oklahoma. Prior to his appointment as a judge, his private practice focused on business, estate planning and Federal Court litigation. He served as Assistant District Attorney and as Chief Prosecutor; has

served on numerous boards including State Bar Association, City Counsel, Medical Foundations, Victims Compensation Board, Airport Board and non-profit boards.

Appendix III: Risks

- **Commodity Price Fluctuations** – The company has direct exposure to the price for helium, which is an opaque market. Downward movements in this commodity can adversely affect the financial performance of the company. To offset this risk, the company may enter into take-or-pay contracts to manage its exposure to commodity price fluctuations.

- **Financing** – Exploring and developing helium may require a combination of debt and equity capital. Our models incorporate fluctuations in net debt and while we may forecast additional equity, there is no certainty that the company can raise equity capital or that any future bank lines will remain static or increase.

- **Foreign Exchange & Interest Rates** – Any movement in either of these rates has the potential to adversely affect the company's financial performance.

- **Cost Overruns** – Unexpected drilling, completion and/or operational cost overruns can mitigate the operational and financial performance of the company.

- **Country Risk** – A change in government may lead to policies or laws that are detrimental to the industry or company, which may impact results. As the United States and Canada are democratically elected governments where the rule of law presides, this risk is muted.

- **Weather and Seasonal Factors** – Extreme weather conditions may impact operations that may then influence results.

- **Change in Fiscal Regime** – A change in the royalty or tax rates as they relate to helium production may adversely affect cash flows.

- **Well Performance** – The company may have a higher than normal amount of risk associated with its wells or plays due to the early-stage nature of its asset base. Lower production volumes, higher decline rates and/or dry holes can adversely affect the results of the company, particularly from a potential negative resource or reserve revision perspective. Past performance may not be indicative of future execution.

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As of March 31, 2023	#Stocks	Distribution
BUY	76	83.5%
Speculative Buy	11	12.1%
Hold	1	1.1%
Sell	0	0.0%
Under Review	2	2.2%
Tender	1	1.1%
Total	91	100%

BUY	Total 12-month return expected to be > 15%
Speculative Buy	Potential 12-month return is high (>15%) but given elevated risk, investment could result in a material loss
Hold	Total 12-month return is expected to be between 0% and 15%
Sell	Total 12-month return is expected to be negative
Under Review	
Tender	Clients are advised to tender their shares to a takeover bid or similar offer

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