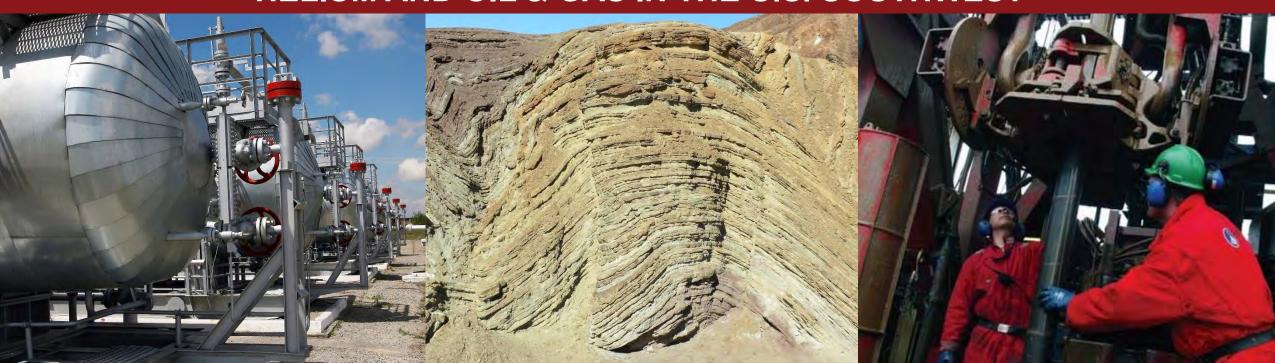






# **HELIUM AND OIL & GAS IN THE U.S. SOUTHWEST**



# FORWARD LOOKING STATEMENTS

Statements in this presentation that are forward-looking statements are subject to various risks and uncertainties concerning the specific factors. Such forward-looking information represents management's best judgment based on information currently available. No forward-looking statement can be guaranteed and actual future results may vary materially. Desert Mountain Energy Corp. does not assume the obligation to update any forward-looking statement.

# DESERT MOUNTAIN ENERGY CORP.

- ✓ Exploration and development of Helium and Oil & Gas properties in the U.S. Southwest.
- ✓ High-grade Helium project in Arizona and excellent permitted Oil Project in Oklahoma.
- ✓ Proven, successful management team that knows how to find, develop, package and vend projects. (e.g., Pan African Mining Corp.)
- ✓ World Class technical team with decades of experience in exploration and development of Helium, Hydrocarbons and other minerals.
- ✓ Excellent access to capital markets.
- ✓ Tight share structure and no long term debt.
- ✓ Now trading on TSX Venture Exchange under ticker symbol "DME.V". The Company has more value in place than ever before.
- ✓ Recent name change from African Queen Mines Ltd. to Desert Mountain Energy Corp. to better reflect current focus and direction of the Company.



# **Management Team**

- Irwin Olian, Chairman, CEO and President, Entrepreneur with strong background in Finance and Law. Co-founder of several successful NASDAQ companies in medical device and biotech spaces. Mr. Olian was the founder and served as CEO and Chairman of Pan African Mining Corp. until its acquisition by Asia Thai Mining in June 2008, providing a substantial uplift for its shareholders.
- Jennifer Todhunter, Director, CFO, served as the Finance Manager of the Company and its predecessor, Pan African Mining
  Corp., since May 2005. Ms. Todhunter has 15 years experience working with public companies, predominantly those in the mining
  industry.
- **Dr. Edward A. Schiller**, **Director**, **Senior Consultant**, 40 years experience across the mineral spectrum. Supervised drilling of Dia Met's Ekati Diamond Discovery in Canada.
- **Greg Sparks, Director, P. Eng.** formerly VP Development of Echo Bay Mines Ltd., 25 Years Experience. **Senior** Minerals Industry Consultant with John T. Boyd Company, Denver, Co.
- Soren Christiansen- Director. Among Canada's leading oil field operations executives, he has overseen drilling and other oil field operations both onshore and offshore in all corners of the globe, including Alaska, Argentina, Australia, Canada, Chad, and the U.S. From 1987-1989, he supervised a five- well drill program on China's Hainan Island as the first foreign operator onshore in China. From 1993 to 2006, he served as Team Leader and Drilling Manager for Canada-based Encana Corp., a leading international energy producer. He lives in Calgary, AB and is a graduate of the University of Calgary, where he received a B.Sc. degree in Mechanical Engineering.

# **Management Team (Continued)**

- Robert Rohlfing, (Director) Executive Vice-President, Head of Technical Operations, is a seasoned oil & gas industry operations executive with a strong geological background and over 25 years' experience in formulating, conducting and managing successful exploration, drilling, development and production programs for oil & gas and minerals worldwide. He has conducted geological exploration programs and drilling operations for a wide variety of companies for helium, hydrocarbons, gold, silver, rare earth metals, diamonds and gemstones in diverse areas ranging from Kansas, Oklahoma, Arizona and Alaska in the U.S. to Papua New Guinea, Malaysia, Australia, Canada, Vietnam, and Cambodia.
- Greg Nowak, M.S., Senior Consulting Geologist, has more than 30 years exploration experience in oil & gas, gold, uranium, and base metals. In the U.S., he has worked in the Permian Basin, the Gulf Coast and the Williston Basin of Montana, managing prospect screening, project generation, wellsite geology, drill log interpretation and planning of development wells. As Exploration Manager in Africa for Golden Star Resources and Ashanti Goldfields, he planned and conducted mineral field exploration and drilling projects throughout the West Africa Sub-Region. He is a Certified Professional Geologist (CPG # 10864) of the AIPG, a Fellow of the Society of Economic Geologists (SEG), and he is a Qualified Person, as defined by NI 43-101.
- Reinhard Ramdohr, Ph.D., Senior Exploration Geologist, a highly qualified exploration geologist and mining engineer, with 40 years experience in gold, base metals, iron ore, uranium and gemstone exploration around the world. His experience runs the gamut from grass roots exploration and mapping to sophisticated geophysical and drilling programs, to ore reserve calculation and feasibility studies, as well as overseeing formal training and education programs. He has a Mining Engineering degree from Clausthal-Zellerfeld Technical University and a Doctorate in Geology from Heidelberg University and is a frequent lecturer and published technical writer.

# **CORPORATE COMMUNICATIONS**

## **North America**

**Lee Dunston**, Vancouver, Marketing Director, North America. Thirty-three years experience in marketing, IT, management and business development with mining investor relations background.

# **Europe & Middle East**

**Carrie Howes,** London and Dubai, Corporate Communications in Europe. Experienced in investor relations worldwide and has served as a registered representative.

# **DESERT MOUNTAIN ENERGY PROJECTS**

Exploration and development of Helium, Oil & Gas and mineral properties in the U.S. Southwest.

# **Helium**

- Heliopolis Project in Arizona's Holbrook Basin
- Worlds Best Address for Helium
- Prolific Historic Production
- 39,742 acres under lease



# Oil and Gas

- Kight Gilcrease Sand Unit in Seminole County, Oklahoma
- Located in the Iconic Gilcrease Sand Formation
- Water Flood Secondary Production Project with new primary prospects.
- 883.7 acres under lease



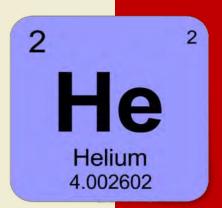


# EXPLORATION FOR HELIUM AND OIL & GAS IN ARIZONA'S PROLIFIC HOLBROOK BASIN

- Early mover among junior explorers in the Helium space.
- 39,742 acres of key Helium prospects under lease throughout the Holbrook Basin, with additional leases pending. Among the highest He grades in world produced there ranging from 8% to 10% vs. benchmark commercial grades of 0.3% to 1%.
- World's best address for Helium: "The Saudi Arabia of Helium"
- Worldwide shortage of Helium reflects huge demands from high tech and the new economy. Helium is now the "High Tech Rare Gas".
- He supplies are limited with U.S. National Helium Reserve in Amarillo, TX projected to be exhausted in 2020. The worlds largest supplier for 70 years.
- Worldwide market size approximately \$1.5 Billion and projected to grow sharply. The U.S. Currently now provides approximately 40% of worldwide supply.
- Recent prices at BLM public auction averaged \$279 per thousand cu ft. (Mcf) for Crude He, reflecting an 135% increase over past 12 months.
- Well positioned to provide a secure source of He supply to users in the high tech and aircraft industries in nearby California, the Western U.S. and worldwide.
- Many existing and potential sources of He are in high risk countries far from end users: Qatar, Algeria, Russia, Tanzania.
- Proven management team includes highly experienced oil & gas professionals with Helium experience in Arizona.
- Exploration program is underway. 2D Seismic survey commencing with plans to drill first well in Q1 2019.

# What is Helium?

- An inert, monatomic gas that is non-flammable, colorless, odorless, tasteless, and has a boiling point of -452.07 f (-268.93 c), lowest of any element on earth.
- Symbol is He and its atomic number is 2; part of the noble gas group.
- Prevalent throughout the universe but rare on earth.
- Its very small atom makes it extremely motile, allowing it to penetrate most rocks and escape from earth's gravity, so trapping mechanisms are critical to retain it in host rocks.
- Two sources on earth: (1) primordial, part of the original formation of the planet; (2) radioactive decay of uranium and thorium in the earth's crust.
- Isotope composition of He in Arizona is consistent with preponderance of He arising from radioactive decay.
- Helium historically found incidental to oil & gas exploration but exploration now underway specifically for Helium.
- Helium often found in wells associated with natural gas. In Holbrook Basin it has generally been associated with nitrogen and carbon dioxide.
- After initial separation from other gases in the well, He is typically sold as raw Helium product grading 50-80% He; it is further processed into Grade A He.
- Typically shipped as liquid to distribution centers in trucks and sold as bulk liquid He or gasified and compressed into tanks or small cylinders for delivery to end users.







# **Uses of Helium**

Helium is now used for far more than just balloons!

It plays a **critical role** in the manufacture of high capacity hard drives, barcode readers, computer chips, semiconductors, LCD panels and fiber optic cable; as a refrigerant in cryogenics research; and as a coolant for nuclear reactors, MRI machines and space vehicles.















# Trucks of the future?

Lockheed Martin has landed its first contract for the hybrid helium airship it created inside its top secret Skunk Works division. Straightline Aviation (SLA) has signed a letter of intent to purchase 12 of the heavier-than-air airships that measure nearly a football field long for \$480 Million. First delivery is scheduled for 2018, with the final airship expected no later than 2021.

Helium is Non-Flammable and Lighter Than Air







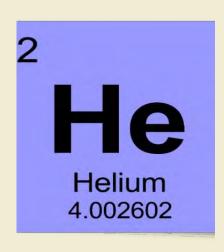
More than half the world is still without internet access.
Google's **Project Loon** aims to fix this through a network of Helium gas filled balloons traveling on the edge of space.

With a new balloon launched every 30 minutes, it is designed to extend internet connectivity to people in rural and remote areas worldwide. Google has now flown over 25 million km of test flights with one balloon staying aloft for 190 days.

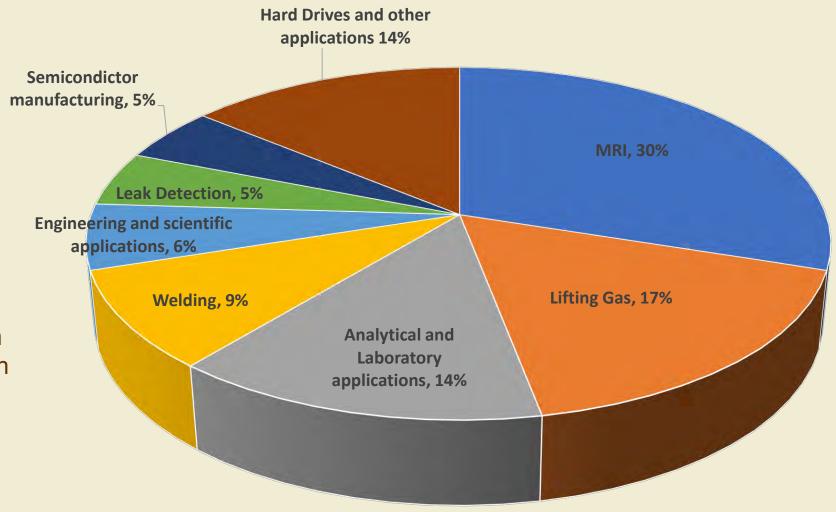
Google



# 2017 Estimated Domestic Helium Consumption and Usage by Application

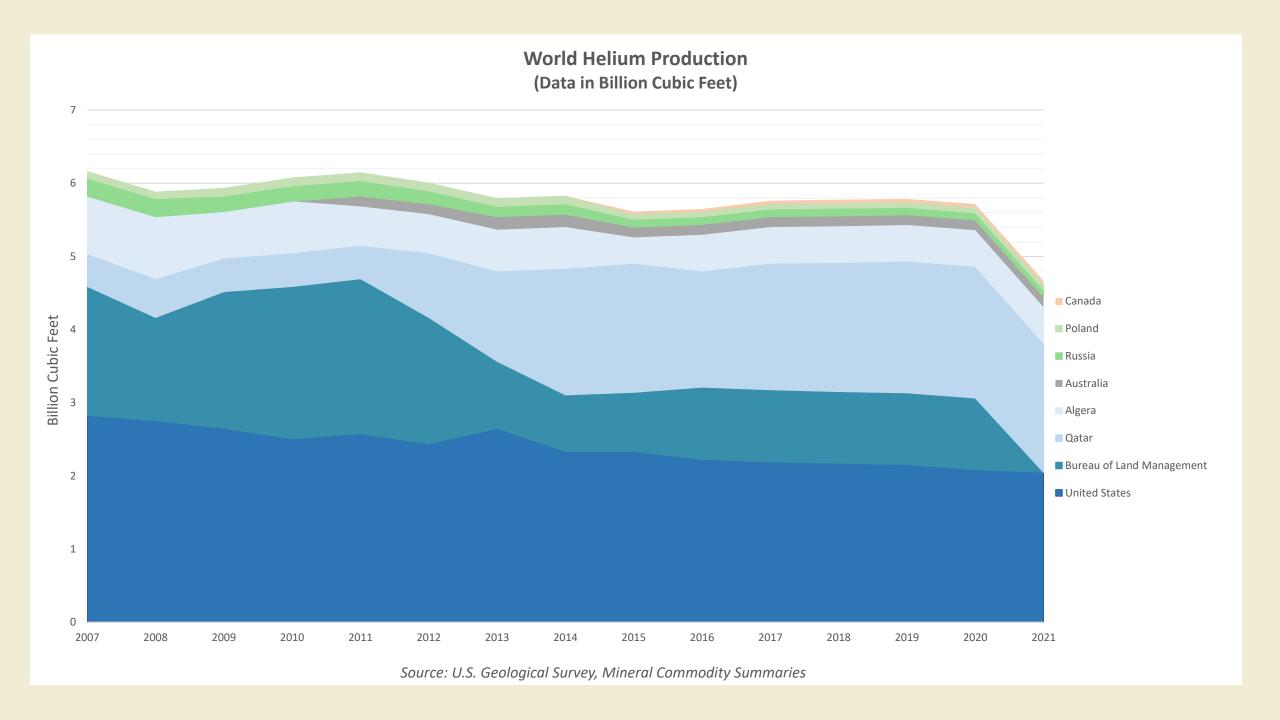


Estimated domestic consumption of Grade-A helium was 1.5 billion cubic feet (Bcf) in 2017, and it was used in these applications.



Source: U.S. Geological Survey, Mineral Commodity Summaries, January 2018





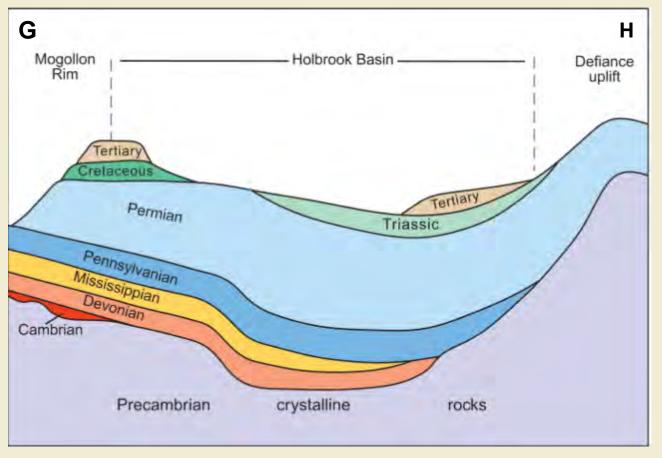
# THE HOLBROOK BASIN



- A large salt basin approximately 160 mi. by 100 mi. with thickened Permian sedimentary rocks.
- Situated in east-central Arizona South West of the defiance uplift near the South margin of the Colorado plateau in Apache, Navajo & Coconino Counties.
- Highly prospective for Helium, oil & natural gas and other minerals.
- Abundance of reservoir rocks with numerous showings of oil & gas in 28 stratigraphic intervals up to 150 ft. wide. Holbrook Helium typically found in the Permian Fort Apache limestone and Coconino sandstones.
- Many geologic similarities to the Permian basin of West Texas with extensive evaporate deposits.
- Extremely underexplored with only one well drilled per 100 sq. mi. Most historic drilling was for minerals. Modern exploration, drilling and production techniques enhance potential.
- 9.23 Billion cu ft. (Bcf) of Helium gas produced from 22 wells in 3 fields in the Holbrook basin from 1961–1976: Pinta Dome, Navajo Springs & East Navajo Springs.
- 6.5 Bcf produced from Pinta Dome alone, averaging 1400 Mcf per day over 15 year period from only 11 wells. Labelled "some of the richest helium-bearing gas ever produced in the world" at that time.
- Largest well at Pinta Dome, Kerr McGee 01 Macie-State, produced stunning 1.779
   Bcf Helium gas over that period; 304.7 Mcf per day.
- Avg. Grades produced from Pinta Dome were **8-10% Helium**; 90% Nitrogen; 1% Carbon dioxide from avg.depths of 1050 ft.
- Elsewhere in N.E. Arizona He was produced in smaller concentrations with oil & natural gas production, e.g., the Dineh Bi Keyah field.
- Production ended in 1976 due to low Helium prices and liquidation of He inventories by the U.S. National Helium Reserve.

# UT CO 6 Page AZ A. INM SHIP ROCK DIACE MESA DASIN Flagstaff Holbrook St. Johns Springerville

# THE HOLBROOK BASIN



Diagrammatic northeast-southwest geologic cross section from the Mogollon Rim to the Defiance uplift (From Peirce, 1970). This Figure shows line of cross section. The distance from G to H is about 150 miles. Not to scale.

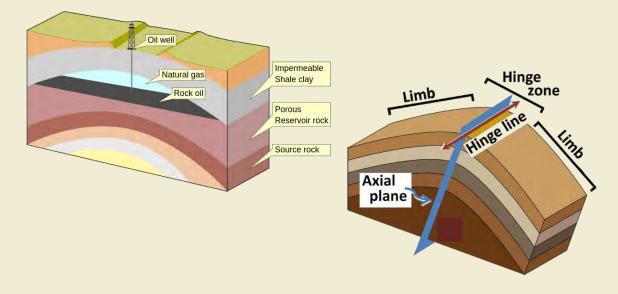
# **GEOLOGICAL SETTING**

The Pinta Dome, Navajo Springs & East Navajo Springs gas fields characterized by: (i) anticlinal features; (ii) favorable reservoir rocks and (iii) impermeable caprock traps.

### **Anticlinal Features**

- An anticline is an arch-shaped fold with the oldest beds at its core. Typically convex up with the greatest curvature at the hinge or crest. The limbs or sides of the fold dip away.
- Contains rock layers that become progressively older toward the center of the fold. Anticlinal ridges typically develop above thrust faults.
- Anticlines, structural domes and stratigraphic traps are favorable for sourcing oil & natural gas, as well as Helium.
- 80% of the world's oil was found in anticlinal traps.



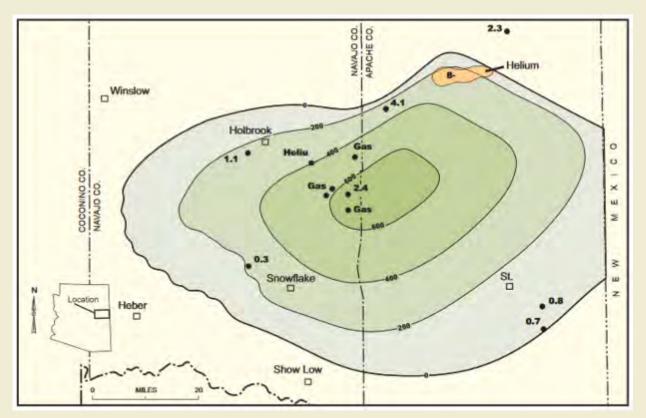


### **Reservoir Rocks**

- Helium in the Holbrook Basin generally found in pay zones 60-70 ft. wide in the Coconino sandstones and Fort Apache limestones at depths of approximately 1050 ft.
- These reservoir rocks are abundant in the Holbrook Basin.
- Coconino sandstones are particularly hospitable to hydrocarbons and helium with average porosity(14%), average permeability (110 millidarcies); and water saturation (29%)

### **Capping Mechanism**

 The Holbrook Basin is essentially a salt basin with salt and anhydrite acting as capping mechanisms to trap Helium in the reservoir rocks.



Holbrook Salt Basin showing the thickness of salt (in feet) and helium content (percent) of selected wells.

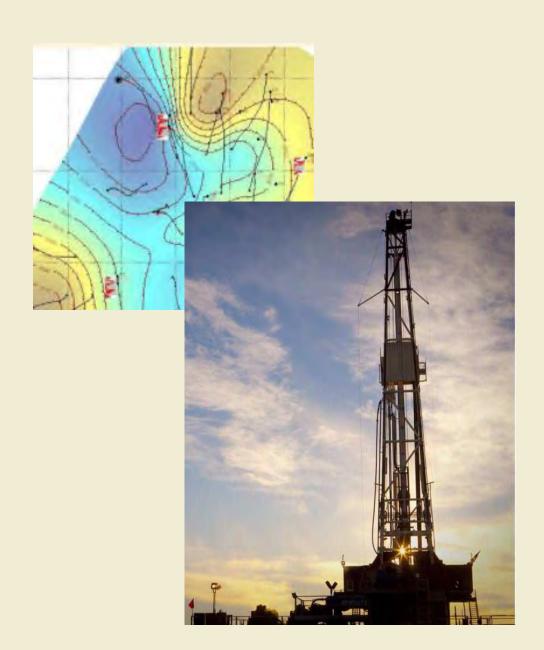
# **HELIOPOLIS**

- DME has **39,742 acres of key helium leases** throughout the Holbrook Basin, with other leases pending throughout the basin.
- This project area is named "Heliopolis" after the famous ancient Egyptian city, seat of worship of the sun god Atum or Ra. The sun is comprised of 25% helium.
- Heliopolis is highly prospective for helium, oil & gas. Its leases were carefully selected from studies of regional geology, engineering reports and logs from historic wells.
- Heliopolis has two large anticlinal features covering an area more than double the other Holbrook helium fields.
- Heliopolis overlays typical Coconino sandstone reservoir rocks and has abundant salt caps to act as trapping mechanisms.
- Heliopolis has never been produced as the other Holbrook fields provided ample supply. Those fields are now largely depleted and Helium prices have skyrocketed in response to new demand.

# Heliopolis' time has come!

# Work program for 2018 includes:

- Mapping, 2-D seismic survey
- Multiple Drill Targets ranging from 1500-4000 ft. First well targeted for Q4 2018.
- Long-term development contemplates potential drilling of 50 wells at Heliopolis.



# **CAPITAL STRUCTURE**

Outstanding shares: 35,250,046

**Options:** 2,581,250

Warrants: 4,828,566

**Fully diluted:** 42,614,862

**TSX Venture Exchange:** DME

Frankfurt Exchange: QM01

# Desert Mountain Energy Corp. (TSX.V: DME) Historic Stock Chart

01/16/19





# DESERT MOUNTAIN ENERGY

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