



**DESERT MOUNTAIN  
ENERGY**



## **HELIUM AND RARE EARTH GASES 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 Rare Earth Gas properties in the U.S. Southwest.
- ✓ High-grade tier 1, Helium project in Arizona
- ✓ Proven, successful management team that knows how to find, develop, package and vend projects.
- ✓ 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”. Also trades on the U.S. OTCQB as “DMEHF” and Frankfurt as “QM01”. The Company has more value in place than ever before.
- ✓ Corporate philosophy that respects the environment, the community and education



**DESERT MOUNTAIN**  
**E N E R G Y**

# Management Team

- Robert Rohlfing, (CEO President and Chairman), 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.
- Scott Davis, CPA, CGA, CFO, is a partner of Vancouver-based Cross Davis & Company LLP Chartered Professional Accountants. The firm is focused on providing accounting and management services for publicly-listed companies. Mr. Davis has extensive accounting and finance experience dealing with the complexities of both private and public corporations in a variety of industries. His experience includes CFO positions of several companies listed on the TSX Venture Exchange. His past senior management experience includes four years at Appleby as an Assistant Financial Controller, two years at Davidson & Company LLP Chartered Professional Accountants as an Auditor and five years with Pacific Opportunity Capital Ltd. as an Accounting Manager.
- Dr. James Cronoble, Vice President of Exploration, Director - He earned his B.S. in Geology from the University of Oklahoma followed with both his M.S. and PhD. in Geology from the Colorado School of Mines. He has more than forty years of exploration and operations experience in the Rocky Mountains and Mid-Continent of the United States.
- Don Mosher, Vice-President of Capital Markets, Director - Don Mosher 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 a number of junior resource companies across the mineral spectrum and in oil & gas.
- Jenaya Rohlfing, Director - Petroleum Engineer who has exhibited exceptional technical, leadership and organizational skills in all facets of drilling operations for oil & gas over the past 13 years in various management positions with ConocoPhillips. Working in diverse locations in North America including the Bakken, Alaska and the Rockies, she has served as Drilling Engineering Supervisor in the Bakken, Global Wells Planning Coordinator and currently as Drilling Engineering Supervisor for ConocoPhillips' Kuparuk, Alaska program.

# **CAPITAL STRUCTURE**

**Outstanding shares: 60,260,115**

**Options: 5,113,750**

**Warrants: 14,036,450**

**Fully diluted: 79,410,315**

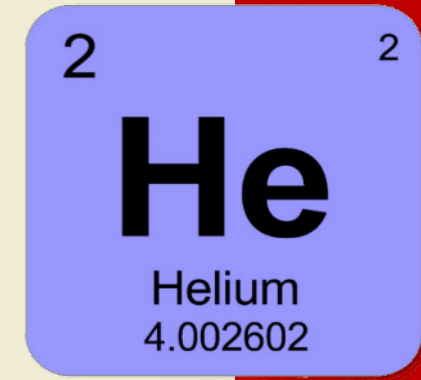
**TSX Venture Exchange: DME**

**U.S. OTC: DMEHF**

**Frankfurt Exchange: QM01**

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



A photograph of a large, blue MRI machine in a clinical setting. The machine's circular gantry is open, revealing a patient bed. The room is brightly lit with white walls.

In Most High-Tech Coolant Applications there is NO Substitute

Liquid Helium is used as a coolant for superconductor magnets in MRI machines and Particle Accelerators

A photograph of a SpaceX Falcon Heavy rocket on the Mobile Launcher Platform (MLP) being moved by a crawler-transporter on the launch complex. The MLP is a large, white, cylindrical structure that houses the rocket. The crawler-transporter is a massive vehicle with multiple sets of continuous tracks, designed to move heavy loads across the launch complex. The background shows the launch complex's infrastructure, including roads and other vehicles.

Used to purge gas in rocket engine systems



Helium-Filled High Capacity Hard Drives increase capacity by 50% and energy efficiency by 23%. Now used to power industry's largest data centers including Netflix Video Streaming.



### Air HDD vs. Helium HDD

*Same Form Factor. Exponential Difference.*

5-disk design

7-disk design

4TB

6TB

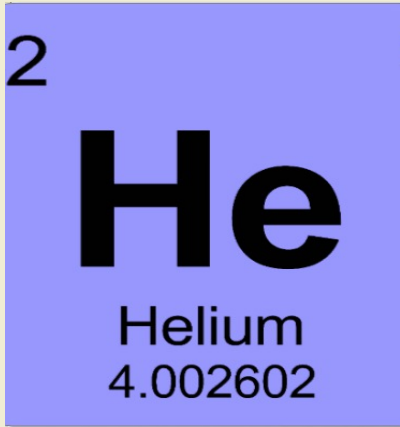
Same z-height

HGST

© 2013 HGST, INC.

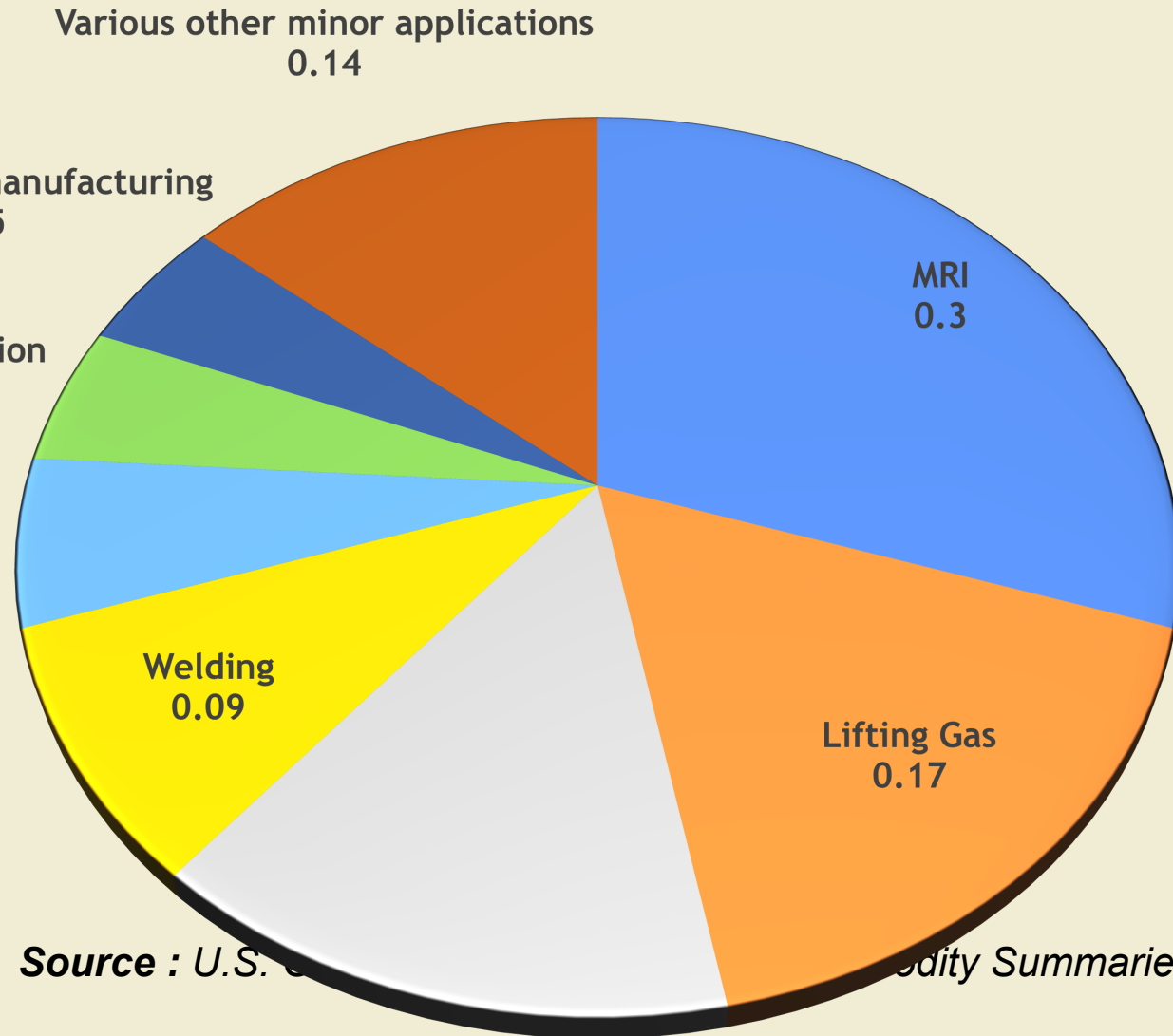


# 2017 Estimated Domestic Helium Consumption and Usage by Application



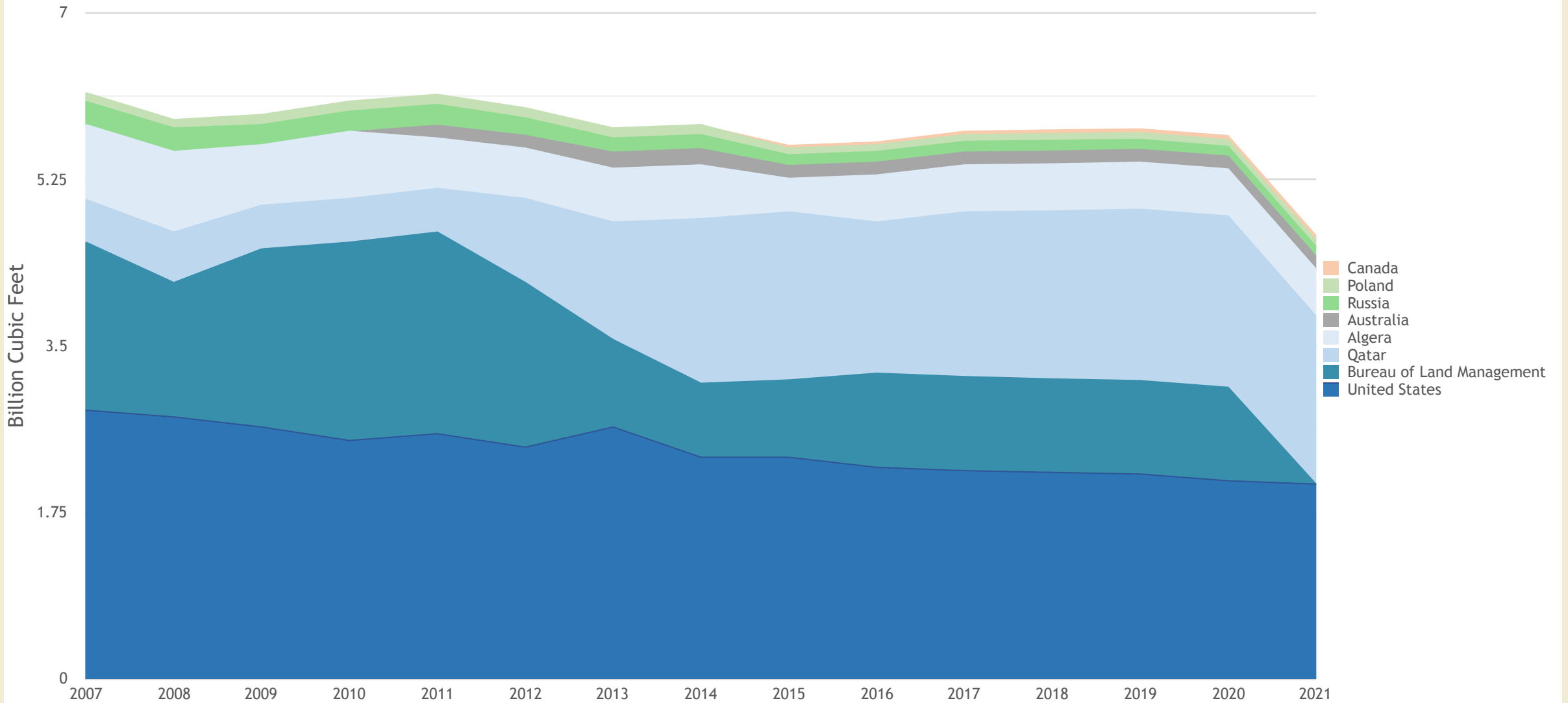
Engineering and scientific applications  
0.06

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

# World Helium Production (Data in Billion Cubic Feet)



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

# Holbrook Basin



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

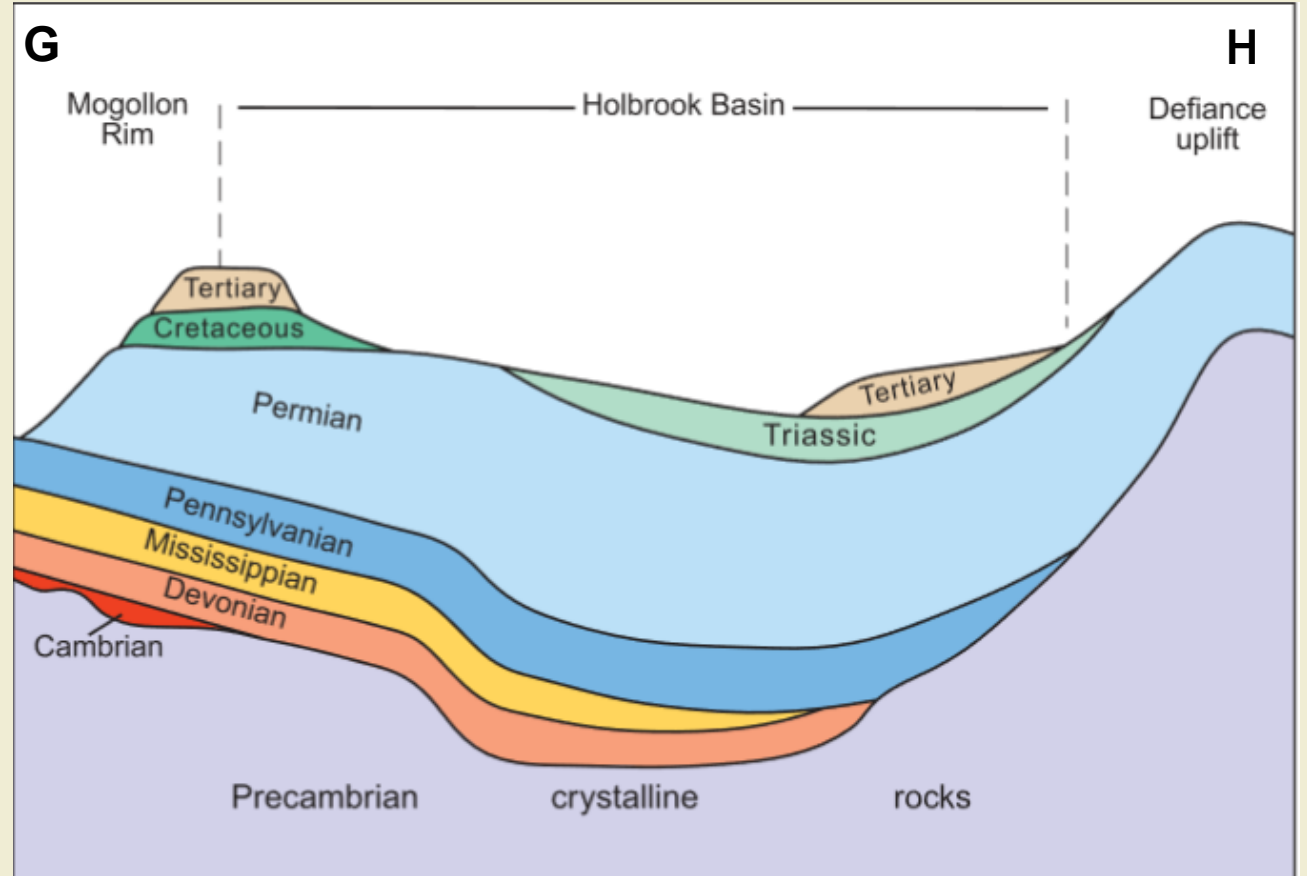
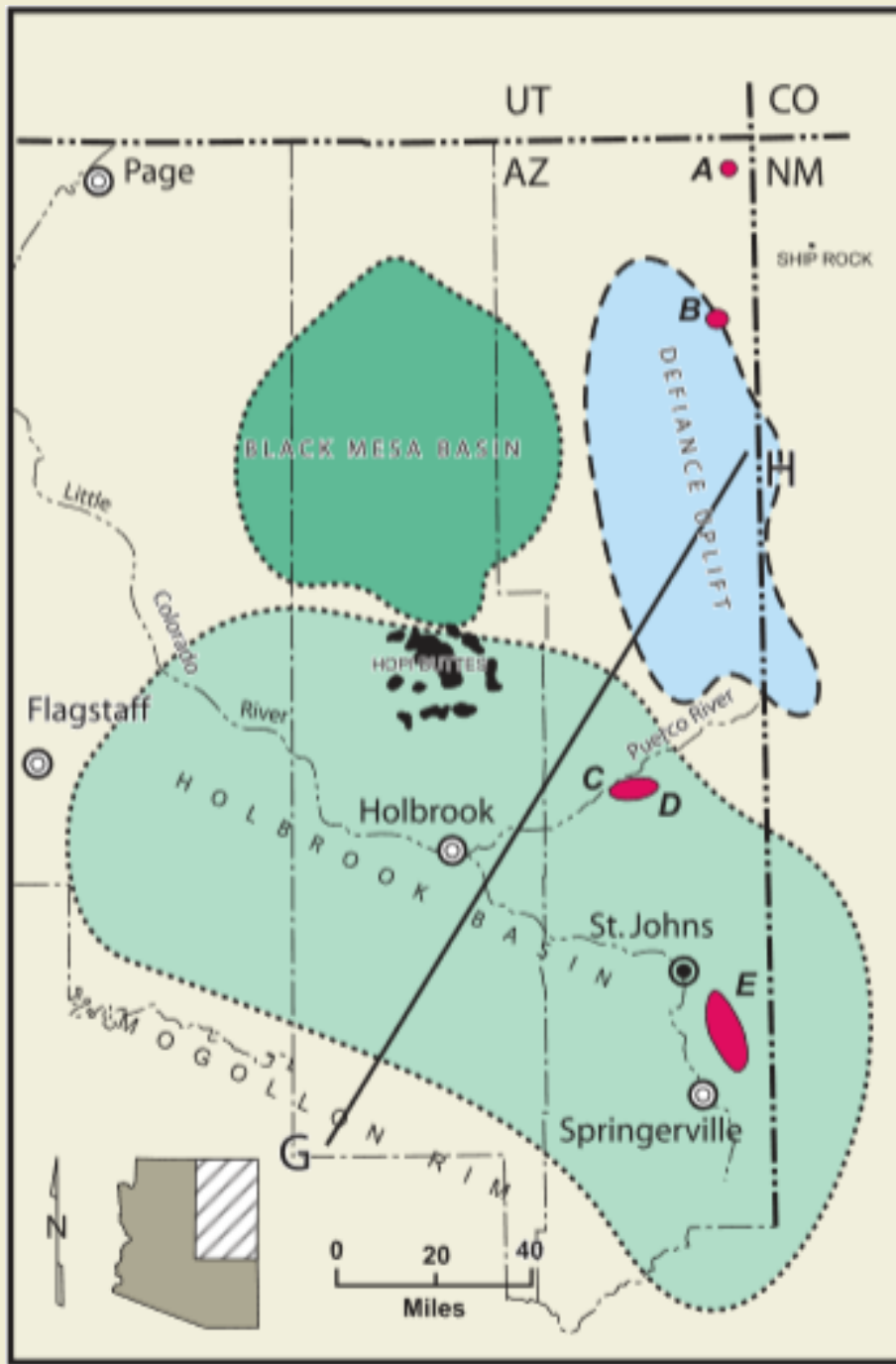
- Early mover among junior explorers in the Helium space.
- **+85,000 acres of Tier 1 Helium prospects** under lease throughout the Holbrook Basin. Among the highest He grades in world produced there ranging from **8% to 10%** vs. benchmark commercial grades of 0.3% to 1%.
- World's best address for 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 world's 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.
- **Successfully completed and tested 2 high grade wells with excellent pressures**

# THE HOLBROOK BASIN



- A large salt basin approximately 160 mi. by 100 mi. with thickened 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, hydrogen 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 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.

# THE HOLBROOK BASIN



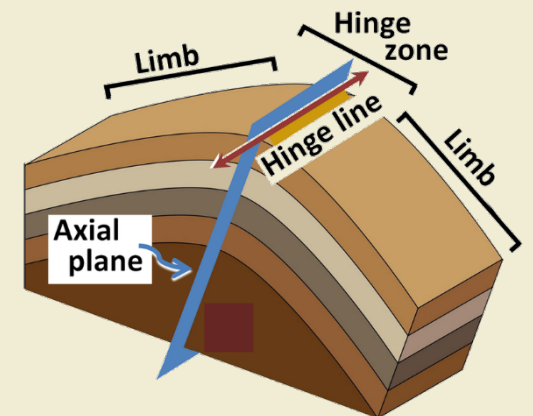
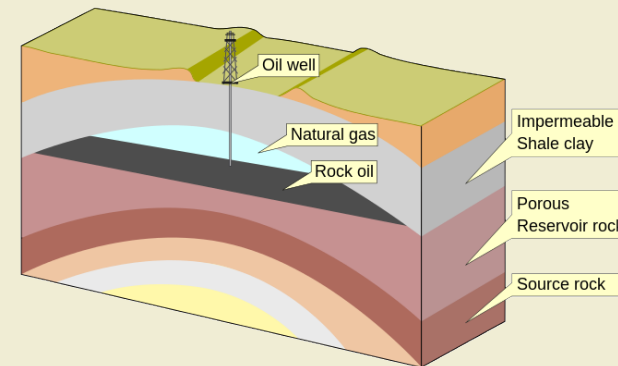
*Diagrammatic northeast-southwest geologic cross section from the Mogollon Rim to the Defiance uplift (From Peirce, 1970). This Figure shows line of cross section. The distance from G to H is about 150 miles. Not to scale.*

# 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.



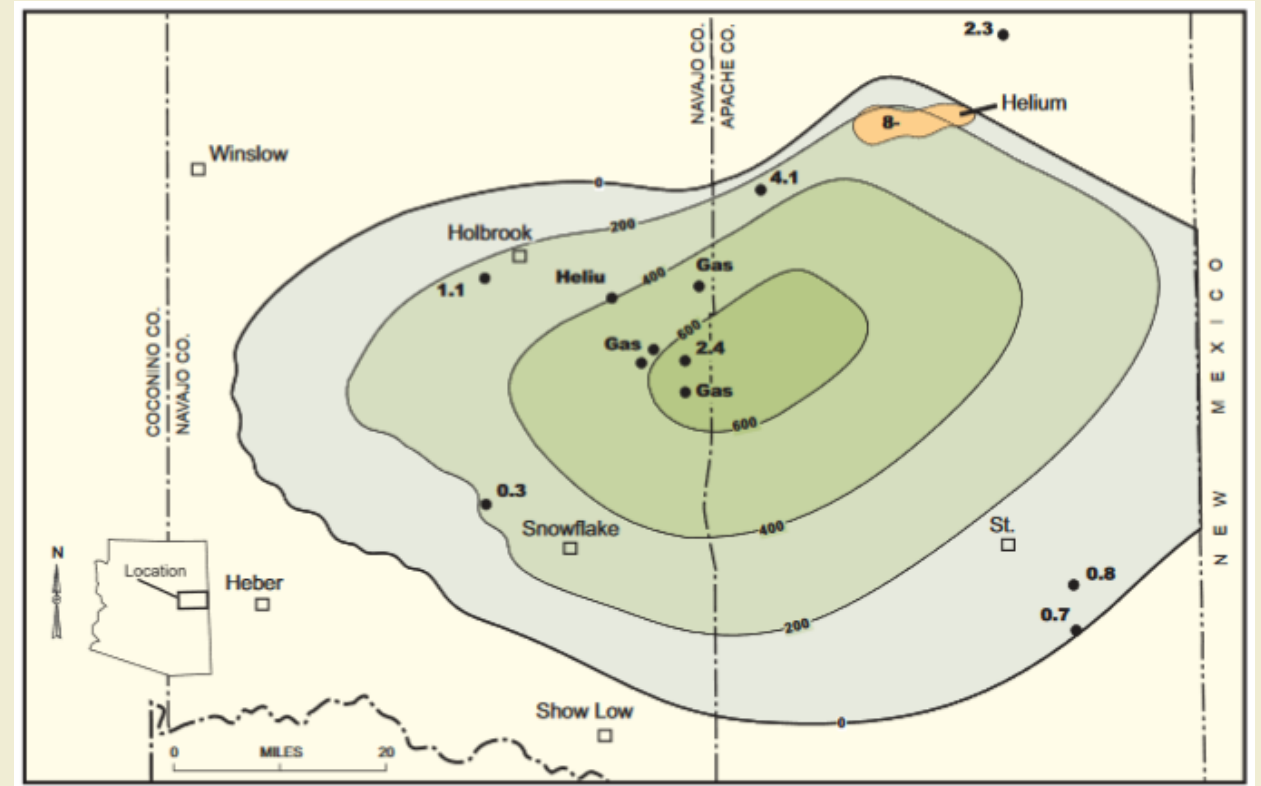


## Reservoir Rocks

- 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.*

# DME's time has come!

## DESERT MOUNTAIN ENERGY ANNOUNCES SIGNIFICANT HELIUM PERCENTAGES IN TWO NEW WELLS IN ARIZONA

### State 10-1

- Flow rate of **24,214 MCFGPD**
- The average gas analysis showed:
  - ✓ **Helium 7.1321%**
  - ✓ Nitrogen 77.0837%
  - ✓ CO2 4.0183%
  - ✓ Methane and other assorted minor gases. 2.6512%

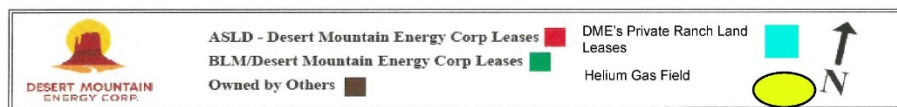
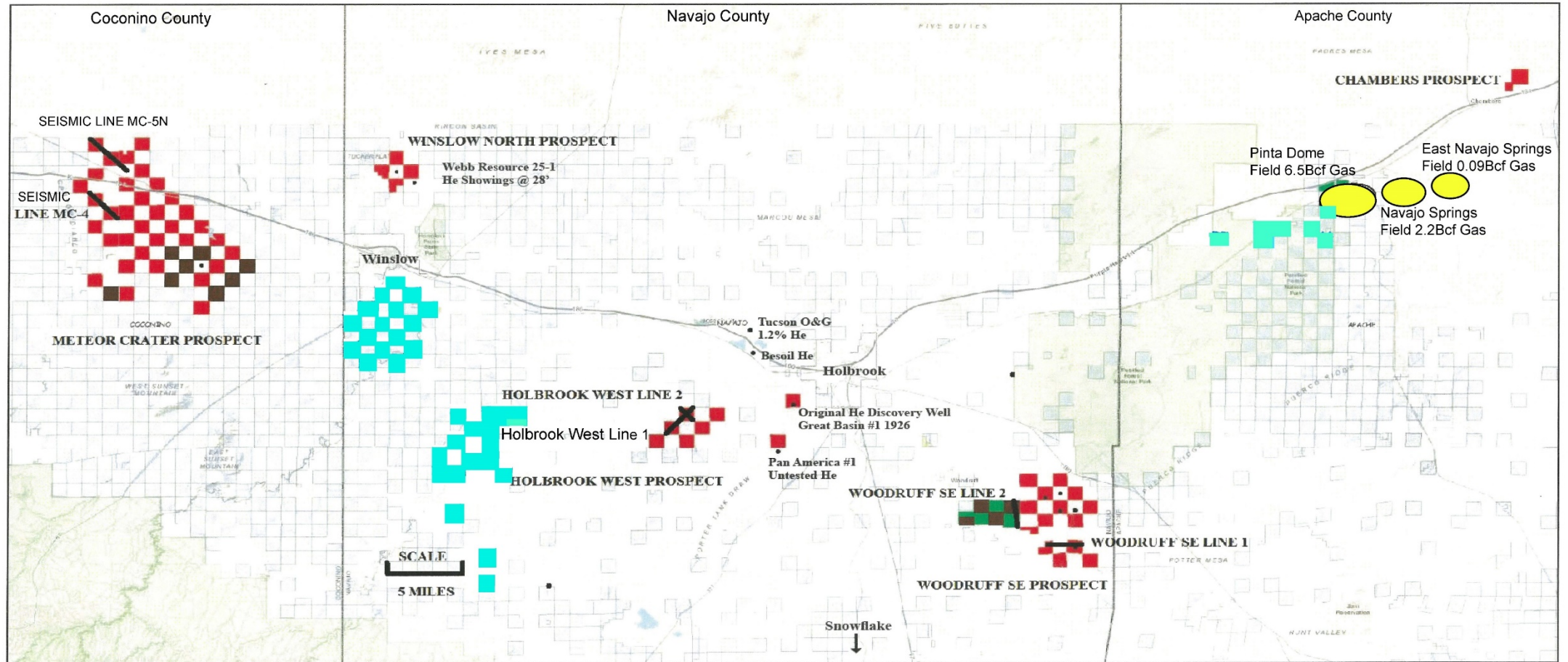
### State 16-1

- Flow rate of **1,251.2 MCFGPD**
- The average gas analysis showed:
  - ✓ **Helium 4.0904%**
  - ✓ Nitrogen 90.2742%
  - ✓ CO2 0.0063%
  - ✓ Methane and other assorted minor gases. 3.5535%

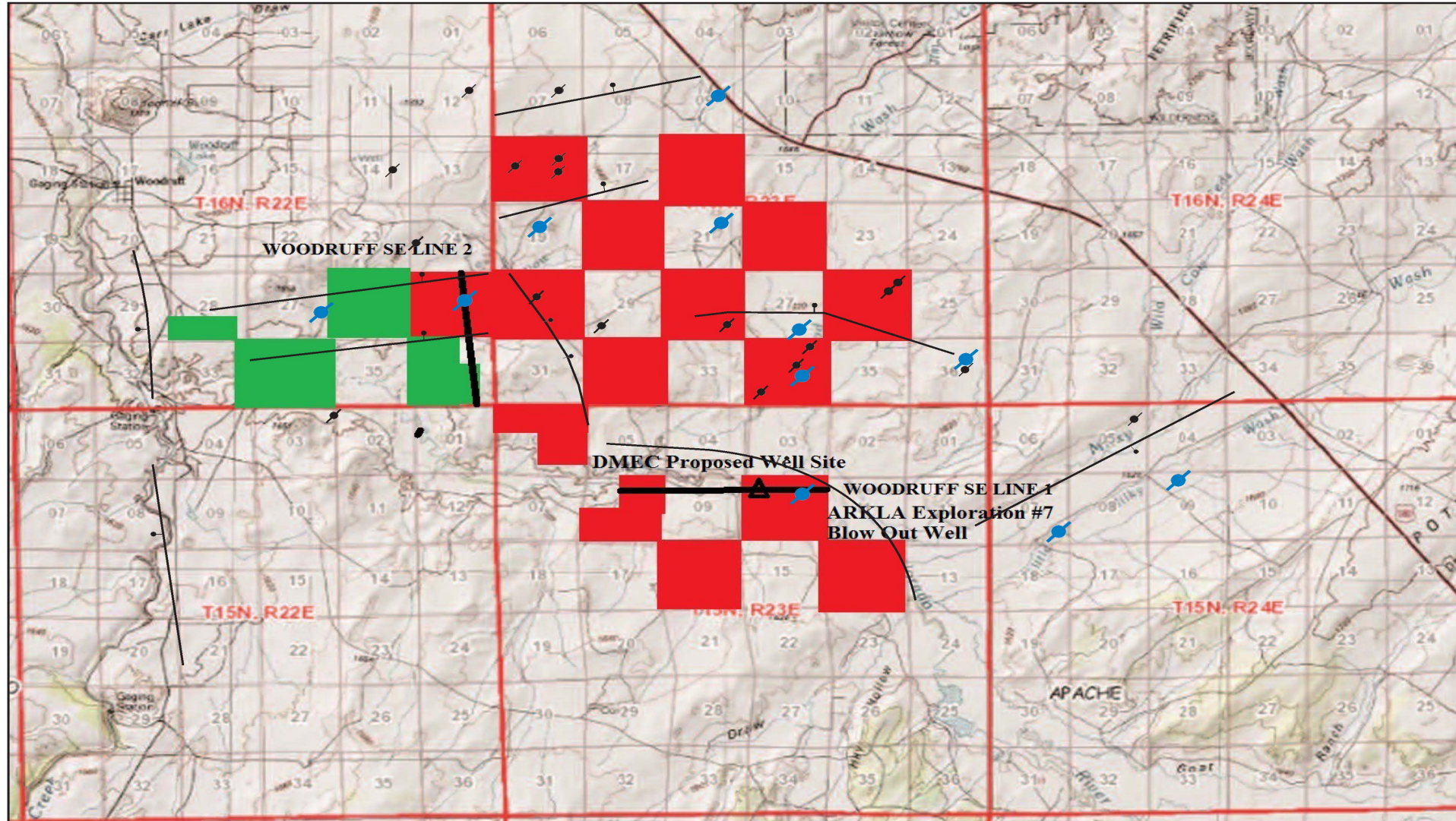


*“This is what 24.2 million cubic feet of gas blowing out of the ground looks like!!”*

# DME's Lease Holdings & 2D Seismic Geophysical Lines, Holbrook Basin, Arizona



## DME's Initial Drill Target at the Woodruff SE Area



ASLD - Desert Mountain Energy Corp Leases ■

BLM/Desert Mountain Energy Corp Leases ■

Owned by Others ■

1 Mile

N

Fault Down Dip	Syncline	Plunging Anticline	Direction of Slope
Fault Slip Strike	Anticline	Well Plugged	He Showing

# PLAN TO PRODUCTION

- Total number of production wells projected 50 to 55
- Gross revenue per well based on crude helium @ \$275mcf is projected at \$8,942,000
- Total projected capital expenditure including all drilling and infrastructure over 6 years \$45,000,000
- Production starting Fourth Quarter 2021 with 5 wells will cost \$26,000,000
- Payback based on only 5 wells after tax, G&A and royalties would be 18 months at current crude prices
- Upgraded helium prices dramatically lower payback period



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