

# NAVAJO NATION OIL & GAS COMPANY

Briefing for Teec Nos Pos Chapter

April 3, 2022



#### Who is NNOGC?

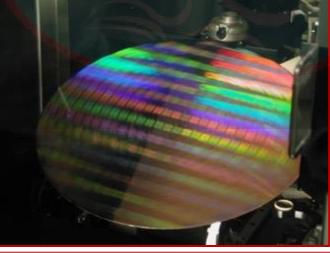
- Entity of the Navajo Nation
- Established in 1993
  - \$15 MM invested by Nation over its life
  - Annual royalties with partners exceeds \$75 MM
  - Over \$500 MM within past 7 years
- Business focus of upstream (O&G production), midstream (RHP) and downstream (C-Stores)
- 97% of staff is Navajo
- Headquarters in St. Michaels, Arizona
- Seven person Board with the majority Navajo
- Five Shareholder Reps for oversight from Council
- Company is in excellent financial health
  - Access to growth capital from Guggenheim (previously) and now TransPecos Banks.

#### WHY INVEST IN HELIUM?



- Helium is in short supply and it is required to support several important industries that impact humanity
- Helium has unique physical and chemical properties
  - Low density, lighter than air, non-toxic, odorless, non-flammable
  - Lowest boiling point (-269 °C)
  - Inert, nonreactive substance that is safe to develop
- Designated by USGS and DOI as a critical mineral
- Used in medical industry as a super coolant in MRI machines
- Nonreactive atmosphere in semiconductor manufacturing
- Ultra-deep SCUBA diving compressed air substitute
- Many other uses including aerospace industry (include outer-space flights), weather and party balloons, leak detection

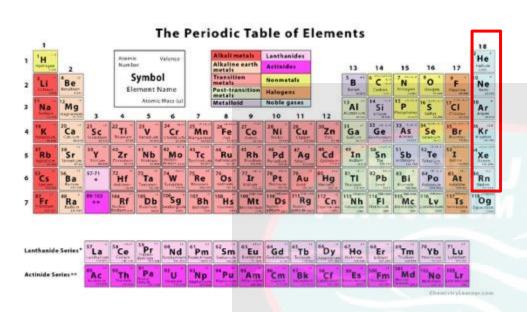




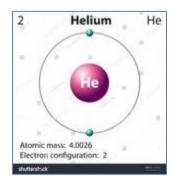


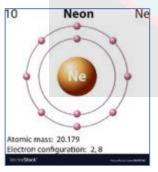
#### The Noble (Inert) Gases





The noble gases, also known as inert gases, are made up of a class of elements on the periodic table that are all odorless, colorless, and chemically non-reactive. There are six elements that comprise the noble gases: helium, neon, argon, krypton, xenon, and radon.



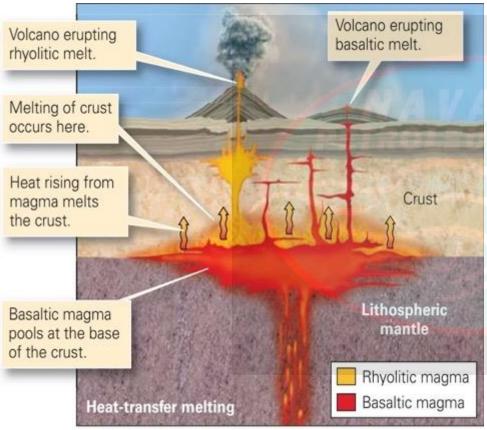




The noble gases are chemically nonreactive and therefore non-toxic due to the fact that the outer electron shells of these noble elements are completely filled.



## The Helium System



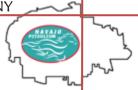
Rising magma from the mantle heats and melts overlying granitic crust releasing trapped helium and nitrogen enriching the magma with these gases.

#### Past and Present

- Helium discoveries in past have been accidentally found as a by-product of oil & gas exploration.
- Current activity by other companies have focused on producing the helium remaining in these old wells from the 1940-1960s.

#### Future

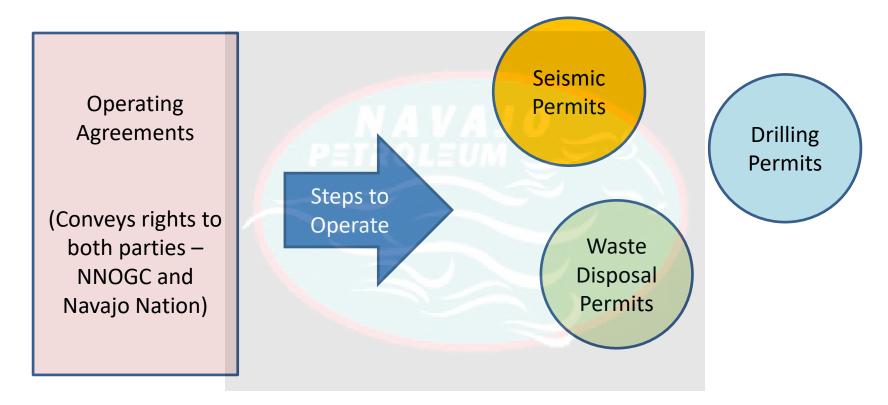
- Helium growth for the Navajo Nation will require purposeful exploration that will lead to new discoveries. This exploration effort will require a new and different workflow compared to oil & gas.
- The new workflow will require surface soil sampling, aeromag and seismic surveys.



### Key Points on Helium Development

- Helium is not a fossil fuel (no carbon footprint).
- Helium is being constantly emitted from the earth since its birth. We are searching for trapped helium in order to produce and market.
- The Navajo Nation is blessed with some of the richest helium deposits in the world (as much as 8 to 10% of the gas stream in some areas), so we should be grateful.
- Helium is primarily associated with Nitrogen (another clear, odorless, tasteless, non-toxic, non-flammable gas).
   Nitrogen makes up 78.1% of the Earth's atmosphere.
- Helium deposits in the subsurface tend to be small and can be developed with a low number of wells.
- The wells tend to be short lived, so community impact should be short in tenure.

# Process Flow for O&G Activity



Oversight:

Council, NN President and BIA

NN Division of Natural Resources, BLM and BIA

## Summary of Initiative



- NNOGC began conversations with the Navajo Nation concerning helium developments beginning in Q4 2019 with a meeting with NNOGC's Shareholders, RDC and Minerals Department.
- This was followed by workshops in January and March 2020 to discuss the revenue potential of helium production.
- Then COVID happened and our effort was stalled until early 2021.
- In 2021, NNOGC matured helium agreements with the Minerals Department and NN DOJ and we finalized in Q3. This was followed by workshops with RDC in September and October.

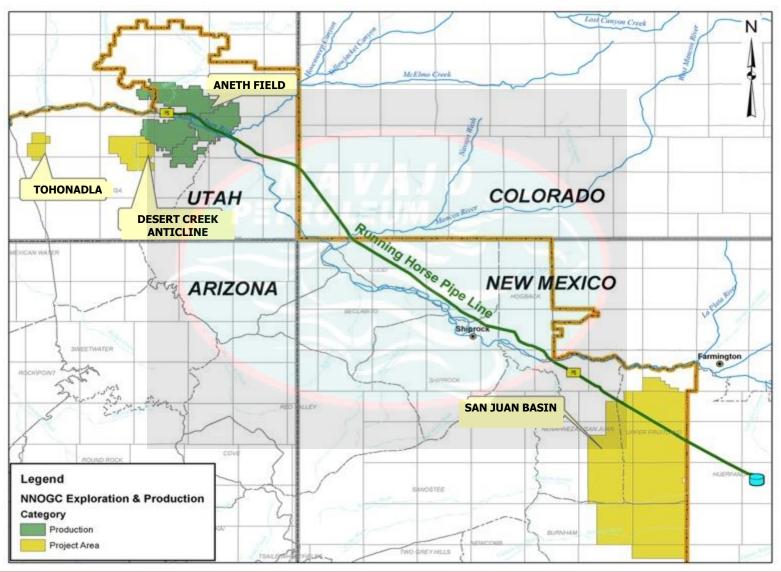
## Summary of Initiative



- NNOGC finalized with Navajo Nation's Minerals Department and Department of Justice (DOJ) detailed language of three Operating Agreements for development of Helium on the Navajo Nation.
- The three Helium Operating Agreements are located in two Chapter areas who have passed supporting resolutions for helium development in their region:
  - Tohache Wash (10,560 acres) near Teec Nos Pos
  - Beautiful Mountain (8,480 acres) and Porcupine Dome (11,040 acres) near Tse Alnaoztíi Chapter
  - Beautiful Mountain agreement will see name change to Big Gap Dam during Winter Session 2022 of Navajo Nation Council
- NNOGC has sound financial standing with stable funding to handle this activity. Also, the company has hired significant technical skills in order to implement its plans.

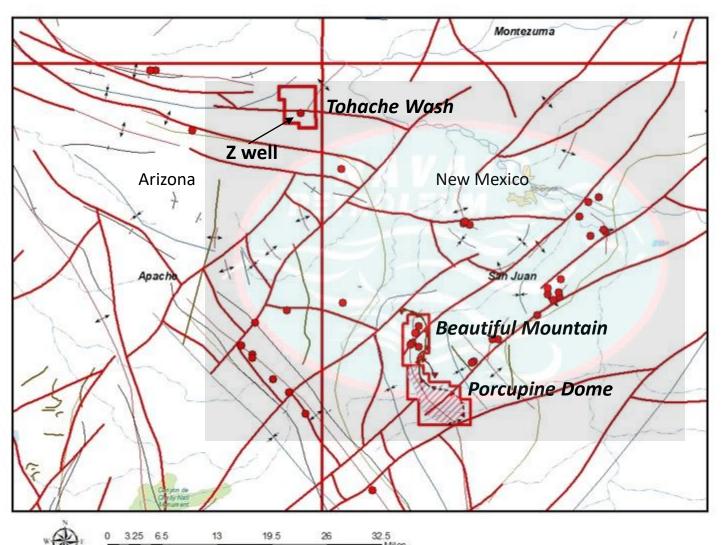
#### **NNOGC Operations**





#### Helium Projects – Navajo Lands





Basement Lineaments shown as red lines.

Helium tests >4% He shown as red dots.



#### Details of Operating Agreements

- Rights of NNOGC to develop on specified lands
  - Primary Term of 10 years for exploration for helium
  - Secondary Term of production of helium runs as long as there is paying quantities
- Bonus, Rentals, Royalty, PILT and Scholarships
- NNOGC must obtain permits for action
  - These include seismic, drilling and pipeline lays
- NNOGC must act as a prudent operator that protects water resources
- The company must carry sufficient insurance to cover operations

#### Well Permitting Process Ensures Prudent Plan



#### Onsiting

- Onsite review with BIA, BLM, Navajo Nation Fish & Wildlife, Water Resources, and other department representatives to ensure protection of archeological or cultural sites
  - Review identifies specific field observations that will need to be included in the Application for Permit to Drill (APD) and Environmental Assessment (EA)

#### Environmental Assessment (EA)

- Purpose of an EA is to provide information to assist the Navajo Nation and the Bureau of Indian Affairs (BIA) in determining the impact this project would have on the environmental resources they manage
- Covers direct and indirect effects and mitigation required
  - Air Resources
  - Cultural Resources
  - Environmental Justice
  - Invasive, Non-native Species
  - · Wastes, Hazardous or Solid
  - Water Quality
  - Topography/Surface Geology
  - Land Use

- Mineral Resources
- Noise
- Public Health & Safety
- Visual Resources
- Wildlife
- Special Status Species
- Vegetation, Forestry
- Soil/Watershed/Hydrology
- EA is approved by Navajo Nation EPA, Historical Preservation Dept, and Fish & Wildlife w/ issuance
  of Cultural Review Compliance Form (CRCF) and Biological Review Compliance Form (BRCF)

# Success Yields Significant Value to Navajo Nation



- Bonus for access, annual scholarship, rental payments during exploration phase, royalty and PILT (payment in lieu of tax) and land rentals during production phase
  - Combined access bonus for three areas is \$752,000
  - Combined scholarships of \$30,000 initial payment plus \$2000 per producing well (with a minimum of \$15,000 and maximum of \$50,000 per agreement)
- 20% Royalty and 5% PILT are competitive with agreements off the Navajo Nation (in fact, probably a bit higher)
- In addition, there is sales tax for some capital and operating expense spend by NNOGC that will flow to the Nation
- Potential payments to the Navajo Nation could approach \$1 billion from 40 prospect portfolio. These agreements are only the beginning of our overall exploration effort.



- Jobs
  - Contract labor during well and facility construction
  - Field Operations roles
- 1% Profit Share to support development projects within Chapter

 Partnership with NNOGC who will listen to concerns and address issues



## What to Expect?

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- NNOGC will begin with geologic assessments. These include seismic and aero-mag surveys plus soil sampling
- Next phase will be drilling operations to provide pathway for production of helium
- Next phase will be pipeline and facility work to process gas and separate helium for sales
- Next phase is transport of helium to market
- This will continue during the economic life of the resource. This can be several years.



# Seismic Activity











#### High-Resolution Aeromagnetic Survey Update

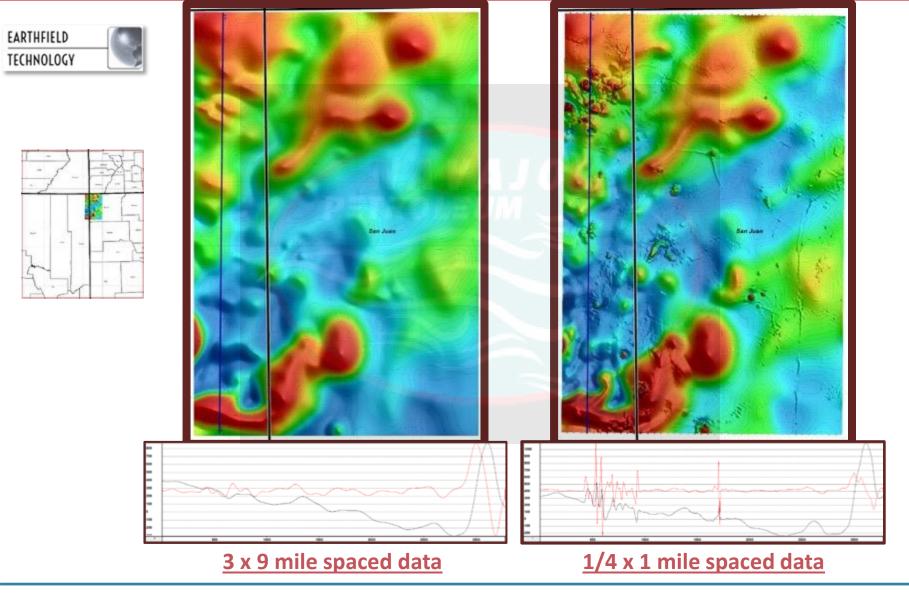






# Hi-Resolution Magnetic With Produce Much More Detailed Products: Including Basement Depth/Fractures & Igneous Body Delineation





#### Helium Soil Gas Sampling Update











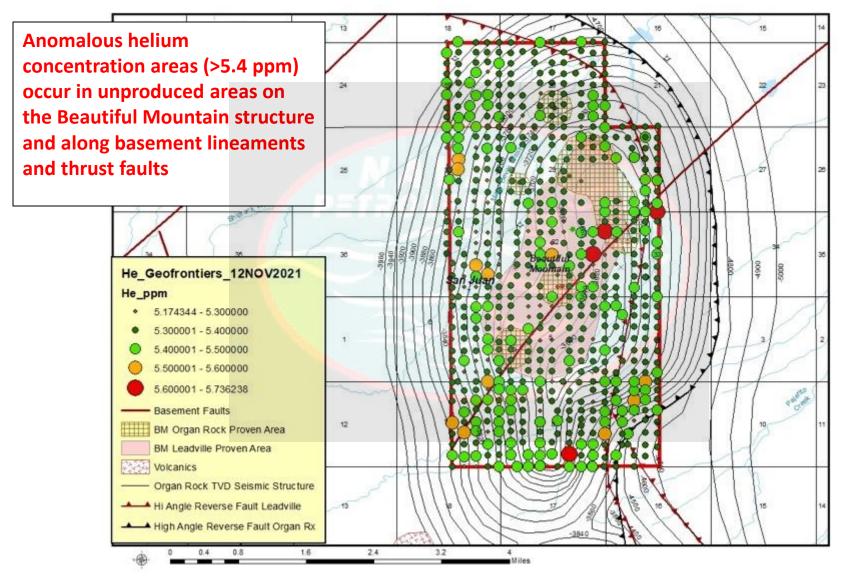




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# Preliminary results from Helium Soil Gas sampling at Beautiful Mountain





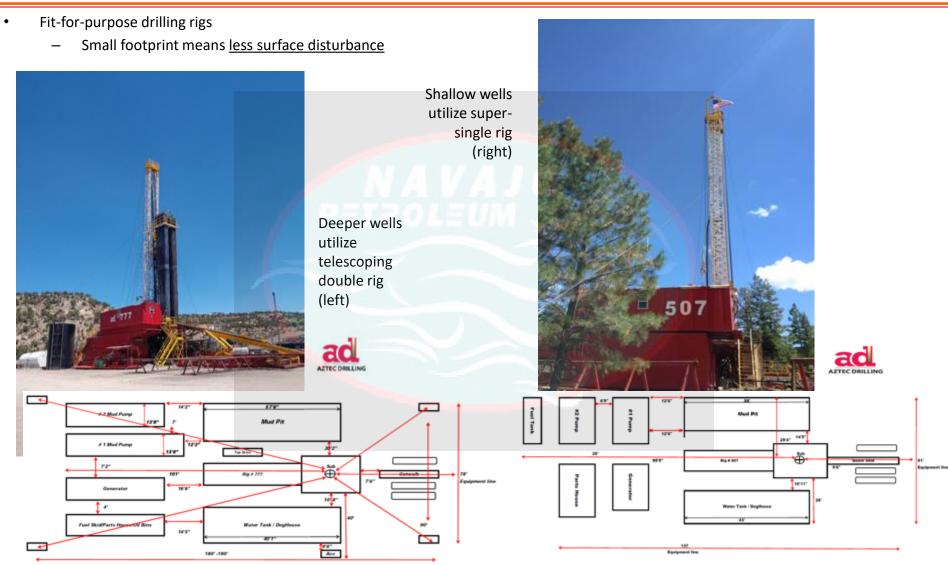
## **Drilling Pad**





#### **Equipment Selection**

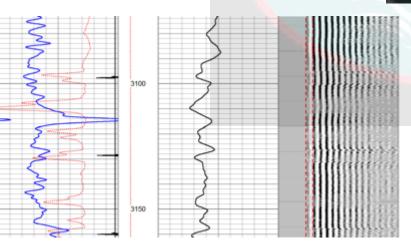


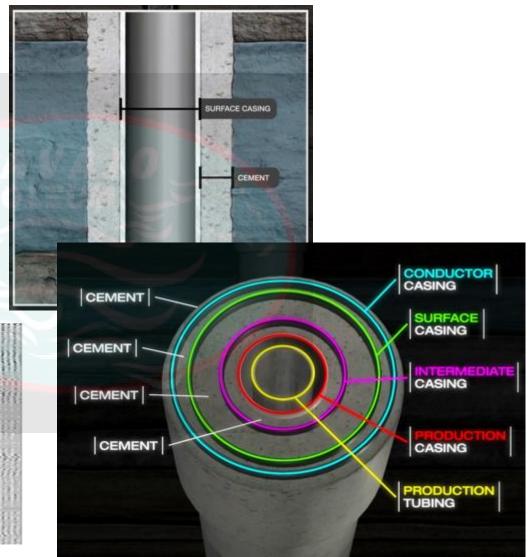


#### Well Design and Drilling to Protect Water



- Drilling Fluids
  - Closed loop mud systems with storage of dried drilling cuttings stored within minimum 20 mil liner
  - Water based fluids to <u>eliminate</u> <u>contamination while drilling</u>
- Casing & Cementing
  - Surface casing and cementing operations are used provide barriers between groundwater
  - Production casing and cement will be brought back to surface to provide additional barriers
  - Witnessed by <u>Navajo Nation BLM inspectors</u>
  - Confirmed with <u>cement bond logs (CBL)</u>





#### **Production**



- Production
  - Anticipate <u>little to none hydrocarbon production</u>
    - Likely to reinject any hydrocarbons back into production reservoir for gas lift purposes
  - Navajo employees that <u>embody environmental commitment and values</u>
  - Surface Facilities
    - Equipment contained within steel containment with <u>liners</u> providing positive barrier between Mother Earth
      - 30' x 72' x 33" galvanized steel secondary containment
        - » Capacity of 42,032 US Gal (1,001 barrels)
      - N45B 45 mil reinforced linear low-density polyethylene (LLDPE) liner









### Teec Nos Pos Chapter Activity



## Navajo Z-Well Location





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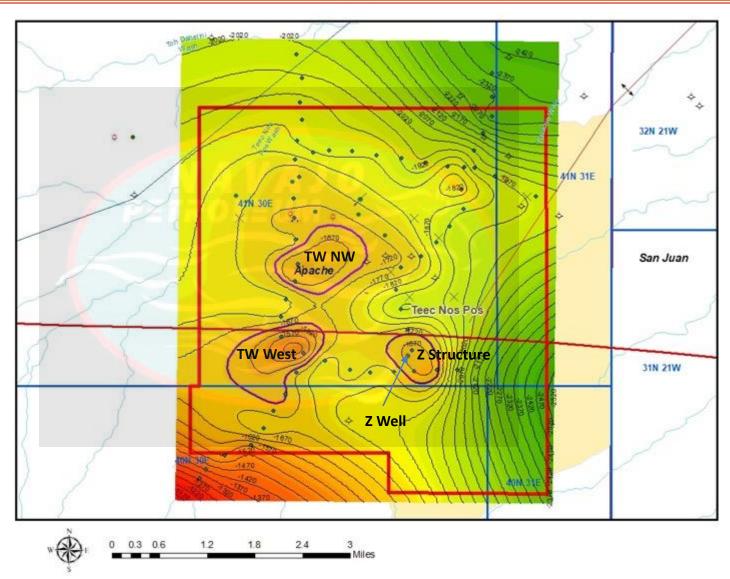
# Tohache Wash Precambrian Structure from 1950's Gulf Oil 100% seismic data



Interpretation of 1950's vintage 100% seismic data from Gulf Oil defines the Z well structural closure and 2 new, untested closures to the west and NW of the Z well.

Prospect Closures: 147 ac – Z Structure 332 ac – TW NW 383 ac – TW West

Basement Lineaments shown as red lines.



# NNOGC P&A Activity to remediate sites speaks to commitment for environmental stewardship





Mule 31-K - Before



Runway 10C-5A - Before



Mule 31-K - After



Runway 10C-5A - After

#### **Tohache Wash Revenue Splits**



- NNOGC must risk capital for the development of these two operating agreements.
   Assuming we produce the amount of helium we expect, the cash flow summary over the life of the project is as follows:
  - Capital investment by NNOGC up-front = \$9 MM
  - Operating expenses paid by NNOGC over life of production = \$19 MM
  - Sales Tax paid on Capital and OPEX Spend = \$400,000
  - Royalty and PILT (pay in lieu of tax) to Navajo Nation = \$15 MM
  - Scholarship requirements paid by NNOGC = \$100,000
  - Profit Share paid to Chapter = \$300,000
- The remaining profit stays with NNOGC. This pays salaries and benefits of staff, stipends for Board and Shareholder Reps, cost for offices, interest on loans, company operating expenses, transportation and travel, donations to community events, What remains allows NNOGC to invest in the next opportunities. The next opportunities could be new helium projects, new C-stores or other investments.



