



Structured to deliver value from:

- Porphyry copper exploration
- Low cost uranium exploration and development
- Gold/silver production
- Assets based in USA & Mexico

February 2012



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# David Newton

## Chief Executive Officer



- Appointed CEO from 1 Sept 2011
- Ex Ernst & Young, London Stock Exchange, Williams de Broë, XCAP Securities
- Specialist AIM corporate finance and mining sector experience
- Chartered Accountant and Fellow of the Chartered Institute for Securities & Investments



# Overview

## Value creation supported by projected cash flow



Structured to deliver value from:

- porphyry copper exploration
  - low cost exploration/potentially enormous returns
  - targets located in southern Arizona and south west New Mexico
- low cost uranium exploration and development
  - northern Arizona and Utah
  - joint venture with Uranium One
- gold/silver production
  - assets based in Mexico
  - provides income to help finance exploration activities



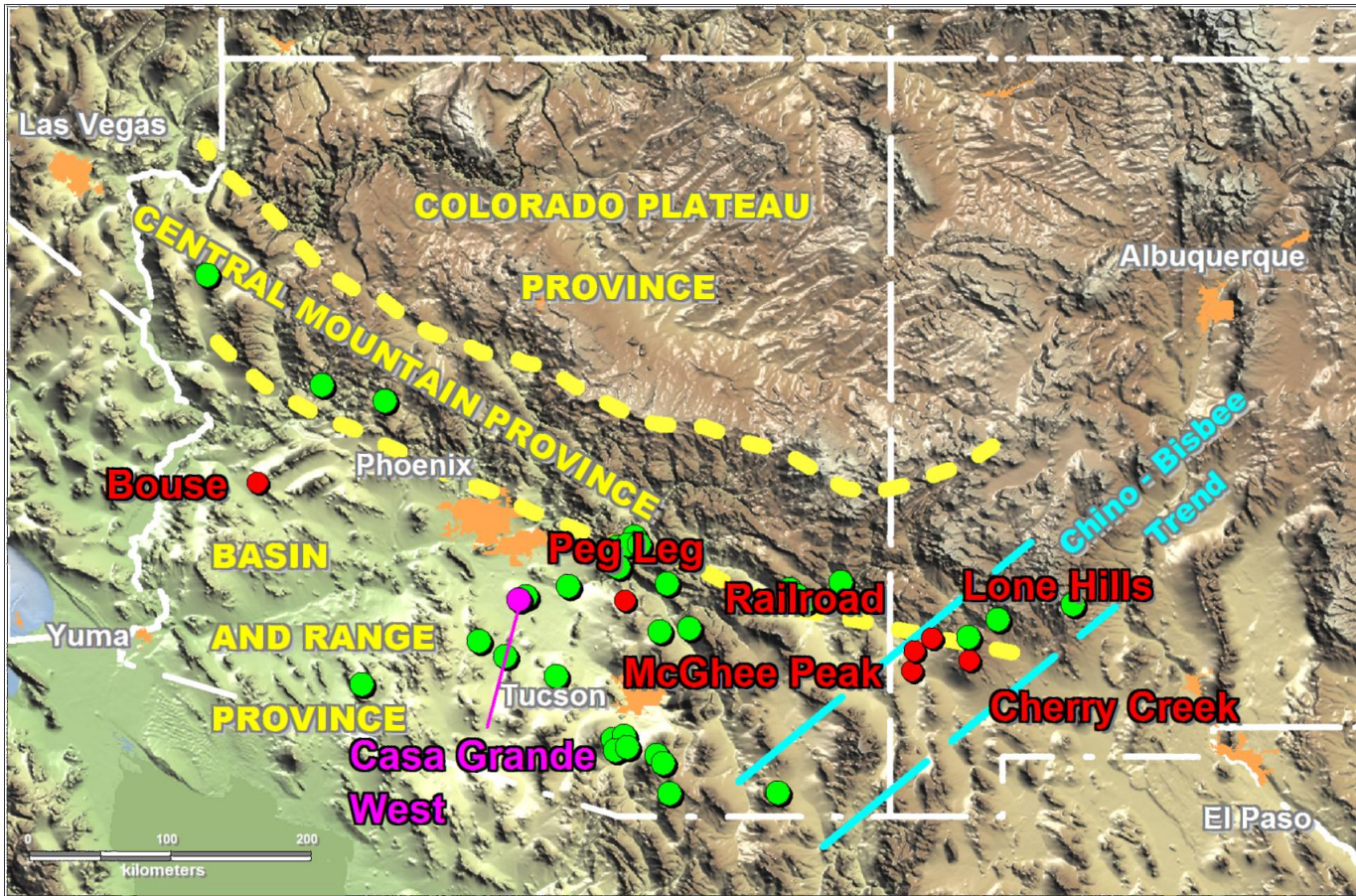
# Porphyry Copper Mine



**Mission/Pima Mine (AZ)**  
**± 1 billion tons**  
**0.57% Cu**  
**11 billion lbs copper**  
**+ Mo, Ag credit**



# Southwest Porphyry Copper Province, USA



Region accounts for 60% of US production

Historical production from 30+ (25 outcropping) deposits

60% of area "covered" (potential for at least 30 new discoveries)

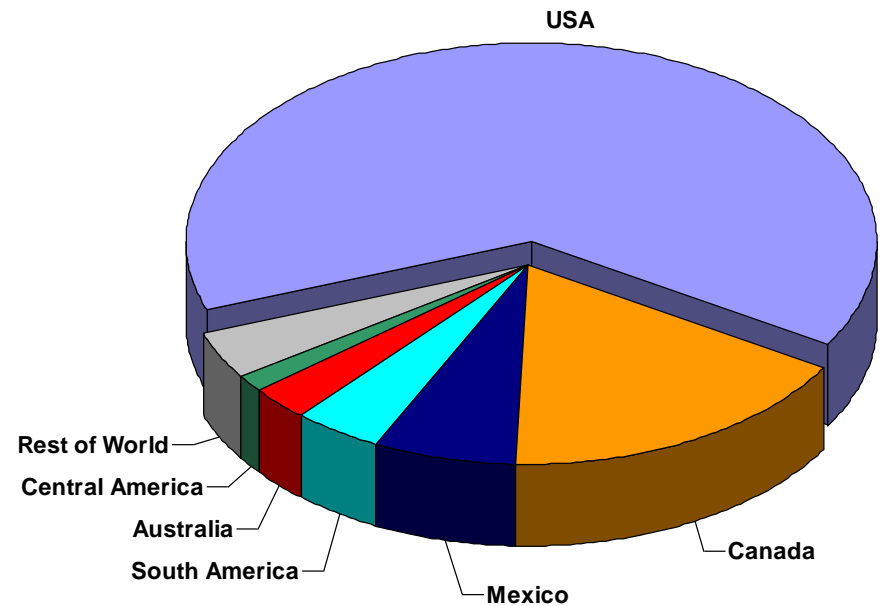


# Freeport-McMoRan Database/BFS Option



- Exclusive access to global database with some 7,000 files accumulated during 100 years of exploration worldwide
- Several properties identified are being pursued and tested
- Freeport has an option on any project to acquire up to 25% at BFS stage or on proven reserves
- Agreement until 30 June 2013 with option to renew

Database Files by Region



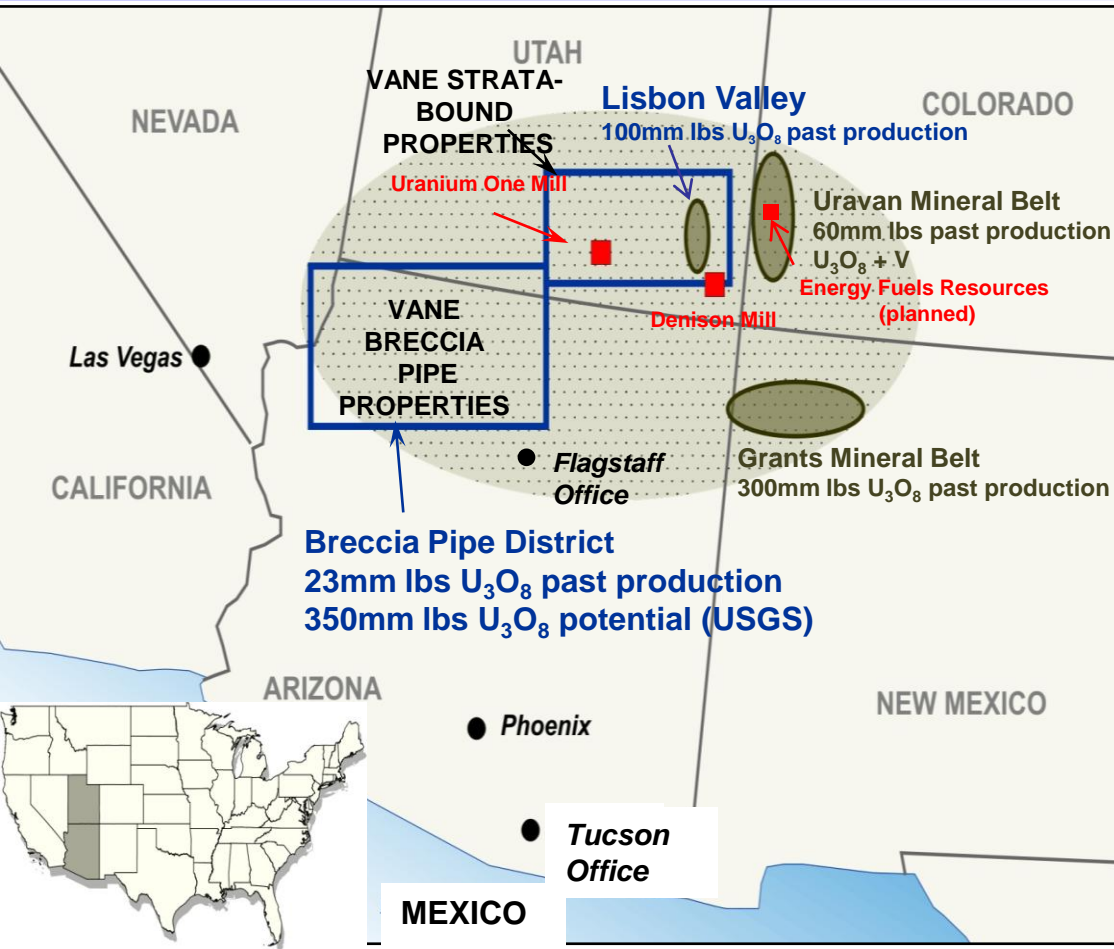
# McGhee Peak



- Copper – Molybdenum porphyry system drilled
- Two mineralised targets located approximately 1 mile apart
- Two rotary holes completed with a third being re-drilled
- Mo-Zn-Cu mineralized porphyry system encountered
  - Copper values in the range of 300-600 ppm
  - Zinc values greater than 200 ppm
  - Visible molybdenite encountered in hole subsequently lost due to caving and being re-drilled
- Further drilling being undertaken to determine if economically viable higher grade mineralization is present



# Uranium Asset Locations, USA



## Projects:

- Northern Arizona - **Arizona Strip Breccia Pipes**  
124 state land projects  
Additional 155 targets on federal land  
(Segregation Order Jan 2012)
- Utah Properties – 3 **Strata-bound Projects**  
Happy Jack Mine  
North Wash  
North La Sal
- Current political issues regarding segregation of federal lands



# VANE Breccia Pipes, Arizona

## (High-grade uranium)



### Breccia Pipe Mines:

- Arizona Strip high-grade uranium district
  - District has 350mm lbs  $U_3O_8$  potential (USGS)
  - 23mm lbs  $U_3O_8$  historic production
  - 3.4mm lbs  $U_3O_8$  per pipe (historic average) 1 – 6mm lbs  $U_3O_8$  single pipe potential
- Compact, high-grade (c.1%) deposits with mine life of 4-6 years, 20-acre mine site foot print
- Low cash cost, high margin and rapid return on investment
- $\pm$  100 additional deposits to be discovered based on USGS study

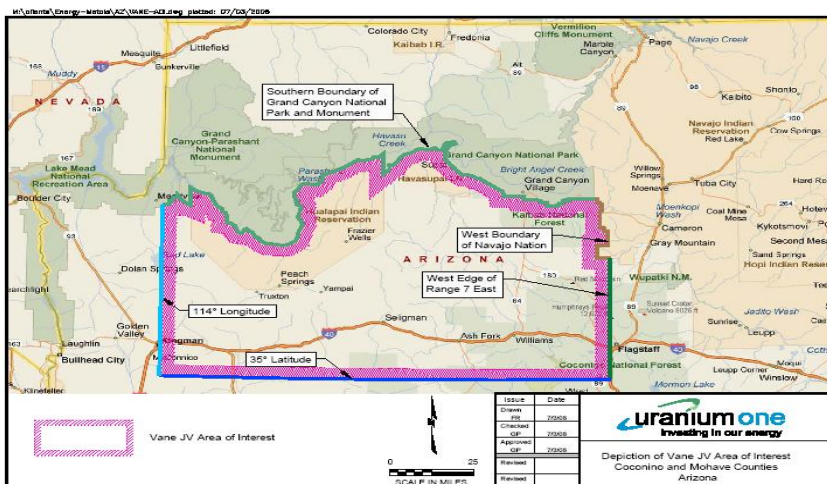
1% = 20 lbs  $U_3O_8$ /t

#### Estimated example of single pipe production:

Capex	\$25,000,000
Cash cost	\$33 per pound $U_3O_8$
(\$13 mining and ore haulage, \$11 milling, \$5 overheads and sales, \$1 reclamation)	
Gross value 3.4m lbs $U_3O_8$ (LT price \$63)	\$214,000,000
Resource	212,500 tons, 0.8%
Production	3,400,000 pounds $U_3O_8$
Mine Life 4 years	250t/d production rate



- 6,250 mi<sup>2</sup> Area of Interest, combined land package of 70,000 acres
- 124 state land targets – operations continue unaffected by federal land politics
- First pipe progressed to development stage (Wate – NI 43-101 compliant resource of 1.118m lbs)
- Rose Pipe project added (+1% U<sub>3</sub>O<sub>8</sub>), further drilling required to prove resource
- Additional potential of 155 federal land projects (79 100% VANE) segregated from Jan 2012, possibly indefinitely



# Precious Metals Operations Mexico (Au, Ag)



Rosario Joint Venture Area of Interest



Location Area



# Overview

## Value creation supported by projected cash flow



### Gold/silver production, Mexico

- Expanding existing mining and milling operations
  - Rosario JV, Area of Interest 1,500km<sup>2</sup>, 4 high-grade mines
  - La Colorada vein system in production
  - Cyanide leach facility built, tested and operational
  - Diablito (100% VANE owned) to close in 2012
- Q4 revenue - \$2.6m
- SDA mill head grades for Q4 2011:
  - 8.06g/T Au, 127g/T Ag
- Recovery rates 78.2% Au, 70.9% Ag
- Total production for Q4 – 1,352 oz. Au and 19,410 oz. Ag at a direct production cost of \$585/equiv. oz. Au; or \$10.8/equiv. oz. Ag



# Gold/Silver Production & Expansion (Mexico)



- Expanding asset base to utilise operational team in place
  - Extensive in-country operating experience
  - 100 T/day mill and flotation plant
  - Own 200 T/day ball mill
  - Cyanide leach facility including Merrill Crowe plant
- Rosario Joint Venture Terms:
  - 80/20 profit split until 150% Cap-ex recovered
  - 60/40 profit split post return of capital
- Targeted production 2,500 T/m @ avg. grade 6 g/T Au, 100 g/T Ag
  - La Colorada/Saltito 6 g/T Au, 100 g/T Ag
  - Valenzuela 6.7 g/T Au, 100 g/T Ag
  - Diablito – 3,200T high grade ore



# Corporate Strategy

## New CEO appointed to drive forward operations



### Mexico

- Move towards closing down Diablito in 2012 whilst maximising remaining production grades
- To maximise the supply of good quality ore for processing through the SDA mill
  - Accelerate joint venture production
  - Increase asset base

### Copper assets

- To carry out our published exploration programme

### Uranium assets

- Protect the current investment through the Uranium One JV
- To continue the pre-development phase of Wate (NI 43-101 resource)
- To prove up an NI 43-101 compliant resource at Rose

### New projects

- To actively seek new opportunities with the view of increasing VANE's portfolio of assets



# Summary



- Cash flow from Mexican assets improving and expected to improve further
- Test porphyry copper exploration targets in prolific southwest USA province – pipeline of projects being developed
  - Substantial value creation opportunity
  - McGhee Peak
- Exposure to high-grade uranium portfolio
  - Exploration and development ongoing in high-grade breccia pipe district – short mine life – rapid returns
  - 124 state land targets
- New projects and opportunities being sought to add to portfolio
- World class exploration/development team with exceptional track record of discovery



# Contacts



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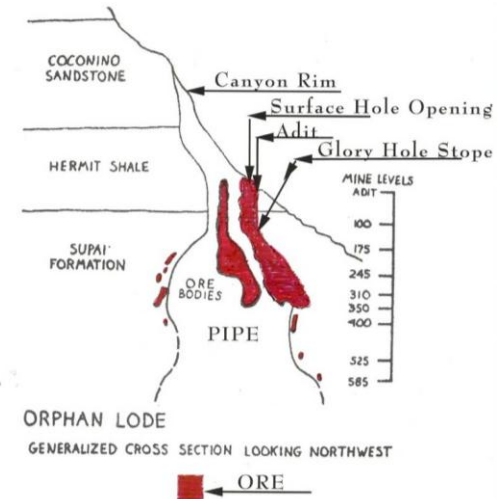
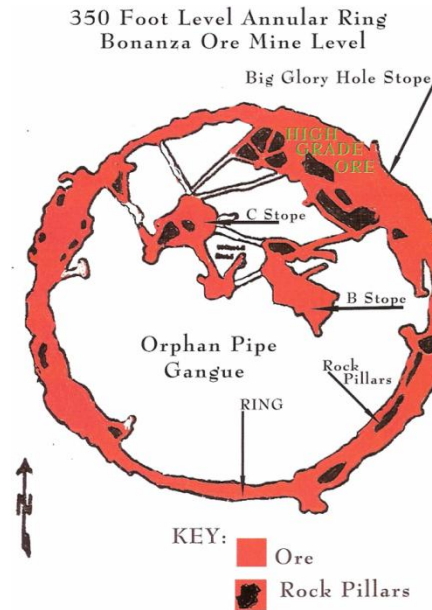
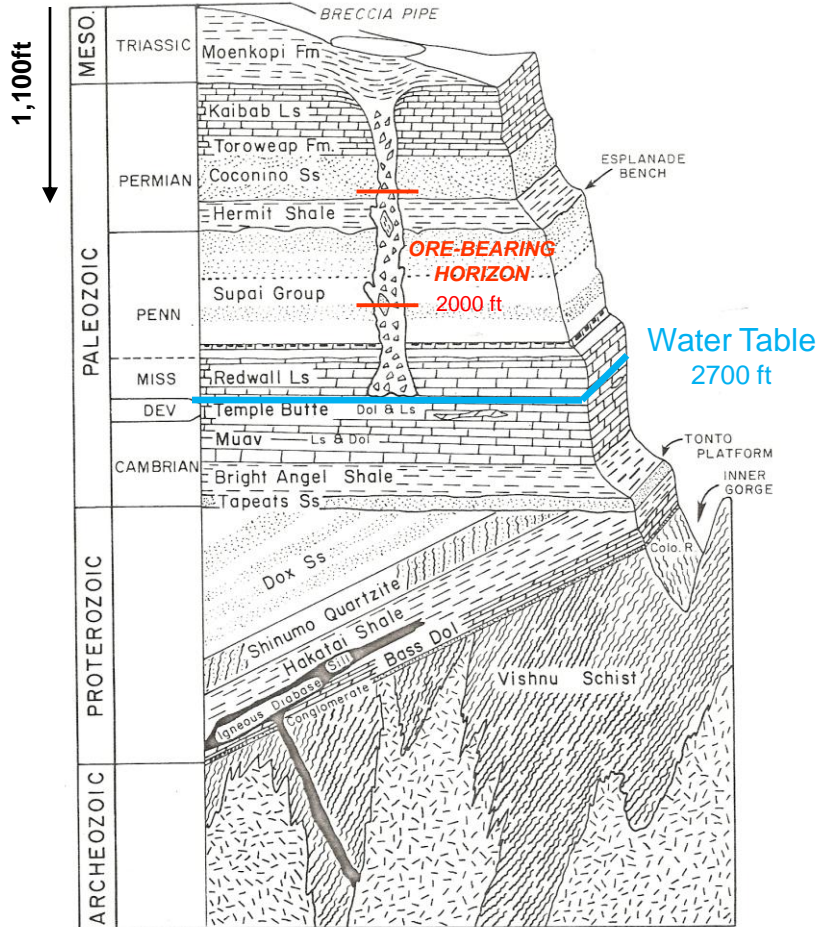


# APPENDICES



# Breccia Pipe Geology

Mineralisation typically in vertical, narrow cylinders



**Orphan Mine (first breccia pipe mine 5.5mm lbs  $U_3O_8$ )**

- Total pipe diameter 300 feet
- Narrow mineralised target (10 – 100 ft width)

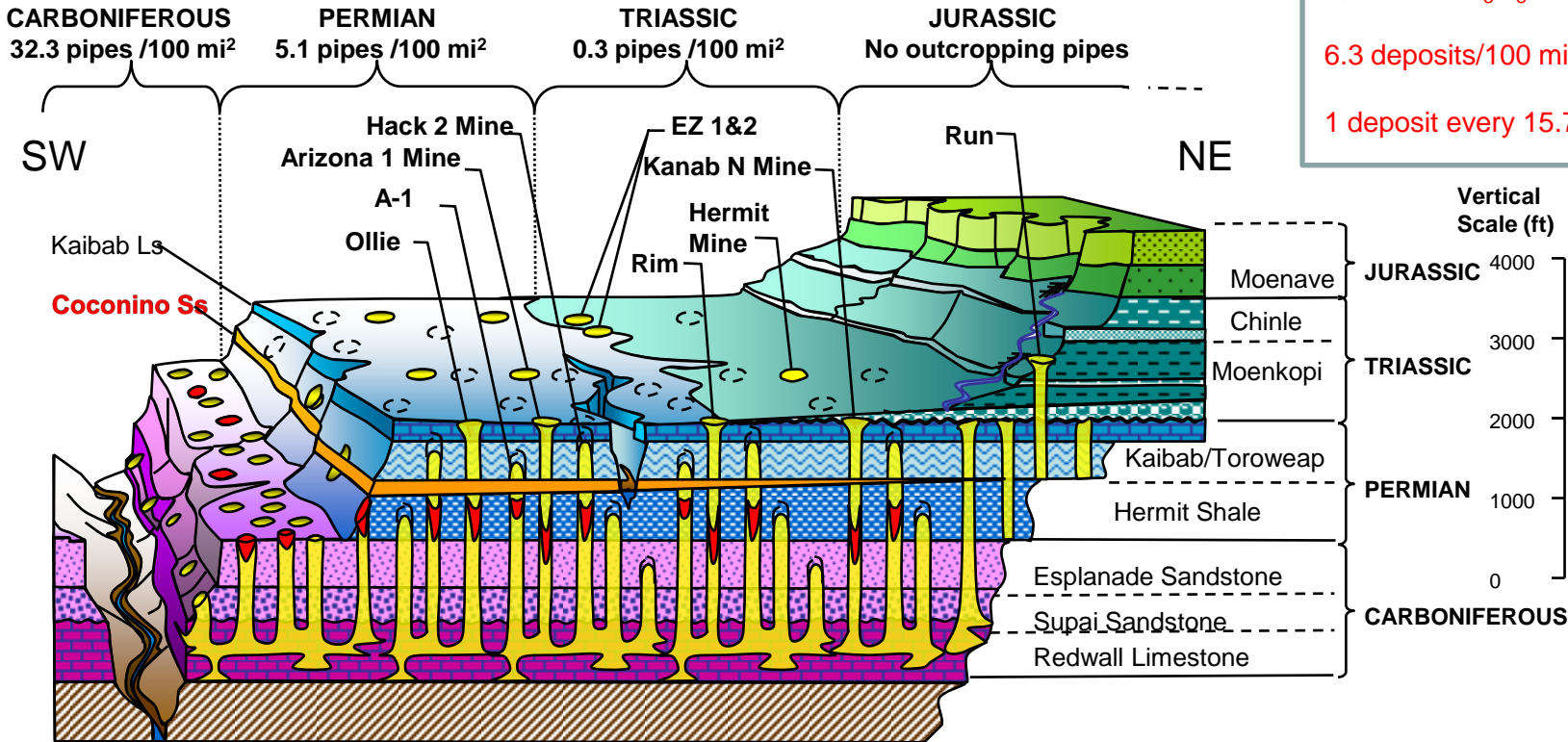


# Breccia Pipe Density – Arizona Strip



USGS Open File Report (OFR-89-550) shows the mapped locations of 1,296 pipes in the Grand Canyon region (1)

10,800 tons  $U_3O_8$ /100 mi<sup>2</sup>  
 1,700 tons  $U_3O_8$ /mine historic average  
 6.3 deposits/100 mi<sup>2</sup>  
 1 deposit every 15.7 mi<sup>2</sup> (1)

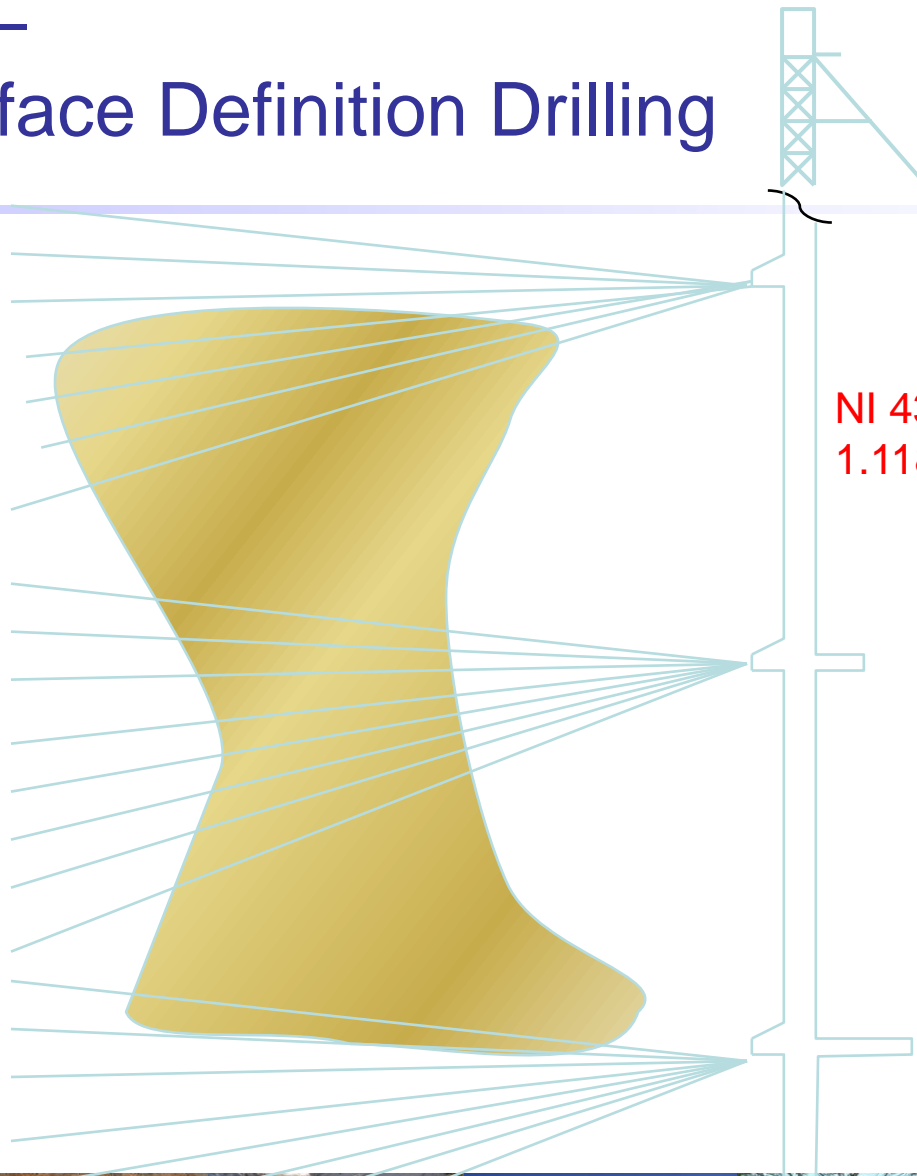


(1) H.B. Sutphin and K.J. Wenrich, Map of Locations of Breccia Pipes in the Grand Canyon Regions of Arizona, USGS Open File Report (OFR 89-550), 1989.

Slide Courtesy of Quaterra (EDS 08)



# WATE – Subsurface Definition Drilling



NI 43-101 Compliant Inferred Resource  
1.118 M lbs eU<sub>3</sub>O<sub>8</sub> @ 0.79% eU<sub>3</sub>O<sub>8</sub>



# Secretary of Interior Segregation Order



As announced on 20<sup>th</sup> July 2009:

- 2-year “time out” on staking new claims (extended for 20 years Jan 2012)
- Covering 633,547 acres BLM and 360,002 acres Forest Service lands
- Severe restrictions on activities on existing claims
- Studies and analysis of area during time-out period
- Arizona House and Senate passed bill opposing withdrawal (Bill SCM 1007)



# Operational Management Discovery Team Resources



The VANE team has participated in discoveries (not including Grasberg) totalling:

Gold	17,810,000 oz	US\$26 billion @ \$1,500/oz Au
Silver	101,690,000 oz	\$4 billion @ \$40/oz Ag
Copper	20,110,000,000 lbs	\$80 billion @ \$4/lb Cu
Nickel	30,000,000 lbs	\$360 million @ \$12/lb Ni

## David Newton (CEO)

- Ex- investment banker
- Chartered accountant & Fellow of Securities Institute

## Kris Hefton (COO)

- 18 years uranium experience, including Energy Fuels Nuclear, Inc.
- Exploration management positions with Freeport-McMoRan and Barrick/Homestake

## Luis Perez Agosttini (Director of Mexican Operations)

- Graduate from Univ. of Mexico, and Univ. of Mexico Medical School In the 1980s operated a cyanide leach - Merrill Crowe plant in northern Mexico
- Worked for several years for JD Lowell on copper exploration in northern Mexico

## Clark Arnold (Dir. of Geology)

- 17 years with Lowell Mineral Exploration
- Long-term consultant to Freeport-McMoRan

## Steven Van Nort (Director)

- Former Senior VP Freeport-McMoRan global exploration, including Grasberg Mine, Indonesia
- 19 years with Hanna Mining in exploration worldwide

## Matthew Idiens (Director)

- Co-Founded VANE in 2002
- Non-Exec Director of Hummingbird Resources plc
- 7 years experience as a fund manager for Laing and Cruickshank

