

## ROBINSON SITE TOUR October 25, 2011

### FORWARD LOOKING STATEMENT



Certain information appearing in this presentation constitutes forward looking information. Forward looking information is subject to known and unknown risks, uncertainties and other factors, including potentially inaccurate assumptions, which may cause the actual results, performance or achievements to be materially different from the results, performance or achievements expected or implied by the forward looking information.

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No invitation to purchase securities is being made.

For additional disclosure about the Company, including a detailed discussion of the risks, assumptions and uncertainties relating to the Company, please see our Annual Information Form, Financial Statements and other materials available from www.sedar.com or our website, www.quadrafnx.com.

All figures except per share amounts are in US\$ unless otherwise stated or unless the context requires otherwise.

Please note that the presentation has a mixture of metric and imperial units.

### **WELCOME TO ROBINSON**



### **Today's Agenda:**

- Breakfast & site presentation
- Site tour (packed lunch)
- Wrap up/QUX overview & Q&A
- Bus ride to Las Vegas (dinner)



### **INTRODUCTIONS**



### The Team:

- Cary Brunson General Manager
- Robby Ruesch Mine
- Doug Moore Mine Engineering
- Tom Bender Mill
- Darren Schaeffer Maintenance
- Dan Ferriter Environmental/Tech Services
- Lloyd Clark HR/Safety
- Randal Burns Geologist
- Amanda Hilton-Eldridge Finance & Admin

### **ROBINSON: OBJECTIVES**



### **Short Term:**

- Continue to operate with Zero harm
- Get to the optimum operating rate (production & tonnage)
  - Increase operating flexibility
  - Slope stability
  - Haulage optimization

### **Medium to Long Term:**

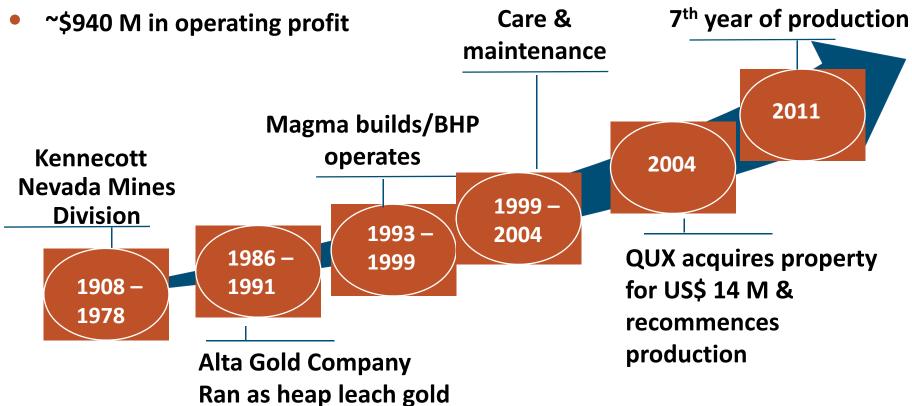
- Increase reserves & mine life
  - Liberty pit
  - Broader strategies

### **INTRODUCTION: HISTORY**



### 2005 - 2010

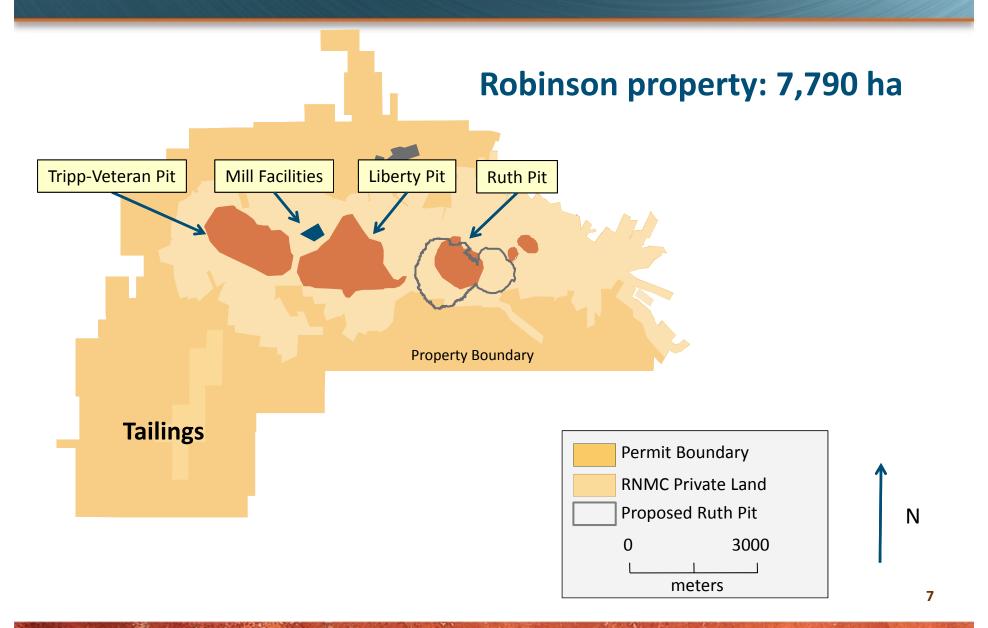




~5.3 BN lbs of Cu & 3.8 M oz Au produced

### **ROBINSON MINE**





### **QUADRA FNX'S HISTORY AT ROBINSON**



2004 Re-commission mill & commence mining at

**Tripp-Veteran pit** 

2005 – 2006 Mining in Tripp-Veteran

2007 – 2010 Mining in Veteran pit

2010 Transition to Ruth

### **Tripp-Veteran pit (Circa 2007)**



### **Vet pit –facing North**

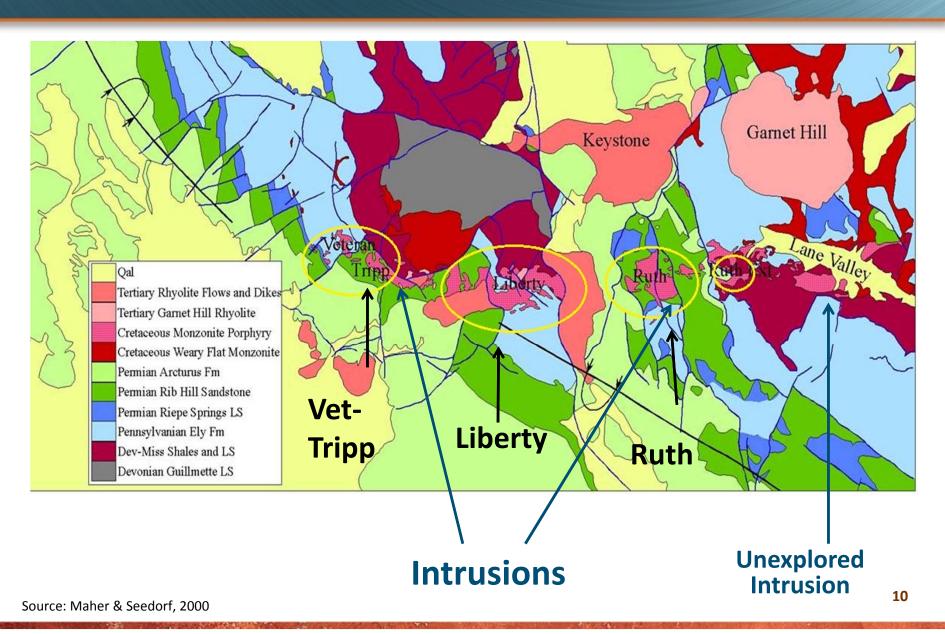




### **PROPERTY GEOLOGY**

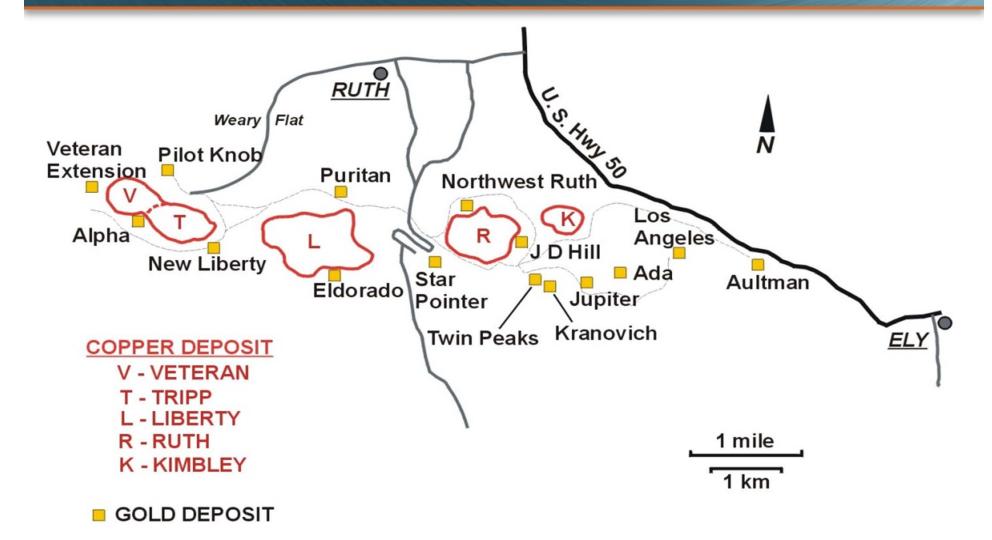
### **DISTRICT: A PORPHYRY-SKARN SYSTEM**





### **CU & AU DEPOSITS AT ROBINSON**





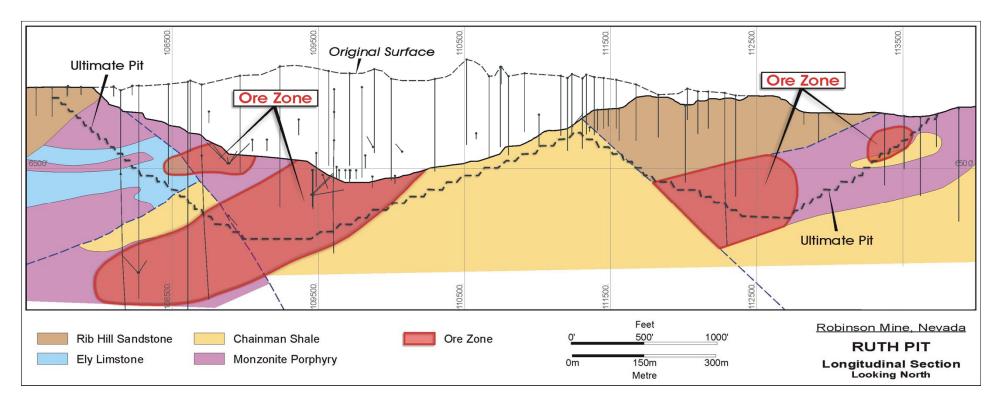
Source: Modified after Seedorf 1993

### **RUTH PIT GEOLOGY**



**Key characteristics:** thick supergene zone; moderate faulting; abundance of problematic clays; some skarn, porphyry; high Mo, Rh, Zn

Cu minerals dominated by chalcopyrite and chalcocite (often rimming pyrite)



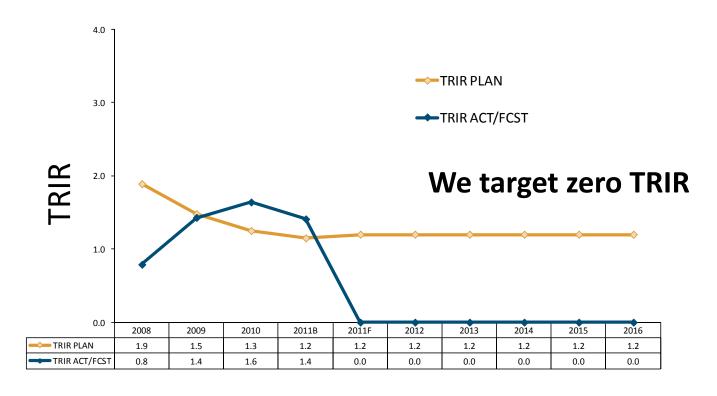


### ROBINSON OPERATIONS

### **ZERO HARM**



"We are committed to Zero Harm for our employees, our communities and the environment. We believe that the best mines are the safest mines."



### **ROBINSON: OVERVIEW**



### Mining: conventional open pit mine

#### **Haul Fleets**

- Caterpillar: 240 (18) & 150 (6) Ton Capacity
- Komatsu: 240 (5) Ton Capacity

### **Loading Fleets**

- Electric Shovels (2)
- Hydraulic Shovels (2)
- Wheel Loaders (3)

### **Processing:** conventional concentrator

- Constructed by BHP in 1995
- Design throughput of 36,000 tons per day





### **RUTH TRANSITION HISTORY**



### 2008:

Capital conservation & mine re-sequencing

### 2009:

- Mining Kimbley/Wedge satellite pits
- Start transition to Ruth

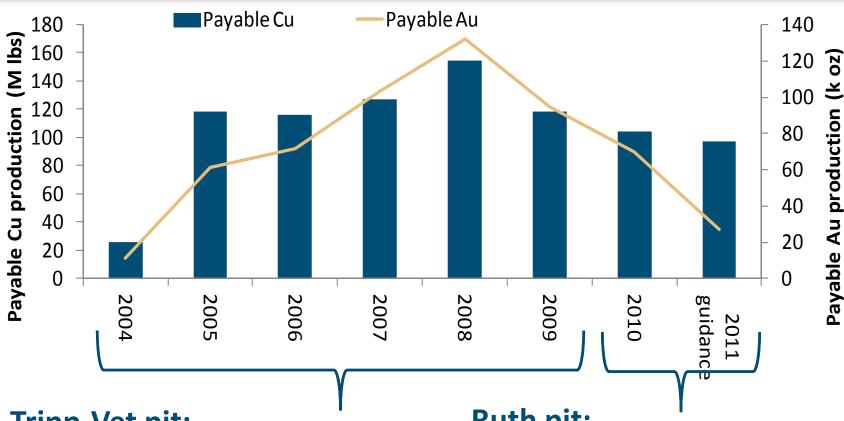
### 2010:

- Transition completed to Ruth
- Mud removal commenced



### **PRODUCTION HISTORY**





### **Tripp-Vet pit:**

- More operating flexibility
- Simpler metallurgy & blending
- Higher Au grades/recovery

### Ruth pit:

- Limited operating flexibility & blending ability
- Lower Au grades/recovery
- Higher Mo grades

### **CURRENT PLAN: FOCUS & STRATEGIES**



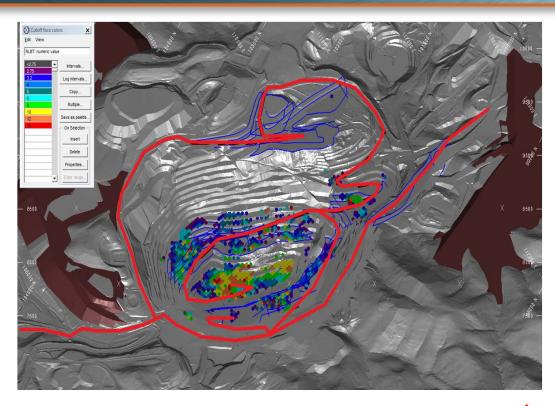
- Operating flexibility
  - 1 Mt in stockpiles
  - Wider benches
  - 3 dig faces
  - Additional ramp access
- Underground workings

- Slope stability
  - Slope angles
  - Dewatering
- Haulage optimization
  - Larger benches
  - Additional haulage & loading capacity
  - Mine Star

### FOCUS & STRATEGIES: OPERATING FLEXIBILITY

### **Operating flexibility**

- 1 Mt in stockpiles
  - Recovery (i.e., blending)
  - Throughput
  - Concentrate grade
- Wider benches
  - Double side loading on shovels
  - More efficient use of equipment
- 3 dig faces
- Additional ramp access
  - Reduces traffic delays
  - Additional flexibility



Blue outlines show planned bench mining Colored blocks represent ore at various recovered copper pounds per ton cutoffs



## FOCUS & STRATEGIES: UNDERGROUND WORKINGS



### **Underground workings at Ruth:**

- Limited historical information (workings & volume) on block cave
- Block cave (mid-2010)
   impacted mining
   grades/volumes & forced resequencing
- Additional infill drilling further defined extent
- Workings not expected to have a long –term impact

### **Ruth pit today**



## FOCUS & STRATEGIES: FLATTENING WALL ANGLE

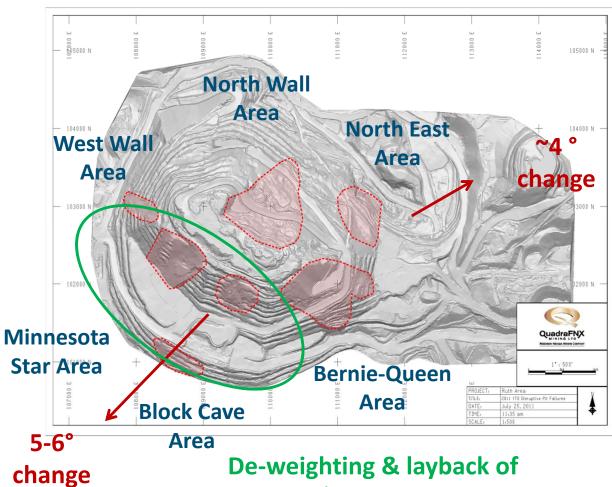


### Improving slope stability:

Flattening of pit wall angles

De-watering Ruth pit

New Slope Monitoring procedures



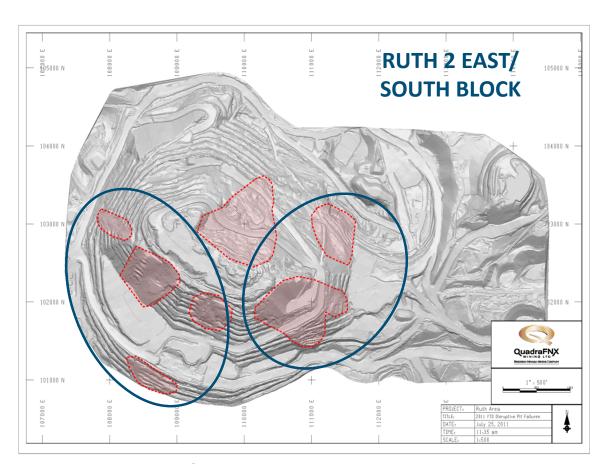
Ruth 2<sup>nd</sup> West is ongoing

### **FOCUS & STRATEGIES: DEWATERING**



### **Dewatering program:**

- Key objective: reduces the risk of flooding in the lower area of the pit
- Also benefits slope stability
- Ultimate dewatering rate of ~12,350 gpm pumping



RUTH 2 WEST/ SOUTH BLOCK

### HAULAGE: ONGOING IMPROVEMENTS





- Transition to Ruth East
  - Larger benches & loading areas
- Additional hauling capacity
  - five Komatsu 830E haul trucks transferred from Carlota

- Loading capacity improvements
- Mine Star System
  - Mine Dispatch System & Business Improvement initiatives (hauls, loading, queuing and delays)

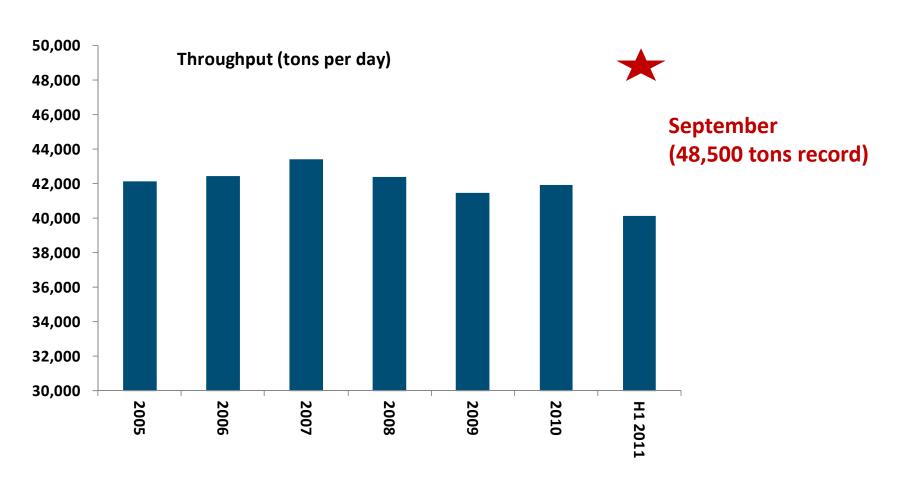


# OPERATIONS PROCESSING

### **PROCESSING: THROUGHPUT**



### **Excellent Asset Efficiency: ~92% since 2007**



### PROCESSING: METALLURGICAL CHALLENGES



### **Metallurgically Complex Ores**

- Pyrite ores
  - Reduces con grade/throughput
- Clay ores
  - Impacts throughput
- Sour Ores
  - Impacts recoveries

### **Strategies**

- Blending (i.e., stockpiles)
- Dilution in flotation circuit (% solids)
- High pH flotation circuit
- Regrinding (ongoing new program)



### **CONCENTRATOR PRODUCTS**



- Copper Concentrate Marketing
  - Tight concentrate market (accepting < 24% Cu)</li>
  - Low Impurities (Zn, As, Bi, Se)
- Molybdenum Concentrate
  - Can produce ~ 1 M lb pa Mo (feed grade dependent)
    - High Rhenium values (sellable product)
    - Shipped via OTR trucking

### **CONCENTRATE TRANSPORT**







### OPERATIONS ENVIRONMENT

### **ENVIRONMENT: CLOSURE**



### **Closure Plan:**

- A Reclamation Plan & Bond for closure costs are required in Nevada
- Current Bond is ~ \$40 M
  - Funding will increase to
  - ~ \$50 M this year
- RNMC has access to \$15 M Kennecott trust fund for reclamation of historic features

### **Closure Projects:**

- Y Removal of historic Ruth mud
- Decommissioning and/or closure of:
  - Historic acid seeps
  - Deep Ruth Shaft
  - Historic gold leaching & processing facilities

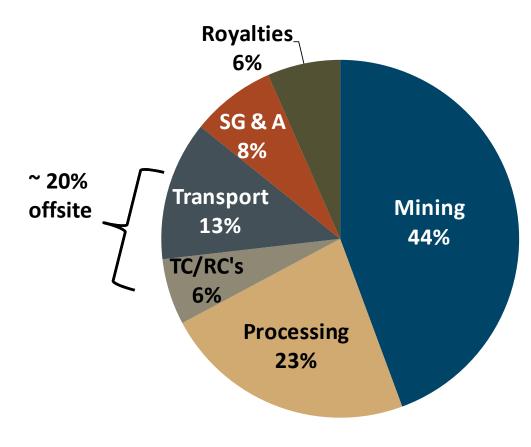


# OPERATIONS COSTS

### **ROBINSON'S COST STRUCTURE**



### 2008-2010 Cost Structure



### **Key activities:**

- Mining
  - Hauling (~ 35%)
  - Blasting (~20%)
- Processing
  - Grinding (~ 25%)
  - Utilities (~25%)c

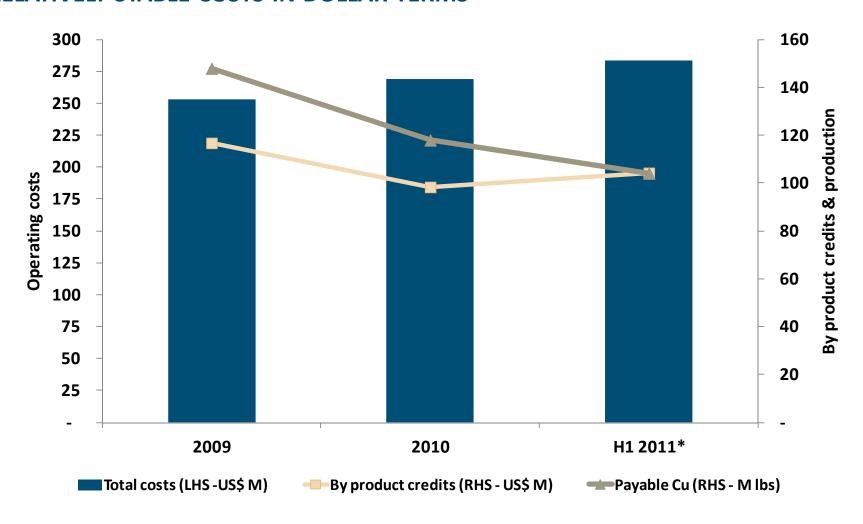
### **Key cost drivers:**

- Labour/wages: ~ 25%
- Heavy equipment parts:
  - ~ 14%
- Fuel: ~ 12%

### **ROBINSON'S C1 COSTS**



### **RELATIVELY STABLE COSTS IN DOLLAR TERMS**

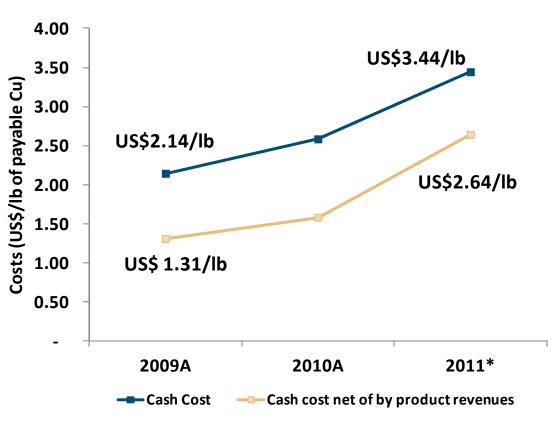


Note: \*annualized H1 2011 results

### **ROBINSON'S C1 COSTS**



### IMPACT OF BY PRODUCTS & VOLUMES ON C1 COSTS



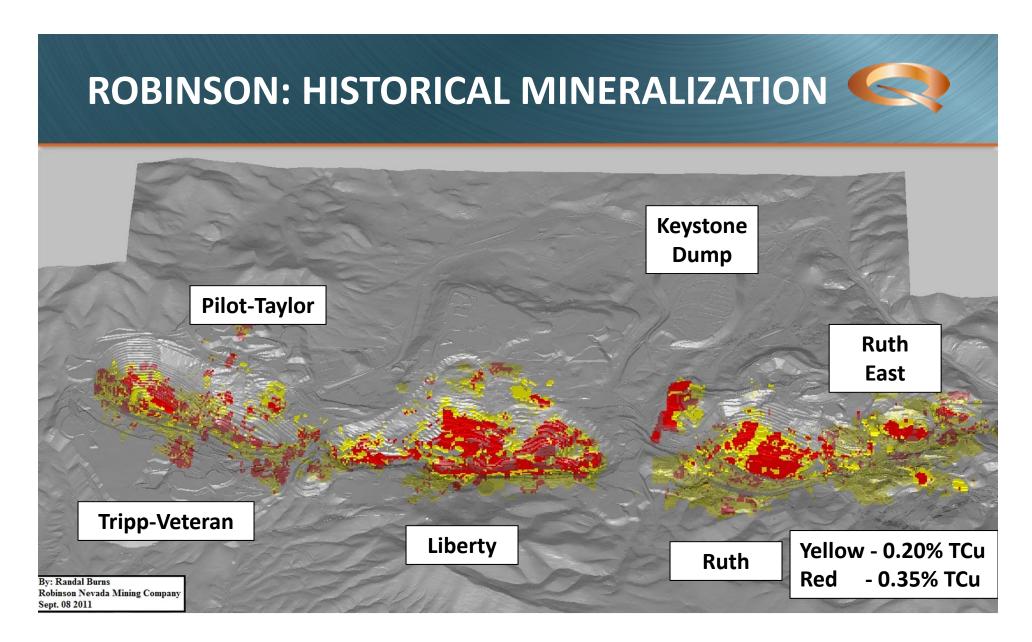
#### H1 2011 vs. 2009:

- C1 costs have increased by over US\$1.30/lb:
  - ~ US\$0.53/lb Cu volumes impacts
  - ~ US\$0.40/lb due to lower by product revenues
  - Remainder due to cost inflation

<sup>\* 2011</sup> data is based on 2011 year to date production and cost results implying an annualized production rate of 82.4 M lbs, below recent and unchanged guidance of 95 – 100 M lbs



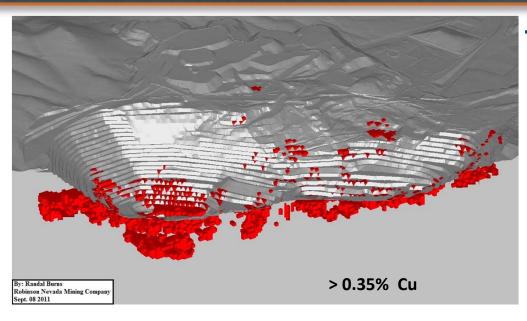
# EXPLORATION DISTRICT POTENTIAL



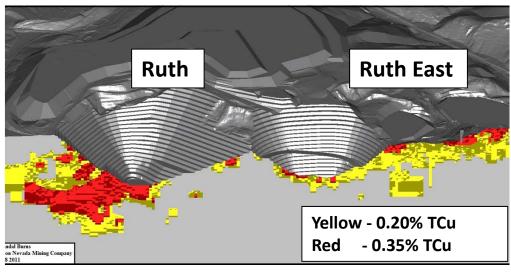
~5.3 BN lbs of Cu & 3.8 M oz Au produced

## **NEAR PIT POTENTIAL**





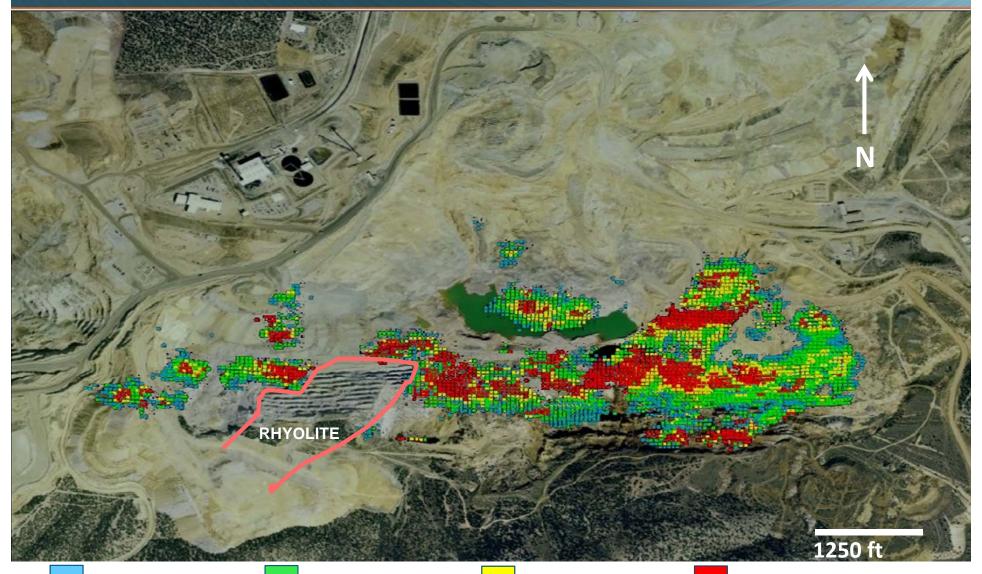
#### **TRIPP-VET PIT**



#### **RUTH PIT**

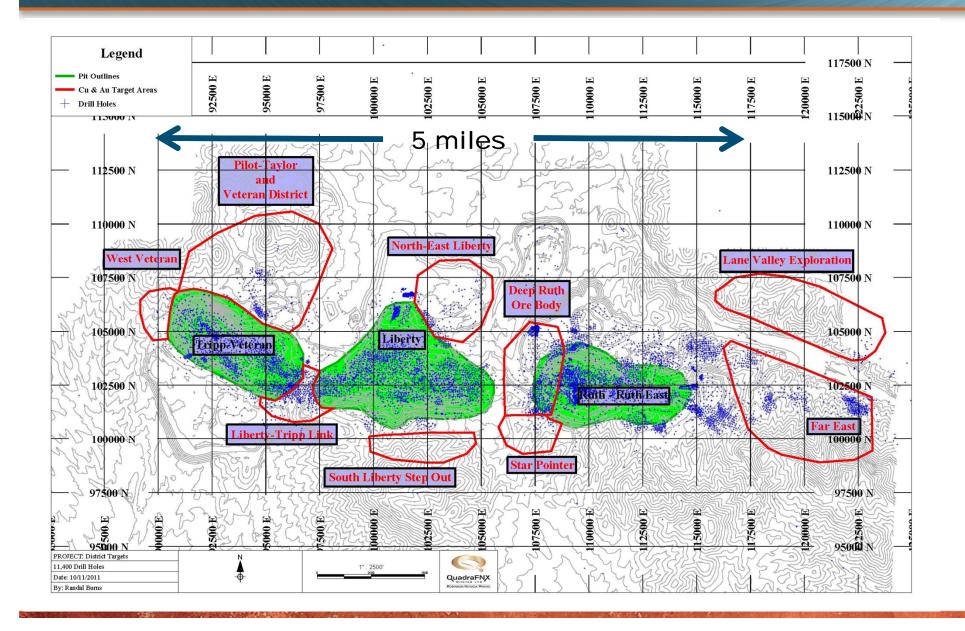
## LIBERTY MINERALIZATION





## **ROBINSON DISTRICT POTENTIAL**







# **EXPLORATION - LIBERTY**

## **LIBERTY PIT PROJECT**



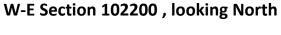
### 2011:

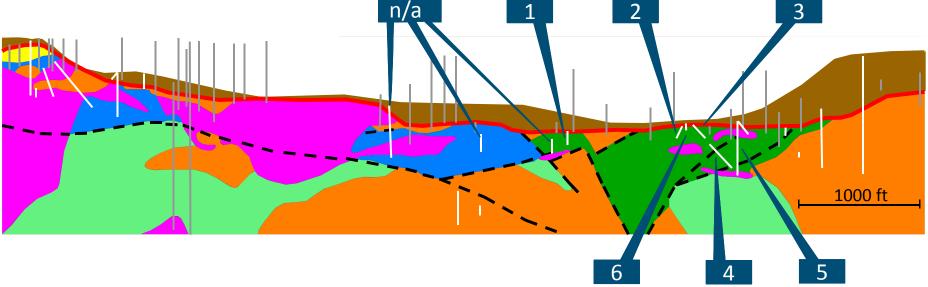
- Complied historical information (drill & geological)
- Drill program (~\$18 M spent)
- Resource modeling is ongoing



## **LIBERTY PIT PROJECT**







**Bottom of mining surface** 

> Fault

Tertiary Rhyolite

Monzonite Porphyry

Rib Hill Formation

**Ely Formation - Limestone** 

Ely Formation - Skarn

**Chainman Formation - Hornfels** 

Dump

|     | DH                      | Length (ft) | Cu%  | Au g/t |  |  |
|-----|-------------------------|-------------|------|--------|--|--|
| 1   | QR11-003                | 135         | 0.60 | 0.008  |  |  |
| 2   | QR11-100                | 390         | 0.41 | 0.005  |  |  |
| 3   | QR11-105                | 240         | 0.40 | 0.004  |  |  |
| 4   | QR11-106                | 106         | 0.52 | 0.005  |  |  |
| 5   | QR11-133                | 133         | 0.71 | 0.008  |  |  |
|     | and                     | 85          | 0.41 | 0.002  |  |  |
| 6   | QR11-097                | 310         | 0.36 | 0.004  |  |  |
| n/a | Assavs not vet received |             |      |        |  |  |

## LIBERTY PIT PROJECT



#### 2012:

- Resource model
- Additional drilling (~ \$15 M)
- Engineering

## **Permitting:**

- Bond update underway
- Water rights secured
- Dewatering permit secured
- Pit Lake Study/Waste Rock
   Management under review





# **ROBINSON SITE VISIT**

## **ROBINSON: KEY TAKE AWAYS**



- Optimization & reliability of the operation
  - Increase operating flexibility
  - Slope stability
  - Dewatering
  - Haulage optimization
- Operating costs
  - A stable cost base
  - Impact of by products & volumes
- Increase longevity
  - Liberty pit & other targets
- Positive operating momentum
  - A new operating team
  - Records at mine/mill in September & into October



# CORPORATE OVERVIEW

## **CURRENT STATUS & OUTLOOK**



#### **Robinson**



#### **Outlook**

Operating flexibility & grades to increase in H2

#### **Morrison**

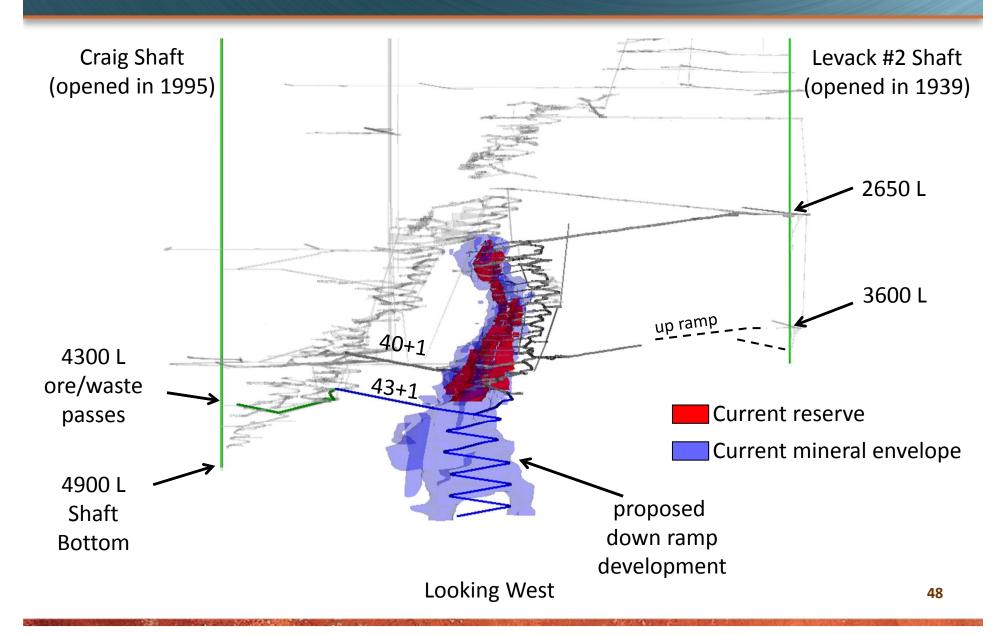


#### **Outlook**

- Craig access arrangement
  - Immediate cost savings
  - Operating flexibility & efficiencies
  - Drill access reserve/resource growth

## **OVERVIEW: SHAFT LOCATIONS**





## **CURRENT STATUS & OUTLOOK**



#### **McCreedy West: Potential Ni re-start**



Carlota: Conveyor stackingEvaluating long term options



**Podolsky: Steady state** 



Franke: Owner mining & stacking
• Evaluating China pit



## **CURRENT STATUS & OUTLOOK**



#### Sierra Gorda



#### **Outlook**

- On time & on budget
  - Shovel parts on site
  - Pre-strip on track for March start date

#### **Victoria**



#### **Outlook**

- Ongoing drilling confirming & expanding footprint
- Engineering studies, permitting & stakeholder discussions ongoing



THANK YOU Q & A



# **APPENDIX**

# RESERVES/RESOURCES



| Reserves | Ore<br>(Mt) | Cu Grade<br>(%) | Au Grade<br>(g/t) | Contained Cu<br>(M lbs) | Contained Au<br>(M oz) | Waste<br>(Mt) | Strip Ratio<br>(Waste/Ore) |
|----------|-------------|-----------------|-------------------|-------------------------|------------------------|---------------|----------------------------|
| Proven   | 105         | 0.51            | 0.18              | 1,181                   | 0.62                   |               |                            |
| Probable | 5           | 0.41            | 0.15              | 50                      | 0.02                   |               |                            |
| Total    | 110         | 0.50            | 0.18              | 1,222                   | 0.65                   | 280           | 2.55                       |

| Resources | Ore<br>(Mt) | Cu Grade<br>(%) | Au Grade<br>(g/t) | Contained Cu<br>(M lbs) | Contained Au<br>(M oz) |
|-----------|-------------|-----------------|-------------------|-------------------------|------------------------|
| Measured  | 510         | 0.35            | 0.15              | 3,882                   | 2.46                   |
| Indicated | 140         | 0.27            | 0.14              | 846                     | 0.62                   |
| M&I       | 650         | 0.33            | 0.15              | 4,728                   | 3.08                   |
| Inferred  | 140         | 0.29            | 0.14              | 882                     | 0.62                   |

The Mineral Reserve and Mineral Resource estimates are prepared in accordance with the CIM Definition Standards On Mineral Resources and Mineral Reserves, adopted by CIM Council on November 14, 2004, and the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines, adopted by CIM Council on November 23, 2003, using geostatistical and/or classical methods, plus economic and mining parameters appropriate to each operation. Definitions and guidelines can be found at <a href="https://www.cim.org">www.cim.org</a>.

## **HAULAGE FLEET: DETAILS**



#### **Haul Fleets**

- Caterpillar
  - (18) CAT 793 Haul-Trucks 240 Ton Capacity
  - (6) CAT 785A Haul-Trucks
    150 Ton Capacity
- Komatsu
  - (5) Komatsu 830E Haul-Trucks 240 Ton Capacity



## **LOADING FLEET: DETAILS**



## **Loading Fleets**

- Electric Shovels
  - Bucyrus Erie 495HR56 yd3 Dipper
  - P&H 2300 XPA
     32 yd3 Dipper
- Hydraulic Shovels
  - (2) Hitachi EX550027 yd3 Dipper
- Wheel Loaders
  - (3) LeTourneau L-1850 31 yd3 Bucket
  - 992C Caterpillar Wheel Loader



## **PROCESSING: MILL OVERVIEW**



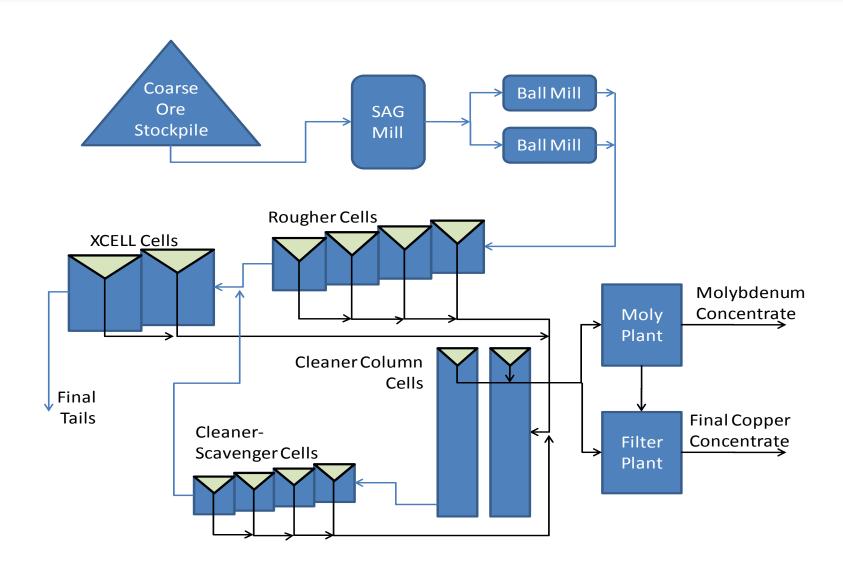
# Concentrator Constructed in 1995 by BHP for a capital cost of approximately US\$300 M

- Design throughput of 36,000 tons per day
- Two-stage grinding (SAG/Ball mill)
- Two Stage Flotation (Roughing /Column Cleaning)
- XCELL Rougher/Scavenger
   Flotation Circuit
- Optional Regrind Circuit
- Filter Plant (Plate & Frame)
- Mo recovery circuit
- Tailing Impoundment (Centerline Dam)



## PROCESSING: CONCENTRATOR FLOWSHEET





## **PROCESSING: IMPROVEMENTS**



- Mo Plant (2005)
  - Re-started (higher Mo grades at Ruth)
- Plate and Frame Filters (2007)
  - Hyperbaric filter replacement
- XCELL Flotation Circuit (2009)
  - Improved recoveries
- Concentrate Regrind (ongoing)
  - Improve concentrate grade in Pyrite ores



