

# ELK PETROLEUM

INVESTOR PRESENTATION JUNE 2011

## Elk's focus:

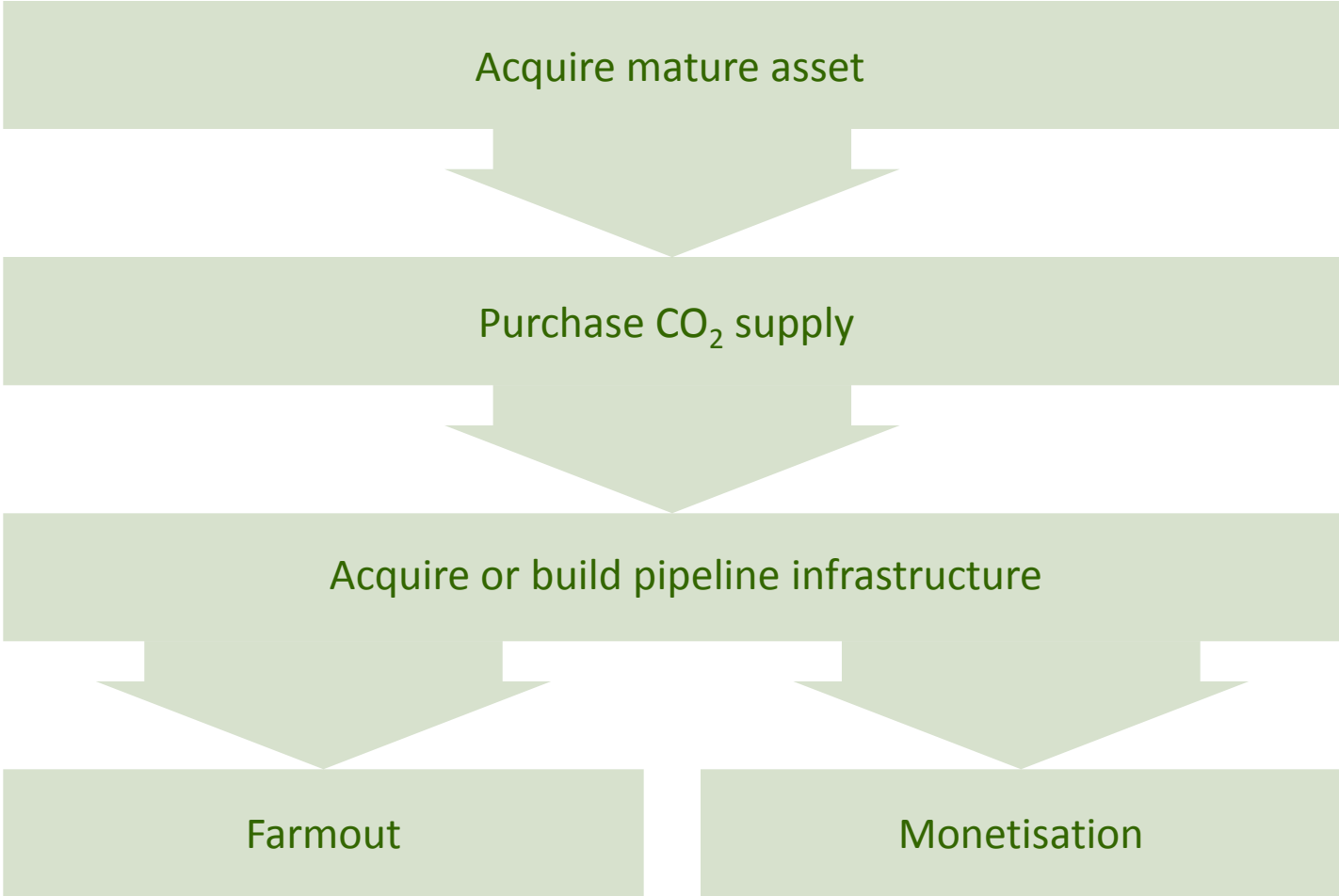
### Rocky Mountains in USA

- Proven enhanced oil recovery (EOR) province
- Highly rated emerging Niobrara shale oil play
- Three current projects
  - Grieve CO<sub>2</sub> EOR development project
  - Niobrara appraisal well
  - Ash Creek chemical EOR development project

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Recent JV success for Grieve EOR project enhances Elk ability to implement its clear business model with unique & tight regional focus



- One of the recent success stories in the US
- 1<sup>st</sup> joint venture completed with leading US EOR player, Denbury Resources
  - *Elk's position fully funded*
- 3P>2P reserves conversion to come with development/production
  - *4 to 8 million barrels net to Elk*
- Proven ability to execute major deals that boost shareholder value
- Further opportunities for growth by leveraging EOR expertise and pipeline & CO<sub>2</sub> supply infrastructure in focus area

# ELK HAS SIGNIFICANT UPSIDE

## Denbury Gulf Coast EOR benchmark

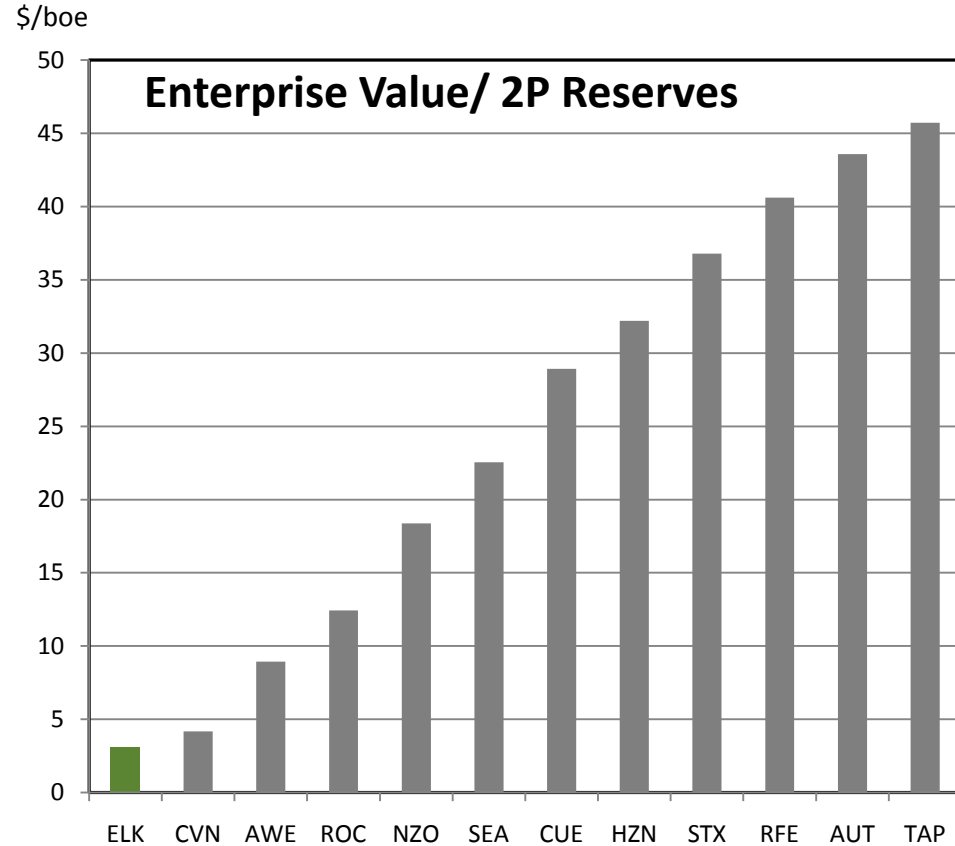
	US\$/B
Avg Capex	\$11.50
Avg opex	\$21.50
Est. gross margin:	\$45.75*
IRR	36%

\* Based on Nymex \$80/bbl & \$1.25/bbl Nymex differential

Elk estimates 4-8 million net EOR barrels

Source: DRI's May 2011 Spring Analyst Presentation

## Relativity to other ASX-listed companies

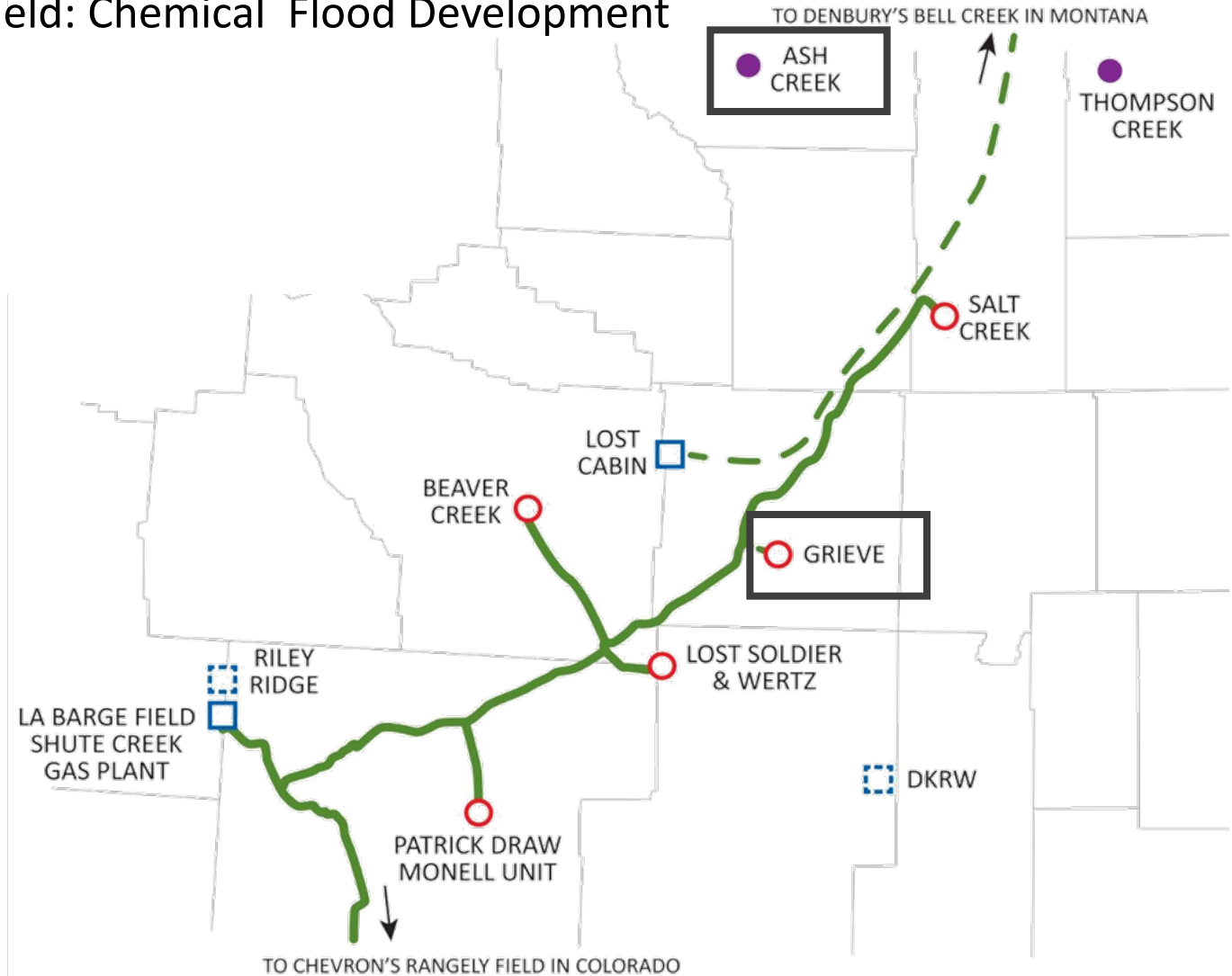
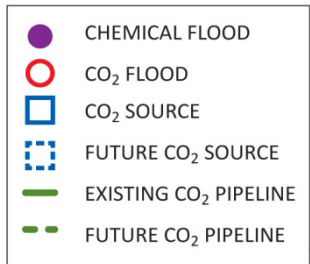


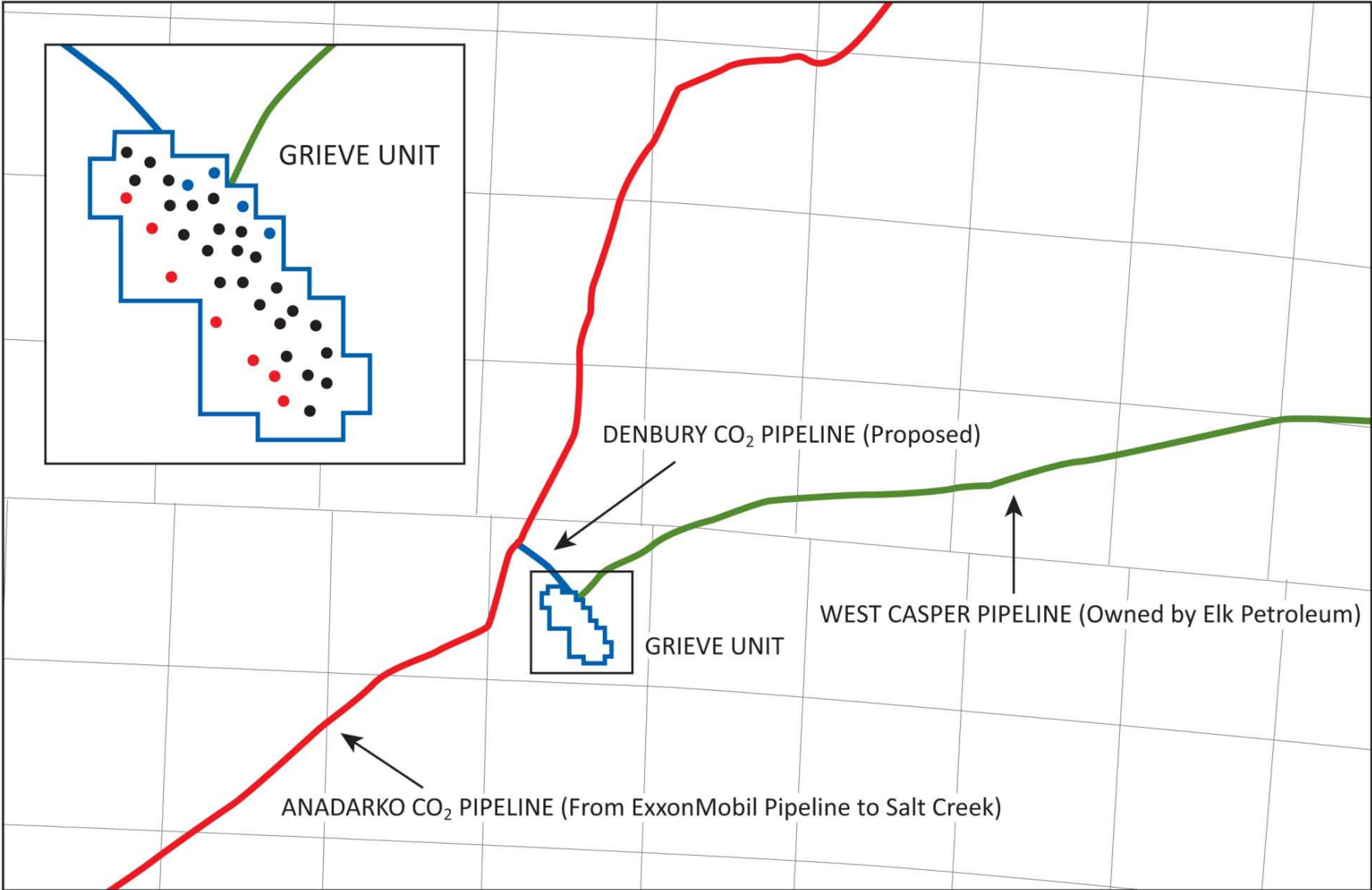
Assumes Elk's 3P reserves undergo expected reclassification to 2P reserves

Source: IRESS and Company data.

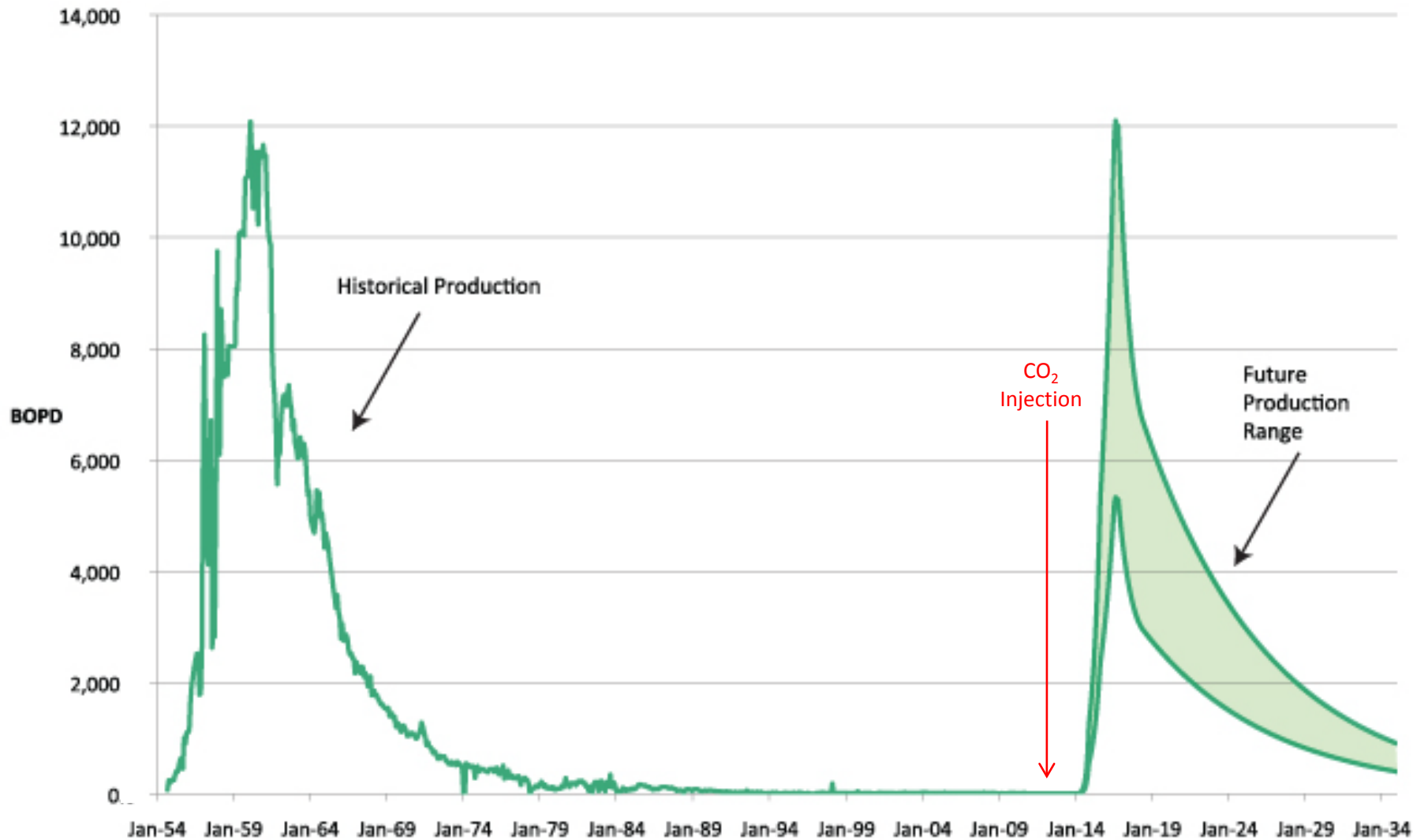
# FOCUS AREA – ELK'S PROJECTS

- Grieve Field: EOR Project and Niobrara Appraisal
- Ash Creek Oil Field: Chemical Flood Development



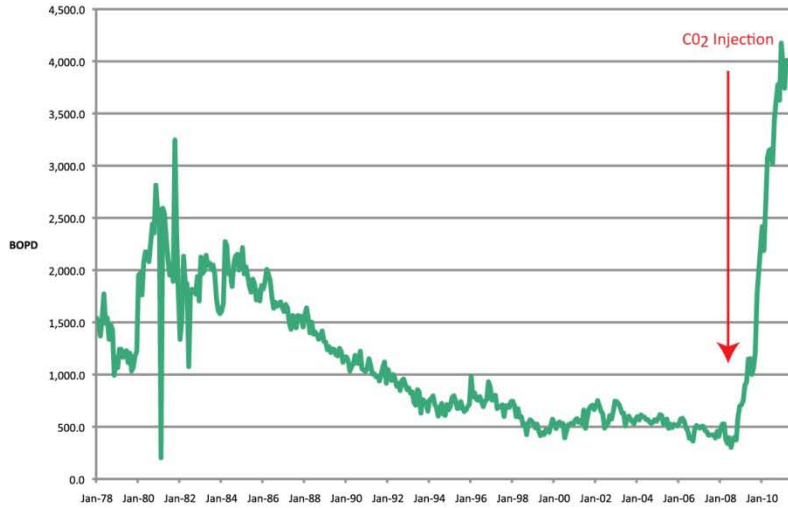


- CO<sub>2</sub> injection & flooding is proven EOR technology
  - One of the most efficient tertiary oil recovery methods
- Project significantly de-risked by
  - Extensive geological knowledge of the field
  - Simulation studies using lengthy field production history-matching
  - Use of proven EOR extraction technique in area
  - Operator with significant management expertise
- Elk estimates 12 - 24 MMbbls gross EOR oil recovery
- Ryder Scott has certified 18.6 MMbbls Possible reserves
  - Conversion to Probable reserves to be sought at earliest opportunity
    - Firm CO<sub>2</sub> & transportation agreements
    - Firm development plan being finalised by operator
    - Equipment purchases and land management approvals underway

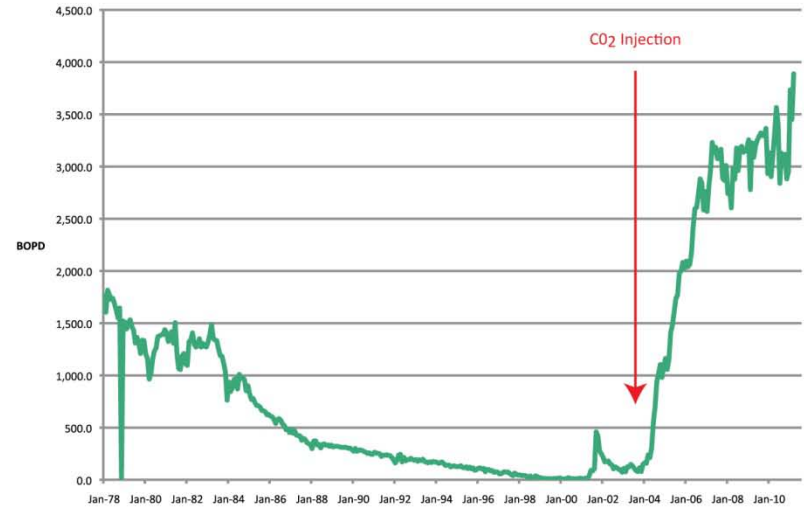


## US DoE estimates 3.2 billion barrels recoverable from Rocky Mountain region using CO<sub>2</sub> EOR

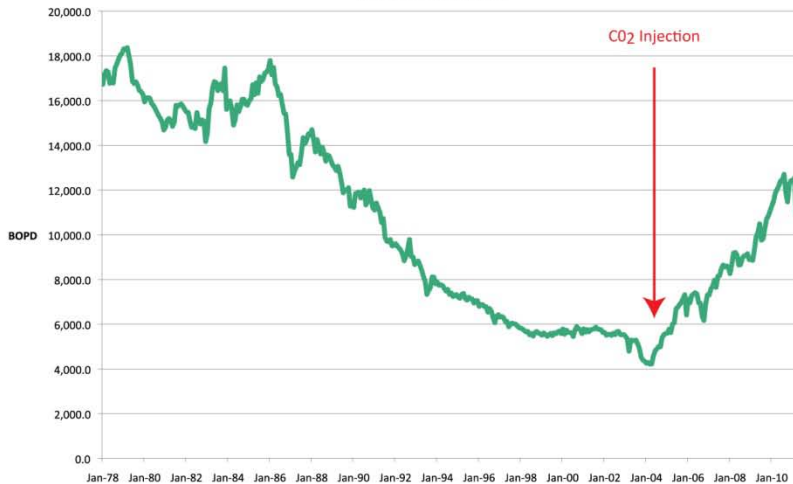
Beaver Creek Production



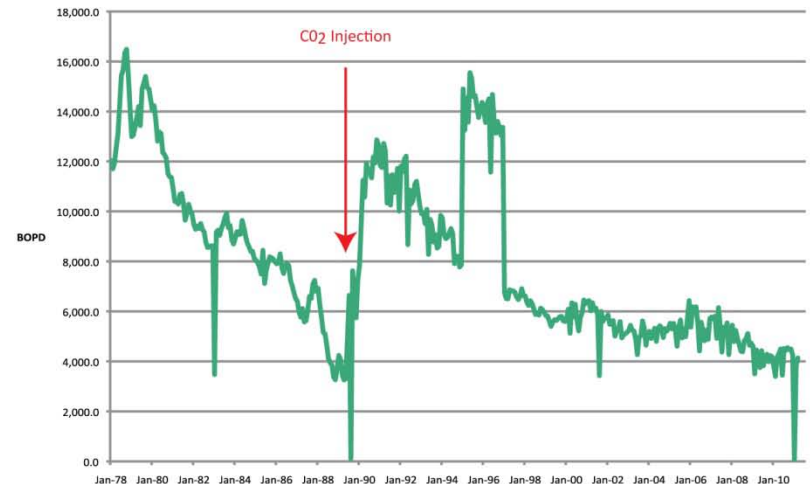
Patrick Draw Monell Unit Production



Salt Creek Production

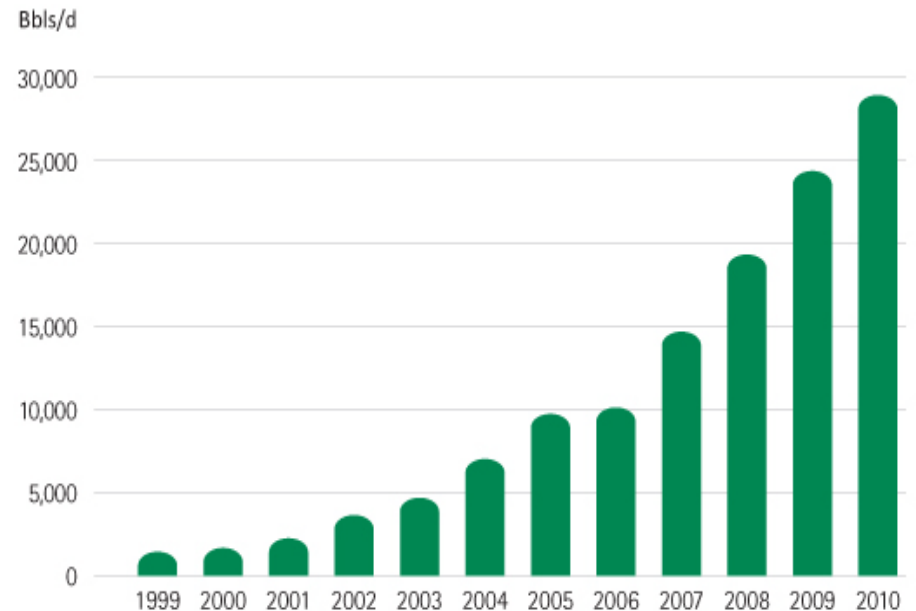


Lost Soldier Production



- Started CO<sub>2</sub> EOR operations in August 1999
- CO<sub>2</sub> EOR proven reserves & production
  - CO<sub>2</sub> EOR production of 31,139 BOPD in Q4 2010
  - 163.3 MMbbls of proven reserves attributable to CO<sub>2</sub> EOR as of 3/12/2010
- Proven CO<sub>2</sub> Supply
  - 8 TCF of 1P reserves
  - 1.9 TCF (2P) in Rockies
- Depth of CO<sub>2</sub> EOR experience
- Balance sheet strength

DENBURY NET DAILY OIL PRODUCTION - TERTIARY OPERATIONS

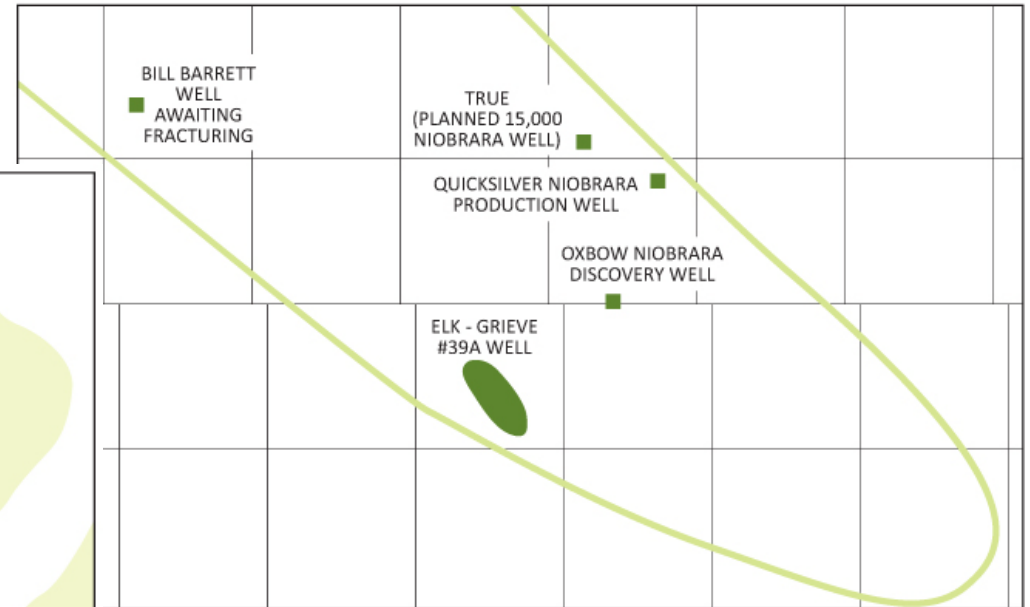


## JV delivers significant funding benefits to ELK

- Denbury will:
  - Sole fund all project costs up to US\$28.5MM (gross)
  - At Elk's election, fund next US\$34.3MM total field expenditure (gross). Elk to incur interest charges
  - 100% build, own and operate a three mile CO<sub>2</sub> supply pipeline (est. US\$1.2MM) to be leased to JV
  - 100% build, own and operate surface facilities and place (est. US\$50MM) to be leased to JV
- Elk not expected to contribute any further funding to reach first production
- Elk to hold 100% ownership of crude export pipeline
  - Expected tariff revenue in excess of US\$25MM gross – 12 MMbbls
  - Expected tariff revenue in excess of US\$50MM gross – 24+ MMbbls

Elk has 3,700 acres in the one of hottest plays in the USA – overlying EOR project

- Nearby exploration & appraisal underway
- Leases are selling for up to \$2,000+ per acre
- Plan to farmout for near-term drilling in 2011-2012



## *2009 drilling of Grieve #39A well revealed promising oil shows*

- Local experts (GFA) assess potential for commercial oil production
  - 65 metres of fractured oil-bearing section
- GFA has prepared design work for extended horizontal appraisal well
  - Well location selected on Grieve 39A well pad
  - Seeking regulatory approvals
  - Monitoring tests underway in adjoining areas
- Farmin offers being sought
  - Numerous local companies active in Niobrara
  - High purchase values per acre being paid
- Appraisal well target - drilled in 2011-12

Suspended Grieve 39A well

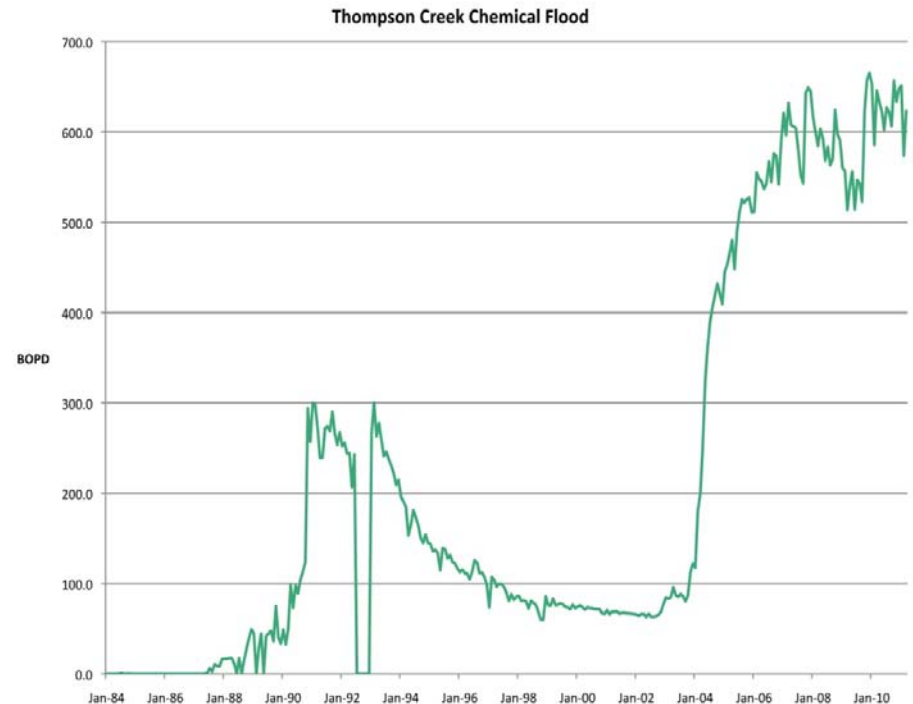


## Plan to farm down for carried interest in chemical flood

- seeking experienced joint venture party

### Three stage redevelopment of the field:

- Stage 1: re-entry and testing several abandoned wells.  
**Status:** complete & ongoing testing
- Stage 2: lab testing, coring, simulation studies' project design.  
**Status:** Underway (using Surtek)
- Stage 3: Initiate development  
**Status:** Target start for 2012



Proven Nearby Analogy at Thompson Creek Field  
- see location on slide 5

- One of the recent success stories in the US
- Wealth of experience and specialist knowledge
- Partnership with leading US EOR player, Denbury Resources
- Large-scale upgrade to 2P reserves imminent
- Proven ability to execute major deals that boost shareholder value
- Further opportunities for growth by leveraging EOR expertise, CO<sub>2</sub> availability and pipeline infrastructure

## Grieve EOR Project

Final closing  
of Grieve JV

Reservoir simulation  
results

2P reserve  
booking

Environmental  
Assessment submission  
to Bureau of Land  
Management

## Niobrara

Appoint  
farmout  
agent

Prospect  
presentation  
at AAPG  
conference

Results from  
fracturing/True  
well(s)/water  
disposal well

Application for  
Permit to Drill  
for appraisal  
well approved

Establish  
drilling  
schedule

## Ash Creek

Complete  
reservoir  
model

Complete laboratory  
fluid analysis

Farmout ~ 50% to  
chemical flood  
operator

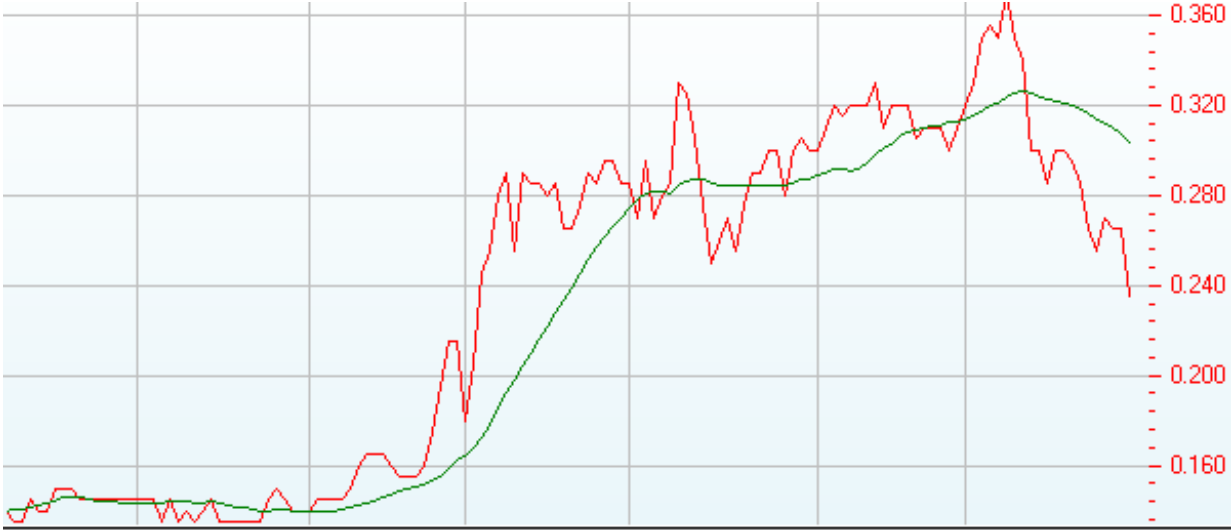
Development  
planning

Assess potential for new acquisitions in focus area - if in line with strategy

- **Market capitalisation:** approximately \$25.3 million
- **Issued capital:** 115.0 million
- **Share price:** 23.5 cents as at 31/05/11
- **Average volume traded:** 238,000 per day
- **52 week high:** 38 cents  
**52 week low:** 9.2 cents

- **Cash:** A\$2.8 million as at 31/03/11
- **Debt:** nil
- **Major shareholders:**

Robert Healy	19.0%
Link Traders	5.5%
Begley Super Co	5.3%
Craig Marshall	4.4%
Phesoj Pty Ltd	2.6%





## **Neale Taylor, Chairman**

Over 40 years of technical, operating and commercial experience in oil and gas exploration, production, planning and evaluation, acquisition and joint venture management with major industry players including Esso.



## **Bob Cook, Managing Director**

Has over 40 years experience in the energy and petroleum industries, including 18 years with Esso Australia and four years with Ampolex in senior management positions.



## **Tony Strasser, Non-Executive Director**

A qualified accountant with extensive experience in corporate finance and advisory services over two decades. He is currently Executive Director and Chief Financial Officer at Bridgeport Energy Ltd.



## **Matt Healy, Non-Executive Director**

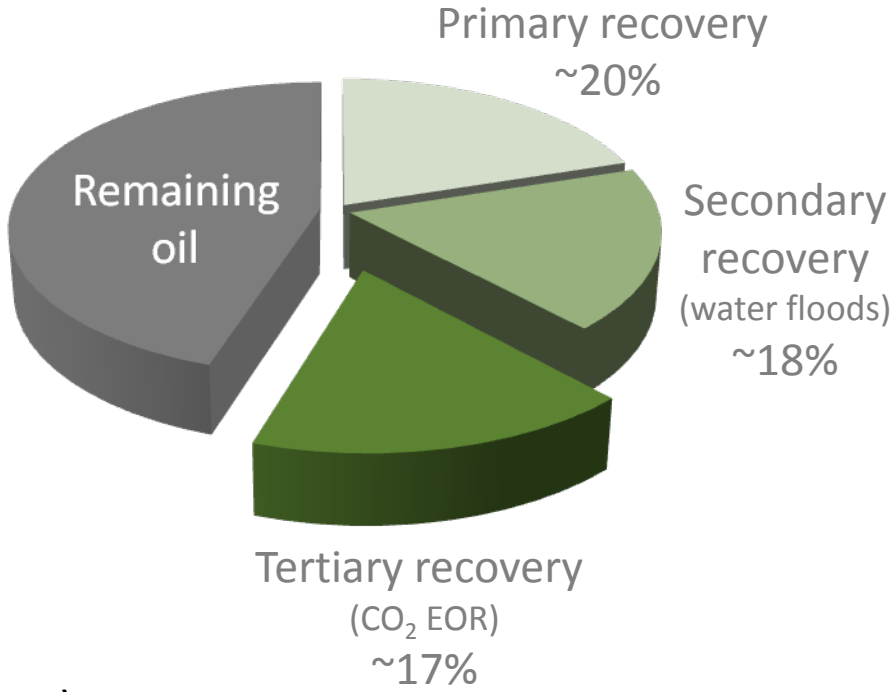
A construction engineer, Matt has worked in various executive and operational roles primarily facilitating development and project management. He currently holds an executive position with the Westfield Group.

## CONTENTS

- WHAT IS EOR?
- EFFECT OF CO<sub>2</sub> IN THE RESERVOIR
- GRIEVE MUDDY CO<sub>2</sub> FLOOD

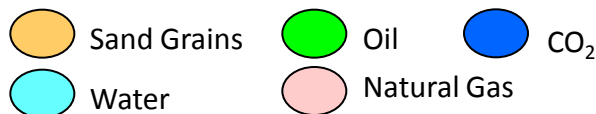
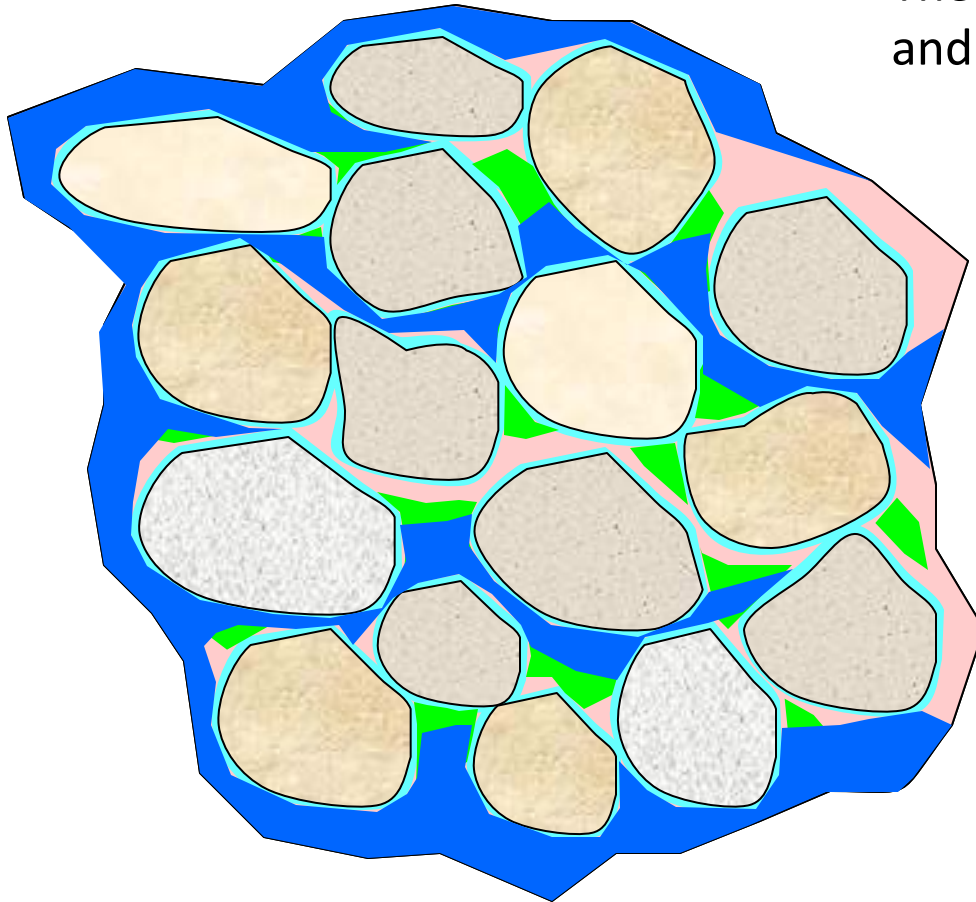
# WHAT IS EOR?

- EOR = enhanced oil recovery
- Delivers almost as much production as primary and secondary recovery<sup>1</sup>
- Utilises proven and effective techniques that alter the original properties of oil to increase extraction
- Three major types:
  - Chemical flood
  - Miscible displacement (CO<sub>2</sub> injection)
  - Thermal recovery
- Elk has assessed various development methods - CO<sub>2</sub> injection provides best opportunity to achieve significantly higher oil recovery rates and therefore attractive project economics.



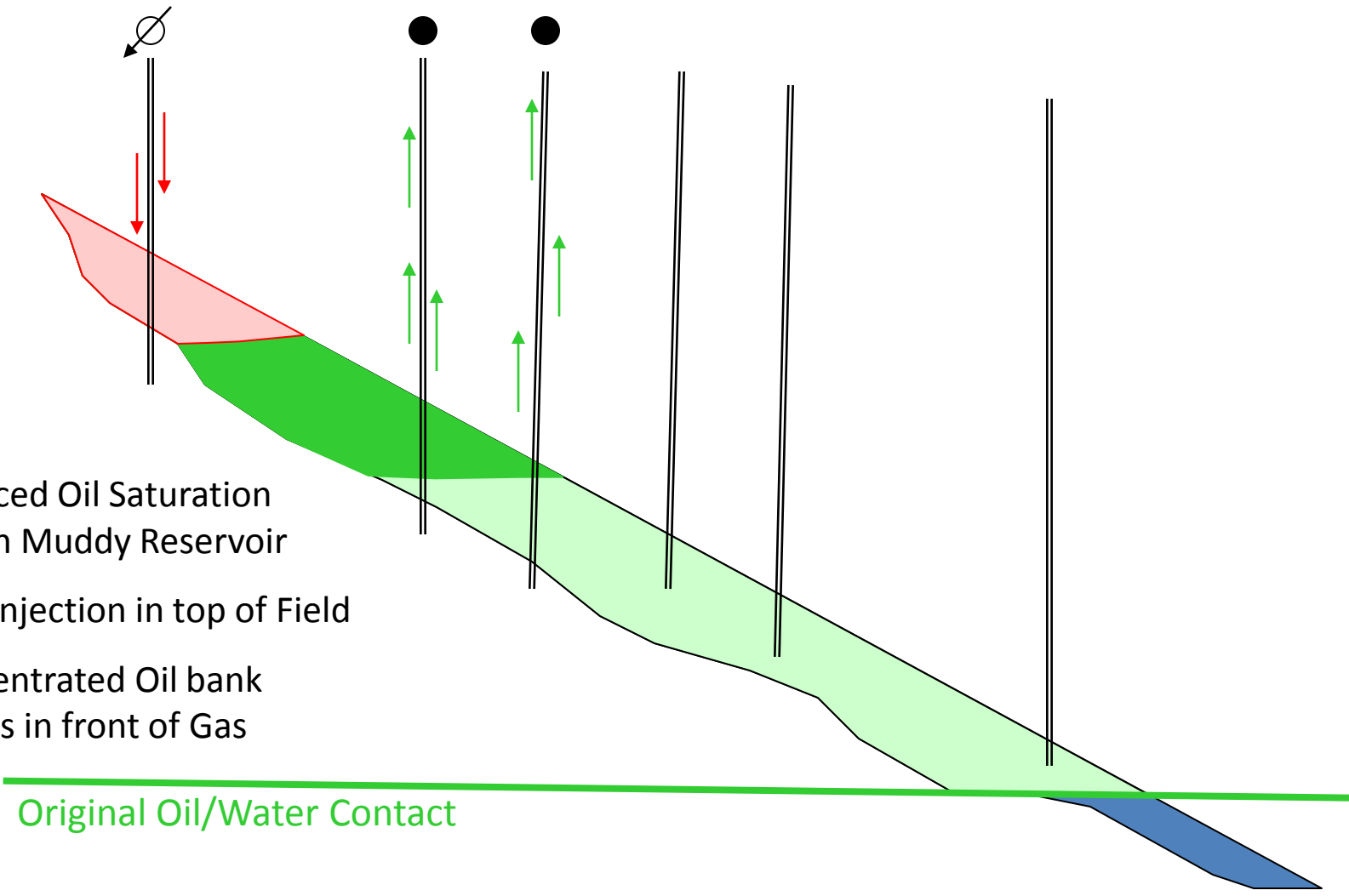
1. Source: Denbury Resources, May 2011

The reservoir is made up of sand grains and pore space between them.



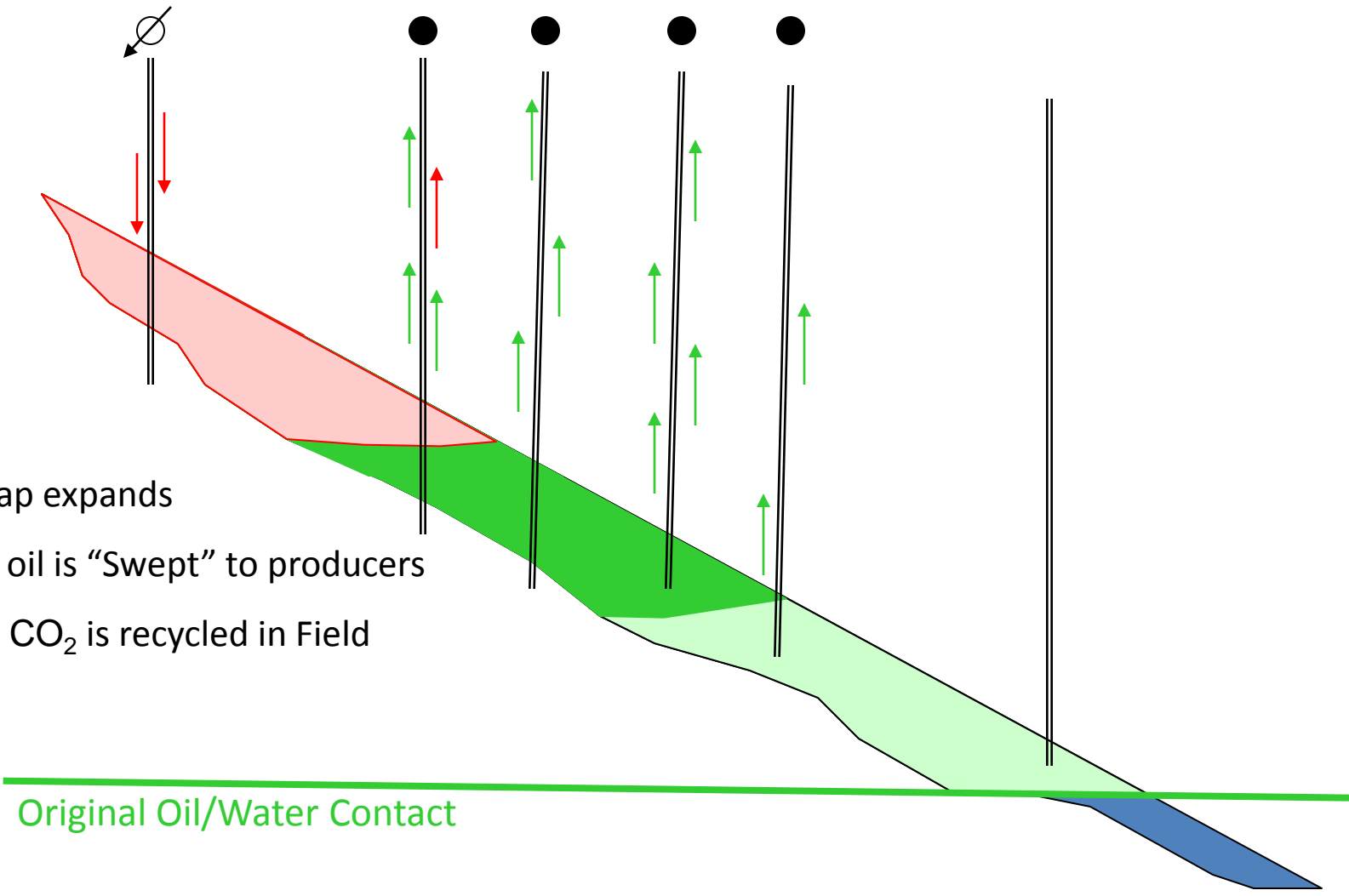
1. Original state: Water surrounds sand grains, Oil occupies the pore space.
2. Gas cycling: Produced gas is re-injected into the reservoir to “sweep” oil out. Large amount of oil still remains in reservoir.
3. CO<sub>2</sub> Miscible Injection:
  - High pressures – CO<sub>2</sub> and Oil are both liquid
  - Reduces capillary pressure holding oil to the sand grains
  - Promotes oil swelling
  - Reduces fluid viscosity
  - Increases mobility

Oil is displaced from the pores much more effectively increasing the overall recovery rates.



- 1. Reduced Oil Saturation within Muddy Reservoir
- 2. CO<sub>2</sub> Injection in top of Field
- 3. Concentrated Oil bank moves in front of Gas

Original Oil/Water Contact



- 4. Gas cap expands
- 5. More oil is "Swept" to producers
- 6. Some CO<sub>2</sub> is recycled in Field

Original Oil/Water Contact