

CO₂

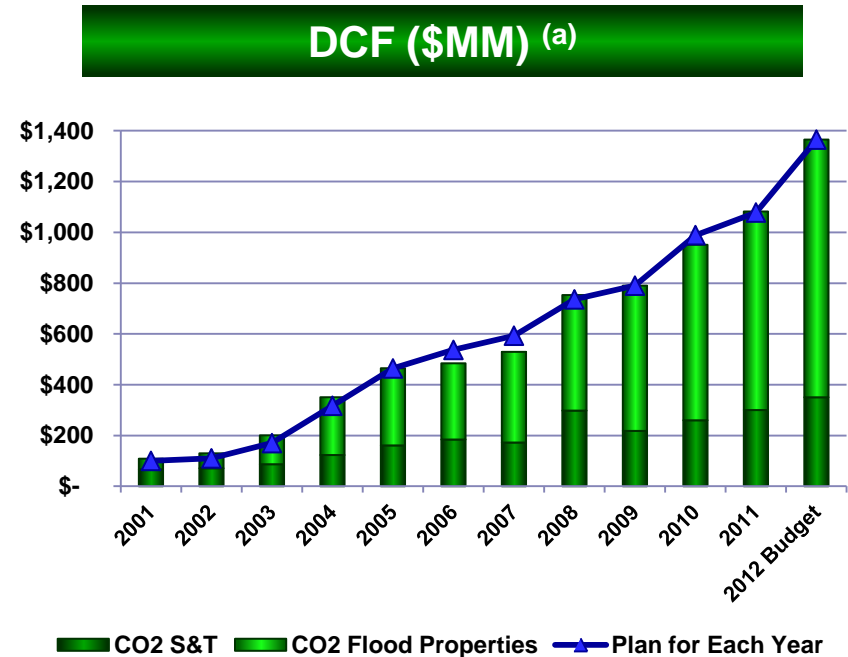
Tim Bradley

President CO₂ Group

History of CO₂ Group and Looking Forward

Track Record – Consistently very close to budget despite inherent volatility

- Shell CO₂ formed in 1998, KM share 20%
- Acquired remaining 80% in April 2000
- Acquired SACROC interests June 2000
- Acquired Yates interests in 2001 and 2003
 - Constructed Centerline pipeline in 2003
 - Constructed power plant in 2005
 - Increased oil production 3X+
- Ramped up developments at SACROC 2003+
 - Constructed Centerline pipeline in 2003
 - Constructed power plant in 2005
 - Increased oil production 3X+
- Acquired Wink pipeline in 2004
- Acquired Claytonville / Katz interests 2005-06
- Increased SW Colorado CO₂ capacity 30% 2008
- Katz CO₂ project: CO₂ injection commenced Dec-2010



Our assets, resources and technologies provide us with growth opportunities

- Continued developments at SACROC, Yates, and Katz
- Strong growth in CO₂ demand – new developments are underway

2011 Performance Recap – Made Plan

Higher price and lower costs offset volume shortfall, Capex below plan

2011 DCF:

\$1,078MM plan

\$1,082MM actual

SACROC (a)

- DCF \$593MM vs. \$555MM plan
- Oil: 28,627 Bbl/d vs. 29,374 Bbl/d
- NGLs: 16,644 Bbl/d vs. 17,008 Bbl/d

Outperformed

CO₂ Source and Transportation

- DCF \$300MM vs. \$301MM plan
- CO₂ Production: 1252 MMCF/d vs 1268 MMCF/d

Flat

Yates

- DCF \$203MM vs. \$203MM plan
- 21,728 Bbl/d vs. 22,500 Bbl/d

Flat

Katz

- DCF (\$17MM) vs \$17 MM plan
- 499 Bbl/d vs 1,455 Bbl/d

Underperformed

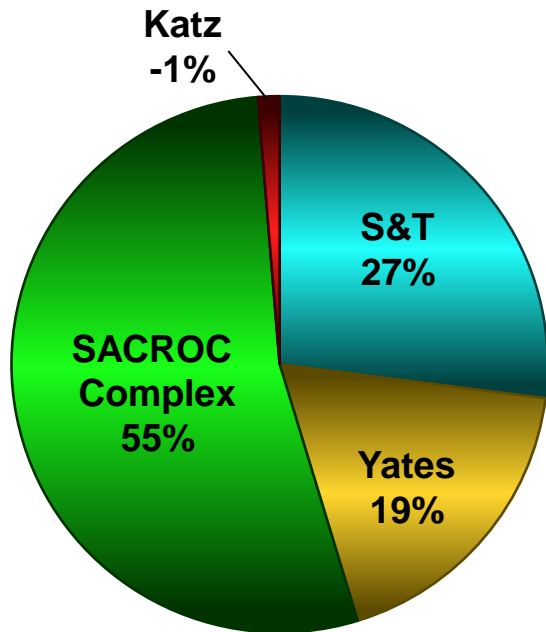
Capex

- Capex \$416MM actual vs. \$464MM plan
- Activation pace slower than budgeted

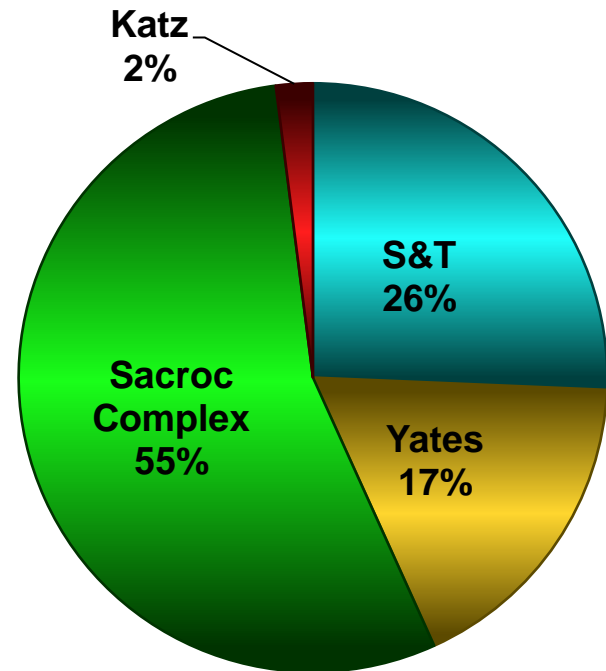
Outperformed

2011 and 2012 DCF by Asset Group (a)

**2011 DCF
= \$1,082 MM**



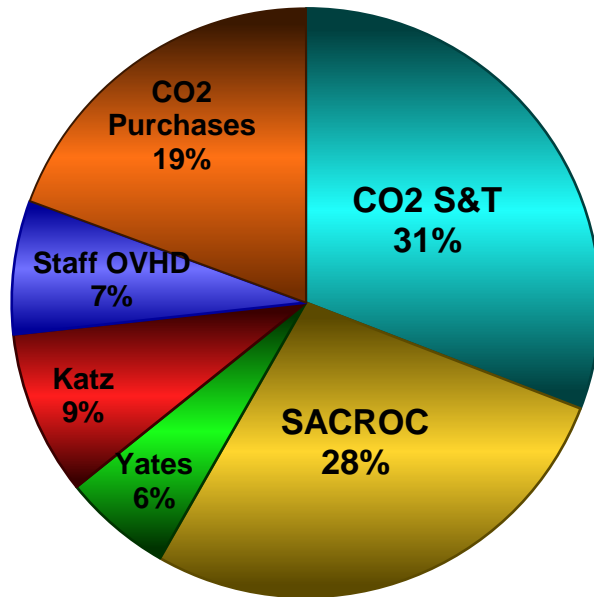
**2012B DCF
= \$1,365 MM**



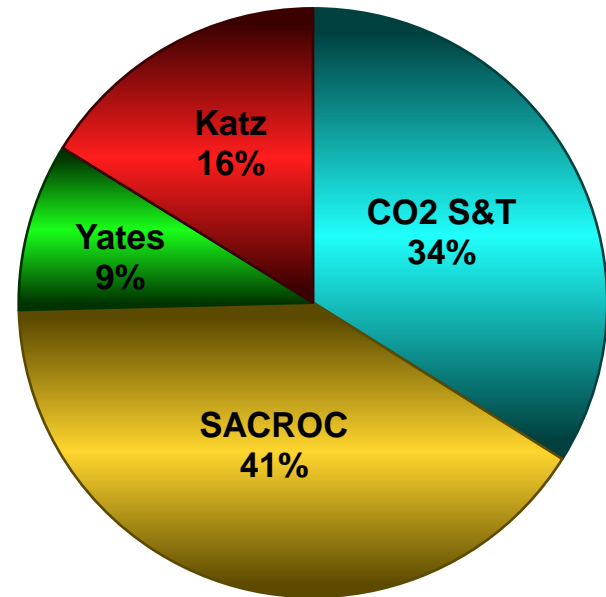
(a) Segments shown without elimination

2012 Expansion Capital Budget - \$437 Million

Staff overhead and CO₂ purchases – aggregated



CO₂ purchases and staff overhead allocated to assets



2012 Executive Summary

Capex Program \$437 MM (a)

CO₂ S&T – \$134.8 MM

\$350MM DCF

- Drill 11 wells
- Debottleneck Gathering System (22+ miles of pipe)
- Order additional Compression (32,000 horsepower)
- Produce 1,260 MMcf/d

SACROC Complex – \$119.7 MM

\$747MM DCF

- Activate 27 patterns
- Initiate work on Platform 3
- Purchase 100 MMcf/d, Produce 27.9 MBbl/d oil, 17.4 MBbl/d NGL

Yates – \$26.1 MM

\$240MM DCF

- Drill 30 wells on West side
- Add 33 CO₂ injectors
- Purchase 115 MMcf/d, Produce 21 MBbl/d oil

Katz – \$39.5 MM

\$26MM DCF

- Add 9 patterns
- Purchase 57 MMcf/d, Produce 2,267 Bbl/d oil

Total \$320.1 MM capex (exc overhead / CO₂ purchases) (a)

Total \$1,365MM DCF (b)

(a) Included in \$437 million total capex program are overhead and CO₂ purchases, in the aggregate, of approximately \$117 million

(b) Includes minor properties, unallocated costs

Impact of Oil Price / Volume Variance on 2012 DCF

2012 Budget: \$1,365MM

Volume +/- 1,000 Bbl/d

SACROC / Katz \$26.6MM

Yates \$14.4MM

Price +/- \$1/Bbl WTI \$5.8MM

CO₂ \$1.6MM

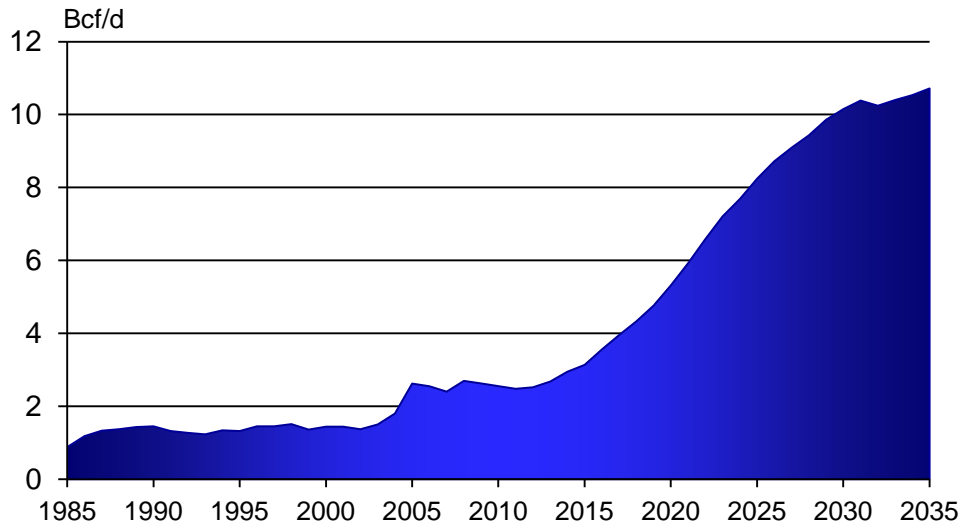
NGL \$2.5MM

Crude \$1.7MM

CO₂ S&T Growth Opportunities

Demand is strong and continues to increase

Domestic EOR Projected CO₂ Demand (a)



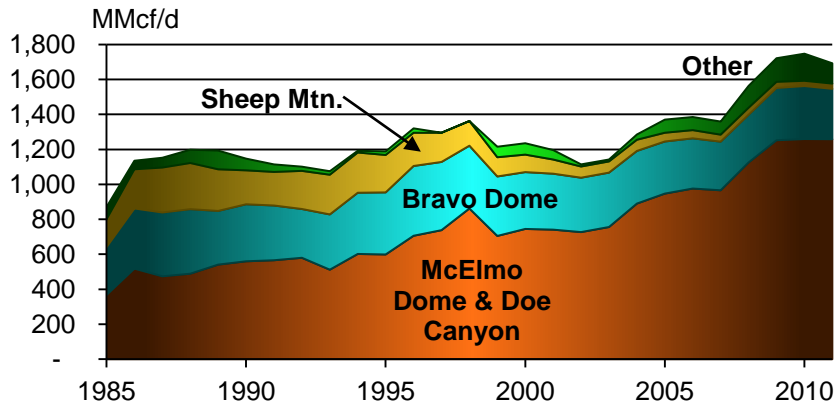
We have a simple plan:

- 1. Sign Contracts securing the demand**
- 2. Develop the supply to meet those contracts**
 - Options: 400-600 MMcf/d for \$1-2 Billion

CO₂ Source & Transportation

Growing Business Opportunities

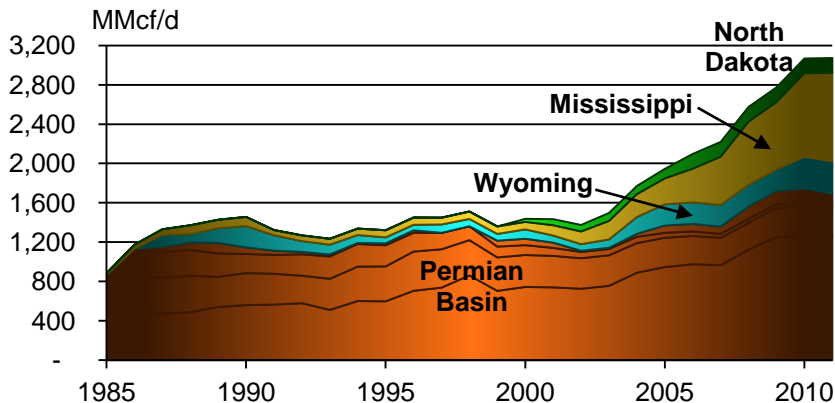
Permian Basin CO₂ Deliveries



Permian Basin

- 2011 supplies were at capacity, customers were being pro-rated
- Permian Basin demand is growing via new projects, extensions of existing projects, and ROZ projects

Domestic CO₂ Deliveries

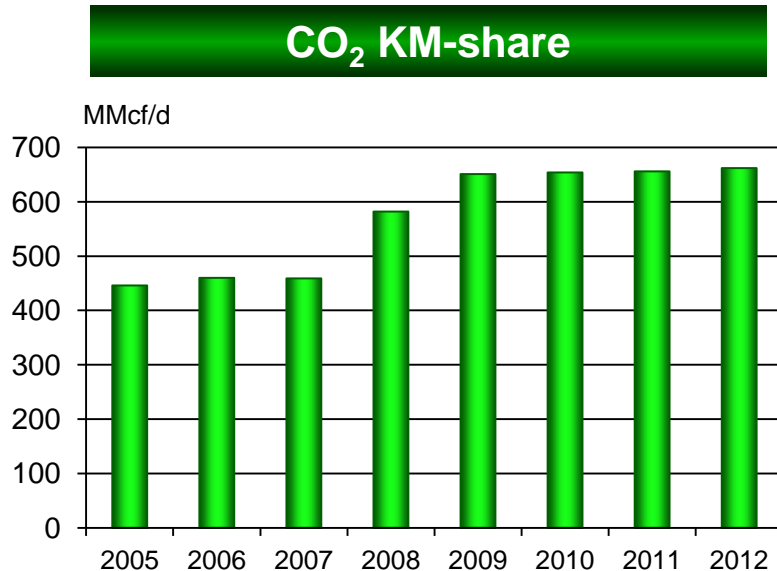


Domestic EOR

- Industry CO₂ EOR activity is increasing
- Naturally occurring sources are being expanded to ultimate capacity
- Several regions have potential
 - Gulf Coast, California, Mid-continent, Canada

CO₂ Volumes

Produced and Sold to our Customers



Significant growth since 2005:

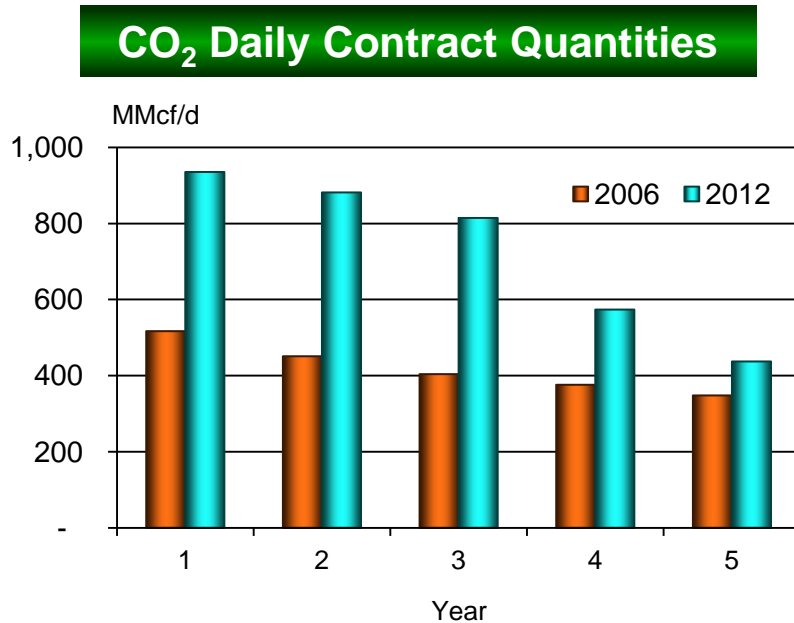
- CAGR: volumes +6.2%, price +13.9%
- 2012 vs 2011: volumes +1%, price +13.6%

And, just to be clear:

- Although our customer deliveries often have and will exceed our entitlement, sales revenues based on our working interest entitlement and not deliveries
- KM share of EOR demand consumes ~36% of our entitled production in 2012
- Elimination: consolidation results in eliminating profit on sales to ourselves, however we view our S&T and O&G businesses independently, and price sales to ourselves at market prices

Demand Growth and Regeneration

5-year Contracted Volumes



High oil prices have increased long-term demand for CO₂

Total contract quantities signed in 2006-2011 represents 2 times our entitled production during that period

- Weighted average contract life with 3rd parties is 5.3 years

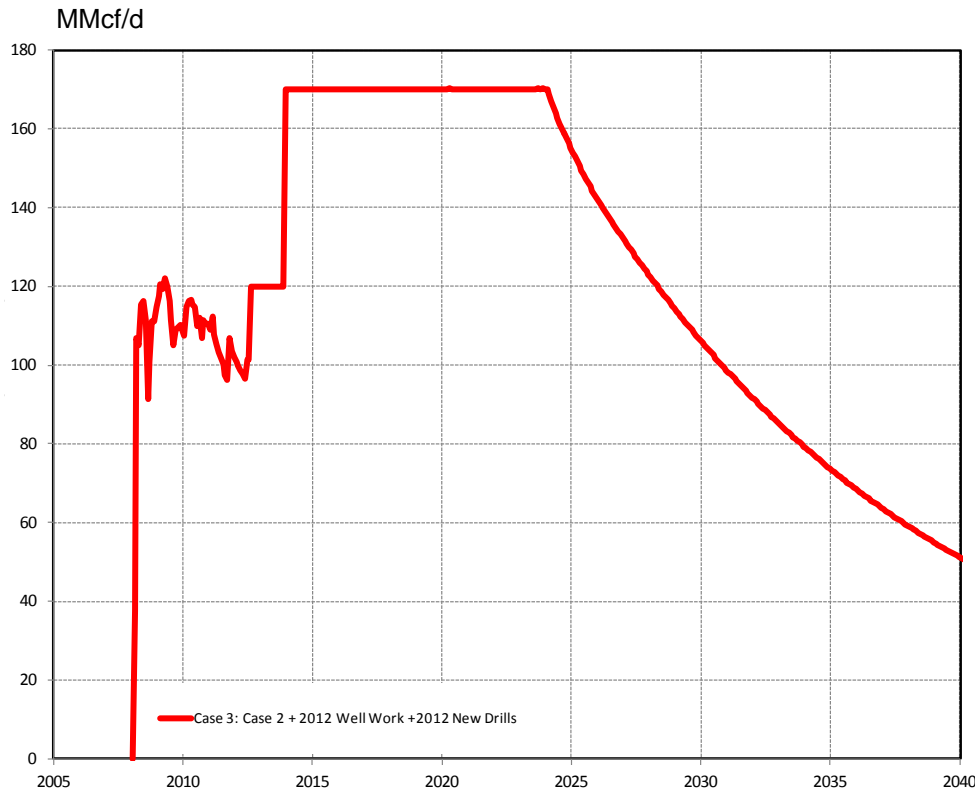
High CO₂ demand has improved contract terms

- Higher floor prices
- Increased upside
- Higher take-or-pay requirements

Doe Canyon Field Expansion

\$255 MM, 65 MMcf/d increase

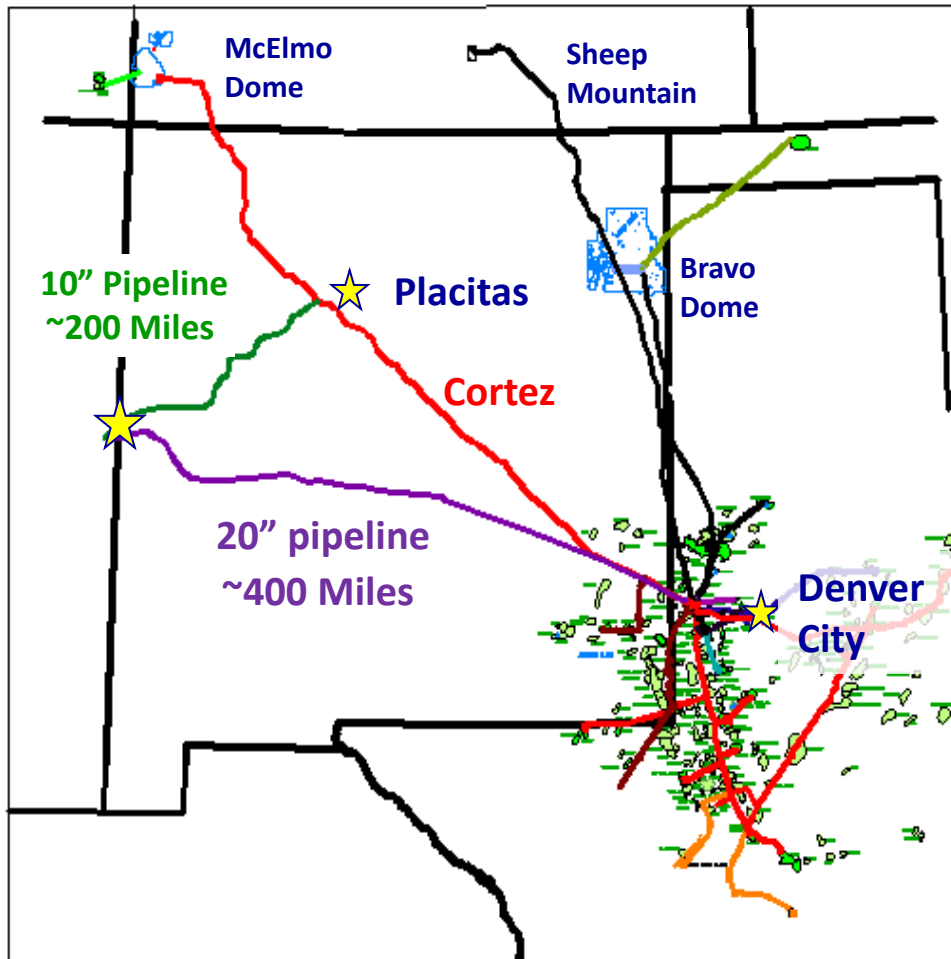
Doe Canyon Expansion Project Flow Rate



- **170 MMcf/d (from 105 MMcf/d)**
 - Adds 750 Bcf reserves
- **Timing : 2nd Quarter 2014**
- **Project delivers attractive returns based on contracts recently executed and currently being negotiated**

St. John's CO₂ Source Opportunity

Expect to close in late January

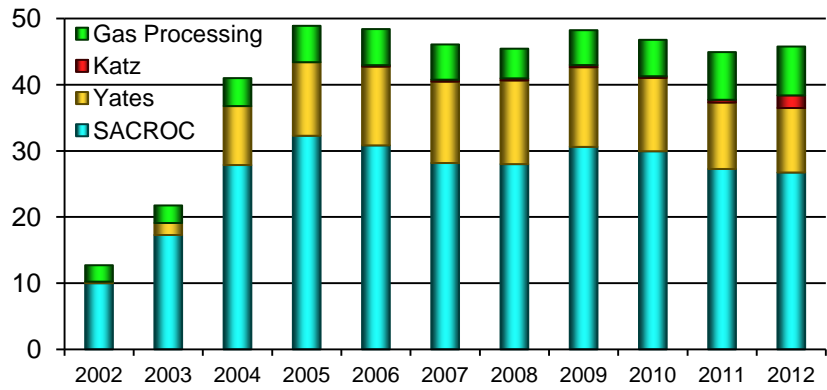


- Located in Arizona and New Mexico
- In-place CO₂ resource of 12+ Tcf
 - 40 wells drilled to-date
- Asset acquisition \$30MM

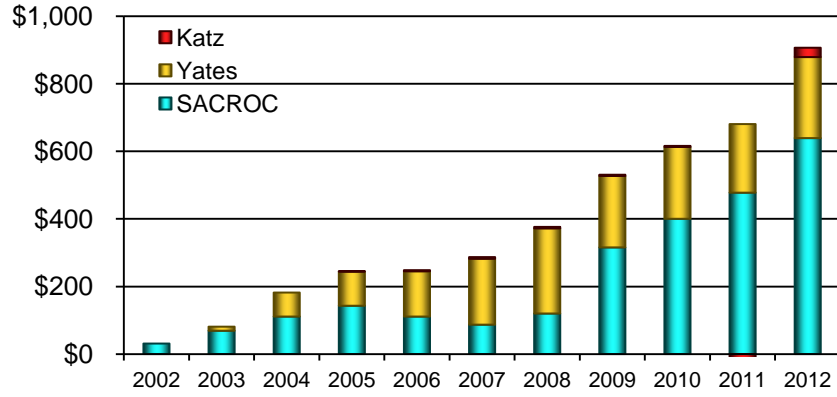
Oil and Gas Segment

Production and DCF

Net Hydrocarbon Production (Mboe/d)



DCF (\$MM)



Original oil in place (billion Bbls)

SACROC	2.8
Yates	5.0
Katz	0.23

Gross production (Bbl/d)

	<u>2011</u>	<u>2012</u>
SACROC oil	28,627	27,868
SGP NGLs	16,644	17,364
Yates	21,728	20,986
Katz	499	2,267

DCF (\$MM, without Elimination)

	<u>2011</u>	<u>2012</u>
SACROC Group ^(a)	595	747
Yates	203	240
Katz ^(a)	(14)	28

Notes: Yates DCF does not include contribution from MKM

Boe: Oil and NGL =1:1, Residue gas sales = 6:1

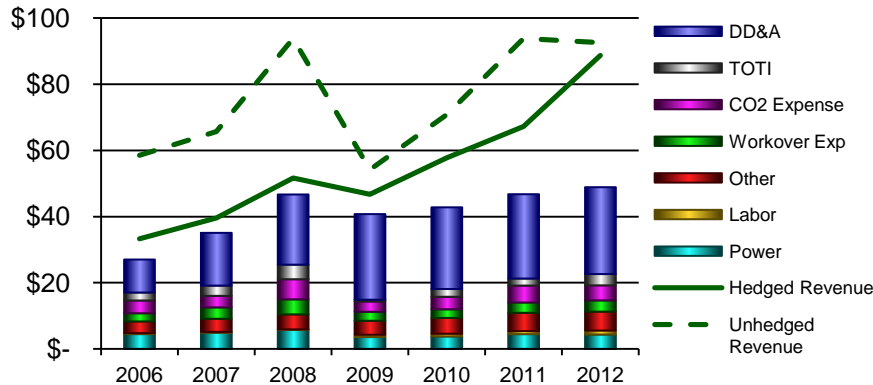
Gas Processing includes net Boe attributable to our plant interests and processing agreements but excluded from reserve report

(a) Includes other minor oil and gas properties near SACROC or in Eastern Shelf asset

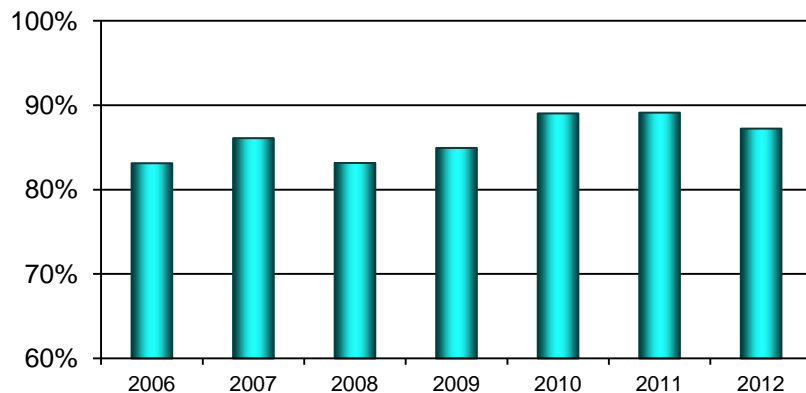
Oil & Gas

Basis for Hedging Policy

Oil & Gas All-in Cost Structure (a) (\$/Net Boe)



Operating Margin as % of Oil Revenue (without hedging)



O&G cost structure has strong correlation to energy prices

- Power is tied to gas prices
- High activity levels have increased staffing and other service costs
- Well-work and rig contracts now being tied to oil prices
- Purchased CO₂ and TOTI (b) are strongly correlated to oil prices

Operating margins (including gas processing activities) have averaged ~85% of our unhedged oil prices

- We target 85% of plan-year production to be hedged
- Gas / oil and NGL / oil price ratios cause some fluctuations

Capital development costs also have a strong correlation to oil prices

- We consider PUD volumes in placing hedges in out years, but consider no more than 50% of those volumes and generally much less

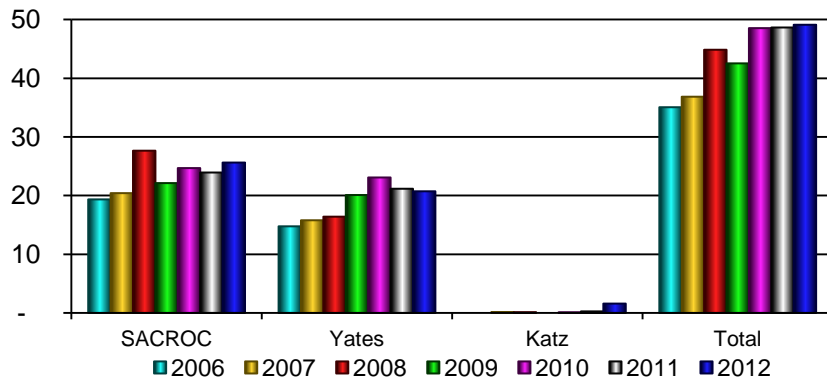
(a) Costs and Revenue per net Boe, including hedges where applicable; includes acquisition and all development costs

(b) Taxes other than income taxes

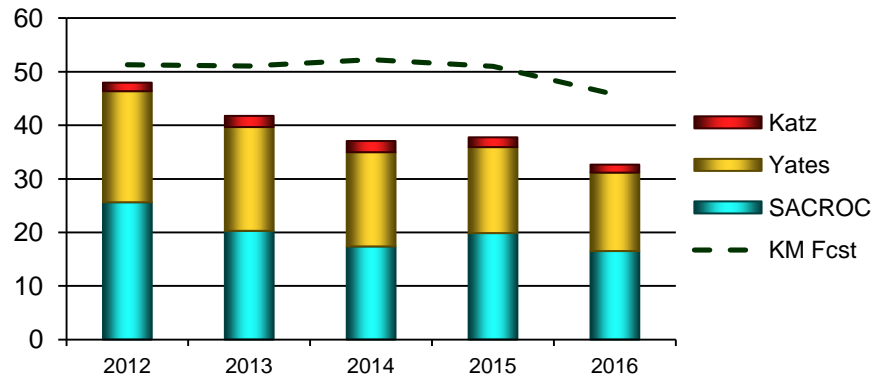
Oil and Gas Segment Production Forecasts

Production expectations tend to grow over time

Evolution of Forecasted 2012 Production (a) over Time (MBbl/d, 8/8ths)



Proved Reserves Production Forecast (a) (MBbl/d, 8/8ths)



Despite oil price volatility, we have replaced all of our oil production and 98% of our HC production with new proved reserves for the past 3 years

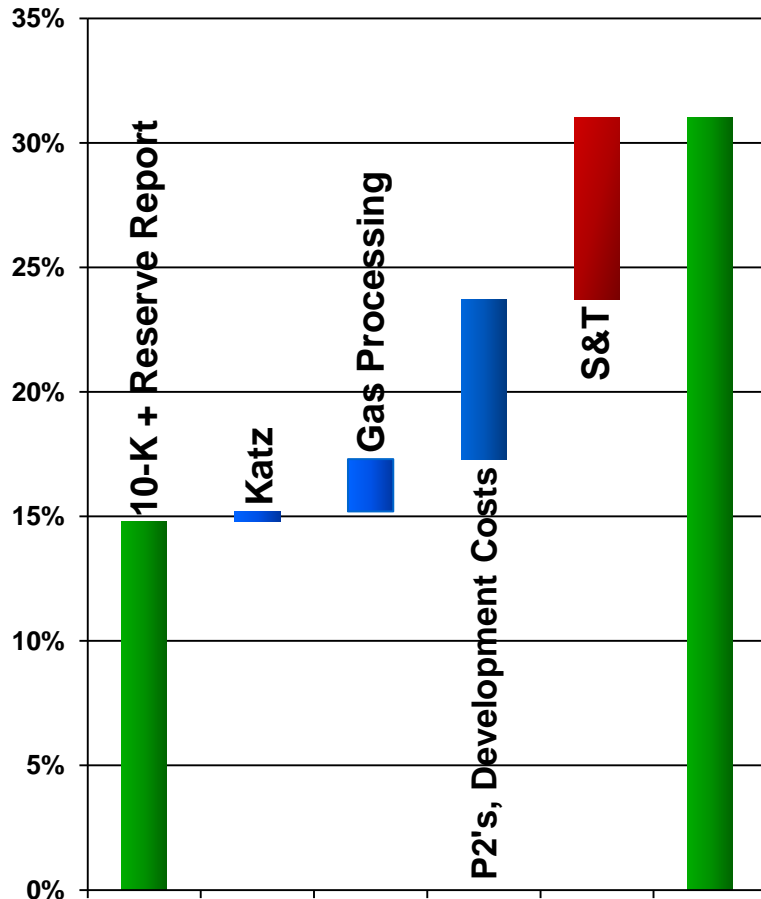
We expect production to exceed our reserve report over the long-term

- Higher recoveries and additional targets added to inventory at SACROC
- Addition of Katz project

Current challenge: slow the decline

(a) 2007+ Forecasts based on independent consultant NSAI Reserve Report. Excludes minor properties

Oil & Gas, and Business Unit IRR



All-in O&G IRR (2000-2021) ~23.7%

- Required disclosures in 10-K plus proved reserves cash flows: 14.8%
 - With unhedged prices, IRR would have been 40%
- Adding in Katz and Gas Processing excluded from disclosures increases IRR to 17.3%
- Adding in reserves discounted to P2 by NSAI, and using planned development costs increases return to 23.7%

Total Business IRR = 31%

- Includes S&T assuming volumes increase with higher capacity, valued at market prices

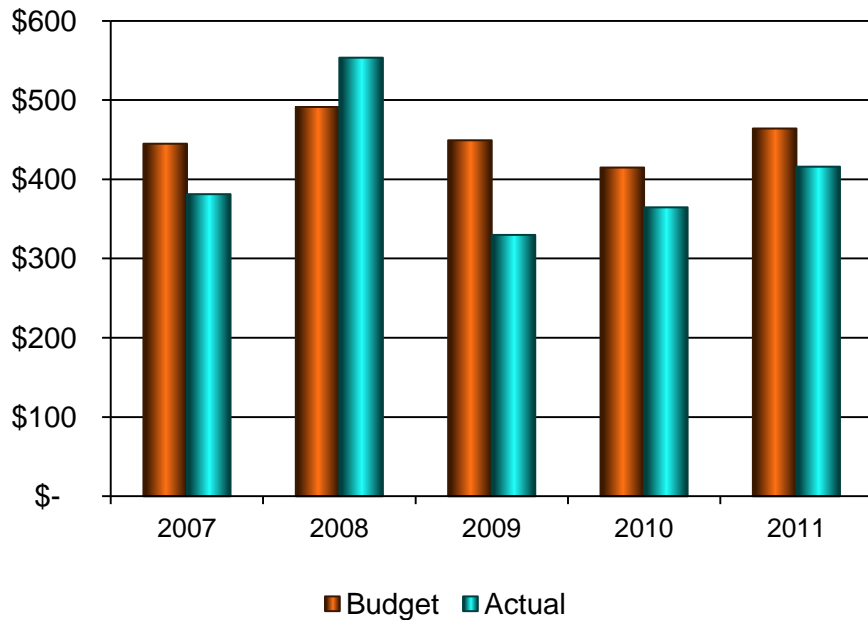
As of 12/31/11, CO₂ Segment Cumulative free cash flow is \$1.8B+

- As of 12/31/12 expect cumulative FCF of \$2.8B

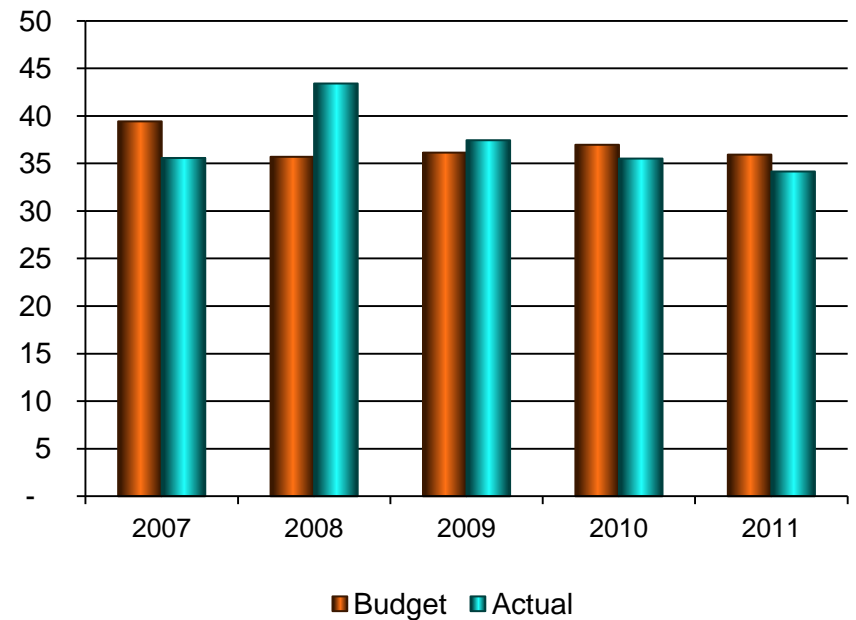
Oil and Gas Segment

Over past 5 years, capex 10% below plan, oil production 1% below plan

Capex (\$MM)

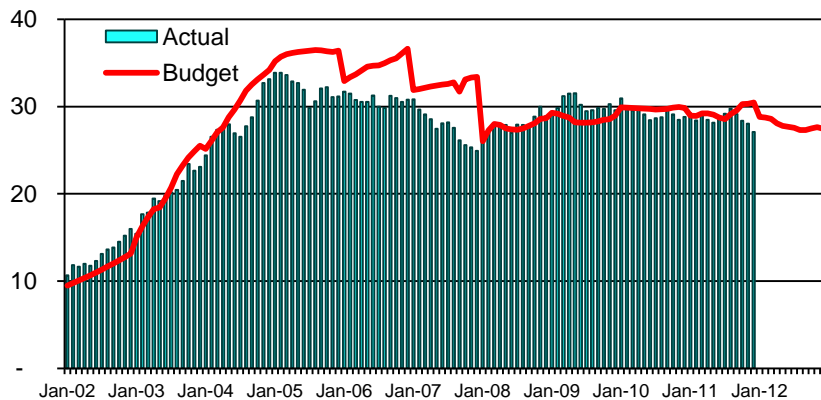


Net Oil Production (MBbl/d)

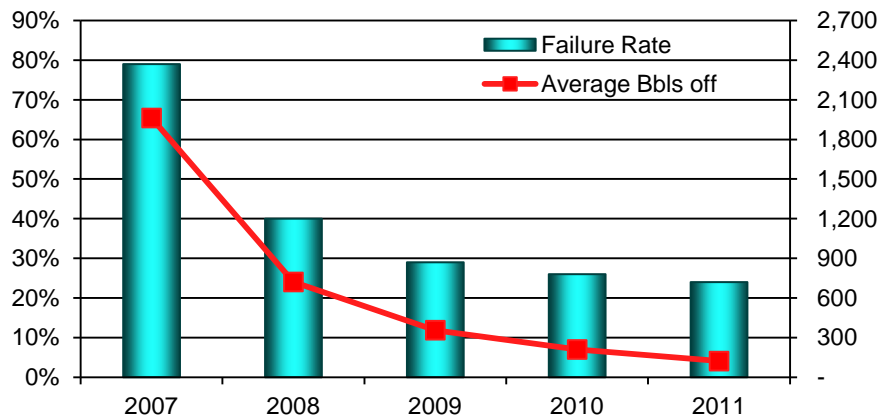


SACROC Production & Operations Highlights

Oil Production 2003-2012 (MBbl/d)



Sub-pump Improvements



2011 – Review

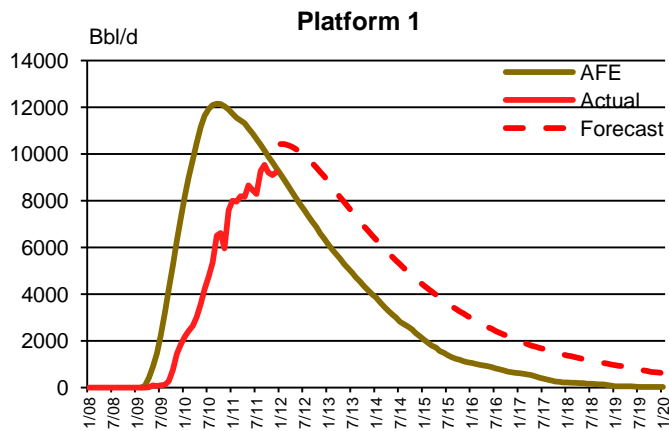
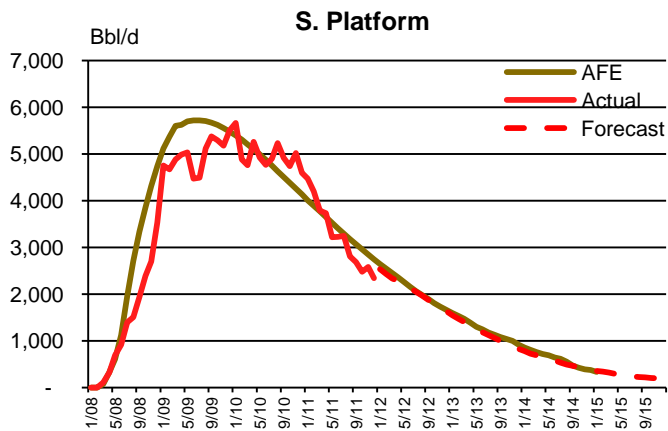
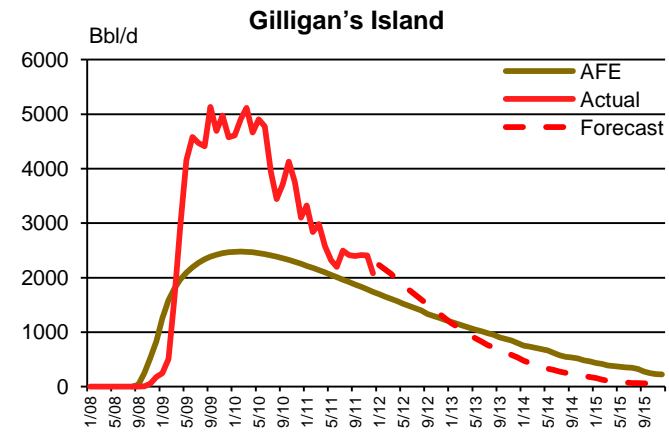
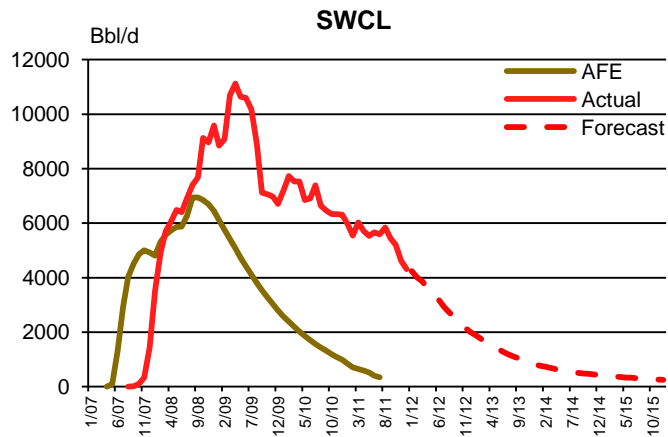
- **Oil production 2.6% below plan**
 - Platform pressure and conformance issues
 - Injection rates higher than expected – curtailed pattern activations from 35 to 27
 - Field gas production continues to increase
 - Sub-pump performance continued to improve
 - Compressor run-time improved from 96.2% to 97%
- **Costs below plan**
 - Opex/sustaining capex: \$18MM below plan
 - Expansion capex: \$23MM below plan
 - Lower rig costs due to lower failure rate
 - Lower activity level due to pattern selections

2012 – Focus

- **Costs, vendors beginning to push increases**
- **Add patterns at the right pace, manage gas volumes**
- **Continue Conformance improvement projects**
- **Evaluate 3D for infill opportunities**

SACROC Unit Look-back:

Recent Projects – Meeting, sometimes exceeding expectations

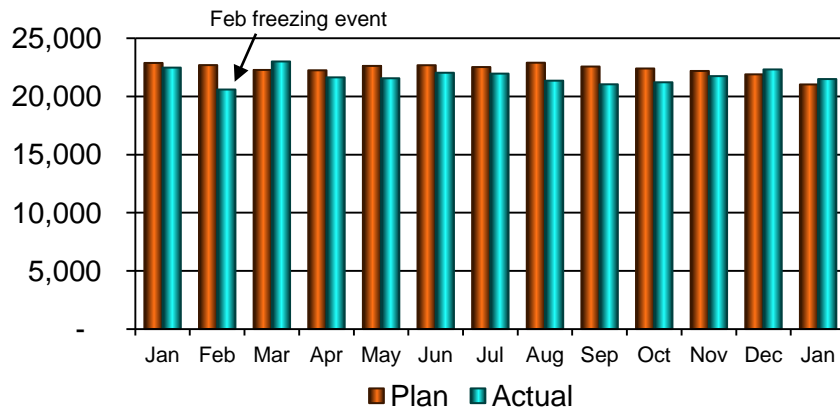


Better surveillance and selective activation pace has added 19 MM Bbls of expected production over past 3 years

Yates Production

Steady

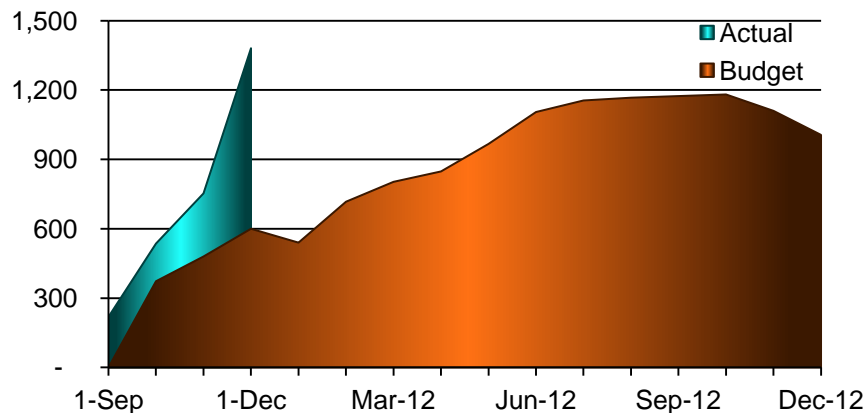
2011 Production (MBbl/d)



Yates oil production missed plan in 2011 (3.4%)

- Oil column thinned to <20' in February; last 9 months loss of 0.3' (less OCT reduction rate from recent past-higher stability).
- Stabilized / improved production rates last half 2011
- High success rate drilling West Side Horizontals

Yates West Side Horizontals (Bbl/d)



Strategies to add long-term reserves include:

- Continuing to raise reservoir pressure to increase CO₂ solubility: this will increase swelling and reduce oil viscosity
- Expand use of CO₂ injectors to increase CO₂ / Oil contact
- Continue West Side Horizontal programs

Katz CO₂ Project

The first year

Investment

- \$199MM project total, \$125MM thru 2011

Oil Response

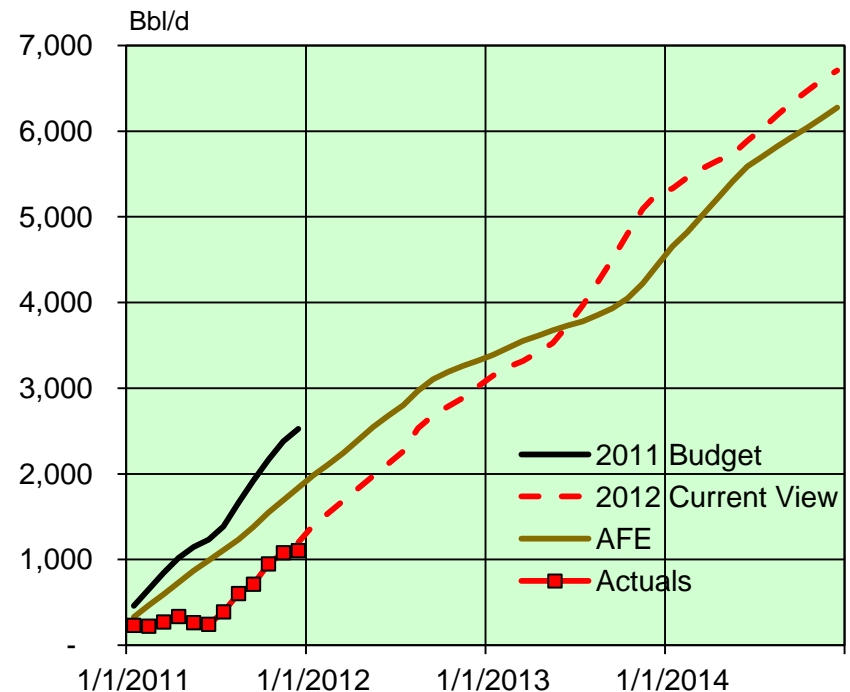
- 2011 plan 1,455 vs. actual 499 Bbl/d
- Response delayed 7-8 month
- Effect was 875 Bbl/d (95% of short fall)

Recent Operation Challenges

- Scale, Asphaltine, Corrosion
- Fix by lower tubing, tubing liner and chem.
- Sub pump – more robust motors
- Effect was 45 Bbl/d (5% of short fall)

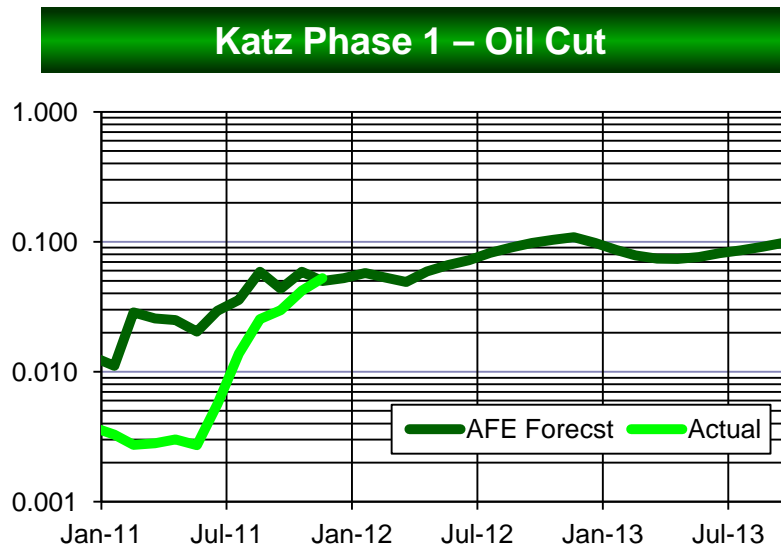
2012 Expected Production – 2,267 Bbl/d

- Existing patterns production continues to climb
- Increase pattern activations by 50% (18-27)
- Increase CO₂ purchases by 25% (45-57 MMcf/d)



Katz CO₂ Project

Solid oil response but delayed from plan

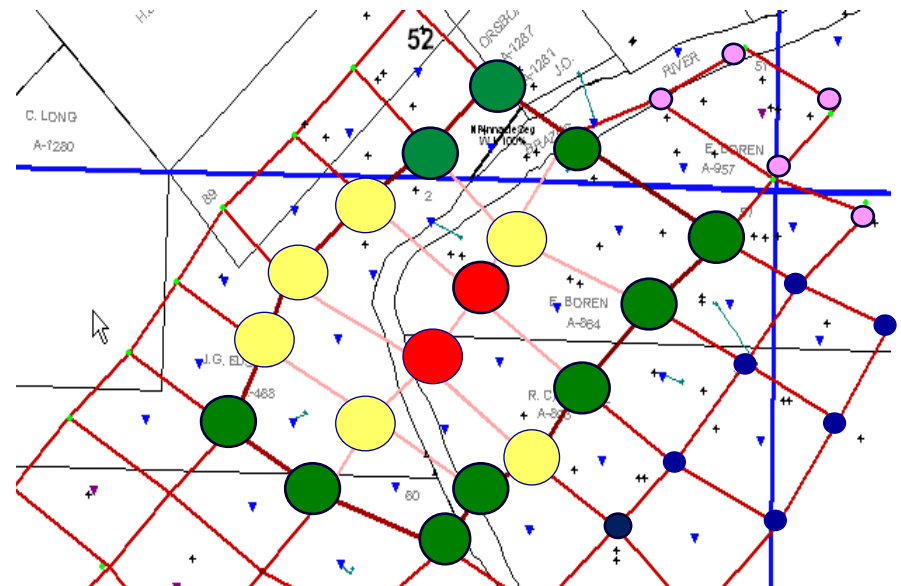


Oil Rate Increase from 232 to 1104 (Dec-Dec)

- Response seen in All Phase 1 Wells
- Oil Cut increase from 1% to 5%, and climbing
- Production growth continues as well response strengthens

Delay indicates a more homogeneous reservoir resulting in more uniform sweep

- Modestly slower processing rate indicates reservoir is curbing channeling



Phase 1 – All Producers Responding

- **Responding w/ Low GOR < 10,000**
Up from 8 to 10
- **Responding High GOR, going down**
Up from 2 to 6
- **Responding High GOR, going up**
Down from 6 to 2
- **Not Responding Yet**
Down from 2 to 0

KM CO₂ Current Outlook

Development Plans 2012-2021

1. SACROC Base Case Forecast

- 67 MMMBoe net ^(a), \$715MM KM-share capex (\$172MM CO₂)
- Continue platform development plan; production forecast is based on existing recovery expectations
- Forecast assumes deteriorating inlet gas quality impacting NGL production volumes

2. Yates Base Case

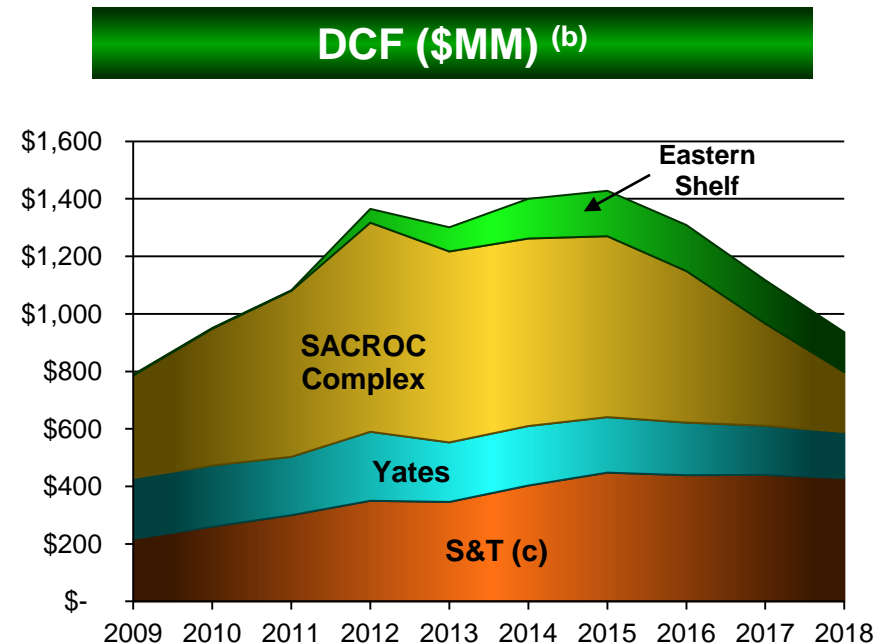
- 29 MMMBoe net ^(a), \$199MM KM-share capex (\$77MM CO₂)
- Continue HDH programs and gravity drainage depletion plan; no upside potential included from infill or surfactant

3. Eastern Shelf

- 16MMBoe net ^(a), \$349MM KM-share capex (\$275MM CO₂)
- Continue development plans at Katz
- Claytonville CO₂ project not included

4. CO₂ S&T

- \$918MM KM-share capex, 1.55 Bcf/d capacity
- Maintain aggressive CO₂ sales program and increase facilities capacity (production sustained by in-fill drilling and inlet compression)



(a) Net Beq = Net Crude plus NGLs plus Residue Gas sold divided by 6.

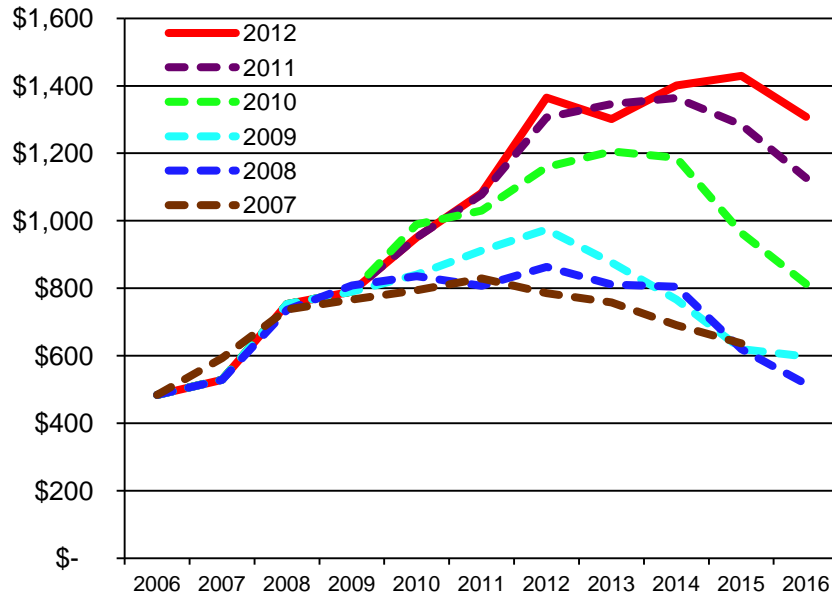
(b) 2012 = Budget, 2013+ at \$90/Bbl; cost metrics based on 2011 run rate; development plans may change in different price scenarios

(c) CO₂ profits not eliminated from S&T

Historical Long-term Outlook

The best is yet to come

Historical DCF Projections (\$MM)



CO₂ segment outlook has continued to grow over past 5 years

- Oil prices have increased from \$50 to \$90/Bbl
 - Increased costs but also opportunities
- Higher CO₂ volumes and prices
 - Increased demand, improved contract terms
- Higher ultimate recoveries being achieved
 - Improved operating practices, new areas to exploit
- Katz CO₂ project added
 - Continue to seek acquisition opportunities

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