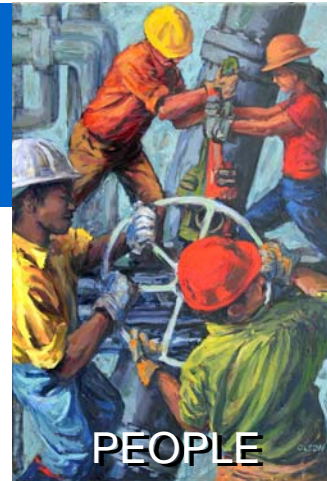




**BURLINGTON™**  
RESOURCES



## Improving Technology Investment Planning with Metering

Dan Shearer and Debbie Garcia  
PNEC  
April 19, 2006

# Forward-Looking Statement

This presentation contains projections and other forward-looking statements within the meaning of Section 27A of the U.S. Securities Act of 1933 and Section 21E of the U.S. Securities Exchange Act of 1934. These projections and statements reflect the company's current views with respect to future events and financial performance. No assurances can be given, however, that these events will occur or that these projections will be achieved, and actual results could differ materially from those projected as a result of certain factors. A discussion of these factors is included in the company's periodic reports filed with the U.S. Securities and Exchange Commission.

For an explanation of reconciliations of GAAP to non-GAAP measures please refer to the Investor Relations section of our Web site.

For additional information regarding non-SEC terms used in this presentation please refer to the Cautionary Note on our Web site.

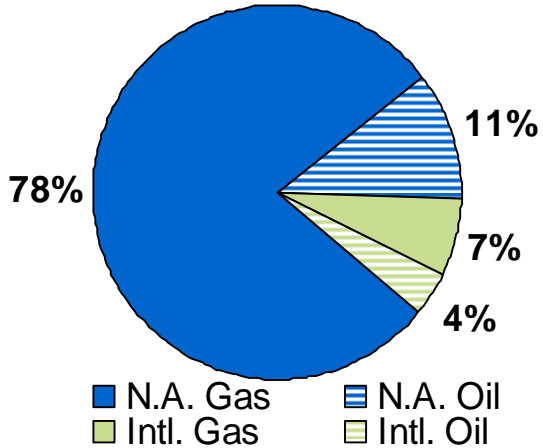
[www.br-inc.com](http://www.br-inc.com)

- Burlington Resources today
- Decades of acquisitions ➡ software explosion
- What did we do?
- Results
- Value to BR



# BR's Worldwide Asset Position: 12/31/04

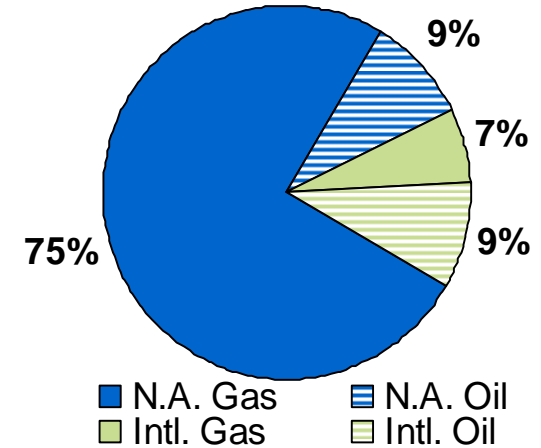
**Reserves**  
Worldwide: 12.0 TCFE



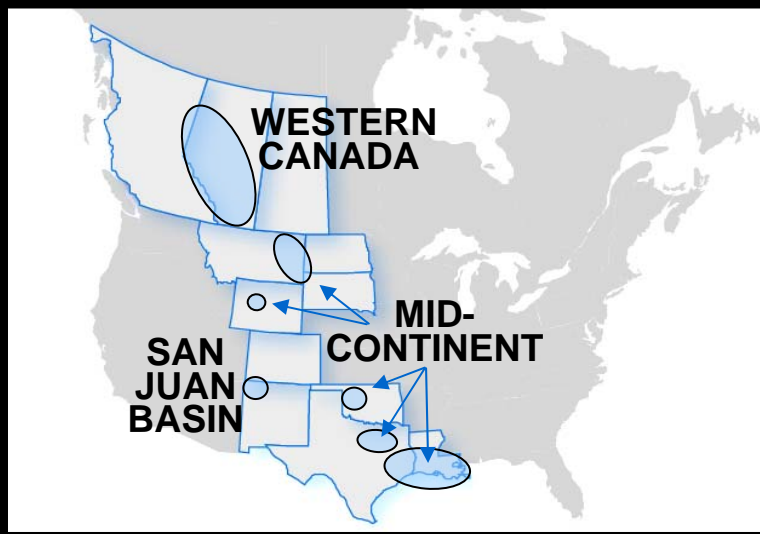
## Focus: N. A. Natural Gas

- Net income of \$1,527 MM or \$3.86/ diluted share
- 125% reserve replacement at \$1.27/MCFE
- Proved reserves of 12 TCFE, 89% in North America
- Production of 2,817 MMCFED

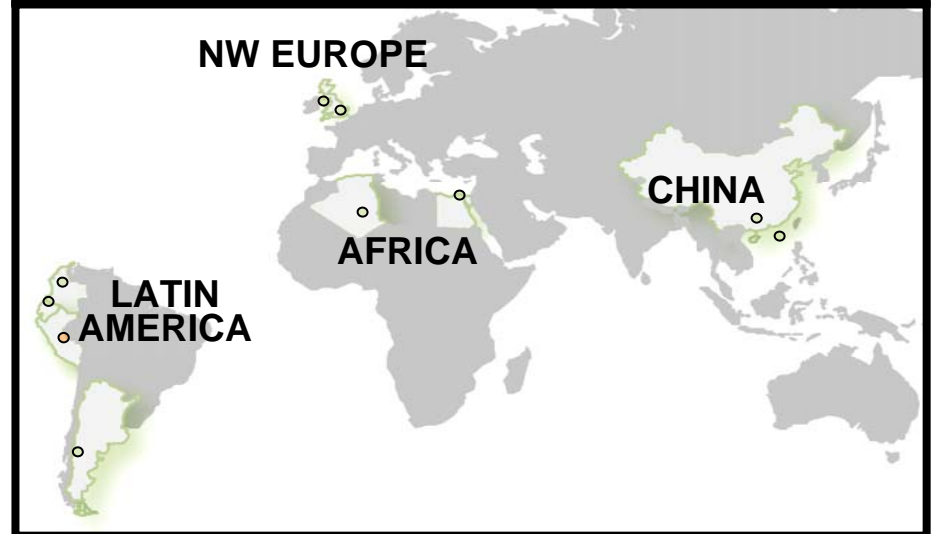
**Production**  
Worldwide: 2.8 BCFED



## NORTH AMERICA



## INTERNATIONAL



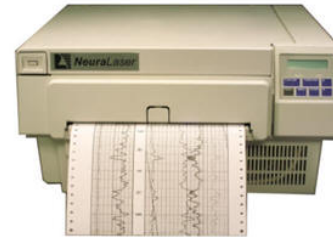
# Decades of acquisitions → software explosion

TbarX	2006	Maxus DSOP	1994	Texcan Resources Corp.	1982
GeoVest	2005	Nerco Oil & Gas	1993	FTW Denver RR	1982
Dallas Production	2002	Union Texas Petroleum	1991	UTP Sub II	1982
ATCO and other properties	2002	Union Texas Petroleum (GOM)	1991	St Louis-San Francisco RR	1981
Prytpnbsml	2001	Union Texas Petroleum (onshore)	1991	PandO Oil	1980
<b>Canadian Hunter</b>	2001	Unicon	1990	SPSR RR	1979
Baker-Hughes	2000	Dreyers Bros	1987	Publishers Petroleum	1979
<b>POCO</b>	1999	Glacier Park	1987	Northwest Production	1979
Oranji-Nassau	1998	Cabil Resources Corp.	1987	Leede Exploration Co.	1978
Burlington Resources, International	1998	Clements Energy Inc.	1987	Malka Production Co.	1978
Burlington Resources, N. A.	1998	El Paso Hydrocarbons	1986	Milestone Petroleum	1978
<b>Louisiana Land &amp; Exploration</b>	1997	Inexco Oil Co.	1986	Aztec Oil & Gas Co.	1977
Gulfstream Resources, Inc.	1996	Clarkland	1986	Westhoma Oil Co.	1976
Meridian Oil	1996	Southland Royalty Co.	1986	St Louis and Kansas City Land	1976
El Paso Producing Co.	1996	LLE Aquistion Inc.	1986	International Nuclear Corp.	1970
<b>Southland Royalty Co.</b>	1996	Southland Royalty Co.	1985	Burlington Northern Railroad	1970
Glacier Park Co.	1995	El Paso Producing Co.	1984	Bateman Island, Inc.	1965
Research Applications	1995	El Can Petroleum	1984	Del Mar Production	?
Saxony	1995	Enstar Petroleum	1983	EPX Co.	?
Zia Gathering	1995	CandK Petroleum	1983	Franco Western Oil	?
Odessa Natural Gas	1995	McAlester Fuel	1983	Franco Wyoming Oil	?
LLECO Holdings	1994	Union Texas Petroleum (Sub II)	1983	Burlington Northern Oil Company	1900
		Supron Energy	1983	Northern Pacific Railway	1864

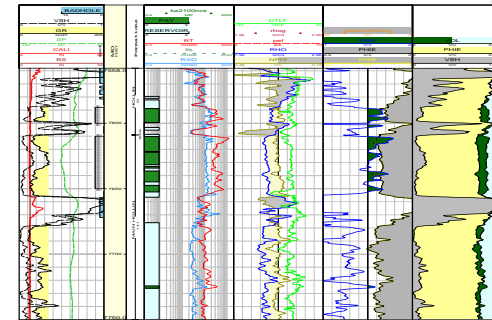
# Geological applications (Lots of details at wells)



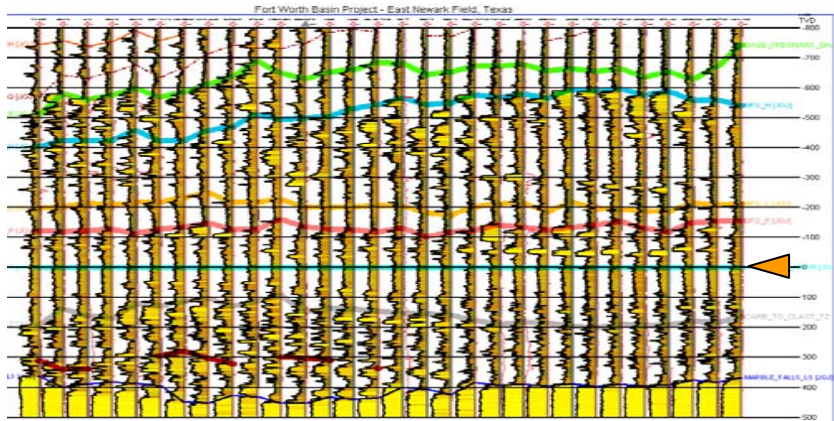
Field trips to examine rocks



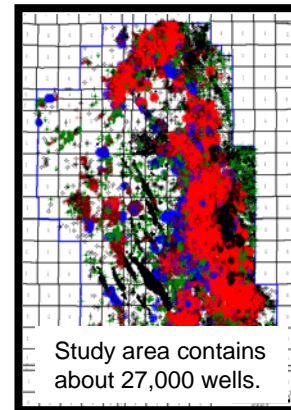
Paper logs and cross-sections



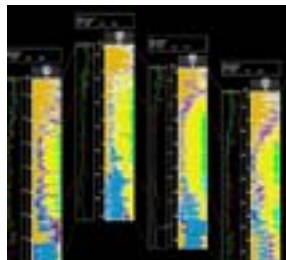
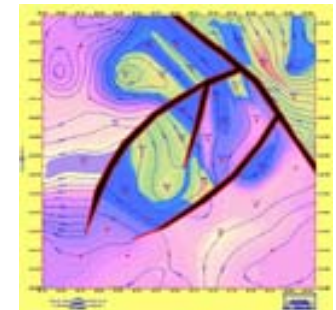
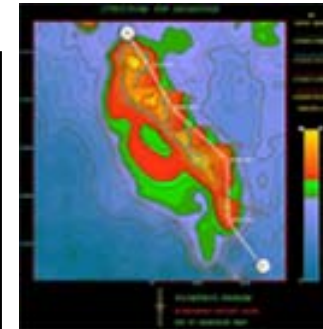
Well log analysis



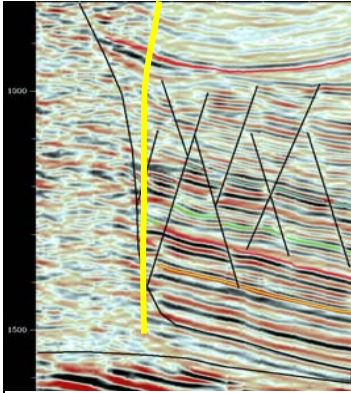
Digital cross-sections



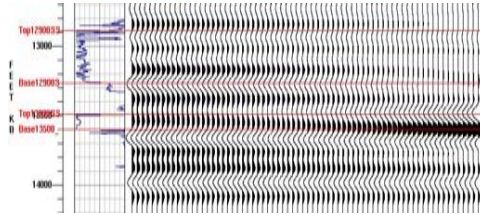
Mapping



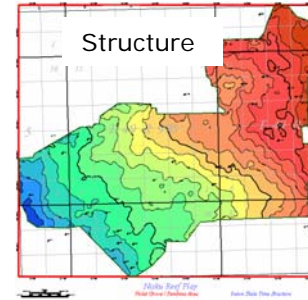
# Geophysical applications (what's between the wells)



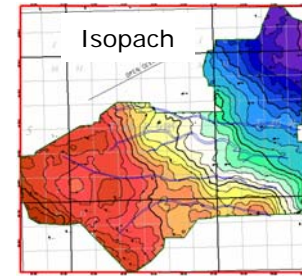
Seismic Interpretation



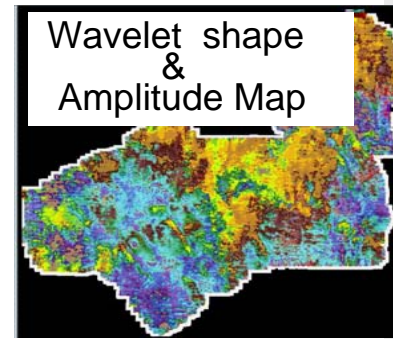
AVO Model - 120' Thick



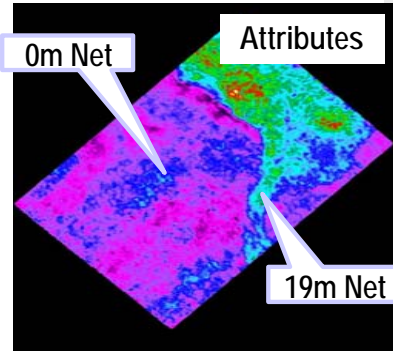
Structure



Isopach



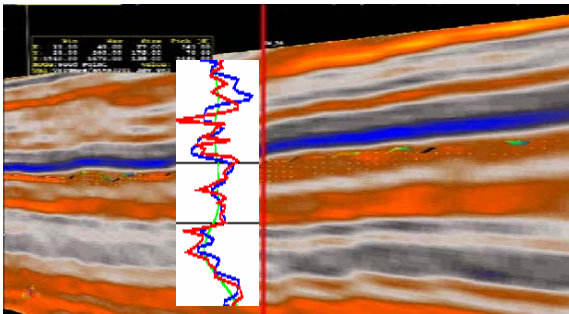
Wavelet shape & Amplitude Map



0m Net

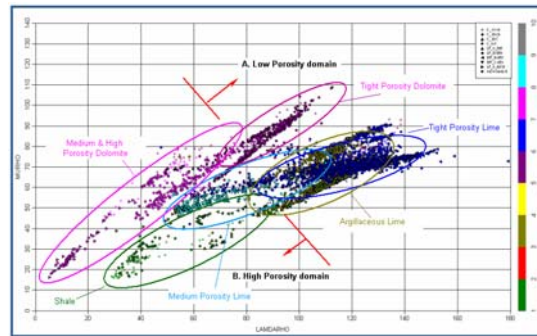
Attributes

19m Net

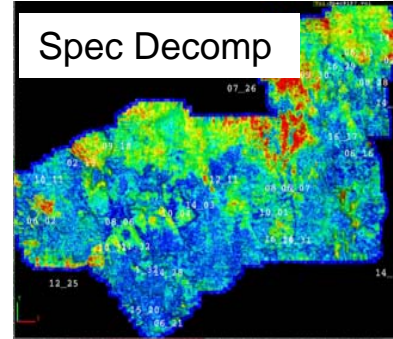


Seismic inverted to Acoustic Impedance and Well Logs

Mapping



Cross-plotting

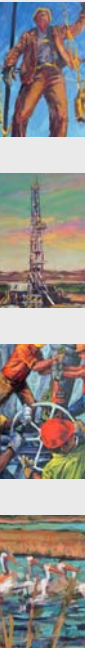
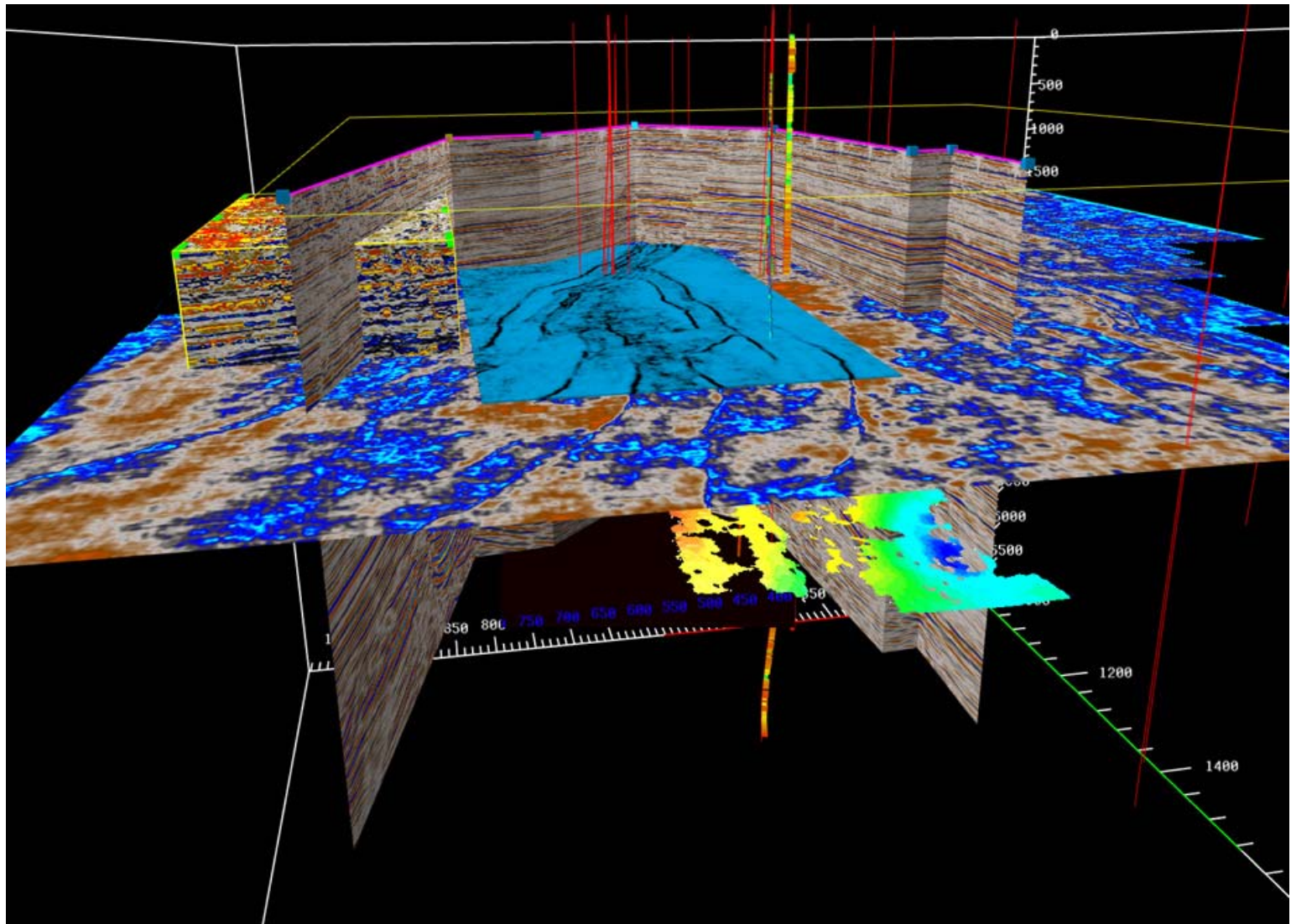


Spec Decomp

Vertical resolution issue: 32 ms wavelet (30hz) @ 8000 ft/sec = 32 ft (1/4 wavelength)



# 3-D Collaboration



# Software explosion → high costs

Reduce software costs NOW!

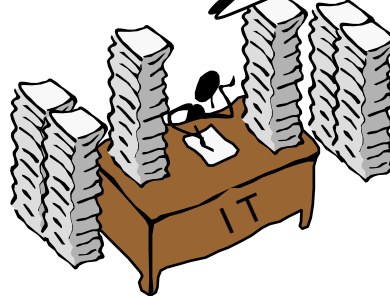
Don't hinder the teams that are finding oil and gas!



I can't do my job without ...!

We are different. We need ...!

What should I do?



**Result: We had at least one of everything (far more than we could support) and no processes to identify or remove disparate software.**

- Why are our software costs so high?
- What software do we have?
- How many licenses of each do we have?
- Is all of this software really being used?
- Do we have the right software?
- Is the software installed at the offices where it is needed?
- Can and should we add the newest application that was just released?

## **Our least favorite:**

- Since software costs are so high, maybe we should outsource IT?

**Summary:** Clean house and replace some of the furniture.



- Identify all application functionality
- Identify where they fit into Shared Earth Modeling (SEM)
  - Shared Earth Modeling is a digital 3D representation of the Earth made through multi-discipline collaboration that includes all available geologic, geophysical, and engineering data
  - Conduct a Global Technology Review (GTR) of our exploration teams
  - Add needed software to fill gaps in workflow
- Classify each application according to its Standardization Category
  - Core, Extended Core, Data, Specialty (seldom used or for working with partners)
  - Turn off maintenance on most Specialty Software (put \$ into kitty, lease as needed)
- Install software usage monitoring (OpenIT)
  - Rebalance LAN and WAN licenses
  - Determine acceptable levels of denials



# SEM: 47 Application Categories

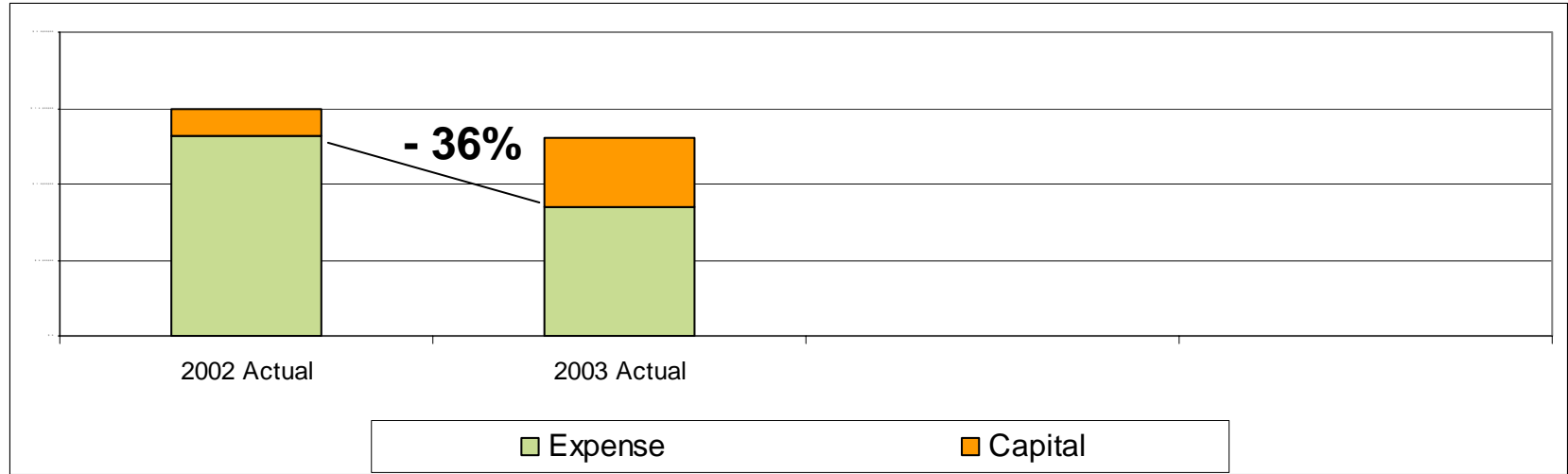
Databases	Data management	Digitizing
Data viewers	Data browsing	Reporting
Base mapping	Data reformatting/moving	Data preparation
Application connectors	Cartographic projection	Log editing
Synthetic seismograms	2D Seismic interpretation	3D Seismic interpretation
Pre-stack seismic interpretation	Mapping (gridding and contouring)	3D visualization
Log modeling	Cross-sections	Velocity modeling
Depth conversion	Fault interpretation	Log interpretation
Attribute analysis	Volumetrics	Workflow documentation
Presentation mapping	Log analysis	Dip analysis
Fluid analysis	Image processing	Seismic modeling
Structural modeling	Inversion & pore pressure prediction	FK migration
Stratigraphic Modeling	Ray Tracing	Spectral Decomposition
Volume interpretation	Palinspastic reconstruction	Basin analysis
Rock physics modeling	Geostatistics	AVO
Fault analysis	Wavelet extraction	

# March 2003 Software Denials (from OpenIT)

Division	Denial Date	Denials per User	Application	Unix User ID
Houston	3/4/2003	1	STRTWRKS	djk
Houston	3/4/2003	1	STRTWRKS	n2m
Houston	3/5/2003	1	SEIS2D	ocs_div1
Houston	3/13/2003	1	SEIS2D	r6s
Midland	3/5/2003	1	ZMAPPLUS	amm1
Midland	3/5/2003	2	ZMAPPLUS	mal
Midland	3/5/2003	1	ZMAPPLUS	mrh
Midland	3/5/2003	1	ZMAPPLUS	taf
Midland	3/6/2003	1	OPENWORKS	gaw
Midland	3/7/2003	1	OPENWORKS	d1e
Midland	3/7/2003	1	OPENWORKS	taf
Midland	3/21/2003	1	PETROWORKS	gaw
Midland	3/21/2003	1	ZAP	tmd
Midland	3/24/2003	1	ZMAPPLUS	amm1
Midland	3/24/2003	1	ZMAPPLUS	prc
Midland	3/26/2003	1	PETROWORKS_PRO	jln
Calgary	3/4/2003	1	STRTWRKS	lgcadm
Calgary	3/5/2003	1	STRTWRKS	lgc1
Calgary	3/5/2003	1	STRTWRKS	lgc2
Calgary	3/6/2003	1	OEDT	lgc1
Calgary	3/10/2003	1	OPENJOURNAL	lgcadm
Calgary	3/11/2003	1	OEDT	dmm
Calgary	3/11/2003	1	OPENJOURNAL	jpg2
Calgary	3/11/2003	1	OPENJOURNAL	kes
Calgary	3/24/2003	1	OEDT	lgc3
Calgary	3/24/2003	1	PETROWORKS	lgcadm
Calgary	3/27/2003	1	STRTWRKS	rqp
London	NO DENIALS			
San Juan	NO DENIALS			

We have the OpenIT software automatically send emails about denials to key personnel. We know about license issues before the client calls. We can even add licenses or rebalance licenses before the client calls.

# Resulting software maintenance savings!



36% software maintenance cost reduction: 2002 vs. 2003  
+ savings in IT staff time and user training



**Great! Reduce costs MORE!**

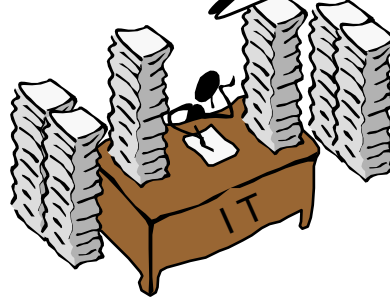
Don't hinder the teams that are finding oil and gas!



I can't do my job without ...!

We are different. We need ...!

What should I do?

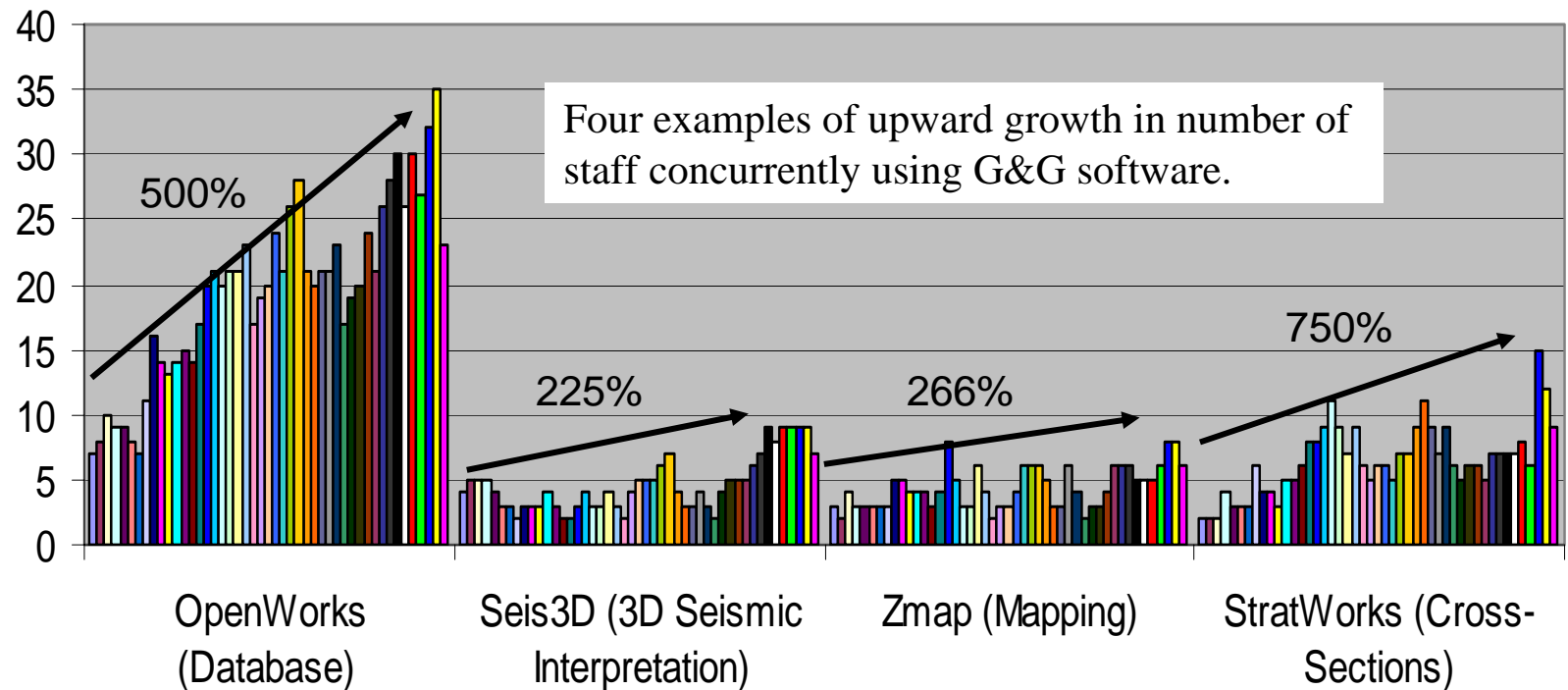


**Question: How do we cut costs more, while the company is growing?**



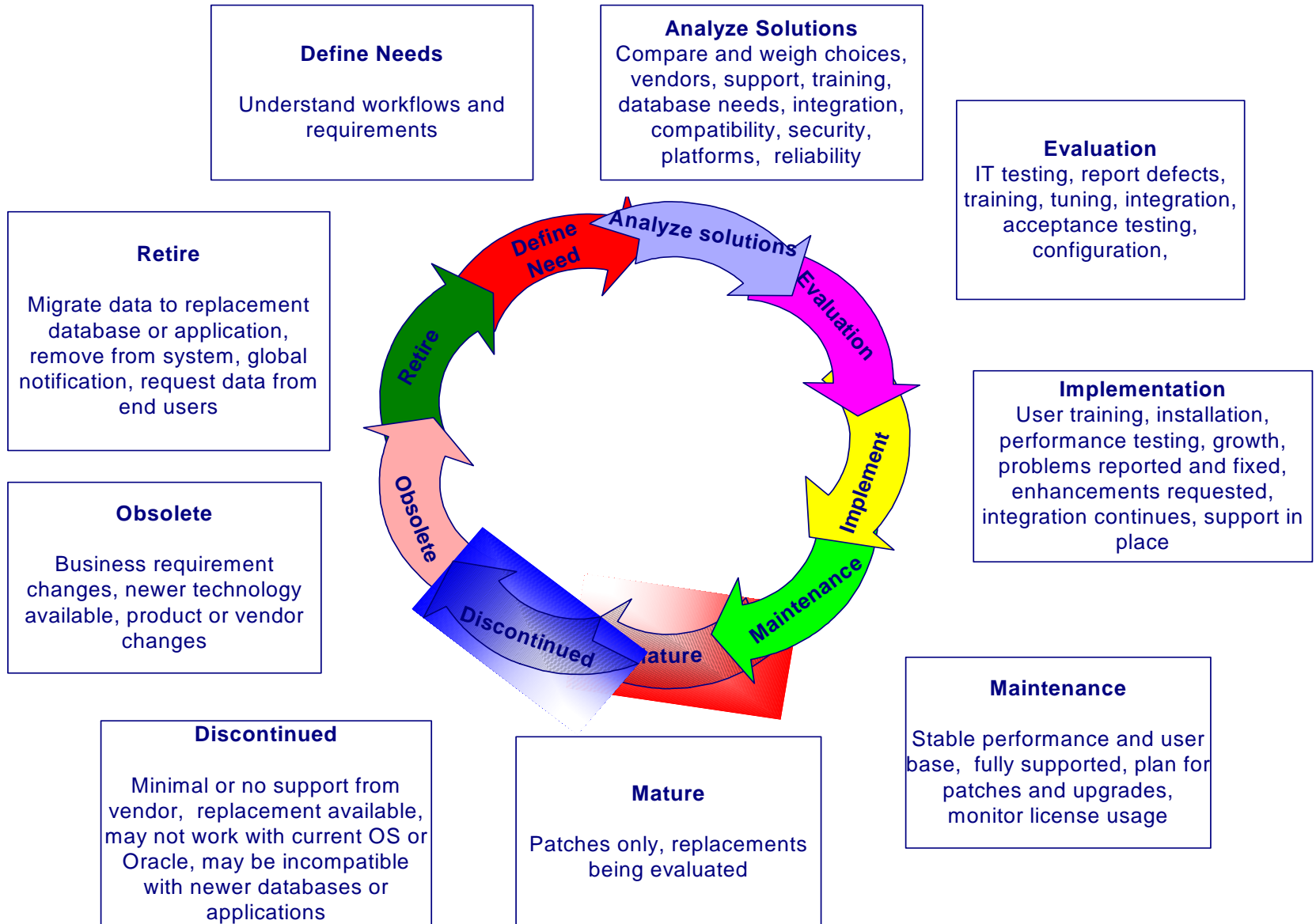
## BR Calgary Concurrent License Usage

March 2002 - January 2005



- IT became very proactive and partnered with operations (form TET)
- Create and publish IT strategy documents
- Classify each application according to its life cycle status
  - Define need, Analyze solutions, Evaluation, Implement, Maintenance, Mature, Discontinued, Obsolete, Retire
  - Develop plans for replacing applications that are at or beyond “mature”
- Create one software spreadsheet
  - Post all information about each application
  - Teach G&G staff how to determine who is using a specific application
  - Automate OpenIT reports and link each chart to the online spreadsheet
  - Teach G&G staff how to shop for applications from the spreadsheet
- Post everything on the portal
- Add Governance to IT financial management
- Make presentations and get G&G staff engaged!
  - Educate G&G staff and management in the Total-Cost-of-Ownership of software
  - Train the G&G staff how to help IT look for cost savings

# Application Life Cycle



# Governance Structure: Executive participation

BR Objectives

Technology Governance Council

Technology Working Group

Business Units

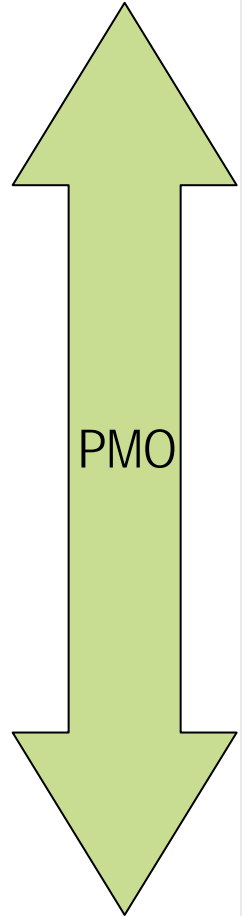
IT Projects

Business unit needs

- Approve
- Enforce

- Qualify
- Prioritize
- Review
- Recommend

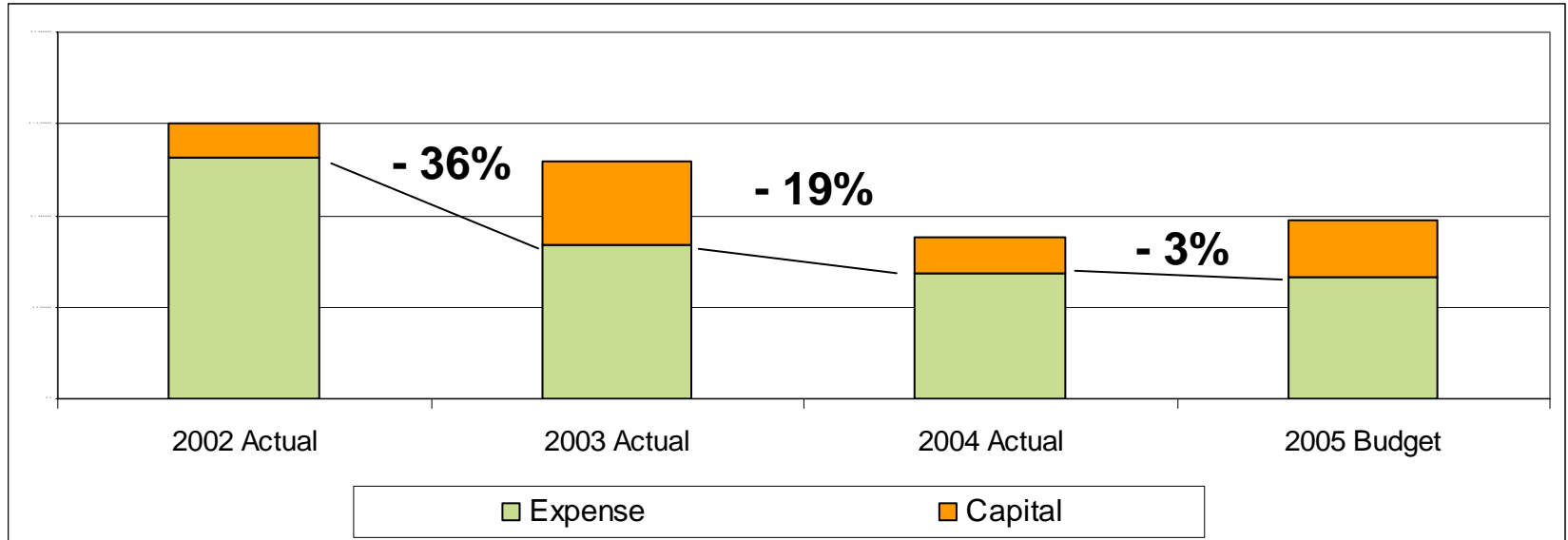
- Identify
- Quantify
- Manage



- Landmark: 53 applications
    - OpenWorks Project Database, GeoProbe 3D Visualization, Interpretation
  - Schlumberger: 38 applications
    - Petrel reservoir modeling, Finder data search and retrieval
  - Paradigm: 32 applications
    - Geolog geologic mapping and petrophysical analysis, SeisX 2D-seismic interpretation
  - ESRI: 9 applications
    - Graphical mapping interface (GIS) for data search and retrieval
  - IHS Energy: 11 applications
    - Public well data
  - Other: 98 applications
    - Utilities and other specialty analysis
- Total: 247 applications under maintenance

Note: For 2000-2005, only ~1/3 of the original applications remain under maintenance

# Resulting software maintenance savings!



- 36% software maintenance cost reduction: 2002 vs. 2003
- 19% software maintenance cost reduction: 2003 vs. 2004
- 3% software maintenance cost reduction: 2004 vs. 2005
- + savings in IT staff time and user training
- + significant increase in geoscience analysis

# Management wanted even more!

How else can we reduce costs?

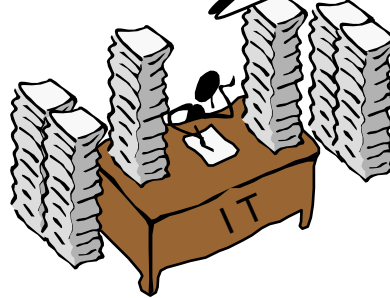
Help the teams that are finding oil and gas!

I need training.

We are different.  
We need ...!

I can't do my job without ...!

What should I do?



**Result: We need to evolve our cost-conscience culture into a disciplined value-conscience culture.**

# What did BR need to happen?

- Improve team synergies and global sharing of information
- Shortened project cycle time for G&G staff
- Work from a 3-D representation of the Earth
- Drill fewer dry holes
- Find more reserves per well drilled and find more total reserves
- Preserve analysis results
- Continue reducing annual software costs

**Summary:** Improve the quality of the work being done.

Standards



Training

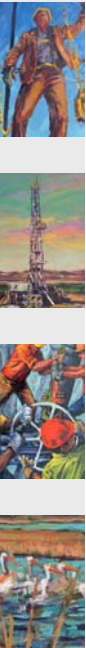
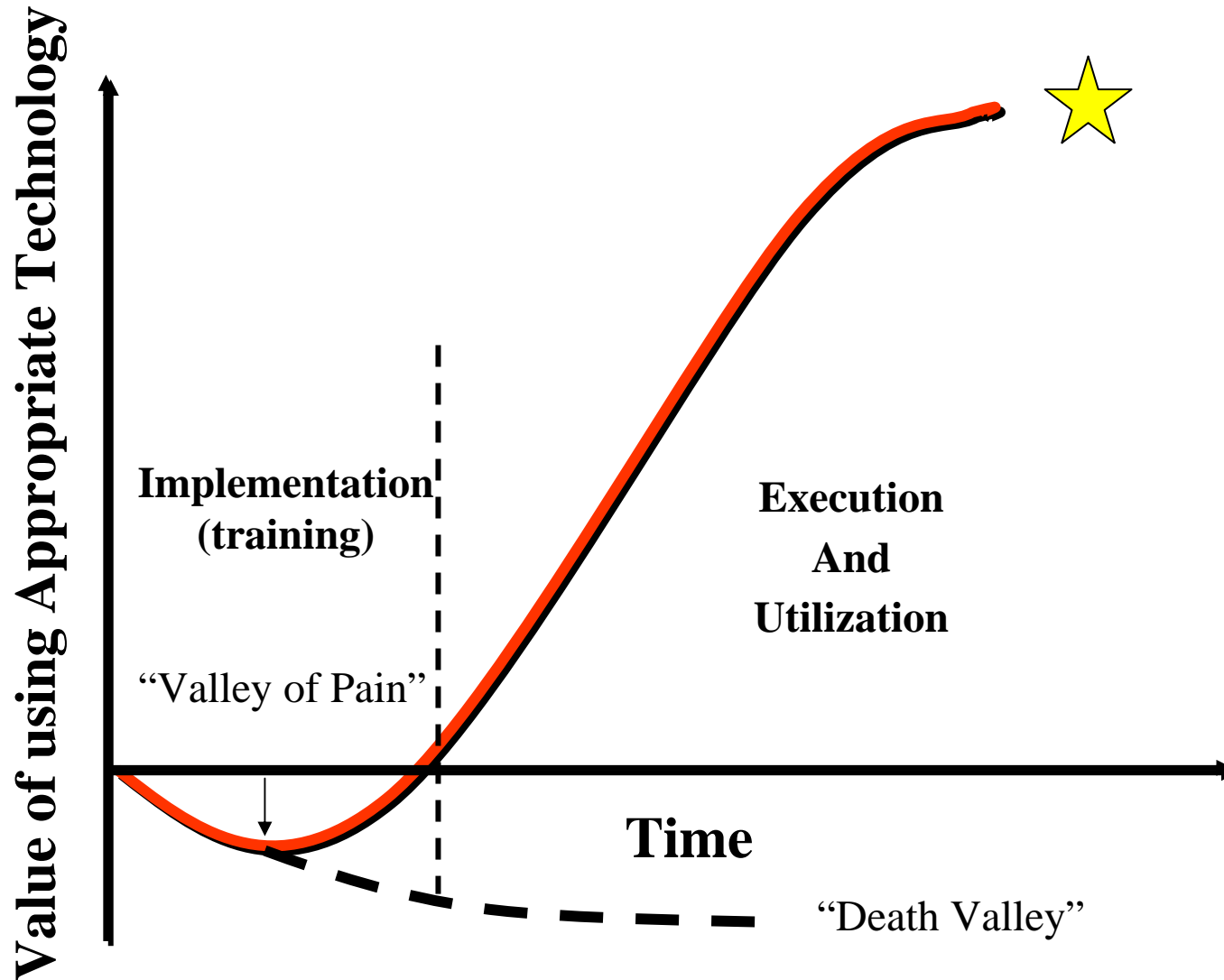
Independent Technology  
Enhancement Team budget

Operations management "Raised the Bar"

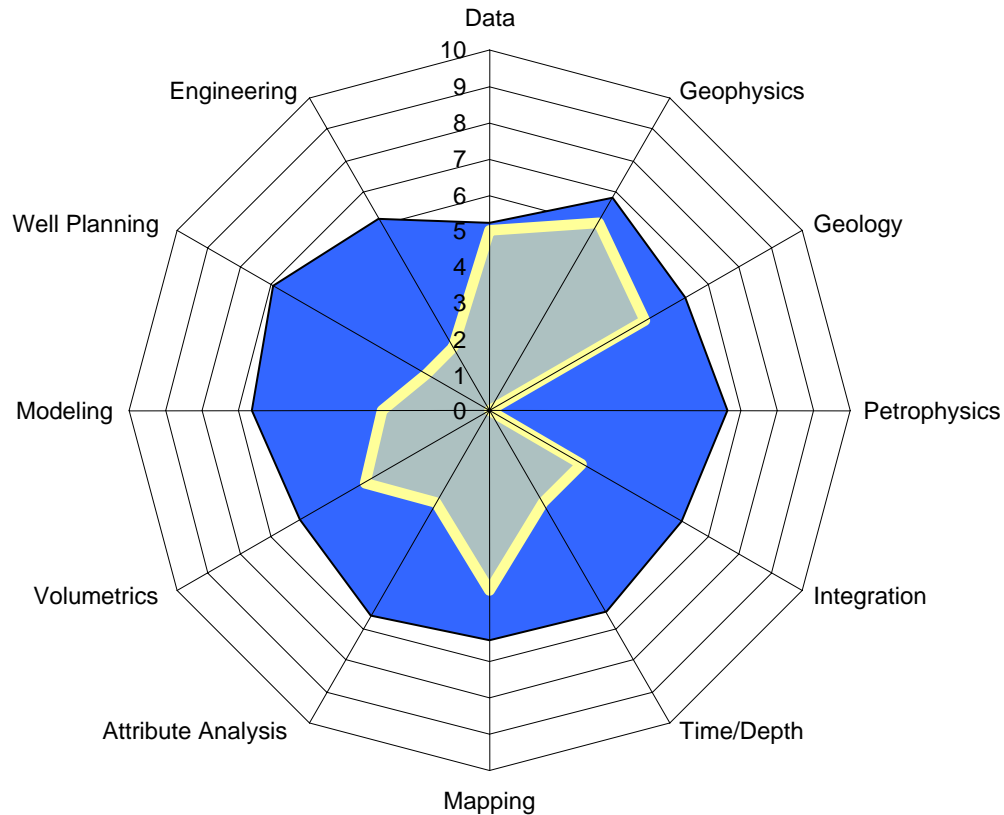


- Create the Geoscience Technology and Training organization
  - Reports to the Vice President of Geoscience and the Chief Geologist
  - Under operations, but works closely with the CIO and IT
- Create the Technology Enhancement Team
- Create the Geophysical Technology Group
- Fund and participate in Outside Technical Research
- Identify and use Centers of Excellence
  - Internal and external
- Fund geoscience training and geology field trips
- Fund software training
  - Classes and mentoring
- Fund and facilitate mini-conferences
- Conduct a second Global Technology Review (GTR)
- Develop strategic workflows

# Engaging G&G staff: A challenge



## 2000 vs 2004 Average



■ 2004 Average Ranking

■ 2000 Average Ranking

10 = Best-in-Breed

6 = Shared Earth Modeling

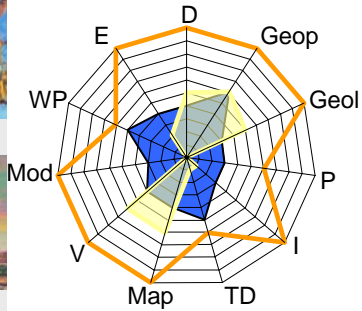
5 = Industry Average

# GTR: Team Technology Adoption Diagram

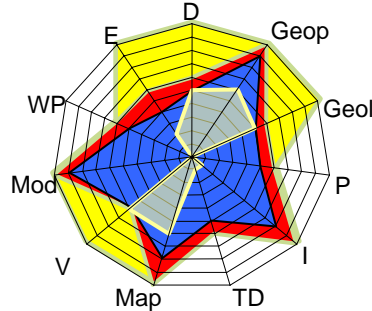
## Example Teams

(measuring our progress and our opportunities)

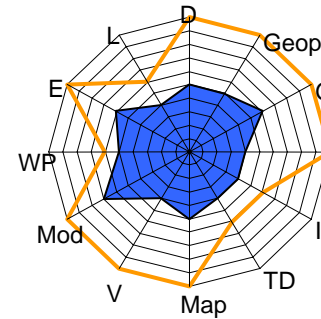
**O'Chiese  
GTR ranking**



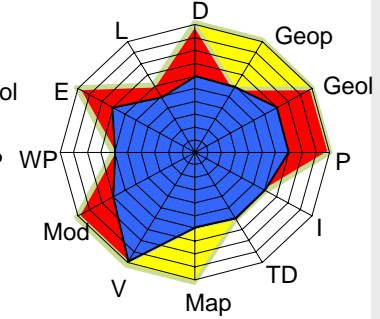
**O'Chiese  
Self ranking**



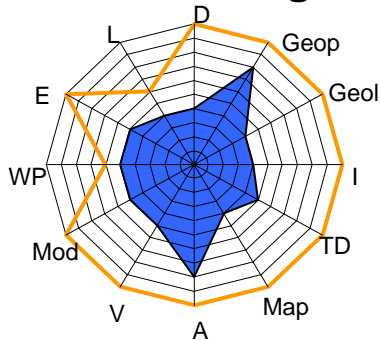
**Ring Border  
GTR ranking**



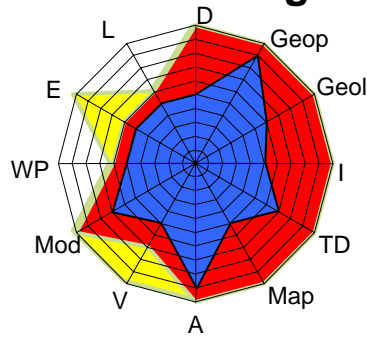
**Ring Border  
Self ranking**



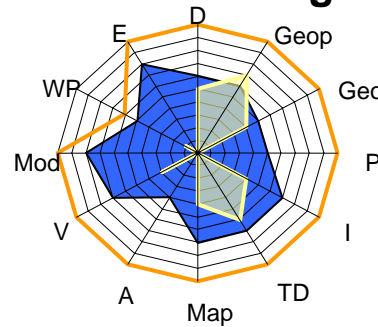
**South Cranberry  
GTR ranking**



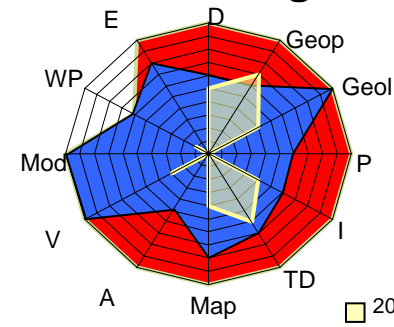
**South Cranberry  
Self ranking**



**Viking  
GTR ranking**

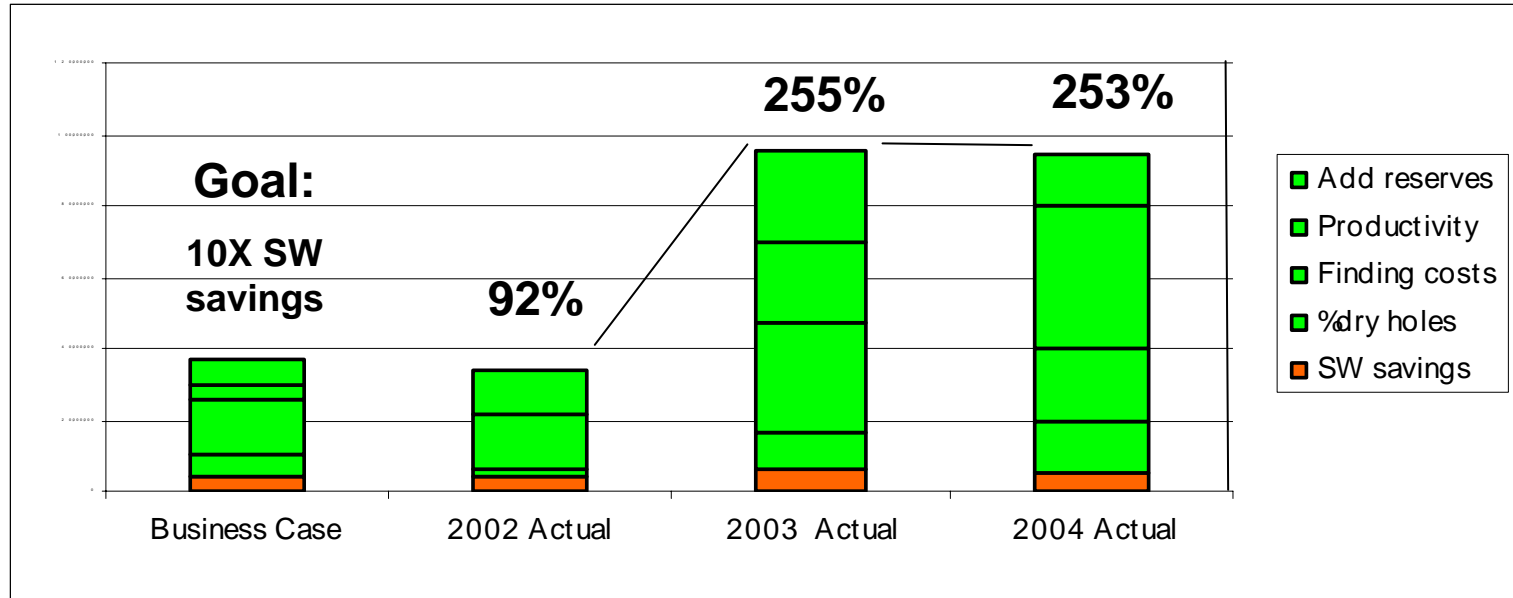


**Viking  
Self ranking**



2000 Ranking  
 2004 Ranking  
 Team Opportunity

Removed spokes that don't apply. Team opportunity is either 6 or 10.

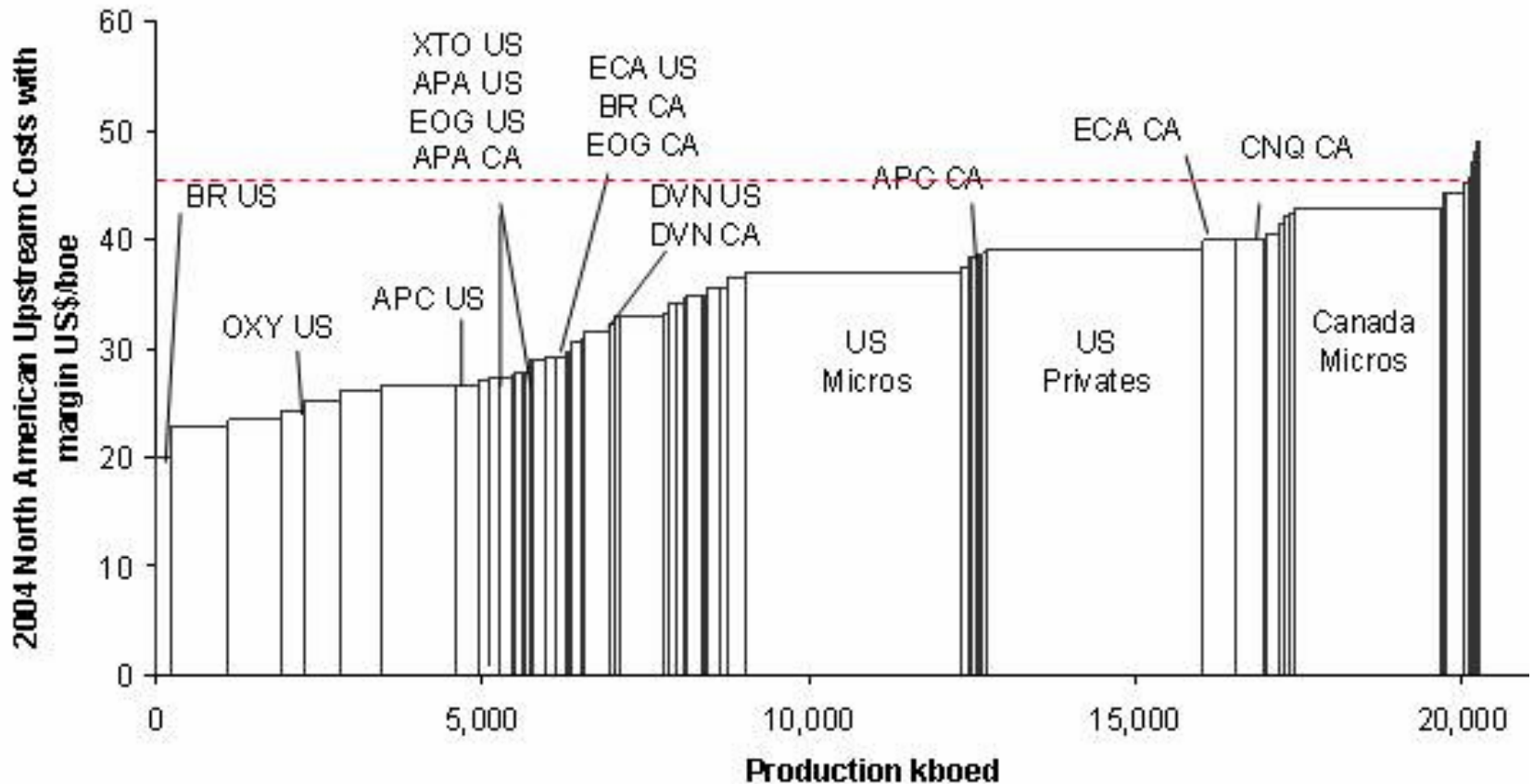


Computed June 2005

- + savings in management time
- + opportunities for better long-range planning
- + opportunity to do even better

# BR cost comparison

- Including a margin, the highest cost companies in 2004 had costs totalling \$45-49/boe



Source: Company reports and Bernstein estimates

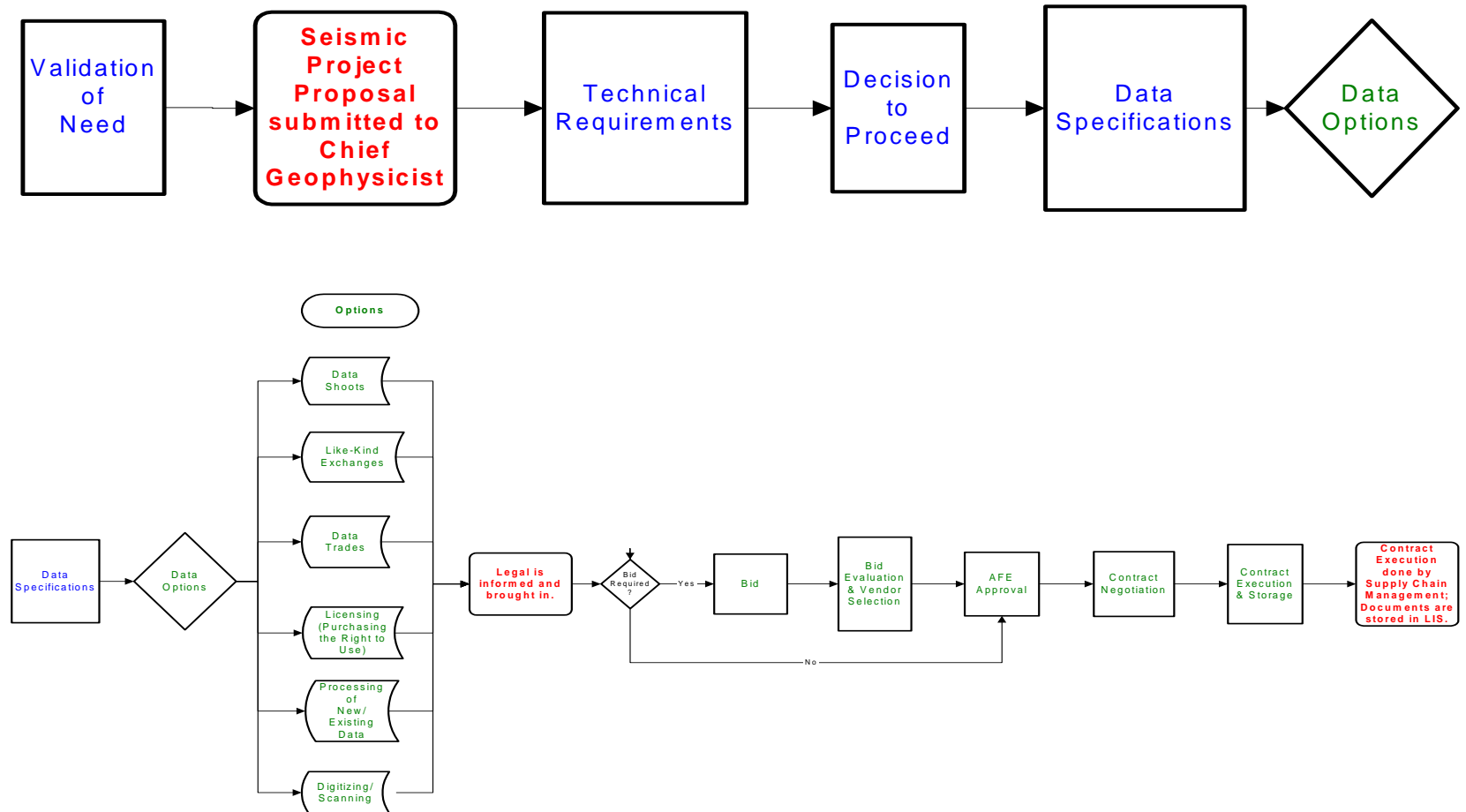
©Bernstein Research 2005

6

What's Next?

# Strategic Workflows: Seismic Data Life Cycle

## Proposal Generation



## PICS

### Prospect Inventory Capture and Sharing

This tool is used to capture and share prospect decision making information for exploration and development teams.

Team

 [Botts #1](#)

 [Cole #2](#)

 [Gaas #1](#)

 [Harris #1](#)

 [Martin #3](#)

 [Smith #1](#)

 [Sullivan #1](#)



Conditional  
Query

**Links:**

[Home](#)

[My Leads](#)

[My Prospects](#)

[Budget Wells](#)

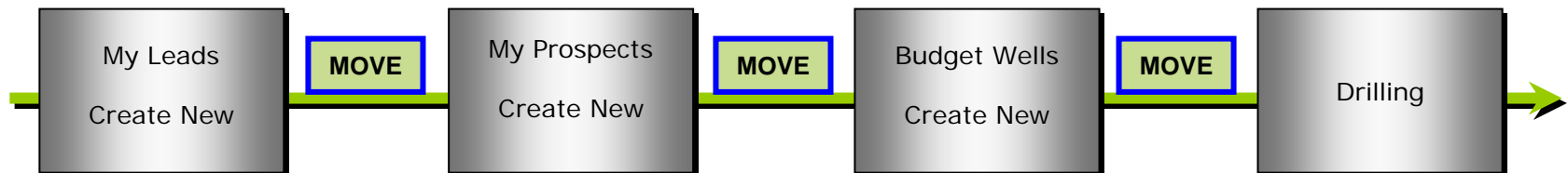
[Drilling](#)

[Forms](#)

[Search](#)

### Daily Drilling Reports

(Linked from WellView (scroll);  
Reports for Well List (A.))

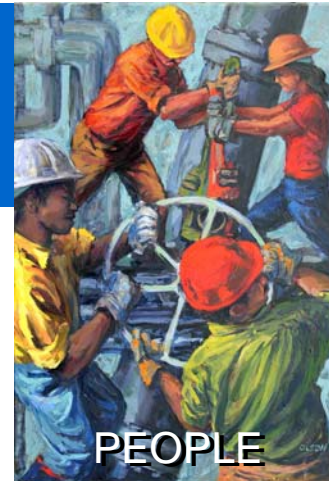


### D. Current Lifecycle Scope





**BURLINGTON™**  
RESOURCES



## Improving Technology Investment Planning with Metering

Dan Shearer and Debbie Garcia  
PNEC  
April 19, 2006