Performance Drilling in a Down Market

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Presenter:
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Flashback to 1995
Communication in 1995

> Voice:
  – Sprint
  – Worldcom
  – Pacific Bell
  – Ameritech
  – AT&T

> Internet (ISP’s):
  – AOL
  – MSN
  – Earthlink
  – Netscape
  – Compuserve

> Data = Pager Plans:
  – Skytel
  – Weblink
  – Arch Wireless
  – Metrocall
Communication Today

> Internet/Phone/Data:
  – Comcast
  – AT&T
  – Time Warner
  – Century Link
  – Charter
  – Verizon
  – Cox
  – Optimum
  – Frontier
  – Suddenlink
Lessons Learned

> Those who owned the wire, fiber, and satellites now control the internet.
> Integrated services made better sense to consumers
> Customers preferred the ease of one invoice.
> In many cases, the systems are now linked.
> Additional add-ons & automation now possible
Drilling Rig Operation of 1995

> Drilling Rig
> TD rental
> EDR rental
> Directional Services
> MWD
> Mud Logging
> Mud Engineer
> Drill bit
> Drilling Fluid

> Choke
> Rotating Head
> BOP tester
> Phone/Pager
> Rig Site Housing
> Solids control
> Gas Buster
> Nipple up
> Etc.
Operator Goal

Minimize Cost Per Foot

Maximize Barrels per Well
Operator Benefits of Integration

> Redundant equipment, wiring and displays are eliminated
Operator Benefits of Integration

> Drillers are best equipped to execute directional commands of the Operator/Directional Driller.
Operator Benefits of Integration

> Real time “connection” to remote operations center is critical to success.

> With low count of rigs/operator, few can execute in scale to make this cost effective.

> Microwave antennae with satellite back-up ensures reliability.
Operator Benefits of Integration

> Real time “chat” documents all commentary between the ROC and driller and ensures accountability.
Operator Benefits of Integration

> Visualizations improve driller’s capability and understanding.
Operator Benefits of Integration

> In house simulators and offline competency assessments ensure success on location.
Operator Benefits of Integration

> Integration of rig controls system with downhole near-real-time data provides better wellbore placement
Operator Benefits of Integration

> Top Drive, Drawworks and Iron Roughneck controls are integrated, allowing repeatable best-in-class consistency.
Drilling Rig Operation of Today/Future

> Drilling Contractor as integrated service provider:
  – Rig & TD integrated
  – MWD/DD integrated
  – Digital Mud Logging integrated
  – Casing Running service
  – Super/auto choke provider
  – BOP testing provider
  – BOP Nipple up crews
  – Rotating head provider

> Drilling Fluid/Cuttings disposal contractor

> Bit contractor

> On-site housing contractor
Thank you for the opportunity to present to you today.