A Supplement to



SILLARY SEPTORS

# A UNIQUE PARTNERSHIP IN THE UINTA BASIN

APRIL 2002

A special report sponsored by



HALLIBURTON

## **A UNIQUE PARTNERSHIP IN THE UINTA BASIN**

he thing we most love about the oil and gas industry today is how much innovation is taking place as companies respond to volatile prices, increasing demand and tighter profit margins. As E&P companies pursue formerly uneconomic oil and gas plays around the world, they have to be more willing to think outside the box if those plays are to be successful.

That innovation obviously comes first and foremost, as it always has, from applying the latest new technologies. That is what gets engineers and geologists excited. But increasingly, companies also are willing to try new ways of doing business. That means new relationships and business arrangements with E&P partners and service providers.

The case study we present here of Gasco Energy Inc. and Halliburton Integrated Solutions is a great example. Here, the best ideas of a small, relatively new independent producer run by highly experienced people, combines with the intellectual power of one of the world's largest oil-service companies.

That dynamic combination is making a difference on Gasco's properties in Utah's Uinta Basin, where major gas accumulations wait to be tapped in the Mesaverde, Wasatch and Mancos formations. They have formed a group effort from initial well planning to final execution, and each side is aligned with the other. Gasco functions as the virtual company with the land position and exploration dream. Halliburton provides the technology and expertise to bring it to fruition.

The goal for all? Asset exploitation, which leads to better financial returns and higher gas production from the formerly challenging formations.

—Leslie Haines, Editor

## **CONTENTS**

- **2** Virtual Company ... A small E&P company and a service giant have joined forces to achieve efficiency and economy in the Uinta Basin of Utah. *Article by W.H. Leach Jr.*
- 7 Gasco Energy Inc. ... A rapidly growing independent, Gasco applies new technologies to generate and develop large natural gas deposits in the U.S. Rockies.
- **9** Halliburton Integrated Solutions ... Less about "one size fits all" than it is about developing technical and business solutions, IS matches the specific needs of each client.

ABOUT THE COVER: Hoarfrost blankets sage bushes at a drillsite in the Uinta Basin in Utah. (Photo by Lowell Georgia.)



a Hart Energy Publication of Chemical Week Associates 4545 Post Oak Place, Suite 210 Houston, Texas 77027-3105 713-993-9320 Fax: 713-840-8585 www.oilandgasinvestor.com

Brad Holmes Publisher Ext. 140, *bholmes@chemweek.com* 

Leslie Haines Editor Ext. 151, *lhaines@chemweek.com* 

Nissa Darbonne Managing Editor Ext. 165, ndarbonne@chemweek.com Peggy Williams Senior Exploration Editor mwilliams@chemweek.com

W.H. Leach Jr. Contributing Editor

Carla Cheshire & Alexa Sanders Graphic Artists

> Lowell Georgia Photo Editor

Bob McGarr Regional Sales Manager Ext. 144, bmcgarr@chemweek.com

Shelley Lamb Regional Sales Manager Ext. 118, *slamb@chemweek.com* 

Bob Jarvis, Vice President, Hart Publications; Group Publisher, Finance & Power Publications Ext. 130, bjarvis@chemweek.com Chemical Week

Mario G. Di Ubaldi Executive VP. Chemweek Groun **Richard A. Eichler President, Hart Publications Bill Rutledge, Group Director Conferences & Exhibitions** Michael D. Kraus VP Manufacturing Shane Mollov **VP & Circulation Director** Stephen J. Schwartz **Group VP** Lyn Tattum **Ğroup VP Richard J. Zanetti Group VP Kevin F. Higgins** VP & CFO **Michael Silber President & CEO** 

# VIRTUAL COMPANY

A small E&P company and a service giant join forces to achieve efficiency and economy.

Article by W.H. Leach Jr. <sup>4</sup> V irtual" is defined by Webster's as "being in essence or effect, though not bearing the name, title or the like, as in virtual rulers." Common expressions of speech refer to something being virtually done or virtually the same. In recent years, game manufacturers have put a product on the market called "Virtual Reality." But a virtual company? That sounds truly innovative. Yet that is exactly what a Denver-based exploration and production company is in the process of creating.

By way of background, Gasco Energy Inc. (Nasdaq: GASE), a Denver-based independent, was formed as a Nevada corporation in 1997, and went public following a reverse merger with Pannonian Energy Corp., a Delaware corporation, in 2001. Pannonian, now a wholly owned subsidiary of Gasco, remains as the operating arm of the company. Gasco's mission statement reads "to create shareholder value through the generation and development of high-potential exploitation projects." To achieve these ends the company currently is active in the Green River Basin of Wyoming and Utah's Uinta Basin.

The Uinta Basin was of particular inter-

est to the company. "We recognized a major gas accumulation across the entire basin, with the principal restraint to development being recovery of sufficient volumes to make it a commercial play," says Robin Dean, Gasco senior geologist.

"Even though a number of wells previously drilled exhibited favorable log characteristics, it was not until the implementation of completion techniques developed during the 1990s that these wells could be completed commercially. In short, modern frac technology is the driving factor of the current basin development."

To demonstrate its faith in the Uinta, Gasco formed an area of mutual interest (AMI) with Phillips Petroleum covering five townships and containing 32,000 gross leasehold acres. In the AMI, Gasco has a 15% to 20% working interest in the Cretaceous Mesaverde formation and deeper, and a 75% to 100% working interest in the shallower Tertiary Wasatch formation.

In addition, the company, for its own account, acquired 127,000 gross acres, and 52,500 net acres in Uintah County. To date, Phillips has drilled and completed three wells on the AMI.

At press time two of the wells were online but

In the Uinta and Piceance basins, only 25% to 30% of the potentially productive area has been adequately tested through the Cretaceous section, says the Potential Gas Committee in a recent report.



still being tested to determine flow capacity and the third well was in the completion stage. Therefore no production rates were available.

Also at press time, the drilling location for Gasco's first own-account operated well was being constructed. This well, named #1 Federal 23-29 and projected to 11,625 feet, will test both Wasatch and Mesaverde. Pipeline capacity is adequate in the area. Phillips gathers the gas, transports it to Dominion Exploration & Production Co. for compression and processing, and Dominion in turn delivers it to the Questar Corp. pipeline. (See map.)

While participating in planning the completion program for the Phillips wells, Gasco became with Halliburton's acquainted Integrated Solutions (IS) program. IS, established by Halliburton in the early 1990s, "utilizes alternative business applications to create additional value in the industry," says Clay Terry, business development manager of Halliburton's Rocky Mountain IS group. "Providing technology-based solutions for asset exploitation, and state-of-the-art well construction expertise, Halliburton supports companies who have structured themselves to leverage industry experience."

Since Gasco believed modern hydraulic fracturing is enabling the development of the Uinta Basin, who better to form a strategic relationship with than Halliburton? Thus the virtual company began to take form. rently numbering nine members, is basically made up of technical and financial personnel. Each staff member brings approximately 20 years of experience to the company. Halliburton, through IS, assists Gasco through the extension of its human resources and the exploitation of its natural resources.

The concept differs from conventional outsourcing in several ways. With outsourcing, corporate functions, such as tax preparation, billing and sales, may be farmed out to a contracting third party, generally with no need for regular communication. The third party holds no economic interest in the company or its assets and is thus not fully aligned with the customer's overall economic objectives. Under the virtual company concept, Halliburton contributes technical support and is aligned by having the option to ultimately become a participant in the wells to which it provides support.

Communication is regular and extensive. For example, regular meetings are held between Gasco staff members and representatives of Halliburton through the venue of a joint technical team, or JTT.

These are not merely restricted to the completion phase of exploitation activity. Rather, well in advance of actual spudding of the new Gasco well, Gasco and Halliburton representatives were in extended conferences regarding procedures to be followed in both the drilling

and completion phases of well construction.

"It's a group effort from the get-go. We've had as many as nine Halliburton engineers and technical people in our conference room for one meeting," says Michael Decker, Gasco executive vice president and chief operating officer.

The collaborative meetings may become even more frequent, as Gasco plans to drill at least three wells this year, keeping at

Communication among Halliburton IS and Gasco personnel is regular and extensive. "It's a group effort from the get-go. We've had as many as nine Halliburton engineers and technical people in our conference room for one meeting," says Michael Decker, Gasco executive vice president and chief operating officer.



#### How it works

The concept is simple: Gasco functions as the virtual company, being the reservoir and production manager, while maintaining a minimal staff, and, therefore, a low-overhead position. Halliburton provides well-construction technology and expertise to the relationship. The Gasco staff, curleast one rig busy in the Mesaverde in each well, with the deeper Mancos as an added possibility. Dean believes the Gasco acreage can yield up to 1 trillion cubic feet (Tcf) of gas on 40-acre spacing.

Gasco definitely benefits from the experience of the Halliburton IS group. The company has provided IS services, on some basis, to numerous companies in the Rockies since its IS group was formed there in 1995. Not all of the relationships are as integral as with Gasco; in fact, services can be structured to the needs of individual client E&P companies.

Says Terry, "Our company's project portfolio includes both majors and independents, domestic and worldwide, and we actively seek more." He believes the services provide a great deal of value, "in that we demonstrate and provide technology-based solutions. Our IS projects take three basic forms: integrated managed services, operations management and asset management."

Specific to its relationship with Gasco, Halliburton is an advisory participant during predrilling



Phillips Petroleum drilled the #34-29 Federal in Uinta County, Utah, to a depth of 12,600 feet in the Mancos.

operations. In the completion phase, Halliburton, becomes the lead contractor, and therefore is in charge of completion-well site management. Gasco and Halliburton, through the JTT, jointly decide the type and design of well completion in advance. As a participant in a well, Halliburton may share in the risk of completion.

#### Applying new technology

Gasco has extended its virtual-company philosophy into the drilling phase of the Uinta Basin program. The company recently entered into a working agreement with Caza Drilling Co., Denver, in which Caza provides a sharedrisk contract to Gasco. Under the agreement, Caza provides not only the usual drilling services but also day-to-day supervision, including selection and application of materials.

This type of contract is somewhat unique to this area of the Rockies, where day-work and footage contracts are more the norm. The contract is similar to turnkey contracts more common to the Denver-Julesburg Basin of Colorado and Nebraska. "The common goal of this arrangement with Caza is to drill cheaper, faster," says John D. Longwell, Gasco operations manager. The companies expect to drill the new well, the #1 Federal 23-29, in 26 days.

Halliburton's technical support team has added yet another benefit to Gasco's Uinta Basin exploitation program. The Gasco #1 Federal 23-29 will be drilled with a diammonium phosphate mud system (DAP), a product relatively new to the area. This system has advantages over the

### Some of the Benefits of IS Assistance

Considerable contributions to the new technologies which have brought Gasco and Halliburton together were developed from a gas-standards study conducted by the Gas Technology Institute and then combined with Halliburton's own research and development.

The combined result focused on a multiplezone completion strategy for low-permeability reservoirs, according to Frank Syfan, Halliburton reservoir engineering advisor. The concept of multiple-zone completions has a definite application to the Uinta Basin, where the Wasatch and Mesaverde together may boast dozens of vertically stacked sands, and may require commingling in a common wellbore. The time required and cost of completions may also be significantly reduced.

The process for designing a specific completion methodology requires a formation evaluation, using all available data. Of particular interest is the determination of formation water saturation and effective permeability. Two critical technologies that have significant application in the development of Mesaverde and Wasatch reserves include magnetic resonance imaging logging (MRIL) applications, and diagnostic fracture injection testing (DFIT).

MRIL applications are particularly useful in differentiating bound from producible water saturations in tight-gas applications. An additional capacity MRIL provides is an ability to estimate reservoir permeability from pore-size distribution analysis.

DFIT utilizes G-function derivative analysis, a technique presented by Barree and Mukherjee and further refined by Halliburton. G-function analysis provides a means to test the leak-off character of individual sands, allowing a determination of permeability and commercial completion potential. This pressure transient testing method is especially useful in the Rockies where some sands do not close for hours following traditional minifracs.

The end result is the identification of potential zones for completion, and the acquisition of data required for effective placement of stimulation treatments in zones demonstrating the potential for commercial production.

A recent innovation in fracturing identified from the GTI and Halliburton studies is the necessity to remove frac fluids from the formation as soon as possible after treatment. This is particularly true with the Mesaverde because of its low permeability. The rapid flow-back of wells following stimulation forces the hydraulically induced fractures to quickly shut down, before the frac fluids can be imbibed.

Syfan says, "Rapid and continuous flow back can result in recovery results up to 20% better than the recovery from offset wells which do not employ this technique. Well payout and rate of return benefit significantly."

The ability to provide rapid and continuous flowback of completion fluids, as well as a commensurate reduction in time and cost of completions, has been provided through the introduction of Halliburton's Fasdrill® Frac Plug. (See picture.)

Developed by the company for use in Jonah Field in Wyoming in the late 1990s, Gasco will be the first operator to use the plug in the Uinta Basin. By means of a ball sealer on top, the plug provides zonal isolation during multizone stimulation treatments, holding differential pressure from above (up to 10,000 psi) while allowing flow-back from below. The plug can be set on electric wireline tools, slickline setting tools or coiled-tubing setting tools. The plug has proved to be quite valuable in rigless completions such as Gasco contemplates.

Recent drilling costs in the Uinta Basin (dryhole costs) are averaging \$750,000. Through its new arrangement with Caza, Gasco hopes to improve on that figure, according to Gasco's John D. Longwell. Completions in the basin can take up to three weeks, and can require five to seven frac jobs depending on the findings of the aforementioned formation evaluation.

Regarding completion costs, Michael Decker says there is good news and bad news. "The good news is that overall completion costs in the Uinta Basin have come down as much as 30% from a year ago. The bad news is that this is due to falling gas prices." However, one of the benefits of the Gasco staff is the knowledge that wellhead prices are always cyclical. Moreover, the company remains convinced there is no greater province for gas exploitation than the Rocky Mountain region.

—W.H. Leach, Jr.

more conventional KCL mud systems, namely drill-string protection, shale inhibition and environmental safety. Furthermore, it allows the running of a conventional, cost-effective triple-combo logging suite.

The importance of a joint technical team cannot be overstressed, according to Terry. "Many E&P companies don't invest the time and effort to develop a solution strategy that couples technology enhancements with cost-effective but proven best practices for optimum well performance," he says. "You can't overestimate the value of having so many minds involved."

Terry cites the problems facing most companies in the decision-making process: there is limit-

### Frac-Plug

The Fasdrill<sup>®</sup> composite Frac-Plug is set on E-line to temporarily isolate the different zones, to place the stimulation where desired. The Fasdrill<sup>®</sup> Frac-Plug is easily

> removed by drilling up the plug, although this is not a necessity.

An additional benefit is it allows flowing the well after the stimulation is completed prior to drilling out. The well can be produced during the completion process and/or cleaned up between stimulation stages. The lower stage will assist the well to clean up.

After a zone is fractured, a Fasdrill<sup>®</sup> Frac-Plug is run in the well to isolate the next zone. Halliburton has run up to 12 Fasdrill<sup>®</sup> plugs in a single well. These plugs can be drilled out by a rig, hydraulic workover unit or rigless by using coiled tubing.

Exceptional drill-out results have been achieved. The standard plug drill-out time is estimated at 10 to 15 minutes and the HPHT is 20 to 30 minutes per plug.



ed time to devote to the problem, personnel are often nervous about going out on a limb with something new, company politics may have to be considered and companies don't have time to repeat the process if mistakes are made. The difference in a Halliburton (IS) agreement with a company is "once we validated that this is our type of play, we have and will provide the expertise and support to back it up."

While it's too early in the Gasco-Halliburton strategic relationship to determine the cost savings from the union, the economic benefit from the ability to reduce staff should be quite obvious. Specific areas of possible staff reduction are field and operational personnel. Operators know that field and operational personnel can create the most overhead expense due to their need for vehicles, and attendant insurance, as well as special tools and equipment. Under the virtual-company business model, other areas of cost savings are expected to develop naturally as Gasco and Halliburton collaborate on complementary roles to optimize the relationship, minimizing overlap between the two companies.

A concept whose time and place has come? Probably yes. As companies continue to merge, as product prices continue to fall, as austerity programs continue to generate layoffs, as fewer and fewer technical people are coming into the oil and gas industry from colleges and universities, and as attrition rapidly eats away at seasoned and experienced personnel, what better solution for some members of the industry than relying on industry infrastructure through the concept of a cost-effective streamlined or virtual company? The Gasco model may not be applicable to all companies, but some version may well be.

Terry says, "This solution option is available to support companies that have structured themselves to rely upon industry experience." ■

From the left are

Gasco president

and chief execu-

tive officer; Clay

Terry, business development

manager of

Halliburton's

group; and

officer.

Michael Decker,

Gasco executive

chief operating

vice president and

Rocky Mountain IS

Mark Erickson,

## GASCO ENERGY INC.

asco Energy Inc. (OTC BB: GASE) is a rapidly growing independent oil and gas company focused on building shareholder value through the application of new technologies to generate and develop large natural gas deposits in the U.S. Rocky Mountains. Its corporate strategy is to capitalize on lower drilling costs, initiate a drilling program in Utah, increase activity in Wyoming and leverage strategic relationships.

The company controls more than 159,000 gross acres in the Uinta Basin of northeast Utah and has an area of mutual interest (AMI) covering 330,000 gross acres in the Greater Green River Basin in southwest Wyoming.

The company is producing gas from its Uinta Basin wells drilled with Phillips Petroleum and recently began drilling its first Uinta Basin well under a 10-well pilot program with Halliburton Energy Services. Gasco's partner in the Green River Basin AMI is Burlington Resources, one of the largest independent operators in North America. The company has an estimated gas resource base of more than 900 billion cubic feet equivalent in its Riverbend project in the Uinta Basin, according to a report by a leading independent engineering firm and filed with the Securities and Exchange Commission. Gasco has a strong balance sheet with approximately \$13 million in cash and no debt.

The Rockies represent the largest untapped, drillable potential for gas supply in North America. The Potential Gas Committee (PGC) estimates ultimate recovery of total gas reserves in the Rockies at 236 trillion cubic feet (Tcf). Of this estimated amount, only 25% of the region's hydrocarbons have been produced, compared with 58% along the Gulf Coast, 54% in the Midcontinent and 30% in the Gulf of Mexico.

The committee estimates the greatest potential for nonassociated gas in the Rocky Mountain region is concentrated in southwestern and south-central Wyoming, adjacent northwestern Colorado and northeastern Utah. This region includes the Uinta, Piceance and Greater Green River basins, in which Gasco operates.

#### **Gasco's Properties**

*Riverbend Project.* The company's primary focus (approximately 48% average working interest) comprises more than 159,000 acres in the Uinta Basin of northeastern Utah, a proven basin rich in gas. The bulk of this acreage position was accumulated prior to the recent industry focus in the basin.

Phillips Petroleum has drilled three wells on Gasco acreage. The first two wells are successful discoveries and are flowing into a pipeline and the third well is completed and awaiting hook-up. Estimates of reserves and stable flow rates will be determined pending ongoing engineering evaluation.

Earlier this year, Gasco announced a strategic relationship with Halliburton Energy Services to drill a 10-well pilot program in the Riverbend Project area. The first well under the pilot program was spud in February 2002.

Gasco's geologic and engineering focus is concentrated on two tight-sand formations in the basin: the Mesaverde and the Wasatch. Gasco's interests are relatively close



to recent wells testing the Mesaverde. During the past 20 months, Coastal Oil & Gas Corp., a subsidiary of El Paso Corp., and Dominion Exploration & Production have drilled 98 wells into or through the Mesaverde with only one dry hole.

Greater Green River Basin Project. According to the U.S. Geological Survey (Gautier, Dolton, et al. 1995), the Greater Green River Basin has produced more than 7.3 Tcf of gas and 849 million barrels of oil, making it one of the country's giant oil and gas fields.



Gasco partnered with Burlington Resources to jointly explore and develop seven areas of mutual interest under an umbrella exploration agreement covering approximately 330,000 acres in the Greater Green River Basin in west-central Wyoming. Burlington will operate each AMI, holding a 50% working interest. Gasco will own a 25% to 50% working interest.

#### **Resource Evaluation**

A leading independent engineering firm completed an in-depth, multidisciplinary, petrophysical and economic evaluation of Gasco's Riverbend properties in the Uinta Basin. The firm believes total unrisked net resources, from the Wasatch and Mesaverde, are 1.45 million barrels of liquids and 904.7 trillion cubic feet of gas. (See table.)

The firm's estimate of future revenues is based on a price deck based on average Nymex prices for September 2000 through August 2002. Wellhead gas prices used in the report are \$3.56 per million Btu (MMBtu), escalated 3% per year to a maximum of \$4.15 per MMBtu. Condensate prices were held con-

stant at \$25 per barrel throughout the life of the properties. On a low price deck of \$1.65 per MMBtu for wellhead gas, holding condensate at \$25 per barrel (and adjusting drilling costs to reflect when Nymex prices were approximately \$2.50 per MMBtu in late 1999 and early 2000), Gasco's present worth, discounted at 10%, is \$129.6 million.

The engineering firm identified a total of 1,815 gross drilling locations—1,711 Mesaverde and 104 Wasatch.

While each of the Wasatch locations is coincident with a Mesaverde location, for purposes of analysis the engineering firm assumed that all of the Wasatch resources would be drilled and produced via wells that did not penetrate the deeper Mesaverde. In the report, the engineering firm notes that the Wasatch and Mesaverde wells can be produced and commingled via the same wellbore.

The report cited lowered costs when the formations are combined: "If the Wasatch and Mesaverde formations are commingled in the same wellbore, there is potential to reduce capital costs by 60% for the Wasatch wells."

#### Senior Management

Gasco's management team has a proven track record in gas exploration and development, including the development of several start-up exploration companies with an aggregate combined market capitalization exceeding \$1 billion.

Mark Erickson, Gasco president and chief executive officer, cofounded Pennaco Energy.

Michael Decker, executive vice president and chief operating officer, is a former vice president of exploitation for Prima Oil & Gas (Nasdaq: PENG).

King Grant, executive vice president and chief financial officer, is a former senior vice president of the natural resources group for ING Barings and a former vice president of Chase Bank.

John Longwell, operations manager, is a former senior vice president of operations for Prima Energy Corp.

#### Gasco Stock

Gasco (OTC BB: GASE) is a fully reporting company to the SEC and is applying for a listing on the American Stock Exchange. Gasco has 27,252,500 primary outstanding shares, and 39,952,500 shares outstanding on a fully diluted basis (as of Oct. 31, 2001).

	Unrisked Net Resources		Unrisked Future Net	
			Revenue (\$M)	
Formation	Condensate	Gas	Total	Present Worth
	(Barrels)	(Mcf)		at 10%
Mesaverde	1,264,989	843,102,000	\$2,246,695	\$181,383
Wasatch	184,797	61,594,400	\$171,082	\$61,069
Total	1,449,786	904,696,400	\$2,417,777	\$242,452

#### Contact:

Gasco Energy Inc. 14 Inverness Drive East, Suite H-236 Englewood, Colo. 80112 303-483-0044 Fax: 303-483-0011 www.gascoenergy.com

## HALLIBURTON INTEGRATED SOLUTIONS

alliburton's Integrated Solutions (IS) means different things to different people. That is how Halliburton management likes it as they believe Integrated Solutions is less about "one size fits all" than it is about developing technical and business solutions that match the specific needs of each client.

IS was formed in 1993 in part as a response to some customers' desire for their service delivery to be coordinated and delivered through a single source. At the same time, Halliburton reorganized its nine separate oilfield service entities under a single management structure to form Halliburton Energy Services. The moves proved to be successful and numerous project successes were enjoyed around the globe. However, Halliburton and many clients believed that there was more progress to be made and more value to be created.

Halliburton had developed a reputation for being an excellent provider of services but had worked almost exclusively on a "you call, we haul" basis matching discrete services to prescribed work orders developed (often exclusively) by its clients. Yet there was a belief within Halliburton that the vast experience base that came from working in nearly 120 countries around the world positioned the company well for participation in more of the project technical design and analysis activities in addition to the service execution. The key challenge was giving its clients the confidence to see things that way too.

In 1995, Halliburton set out to define its IS strategy and determine what would be required to achieve it. Early on, Halliburton recognized that it needed to balance its technology expertise with a better understanding of the processes and drivers of its E&P company clients.

In order to do so, Halliburton realized it needed skillsets that historically resided within the E&P companies. This led the company to begin recruiting experienced drilling and completions engineering and project management expertise along with expanding its reservoir description ranks. Today, the Integrated Solutions group, which is still growing, numbers nearly 450 personnel worldwide with a significant number of former E&P industry professionals comprising much of the skill base.

#### **The Strategy**

The strategy, which emerged from the efforts in 1995, has remained essentially intact to this day. It is designed to enhance projects by leveraging the depth and breadth of Halliburton's technology and operational capability to create value for its clients and utilize performance contracts to align with them to deliver that value

The strategy is focused on wellconstruction and productionenhancement projects in the development and production phases of the oilfield life cycle.

Halliburton's goal is to work with its clients to complement their expertise in a manner appropriate for the given opportunity. It can combine its global experience base from technology applications with its local knowledge and resources, to offer support, which goes beyond the typical provision of products and services. Among the functions that Halliburton can provide to meet a particular resource constraint are:

- Reservoir description,
- Project finance,
- Drilling engineering,
- Procurement and logistics,
- Completions engineering,

- Health, safety and environmental management,
- Well construction,
- Project management,
- Risk analysis and
- Asset management.

With a client list spanning large majors and national oil companies to small independents working all over the world, there are a multitude of ways that projects have benefited from Halliburton's Integrated Solutions.

Often there is a strategy specific to a particular operating area or basin, like the low-perm multizone completion-solution strategy in the Rockies, which may be ideally suited for a particular type of client. But Halliburton has demonstrated unparalleled flexibility which means that it can tailor a solution to meet almost any need, providing it makes economic sense for both parties to do so.

#### **Unique Arrangements**

IS can provide unique business arrangements. Halliburton recognized that it is easy to make claims of superior performance if you are not required to put anything on the line to back up the claims. The IS group knew that to be successful with its approach it would need to ensure that Halliburton's interests were aligned with the interests of its clients.

To do this, IS introduced a series of nontraditional commercial options. The result is the broadest array of commercial choices available in the industry.

While there are many ways of structuring the deal terms to ensure alignment and encourage behavior that achieves shared goals, three basic categories of deals that are being structured by Halliburton include:

— The *lump sum option*, which provides project-cost certainty for

## HALLIBURTON

repetitive types of operations where risk can be spread over a number of wells. However this option does not necessarily align the customer and service provider interests or encourage the introduction of new technology.

— The *incentive/penalty payment* arrangement bases a share of Halliburton's compensation on one or more performance measures related to achieving project goals. It helps align mutual interests by encouraging teamwork where team members stand to lose or gain, depending on each other's activities.

- The bottom line method to

align interests is through *reservoir performance*. This option optimizes the relationship between cost control and end results because both parties use the same scorecard.

#### **Adaptive Service**

The industry is undergoing continual change. The "marginal" development prospects of yesterday are today's challenges and represent one of the key drivers leading energy companies and service companies into new types of business relationships. These new relationships are not only necessary for overall industry health, but simultaneously offer unprecedented opportunities for mutual success.

Halliburton has taken significant and far-reaching steps in terms of organizational restructuring, skill-set development and business-practices refinement to meet the industry's needs for these new relationships. The steps it has taken enable the experience and detailed knowledge within the vast portfolio of Halliburton's products and services to be combined with the client's extensive knowledge such that together, cost-effective, world-class integrated solutions can be achieved.



**To learn more about Halliburton's services**, contact a local Integrated Solutions representative or e-mail ward.dempsey@halliburton.com.



## HALLIBURTON