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A Perspective on the Houston Economy

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Upstream Petroleum Employment in the Current Drilling Cycle

Oil and gas extraction employment in the United States has been dominated by productivity gains in the producer sector since the 1980s. Although drilling and oil services still show a strong pattern of movement as the rig count rises and falls, productivity has exerted strong downward pressure on producer jobs since the 1980s.

The number of U.S. jobs related to oil and gas production, drilling and services rose a strong 7.3 percent in 2004, the result of a continued upswing in domestic exploration activity. It represents the fifth employment increase in the oil and gas sector since 1989, but structural declines in oil- and gas-related employment seem likely to dominate in the future.

Regional changes in oil and gas activity and employment accompanied the 2004 U.S. job increases. Specifically, Texas, New Mexico and the Rocky Mountain states have emerged as winners, while oil-bearing, offshore and mid-continent regions have lost out.¹

This article examines recent U.S. trends in oil- and gas-related employment within the context of longer-term developments in the industry. Our ability to compare employment across time and regions is com-

plicated by lags in government data releases and recent changes to the rules governing both industry classifications and metropolitan statistical definitions. Even so, the available data tell an interesting story about upstream energy employment through 2004.

National Trends

The Bureau of Labor Statistics (BLS) provides employment data on three upstream energy sectors relevant to our investigation: oil and gas extraction, drilling, and oil and gas support. These correspond roughly to the industry terms of production, drilling and oil services, respectively.² One can reasonably aggregate the BLS drilling and support series, leaving two segments of employment: extraction (production) and drilling and support (drilling and services). Figure 1 plots these two series against oilfield activity as measured by the Baker Hughes rotary rig count.

As shown in Figure 1, while drilling and support generally track cyclical trends in rig activity, employment in the extraction sector has been in a

Figure 1
Employment in Oil Extraction and Support
Compared with Rig Count

Index, January 1990 = 1



SOURCES: Baker Hughes; Bureau of Labor Statistics; authors' calculations.

near-constant decline in recent years. In fact, extraction employment saw two decades of decline between 1983 and 2003, with 1991 the only (modest) exception. The strong 7.3 percent increase in total upstream employment in 2004 (measured December to December) was widely noted as the first in years. Extraction jobs rose 5.4 percent, and the sum of drilling and support service jobs rose 8.6 percent.³

Prior to the 2004 gains, the total upstream industry saw cyclical increases in 1990, 1993, 1996 and 1999. The Baker Hughes rig count has reached 1,000 working rigs four times since 1989: in April 1990, January 1998, October 2000 and April 2003. The average industry employment corresponding to each date was 359,300, 322,600, 301,000 and 298,200, respectively, indicating that the industry has learned to do more with fewer workers. However, the data also make clear that most of the gains in output per worker in recent years have been concentrated in the extraction, or producer, sector, which follows a long downward trend. Drilling and support have tended to follow the drilling cycle much more closely.

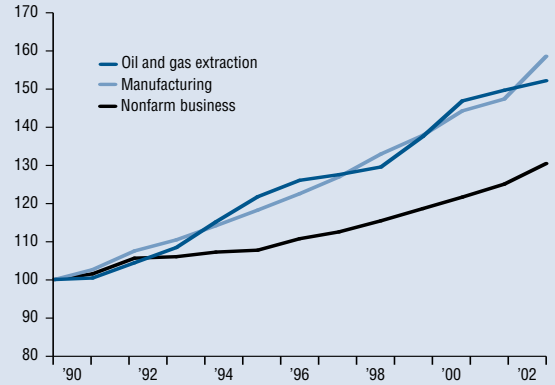
Throughout the U.S. economy, productivity gains have been the enemy of short-run employment gains. Since the last peak in production in the fourth quarter of 2000, gross domestic product has risen 11.2 percent, while nonfarm establishment jobs have not grown at all. January 2005 saw the number of jobs in the U.S. economy finally match the previous employment peak, ending more than three years of jobless recovery.

With no new jobs, the increase in output has been covered by growing output per work hour—productivity gains. Nonfarm productivity grew just 1.4 percent annually on average from 1973 to 1990 but surged to a 2.5 percent annual rate after 1990. Over the past four years, with job growth stalled, economy-wide productivity gains accelerated to 3.9 percent.

Throughout the 1990s, the oil and gas industry was a leader in productivity improvement (Figure 2). Output

Figure 2
Productivity in Oil and Gas Outpaces
the Nonfarm Economy

Index: 1990 = 100



SOURCE: Bureau of Labor Statistics.

per oil and gas worker surged 3.6 percent annually from 1990 to 2002, well ahead of the 2.2 percent rate in the U.S. economy and nearly matching manufacturing's 3.9 percent rate. This means that downward pressure on oil jobs due to productivity improvements was over 60 percent greater than that on the overall U.S. economy.

Where do these productivity gains come from? For the economy as a whole, they are widely attributed to the New Economy: new ways to arrange the workplace and improve production processes made possible by computers, semiconductors and advances in telecommunications.

Table 1
Oil and Gas Production by State and Region, 2003

State/region	Crude oil (thousands of barrels)	Natural gas (billion cubic feet)
Alaska	355,582	490
California	250,000	337
Kansas	33,944	419
Louisiana	90,111	1,362
New Mexico	66,130	1,604
Oklahoma	65,356	1,558
Texas	405,801	5,244
Federal Gulf of Mexico	569,131	4,406
Rockies	105,931	2,905
Southeast	32,196	642
Other	99,271	918
United States	2,073,453	19,885

NOTE: State totals include offshore production belonging to the state. Federal Offshore except Gulf of Mexico are in "Other."

SOURCE: Energy Information Administration.

The oil industry has been a recognized leader in embracing improvements in materials and technology, such as 3-D and 4-D seismic, drill bit sensors and horizontal drilling.⁴ All have improved the industry's ability to know where to drill, to drill deeper into the earth, and to drill in deeper waters and harsher environments. But the industry has also benefited from downsizing and outsourcing activities in relatively mundane business areas, such as personnel and accounting services. The data suggest that the bulk of these productivity gains have accrued to producers more than to drilling and support services.

Productivity gains are likely to continue their dominance of oil and gas employment once the current cyclical peak is past. However, it is important to recognize that falling employment does not necessarily indicate a declining industry. It may simply be a sign of technological success. Productivity gains in manufacturing, for example, pushed employment down from a peak of 19.4 million in 1979 to 17.7 million in 2000, even though manufacturing output grew rapidly throughout the period. Despite falling employment, the upstream oil and gas sector has held on to about a 1 percent share of GDP since 1987.

Regional Trends

Table 1 outlines the simple geography of oil and gas in the United States. There are seven key states: Alaska, California, Kansas, Louisiana, New Mexico, Oklahoma and Texas. These seven states, along with the Federal Offshore area, four states in the Rockies (Colorado, Montana, Utah and Wyoming) and three in the Southeast (Alabama, Arkansas and Mississippi), dominate the domestic

upstream industry. Together these states and regions accounted for just over 95 percent of both oil and natural gas production in 2003.

The recent regional energy story revolves around two themes: the oil-gas mix and declining offshore activity. The period since 1992 has marked a turning point in domestic production. During the short-lived expansion of June to December 1992, gas-directed exploration overtook oil-directed in its share of U.S. activity. In June 1992, 40.7 percent of all rigs drilling were directed to natural gas. By the December 1992 peak, 56.5 percent of drilling was gas-directed. Continuing this trend, about 85 percent of drilling activity is now directed to natural gas.

Table 2 details the share of each region's oil and gas activity since 1992 as measured by the Baker Hughes rig count. It shows drilling activity shifting out of states dominated by oil production, such as Alaska and California. Texas and New Mexico show definite long-term movements of drilling activity into the region, both from 1992 to 2001 and in the current expansion. The Rocky Mountain states fell out of favor in the 1990s but have returned strongly in the present cycle.

Oklahoma and Kansas have seen continuing declines in exploration since 1992. The Gulf of Mexico has clearly not done well in the current cycle. It was the big winner in the 1990s, with its share of drilling activity growing from 5.5 percent to 12.1 percent, but it has fallen back to 7 percent in recent months. The number of rigs working in the Gulf is now below its level in

April 1999, during the last trough in overall drilling activity.

State data on marketed natural gas production are available only from 1997 to 2003.⁵ In states like Texas and New Mexico, however, significant increases in drilling have managed only to maintain stable production. In Kansas, Oklahoma, Louisiana and the Federal Offshore, stable or declining drilling activity has resulted in rapidly dropping production levels. Production is down 10 to 15 percent since 1997 in Louisiana, Oklahoma and the Gulf and 39 percent in Kansas. Production in the Rockies is up 72 percent. Nationwide production is down 1.4 percent over the period.

Table 3 shows one measure of the distribution by state and region of oil and gas employment. The data here are taken from the Census Bureau's *County Business Patterns* report, whereas data in Figure 1 come from the Bureau of Labor Statistics' monthly Current Employment Statistics survey. In Census Bureau data, workers are classified as working in either central or noncentral

Table 2
Distribution of Drilling Activity by State and Region
(Oil and gas rigs drilling at peak activity)

State/region	Percent of rigs		
	2005	2001	1992
Texas	43.9	38.2	34.8
Oklahoma	11.1	12.1	15.7
Louisiana	8.2	8.1	6.7
New Mexico	5.8	6.0	4.4
California	2.0	3.3	4.1
Kansas	.5	1.7	3.5
Alaska	.8	1.0	.9
Gulf of Mexico	7.0	12.1	5.5
Rockies	14.7	10.3	13.2
Southeast	1.1	1.4	1.6
Other	4.8	5.6	9.7
United States	100	100	100

NOTE: Texas, Louisiana, Mississippi and Alabama are land drilling only, with all offshore in the Gulf of Mexico category. Alaska and California include some offshore drilling. Dates are peaks in activity on December 18, 1992; June 22, 2001; and March 18, 2005.

SOURCE: Baker Hughes.

Table 3
Oil and Gas Employment by State and Region, 2002

State/region	Oil- and gas-related jobs	Extraction	Drilling	Support services
Texas	107,554	37,016	24,999	45,539
Oklahoma	24,238	8,725	5,196	10,317
Louisiana	42,607	10,633	7,482	24,492
New Mexico	10,062	3,204	2,643	4,215
California	12,332	3,682	2,192	6,458
Kansas	5,525	2,646	589	2,290
Alaska	6,270	1,382	905	3,983
Rockies	22,441	8,455	5,073	8,913
Southeast	7,134	2,311	1,966	2,857
Other	23,082	10,226	4,977	7,879
United States	261,245	88,280	56,022	116,943

NOTE: Noncentral establishments only.

SOURCE: Census Bureau, *County Business Patterns*.

establishments. Central establishments serve multiple establishments, such as headquarters, laboratories or central warehouses.

Table 3, which counts employment only in noncentral establishments, mostly captures employment at establishments in the field and serving specific regions or localities. Because the Census Bureau no longer reports the specific industry serviced by a subset of central establishments, upstream employment in cities with high concentrations of central establishments is probably underrepresented.

Texas dominates in oil and gas employment, accounting for 107,554 jobs, or 41.2 percent of the total. Louisiana and Oklahoma follow with a combined 25.6 percent of jobs. The combined oil-producing states and regions account for 91.2 percent of employment. Not surprisingly, drilling and oil services make up 66.2 percent of the industry's jobs found in the field. Texas, Oklahoma and Louisiana also lead in the number of drilling and service workers.

Table 4 returns to data comparable with that used in Figure 1. It shows percentage changes in oil-related employment by region over the cur-

rent drilling cycle.⁶ These state and regional data are available only through June 2004. For the United States as a whole, employment fell 9.9 percent between June 2001 and April 2002, then rose 6.6 percent by June 2004. The net loss in industry jobs by

June 2004 was 3.4 percent.

The regions that do better than the U.S. average in retaining jobs are those with growing levels of drilling activity—Texas, New Mexico and especially the Rockies. Oklahoma does well, but probably more because of gains in producer headquarters employment than in drilling or support, especially in Oklahoma City. States losing jobs are also predictable on the basis of activity shifting out of these states: Alaska, California and Kansas. Louisiana has also lost jobs as the share of drilling activity shifts out of the Gulf.

Shifts by Metro Area

Table 5 shows the sectoral composition of oil- and gas-related employment for 16 metropolitan areas, with the jobs divided into oil and gas extraction, drilling and support. The employment measure here includes jobs in noncentral establishments only, excluding headquarters, laboratories, central warehouses and so forth.⁷

The typical metro area shown here has 45.4 percent of its oil- and gas-related jobs in

extraction, or producer, establishments. The metro areas whose upstream employment is dominated by extraction are Denver, 83.2 percent; Fort Worth, 66.2; New Orleans, 65; and Oklahoma City, 57.2. The typical city has 54.6 percent of its oil- and gas-related jobs in drilling and support, but Lafayette has 91.6 percent; Houma, 87.3; Bakersfield, 71.2; and Anchorage, 71.

The omission of central establishments from this employment measure challenges researchers' ability to capture the full impact of upstream energy employment in some regions. Official data no longer allow us to separate central establishments by industry, but past studies show that the cities with the largest number of these establishments are Houston, Denver, Dallas, Fort Worth, Tulsa, New Orleans and Odessa–Midland.⁸ The number of central establishments is probably dominated by headquarters in most of these cities, especially Houston. In 1997, for example, Houston had six employees in central establishments for every one in Dallas, the No. 2 city. Dallas and the

Table 4
Change in Oil-Related Jobs by State and Region
(Decline and recovery in the last oil recession)

State/region	Percent change		
	Peak to trough (6/01–4/02)	Trough to present (4/02–6/04)	Peak to present (6/01–6/04)
Alaska	-7.8	-7.1	-14.9
California	-13.5	3.5	-10.0
Kansas	-6.9	6.9	0
Louisiana	-10.1	-7.1	-17.2
New Mexico	2.9	0.9	3.8
Oklahoma	-8.0	13.9	5.9
Texas	-7.2	6.4	-0.8
Rockies	-5.8	14.3	8.5
Southeast	-7.8	-0.7	-8.5
All oil states	-7.9	5.1	-2.8
Non-oil states	-13.2	9.1	-4.1
United States	-9.9	6.6	-3.3

NOTE: Data are based on the percentage change in mining activity by state.

SOURCE: Bureau of Labor Statistics Quarterly Census of Employment and Wages.

Table 5
Metropolitan Employment in Oil and Gas, 2002

Metro area	Oil- and gas-related	Extraction	Drilling	Support
Houston	28,398	15,159	5,377	7,862
Odessa–Midland	8,321	2,801	2,448	3,072
New Orleans	7,580	4,930	265	2,385
Dallas	7,350	3,276	700	3,374
Lafayette	6,939	586	459	5,894
Oklahoma City	5,207	2,980	401	1,826
Tulsa	4,080	2,500	675	905
Houma	3,824	486	1,680	1,658
Anchorage	3,545	1,027	842	1,676
Bakersfield	3,535	1,004	500	2,031
Denver	3,383	2,815	103	465
Longview–Marshall	2,438	763	601	1,074
Corpus Christi	1,914	596	394	924
Los Angeles	1,576	714	37	825
Fort Worth	1,475	976	115	384
San Antonio	1,382	700	499	183
Sixteen-city total	90,947	41,313	15,096	34,538

NOTE: Noncentral establishments only.

SOURCE: Census Bureau, *County Business Patterns*.

other cities listed above each had 2,500 to 4,000 oil and gas employees in central establishments, compared with 23,700 in Houston.

Some back-of-the-envelope calculations comparing the data in Table 5 with more comprehensive employment measures suggest that the list of headquarters/central establishment cities has not changed much since 1997.⁹ Oklahoma City may have moved into the top group, while Tulsa and New Orleans probably have moved down. Houston has likely maintained or added to its lead over the other cities as a headquarters location.

Table 6 shows gains and losses in metropolitan employment in oil and gas over the current drilling cycle. Compared with a 3.4 percent national loss through June 2004, cities that did notably better included Corpus Christi, Longview–Marshall, Oklahoma City and Houston. Among those faring worse were Anchorage, New Orleans, Lafayette, Houma, Tulsa and Midland.

These results partly reflect

the shifts in drilling activity already noted. Improvement in Corpus Christi and Longview–Marshall reflect a substantial pickup in drilling activity throughout Texas. The pullback in Gulf drilling hurts Houma and Lafayette. However, because Table 6 combines central and noncentral establishments, we can see that shifts in headquarters activity also play a role.

Given that many drilling and oil support activities tend to follow drilling activity from one place to another, central establishments (especially headquarters) are relatively “sticky.” Economists have recognized the glue that binds a headquarters to a particular city—and to other headquarters—since the 19th century. The principles apply as much to autos in Detroit and financial services in New York as they do to oil in Houston.

Companies find it attractive to locate near many similar businesses in order to lower their cost of doing business.

Table 6
Change in Oil-Related Jobs by Metro Area
(Decline and recovery in the last oil recession)

Metro area	Percent change		
	Peak to trough (6/01–4/02)	Trough to present (4/02–6/04)	Peak to present (6/01–6/04)
Houston	–6.1	7.0	1.0
Odessa	–18.2	17.8	–0.3
Midland	–17.4	4.0	–13.3
New Orleans	–19.6	–5.6	–25.2
Dallas	NR	NR	NR
Lafayette	–6.1	–14.8	–20.8
Oklahoma City	–7.1	22.7	15.7
Tulsa	–5.0	–11.4	–16.3
Houma	–7.4	–10.2	–17.6
Anchorage	–17.3	–29.7	–47.0
Bakersfield	–10.3	5.1	–5.2
Denver	NR	3.3	NR
Longview–Marshall	3.6	18.4	22.0
Corpus Christi	–1.6	28.0	26.3
Los Angeles–Long Beach	NR	NR	NR
San Antonio	1.2	–2.4	–1.2
United States	–9.9	6.6	–3.4

NOTE: NR = Not reported. Data are percentage change in natural resources and mining jobs.

SOURCES: Bureau of Labor Statistics Quarterly Census of Employment and Wages, except Bakersfield, Los Angeles and Odessa from Current Employment Statistics Survey.

This is because of the industry-specific knowledge generated by headquarters cities and shared through daily interactions such as conferences, professional meetings and even cocktail gossip. Also, such cities offer a large supply of specialized labor and skills. And industry suppliers are drawn there to be close to many large customers. These characteristics—called economies of localization—make it easier and cheaper to operate in large urban clusters of oil- and gas-related activity than elsewhere.

Houston has dominated headquarters activity in recent years, with many of its gains often coming on the downside of drilling cycles as companies seek lower costs to survive.¹⁰ Specific mergers can quickly move large numbers of headquarters jobs from one city to another. There is almost certainly a strong element of shifting headquarters activity in the recent success of Oklahoma City, where local companies

like Devon Energy Corp., Chesapeake Energy Corp. and Kerr-McGee Corp. have been active in mergers. The same may be said of the losses in Tulsa as a result of Phillips Petroleum Corp.'s merger with Conoco into Houston and Citgo Petroleum Corp.'s move to Houston. Midland, a producer/headquarters city, fails to keep up with national employment trends, while Odessa, a service center, stays ahead of the U.S. employment pace as drilling expands.

Conclusion

Oil and gas extraction employment in the United States has been dominated by productivity gains in the producer sector since the 1980s. Although drilling and oil services still show a strong pattern of movement as the rig count rises and falls, productivity has exerted strong downward pressure on producer jobs since the 1980s.

Recent increases in oil and gas employment have been dominated by drilling and oil services as the rig count has risen to the highest levels of domestic activity since 1986. Over the longer term, as drilling activity recedes to levels more typical of the last decade, it seems likely that productivity will reassert downward pressure on oil-related jobs. As this happens, it is important not to confuse declining employment with a declining industry. Oil and gas extraction has maintained its share of gross domestic product at near 1 percent of output since the late 1980s, and declining employment is best seen as a sign of technological success.

This drilling cycle has also been marked by strong regional trends, favoring Texas, New Mexico and the Rocky Mountain states but working against Louisiana, Kansas and Okla-

homa. Specific metro areas tied closely to rising activity in the oil fields have done well, while those with headquarters generally have been hurt by shrinking producer employment. Industry merger activity may also have helped or hurt some metro areas.

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Notes

- ¹ The Rocky Mountain states include Colorado, Montana, Utah and Wyoming. Mid-continent states include Arkansas, Iowa, Kansas, Minnesota, Missouri, Nebraska and Oklahoma, but the bulk of production originates in Kansas and Oklahoma.
- ² Nationwide data on oil and gas extraction and oil and gas support have been reported monthly since 1990 by the Bureau of Labor Statistics. Data on drilling are reported only with a lag in the Quarterly Census of Employment and Wages. As a result, we projected drilling employment as a function of the rig count for the final six months of 2004.
- ³ "U.S. Upstream Jobs Rose in 2004, Data Show," by Nick Snow, *Oil & Gas Journal*, January 14, 2005, p. 34.
- ⁴ "The New Old Economy: Oil, Computers, and the Reinvention of the Earth," by Jonathan Rauch, *The Atlantic Monthly*, January 2001, p. 42.
- ⁵ In 1997, the Department of Energy created a separate category for Federal Offshore. Before that, offshore data were included in data for individual states. Data for 2004 by state are only available through October.
- ⁶ The data in Table 3 from *County Business Patterns* remain the latest available, and because of changes in industry definitions, comparisons cannot be made to dates before 2001. The 2001 release also marked the end of central establishments being reported for individual sectors, so only noncentral establishments are reported. In Table 4, disclosure limitations mean that only total mining can be reported by state, not oil and gas specifically. For the large oil states in the table, oil and gas dominate the mining sector,

and the reported percentage changes are a reasonable estimate of swings in oil-related activity.

- ⁷ The exclusion of central establishments affects Houston, Odessa–Midland, New Orleans, Dallas and Lafayette the most because these cities lead the way in totals for such establishments.
- ⁸ "The Oil Industry and the Cities: Consolidation in the Oil Extraction Industry," by Robert W. Gilmer and Jun Ishii, Federal Reserve Bank of Dallas *Houston Business*, April 1996; "Urban Oil Consolidation: An Update," by Robert W. Gilmer and David G. Kang, Federal Reserve Bank of Dallas *Houston Business*, August 2000.
- ⁹ The calculation referred to is a comparison of a comprehensive measure of employment in oil and gas extraction prepared by the Bureau of Economic Analysis to the number in Table 5. The difference between the measures includes a broader definition of establishment employment and the self-employed. However, half or more of the difference can be attributed to jobs in central establishments. The differences were largest in those cities where central establishments have been found to be important in past studies.
- ¹⁰ According to the list of the largest 100 oil producers in 2003, only six cities today are home to the headquarters of more than two of these producers: Houston (28), Denver (11), Dallas (9), Oklahoma City (6), Tulsa (5) and Fort Worth (4). Dallas has the most producer assets (\$182.1 billion), although 95.7 percent of them belong to one company, ExxonMobil. Houston (\$170.6 billion) and Oklahoma City (\$42 billion) follow. See "OGJ 200/100," by Laura Bell and Marilyn Radler, *Oil & Gas Journal*, September 13, 2004, pp. 36–41.

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With Houston's energy sector stretched to the limit, both upstream and downstream, it was a surprise to see 2004 job growth estimates for Houston revised downward. With U.S. and global growth running strong and the rig count at its highest levels since 1986, total employment growth for Houston was revised down to only 1.2 percent over the past 12 months. The local unemployment rate stands at 6 percent, (seasonally adjusted), the same as the state and highest among the big Texas Triangle metros. The split between rapid production growth and a sluggish job market continues.

Retail and Auto Sales

Discount retailers report excellent sales, but the rest of the market continues to struggle to meet their plans for the year. Department stores were generally running below plan through the first quarter, with at least one important exception. Furniture stores report sales below expectations, despite rapid sales of new and existing homes. Independent retailers must have a solid niche in the market simply to survive.

Auto sales remained in decline through the first two months of 2005 after ending 2004 more than 15 percent below the 2001 peak in local auto sales. Incentive programs and a surge of buying forced by Tropical Storm Allison in 2001 stole at least part of current sales.

Crude Oil and Natural Gas Markets

Crude oil rose from \$46–\$47 per barrel to \$57 and fell back

quickly to \$53. The price increases come in the face of domestic crude inventories building rapidly toward five-year highs and evidence from the spot market that adequate oil is available. Another increase in OPEC's quota (by 500,000 barrels per day) did little to cool prices. Driving crude price is fear of the unknown: a rapidly approaching summer driving season, limited refinery capacity and no spare capacity in OPEC. Crude demand was seasonally weak because of scheduled refinery maintenance.

Natural gas also saw its price increase against a backdrop of rising inventories. Gas prices moved from near \$6 per thousand cubic feet in early February to near \$7.25 in early April. Natural gas inventories are now 22 percent higher than the five-year average, with the heating season rapidly coming to an end. Apart from cold weather, natural gas prices moved up along with crude.

Refining and Petrochemicals

Refiners were taking capacity off-line until mid-March but added it back slowly as the turnaround season ended. Despite the large increases in crude feedstock prices, refiners were able to double margins in March from levels that were already good. Strong product demand and limited capacity allowed profits to increase for both sweet and sour crude.

Demand for basic petro-

chemicals was reported as robust, except for some normal first-quarter weakness in a few products such as ethylene and PVC. Pricing is clearly in the hands of chemical producers, and margins are strong. PVC, styrene monomer (ABS), benzene, butadiene, polycarbonate and chlorine are among products whose prices have risen recently.

Oil Services and Machinery

Producer drilling plans have moved upward faster than anyone forecast early in the year. The U.S. rig count has surpassed the last 2001 peak and is now at its highest point since 1986. International drilling rose by more than 30 rigs during the past two months.

Pricing power for oil services moved in favor of services over operators late last year, and the service providers' bargaining position continues to strengthen. The discussion in the service industry has moved to speculation about how long the cycle will last—normal is two years—as firms begin to consider capacity expansion. An order was placed recently for construction of 10 new land rigs, and some capacity was added incrementally in pressure pumping.

Labor remains a constraint for the industry, with operators and service companies now actively stealing employees from each other—rig hands, truck drivers, engineers and others.



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