



# Industry Wage Survey: Oil and Gas Extraction, June 1988

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# Preface

This bulletin summarizes the results of a Bureau of Labor Statistics survey of occupational earnings and employee benefits in the oil and gas extraction industries in June 1988. Data are provided separately, where possible, for oil and gas field operations and for contract drilling establishments. A similar survey was conducted in June 1982.

Separate releases were issued earlier for 10 regions of industry concentration. Copies of these reports are available from the Bureau or any of its regional offices.

The study was conducted in the Bureau's Office of Compensation and Working Conditions. Jonathan W. Kelinson of the Division of Occupational Pay and Employee Benefit

Levels analyzed the survey findings and prepared this bulletin. The Bureau's field representatives obtained the data through personal visits to a probability-based sample of establishments within the scope of the survey. Fieldwork for the survey was directed by the Bureau's Assistant Regional Commissioners for Operations.

Other industry wage survey reports are listed at the end of this bulletin, along with information on how to obtain copies.

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# Oil and Gas Extraction, June 1988

## Earnings

Gasplant operators, who prepare natural gas for use as fuel, had average earnings of \$14.19 an hour in June 1988, and were the highest paid among the 13 jobs studied in the oil and gas extraction industries. Averages for the other 12 occupations ranged from \$8.29 an hour for rotary floor workers, who assist in drilling operations, to \$14.12 an hour for maintenance mechanics (table 1).<sup>1</sup> Among the geographic regions studied separately, occupational pay generally was highest in California and lowest in the Middle Atlantic and Border States regions.

The survey included two types of establishments or operations: 1) those operating oil and gas field properties (field operations), and 2) those engaged in drilling oil and gas wells for others on a contract or fee basis (contract drillers). Field operations, which accounted for three-fifths of the production employment, included exploration, drilling and equipping of wells, operation of separators, and all other activities required to prepare oil and gas for shipment from the producing property.

Since June 1982, when the Bureau conducted a similar survey, average hourly earnings increased from 6 to 23 percent for 9 of the 13 jobs, and decreased from 12 to 18 percent for the other 4 jobs—derrick operators, rotary drillers, rotary floor workers, and motor operators. (Unlike the earlier survey, the 1988 study included contract drillers employing fewer than 50 workers.<sup>2</sup> These smaller contractors were excluded from the data used to make year-to-year comparisons of earnings and employment.) Those having the highest aver-

<sup>1</sup> See appendix A for the scope and method of the survey, for definitions of terms used in this bulletin, and for definitions of the regions surveyed. Earnings data exclude premium pay for overtime, for work on weekends, holidays, and late shifts; and, where applicable, for offshore work. See appendix B for occupational descriptions.

<sup>2</sup> In June 1988, contract drillers with fewer than 50 workers employed almost 4,000 production workers, or about 6 percent of the industries' work force. For a detailed account of the 1982 survey, see *Industry Wage Survey: Oil and Gas Extraction, June 1982*, Bulletin 2193.

<sup>3</sup> For information on June production worker employment in the oil and gas extraction industries, see *Employment and Earnings*, September 1982; *Supplement to Employment and Earnings*, July 1987; *Employment and Earnings*, September 1987; and *Employment and Earnings*, September 1988. Data from the *Employment and Earnings* series include workers not covered by this occupational wage survey: Those employed by producers of natural gas liquids and firms providing oil and gas exploration services on a contract basis, as well as by facilities with employment below the minimum establishment sizes for this survey.

age increases were well pullers (23 percent) and pumpers (18 percent). In general, occupations at the higher end of the industries' pay scales recorded higher average increases than the lower paid occupations. During the 1982-88 period, the wage and salary component of the Bureau's Employment Cost Index for nonmanufacturing industries recorded a 28.7-percent increase.

These wage changes in oil and gas extraction accompanied dramatic employment declines. Production worker employment dropped 44 percent, declining in 9 of the 10 regions studied. Declines ranged from 52 percent in Oklahoma to 15 percent in the Great Lakes States; employment in the Border States, however, grew by 2 percent. In Texas, which accounted for about one-third of the workers in each survey, production worker employment declined by 50 percent over the 6-year period. The losses generally were more significant among contract drillers than among field operators (text table 1). According to the Bureau's monthly employment and earnings series, most of the decline in production employment in the Nation's oil and gas extraction industries occurred between 1985 and 1986, when the price of oil collapsed in world markets.<sup>3</sup>

The 13 jobs, selected to represent the wage structure and skill range of the industries' production workers, accounted for three-fourths of the 68,658 production employees estimated to be within the scope of the survey. These jobs accounted for two-thirds of the production work force in field

**Text table 1. Percent change in production worker employment, oil and gas extraction, June 1982-June 1988**

Region and area <sup>1</sup>	All establishments	Field operations	Contract drilling operations <sup>2</sup>
United States .....	-44	-22	-62
Middle Atlantic .....	-34	-31	-37
Western Pennsylvania <sup>3</sup> .....	-35	-33	-37
Border States .....	2	1	( <sup>5</sup> )
Great Lakes .....	-15	-23	-8
Midcontinent <sup>4</sup> .....	-45	-5	-74
Oklahoma .....	-52	-8	-78
Louisiana .....	-48	-29	-62
Texas .....	-50	-30	-65
Mountain States .....	-16	61	-62
California .....	-32	-37	-13

<sup>1</sup> For definitions of regions and areas, see appendix A, table A-1, footnote 1.

<sup>2</sup> In order to maintain comparability with the earlier survey, contract drillers employing fewer than 50 workers were excluded from the data for June 1988.

<sup>3</sup> Includes data for Western Pennsylvania shown separately.

<sup>4</sup> Includes data for Oklahoma shown separately.

<sup>5</sup> Employment data were not available for June 1982.

operations, and nearly seven-eighths of those working as contract drillers.

In field operations, average earnings ranged from \$8.73 an hour for rotary floor workers to \$14.99 an hour for maintenance electricians (table 2). Pumpers, numerically the largest occupation studied in this industry, averaged \$13.16 an hour.

In contract drilling, occupational average earnings ranged from \$7.27 for roustabouts to \$10.85 for rotary drillers (table 3). Rotary floor workers (roughnecks), the largest contract drilling job studied, averaged \$8.26 an hour.

Workers in field operations recorded higher average pay than their contract drilling counterparts in 9 of 10 occupations for which comparisons could be made. The pay advantages ranged from 4 percent for motor operators (\$8.98 compared to \$8.63) to 63 percent for roustabouts, who perform a variety of tasks (\$11.83 compared to \$7.27). Typically, however, the pay advantage in favor of contract drillers was between 30 and 45 percent, a range which generally held when comparisons were limited to individual regions. Exceptions included the Great Lakes region, where contract derrick operators and contract drillers averaged 3 and 16 percent, respectively, more than their counterparts in field operations. In the Midcontinent region, the pay advantage for contract welders was 35 percent, while pumpers in both industries averaged about the same rate of pay.

Occupational pay relationships varied widely among the regions studied separately. For example, contract rotary drillers in Louisiana averaged 21 percent more than those in the Border States region (\$11.52 compared to \$9.52), but the relationship was reversed for contract welders (\$9.58-\$9.31). Occupational pay relationships also varied within regions.

Wage data are presented separately, where possible, for land-based (onshore) and offshore workers. In field operations, where about four-fifths or more of the workers in each occupation were land based, offshore workers had higher average pay in all six of the jobs permitting comparison (table 2). The pay advantage for offshore rotary drillers was 48 percent; the corresponding advantage for the other five occupations was between 2 and 13 percent.

Similarly, land-based workers among contract drillers accounted for about four-fifths or more of the workers in 6 of the 11 occupations (table 3). In the seven jobs that could be compared, offshore workers held a pay advantage in six, with differentials ranging from 5 percent for electricians and mechanics to 18 percent for rotary drillers. Land-based welders, in contrast, had an 11-percent edge on their offshore counterparts (\$10.33 compared to \$9.34).

Earnings of workers in the individual occupations spanned a broad range, but when examined on a regional basis, large proportions of workers often clustered within narrow pay bands (tables 4 and 7-16). For example, four-fifths of the mechanics and three-fifths of the welders in California oil and gas extraction earned between \$15 and \$15.50 an hour. Such concentrations of workers partly reflect the prevalence

of single-rate pay systems for a given job. Single-rate pay systems covered about four-fifths of the industries' employment, and nearly all of the workers in California.

## Benefits

Paid holiday provisions—most commonly 10 days annually—were provided to nearly three-fourths of the production workers. Nearly all workers on oil and gas field properties received paid holidays, compared with one-third in contract drilling operations, where 1 or 2 days per year were most common (table 21). Holiday provisions varied by region, as well as by industry.

Virtually all workers in oil and gas field operations could receive paid vacations after qualifying periods of service. Typical provisions were 2 weeks of pay after 1 year of service, 3 weeks after 5 years, 4 weeks after 10 years, 5 weeks after 20 years, and 6 weeks after 30 or more years of service (table 22). In the contract drilling industry, vacation provisions were reported for almost two-fifths of the production workers. Provisions generally were 1 or 2 weeks of vacation pay after 1 year of service, 2 weeks after 2 years, and 2 or 3 weeks after 5 or more years of service.

Life insurance and hospitalization, surgical, and medical coverage were provided to nearly all production workers in oil and gas field operations, and to about nine-tenths of those in contract drilling (table 23). Employers in both industries provided accidental death and dismemberment insurance to three-fourths of the workers. Short-term protection against lost income through insurance or sick leave applied to seven-eighths of the workers in field operations and to three-eighths in contract drilling. One-half of the workers in field operations were covered by long-term disability insurance and one-fifth were in contract drilling. Health maintenance organization (HMO) membership was available to about three-tenths of field operations workers nationwide; and to less than one-tenth of those in contract drilling. Among field operations, HMO's were most prevalent in California (nearly half of the workers), and in Louisiana and Texas (about two-fifths). Health plan participation by employees, as opposed to availability of plans, also was studied for the first time in this industry (table 24).

Retirement pension plans, typically financed entirely by employers, covered slightly over four-fifths of the field operations workers and one-third of the contract drillers. Retirement severance plans (one or more lump-sum payments upon retirement) applied to one-third of those in field operations and to one-tenth of the contract drilling employees. None of these severance plans were paid entirely by employers.

Funeral leave and jury-duty pay applied to nearly all workers in field operations and to three-tenths and one-third of the work force, respectively, in contract drilling (table 25). Severance pay for loss of jobs due to technological change or closedown was available to one-half of the field operations workers and to one-eighth of those in contract drilling. Employee savings and thrift plans to which employers

contribute money beyond administrative costs covered three-fifths of field operations workers and one-fourth of the contract drilling workers. No formal provisions for automatic cost-of-living adjustments were found in the operations studied.

### Industry characteristics

The study covered operations in two industries primarily engaged in extracting oil and gas: Those engaged in crude petroleum and natural gas field production (field operations), and those drilling oil and gas wells for others, on a contract, fee, or similar basis (contract drillers). Oil and gas field operators with fewer than 8 workers and contract drillers with fewer than 20 were excluded from the survey.

The 1,485 operations within the scope of the survey employed 68,658 nonsupervisory production and related workers in June 1988. Establishments primarily engaged in operating oil field properties accounted for three-fifths of the total production work force. Contract drillers employed the other two-fifths. Texas recorded the largest share of employment in both industries—three-tenths of the 41,362 production workers in field operations and just over one-third of the 27,296 workers in contract drilling. Louisiana, next in employment, accounted for one-fifth and one-fourth of the workers, respectively. Most of the other regions employed 10 percent or less of the workers in each industry (table A-1).

Virtually all production workers were paid time rates, typically under formal plans providing single rates for specified occupations (table 17). Range-of-rate plans applied to nearly one-fifth of the field operations workers, and individual rates—based on the workers' qualifications—applied to less than one-tenth. In contract drilling, fewer than one-tenth of the workers were compensated under a range-of-rate or individual determination pay plan.

Work schedules of 40 hours per week for land-based workers were in effect for seven-eighths of the field operations workers (table 18).<sup>4</sup> Nearly all of the remaining workers had longer schedules, typically between 40 and 50 hours. For land-based contract drilling workers, three-fifths of the work force operated under fixed weekly schedules; however, these schedules varied both within and among the regions. Two-fifths of the contract drilling workers had variable workweeks where no fixed weekly schedule prevailed, or the hours routinely varied from week to week. The use of variable workweek schedules among contract drillers varied by region, from less than 5 percent of the workers in the Middle Atlantic region to 87 percent of those in California.

Operations with formal provisions for second- and third-shift work employed over two-thirds of the workers in both oil and gas extraction industries (table 19). At the time of the survey, one-eighth of the field operations workers actually were employed on second shifts and slightly less than one-tenth were on third shifts (table 20). Most commonly, these workers received 50 cents an hour above day-shift rates for second shifts and \$1 for third shifts. Among contract drillers, about one-fifth of the workers were on each late shift, but none in the survey's sample received premium rates for such work.

Establishments operating under labor-management agreements employed about 30 percent of the field operations workers and less than 5 percent of the contract drilling work force. Among field operations, union representation ranged from 70 percent in California to 9 percent in the Mountain States but generally fell between 20 and 30 percent. Collective bargaining agreements typically were with single-establishment, independent unions (those not affiliated with the AFL-CIO), although the Oil, Chemical and Atomic Workers International Union (AFL-CIO) also was prominent.

<sup>4</sup> Information on work schedules of offshore workers was not collected.

**Table 1. Oil and gas extraction: Occupational average earnings**

(Number of workers and average straight-time hourly earnings<sup>1</sup> in selected occupations, United States, selected regions, and States,<sup>2</sup> June 1988)

Occupation	United States <sup>3</sup>		Middle Atlantic <sup>4</sup>		Western Pennsylvania		Border States		Great Lakes		Midcontinent <sup>5</sup>		Oklahoma		Louisiana		Texas		Mountain States		California	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Derrick operators .....	4,403	\$9.21	58	\$8.47	58	\$8.47	110	\$8.23	222	\$8.89	710	\$8.83	423	\$8.68	827	\$8.92	1,362	\$8.47	596	\$8.99	493	\$12.93
Onshore .....	3,760	9.08	58	8.47	58	8.47	110	8.23	222	8.89	669	8.61	423	8.68	376	8.01	1,254	8.35	596	8.99	475	13.02
Offshore .....	643	9.93	-	-	-	-	-	-	-	-	-	-	-	-	451	9.67	108	9.89	-	-	18	10.47
Drillers, rotary .....	4,521	10.82	73	10.16	73	10.16	114	9.52	275	10.56	806	10.20	460	10.53	864	11.29	1,522	10.47	607	11.21	260	13.38
Onshore .....	3,868	10.52	73	10.16	73	10.16	114	9.52	275	10.56	773	10.04	460	10.53	367	9.71	1,422	10.33	607	11.21	237	13.28
Offshore .....	653	12.59	-	-	-	-	-	-	-	-	-	-	-	-	497	12.46	100	12.45	-	-	23	14.32
Electricians, maintenance .....	1,224	13.85	10	11.92	10	11.92	-	-	24	12.84	-	-	-	-	454	13.14	387	14.38	31	14.75	113	15.16
Onshore .....	815	14.52	10	11.92	10	11.92	-	-	24	12.84	-	-	-	-	112	14.63	363	14.54	31	14.75	103	15.30
Offshore .....	409	12.54	-	-	-	-	-	-	-	-	-	-	-	-	342	12.65	24	12.01	-	-	10	13.69
Floor workers, rotary .....	8,373	8.29	162	8.10	162	8.10	188	8.06	441	8.33	1,300	8.07	621	8.00	2,100	8.49	2,725	8.07	989	8.05	468	9.99
Onshore .....	6,566	8.09	162	8.10	162	8.10	188	8.06	441	8.33	1,194	7.90	621	8.00	759	7.60	2,425	7.97	989	8.05	408	10.12
Offshore .....	1,807	9.03	-	-	-	-	-	-	-	-	-	-	-	-	1,341	9.00	300	8.86	-	-	60	9.09
Gasplant operators .....	1,992	14.19	-	-	-	-	58	11.48	88	12.85	247	14.67	247	14.67	418	14.87	791	14.20	233	14.76	81	14.91
Onshore .....	1,770	14.04	-	-	-	-	58	11.48	88	12.85	247	14.67	247	14.67	220	14.39	787	14.20	233	14.76	72	14.89
Hoist operators .....	271	10.68	-	-	-	-	-	-	-	-	-	-	-	-	93	10.28	-	-	-	-	-	-
Onshore .....	91	12.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Offshore .....	180	10.00	-	-	-	-	-	-	-	-	-	-	-	-	91	10.36	-	-	-	-	-	-
Mechanics, maintenance .....	3,678	14.12	58	9.93	58	9.93	31	12.26	112	12.30	540	13.76	322	14.08	1,209	14.03	1,058	14.40	232	14.48	392	15.19
Onshore .....	2,704	14.17	58	9.93	58	9.93	31	12.26	112	12.30	441	13.46	322	14.08	438	14.06	979	14.56	232	14.48	383	15.22
Offshore .....	974	13.97	-	-	-	-	-	-	-	-	-	-	-	-	771	14.01	79	12.43	-	-	-	-
Motor operators .....	2,836	8.64	-	-	-	-	-	-	77	9.38	445	8.71	331	8.45	427	8.98	1,343	8.25	414	8.62	113	11.36
Onshore .....	2,480	8.50	-	-	-	-	-	-	77	9.38	424	8.68	331	8.45	171	8.01	1,277	8.18	414	8.62	100	11.52
Offshore .....	356	9.62	-	-	-	-	-	-	-	-	-	-	-	-	256	9.63	66	9.62	-	-	-	-
Pumpers .....	12,047	13.10	217	10.35	204	10.50	173	10.58	588	9.83	2,081	12.71	1,534	12.44	2,001	13.70	4,424	13.23	1,632	13.41	850	14.60
Onshore .....	10,234	12.83	217	10.35	204	10.50	173	10.58	588	9.83	1,976	12.58	1,534	12.44	1,066	12.91	3,676	12.98	1,632	13.41	830	14.59
Offshore .....	1,813	14.61	-	-	-	-	-	-	-	-	-	-	-	-	935	14.61	748	14.50	-	-	-	-
Roustabouts .....	9,240	10.74	87	9.56	69	9.74	197	9.47	295	10.06	1,458	10.92	873	10.98	2,881	10.25	3,067	10.85	640	11.88	489	11.79
Onshore .....	6,547	11.22	87	9.56	69	9.74	197	9.47	295	10.06	1,211	10.85	873	10.98	985	11.62	2,626	11.21	640	11.88	426	12.16
Offshore .....	2,693	9.58	-	-	-	-	-	-	-	-	247	11.31	-	-	1,896	9.55	441	8.74	-	-	63	9.33
Truckdrivers .....	1,356	9.10	85	10.19	82	10.26	73	8.36	144	9.34	340	8.74	202	9.72	125	8.68	431	8.16	77	11.03	81	13.56
Onshore .....	1,356	9.10	85	10.19	82	10.26	73	8.36	144	9.34	340	8.74	202	9.72	125	8.68	431	8.16	77	11.03	81	13.56
Welders, oil field .....	624	10.66	23	9.52	23	9.52	32	11.25	15	10.30	80	9.56	20	13.70	261	9.52	111	11.68	24	13.05	68	14.17
Onshore .....	312	11.87	23	9.52	23	9.52	32	11.25	15	10.30	65	9.35	20	13.70	31	10.47	62	13.72	24	13.05	60	14.57
Offshore .....	312	9.46	-	-	-	-	-	-	-	-	-	-	-	-	230	9.39	49	9.11	-	-	-	-
Well pullers .....	542	10.91	-	-	-	-	35	9.80	84	9.10	-	-	-	-	26	8.39	-	15	13.80	-	-	-
Onshore .....	542	10.91	-	-	-	-	35	9.80	84	9.10	-	-	-	-	26	8.39	-	15	13.80	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> For definitions of regions, see appendix A, table A-1, footnote 1.

<sup>3</sup> Includes data for regions not shown separately.

<sup>4</sup> Includes data for Western Pennsylvania shown separately.

<sup>5</sup> Includes data for Oklahoma shown separately.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupation may include data for offshore workers not shown separately.

**Table 2. Oil and gas field operations: Occupational average earnings**

(Number of workers and average straight-time hourly earnings<sup>1</sup> in selected occupations, United States, selected regions, and States,<sup>2</sup> June 1988)

Occupation	United States <sup>3</sup>		Middle Atlantic <sup>4</sup>		Western Pennsylvania		Border States		Great Lakes		Midcontinent <sup>5</sup>		Oklahoma		Louisiana		Texas		Mountain States		California	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Derrick operators .....	546	\$11.68	-	-	-	-	-	-	23	\$8.69	113	\$10.32	60	\$9.30	-	-	-	-	-	-	-	-
Onshore .....	498	11.57	-	-	-	-	-	-	23	8.69	72	9.14	60	9.30	-	-	-	-	-	-	-	-
Offshore .....	48	12.88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Drillers, rotary .....	357	10.54	-	-	-	-	-	-	23	9.20	159	10.86	60	11.78	-	-	-	-	-	-	-	-
Onshore .....	315	9.98	-	-	-	-	-	-	23	9.20	126	10.07	60	11.78	-	-	-	-	-	-	-	-
Offshore .....	42	14.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electricians, maintenance .....	890	14.99	10	\$11.92	10	\$11.92	-	-	23	13.06	-	-	-	-	249	\$15.14	312	\$15.17	31	\$14.75	103	\$15.35
Onshore .....	741	14.93	10	11.92	10	11.92	-	-	23	13.06	-	-	-	-	-	-	312	15.17	31	14.75	101	15.34
Offshore .....	149	15.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Floor workers, rotary .....	663	8.73	-	-	-	-	-	-	-	-	253	8.77	-	-	-	-	-	-	-	-	-	-
Onshore .....	523	8.05	-	-	-	-	-	-	-	-	147	7.96	-	-	-	-	-	-	-	-	-	-
Gasplant operators .....	1,851	14.34	-	-	-	-	58	\$11.48	88	12.85	247	14.67	247	14.67	418	14.87	692	14.25	233	14.76	81	14.91
Onshore .....	1,629	14.21	-	-	-	-	58	11.48	88	12.85	247	14.67	247	14.67	220	14.39	688	14.24	233	14.76	72	14.89
Offshore .....	222	15.13	-	-	-	-	-	-	-	-	1	19.00	1	19.00	198	15.48	104	14.25	1	14.76	9	14.82
Mechanics, maintenance .....	3,181	14.67	21	11.97	21	11.97	22	13.33	86	13.04	511	13.97	305	14.23	987	14.78	937	14.94	220	14.58	361	15.34
Onshore .....	2,475	14.53	21	11.97	21	11.97	22	13.33	86	13.04	412	13.70	305	14.23	420	14.23	906	14.93	220	14.58	358	15.33
Offshore .....	706	15.17	-	-	-	-	-	-	-	-	-	-	-	-	567	15.18	31	15.12	-	-	-	-
Motor operators .....	113	8.98	-	-	-	-	-	-	-	-	89	8.85	-	-	-	-	-	-	-	-	-	-
Onshore .....	92	8.92	-	-	-	-	-	-	-	-	68	8.73	-	-	-	-	-	-	-	-	-	-
Pumpers .....	11,817	13.16	217	10.35	204	10.50	173	10.58	582	9.86	2,060	12.71	1,532	12.43	1,929	13.95	4,293	13.31	1,632	13.41	850	14.60
Onshore .....	10,010	12.90	217	10.35	204	10.50	173	10.58	582	9.86	1,955	12.57	1,532	12.43	1,000	13.31	3,545	13.06	1,632	13.41	830	14.59
Offshore .....	1,807	14.63	-	-	-	-	-	-	-	-	105	14.84	-	-	929	14.64	748	14.50	-	-	-	-
Roustabouts .....	7,036	11.83	55	10.69	-	-	141	11.28	286	10.17	1,406	11.04	845	11.08	1,721	12.30	2,249	12.11	640	11.88	437	12.25
Onshore .....	5,841	11.69	55	10.69	-	-	141	11.28	286	10.17	1,159	10.98	845	11.08	951	11.83	2,109	12.09	640	11.88	420	12.21
Offshore .....	1,195	12.52	-	-	-	-	-	-	-	-	247	11.31	-	-	770	12.89	140	12.47	-	-	-	-
Truckdrivers .....	572	11.10	-	-	-	-	19	11.18	79	10.32	154	10.20	92	11.98	-	-	77	14.07	36	14.24	36	14.40
Onshore .....	572	11.10	-	-	-	-	19	11.18	79	10.32	154	10.20	92	11.98	-	-	77	14.07	36	14.24	36	14.40
Welders, oil field .....	250	12.33	9	11.66	9	11.66	26	11.63	-	-	61	8.82	-	-	28	11.28	-	-	20	13.09	52	14.97
Onshore .....	232	12.40	9	11.66	9	11.66	26	11.63	-	-	46	8.30	-	-	25	10.71	-	-	20	13.09	52	14.97
Well pullers .....	517	11.09	-	-	-	-	32	10.11	80	9.18	-	-	26	8.39	-	-	-	-	-	-	-	-
Onshore .....	517	11.09	-	-	-	-	32	10.11	80	9.18	-	-	26	8.39	-	-	-	-	-	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> For definitions of regions, see appendix A, table A-1, footnote 1.

<sup>3</sup> Includes data for regions not shown separately.

<sup>4</sup> Includes data for Western Pennsylvania shown separately.

<sup>5</sup> Includes data for Oklahoma shown separately.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupation may include data for offshore workers not shown separately.

**Table 3. Contract drilling operations: Occupational average earnings**

(Number of workers and average straight-time hourly earnings<sup>1</sup> in selected occupations, United States, selected regions, and States,<sup>2</sup> June 1988)

Occupation	United States <sup>3</sup>		Middle Atlantic <sup>4</sup>		Western Pennsylvania		Border States		Great Lakes		Midcontinent <sup>5</sup>		Oklahoma		Louisiana		Texas		Mountain States		California	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Derrick operators .....	3,857	\$8.86	58	\$8.47	58	\$8.47	110	\$8.23	199	\$8.92	597	\$8.54	363	\$8.57	665	\$8.99	1,362	\$8.47	586	\$8.88	255	\$11.39
Onshore .....	3,262	8.70	58	8.47	58	8.47	110	8.23	199	8.92	597	8.54	363	8.57	221	7.82	1,254	8.35	586	8.88	237	11.46
Offshore .....	595	9.69	-	-	-	-	-	-	-	-	-	-	-	-	444	9.58	108	9.89	-	-	18	10.47
Drillers, rotary .....	4,164	10.85	73	10.16	73	10.16	114	9.52	252	10.69	647	10.03	400	10.34	701	11.52	1,522	10.47	595	11.19	260	13.38
Onshore .....	3,553	10.57	73	10.16	73	10.16	114	9.52	252	10.69	647	10.03	400	10.34	213	9.60	1,422	10.33	595	11.19	237	13.28
Offshore .....	611	12.45	-	-	-	-	-	-	-	-	-	-	-	-	488	12.36	100	12.45	-	-	23	14.32
Electricians, maintenance .....	334	10.84	-	-	-	-	-	-	-	-	-	-	-	-	205	10.70	75	11.10	-	-	10	13.21
Onshore .....	74	10.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	10.67	-	-	-	-
Offshore .....	260	10.96	-	-	-	-	-	-	-	-	-	-	-	-	198	10.74	24	12.01	-	-	-	-
Floor workers, rotary .....	7,710	8.26	162	8.10	162	8.10	188	8.06	424	8.28	1,047	7.90	527	7.94	1,734	8.48	2,725	8.07	962	8.00	468	9.99
Onshore .....	6,043	8.10	162	8.10	162	8.10	188	8.06	424	8.28	1,047	7.90	527	7.94	427	7.40	2,425	7.97	962	8.00	408	10.12
Offshore .....	1,667	8.84	-	-	-	-	-	-	-	-	-	-	-	-	1,307	8.83	300	8.86	-	-	60	9.09
Hoist operators .....	202	9.79	-	-	-	-	-	-	-	-	-	-	-	-	93	10.28	-	-	-	-	-	-
Offshore .....	180	10.00	-	-	-	-	-	-	-	-	-	-	-	-	91	10.36	-	-	-	-	-	-
Mechanics, maintenance .....	497	10.56	37	8.77	37	8.77	9	9.63	26	9.86	29	10.07	17	11.26	222	10.69	121	10.24	12	12.62	31	13.46
Onshore .....	229	10.28	37	8.77	37	8.77	9	9.63	26	9.86	29	10.07	17	11.26	18	9.93	73	9.94	12	12.62	25	13.57
Offshore .....	268	10.80	-	-	-	-	-	-	-	-	-	-	-	-	204	10.75	48	10.69	-	-	-	-
Motor operators .....	2,723	8.63	-	-	-	-	-	-	77	9.38	356	8.68	275	8.36	403	8.95	1,343	8.25	414	8.62	113	11.36
Onshore .....	2,388	8.48	-	-	-	-	-	-	77	9.38	356	8.68	275	8.36	147	7.77	1,277	8.18	414	8.62	100	11.52
Offshore .....	335	9.64	-	-	-	-	-	-	-	-	-	-	-	-	256	9.63	66	9.62	-	-	-	-
Pumpers .....	230	9.66	-	-	-	-	-	-	-	-	21	12.78	-	-	72	7.09	-	-	-	-	-	-
Onshore .....	224	9.67	-	-	-	-	-	-	-	-	21	12.78	-	-	-	-	-	-	-	-	-	-
Roustabouts .....	2,204	7.27	32	7.61	32	7.61	56	4.92	-	-	52	7.90	-	-	1,160	7.21	818	7.40	-	-	52	8.00
Onshore .....	-	-	32	7.61	32	7.61	56	4.92	-	-	52	7.90	-	-	-	-	-	-	-	-	-	-
Offshore .....	1,498	7.24	-	-	-	-	-	-	-	-	-	-	-	-	1,126	7.26	301	7.00	-	-	-	-
Truckdrivers .....	784	7.64	26	8.26	26	8.26	54	7.36	65	8.16	186	7.52	110	7.83	13	7.55	354	6.88	41	8.22	45	12.89
Onshore .....	784	7.64	26	8.26	26	8.26	54	7.36	65	8.16	186	7.52	110	7.83	13	7.55	354	6.88	41	8.22	45	12.89
Welders, oil field .....	374	9.55	-	-	-	-	6	9.58	11	8.90	19	11.91	-	-	233	9.31	61	9.40	-	-	16	11.60
Onshore .....	80	10.33	-	-	-	-	6	9.58	11	8.90	19	11.91	-	-	6	9.44	12	10.58	-	-	-	-
Offshore .....	294	9.34	-	-	-	-	-	-	-	-	-	-	-	-	227	9.31	49	9.11	-	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> For definitions of regions, see appendix A, table A-1, footnote 1.

<sup>3</sup> Includes data for regions not shown separately.

<sup>4</sup> Includes data for Western Pennsylvania shown separately.

<sup>5</sup> Includes data for Oklahoma shown separately.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupation may include data for subclassifications not shown separately.

**Table 4. Oil and gas extraction: Occupational earnings distribution—United States**

(Percent distribution of workers in selected occupations by straight-time hourly earnings,<sup>1</sup> June 1988)

Occupation	Number of workers	Average (mean) hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																											
			Under 6.25	6.25 and under 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 and over	
Derrick operators .....	4,403	\$9.21	( <sup>2</sup> )	1	1	1	6	( <sup>2</sup> )	6	9	7	9	3	9	18	7	8	2	2	1	-	1	1	( <sup>2</sup> )	( <sup>2</sup> )	6	( <sup>2</sup> )	1	-	
Onshore .....	3,760	9.08	( <sup>2</sup> )	1	2	1	7	( <sup>2</sup> )	8	10	6	10	4	11	19	5	3	1	2	1	-	1	2	( <sup>2</sup> )	1	7	( <sup>2</sup> )	-	-	
Offshore .....	643	9.93	-	-	-	-	-	-	-	11	-	-	-	-	16	23	39	5	1	-	-	-	-	-	-	-	-	-	-	
Drillers, rotary .....	4,521	10.82	( <sup>2</sup> )	-	-	1	1	1	1	1	3	1	1	( <sup>2</sup> )	12	6	21	10	8	10	13	3	1	3	3	1	1	-	1	
Onshore .....	3,868	10.52	( <sup>2</sup> )	-	-	1	1	1	1	1	3	1	2	( <sup>2</sup> )	14	7	22	11	9	8	12	( <sup>2</sup> )	( <sup>2</sup> )	1	1	2	( <sup>2</sup> )	-	1	
Offshore .....	653	12.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	18	18	20	3	13	12	-	1	-	3	
Electricians, maintenance .....	1,224	13.85	-	-	-	-	-	-	1	( <sup>2</sup> )	-	-	( <sup>2</sup> )	-	1	-	8	2	13	( <sup>2</sup> )	2	1	( <sup>2</sup> )	3	3	16	21	26	2	
Onshore .....	815	14.52	-	-	-	-	-	-	1	( <sup>2</sup> )	-	-	1	-	2	-	3	2	( <sup>2</sup> )	( <sup>2</sup> )	3	( <sup>2</sup> )	-	2	4	20	29	31	-	
Offshore .....	409	12.54	-	-	-	-	-	-	-	-	-	-	-	-	-	19	1	39	( <sup>2</sup> )	-	2	1	4	( <sup>2</sup> )	8	5	16	5	-	
Floor workers, rotary .....	8,373	8.29	2	3	1	1	9	2	13	7	7	15	9	11	10	4	2	1	( <sup>2</sup> )	-	2	( <sup>2</sup> )	-	( <sup>2</sup> )	-	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	-
Onshore .....	6,566	8.09	3	4	1	1	12	3	14	9	9	13	10	8	4	1	2	1	( <sup>2</sup> )	-	2	( <sup>2</sup> )	-	( <sup>2</sup> )	-	-	-	-	-	-
Offshore .....	1,807	9.03	-	-	-	-	( <sup>2</sup> )	-	9	-	1	19	2	22	31	11	1	-	-	-	-	-	-	-	-	( <sup>2</sup> )	1	1	-	-
Gasplant operators .....	1,992	14.19	( <sup>2</sup> )	-	-	-	-	-	( <sup>2</sup> )	2	1	-	-	( <sup>2</sup> )	2	( <sup>2</sup> )	( <sup>2</sup> )	2	1	3	3	5	1	2	20	22	25	12	-	
Onshore .....	1,770	14.04	( <sup>2</sup> )	-	-	-	-	-	( <sup>2</sup> )	2	1	-	-	( <sup>2</sup> )	2	( <sup>2</sup> )	( <sup>2</sup> )	2	1	3	3	5	2	3	22	21	27	6	-	
Hoist operators .....	271	10.68	-	1	-	-	5	2	-	-	2	-	-	19	6	11	7	( <sup>2</sup> )	30	-	-	( <sup>2</sup> )	1	-	-	-	-	16	-	-
Onshore .....	91	12.03	-	2	-	-	15	7	-	-	7	-	-	-	16	-	1	-	1	-	-	1	2	-	-	-	47	-	-	
Offshore .....	180	10.00	-	-	-	-	-	-	-	-	-	-	-	29	9	8	11	-	44	-	-	-	-	-	-	-	-	-	-	-
Mechanics, maintenance .....	3,678	14.12	1	-	-	-	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	1	1	( <sup>2</sup> )	1	1	2	4	2	4	1	1	1	2	3	5	14	39	12	5	
Onshore .....	2,704	14.17	1	-	-	-	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	1	1	1	2	1	1	2	2	1	1	1	1	2	3	7	12	47	8	5	
Offshore .....	974	13.97	-	-	-	-	-	-	-	-	-	-	-	-	3	11	-	14	( <sup>2</sup> )	-	-	2	1	2	1	20	18	25	4	-
Motor operators .....	2,836	8.64	-	( <sup>2</sup> )	5	( <sup>2</sup> )	3	1	4	21	7	6	11	11	12	6	6	1	1	-	1	1	-	2	-	-	-	-	-	-
Onshore .....	2,480	8.50	-	( <sup>2</sup> )	5	( <sup>2</sup> )	4	1	5	25	9	7	12	12	10	( <sup>2</sup> )	4	1	1	-	1	1	-	2	-	-	-	-	-	-
Offshore .....	356	9.62	-	-	-	-	-	-	-	-	-	-	2	4	26	42	23	1	1	-	-	-	-	-	-	-	-	-	-	-
Pumpers .....	12,047	13.10	1	1	1	1	1	2	1	1	1	1	( <sup>2</sup> )	1	3	1	3	1	2	3	3	3	4	10	28	17	5	6	1	
Onshore .....	10,234	12.83	1	1	1	1	2	2	1	1	1	1	( <sup>2</sup> )	1	3	1	4	1	3	3	3	2	4	11	30	17	2	4	1	
Offshore .....	1,813	14.61	-	-	-	-	-	-	-	-	-	-	-	( <sup>2</sup> )	-	-	-	-	4	-	8	6	5	20	16	24	17	1	-	
Roustabouts .....	9,240	10.74	4	4	3	1	4	1	8	3	4	2	1	1	2	1	1	2	1	2	3	16	17	15	1	( <sup>2</sup> )				
Onshore .....	6,547	11.22	5	3	1	1	3	1	8	( <sup>2</sup> )	2	1	2	2	3	2	1	2	1	2	3	19	18	18	1	1	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Offshore .....	2,693	9.58	3	8	9	2	6	1	8	9	10	3	-	( <sup>2</sup> )	1	-	( <sup>2</sup> )	2	1	2	1	10	16	7	1	-	-	-	-	-
Truckdrivers .....	1,356	9.10	<sup>3</sup> 18	1	2	2	13	3	5	1	11	2	3	1	6	1	1	1	( <sup>2</sup> )	2	2	2	2	10	5	4	( <sup>2</sup> )	-	-	-
Onshore .....	1,356	9.10	18	1	2	2	13	3	5	1	11	2	3	1	6	1	1	1	( <sup>2</sup> )	2	2	2	2	10	5	4	( <sup>2</sup> )	-	-	-
Welders, oil field .....	624	10.66	4	-	-	-	1	-	3	( <sup>2</sup> )	( <sup>2</sup> )	2	3	12	20	8	7	6	3	2	5	2	( <sup>2</sup> )	1	3	3	14	1	-	-
Onshore .....	312	11.87	8	-	-	-	2	-	4	( <sup>2</sup> )	1	4	3	1	3	3	7	2	3	4	9	3	1	3	5	5	28	1	-	-
Offshore .....	312	9.46	-	-	-	-	-	-	2	-	-	-	-	3	23	37	13	6	10	2	1	-	-	-	-	-	1	1	-	-
Well pullers .....	542	10.91	<sup>4</sup> 11	-	1	5	6	-	3	-	4	2	1	2	1	5	4	-	( <sup>2</sup> )	6	5	-	-	3	38	1	1	-	-	-
Onshore .....	542	10.91	11	-	1	5	6	-	3	-	4	2	1	2	1	5	4	-	( <sup>2</sup> )	6	5	-	-	3	38	1	1	-	-	-

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.  
<sup>2</sup> Less than 0.5 percent.  
<sup>3</sup> Workers were distributed as follows: 13 percent at \$6 and under \$6.25; and 4 percent at under \$6.  
<sup>4</sup> Workers were distributed as follows: 6 percent at \$6 and under \$6.25; and 5 percent at under \$6.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data. Overall classifications may include data for subclassifications not shown separately.

**Table 5. Oil and gas field operations: Occupational earnings distribution--United States**

(Percent distribution of workers in selected occupations by straight-time hourly earnings,<sup>1</sup> June 1988)

Occupation	Number of workers	Average (mean) hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of--																											
			Under 6.25	6.25 and under 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 and over	
Derrick operators	546	\$11.68	-	-	7	5	-	-	-	-	-	2	7	(?)	20	4	4	-	-	-	-	-	-	-	(?)	1	44	2	5	-
Onshore	498	11.57	-	-	7	5	-	-	-	-	-	2	8	(?)	21	-	5	-	-	-	-	-	-	-	(?)	1	48	2	-	
Offshore	48	12.88	-	-	-	-	-	-	-	-	-	-	-	-	48	-	-	-	-	-	-	-	-	-	-	-	-	52	-	
Drillers, rotary	357	10.54	1	-	-	7	7	7	-	-	2	7	-	-	2	-	-	27	17	17	-	-	-	-	1	-	-	-	5	
Onshore	315	9.98	1	-	-	8	8	8	-	-	3	8	-	-	2	-	-	31	19	11	-	-	-	-	2	-	-	-	-	
Offshore	42	14.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57	-	-	-	-	-	-	-	-	-	3	43
Electricians, maintenance	890	14.99	-	-	-	-	-	-	1	-	-	-	-	-	(?)	-	1	(?)	-	(?)	1	1	-	2	4	22	29	36	2	
Onshore	741	14.93	-	-	-	-	-	-	1	-	-	-	-	-	1	-	1	(?)	-	(?)	1	(?)	-	3	4	22	32	34	-	
Offshore	149	15.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	5	-	1	1	21	13	44	13	-	
Floor workers, rotary	663	8.73	8	8	-	4	-	-	-	14	2	-	36	-	14	4	4	-	-	-	-	-	-	1	-	1	2	4	-	
Onshore	523	8.05	10	10	-	5	-	-	-	18	2	-	46	-	-	5	5	-	-	-	-	-	-	1	-	-	-	-	-	
Gasplant operators	1,851	14.34	(?)	-	-	-	-	-	(?)	-	1	-	-	-	2	(?)	(?)	2	(?)	3	3	4	2	2	21	20	27	13	-	
Onshore	1,629	14.21	(?)	-	-	-	-	-	(?)	-	1	-	-	-	2	(?)	(?)	2	(?)	3	3	5	2	3	24	19	29	7	-	
Mechanics, maintenance	3,181	14.67	1	-	-	-	-	-	(?)	-	(?)	1	-	1	(?)	1	1	1	(?)	1	1	1	2	3	6	16	45	14	5	
Onshore	2,475	14.53	1	-	-	-	-	-	(?)	-	(?)	1	-	1	(?)	1	1	2	(?)	1	1	1	2	3	7	13	51	8	5	
Offshore	706	15.17	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	3	-	2	2	2	27	24	34	5	
Motor operators	113	8.98	-	-	-	-	-	-	-	11	28	-	-	-	40	-	21	-	-	-	-	-	-	-	-	-	-	-	-	
Onshore	92	8.92	-	-	-	-	-	-	-	13	35	-	-	-	26	-	26	-	-	-	-	-	-	-	-	-	-	-	-	
Pumpers	11,817	13.16	1	1	1	1	1	1	2	1	1	1	(?)	1	3	1	3	1	2	3	3	3	4	10	29	17	5	6	1	
Onshore	10,010	12.90	1	1	1	1	1	1	3	1	1	1	(?)	1	3	1	4	1	2	2	3	2	4	11	30	17	2	4	1	
Offshore	1,807	14.63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	8	6	5	20	16	24	17	1		
Roustabouts	7,036	11.83	3	2	1	1	4	1	(?)	(?)	1	1	2	2	2	1	1	3	1	2	4	21	23	20	2	1	(?)	1	-	
Onshore	5,841	11.69	4	3	1	1	3	1	1	(?)	2	1	2	2	3	2	1	3	1	2	4	21	20	20	1	1	(?)	1	-	
Offshore	1,195	12.52	-	-	-	-	6	-	-	-	-	-	-	(?)	1	-	1	5	2	4	3	22	37	16	2	-	-	-	-	
Truckdrivers	572	11.10	9	1	(?)	4	3	1	3	1	4	2	2	1	8	1	1	1	1	5	5	1	1	23	12	9	(?)	-	-	
Onshore	572	11.10	9	1	(?)	4	3	1	3	1	4	2	2	1	8	1	1	1	1	5	5	1	1	23	12	9	(?)	-	-	
Welders, oil field	250	12.33	<sup>5</sup> 10	-	-	2	-	-	-	-	-	5	2	-	5	-	6	(?)	2	4	10	4	1	2	4	7	34	2	-	
Onshore	232	12.40	10	-	-	2	-	-	-	-	-	6	2	-	-	7	(?)	3	4	10	4	1	3	4	7	35	1	-	-	
Well pullers	517	11.09	<sup>6</sup> 12	-	-	6	3	-	3	-	4	3	1	3	1	5	4	-	(?)	6	5	-	-	3	40	1	1	-	-	
Onshore	517	11.09	12	-	-	6	3	-	3	-	4	3	1	3	1	5	4	-	(?)	6	5	-	-	3	40	1	1	-	-	

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Less than 0.5 percent.

<sup>3</sup> All workers were at \$18 and under \$18.50.

<sup>4</sup> Workers were distributed as follows: 7 percent at \$16 and under \$16.50; and 6 percent at \$16.50 and over.

<sup>5</sup> All workers were at \$5.75 and under \$6.

<sup>6</sup> Workers were distributed as follows: 6 percent at \$6 and under \$6.25; 1 percent at \$5.75 and under \$6; and 5 percent at \$5 and under \$5.25.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data. Overall classifications may include data for subclassifications not shown separately.

**Table 6. Contract drilling operations: Occupational earnings distribution—United States**

(Percent distribution of workers in selected occupations by straight-time hourly earnings,<sup>1</sup> June 1988)

Occupation	Number of workers	Average (mean) hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																										
			Under 6.25	6.25 and under 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 and over
Derrick operators .....	3,857	\$8.86	(?)	1	1	7	(?)	7	10	8	10	3	10	18	8	9	2	2	1	-	1	2	(?)	(?)	(?)	(?)	-	-	-
Onshore .....	3,262	8.70	(?)	1	1	8	(?)	9	12	7	11	3	12	18	5	3	1	2	1	-	1	2	(?)	(?)	(?)	-	-	-	
Offshore .....	595	9.69	-	-	-	-	-	-	-	12	-	-	17	22	42	6	1	-	-	-	-	-	-	-	-	-	-	-	
Drillers, rotary .....	4,164	10.85	-	-	-	1	-	1	1	3	1	1	(?)	13	6	23	10	6	9	13	4	1	3	3	2	1	-	1	
Onshore .....	3,553	10.57	-	-	-	1	-	1	1	3	1	2	(?)	15	7	24	12	8	7	12	(?)	(?)	1	1	2	(?)	-	1	
Offshore .....	611	12.45	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	20	16	22	3	13	12	-	1	-	-		
Electricians, maintenance .....	334	10.84	-	-	-	-	-	1	(?)	-	-	2	-	4	-	27	6	48	(?)	5	1	1	4	(?)	-	-	(?)	-	
Onshore .....	74	10.40	-	-	-	-	-	5	1	-	-	8	-	19	-	18	19	1	1	23	1	-	-	1	-	1	-		
Offshore .....	260	10.96	-	-	-	-	-	-	-	-	-	-	-	-	29	2	61	-	1	-	2	5	-	-	-	-	-		
Floor workers, rotary .....	7,710	8.26	2	3	1	1	10	2	14	7	8	16	6	12	10	4	2	1	(?)	-	2	(?)	-	-	-	-	-	-	
Onshore .....	6,043	8.10	2	3	1	1	13	3	16	9	10	15	7	9	4	1	2	1	(?)	-	3	1	-	-	-	-	-	-	
Offshore .....	1,667	8.84	-	-	-	(?)	-	9	-	1	21	2	24	29	12	1	-	-	-	-	-	-	-	-	-	-	-		
Hoist operators .....	202	9.79	-	1	-	-	-	7	-	-	-	-	26	8	8	9	(?)	40	-	-	(?)	-	-	-	-	-	-	-	
Offshore .....	180	10.00	-	-	-	-	-	-	-	-	-	-	29	9	8	11	-	44	-	-	-	-	-	-	-	-	-		
Mechanics, maintenance .....	497	10.56	-	-	-	(?)	-	(?)	1	2	2	4	5	6	9	26	4	29	1	1	1	2	2	1	2	1	1	1	
Onshore .....	229	10.28	-	-	-	(?)	-	(?)	3	5	5	8	11	12	8	15	10	5	2	3	2	1	1	1	-	3	2		
Offshore .....	268	10.80	-	-	-	-	-	-	-	-	-	-	-	-	10	35	-	49	-	-	1	2	3	-	-	-	-		
Motor operators .....	2,723	8.63	-	(?)	5	(?)	3	1	4	22	7	7	11	11	6	6	1	1	-	1	1	-	2	-	-	-	-		
Onshore .....	2,388	8.48	-	(?)	5	1	4	1	5	25	8	8	13	12	10	1	3	1	1	-	1	-	2	-	-	-	-		
Offshore .....	335	9.64	-	-	-	-	-	-	-	-	-	2	5	21	44	24	1	1	-	-	-	-	-	-	-	-	-		
Pumpers .....	230	9.66	<sup>3</sup> 10	-	-	17	15	-	-	5	-	-	-	3	-	1	3	17	11	-	4	3	6	-	4	-	1		
Onshore .....	224	9.67	11	-	-	17	16	-	-	5	-	-	-	1	-	1	3	17	11	-	4	3	6	-	4	-	1		
Roustabouts .....	2,204	7.27	7	10	12	3	4	1	33	12	14	3	-	(?)	(?)	(?)	-	-	(?)	(?)	(?)	-	-	-	-	-	-		
Offshore .....	1,498	7.24	5	15	16	4	5	2	14	16	18	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Truckdrivers .....	784	7.64	<sup>4</sup> 24	(?)	4	(?)	21	4	7	1	16	2	3	2	5	2	1	-	(?)	-	3	3	-	-	-	-	-		
Onshore .....	784	7.64	24	(?)	4	(?)	21	4	7	1	16	2	3	2	5	2	1	-	(?)	-	3	3	-	-	-	-	-		
Welders, oil field .....	374	9.55	-	-	-	1	-	6	(?)	1	-	4	20	30	13	7	10	3	1	1	-	(?)	1	2	-	1	-		
Onshore .....	80	10.33	-	-	-	3	-	18	1	4	-	5	3	11	11	6	6	4	3	6	-	1	3	10	-	6	-		
Offshore .....	294	9.34	-	-	-	-	-	2	-	-	-	3	25	35	14	7	11	2	1	-	-	-	-	-	-	-	-		

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Less than 0.5 percent.

<sup>3</sup> All workers were at \$6 and under \$6.25.

<sup>4</sup> Workers were distributed as follows: 20 percent at \$6 and under \$6.25; and 5 percent at under \$6.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data. Overall classifications may include data for subclassifications not shown separately.



**Table 9. Oil and gas extraction: Occupational earnings distribution—Border States region<sup>1</sup>**

(Percent distribution of workers in selected occupations by straight-time hourly earnings,<sup>2</sup> June 1988)

Occupation <sup>3</sup>	Number of workers	Average (mean) hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																									
			Under 5.75	5.75 and under 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	
Derrick operators .....	110	\$8.23	-	-	-	-	-	-	-	-	25	7	44	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Drillers, rotary .....	114	9.52	-	-	-	-	-	-	-	-	-	2	-	11	-	54	11	24	-	-	-	-	-	-	-	-	-	-
Floor workers, rotary .....	188	8.06	1	-	-	-	-	-	-	-	14	-	56	29	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gasplant operators .....	58	11.48	-	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	2	-	34	48	-	-	2	-	-	
Mechanics, maintenance .....	31	12.26	-	-	-	-	-	-	-	3	-	-	-	-	10	3	3	6	6	-	3	10	-	-	-	32	23	
Pumpers .....	173	10.58	3	-	9	-	3	-	1	-	10	-	1	-	9	-	-	3	-	6	1	36	-	-	19	-	-	
Roustabouts .....	197	9.47	<sup>4</sup> 29	-	1	1	3	1	-	1	-	1	-	-	-	-	4	-	5	1	1	53	-	-	-	-	-	
Truckdrivers .....	73	8.36	<sup>5</sup> 15	-	-	-	-	1	-	19	8	34	-	-	-	-	-	-	5	5	-	7	-	4	-	-	-	
Welders, oil field .....	32	11.25	-	-	-	-	-	-	13	-	-	-	-	6	3	6	-	-	-	16	13	22	-	-	3	19	-	
Well pullers .....	35	9.80	-	11	-	-	9	6	11	-	-	-	3	-	-	-	6	-	-	3	11	40	-	-	-	-	-	

<sup>1</sup> For definition of region, see appendix A, table A-1, footnote 1.

<sup>2</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>3</sup> All workers were onshore workers.

<sup>4</sup> Workers were distributed as follows: 4 percent at \$5.50 and under \$5.75; 2 percent at \$5.25 and under \$5.50; 17 percent at \$5 and under \$5.25; and 7 percent at under \$5.

<sup>5</sup> Workers were distributed as follows: 14 percent at \$5.50 and under \$5.75; and 1 percent at \$5 and under \$5.25.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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**Table 10. Oil and gas extraction: Occupational earnings distribution—Great Lakes region<sup>1</sup>**

(Percent distribution of workers in selected occupations by straight-time hourly earnings,<sup>2</sup> June 1988)

Occupation <sup>3</sup>	Number of workers	Average (mean) hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																										
			Under 6.25	6.25 and under 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 and over
Derrick operators .....	222	\$8.89	5	-	5	-	5	-	-	4	4	11	3	13	23	9	6	-	-	8	-	-	-	-	2	-	-	-	-
Drillers, rotary .....	275	10.56	1	-	-	-	10	-	-	4	7	-	-	-	2	8	8	( <sup>4</sup> )	31	( <sup>4</sup> )	17	-	-	-	2	9	-	-	-
Electricians, maintenance .....	24	12.84	-	-	-	-	-	-	25	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	33	21	-	
Floor workers, rotary .....	441	8.33	8	-	-	5	6	4	-	8	3	15	1	17	17	8	-	5	-	-	-	-	-	1	-	-	-	-	
Gasplant operators .....	88	12.85	-	-	-	-	-	-	7	-	-	-	-	-	1	5	-	-	-	22	17	9	8	8	-	24	-		
Mechanics, maintenance .....	112	12.30	-	-	-	-	-	-	6	5	11	3	2	1	4	-	6	6	-	-	1	-	1	6	-	10	23	3	
Motor operators .....	77	9.38	-	-	-	-	-	-	22	-	5	-	1	-	25	16	-	-	31	-	-	-	-	-	-	-	-	-	
Pumpers .....	588	9.83	8	10	1	1	9	4	2	2	4	4	2	5	6	2	3	3	( <sup>4</sup> )	1	9	1	( <sup>4</sup> )	11	1	13	-	-	
Roustabouts .....	295	10.06	7	3	5	6	8	-	4	1	4	1	1	-	7	3	2	2	-	3	1	9	32	-	-	-	-	-	
Truckdrivers .....	144	9.34	3	3	8	2	6	3	11	3	11	1	1	1	15	6	3	-	-	-	-	-	-	-	17	4	-	-	
Welders, oil field .....	15	10.30	-	-	-	-	-	-	7	7	20	-	-	-	13	13	-	20	-	-	-	-	-	-	-	20	-	-	
Well pullers .....	84	9.10	-	-	-	4	18	-	21	-	17	4	-	-	8	2	-	-	-	-	4	-	-	-	17	-	-	-	

<sup>1</sup> For definition of region, see appendix A, table A-1, footnote 1.

<sup>2</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>3</sup> All workers were onshore workers.

<sup>4</sup> Less than 0.5 percent.

<sup>5</sup> Workers were distributed as follows: 9 percent at \$16 and under \$16.50; and 3 percent at \$18.50 and under \$19.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

**Table 11. Oil and gas extraction: Occupational earnings distribution--Midcontinent region<sup>1</sup>**

(Percent distribution of workers in selected occupations by straight-time hourly earnings,<sup>2</sup> June 1988)

Occupation	Number of workers	Average (mean) hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of--																											
			Under 6.25	6.25 and under 6.50	6.50-6.75	6.75-7.00	7.00-7.25	7.25-7.50	7.50-7.75	7.75-8.00	8.00-8.25	8.25-8.50	8.50-8.75	8.75-9.00	9.00-9.50	9.50-10.00	10.00-10.50	10.50-11.00	11.00-11.50	11.50-12.00	12.00-12.50	12.50-13.00	13.00-13.50	13.50-14.00	14.00-14.50	14.50-15.00	15.00-15.50	15.50-16.00	16.00 and over	
Derrick operators	710	\$8.83	-	-	-	12	-	13	8	10	12	5	( <sup>3</sup> )	19	4	3	7	4	-	-	-	-	-	-	-	-	2	-	3	-
Onshore	669	8.61	-	-	-	13	-	14	8	10	12	5	( <sup>3</sup> )	20	1	4	7	4	-	-	-	-	-	-	-	-	2	-	-	
Drillers, rotary	806	10.20	-	-	-	3	-	-	-	9	3	6	-	22	5	18	-	5	4	20	-	-	-	4	-	-	-	-	-	1
Onshore	773	10.04	-	-	-	3	-	-	-	9	3	6	-	23	5	19	-	5	5	18	-	-	-	4	-	-	-	-	-	
Floor workers, rotary	1,300	8.07	-	-	-	2	28	4	2	19	12	6	8	1	7	2	8	-	-	-	-	-	-	-	-	-	1	-	-	
Onshore	1,194	7.90	-	-	-	2	31	5	3	20	13	6	9	1	( <sup>3</sup> )	2	9	-	-	-	-	-	-	-	-	-	-	-	-	
Gasplant operators	247	14.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	( <sup>3</sup> )	-	-	-	-	-	2	5	43	19	15	16	-	
Onshore	247	14.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	( <sup>3</sup> )	-	-	-	-	2	5	43	19	15	16	-	-	
Mechanics, maintenance	540	13.76	4	-	-	( <sup>3</sup> )	-	-	-	1	4	1	3	2	2	2	( <sup>3</sup> )	( <sup>3</sup> )	1	1	( <sup>3</sup> )	-	2	5	5	39	19	7	-	
Onshore	441	13.46	5	-	-	( <sup>3</sup> )	-	-	-	1	5	2	3	2	3	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	1	1	( <sup>3</sup> )	-	2	7	6	43	11	6	-	
Motor operators	445	8.71	-	-	-	16	3	8	3	16	9	2	18	5	-	13	-	-	-	-	-	-	7	-	-	-	-	-	-	-
Onshore	424	8.68	-	-	-	17	4	8	3	16	9	2	19	-	-	14	-	-	-	-	-	-	7	-	-	-	-	-	-	-
Pumpers	2,081	12.71	-	-	4	-	1	10	( <sup>3</sup> )	3	2	( <sup>3</sup> )	1	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	2	1	1	2	2	7	6	30	16	6	4	1	-	
Onshore	1,976	12.58	-	-	4	-	1	11	( <sup>3</sup> )	3	2	( <sup>3</sup> )	1	( <sup>3</sup> )	( <sup>3</sup> )	1	2	1	1	2	2	8	6	31	17	1	4	1	-	
Roustabouts	1,458	10.92	5	( <sup>3</sup> )	2	1	12	1	( <sup>3</sup> )	( <sup>3</sup> )	4	5	( <sup>3</sup> )	1	3	1	( <sup>3</sup> )	4	3	1	3	26	18	7	1	1	-	-	( <sup>3</sup> )	-
Onshore	1,211	10.85	6	( <sup>3</sup> )	2	2	8	1	( <sup>3</sup> )	( <sup>3</sup> )	5	6	( <sup>3</sup> )	2	3	2	1	5	3	1	2	31	11	7	1	1	-	-	( <sup>3</sup> )	-
Offshore	247	11.31	-	-	-	31	-	-	-	-	-	-	-	-	-	-	-	1	-	5	4	49	10	-	-	-	-	-	-	-
Truckdrivers	340	8.74	4	16	4	-	24	4	4	1	14	3	1	1	-	( <sup>3</sup> )	4	1	-	1	1	1	16	1	2	( <sup>3</sup> )	-	-	-	-
Onshore	340	8.74	16	-	4	-	24	4	4	1	14	3	1	1	-	( <sup>3</sup> )	4	1	-	1	1	1	16	1	2	( <sup>3</sup> )	-	-	-	-
Welders, oil field	80	9.56	5	30	-	-	3	-	5	-	-	16	-	-	15	-	3	-	-	-	-	-	-	-	10	4	15	-	-	
Onshore	65	9.35	37	-	-	-	3	-	6	-	-	20	-	-	-	-	3	-	-	-	-	-	-	-	12	5	14	-	-	

<sup>1</sup> For definition of region, see appendix A, table A-1, footnote 1.

<sup>2</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>3</sup> Less than 0.5 percent.

<sup>4</sup> Workers were distributed as follows: 7 percent at \$6 and under \$6.25; 2 percent at \$5.50 and under \$5.75; and 7 percent at \$5.25 and under \$5.50.

<sup>5</sup> All workers were at \$5.75 and under \$6.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data. Overall classifications may include data for subclassifications not shown separately.

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**Table 12. Oil and gas extraction: Occupational earnings distribution--Oklahoma**

(Percent distribution of workers in selected occupations by straight-time hourly earnings,<sup>1</sup> June 1988)

Occupation <sup>2</sup>	Number of workers	Average (mean) hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of--																											
			6.00 and under 6.25	6.25-6.50	6.50-6.75	6.75-7.00	7.00-7.25	7.25-7.50	7.50-7.75	7.75-8.00	8.00-8.25	8.25-8.50	8.50-8.75	8.75-9.00	9.00-9.50	9.50-10.00	10.00-10.50	10.50-11.00	11.00-11.50	11.50-12.00	12.00-12.50	12.50-13.00	13.00-13.50	13.50-14.00	14.00-14.50	14.50-15.00	15.00-15.50	15.50-16.00	16.00 and over	
Derrick operators	423	\$8.68	-	-	-	6	-	13	7	9	9	8	( <sup>3</sup> )	31	-	6	11	-	-	-	-	-	-	-	-	-	-	-	-	-
Drillers, rotary	460	10.53	-	-	-	-	-	-	-	3	-	10	-	10	3	32	-	5	8	30	-	-	-	-	-	-	-	-	-	-
Floor workers, rotary	621	8.00	-	-	-	18	1	5	34	14	-	16	2	-	4	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gasplant operators	247	14.67	-	-	-	-	-	-	-	-	-	-	-	-	-	( <sup>3</sup> )	-	-	-	-	-	2	5	43	19	15	16	-	-	
Mechanics, maintenance	322	14.08	-	-	-	( <sup>3</sup> )	-	-	-	-	-	3	-	5	3	4	( <sup>3</sup> )	1	( <sup>3</sup> )	1	( <sup>3</sup> )	-	3	5	8	41	16	8	-	
Motor operators	331	8.45	-	-	-	22	-	-	-	21	12	3	24	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumpers	1,534	12.44	-	-	5	-	-	1	14	( <sup>3</sup> )	1	2	( <sup>3</sup> )	1	-	( <sup>3</sup> )	( <sup>3</sup> )	2	2	2	3	2	3	8	32	16	2	4	1	
Roustabouts	873	10.98	2	( <sup>3</sup> )	1	2	10	( <sup>3</sup> )	( <sup>3</sup> )	1	7	6	( <sup>3</sup> )	2	3	( <sup>3</sup> )	1	4	4	( <sup>3</sup> )	2	29	13	7	1	2	-	-	-	-
Truckdrivers	202	9.72	-	-	7	-	6	6	6	1	24	5	2	2	-	( <sup>3</sup> )	7	1	-	1	2	2	-	21	1	3	( <sup>3</sup> )	-	-	-
Welders, oil field	20	13.70	-	-	-	10	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	40	15	30	-	-	
Well pullers	26	8.39	31	-	-	-	-	-	-	-	15	38	4	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> All workers were onshore workers.

<sup>3</sup> Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

**Table 13. Oil and gas extraction: Occupational earnings distribution--Louisiana**

(Percent distribution of workers in selected occupations by straight-time hourly earnings,<sup>1</sup> June 1988)

Occupation	Number of workers	Average (mean) hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																										
			Under 5.75	5.75 and under 6.00	6.00-6.25	6.25-6.50	6.50-6.75	6.75-7.00	7.00-7.25	7.25-7.50	7.50-7.75	7.75-8.00	8.00-8.25	8.25-8.50	8.50-9.00	9.00-9.50	9.50-10.00	10.00-10.50	10.50-11.00	11.00-11.50	11.50-12.00	12.00-12.50	12.50-13.00	13.00-13.50	13.50-14.00	14.00-14.50	14.50-15.00	15.00-15.50	15.50 and over
Derrick operators .....	827	\$8.92	-	-	-	-	6	6	-	-	13	-	3	-	28	15	18	2	-	-	-	-	-	(?)	-	-	-	-	1
Onshore .....	376	8.01	-	-	-	13	13	13	-	6	-	9	-	7	35	5	-	-	-	-	-	-	(?)	-	-	-	-	-	
Offshore .....	451	9.67	-	-	-	-	-	-	-	-	-	16	-	-	21	23	33	4	-	-	-	-	-	-	-	-	-	-	
Drillers, rotary .....	864	11.29	-	-	-	-	-	-	3	3	3	2	3	1	3	1	16	-	11	18	10	9	1	9	7	-	-	1	
Onshore .....	367	9.71	-	-	-	-	-	7	7	7	4	7	-	2	7	2	16	-	25	16	-	-	-	-	-	-	-	-	
Offshore .....	497	12.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	19	17	16	2	16	12	-	-	-	2	
Electricians, maintenance .....	454	13.14	-	-	-	-	-	-	-	-	-	-	-	-	1	-	15	1	27	(?)	-	2	-	4	1	8	19	<sup>3</sup> 21	
Onshore .....	112	14.63	-	-	-	-	-	-	-	-	-	-	-	-	5	-	1	-	-	-	-	-	-	13	3	5	61	13	
Offshore .....	342	12.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	2	36	1	-	2	-	1	1	9	6	23	
Floor workers, rotary .....	2,100	8.49	-	-	4	2	4	1	5	-	11	-	-	15	26	22	8	-	-	-	-	-	-	-	-	-	(?)	-	1
Onshore .....	759	7.60	-	-	11	7	10	3	13	-	8	-	-	7	35	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Offshore .....	1,341	9.00	-	-	-	-	-	-	-	-	12	-	-	20	21	32	12	-	-	-	-	-	-	-	-	-	-	-	-
Gasplant operators .....	418	14.87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	3	1	18	28	<sup>4</sup> 35	
Onshore .....	220	14.39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	-	5	2	11	45	7	
Offshore .....	93	10.28	-	-	2	-	-	-	-	-	-	-	-	-	17	15	13	-	53	-	-	-	-	-	-	-	-	-	-
Offshore .....	91	10.36	-	-	-	-	-	-	-	-	-	-	-	-	18	15	13	-	54	-	-	-	-	-	-	-	-	-	-
Mechanics, maintenance .....	1,209	14.03	-	-	-	-	-	-	-	-	-	-	-	(?)	-	(?)	1	8	3	10	(?)	-	2	2	2	6	18	28	<sup>5</sup> 18
Onshore .....	438	14.06	-	-	-	-	-	-	-	-	-	-	-	1	-	1	3	2	7	-	-	2	6	2	16	6	50	3	
Offshore .....	771	14.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	15	1	-	3	-	2	1	25	16	26	
Motor operators .....	427	8.98	-	-	-	7	3	2	-	5	7	-	-	12	21	26	17	-	-	-	-	-	-	-	-	-	-	-	-
Onshore .....	171	8.01	-	-	-	16	7	5	-	12	19	-	-	16	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Offshore .....	256	9.63	-	-	-	-	-	-	-	-	-	-	-	9	19	43	29	-	-	-	-	-	-	-	-	-	-	-	-
Pumpers .....	2,001	13.70	-	-	1	-	2	-	2	-	1	1	-	(?)	(?)	-	4	-	1	5	-	5	6	6	31	13	12	<sup>6</sup> 11	
Onshore .....	1,066	12.91	-	-	2	-	3	-	4	-	1	1	-	(?)	-	-	8	-	1	1	-	(?)	10	10	49	6	-	2	
Offshore .....	935	14.61	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	9	-	(?)	10	1	1	10	21	25	22	
Roustabouts .....	2,881	10.25	5	3	(?)	8	3	2	-	1	7	9	7	2	(?)	1	(?)	-	2	1	1	1	10	17	19	1	(?)	-	
Onshore .....	985	11.62	<sup>7</sup> 14	1	1	2	1	1	-	4	1	-	-	(?)	-	1	(?)	-	1	2	1	2	12	23	39	-	(?)	-	
Offshore .....	1,896	9.55	-	4	-	12	4	3	-	-	11	13	10	3	(?)	1	-	1	3	1	1	9	14	9	1	-	-	-	
Truckdrivers .....	125	8.68	-	1	-	2	-	17	4	4	2	2	13	-	13	34	-	-	-	-	-	-	-	2	7	-	-	-	
Onshore .....	125	8.68	-	1	-	2	-	17	4	4	2	2	13	-	13	34	-	-	-	-	-	-	-	2	7	-	-	-	
Welders, oil field .....	261	9.52	-	-	-	-	-	-	-	-	3	-	-	-	22	35	13	11	11	-	-	-	-	-	1	1	(?)	-	1
Onshore .....	31	10.47	-	-	-	-	-	-	-	-	-	-	-	-	16	6	13	45	-	-	-	-	-	6	10	3	-	-	
Offshore .....	230	9.39	-	-	-	-	-	-	-	3	-	-	-	-	23	39	13	7	13	-	-	-	-	-	-	-	-	-	1

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

<sup>2</sup> Less than 0.5 percent.

<sup>3</sup> Workers were distributed as follows: 17 percent at \$15.50 and under \$16; and 5 percent at \$16 and over.

<sup>4</sup> All workers were at \$15.50 and under \$16.

<sup>5</sup> Workers were distributed as follows: 16 percent at \$15.50 and under \$16; and 2 percent at \$16 and over.

<sup>6</sup> All workers were at \$15.50 and under \$16.

<sup>7</sup> Workers were distributed as follows: 2 percent at \$5.50 and under \$5.75; 5 percent at \$5.25 and under \$5.50; and 6 percent at \$5 and under \$5.25.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data. Overall classifications may include data for subclassifications not shown separately.





**Table 17. Method of wage payment**

(Percent of production workers in oil and gas extraction establishments by method of wage payment,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Method	United States <sup>3</sup>			Middle Atlantic <sup>4</sup>			Western Pennsylvania			Border States		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100	100	100	100
Time-rated workers .....	99	99	100	100	100	100	100	100	100	100	100	100
Formal plans .....	94	93	97	94	92	97	96	95	97	92	89	95
Single rate .....	82	75	92	74	75	71	78	82	71	61	39	82
Range of rates .....	13	18	6	21	17	26	18	12	26	31	49	13
Length of service .....	5	6	3	10	-	26	11	-	26	10	21	-
Merit review .....	2	2	( <sup>5</sup> )	-	-	-	-	-	-	3	7	-
Combination .....	6	9	2	10	17	-	7	12	-	17	22	13
Individual rates .....	5	7	3	6	8	3	4	5	3	8	11	5
Incentive workers .....	( <sup>5</sup> )	1	-	-	-	-	-	-	-	-	-	-
Individual piecework .....	( <sup>5</sup> )	( <sup>5</sup> )	-	-	-	-	-	-	-	-	-	-
Commission .....	( <sup>5</sup> )	( <sup>5</sup> )	-	-	-	-	-	-	-	-	-	-
	Great Lakes			Midcontinent <sup>6</sup>			Oklahoma			Louisiana		
All workers .....	100	100	100	100	100	100	100	100	100	100	100	100
Time-rated workers .....	93	88	100	100	100	100	100	100	100	100	100	100
Formal plans .....	79	69	95	92	94	90	93	91	98	95	93	98
Single rate .....	55	46	70	71	69	75	77	69	98	93	88	98
Range of rates .....	24	23	25	21	25	14	16	22	-	3	5	-
Length of service .....	8	8	8	9	10	6	10	15	-	-	-	-
Merit review .....	2	-	6	5	8	-	3	4	-	-	-	-
Combination .....	14	16	11	7	7	8	3	4	-	3	5	-
Individual rates .....	14	19	5	8	6	10	7	9	2	5	7	2
Incentive workers .....	7	12	-	-	-	-	-	-	-	-	-	-
Individual piecework .....	6	9	-	-	-	-	-	-	-	-	-	-
Commission .....	1	2	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

**Table 17. Method of wage payment—Continued**(Percent of production workers in oil and gas extraction establishments by method of wage payment,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Method	Texas			Mountain States			California		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100
Time-rated workers .....	100	100	100	100	100	100	100	100	100
Formal plans .....	95	92	99	98	97	99	97	97	100
Single rate .....	87	80	96	68	54	94	95	93	100
Range of rates .....	8	12	3	30	43	5	3	4	-
Length of service .....	7	10	3	2	2	3	3	4	-
Merit review .....	1	3	-	-	-	-	-	-	-
Combination .....	-	-	-	28	41	2	-	-	-
Individual rates .....	5	8	1	2	3	1	3	3	-
Incentive workers .....	-	-	-	-	-	-	-	-	-
Individual piecework .....	-	-	-	-	-	-	-	-	-
Commission .....	-	-	-	-	-	-	-	-	-

<sup>1</sup> For definition of method of wage payment, see appendix A.<sup>2</sup> For definitions of regions, see appendix A, table A-1, footnote 1.<sup>3</sup> Includes data for regions in addition to those shown separately.<sup>4</sup> Includes data for Western Pennsylvania shown separately.<sup>5</sup> Less than 0.5 percent.<sup>6</sup> Includes data for Oklahoma shown separately.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate no data.

**Table 18. Scheduled weekly hours—land-based workers**(Percent of production workers in oil and gas extraction establishments by scheduled weekly hours,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Weekly hours	United States <sup>3</sup>			Middle Atlantic <sup>4</sup>			Western Pennsylvania			Border States		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All land-based workers .....	100	100	100	100	100	100	100	100	100	100	100	100
Under 37.5 hours .....	( <sup>5</sup> )	( <sup>5</sup> )	-	-	-	-	-	-	-	-	-	-
37.5 and under 40 hours .....	1	1	2	1	2	-	1	3	-	10	20	-
40 hours .....	61	87	13	85	86	83	85	86	83	75	80	70
Over 40 and under 50 hours .....	13	6	24	13	12	14	13	11	14	10	-	19
50 hours .....	3	2	4	-	-	-	-	-	-	2	-	4
Over 50 and under 60 hours .....	7	2	17	-	-	-	-	-	-	-	-	-
60 or more hours .....	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	-	-	-	-	-	-	-	-	-
Variable workweek <sup>6</sup> .....	15	2	39	1	-	3	1	-	3	3	-	7
	Great Lakes			Midcontinent <sup>7</sup>			Oklahoma			Louisiana		
All land-based workers .....	100	100	100	100	100	100	100	100	100	100	100	100
Under 37.5 hours .....	1	2	-	-	-	-	-	-	-	-	-	-
37.5 and under 40 hours .....	6	2	12	-	-	-	-	-	-	1	-	3
40 hours .....	44	70	6	48	70	1	53	75	-	64	88	14
Over 40 and under 50 hours .....	30	20	45	30	24	44	18	16	23	-	-	-
50 hours .....	-	-	-	-	-	-	-	-	-	14	9	24
Over 50 and under 60 hours .....	7	-	18	12	6	25	20	9	46	1	-	4
60 or more hours .....	2	3	-	-	-	-	-	-	-	1	-	2
Variable workweek <sup>6</sup> .....	9	3	19	10	-	30	9	-	31	19	3	53

See footnotes at end of table.

**Table 18. Scheduled weekly hours—land-based workers—Continued**(Percent of production workers in oil and gas extraction establishments by scheduled weekly hours,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Weekly hours	Texas			Mountain States			California		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All land-based workers .....	100	100	100	100	100	100	100	100	100
Under 37.5 hours .....	-	-	-	-	-	-	-	-	-
37.5 and under 40 hours .....	-	-	-	2	-	5	-	-	-
40 hours .....	58	90	12	69	100	9	73	100	-
Over 40 and under 50 hours .....	10	3	21	15	-	45	3	-	13
50 hours .....	-	-	-	-	-	-	-	-	-
Over 50 and under 60 hours .....	14	4	30	1	-	3	-	-	-
60 or more hours .....	-	-	-	-	-	-	-	-	-
Variable workweek <sup>7</sup> .....	17	3	37	13	-	39	23	-	87

<sup>1</sup> Data relate to the predominant schedule for full-time, land-based, day-shift workers in each establishment.<sup>2</sup> For definitions of regions, see appendix A, table A-1, footnote 1.<sup>3</sup> Includes data for regions in addition to those shown separately.<sup>4</sup> Includes data for Western Pennsylvania shown separately.<sup>5</sup> Less than 0.5 percent.<sup>6</sup> Variable workweeks include requirements for employees to routinely

work schedules that vary from one week to the next, such as 48 hours in one week and 40 the next; or schedules of 12 hours on duty, then 12 hours off duty for 10 days, then 10 days off.

<sup>7</sup> Includes data for Oklahoma shown separately.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

**Table 19. Shift differential provisions**

(Percent of production workers in oil and gas extraction establishments by shift differential provisions,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Shift differential	United States <sup>3</sup>			Middle Atlantic <sup>4</sup>			Western Pennsylvania			Border States		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
<b>Second shift</b>												
Workers in establishments with second-shift provisions .....	69.2	70.7	66.9	57.0	29.8	97.2	62.2	34.7	97.2	59.1	37.4	80.4
With shift differential .....	29.6	49.1	-	-	-	-	-	-	-	18.5	37.4	-
Uniform cents per hour .....	29.5	49.0	-	-	-	-	-	-	-	16.7	33.8	-
20 cents .....	.3	.6	-	-	-	-	-	-	-	12.2	24.6	-
25 cents .....	.1	.2	-	-	-	-	-	-	-	4.5	9.1	-
30 cents .....	.3	.5	-	-	-	-	-	-	-	-	-	-
50 cents .....	27.4	45.5	-	-	-	-	-	-	-	-	-	-
55 cents .....	.3	.6	-	-	-	-	-	-	-	-	-	-
\$1 .....	1.0	1.7	-	-	-	-	-	-	-	-	-	-
Other formal paid differential	.1	.1	-	-	-	-	-	-	-	1.8	3.6	-
<b>Third shift</b>												
Workers in establishments with third-shift provisions .....	64.9	66.5	62.5	39.2	-	97.2	42.8	-	97.2	60.3	37.4	82.7
With shift differential .....	28.6	47.4	-	-	-	-	-	-	-	18.5	37.4	-
Uniform cents per hour .....	28.5	47.3	-	-	-	-	-	-	-	16.7	33.8	-
30 cents .....	.6	1.1	-	-	-	-	-	-	-	12.2	24.6	-
50 cents .....	.1	.2	-	-	-	-	-	-	-	4.5	9.1	-
\$1 .....	27.4	45.5	-	-	-	-	-	-	-	-	-	-
\$1.10 .....	.3	.6	-	-	-	-	-	-	-	-	-	-
Other formal paid differential	.1	.1	-	-	-	-	-	-	-	1.8	3.6	-

See footnotes at end of table.

**Table 19. Shift differential provisions—Continued**

(Percent of production workers in oil and gas extraction establishments by shift differential provisions,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Shift differential	Great Lakes			Midcontinent <sup>5</sup>			Oklahoma			Louisiana		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
<b>Second shift</b>												
Workers in establishments with second-shift provisions .....	55.2	39.5	81.4	69.8	65.9	77.9	82.1	74.7	100.0	58.4	77.6	35.2
With shift differential .....	15.7	25.2	-	29.1	43.0	-	35.0	49.3	-	32.6	59.7	-
Uniform cents per hour .....	15.7	25.2	-	29.1	43.0	-	35.0	49.3	-	32.6	59.7	-
20 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
25 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
30 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
50 cents .....	15.7	25.2	-	29.1	43.0	-	35.0	49.3	-	32.6	59.7	-
55 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
\$1 .....	-	-	-	-	-	-	-	-	-	-	-	-
Other formal paid differential	-	-	-	-	-	-	-	-	-	-	-	-
<b>Third shift</b>												
Workers in establishments with third-shift provisions .....	55.2	39.5	81.4	69.8	65.9	77.9	82.1	74.7	100.0	55.2	77.6	28.2
With shift differential .....	15.7	25.2	-	29.1	43.0	-	35.0	49.3	-	32.6	59.7	-
Uniform cents per hour .....	15.7	25.2	-	29.1	43.0	-	35.0	49.3	-	32.6	59.7	-
30 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
50 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
\$1 .....	15.7	25.2	-	29.1	43.0	-	35.0	49.3	-	32.6	59.7	-
\$1.10 .....	-	-	-	-	-	-	-	-	-	-	-	-
Other formal paid differential	-	-	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

**Table 19. Shift differential provisions—Continued**(Percent of production workers in oil and gas extraction establishments by shift differential provisions,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Shift differential	Texas			Mountain States			California		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
<b>Second shift</b>									
Workers in establishments with second-shift provisions .....	73.2	73.0	73.5	71.2	64.3	84.4	92.3	95.8	83.3
With shift differential .....	24.5	43.9	-	35.9	54.8	-	49.4	68.1	-
Uniform cents per hour .....	24.5	43.9	-	35.9	54.8	-	49.4	68.1	-
20 cents .....	-	-	-	-	-	-	-	-	-
25 cents .....	-	-	-	-	-	-	-	-	-
30 cents .....	.9	1.6	-	-	-	-	-	-	-
50 cents .....	23.6	42.3	-	24.3	37.1	-	49.4	68.1	-
55 cents .....	-	-	-	3.0	4.6	-	-	-	-
\$1 .....	-	-	-	8.6	13.1	-	-	-	-
Other formal paid differential	-	-	-	-	-	-	-	-	-
<b>Third shift</b>									
Workers in establishments with third-shift provisions .....	65.9	66.1	65.7	63.0	51.2	85.7	92.3	95.8	83.3
With shift differential .....	24.5	43.9	-	27.3	41.7	-	49.4	68.1	-
Uniform cents per hour .....	24.5	43.9	-	27.3	41.7	-	49.4	68.1	-
30 cents .....	.9	1.6	-	-	-	-	-	-	-
50 cents .....	-	-	-	-	-	-	-	-	-
\$1 .....	23.6	42.3	-	24.3	37.1	-	49.4	68.1	-
\$1.10 .....	-	-	-	3.0	4.6	-	-	-	-
Other formal paid differential	-	-	-	-	-	-	-	-	-

<sup>1</sup> Refers to policies of establishments currently operating late shifts or having provisions covering late shifts.<sup>2</sup> For definitions of regions, see appendix A, table A-1, footnote 1.<sup>3</sup> Includes data for regions in addition to those shown separately.<sup>4</sup> Includes data for Western Pennsylvania shown separately.<sup>5</sup> Includes data for Oklahoma shown separately.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate no data.

**Table 20. Shift differential practices**

(Percent of production workers in oil and gas extraction establishments employed on late shifts by amount of pay differential, United States, selected regions, and States,<sup>1</sup> June 1988)

Shift differential	United States <sup>2</sup>			Middle Atlantic <sup>3</sup>			Western Pennsylvania			Border States		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
<b>Second shift</b>												
Workers employed on second shift ..	15.3	11.6	20.9	10.0	0.5	23.9	10.9	0.6	23.9	7.8	1.3	14.0
Receiving differential .....	3.5	5.8	-	-	-	-	-	-	-	.7	1.3	-
Uniform cents per hour .....	3.5	5.8	-	-	-	-	-	-	-	.2	.3	-
20 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
25 cents .....	( <sup>0</sup> )	( <sup>0</sup> )	-	-	-	-	-	-	-	.2	.3	-
30 cents .....	( <sup>0</sup> )	.1	-	-	-	-	-	-	-	-	-	-
50 cents .....	3.2	5.3	-	-	-	-	-	-	-	-	-	-
55 cents .....	( <sup>0</sup> )	( <sup>0</sup> )	-	-	-	-	-	-	-	-	-	-
\$1 .....	.2	.4	-	-	-	-	-	-	-	-	-	-
Other formal paid differential	( <sup>0</sup> )	( <sup>0</sup> )	-	-	-	-	-	-	-	.5	1.0	-
<b>Third shift</b>												
Workers employed on third shift .....	12.1	7.8	18.6	9.6	-	23.9	10.5	-	23.9	7.8	.8	14.5
Receiving differential .....	1.5	2.4	-	-	-	-	-	-	-	.4	.8	-
Uniform cents per hour .....	1.5	2.4	-	-	-	-	-	-	-	.2	.3	-
30 cents .....	( <sup>0</sup> )	( <sup>0</sup> )	-	-	-	-	-	-	-	-	-	-
50 cents .....	( <sup>0</sup> )	( <sup>0</sup> )	-	-	-	-	-	-	-	.2	.3	-
\$1 .....	1.4	2.3	-	-	-	-	-	-	-	-	-	-
\$1.10 .....	( <sup>0</sup> )	( <sup>0</sup> )	-	-	-	-	-	-	-	-	-	-
Other formal paid differential	( <sup>0</sup> )	( <sup>0</sup> )	-	-	-	-	-	-	-	.3	.5	-

See footnotes at end of table.

**Table 20. Shift differential practices—Continued**

(Percent of production workers in oil and gas extraction establishments employed on late shifts by amount of pay differential, United States, selected regions, and States,<sup>1</sup> June 1988)

Shift differential	Great Lakes			Midcontinent <sup>4</sup>			Oklahoma			Louisiana		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
<b>Second shift</b>												
Workers employed on second shift ..	8.8	2.7	18.9	14.2	10.0	23.1	14.9	8.6	30.4	17.2	19.8	14.1
Receiving differential .....	.5	.9	-	2.3	3.4	-	1.0	1.5	-	7.9	14.5	-
Uniform cents per hour .....	.5	.9	-	2.3	3.4	-	1.0	1.5	-	7.9	14.5	-
20 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
25 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
30 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
50 cents .....	.5	.9	-	2.3	3.4	-	1.0	1.5	-	7.9	14.5	-
55 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
\$1 .....	-	-	-	-	-	-	-	-	-	-	-	-
Other formal paid differential	-	-	-	-	-	-	-	-	-	-	-	-
<b>Third shift</b>												
Workers employed on third shift .....	8.8	2.7	18.9	12.4	7.5	22.7	14.9	8.6	30.4	9.2	8.2	10.5
Receiving differential .....	.5	.9	-	.6	.9	-	1.0	1.5	-	1.6	2.9	-
Uniform cents per hour .....	.5	.9	-	.6	.9	-	1.0	1.5	-	1.6	2.9	-
30 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
50 cents .....	-	-	-	-	-	-	-	-	-	-	-	-
\$1 .....	.5	.9	-	.6	.9	-	1.0	1.5	-	1.6	2.9	-
\$1.10 .....	-	-	-	-	-	-	-	-	-	-	-	-
Other formal paid differential	-	-	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

**Table 20. Shift differential practices—Continued**(Percent of production workers in oil and gas extraction establishments employed on late shifts by amount of pay differential, United States, selected regions, and States,<sup>1</sup> June 1988)

Shift differential	Texas			Mountain States			California		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
<b>Second shift</b>									
Workers employed on second shift ..	16.7	11.4	23.3	13.8	7.4	26.1	17.1	12.9	28.2
Receiving differential .....	1.6	2.9	-	2.9	4.4	-	5.5	7.6	-
Uniform cents per hour .....	1.6	2.9	-	2.9	4.4	-	5.5	7.6	-
20 cents .....	-	-	-	-	-	-	-	-	-
25 cents .....	-	-	-	-	-	-	-	-	-
30 cents .....	.1	.2	-	-	-	-	-	-	-
50 cents .....	1.5	2.7	-	.9	1.3	-	5.5	7.6	-
55 cents .....	-	-	-	.1	.2	-	-	-	-
\$1 .....	-	-	-	1.9	2.9	-	-	-	-
Other formal paid differential	-	-	-	-	-	-	-	-	-
<b>Third shift</b>									
Workers employed on third shift .....	14.2	10.1	19.3	12.1	4.5	26.5	15.1	10.3	27.8
Receiving differential .....	1.6	2.8	-	1.0	1.5	-	3.8	5.2	-
Uniform cents per hour .....	1.6	2.8	-	1.0	1.5	-	3.8	5.2	-
30 cents .....	.1	.2	-	-	-	-	-	-	-
50 cents .....	-	-	-	-	-	-	-	-	-
\$1 .....	1.5	2.7	-	.9	1.3	-	3.8	5.2	-
\$1.10 .....	-	-	-	.1	.2	-	-	-	-
Other formal paid differential	-	-	-	-	-	-	-	-	-

<sup>1</sup> For definitions of regions, see appendix A, table A-1, footnote 1.<sup>2</sup> Includes data for regions in addition to those shown separately.<sup>3</sup> Includes data for Western Pennsylvania shown separately.<sup>4</sup> Includes data for Oklahoma shown separately.<sup>5</sup> Less than 0.05 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate no data.

**Table 21. Paid holidays**(Percent of production workers in oil and gas extraction establishments with formal provisions for paid holidays, United States, selected regions, and States,<sup>1</sup> June 1988)

Benefit	United States <sup>2</sup>			Middle Atlantic <sup>3</sup>			Western Pennsylvania			Border States		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100	100	100	100
Workers in establishments providing paid holidays .....	72	97	33	77	100	42	75	100	42	52	92	13
1 day .....	4	1	8	-	-	-	-	-	-	-	-	-
2 days .....	3	-	9	-	-	-	-	-	-	-	-	-
3 days .....	( <sup>5</sup> )	-	1	-	-	-	-	-	-	-	-	-
4 days .....	1	( <sup>5</sup> )	2	-	-	-	-	-	-	-	-	-
5 days .....	2	2	3	10	-	25	11	-	25	-	-	-
5 days plus 1 or 2 half days .....	( <sup>5</sup> )	( <sup>5</sup> )	-	-	-	-	-	-	-	-	-	-
6 days .....	5	8	2	13	11	17	14	11	17	7	14	1
7 days .....	1	1	1	9	15	-	9	16	-	2	3	-
7 days plus 1 or 2 half days .....	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	-	-	-	-	-	-	1	-	3
8 days .....	3	6	( <sup>5</sup> )	3	5	-	2	4	-	3	5	-
8 days plus 1 or 2 half days .....	( <sup>5</sup> )	( <sup>5</sup> )	-	-	-	-	-	-	-	1	1	-
9 days .....	7	7	7	4	7	-	( <sup>5</sup> )	( <sup>5</sup> )	-	12	21	4
9 days plus 1 or 2 half days .....	( <sup>5</sup> )	( <sup>5</sup> )	-	-	-	-	-	-	-	-	-	-
10 days .....	43	71	1	35	59	-	37	66	-	24	45	5
11 days .....	1	1	-	2	4	-	1	3	-	2	4	-

See footnotes at end of table.

**Table 21. Paid holidays—Continued**

(Percent of production workers in oil and gas extraction establishments with formal provisions for paid holidays, United States, selected regions, and States,<sup>1</sup> June 1988)

Benefit	Great Lakes			Midcontinent <sup>4</sup>			Oklahoma			Louisiana		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100	100	100	100
Workers in establishments providing paid holidays .....	66	85	33	78	93	48	73	88	35	62	100	17
1 day .....	6	-	17	13	8	23	10	4	27	-	-	-
2 days .....	2	-	6	-	-	-	-	-	-	5	-	11
3 days .....	-	-	-	3	-	9	-	-	-	-	-	-
4 days .....	1	2	-	-	-	-	-	-	-	-	-	-
5 days .....	-	-	-	2	-	5	-	-	-	5	9	-
5 days plus 1 or 2 half days .....	2	3	-	-	-	-	-	-	-	-	-	-
6 days .....	18	28	( <sup>5</sup> )	11	14	5	8	11	-	5	7	2
7 days .....	1	2	-	1	1	-	2	2	-	-	-	-
7 days plus 1 or 2 half days .....	1	1	-	-	-	-	-	-	-	-	-	-
8 days .....	1	1	-	( <sup>5</sup> )	-	1	-	-	-	4	8	-
8 days plus 1 or 2 half days .....	1	2	-	-	-	-	-	-	-	-	-	-
9 days .....	8	6	11	6	6	5	7	6	9	1	3	-
9 days plus 1 or 2 half days .....	-	-	-	( <sup>5</sup> )	( <sup>5</sup> )	-	-	-	-	-	-	-
10 days .....	22	36	-	42	63	-	47	66	-	42	73	4
11 days .....	3	5	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

**Table 21. Paid holidays—Continued**

(Percent of production workers in oil and gas extraction establishments with formal provisions for paid holidays, United States, selected regions, and States,<sup>1</sup> June 1988)

Benefit	Texas			Mountain States			California		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100
Workers in establishments providing paid holidays .....	71	98	38	81	100	45	83	100	39
1 day .....	4	-	8	6	-	17	-	-	-
2 days .....	7	-	16	-	-	-	-	-	-
3 days .....	-	-	-	-	-	-	-	-	-
4 days .....	-	-	-	7	-	19	-	-	-
5 days .....	( <sup>5</sup> )	-	1	-	-	-	7	-	25
5 days plus 1 or 2 half days .....	-	-	-	-	-	-	-	-	-
6 days .....	3	5	-	1	-	4	1	1	-
7 days .....	( <sup>5</sup> )	-	( <sup>5</sup> )	-	-	-	4	2	7
7 days plus 1 or 2 half days .....	-	-	-	-	-	-	-	-	-
8 days .....	7	12	-	-	-	-	-	-	-
8 days plus 1 or 2 half days .....	-	-	-	-	-	-	-	-	-
9 days .....	8	4	12	18	24	6	2	-	7
9 days plus 1 or 2 half days .....	-	-	-	-	-	-	-	-	-
10 days .....	42	75	-	46	70	-	70	97	-
11 days .....	( <sup>5</sup> )	1	-	4	6	-	-	-	-

<sup>1</sup> For definitions of regions, see appendix A, table A-1, footnote 1.

<sup>2</sup> Includes data for regions in addition to those shown separately.

<sup>3</sup> Includes data for Western Pennsylvania shown separately.

<sup>4</sup> Includes data for Oklahoma shown separately.

<sup>5</sup> Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate no data.

**Table 22. Paid vacations**

(Percent of production workers in oil and gas extraction establishments with formal provisions for paid vacations after selected periods of service, United States, selected regions, and States,<sup>1</sup> June 1988)

Benefit	United States <sup>2</sup>			Middle Atlantic <sup>3</sup>			Western Pennsylvania			Border States		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100	100	100	100
<b>Method of payment</b>												
Workers in establishments providing paid vacations .....	74	97	38	72	100	32	70	100	32	69	93	46
Length-of-time payment .....	74	97	38	72	100	32	70	100	32	69	93	46
<b>Amount of vacation pay<sup>5</sup></b>												
After 6 months of service:												
Under 1 week .....	( <sup>1</sup> )	( <sup>1</sup> )	-	1	2	-	1	2	-	-	-	-
1 week .....	20	29	5	24	40	-	24	44	-	21	30	13
Over 1 and under 2 weeks .....	2	2	1	-	-	-	-	-	-	-	-	-
After 1 year of service:												
Under 1 week .....	( <sup>1</sup> )	( <sup>1</sup> )	-	7	12	-	-	-	-	-	-	-
1 week .....	13	8	20	40	45	32	43	53	32	37	35	38
2 weeks .....	60	89	16	26	43	-	27	47	-	32	58	8
Over 2 and under 3 weeks .....	1	( <sup>1</sup> )	2	-	-	-	-	-	-	-	-	-
After 2 years of service:												
Under 1 week .....	( <sup>1</sup> )	( <sup>1</sup> )	-	7	12	-	-	-	-	-	-	-
1 week .....	5	1	9	14	2	32	15	3	32	22	6	38
Over 1 and under 2 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	-	-	-	-	-	-	-	-	-	-
2 weeks .....	68	95	27	51	86	-	55	97	-	45	86	5
Over 2 and under 3 weeks .....	1	( <sup>1</sup> )	2	-	-	-	-	-	-	2	-	3
After 5 years of service:												
Under 1 week .....	( <sup>1</sup> )	( <sup>1</sup> )	-	7	12	-	-	-	-	-	-	-
1 week .....	2	( <sup>1</sup> )	5	7	-	17	8	-	17	13	6	19
Over 1 and under 2 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	-	-	-	-	-	-	-	-	-	-
2 weeks .....	17	16	20	33	45	14	36	52	14	32	45	19
Over 2 and under 3 weeks .....	1	( <sup>1</sup> )	1	1	2	-	1	2	-	-	-	-
3 weeks .....	53	80	11	25	41	-	25	45	-	24	41	8
Over 3 and under 4 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	1	-	-	-	-	-	-	-	-	-
After 8 years of service:												
Under 1 week .....	( <sup>1</sup> )	( <sup>1</sup> )	-	7	12	-	-	-	-	-	-	-
1 week .....	2	( <sup>1</sup> )	5	7	-	17	8	-	17	13	6	19
2 weeks .....	14	11	19	21	25	14	23	29	14	15	10	19
Over 2 and under 3 weeks .....	1	( <sup>1</sup> )	1	1	2	-	1	2	-	-	-	-
3 weeks .....	56	85	12	36	61	-	38	69	-	39	76	3
Over 3 and under 4 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	1	-	-	-	-	-	-	-	-	-
4 weeks .....	( <sup>1</sup> )	-	( <sup>1</sup> )	-	-	-	-	-	-	2	-	5

See footnotes at end of table.

**Table 22. Paid vacations—Continued**

(Percent of production workers in oil and gas extraction establishments with formal provisions for paid vacations after selected periods of service, United States, selected regions, and States,<sup>1</sup> June 1988)

Benefit	United States <sup>2</sup>			Middle Atlantic <sup>3</sup>			Western Pennsylvania			Border States		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
<b>Amount of vacation pay<sup>5</sup>—Continued</b>												
<b>After 10 years of service:</b>												
Under 1 week .....	( <sup>1</sup> )	( <sup>1</sup> )	-	7	12	-	-	-	-	-	-	-
1 week .....	2	( <sup>1</sup> )	5	7	-	17	8	-	17	13	6	19
2 weeks .....	12	10	17	9	15	-	10	18	-	3	6	-
Over 2 and under 3 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	1	-	-	-	-	-	-	-	-	-
3 weeks .....	12	11	13	25	32	14	27	37	14	41	60	22
4 weeks .....	46	76	1	25	41	-	25	45	-	12	20	5
Over 4 and under 5 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	1	-	-	-	-	-	-	-	-	-
<b>After 15 years of service:</b>												
Under 1 week .....	( <sup>1</sup> )	( <sup>1</sup> )	-	7	12	-	-	-	-	-	-	-
1 week .....	2	( <sup>1</sup> )	5	7	-	17	8	-	17	13	6	19
2 weeks .....	12	9	17	7	12	-	8	14	-	3	6	-
Over 2 and under 3 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	1	-	-	-	-	-	-	-	-	-
3 weeks .....	9	9	10	15	15	14	16	17	14	23	27	19
4 weeks .....	49	79	4	36	61	-	38	69	-	30	53	8
Over 4 and under 5 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	1	-	-	-	-	-	-	-	-	-
5 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	-	-	-	-	-	-	-	-	-	-
<b>After 20 years of service:</b>												
Under 1 week .....	( <sup>1</sup> )	( <sup>1</sup> )	-	7	12	-	-	-	-	-	-	-
1 week .....	2	( <sup>1</sup> )	5	7	-	17	8	-	17	13	6	19
2 weeks .....	12	9	17	7	12	-	8	14	-	3	6	-
Over 2 and under 3 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	1	-	-	-	-	-	-	-	-	-
3 weeks .....	9	8	10	9	5	14	10	6	14	22	25	19
4 weeks .....	7	9	3	12	21	-	12	21	-	8	11	5
Over 4 and under 5 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	1	-	-	-	-	-	-	-	-	-
5 weeks .....	43	71	1	30	50	-	33	58	-	24	45	3
Over 5 and under 6 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	-	-	-	-	-	-	-	-	-	-
6 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	-	-	-	-	-	-	-	-	-	-
<b>After 25 years of service:</b>												
Under 1 week .....	( <sup>1</sup> )	( <sup>1</sup> )	-	7	12	-	-	-	-	-	-	-
1 week .....	2	( <sup>1</sup> )	5	7	-	17	8	-	17	13	6	19
2 weeks .....	12	9	17	7	12	-	8	14	-	3	6	-
Over 2 and under 3 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	1	-	-	-	-	-	-	-	-	-
3 weeks .....	9	8	10	9	5	14	10	6	14	22	25	19
4 weeks .....	6	8	3	11	18	-	12	21	-	6	8	5
Over 4 and under 5 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	1	-	-	-	-	-	-	-	-	-
5 weeks .....	44	71	2	31	52	-	33	58	-	25	47	3
Over 5 and under 6 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	-	-	-	-	-	-	-	-	-	-
6 weeks .....	( <sup>1</sup> )	( <sup>1</sup> )	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

**Table 22. Paid vacations—Continued**

(Percent of production workers in oil and gas extraction establishments with formal provisions for paid vacations after selected periods of service, United States, selected regions, and States,<sup>1</sup> June 1988)

Benefit	United States <sup>2</sup>			Middle Atlantic <sup>3</sup>			Western Pennsylvania			Border States		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
<b>Amount of vacation pay<sup>5</sup>—Continued</b>												
After 30 years of service: <sup>6</sup>												
Under 1 week .....	( <sup>7</sup> )	( <sup>7</sup> )	-	7	12	-	-	-	-	-	-	-
1 week .....	2	( <sup>7</sup> )	5	7	-	17	8	-	17	13	6	19
2 weeks .....	12	9	17	7	12	-	8	14	-	3	6	-
Over 2 and under 3 weeks .....	( <sup>7</sup> )	( <sup>7</sup> )	1	-	-	-	-	-	-	-	-	-
3 weeks .....	9	8	10	9	5	14	10	6	14	22	25	19
4 weeks .....	6	8	3	11	18	-	12	21	-	4	4	5
Over 4 and under 5 weeks .....	( <sup>7</sup> )	( <sup>7</sup> )	1	-	-	-	-	-	-	-	-	-
5 weeks .....	8	12	2	13	23	-	13	24	-	21	40	3
Over 5 and under 6 weeks .....	( <sup>7</sup> )	( <sup>7</sup> )	-	-	-	-	-	-	-	-	-	-
6 weeks .....	36	60	-	18	30	-	19	35	-	6	12	-

See footnotes at end of table.

**Table 22. Paid vacations—Continued**

(Percent of production workers in oil and gas extraction establishments with formal provisions for paid vacations after selected periods of service, United States, selected regions, and States,<sup>1</sup> June 1988)

Benefit	Great Lakes			Midcontinent <sup>4</sup>			Oklahoma			Louisiana		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100	100	100	100
<b>Method of payment</b>												
Workers in establishments providing paid vacations .....	81	90	67	77	88	52	77	90	44	58	100	8
Length-of-time payment .....	81	90	67	77	88	52	77	90	44	58	100	8
<b>Amount of vacation pay<sup>5</sup></b>												
After 6 months of service:												
Under 1 week .....	-	-	-	-	-	-	-	-	-	-	-	-
1 week .....	17	27	-	15	21	3	13	16	5	22	40	-
Over 1 and under 2 weeks .....	3	5	-	3	-	9	-	-	-	( <sup>7</sup> )	( <sup>7</sup> )	-
After 1 year of service:												
Under 1 week .....	-	-	-	-	-	-	-	-	-	-	-	-
1 week .....	43	31	62	17	12	28	14	10	25	7	11	3
2 weeks .....	36	55	5	57	77	15	63	81	19	51	88	6
Over 2 and under 3 weeks .....	2	3	-	3	-	9	-	-	-	( <sup>7</sup> )	( <sup>7</sup> )	-
After 2 years of service:												
Under 1 week .....	-	-	-	-	-	-	-	-	-	-	-	-
1 week .....	19	12	30	1	-	3	2	-	5	1	-	1
Over 1 and under 2 weeks .....	2	3	-	-	-	-	-	-	-	-	-	-
2 weeks .....	58	71	37	72	88	40	75	90	39	58	100	7
Over 2 and under 3 weeks .....	2	3	-	3	( <sup>7</sup> )	9	( <sup>7</sup> )	( <sup>7</sup> )	-	( <sup>7</sup> )	( <sup>7</sup> )	-
After 5 years of service:												
Under 1 week .....	-	-	-	-	-	-	-	-	-	-	-	-
1 week .....	3	2	6	1	-	3	2	-	5	1	-	1
Over 1 and under 2 weeks .....	2	3	-	-	-	-	-	-	-	-	-	-
2 weeks .....	42	31	61	26	20	38	21	15	36	12	19	3
Over 2 and under 3 weeks .....	1	2	-	3	-	9	-	-	-	( <sup>7</sup> )	( <sup>7</sup> )	-
3 weeks .....	30	49	-	47	68	2	54	75	3	46	81	4
Over 3 and under 4 weeks .....	2	3	-	-	-	-	-	-	-	-	-	-
After 8 years of service:												
Under 1 week .....	-	-	-	-	-	-	-	-	-	-	-	-
1 week .....	2	-	6	1	-	3	2	-	5	1	-	1
2 weeks .....	44	34	61	24	19	33	18	15	27	10	15	3
Over 2 and under 3 weeks .....	-	-	-	3	-	9	-	-	-	( <sup>7</sup> )	( <sup>7</sup> )	-
3 weeks .....	33	52	-	49	69	6	57	76	12	48	84	4
Over 3 and under 4 weeks .....	2	3	-	-	-	-	-	-	-	-	-	-
4 weeks .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

**Table 22. Paid vacations—Continued**

(Percent of production workers in oil and gas extraction establishments with formal provisions for paid vacations after selected periods of service, United States, selected regions, and States,<sup>1</sup> June 1988)

Benefit	Great Lakes			Midcontinent <sup>4</sup>			Oklahoma			Louisiana		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
<b>Amount of vacation pay<sup>5</sup>—Continued</b>												
After 10 years of service:												
Under 1 week .....	-	-	-	-	-	-	-	-	-	-	-	-
1 week .....	2	-	6	1	-	3	2	-	5	1	-	1
2 weeks .....	33	23	51	22	18	29	18	14	27	10	15	3
Over 2 and under 3 weeks .....	-	-	-	3	-	9	-	-	-	( <sup>1</sup> )	( <sup>1</sup> )	-
3 weeks .....	18	22	11	7	6	11	9	8	12	2	3	-
4 weeks .....	26	41	-	44	64	-	49	69	-	46	81	4
Over 4 and under 5 weeks .....	2	3	-	-	-	-	-	-	-	-	-	-
After 15 years of service:												
Under 1 week .....	-	-	-	-	-	-	-	-	-	-	-	-
1 week .....	2	-	6	1	-	3	2	-	5	1	-	1
2 weeks .....	29	21	43	20	16	29	18	14	27	10	15	3
Over 2 and under 3 weeks .....	-	-	-	3	-	9	-	-	-	( <sup>1</sup> )	( <sup>1</sup> )	-
3 weeks .....	19	19	18	6	6	6	5	6	3	2	3	-
4 weeks .....	29	46	-	46	66	5	53	71	9	46	81	4
Over 4 and under 5 weeks .....	2	3	-	-	-	-	-	-	-	-	-	-
5 weeks .....	-	-	-	-	-	-	-	-	-	-	-	-
After 20 years of service:												
Under 1 week .....	-	-	-	-	-	-	-	-	-	-	-	-
1 week .....	2	-	6	1	-	3	2	-	5	1	-	1
2 weeks .....	29	21	43	20	16	29	18	14	27	10	15	3
Over 2 and under 3 weeks .....	-	-	-	3	-	9	-	-	-	( <sup>1</sup> )	( <sup>1</sup> )	-
3 weeks .....	13	16	8	5	4	6	3	2	3	2	3	-
4 weeks .....	13	15	11	7	8	5	11	12	9	4	8	-
Over 4 and under 5 weeks .....	1	2	-	-	-	-	-	-	-	-	-	-
5 weeks .....	21	34	-	41	60	-	44	62	-	42	73	4
Over 5 and under 6 weeks .....	1	1	-	-	-	-	-	-	-	-	-	-
6 weeks .....	-	-	-	-	-	-	-	-	-	-	-	-
After 25 years of service:												
Under 1 week .....	-	-	-	-	-	-	-	-	-	-	-	-
1 week .....	2	-	6	1	-	3	2	-	5	1	-	1
2 weeks .....	29	21	43	20	16	29	18	14	27	10	15	3
Over 2 and under 3 weeks .....	-	-	-	3	-	9	-	-	-	( <sup>1</sup> )	( <sup>1</sup> )	-
3 weeks .....	13	16	8	5	4	6	3	2	3	2	3	-
4 weeks .....	13	15	11	5	8	-	8	12	-	4	8	-
Over 4 and under 5 weeks .....	1	2	-	-	-	-	-	-	-	-	-	-
5 weeks .....	21	34	-	42	60	5	47	62	9	42	73	4
Over 5 and under 6 weeks .....	1	1	-	-	-	-	-	-	-	-	-	-
6 weeks .....	-	-	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

**Table 22. Paid vacations—Continued**

(Percent of production workers in oil and gas extraction establishments with formal provisions for paid vacations after selected periods of service, United States, selected regions, and States,<sup>1</sup> June 1988)

Benefit	Great Lakes			Midcontinent <sup>4</sup>			Oklahoma			Louisiana		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
<b>Amount of vacation pay<sup>2</sup>—Continued</b>												
After 30 years of service: <sup>5</sup>												
Under 1 week .....	-	-	-	-	-	-	-	-	-	-	-	-
1 week .....	2	-	6	1	-	3	2	-	5	1	-	1
2 weeks .....	29	21	43	20	16	29	18	14	27	10	15	3
Over 2 and under 3 weeks .....	-	-	-	3	-	9	-	-	-	( <sup>7</sup> )	( <sup>7</sup> )	-
3 weeks .....	13	16	8	5	4	6	3	2	3	2	3	-
4 weeks .....	13	15	11	5	8	-	8	12	-	4	8	-
Over 4 and under 5 weeks .....	1	2	-	-	-	-	-	-	-	-	-	-
5 weeks .....	2	3	-	16	22	5	18	22	9	4	3	4
Over 5 and under 6 weeks .....	1	1	-	-	-	-	-	-	-	-	-	-
6 weeks .....	20	31	-	26	38	-	29	40	-	38	70	-

See footnotes at end of table.

**Table 22. Paid vacations—Continued**

(Percent of production workers in oil and gas extraction establishments with formal provisions for paid vacations after selected periods of service, United States, selected regions, and States,<sup>1</sup> June 1988)

Benefit	Texas			Mountain States			California		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100
<b>Method of payment</b>									
Workers in establishments providing paid vacations .....	75	100	42	90	100	72	81	100	30
Length-of-time payment .....	75	100	42	90	100	72	81	100	30
<b>Amount of vacation pay<sup>5</sup></b>									
After 6 months of service:									
Under 1 week .....	-	-	-	-	-	-	-	-	-
1 week .....	18	25	9	17	24	4	31	40	6
Over 1 and under 2 weeks .....	-	-	-	7	11	-	4	5	-
After 1 year of service:									
Under 1 week .....	-	-	-	-	-	-	-	-	-
1 week .....	7	2	12	19	-	54	6	1	18
2 weeks .....	68	98	30	72	100	18	72	99	-
Over 2 and under 3 weeks .....	-	-	-	-	-	-	3	-	12
After 2 years of service:									
Under 1 week .....	-	-	-	-	-	-	-	-	-
1 week .....	6	2	10	5	-	14	2	-	6
Over 1 and under 2 weeks .....	-	-	-	-	-	-	-	-	-
2 weeks .....	69	98	32	86	100	58	76	100	12
Over 2 and under 3 weeks .....	-	-	-	-	-	-	3	-	12
After 5 years of service:									
Under 1 week .....	-	-	-	-	-	-	-	-	-
1 week .....	2	-	6	4	-	11	2	-	6
Over 1 and under 2 weeks .....	-	-	-	-	-	-	-	-	-
2 weeks .....	11	11	10	30	15	59	4	1	12
Over 2 and under 3 weeks .....	-	-	-	-	-	-	-	-	-
3 weeks .....	61	89	27	56	85	1	72	99	-
Over 3 and under 4 weeks .....	-	-	-	-	-	-	3	-	12
After 8 years of service:									
Under 1 week .....	-	-	-	-	-	-	-	-	-
1 week .....	2	-	6	4	-	11	2	-	6
2 weeks .....	9	8	10	21	1	59	4	1	12
Over 2 and under 3 weeks .....	-	-	-	-	-	-	-	-	-
3 weeks .....	63	92	27	65	99	1	72	99	-
Over 3 and under 4 weeks .....	-	-	-	-	-	-	3	-	12
4 weeks .....	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

**Table 22. Paid vacations—Continued**

(Percent of production workers in oil and gas extraction establishments with formal provisions for paid vacations after selected periods of service, United States, selected regions, and States,<sup>1</sup> June 1988)

Benefit	Texas			Mountain States			California		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
<b>Amount of vacation pay<sup>5</sup>—Continued</b>									
<b>After 10 years of service:</b>									
Under 1 week .....	-	-	-	-	-	-	-	-	-
1 week .....	2	-	6	4	-	11	2	-	6
2 weeks .....	7	5	10	21	1	58	3	-	12
Over 2 and under 3 weeks .....	-	-	-	-	-	-	-	-	-
3 weeks .....	17	10	27	16	24	1	3	4	-
4 weeks .....	48	85	-	50	75	1	70	96	-
Over 4 and under 5 weeks .....	-	-	-	-	-	-	3	-	12
<b>After 15 years of service:</b>									
Under 1 week .....	-	-	-	-	-	-	-	-	-
1 week .....	2	-	6	4	-	11	2	-	6
2 weeks .....	7	5	10	21	1	58	3	-	12
Over 2 and under 3 weeks .....	-	-	-	-	-	-	-	-	-
3 weeks .....	15	10	21	9	14	1	2	3	-
4 weeks .....	50	85	6	56	85	1	69	95	-
Over 4 and under 5 weeks .....	-	-	-	-	-	-	3	-	12
5 weeks .....	-	-	-	-	-	-	1	2	-
<b>After 20 years of service:</b>									
Under 1 week .....	-	-	-	-	-	-	-	-	-
1 week .....	2	-	6	4	-	11	2	-	6
2 weeks .....	7	5	10	21	1	58	3	-	12
Over 2 and under 3 weeks .....	-	-	-	-	-	-	-	-	-
3 weeks .....	15	10	21	9	14	1	2	3	-
4 weeks .....	9	11	6	7	10	1	( <sup>1</sup> )	( <sup>1</sup> )	-
Over 4 and under 5 weeks .....	-	-	-	-	-	-	3	-	12
5 weeks .....	41	74	-	49	75	-	70	96	-
Over 5 and under 6 weeks .....	-	-	-	-	-	-	( <sup>1</sup> )	( <sup>1</sup> )	-
6 weeks .....	-	-	-	-	-	-	( <sup>1</sup> )	( <sup>1</sup> )	-
<b>After 25 years of service:</b>									
Under 1 week .....	-	-	-	-	-	-	-	-	-
1 week .....	2	-	6	4	-	11	2	-	6
2 weeks .....	7	5	10	21	1	58	3	-	12
Over 2 and under 3 weeks .....	-	-	-	-	-	-	-	-	-
3 weeks .....	14	10	21	9	14	1	2	3	-
4 weeks .....	9	11	6	3	5	1	( <sup>1</sup> )	( <sup>1</sup> )	-
Over 4 and under 5 weeks .....	-	-	-	-	-	-	3	-	12
5 weeks .....	41	74	-	53	81	-	70	96	-
Over 5 and under 6 weeks .....	-	-	-	-	-	-	( <sup>1</sup> )	( <sup>1</sup> )	-
6 weeks .....	( <sup>1</sup> )	1	-	-	-	-	( <sup>1</sup> )	( <sup>1</sup> )	-

See footnotes at end of table.

**Table 22. Paid vacations—Continued**

(Percent of production workers in oil and gas extraction establishments with formal provisions for paid vacations after selected periods of service, United States, selected regions, and States,<sup>1</sup> June 1988)

Benefit	Texas			Mountain States			California		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
<b>Amount of vacation pay<sup>2</sup>—Continued</b>									
After 30 years of service: <sup>6</sup>									
Under 1 week .....	-	-	-	-	-	-	-	-	-
1 week .....	.2	-	6	4	-	11	2	-	6
2 weeks .....	7	5	10	21	1	58	3	-	12
Over 2 and under 3 weeks .....	-	-	-	-	-	-	-	-	-
3 weeks .....	14	10	21	9	14	1	2	3	-
4 weeks .....	9	11	6	3	5	1	( <sup>7</sup> )	( <sup>7</sup> )	-
Over 4 and under 5 weeks .....	-	-	-	-	-	-	3	-	12
5 weeks .....	4	7	-	15	23	-	3	4	-
Over 5 and under 6 weeks .....	-	-	-	-	-	-	-	-	-
6 weeks .....	37	67	-	38	58	-	67	92	-

<sup>1</sup> For definitions of regions, see appendix A, table A-1, footnote 1.

<sup>2</sup> Includes data for regions in addition to those shown separately.

<sup>3</sup> Includes data for Western Pennsylvania shown separately.

<sup>4</sup> Includes data for Oklahoma shown separately.

<sup>5</sup> Vacation payments, such as percent of annual earnings, were converted to an equivalent time basis. Periods of service were chosen arbitrarily and do not necessarily reflect individual establishment provisions for progression. For example, changes indicated at 20 years may include

changes that occurred between 15 and 20 years.

<sup>6</sup> Vacation provisions were virtually the same after longer periods of service.

<sup>7</sup> Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate no data.

**Table 23. Health, insurance, and retirement plans**

(Percent of production workers in oil and gas extraction establishments with specified health, insurance, and retirement plans,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Benefit	United States <sup>3</sup>			Middle Atlantic <sup>4</sup>			Western Pennsylvania			Border States		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100	100	100	100
Workers in establishments offering:												
Life insurance .....	94	98	89	99	99	100	100	100	100	83	88	78
Noncontributory plans .....	64	69	57	70	79	58	68	77	58	32	41	23
Accidental death and dismemberment insurance .....	74	75	74	75	87	58	74	86	58	77	85	69
Noncontributory plans .....	45	43	48	75	87	58	74	86	58	30	38	23
Sickness and accident insurance or sick leave or both <sup>5</sup> .....	68	88	37	67	87	39	69	92	39	60	86	34
Sickness and accident insurance .....	22	19	27	60	74	39	62	81	39	37	42	31
Noncontributory plans .....	16	15	18	50	74	14	51	81	14	29	39	19
Sick leave (full pay, no waiting period) .....	53	84	8	20	33	-	19	34	-	27	51	3
Sick leave (partial pay or waiting period) .....	2	1	3	-	-	-	-	-	-	1	3	-
Long-term disability insurance .....	38	48	22	7	12	-	7	12	-	28	45	13
Noncontributory plans .....	21	27	12	7	12	-	7	12	-	4	7	-
Hospitalization, surgical, and medical insurance .....	96	99	91	100	100	100	100	100	100	90	97	82
Noncontributory plans .....	30	28	32	57	66	44	59	71	44	33	63	4
Health maintenance organizations .....	21	31	6	4	7	-	-	-	-	-	-	-
Noncontributory plans .....	3	5	1	-	-	-	-	-	-	-	-	-
Dental care .....	69	84	46	55	66	39	59	75	39	45	66	24
Noncontributory plans .....	14	18	8	28	46	-	29	51	-	8	17	-
Vision care .....	10	11	7	13	12	14	14	14	14	16	14	19
Noncontributory plans .....	7	10	3	4	7	-	5	8	-	2	5	-
Alcohol and drug abuse treatment .....	83	90	72	93	88	100	92	86	100	42	54	31
Noncontributory plans .....	27	25	29	50	54	44	51	57	44	17	35	-
Hearing care .....	8	8	8	-	-	-	-	-	-	-	-	-
Noncontributory plans .....	6	8	3	-	-	-	-	-	-	-	-	-
Retirement plans <sup>7</sup> .....	68	86	40	60	73	42	59	72	42	48	71	26
Pensions .....	63	83	34	58	71	39	56	70	39	45	67	23
Noncontributory plans .....	59	81	26	54	64	39	53	64	39	45	67	23
Lump sum .....	24	34	9	8	2	17	9	3	17	20	14	26

See footnotes at end of table.

**Table 23. Health, insurance, and retirement plans—Continued**

(Percent of production workers in oil and gas extraction establishments with specified health, insurance, and retirement plans,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Benefit	Great Lakes			Midcontinent <sup>5</sup>			Oklahoma			Louisiana		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100	100	100	100
Workers in establishments offering:												
Life insurance .....	81	70	100	87	97	67	88	95	70	96	100	90
Noncontributory plans .....	61	57	68	56	68	31	60	69	39	60	64	55
Accidental death and dismemberment insurance .....	62	56	72	63	70	49	67	72	54	77	74	81
Noncontributory plans .....	42	43	41	34	40	23	40	47	23	39	33	46
Sickness and accident insurance or sick leave or both <sup>6</sup> .....	67	68	65	52	74	6	57	76	9	73	87	57
Sickness and accident insurance .....	42	28	65	8	11	1	4	6	-	22	17	29
Noncontributory plans .....	36	23	57	8	11	1	4	6	-	16	17	15
Sick leave (full pay, no waiting period) .....	24	39	-	51	73	5	55	74	9	55	87	18
Sick leave (partial pay or waiting period) .....	11	17	-	( <sup>6</sup> )	( <sup>6</sup> )	-	( <sup>6</sup> )	( <sup>6</sup> )	-	5	-	10
Long-term disability insurance .....	24	20	31	25	36	1	24	34	-	38	52	21
Noncontributory plans .....	17	17	17	17	24	1	16	23	-	19	29	7
Hospitalization, surgical, and medical insurance .....	93	88	100	91	97	80	90	95	79	96	100	91
Noncontributory plans .....	44	38	53	16	15	16	12	13	8	22	30	13
Health maintenance organizations .....	20	23	14	11	16	-	9	13	-	28	41	14
Noncontributory plans .....	2	3	-	( <sup>6</sup> )	1	-	1	1	-	-	-	-
Dental care .....	60	63	56	59	69	37	63	76	33	75	84	64
Noncontributory plans .....	33	30	37	6	4	9	2	2	-	12	23	-
Vision care .....	13	6	25	6	5	9	3	4	-	12	22	-
Noncontributory plans .....	10	6	17	2	3	-	-	-	-	12	22	-
Alcohol and drug abuse treatment .....	72	70	75	74	88	44	73	88	37	82	93	68
Noncontributory plans .....	37	27	53	7	8	7	7	8	5	20	27	13
Hearing care .....	12	-	33	5	3	9	-	-	-	15	19	10
Noncontributory plans .....	9	-	24	2	3	-	-	-	-	11	19	-
Retirement plans <sup>7</sup> .....	49	51	47	68	82	39	72	83	45	69	84	52
Pensions .....	45	49	39	59	75	24	59	76	18	69	84	52
Noncontributory plans .....	45	49	39	56	75	15	59	76	18	62	83	35
Lump sum .....	8	8	8	34	43	15	38	43	27	23	38	4

See footnotes at end of table.

**Table 23. Health, insurance, and retirement plans—Continued**

(Percent of production workers in oil and gas extraction establishments with specified health, insurance, and retirement plans,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Benefit	Texas			Mountain States			California		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100
Workers in establishments offering:									
Life insurance .....	97	100	92	98	100	95	99	100	96
Noncontributory plans .....	69	73	64	65	71	55	82	77	96
Accidental death and dismemberment insurance .....	78	82	73	77	73	86	78	75	84
Noncontributory plans .....	54	51	58	46	42	54	49	40	72
Sickness and accident insurance or sick leave or both <sup>8</sup> .....	70	94	39	71	93	30	72	100	-
Sickness and accident insurance .....	22	13	33	29	29	29	16	21	-
Noncontributory plans .....	19	12	28	6	6	6	16	21	-
Sick leave (full pay, no waiting period) .....	54	92	6	61	93	1	71	98	-
Sick leave (partial pay or waiting period) .....	-	-	-	-	-	-	1	2	-
Long-term disability insurance .....	47	58	33	48	62	21	29	36	12
Noncontributory plans .....	32	36	27	8	11	1	23	31	-
Hospitalization, surgical, and medical insurance .....	97	100	92	98	100	95	98	100	93
Noncontributory plans .....	31	22	42	30	26	38	60	53	77
Health maintenance organizations .....	23	41	-	10	15	-	44	48	35
Noncontributory plans .....	1	2	-	-	-	-	31	35	19
Dental care .....	64	88	33	78	100	37	96	98	88
Noncontributory plans .....	9	14	2	11	16	1	48	39	70
Vision care .....	6	6	4	4	6	1	28	23	40
Noncontributory plans .....	4	6	( <sup>8</sup> )	1	2	1	28	23	40
Alcohol and drug abuse treatment .....	90	96	83	79	80	77	97	100	87
Noncontributory plans .....	30	22	41	27	25	31	60	55	71
Hearing care .....	2	4	-	1	2	-	27	21	40
Noncontributory plans .....	2	4	-	1	2	-	27	21	40
Retirement plans <sup>7</sup> .....	65	93	29	68	85	36	87	97	60
Pensions .....	60	89	24	63	85	20	85	97	54
Noncontributory plans .....	55	83	20	58	85	8	85	97	54
Lump sum .....	20	31	5	25	30	16	37	48	9

<sup>1</sup> Includes those plans for which the employer pays at least part of the cost and excludes legally required plans such as workers' compensation and Social Security; however, plans required by State temporary disability insurance laws are included if the employer contributes more than is legally required or employees receive benefits over legal requirements.

"Noncontributory plans" include only those plans financed entirely by the employer.

<sup>2</sup> For definitions of regions, see appendix A, table A-1, footnote 1.

<sup>3</sup> Includes data for regions in addition to those shown separately.

<sup>4</sup> Includes data for Western Pennsylvania shown separately.

<sup>5</sup> Includes data for Oklahoma shown separately.

<sup>6</sup> Unduplicated total of workers receiving sickness and accident insurance and sick leave shown separately.

<sup>7</sup> Unduplicated total of workers covered by pension plans and severance pay shown separately.

<sup>8</sup> Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate no data.

**Table 24. Health plan participation**(Percent of production workers in oil and gas extraction establishments participating in specified health plans,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Type of plan	United States <sup>3</sup>			Middle Atlantic <sup>4</sup>			Western Pennsylvania			Border States		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100	100	100	100
Hospitalization, surgical, and medical insurance .....	83	89	75	94	95	92	95	97	92	83	95	70
Noncontributory plans .....	29	28	31	57	66	44	59	71	44	33	63	4
Health maintenance organizations .....	4	5	2	1	2	-	-	-	-	-	-	-
Noncontributory plans .....	1	1	1	-	-	-	-	-	-	-	-	-
Dental care .....	63	81	37	51	62	33	54	70	33	39	58	21
Noncontributory plans .....	14	18	8	28	46	-	29	51	-	8	17	-
Vision care .....	9	11	6	12	12	13	13	14	13	15	14	17
Noncontributory plans .....	7	10	3	4	7	-	5	8	-	2	5	-
Alcohol and drug abuse treatment .....	76	86	62	88	85	92	87	83	92	38	52	24
Noncontributory plans .....	26	25	29	50	54	44	51	57	44	17	35	-
Hearing care .....	8	8	7	-	-	-	-	-	-	-	-	-
Noncontributory plans .....	6	8	3	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

**Table 24. Health plan participation—Continued**

(Percent of production workers in oil and gas extraction establishments participating in specified health plans,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Type of plan	Great Lakes			Midcontinent <sup>5</sup>			Oklahoma			Louisiana		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100	100	100	100
Hospitalization, surgical, and medical insurance .....	80	78	83	79	88	59	76	87	51	86	90	81
Noncontributory plans .....	43	36	53	16	15	16	12	13	8	22	30	12
Health maintenance organizations .....	2	3	( <sup>6</sup> )	2	2	-	2	3	-	3	4	2
Noncontributory plans .....	1	1	-	( <sup>6</sup> )	( <sup>6</sup> )	-	( <sup>6</sup> )	( <sup>6</sup> )	-	-	-	-
Dental care .....	55	59	48	54	66	28	57	72	22	70	81	58
Noncontributory plans .....	32	29	37	6	4	9	2	2	-	12	23	-
Vision care .....	13	6	24	5	4	6	2	3	-	12	22	-
Noncontributory plans .....	10	6	17	2	3	-	-	-	-	12	22	-
Alcohol and drug abuse treatment .....	65	65	67	67	82	36	68	83	30	76	88	62
Noncontributory plans .....	37	27	53	7	8	7	7	8	5	20	27	12
Hearing care .....	12	-	31	4	3	6	-	-	-	15	19	10
Noncontributory plans .....	9	-	24	2	3	-	-	-	-	11	19	-

See footnotes at end of table.

**Table 24. Health plan participation—Continued**(Percent of production workers in oil and gas extraction establishments participating in specified health plans,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Type of plan	Texas			Mountain States			California		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100
Hospitalization, surgical, and medical insurance .....	81	84	78	86	99	66	87	90	81
Noncontributory plans .....	30	21	40	30	26	37	52	46	67
Health maintenance organizations .....	5	10	-	-	-	-	12	9	19
Noncontributory plans .....	( <sup>6</sup> )	1	-	-	-	-	10	7	17
Dental care .....	57	83	23	70	98	16	94	96	87
Noncontributory plans .....	9	14	2	10	16	( <sup>6</sup> )	48	39	70
Vision care .....	5	6	4	4	6	( <sup>6</sup> )	27	22	38
Noncontributory plans .....	4	6	( <sup>6</sup> )	1	2	( <sup>6</sup> )	27	22	38
Alcohol and drug abuse treatment .....	82	90	72	69	79	53	96	99	87
Noncontributory plans .....	30	22	40	27	25	30	60	55	71
Hearing care .....	2	4	-	1	2	-	26	21	38
Noncontributory plans .....	2	4	-	1	2	-	26	21	38

<sup>1</sup> For definitions of items, see appendix A. Includes those plans for which the employer pays at least part of the cost. "Noncontributory plans" include only those financed entirely by the employer.

<sup>2</sup> For definitions of regions, see appendix A, table A-1, footnote 1.

<sup>3</sup> Includes data for regions in addition to those shown separately.

<sup>4</sup> Includes data for Western Pennsylvania shown separately.

<sup>5</sup> Includes data for Oklahoma shown separately.

<sup>6</sup> Less than 0.5 percent.

NOTE: Dashes indicate no data.

**Table 25. Other selected benefits**(Percent of production workers in oil and gas extraction establishments with formal provisions for selected benefits,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Benefit	United States <sup>3</sup>			Middle Atlantic <sup>4</sup>			Western Pennsylvania			Border States		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100	100	100	100
Workers in establishments with provisions for:												
Funeral leave .....	69	96	29	70	88	42	67	86	42	61	80	42
Jury-duty leave .....	71	95	34	86	79	97	89	83	97	67	65	69
Technological severance pay .....	36	52	13	8	14	-	8	14	-	6	12	-
Savings and thrift plan <sup>5</sup> .....	45	59	23	24	31	14	26	35	14	27	28	26
	Great Lakes			Midcontinent <sup>6</sup>			Oklahoma			Louisiana		
All workers .....	100	100	100	100	100	100	100	100	100	100	100	100
Workers in establishments with provisions for:												
Funeral leave .....	50	76	6	64	92	6	64	87	9	73	100	40
Jury-duty leave .....	53	77	12	74	88	44	72	89	29	73	100	40
Technological severance pay .....	23	36	-	41	56	9	39	55	-	24	44	-
Savings and thrift plan <sup>5</sup> .....	26	34	14	42	54	17	42	47	31	51	63	37

See footnotes at end of table.

**Table 25. Other selected benefits—Continued**

(Percent of production workers in oil and gas extraction establishments with formal provisions for selected benefits,<sup>1</sup> United States, selected regions, and States,<sup>2</sup> June 1988)

Benefit	Texas			Mountain States			California		
	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations	All establishments	Oil and gas field operations	Contract drilling operations
All workers .....	100	100	100	100	100	100	100	100	100
Workers in establishments with provisions for:									
Funeral leave .....	70	96	37	69	100	9	79	100	23
Jury-duty leave .....	66	100	23	80	100	41	77	100	16
Technological severance pay .....	43	53	30	44	67	-	48	61	12
Savings and thrift plan <sup>5</sup> .....	47	69	18	45	59	18	46	55	22

<sup>1</sup> For definitions of items, see appendix A.

<sup>2</sup> For definitions of regions, see appendix A, table A-1, footnote 1.

<sup>3</sup> Includes data for regions in addition to those shown separately.

<sup>4</sup> Includes data for Western Pennsylvania shown separately.

<sup>5</sup> Includes only those plans for which the employer makes a contribu-

yond administrative costs.

<sup>6</sup> Includes data for Oklahoma shown separately.

NOTE: Cost-of-living adjustment plans were studied, but no such plans were reported in these industries. Dashes indicate no data.

# Appendix A. Scope and Method of Survey

## Scope of survey

The survey included establishments primarily engaged in operating oil and gas field properties and those chiefly engaged in drilling wells for oil and gas field operations on a contract, fee, or similar basis (industries 1311 and 1381, respectively, as defined in the 1972 edition of the *Standard Industrial Classification Manual*, prepared by the U.S. Office of Management and Budget). Separate auxiliary units, such as central offices, were excluded.

Establishments studied were selected from those employing 8 workers or more in operating oil and gas field properties, and 20 workers or more in contract drilling at the time of reference of the data used in compiling the universe lists. Table A-1 shows the number of establishments and workers estimated to be within the scope of the survey, as well as the number actually studied by the Bureau.

## Method of study

Data were obtained by personal visits of the Bureau's field representatives to a probability-based sample of establishments within the scope of the survey. To obtain appropriate accuracy at minimum cost, a greater proportion of large than of small establishments was studied. In combining the data, each establishment was given an appropriate weight. All estimates are presented, therefore, as relating to all establishments in each of the industries, excluding only those below the minimum size at the time of reference of the universe data.

## Establishment definition

An establishment, for purposes of this study, includes all oil and gas field activities of an operating company or a contract driller, in the wage area for which separate data are presented. For areas including two or more States, such as the Great Lakes region, activities which cross State lines were counted within the geographic boundaries of each State rather than combined into one unit.

## Employment

Estimates of the number of workers within the scope of the study are intended as a general guide to the size and com-

position of the industry's labor force, rather than as precise measures of employment.

## Occupational classification

Occupational classification was based on a uniform set of job descriptions designed to take account of interestablishment and interarea variations in duties within the same job. (See appendix B for these descriptions.) The criteria for selection of the occupations were: The number of workers in the occupation; the usefulness of the data in wage and salary administration and in collective bargaining; and appropriate representation of the entire wage structure in the industries. Supervisors, apprentices, learners, beginners, trainees, and part-time, handicapped, temporary, and probationary workers were not reported in the data for selected occupations.

## Wage data

Information on wages relates to straight-time hourly earnings, excluding premium pay for overtime and for work on weekends, holidays, and late shifts; and, where applicable, for offshore work. Incentive payments, such as those resulting from piecework or production bonus systems, and cost-of-living pay increases (but not bonuses) were included as part of the workers' regular pay. Excluded are performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or yearend bonuses, and other nonproduction bonuses.

*Average (mean) hourly rates or earnings* for each occupation were calculated by weighting each rate (or hourly earnings) by the number of workers receiving the rate, totaling, and dividing by the number of individuals. The hourly earnings of salaried workers, if any, were obtained by dividing straight-time salary by the normal (or standard) hours to which the salary corresponds.

The *median* designates position; that is, one-half of the employees surveyed received the same as or more than this rate and one-half received the same as or less. The *middle range* is defined by two rates of pay such that one-fourth of the employees earned the same as or less than the lower of these rates and one-fourth earned the same as or more than the higher.

**Table A-1. Estimated number of establishments and employees within the scope of the study and the number studied, oil and gas extraction establishments, June 1988**

Region and State <sup>1</sup>	Number of establishments <sup>2</sup>		Workers in establishments				Total actually studied <sup>3</sup>
	Within scope of study	Actually studied	Within scope of study			Total actually studied <sup>3</sup>	
			Total <sup>4</sup>	All production workers	Land-based workers		
<b>All establishments</b>							
United States <sup>5</sup> .....	1,485	363	109,691	68,658	55,610	13,048	69,180
Middle Atlantic <sup>6</sup> .....	47	22	1,858	1,225	1,225	-	1,109
Western Pennsylvania .....	40	16	1,656	1,122	1,122	-	934
Border States .....	83	31	2,501	1,972	1,972	-	1,514
Great Lakes .....	157	52	4,279	3,291	3,291	-	2,807
Midcontinent <sup>7</sup> .....	338	67	15,588	10,829	9,961	868	7,345
Oklahoma .....	182	46	8,986	6,563	6,563	-	5,088
Louisiana .....	123	43	23,532	14,923	5,948	8,975	18,859
Texas .....	411	64	39,600	22,238	19,691	2,547	24,031
Mountain States .....	246	52	12,308	7,953	7,953	-	6,147
California .....	67	26	9,540	5,793	5,333	460	7,128
<b>Oil and gas field operations</b>							
United States <sup>5</sup> .....	1,077	221	77,254	41,362	35,175	6,187	50,576
Middle Atlantic <sup>6</sup> .....	39	17	1,287	731	731	-	757
Western Pennsylvania .....	32	11	1,085	628	628	-	582
Border States .....	59	19	1,381	974	974	-	790
Great Lakes .....	133	38	2,904	2,055	2,055	-	1,802
Midcontinent <sup>7</sup> .....	270	43	11,444	7,329	6,461	868	5,128
Oklahoma .....	152	30	6,870	4,652	4,652	-	3,820
Louisiana .....	67	20	15,477	8,143	4,363	3,780	12,655
Texas .....	257	33	27,591	12,429	11,192	1,237	18,962
Mountain States .....	198	30	9,209	5,220	5,220	-	4,508
California .....	46	16	7,626	4,197	3,943	254	5,764
<b>Contract drilling operations</b>							
United States <sup>5</sup> .....	408	142	32,437	27,296	20,435	6,861	18,604
Middle Atlantic <sup>6</sup> .....	8	5	571	494	494	-	352
Western Pennsylvania .....	8	5	571	494	494	-	352
Border States .....	24	12	1,120	998	998	-	724
Great Lakes .....	24	14	1,375	1,236	1,236	-	1,005
Midcontinent <sup>7</sup> .....	68	24	4,144	3,500	3,500	-	2,217
Oklahoma .....	30	16	2,116	1,911	1,911	-	1,268
Louisiana .....	56	23	8,055	6,780	1,585	5,195	6,204
Texas .....	154	31	12,009	9,809	8,499	1,310	5,069
Mountain States .....	48	22	3,099	2,733	2,733	-	1,639
California .....	21	10	1,914	1,596	1,390	206	1,364

<sup>1</sup> The regions and areas as defined for this study were: *Middle Atlantic*—New Jersey, New York, and Pennsylvania; *Western Pennsylvania*—Adams, Cumberland, Juniata, Lycoming, Mifflin, Perry, Tioga, Union, and all other Pennsylvania Counties west thereof; *Border States*—Delaware, District of Columbia, Kentucky, Maryland, Virginia, and West Virginia; *Great Lakes*—Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin; *Midcontinent*—Arkansas, Kansas, Mississippi, Nebraska, and Oklahoma; *Mountain States*—Arizona, Colorado, Idaho, Montana, New Mexico, North Dakota, South Dakota, Utah, and Wyoming. Alaska and Hawaii were not included in the study.

<sup>2</sup> Includes only establishments with 8 workers or more in field

operations and 20 workers or more in contract drilling at the time of reference of the universe data.

<sup>3</sup> Data relate to total employment in establishments actually visited.

<sup>4</sup> Includes executive, professional, managerial, office, and other workers in addition to the production worker category shown separately.

<sup>5</sup> Includes data for regions in addition to those shown separately.

<sup>6</sup> Includes data for Western Pennsylvania shown separately.

<sup>7</sup> Includes data for Oklahoma shown separately.

## Scheduled weekly hours

Data on weekly hours refer to the predominant work schedule for full-time, land-based production workers employed on the day shift. Variable workweeks are those where no predominant schedule prevailed in the employing establishment. Data on weekly hours for offshore workers were not collected.

## Shift provisions and practices

Shift provisions relate to the policies of establishments either currently operating late shifts or having formal provisions covering late-shift work. Practices relate to workers employed on late shifts at the time of the survey.

## Employee benefits

Employee benefits in an establishment were considered applicable to production workers if they applied to half or more of such workers in the establishment. Similarly, if fewer than half of the workers were covered, the benefit was considered nonexistent in the establishment. Because of length-of-service and other eligibility requirements, the proportion of workers receiving the benefits may be smaller than estimated.

*Paid holidays.* Paid-holiday provisions relate to full-day and half-day holidays provided annually.

*Paid vacations.* The summaries of vacation plans are limited to formal arrangements and exclude informal plans whereby time off with pay is granted at the discretion of the employer or supervisor. Payments not on a time basis were converted; for example, a payment of 2 percent of annual earnings was considered the equivalent of 1 week's pay. The periods of service for which data are presented represent the most common practices, but they do not necessarily reflect individual establishment provisions for progression. For example, changes in proportions indicated at 20 years of service may include changes which occurred between 15 and 20 years.

*Health-care, insurance, and retirement plans.* Data are presented for health-care, insurance, and retirement plans for which the employer pays all or a part of the cost, excluding programs required by law such as workers' compensation and Social Security.<sup>1</sup> Among plans included are those underwritten by a commercial insurance company and those paid directly by the employer from current operating funds or from a fund set aside for this purpose.

Death benefits are included as a form of life insurance. Sickness and accident insurance is limited to that type of insurance under which predetermined cash payments are made directly to the insured on a weekly or monthly basis during illness or accident disability.

Tabulations of paid sick leave plans are limited to formal plans<sup>2</sup> which provide full pay or a portion of the worker's pay during absence from work because of illness; informal arrangements have been omitted. Separate tabulations are provided for (1) plans which provide full pay and no waiting period, and (2) plans providing either partial pay or a waiting period.

Long-term disability insurance plans provide payments to totally disabled employees upon the expiration of sick leave, sickness and accident insurance, or both, or after a specified period of disability (typically 6 months). Payments are made until the end of disability, a maximum age, or eligibility for retirement benefits. Payments may be at full or partial pay, but are almost always reduced by Social Security, workers' compensation, and private pension benefits payable to the disabled employee.

Hospitalization, surgical, and medical insurance refers to plans providing for complete or partial payment for hospital room charges, inpatient surgery, and doctors' fees. These plans typically cover other expenses, such as outpatient surgery and prescription drugs, and may be underwritten by a commercial insurance company or a nonprofit organization, or they may be a form of self-insurance.

A health maintenance organization (HMO) provides comprehensive health care services to its members for fixed periodic payments rather than indemnification or reimbursement for medical, surgical, and hospital expenses.

Dental insurance covers routine dental work, such as fillings, extractions, and X-rays. Excluded are plans which cover only oral surgery or accidental injury.

Vision care covers routine eye examinations and eyeglasses. Excluded are plans which cover only certain kinds of surgery or care required as a result of an accident.

Hearing-care plans provide at least partial payment for hearing examinations, hearing aids, or both.

<sup>1</sup> Temporary disability insurance, which provides benefits to covered workers disabled by injury or illness which is not work-connected, is mandatory under State laws in California, New Jersey, New York, and Rhode Island. Establishment plans which meet only the legal requirements are excluded from the survey data, but those under which (1) employers contribute more than is legally required, or (2) benefits exceed those specified in the State law are included. In Rhode Island, benefits are paid out of a State fund to which only employees contribute. In each of the other three States, benefits are paid either from a State fund or through a private plan.

*State fund financing:* In California, only employees contribute to the State fund; in New Jersey, employees and employers contribute; in New York, employees contribute up to a specified maximum and employers pay the difference between the employees' share and the total contribution required.

*Private plan financing:* In California and New Jersey, employees cannot be required to contribute more than they would if they were covered by the State fund; in New York, employees can agree to contribute more if the State rules that the additional contribution is commensurate with the benefit provided.

<sup>2</sup> An establishment is considered as having a formal plan if it specifies at least the minimum amount of sick leave available to each employee. Such a plan need not be written, but informal sick leave allowances determined on an individual basis are excluded.

Alcohol and drug abuse treatment plans provide at least partial payment for institutional treatment (in a hospital or specialized facility) for addiction to alcohol or drugs.

Tabulations of retirement pensions are limited to plans which provide regular payments for the remainder of the retiree's life. Data are presented separately for retirement severance pay (one payment or several over a specified period of time) made to employees upon retirement. Establishments providing both retirement severance payments and retirement pensions to employees were considered as having both retirement pensions and retirement severance pay plans; however, establishments having optional plans providing employees a choice of either retirement severance payments or pensions were considered as having only retirement pension benefits.

*Paid funeral and jury-duty leave.*<sup>3</sup> Formal plans that provide at least partial payment for time lost as a result of at-

tending funerals of specified family members or serving as a juror.

*Cost-of-living adjustments.* Formal plans that adjust wages in keeping with changes in the BLS Consumer Price Index or some other measure.

*Technological severance pay.* Formal plans that provide payments to employees permanently separated from the company because of a technological change or facility closing.

*Thrift or savings plan.* Data relate to formal provisions for thrift or savings plans to which the employer makes monetary contributions beyond administrative costs.

<sup>3</sup> When jury-duty leave is required by law, as it is in Alabama, Nebraska, Tennessee, and parts of Florida and Massachusetts, plans are included only if the employer provides the employees with benefits exceeding the legal requirement.

## Appendix B. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field representatives in classifying into appropriate occupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits the grouping of occupational wage rates representing comparable job content. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's job descriptions may differ significantly from those used in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field representatives are instructed to exclude supervisors, apprentices, learners, beginners, trainees, and handicapped, part-time, temporary, and probationary workers.

The titles and codes below the job titles in this appendix are taken from the 1980 edition of the *Standard Occupational Classification Manual* (SOC), issued by the U.S. Department of Commerce, Office of Federal Statistical Policy and Standards.

In general, the Bureau of Labor Statistics occupational descriptions are much more specific than those found in the SOC manual. For example, three of the occupations studied separately in oil and gas extraction had the same SOC code (652—drillers, oil wells). Therefore, in comparing the results of this survey with other sources, differences in occupational definitions should be taken into consideration.

### **Derrick operator**

(652: Drillers, oil well)

Works on a rotary drilling rig, assisting in raising or lowering casing and drill pipe and in carrying out drilling operations. Work involves: Guiding and attaching elevator to upper end of sections of casing or drill pipe as it is being run into the well; detaching components as they are pulled out of the well; tending slush or mud pumps which circulate a heavy mixture of clay and water through a drill pipe to flush out drillings and to cool the bit; cleaning, oiling, greasing, inspecting, and repairing pulleys, blocks, and cables that are used to raise or lower casing and drill pipe; assists rotary driller to regulate valves in controlling the flow of oil when the well first begins to flow.

### **Driller, rotary**

(652: Drillers, oil well)

(Core driller; well driller)

Supervises drilling operations and operates draw works that serve as a power distribution center for the raising or lowering of drill pipe and casing, and for rotating drill pipe in the well. Work involves: Manipulating levers and throttles to control the speed of the rotary table which rotates a string of tools, and regulating the pressure of the tools at the bottom of the well as indicated by a gauge; connecting or disconnecting sections of drill pipe; selecting drill bits according to the nature of the strata encountered and changing the bits when dull or when the strata change; manipulating levers, pedals, and brakes to control draw works which supply the power necessary to lower or raise drill pipe and casing; checking operation of slush pumps to see that the fluid used to cool bits, remove cuttings, and seal the walls of the well with clay, is circulating properly and is of the correct consistency; inspecting core or cuttings from the well to determine the nature of the strata drilled; fishing for and removing equipment lost in the well, using special tools at the end of the drill pipe or cable; keeping a record of the location and the nature of the strata, the number of feet advanced per shift, and the materials used. May start the flow of the well by assisting the shooter to lower and set off a charge of explosives in the strata and control the flow of the well when it first begins to flow either by capping it or by regulating the control valves. Supervises workers such as derrick operators and rotary floor workers, who may assist in the work described.

### **Electrician, maintenance**

(615: Electrical and electronic equipment repairer)

(6432: Electrician)

Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generation, distribution, or utilization of electric energy. Work involves most of the following: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings,

layouts, or other specifications; locating and diagnosing trouble in the electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's handtools and measuring and testing instruments. In general, the work of the maintenance electrician requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

### **Floor worker, rotary**

(656: Extractive occupations, not elsewhere classified)  
(Rotary driller helper; rotary helper; roughneck)

Assists in drilling operations and in running drill pipe and casing into or out of wells. Work involves: Guiding lower end of drill pipe and casing sections through the well opening as a derrick operator handles the upper end to run sections to the well; racking and unracking drill pipe sections as these are removed; helping to connect or disconnect joints between sections, using tongs or chain wrenches to grip and turn pipe; inserting or removing slips (curved metal wedges) used at the top of the well to hold the drill pipe at the desired point when running it from the well; operating a cathead (power-driven winch), the cable of which is attached to the tongs or wrench, to loosen or tighten the joints; digging ditches, racking tools, and cleaning drilling floor and area around drilling rig; and assisting in making repairs to drilling machinery, slush pumps, and derrick.

### **Gasplant operator**

(692: Gas plant operators)  
(Gas producer)

Operates automatically controlled natural gas treating unit in an oil or gas field to render gas suitable for fuel or for pipeline transportation. Work involves most of the following: Opening valves to admit gas and specified chemicals into treating vessel where moisture is absorbed and impurities are removed; adjusting controls of auxiliary equipment, such as pumps, heating coils, and cooling tower; reading temperature and pressure gauges and adjusting controls to keep heat and pressure at the level of maximum efficiency and within safe operating limits; performing routine tests or delivering samples to laboratory to determine qualities of gas, such as B.T.U. value, flame candlepower, and specific gravity, and proportions of elements, such as methane, propane, and natural gasoline; draining samples of water from treating unit for laboratory analysis; adding specified chemicals to water to keep heating and cooling systems in working order. May adjust and repair gas meters and governors, using handtools. May change charts on meters equipped with automatic recorders and may advise and assist workers repairing regulators (governors) and other control instruments.

### **Hoist operator**

(8314: Hoist and winch operators)  
(Winch operator)

Operates a truck-mounted hoist to lower or raise oil or gas well instruments used in directional drilling, electric well logging, perforating, and free-point shooting. May connect, or assist in connecting, various instruments to conductor cable. May also maintain and repair cables and hoisting equipment.

### **Mechanic, maintenance**

(613: Industrial machinery repairer)

Repairs machinery or mechanical equipment. Work involves most of the following: Examining machines and mechanical equipment to diagnose the source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use of handtools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending the machine to a machine shop for major repairs; preparing written specifications for major repairs or for the production of parts ordered from a machine shop; reassembling machines; and making all necessary adjustments for operation. In general, the work of a maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Excluded from this classification are workers whose primary duties involve setting up or adjusting machines.

### **Motor operator**

(652: Drillers, oil well)

Primary duties include running and maintaining the engines of a drilling rig that provide power for drilling.

### **Pumper**

(8319: Miscellaneous material-moving equipment operators)  
(Oil-well pumper)

Operates the power unit (steam, gas, gasoline, electric, or diesel) which drives the oil-well pumps used in wells where the natural flow of oil has diminished or ceased. Work includes: Regulating the flow of oil from wells to storage tanks or into pipelines by opening or closing valves; reading meters and making daily production reports of the amount and quality of oil pumped; checking the pressure of the separator, which separates natural gas from oil, making adjustments, if necessary; lubricating pumps and making minor repairs; and reporting major breakdowns and difficulties. May make regular tests of oil for sediment and water.

**Roustabout**

(656: Extractive occupations, not elsewhere classified)  
(Laborer)

Performs any combination of the following tasks in or around an oil field, as assigned: Digging trenches for drainage around oil wells, storage tanks, and other installations; filling excavations with dirt; loading and unloading trucks; assisting pumpers in setting up pumps used to pump oil, gas, water, or mud; bailing spilled oil into buckets and barrels; cleaning machinery; cutting down trees and brush around oil field installations; segregating pipe sections on racks in yard; and connecting tanks and flow lines; and performing other miscellaneous pipefitting work. Excluded from this classification are casual laborers who are hired as needed, and maintenance floor workers (gang pushers).

Difficulties are sometimes encountered in distinguishing between roustabouts and roughnecks (rotary floor workers). Whenever such difficulties arise, roughnecks should be considered as those workers who assist in the actual drilling operations and those operations alone. Roustabouts are employed after the well is drilled. They assist in various other functions encountered in petroleum production.

**Truckdriver**

(821: Motor vehicle operator)

Drives a truck in or around oil or gas fields to transport petroleum, equipment, work crew, or supplies between battery sites, rail points, and other unloading docks. May also load or unload truck, with or without helpers, make minor mechanical repairs, and keep truck in good working order. Excluded are driver-salesmen and over-the-road drivers.

**Welder, oil field**

(7714: Welders and cutters)

Cuts, lays out, fits, and welds sheet metal, cast iron, aluminum, and other metal or alloyed metal parts used to fabricate or repair oil field machinery, equipment, or other installation, such as oil and gas pipelines and tanks, pressure vessels, pump sections, heavy bases for drilling equipment, drill pipes, or casings. The oil field welder usually operates electric-welding or acetylene-welding apparatus, or both.

**Well puller**

(8314: Hoist and winch operators)

(Casing puller; clutchworker; rodworker; hydraulic-tool operator)

Controls power hoisting equipment to pull casing, tubing, and pumping rods from oil and gas wells for repair and to lower repaired equipment, testing devices, and servicing tools into well. Duties usually involve: Attaching cable clamps to top of pump rod or casing and starting winch or hydraulic jack that raises rod or casing; disconnecting sections of rod or casing, using hand or power wrenches and tongs; running packer (plug device) into well to control flow of oil, water, or gas during well-pulling operations. May lower pressure recording device into well and interpret findings. May also test pipes for leaks, using hydraulic testing equipment. Excluded from this classification are workers operating power hoisting equipment mounted on a truck (hoist operators) and derrick operators.

# Industry Wage Survey Bulletins

The most recent reports providing occupational wage data for industries currently included in the Bureau's program of industry wage surveys are listed below. Bulletins still in print are for sale from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, or from the Bureau of Labor Statistics, Publications Sales Center, P.O. Box 2145, Chicago, IL 60690. Order by title and GPO Stock Number. Bulletins marked with an asterisk (\*) are available only from the Chicago address. Bulletins that are out of print are available for reference at leading public, college, or university libraries or at the Bureau's Washington or regional offices.

## *Manufacturing*

Basic Iron and Steel, 1983. BLS Bulletin 2221. \$2.25\*  
Cigarette Manufacturing, 1986. BLS Bulletin 2276. \$1.25\*  
Corrugated and Solid Fiber Boxes, 1987. BLS Bulletin 2315.  
\$3.50. GPO Stock No. 029-001-02986-1  
Grain Mill Products, 1987. BLS Bulletin 2325.  
\$4.50. GPO Stock No. 029-001-02996-9.  
Hosiery Manufacturing, 1987. BLS Bulletin 2321.  
\$3. GPO Stock No. 029-001-02987-0.  
Industrial Chemicals, 1986. BLS Bulletin 2287. \$2.50\*  
GPO Stock No. 029-001-02934-9  
Iron and Steel Foundries, 1986. BLS Bulletin 2292.  
\$5.50. GPO Stock No. 029-001-02963-2.  
Machinery Manufacturing, 1983. BLS Bulletin 2229. \$3.50\*  
Meat Products, 1984. BLS Bulletin 2247. \$6\*  
Men's and Boys' Shirts and Nightwear, 1987.  
BLS Bulletin 2304. \$3.25\*  
Men's and Boys' Suits and Coats, 1984.  
BLS Bulletin 2230. \$2.25\*  
Men's and Women's Footwear, 1986. BLS Bulletin 2291. \$3.50\*  
Millwork, 1984. BLS Bulletin 2244. \$2\*  
Motor Vehicles and Parts, 1983. BLS Bulletin 2223. \$4.75\*  
Petroleum Refining, 1985. BLS Bulletin 2255. \$2.25\*

Pressed or Blown Glass and Glassware, 1986.  
BLS Bulletin 2286. \$3.\*  
Pulp, Paper, and Paperboard Mills, 1987. BLS Bulletin 2324.  
\$5.50. GPO Stock No. 029-001-02993-4  
Shipbuilding and Repairing, 1986. BLS Bulletin 2295.  
\$2. GPO Stock No. 029-001-02965-9  
Structural Clay Products, 1986. BLS Bulletin 2288. \$3.25\*  
Synthetic Fibers, 1985. BLS Bulletin 2268. \$1.50\*  
Textile Dyeing and Finishing, 1985. BLS Bulletin 2260. \$3.25\*  
Textile Mills, 1985. BLS Bulletin 2265. \$5.50\*  
Women's and Misses' Dresses, 1982. BLS Bulletin 2187. Out  
of print.  
Wood Household Furniture, 1986. BLS Bulletin 2283.  
\$5.50\*

## *Nonmanufacturing*

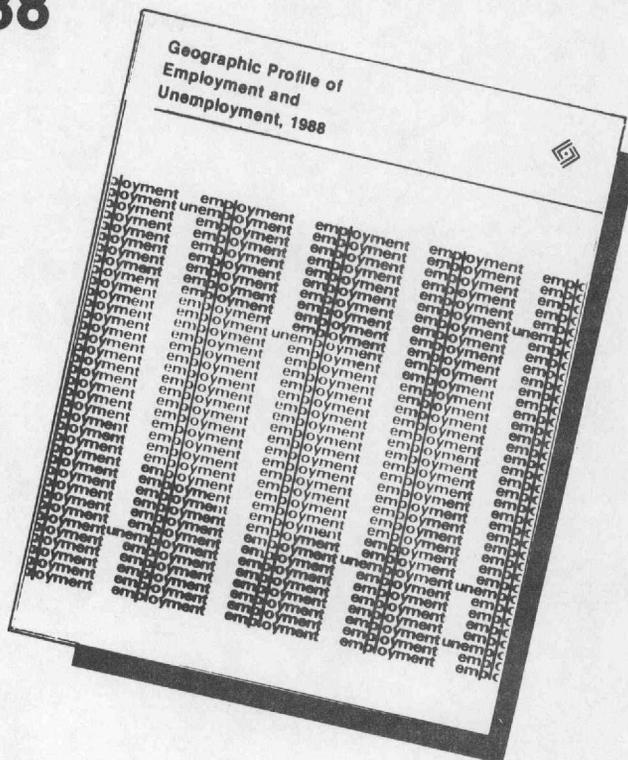
Auto Dealer Repair Shops, 1982. BLS Bulletin 2198. \$2.25\*  
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Bituminous Coal Mining, 1982. BLS Bulletin 2185. Out of  
print.  
Certificated Air Carriers, 1984. BLS Bulletin 2241. \$2\*  
Computer and Data Processing Services, 1987.  
BLS Bulletin 2318. \$3.50. GPO Stock No. 029-001-02988-8  
Contract Cleaning Services, 1986. BLS Bulletin 2299.  
\$3. GPO Stock No. 029-001-02970-5  
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Nursing and Personal Care Facilities, 1985.  
BLS Bulletin 2275. \$5  
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Temporary Help Supply, 1987. BLS Bulletin 2313. \$5  
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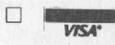
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