

Information Circular 9400

Analyses of Natural Gases, 1993

By Stella M. Sigler

**UNITED STATES DEPARTMENT OF THE INTERIOR
Bruce Babbitt, Secretary**

BUREAU OF MINES

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ANALYSES OF NATURAL GASES, 1993

By Stella Sigler¹

ABSTRACT

This publication contains analyses and related source data for 153 natural gas samples from 16 States. Of the total samples, 149 were collected during calendar year 1993. The remainder were collected earlier, but releases granting permission to publish were not received until 1993. None of the analyses have been previously published in annual reports. All samples were obtained and analyzed as part of U.S. Department of the Interior, U.S. Bureau of Mines investigations of the occurrences of helium in natural gases of countries with free-market economies. This survey has been conducted since 1917. The analyses published herein were made by mass spectrometer and chromatograph.

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INTRODUCTION

This U.S. Bureau of Mines publication contains analyses and related source data for 153 natural gas samples from 16 States. None of the analyses have been previously published in annual reports. All samples were obtained and analyzed as part of the U.S. Bureau of Mines investigations of the occurrences of helium in natural gases of countries with free market economies. This survey has been conducted since 1917. The analyses published herein were made by mass spectrometer and chromatograph.

The results of these investigations are published annually to make the information available to the petroleum industry and the general public. Thirty-nine publications have presented the results of 15,578 gas analyses made through 1993. The first three bulletins (1-3)² contain analyses and related source data on 5,218 gas samples collected from 1917 through 1960; these bulletins have been supplemented annually by information circulars (4-17, 19-24, 26-30, 32-36, 38-39) containing 10,360 analyses of samples collected since 1960.

In 1976, a compilation of the analyses made prior to 1975 was prepared by the U.S. Bureau of Mines and published by the National Technical Information Service of the U.S. Department of Commerce (18). The 1976 compilation contains 10,562 analyses of gas samples from gas and oil wells and natural gas pipelines in 37 States and 23 foreign countries.

Three other compilations of analyses have been published (25, 31, 37) by the U.S. Bureau of Mines. The first of these was published in 1982 and contained analyses made prior to 1981. The 1982 publication contains 12,554 analyses of gas samples from gas and oil wells and

natural gas pipelines in 39 States and 24 foreign countries and includes the analyses from the 1976 publication (25). The second of these compilations was published in 1987 and contains 14,242 analyses made prior to 1986. The samples were taken from wells or pipelines in 40 States and 24 foreign countries (31). In 1991 a compilation was completed as a supplement to the 1987 publication and contains all analyses published from 1986 through 1990. The 1991 publication contains 920 samples from gas and oil wells and pipelines in 26 States and 2 foreign countries (37).

In addition to being in the publications, all analyses and related information published through 1993 are available on a magnetic tape file and 3.5-inch diskettes. The tape and diskettes are available from the National Technical Information Service, Springfield, VA 22161, phone 1-800-553-NTIS; (orders should refer to U.S. Bureau of Mines tape PB 92-501337). There are 10 diskettes available; diskette PB 503317 contains all available analyses, 7 other diskettes contain analyses from various regions of the United States, one diskette contains foreign analyses, and one diskette contains historical analyses of samples collected prior to 1951.

The helium survey program is conducted by soliciting natural gas samples throughout the United States and other countries with free-market economies. Without the assistance of the petroleum industry, State and Federal agencies, and many individuals engaged in oil and gas exploration and production, the helium survey in its present scope would not be possible.

GEOLOGIC PROVINCES OF THE UNITED STATES

The tables include geologic province codes so each sample source can be located within a specific geologic province as defined by the Committee on Statistics of Drilling of the American Association of Petroleum Geologists.³ These provinces, which are given in the following list and shown in figure 1, are delineated by political

boundaries for convenience and for accommodation of data processing equipment. Not all of the provinces shown are gas-producing areas, so many of the codes are not used in this publication. Since State or Federal ownership is not always known in offshore areas, only one code is used for each State. Owing to the lack of information on the location of wells in Alaska, only one code, 972, is used for all wells.

The following list and figure 1 are taken from the article cited in footnote 3:

²Italic numbers in parentheses refer to items in the list of previous publications at the end of this report.

³Meyer, R. F. Geologic Provinces Code Map for Computer Use. AAPG Bull., v. 54, No. 7, July 1970, pp. 1301-1305.

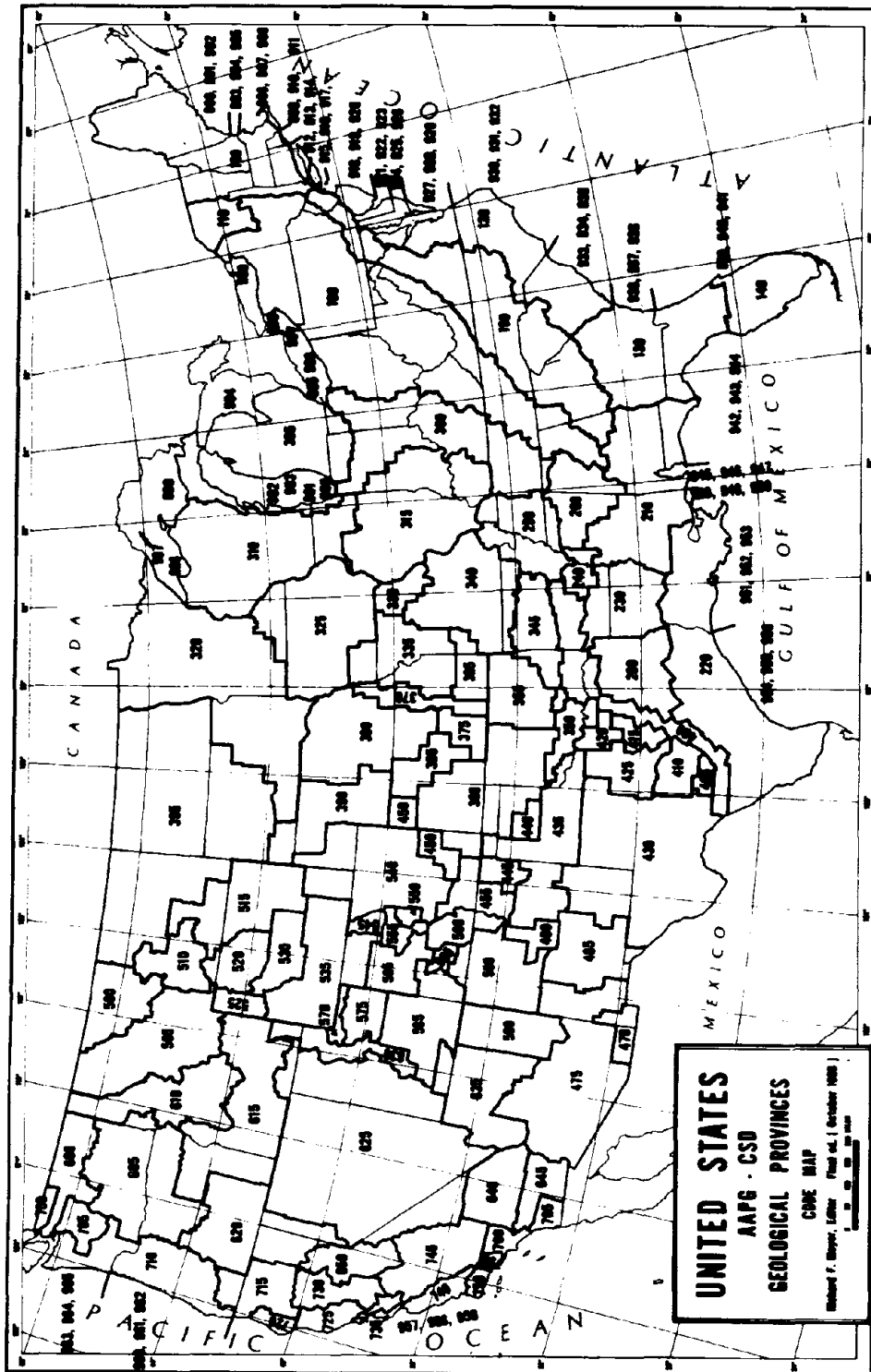


Figure 1.—Geologic provinces of the United States.

<u>Code</u>	<u>Province</u>	<u>Code</u>	<u>Province</u>
100	New England Province	460	Estancia Basin
110	Adirondack Uplift	465	Orogrande Basin
120	Atlantic Coast Basin	470	Pedregosa Basin
130	South Georgia-North Florida Sedimentary Province	475	Basin-and-Range Province
140	South Florida Province	500	Sweetgrass Arch
150	Piedmont-Blue Ridge Province	505	Montana Folded Belt Province
160	Appalachian Basin	510	Central Montana Uplift
200	Black Warrior Basin	515	Powder River Basin
210	Mid-Gulf Coast Basin	520	Big Horn Basin
220	Gulf Coast Basin	525	Yellowstone Province
230	Arkla Basin	530	Wind River Basin
240	Desha Basin	535	Green River Basin
250	Upper Mississippi Embayment	540	Denver Basin
260	East Texas Basin	545	North Park Basin
300	Cincinnati Arch	550	South Park Basin
305	Michigan Basin	555	Eagle Basin
310	Wisconsin Arch	560	San Luis Basin
315	Illinois Basin	565	San Juan Mountain Province
320	Sioux Uplift	570	Uinta Uplift
325	Iowa Shelf	575	Uinta Basin
330	Lincoln Anticline	580	San Juan Basin
335	Forest City Basin	585	Paradox Basin
340	Ozark Uplift	590	Black Mesa Basin
345	Arkoma Basin	595	Piceance Basin
350	South Oklahoma Folded Belt Province	600	Northern Cascade Range-Okanagan Province
355	Chautauqua Platform	605	Eastern Columbia Basin
360	Anadarko Basin	610	Idaho Mountains Province
365	Cherokee Basin	615	Snake River Basin
370	Nemaha Anticline	620	Southern Oregon Basin
375	Sedgwick Basin	625	Great Basin Province
380	Salina Basin	630	Wasatch Uplift
385	Central Kansas Uplift	635	Plateau Sedimentary Province
390	Chadron Arch	640	Mojave Basin
395	Williston Basin	645	Salton Basin
400	Ouachita Tectonic Belt Province	650	Sierra Nevada Province
405	Kerr Basin	700	Bellingham Basin
410	Llano Uplift	705	Puget Sound Province
415	Strawn Basin	710	Western Columbia Basin
420	Fort Worth Syncline	715	Klamath Mountains Province
425	Bend Arch	720	Eel River Basin
430	Permian Basin	725	Northern Coast Range Province
435	Palo Duro Basin	730	Sacramento Basin
440	Amarillo Arch	735	Santa Cruz Basin
445	Sierra Grande Uplift	740	Coastal Basins
450	Las Animas Arch	745	San Joaquin Basin
455	Las Vegas-Raton Basin	750	Santa Maria Basin

Code	Province	Code	Province
755	Ventura Basin	921	Delaware Atlantic offshore—general
760	Los Angeles Basin	922	Delaware Atlantic offshore—State
765	Capistrano Basin	923	Delaware Atlantic offshore—Federal
800	Heceta Island Area	924	Maryland Atlantic offshore—general
805	Keku Islands Area	925	Maryland Atlantic offshore—State
810	Gulf of Alaska Basin	926	Maryland Atlantic offshore—Federal
815	Copper River Basin	927	Virginia Atlantic offshore—general
820	Cook Inlet Basin	928	Virginia Atlantic offshore—State
830	Kandik Province	929	Virginia Atlantic offshore—Federal
835	Kobuk Province	930	North Carolina Atlantic offshore—general
840	Koyukuk Province	931	North Carolina Atlantic offshore—State
845	Bristol Bay Basin	932	North Carolina Atlantic offshore—Federal
850	Bethel Basin	933	South Carolina Atlantic offshore—general
855	Norton Basin	934	South Carolina Atlantic offshore—State
860	Selawik Basin	935	South Carolina Atlantic offshore—Federal
863	Yukon Flats Basin	936	Georgia Atlantic offshore—general
865	Lower Tanana Basin	937	Georgia Atlantic offshore—State
867	Middle Tanana Basin	938	Georgia Atlantic offshore—Federal
870	Upper Tanana Basin	939	Florida Atlantic offshore—general
873	Galena Basin	940	Florida Atlantic offshore—State
875	Innoko Basin	941	Florida Atlantic offshore—Federal
877	Minchumina Basin	942	Florida Gulf of Mexico offshore—general
880	Holitna Basin	943	Florida Gulf of Mexico offshore—State
885	Arctic Foothills Province	944	Florida Gulf of Mexico offshore—Federal
890	Arctic Slope Basin	945	Alabama Gulf of Mexico offshore—general
900	Maine Atlantic offshore—general	946	Alabama Gulf of Mexico offshore—State
901	Maine Atlantic offshore—State	947	Alabama Gulf of Mexico offshore—Federal
902	Maine Atlantic offshore—Federal	948	Mississippi Gulf of Mexico offshore—general
903	New Hampshire Atlantic offshore—general	949	Mississippi Gulf of Mexico offshore—State
904	New Hampshire Atlantic offshore—State	950	Mississippi Gulf of Mexico offshore—Federal
905	New Hampshire Atlantic offshore—Federal	951	Louisiana Gulf of Mexico offshore—general
906	Massachusetts Atlantic offshore—general	952	Louisiana Gulf of Mexico offshore—State
907	Massachusetts Atlantic offshore—State	953	Louisiana Gulf of Mexico offshore—Federal
908	Massachusetts Atlantic offshore—Federal	954	Texas Gulf of Mexico offshore—general
909	Rhode Island Atlantic offshore—general	955	Texas Gulf of Mexico offshore—State
910	Rhode Island Atlantic offshore—State	956	Texas Gulf of Mexico offshore—Federal
911	Rhode Island Atlantic offshore—Federal	957	California Pacific offshore—general
912	Connecticut Atlantic offshore—general	958	California Pacific offshore—State
913	Connecticut Atlantic offshore—State	959	California Pacific offshore—Federal
914	Connecticut Atlantic offshore—Federal	960	Oregon Pacific offshore—general
915	New York Atlantic offshore—general	961	Oregon Pacific offshore—State
916	New York Atlantic offshore—State	962	Oregon Pacific offshore—Federal
917	New York Atlantic offshore—Federal	963	Washington Pacific offshore—general
918	New Jersey Atlantic offshore—general	964	Washington Pacific offshore—State
919	New Jersey Atlantic offshore—State	965	Washington Pacific offshore—Federal
920	New Jersey Atlantic offshore—Federal	972	Alaska Arctic offshore—general
		973	Alaska Arctic offshore—State
		974	Alaska Arctic offshore—Federal

Code	Province	Code	Province
975	Alaska Bering Sea offshore—general	991	Illinois Lake Michigan offshore
976	Alaska Bering Sea offshore—State	992	Wisconsin Lake Michigan offshore
977	Alaska Bering Sea offshore—Federal	993	Michigan Lake Michigan offshore
978	Alaska Pacific offshore—general	994	Michigan Lake Huron offshore
979	Alaska Pacific offshore—State	995	Michigan Lake Erie offshore
980	Alaska Pacific offshore—Federal	996	Ohio Lake Erie offshore
987	Minnesota Lake Superior offshore	997	Pennsylvania Lake Erie offshore
988	Wisconsin Lake Superior offshore	998	New York Lake Erie offshore
989	Michigan Lake Superior offshore	999	New York Lake Ontario offshore
990	Indiana Lake Michigan offshore		

TABLES

The following tables include the results of analyses and related source data from the gas samples, which are divided into two groups as follows:

Table 1. - Samples from gas and oil wells in the United States.

Source	Number of samples	Tables	Source	Number of samples	Tables
Alaska	1	1	New Mexico	4	1
Arkansas	16	1	North Dakota	1	1
Colorado	29	1	Ohio	4	1
Kansas	12	1	Oklahoma	23	1
Louisiana	1	1	Pennsylvania	6	1
Michigan	1	1	Texas	30	1
Missouri	2	1	Utah	2	1
Montana	4	1	Wyoming	17	2

All components of the analyses in the tables are reported to the nearest 0.1 pct, except helium, which is reported to the nearest 0.01 pct. The word "trace" is used to

Table 2. - Samples from pipelines in the United States.

The following list indicates the sources of the samples listed in the tables.

denote quantities of helium of less than 0.005 pct and quantities of other components of less than 0.05 pct.

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19500	INDEX SAMPLE 19592	INDEX SAMPLE 19513
STATE.....	ALASKA	ARKANSAS	ARKANSAS
COUNTY.....	NOT GIVEN	CRAWFORD	CRAWFORD
FIELD.....	DELUCA RIVER	DYER	KIDLER WILLIAMS
WELL NAME.....	DELUCA RIVER UNIT NO. 224-34	ALEXANDER NO. 10-3	BYARS NO. 6
API.....	50-283-20000		03-033-10425
LOCATION.....	SEC. 4, T12N, R10W	SEC. 3, T9N, R29W	SEC. 10, T9N, R30W
OWNER.....	ARCO ALASKA, INC.	SEECO, INC.	SONAT EXPLORATION CO.
COMPLETED.....	86/05/07	92/11/21	92/11/11
SAMPLED.....	92/12/00	93/05/04	93/01/23
FORMATION.....	ROCK-STERLING, DELUCA	PENN-MORRIS	PENN-DUHN A
GEOLOGIC PROVINCE CODE...	000	345	345
DEPTH, FEET.....	3340	3125	5828
WELLHEAD PRESSURE, PSIG...	1317	NOT GIVEN	1290
OPEN FLOW, MCFD.....	60000	NOT GIVEN	2376
COMPONENT, MOLE PCT			
METHANE.....	99.1	98.3	96.7
ETHANE.....	0.0	1.0	1.4
PROPANE.....	0.1	0.1	0.2
N-BUTANE.....	0.0	0.0	0.0
ISOBUTANE.....	0.0	0.0	TRACE
N-PENTANE.....	0.0	0.0	0.0
ISOPENTANE.....	0.0	0.0	0.0
CYCLOPENTANE.....	0.0	0.0	0.0
HEXANES PLUS.....	0.0	0.0	0.0
NITROGEN.....	0.4	0.3	0.7
OXYGEN.....	0.0	0.0	0.3
ARGON.....	0.0	0.0	0.0
HYDROGEN.....	TRACE	TRACE	0.0
HYDROGEN SULFIDE**.....	0.0	0.0	0.0
CARBON DIOXIDE.....	0.4	0.2	0.7
HELIUM.....	TRACE	0.12	0.07
HEATING VALUE*.....	1006	1016	1009
SPECIFIC GRAVITY.....	0.561	0.563	0.574

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 4 SAMPLE 19540			INDEX 5 SAMPLE 19658			INDEX 6 SAMPLE 19659		
STATE.....	ARKANSAS		ARKANSAS			ARKANSAS		
COUNTY.....	FRANKLIN		FRANKLIN			FRANKLIN		
FIELD.....	LONE ELM		LONE ELM			LONE ELM		
WELL NAME.....	CARETHERS NO. 3-15		HUTCHENS NO. 1-12			BATTLES NO. 1-22		
API.....			03-047-10810			03-047-10808		
LOCATION.....	SEC. 15, T10N, R28W		SEC. 12, T10N, R28W			SEC. 22, T10N, R28W		
OWNER.....	SEECO, INC.		SEECO, INC.			SEECO, INC.		
COMPLETED.....	92/12/05		93/05/25			93/05/14		
SAMPLED.....	93/03/09		93/08/13			93/08/13		
FORMATION.....	PENN-MALE		PENN-DOWN C			PENN-JENKINS, PATTERSON		
GEOLOGIC PROVINCE CODE...	345		345			345		
DEPTH, FEET.....	3402		3400			2919		
WELLHEAD PRESSURE, PSIG...	NOT GIVEN		940			270		
OPEN FLOW, MCFD.....	NOT GIVEN		1661			1033		
COMPONENT, MOLE PCT								
METHANE.....	97.5	-----	97.7	-----		97.7	-----	
ETHANE.....	1.1		0.6			0.9		
PROPANE.....	0.1	-----	0.1	-----		0.1	-----	
N-BUTANE.....	0.0		0.0			0.0		
ISOBUTANE.....	TRACE	-----	0.0	-----		0.0	-----	
N-PENTANE.....	0.0		0.0			0.0		
ISOPENTANE.....	0.1	-----	0.0	-----		0.0	-----	
CYCLOPENTANE.....	0.0		0.0			0.0		
HEXANES PLUS.....	0.0	-----	0.0	-----		0.0	-----	
NITROGEN.....	0.7		1.1			0.9		
OXYGEN.....	0.0	-----	0.2	-----		0.1	-----	
ARGON.....	0.0		0.0			0.0		
HYDROGEN.....	0.1	-----	0.0	-----		0.0	-----	
HYDROGEN SULFIDE**.....	0.0		0.0			0.0		
CARBON DIOXIDE.....	0.4	-----	0.1	-----		0.1	-----	
HELIUM.....	0.06		0.13			0.09		
HEATING VALUE*.....	1014	-----	1004	-----		1010	-----	
SPECIFIC GRAVITY.....	0.568		0.565			0.565		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19500	INDEX SAMPLE 19592	INDEX SAMPLE 19513
STATE.....	ALASKA	ARKANSAS	ARKANSAS
COUNTY.....	NOT GIVEN	CRAWFORD	CRAWFORD
FIELD.....	BELUGA RIVER	DYER	KIDLER WILLIAMS
WELL NAME.....	BELUGA RIVER UNIT NO. 224-34	ALEXANDER NO. 10-3	BYARS NO. 6
API.....	50-203-20000		03-033-10425
LOCATION.....	SEC. 4, T12N, R10W	SEC. 3, T9N, R29W	SEC. 10, T9N, R30W
OWNER.....	ARCO ALASKA, INC.	SERCO, INC.	SONAT EXPLORATION CO.
COMPLETED.....	86/05/07	92/11/21	92/11/11
SAMPLED.....	92/12/00	93/05/04	93/01/23
FORMATION.....	HOGE-STERLING, BELUGA	PENN-MORRIS	PENN-DUHN A
GEOLOGIC PROVINCE CODE...	000	345	345
DEPTH, FEET.....	3340	3125	5828
WELLHEAD PRESSURE, PSIG...	1317	NOT GIVEN	1290
OPEN FLOW, MCFD.....	60000	NOT GIVEN	2376
COMPONENT, MOLE PCT			
METHANE.....	99.1 -----	98.3 -----	96.7 -----
ETHANE.....	0.0 -----	1.0 -----	1.4 -----
PROPANE.....	0.1 -----	0.1 -----	0.2 -----
N-BUTANE.....	0.0 -----	0.0 -----	0.0 -----
ISOBUTANE.....	0.0 -----	0.0 -----	TRACE -----
N-PENTANE.....	0.0 -----	0.0 -----	0.0 -----
ISOPENTANE.....	0.0 -----	0.0 -----	0.0 -----
CYCLOPENTANE.....	0.0 -----	0.0 -----	0.0 -----
HEXANES PLUS.....	0.0 -----	0.0 -----	0.0 -----
NITROGEN.....	0.4 -----	0.3 -----	0.7 -----
OXYGEN.....	0.0 -----	0.0 -----	0.3 -----
ARGON.....	0.0 -----	0.0 -----	0.0 -----
HYDROGEN.....	TRACE -----	TRACE -----	0.0 -----
HYDROGEN SULFIDE**.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	0.4 -----	0.2 -----	0.7 -----
HELIUM.....	TRACE -----	0.12 -----	0.07 -----
HEATING VALUE*.....	1006 -----	1016 -----	1009 -----
SPECIFIC GRAVITY.....	0.561	0.563	0.574

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

∞

INDEX 4 SAMPLE 19540		INDEX 5 SAMPLE 19658		INDEX 6 SAMPLE 19659	
STATE.....	ARKANSAS	ARKANSAS		ARKANSAS	
COUNTY.....	FRANKLIN	FRANKLIN		FRANKLIN	
FIELD.....	LONE ELM	LONE ELM		LONE ELM	
WELL NAME.....	CARETHERS NO. 3-15	WITCHENS NO. 1-12		BATTLES NO. 1-22	
API.....		03-047-10810		03-047-10808	
LOCATION.....	SEC. 15, T10N, R28W	SEC. 12, T10N, R28W		SEC. 22, T10N, R28W	
OWNER.....	SEECO, INC.	SEECO, INC.		SEECO, INC.	
COMPLETED.....	92/12/05	93/05/25		93/05/14	
SAMPLED.....	93/03/09	93/08/13		93/08/13	
FORMATION.....	PENN-NALE	PENN-DUNN C		PENN-JENKINS, PATTERSON	
GEOLOGIC PROVINCE CODE...	345	345		345	
DEPTH, FEET.....	3402	3400		2919	
WELLHEAD PRESSURE, PSIG...	NOT GIVEN	940		270	
OPEN FLOW, MCFD.....	NOT GIVEN	1661		1033	
COMPONENT, MOLE PCT					
METHANE.....	97.5 -----	97.7 -----		97.7 -----	
ETHANE.....	1.1 -----	0.6 -----		0.9 -----	
PROPANE.....	0.1 -----	0.1 -----		0.1 -----	
N-BUTANE.....	0.0 -----	0.0 -----		0.0 -----	
ISOBUTANE.....	TRACE -----	0.0 -----		0.0 -----	
N-PENTANE.....	0.0 -----	0.0 -----		0.0 -----	
ISOPENTANE.....	0.1 -----	0.0 -----		0.0 -----	
CYCLOPENTANE.....	0.0 -----	0.0 -----		0.0 -----	
HEXANES PLUS.....	0.0 -----	0.0 -----		0.0 -----	
NITROGEN.....	0.7 -----	1.1 -----		0.9 -----	
OXYGEN.....	0.0 -----	0.2 -----		0.1 -----	
ARGON.....	0.0 -----	0.0 -----		0.0 -----	
HYDROGEN.....	0.1 -----	0.0 -----		0.0 -----	
HYDROGEN SULFIDE**.....	0.0 -----	0.0 -----		0.0 -----	
CARBON DIOXIDE.....	0.4 -----	0.1 -----		0.1 -----	
HELIUM.....	0.06 -----	0.13 -----		0.09 -----	
HEATING VALUE*.....	1014 -----	1004 -----		1010 -----	
SPECIFIC GRAVITY.....	0.568	0.565		0.565	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19649	INDEX SAMPLE 19593	INDEX SAMPLE 19499
STATE.....	ARKANSAS	ARKANSAS	ARKANSAS
COUNTY.....	FRANKLIN	FRANKLIN	FRANKLIN
FIELD.....	VESTA	WAPALULA	WHITE OAK
WELL NAME.....	DRAKE NO. 2	CAGLE NO. 1-5	SMITHERMAN NO. 1-13
API.....			
LOCATION.....	SEC. 14, T8N, R29W	SEC. 5, T10N, R27W	SEC. 13, T10N, R27W
OWNER.....	SONAT EXPLORATION CO.	SEECO, INC.	SEECO, INC.
COMPLETED.....	93/03/28	93/01/22	92/09/23
SAMPLED.....	93/07/16	93/05/04	92/12/07
FORMATION.....	PENN-DUNN A & C	PENN-FRIEBURG	MISS-BOONE, DEVO-PENTERS
GEOLOGIC PROVINCE CODE...	345	345	345
DEPTH, FEET.....	2314	3188	4786
WELLHEAD PRESSURE, PSIG...	NOT GIVEN	660	1716
OPEN FLOW, MCFD.....	1450	4854	1683
COMPONENT, MOLE PCT			
METHANE.....	97.2	98.0	94.2
ETHANE.....	1.1	1.1	0.9
PROPANE.....	0.2	0.2	0.1
N-BUTANE.....	0.0	0.0	0.0
ISOBUTANE.....	TRACE	0.0	TRACE
N-PENTANE.....	0.0	0.0	0.0
ISOPENTANE.....	0.1	0.0	0.0
CYCLOPENTANE.....	0.0	0.0	0.0
HEXANES PLUS.....	0.0	0.0	0.0
NITROGEN.....	0.5	0.4	0.9
OXYGEN.....	0.1	0.0	0.0
ARGON.....	0.0	0.0	0.0
HYDROGEN.....	0.0	0.1	TRACE
HYDROGEN SULFIDE**.....	0.0	0.0	0.0
CARBON DIOXIDE.....	0.7	0.2	3.9
HELIUM.....	0.11	0.00	0.06
HEATING VALUE*.....	1013	1016	973
SPECIFIC GRAVITY.....	0.572	0.564	0.601

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19510	INDEX SAMPLE 19528	INDEX SAMPLE 19529
STATE.....	ARKANSAS	ARKANSAS	ARKANSAS
COUNTY.....	FRANKLIN	FRANKLIN	FRANKLIN
FIELD.....	WHITE OAK	WHITE OAK	WHITE OAK
WELL NAME.....	OZARK LAKE NO. 2-14	OZARK LAKE NO. 2-14	WOOLSEY NO. 7
API.....			
LOCATION.....	SEC. 14, T10N, R27W	SEC. 14, T10N, R27W	SEC. 13, T10N, R27W
OWNER.....	SEECO, INC.	SEECO, INC.	SEECO, INC.
COMPLETED.....	92/09/29	92/09/29	92/10/22
SAMPLED.....	93/01/20	93/02/18	93/02/18
FORMATION.....	PENN-ALMA, CARPENTER	PENN-ALMA L, CARPENTER L	PENN-MORROW
GEOLOGIC PROVINCE CODE...	345	345	345
DEPTH, FEET.....	1084	1084	1324
WELLHEAD PRESSURE, PSIG...	NOT GIVEN	NOT GIVEN	NOT GIVEN
OPEN FLOW, MCFD.....	1200	1200	19600
COMPONENT, MOLE PCT			
METHANE.....	92.4	99.1	97.5
ETHANE.....	0.3	0.2	1.0
PROPANE.....	0.1	0.1	0.1
N-BUTANE.....	0.0	0.0	0.0
ISOBUTANE.....	0.0	0.0	0.0
N-PENTANE.....	0.0	0.0	0.0
ISOPENTANE.....	0.0	0.1	0.0
CYCLOPENTANE.....	0.0	0.0	0.0
HEXANES PLUS.....	0.0	0.0	0.0
NITROGEN.....	5.4	0.4	0.8
OXYGEN.....	1.5	0.0	0.2
ARGON.....	0.1	0.0	0.0
HYDROGEN.....	TRACE	0.0	0.0
HYDROGEN SULFIDE**.....	0.0	0.0	0.0
CARBON DIOXIDE.....	0.1	0.1	0.2
HELIUM.....	0.09	0.09	0.09
HEATING VALUE*.....	943	1011	1010
SPECIFIC GRAVITY.....	0.589	0.559	0.567

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19532	INDEX SAMPLE 19526	INDEX SAMPLE 19498
STATE.....	ARKANSAS	ARKANSAS	ARKANSAS
COUNTY.....	FRANKLIN	JOHNSON	JOHNSON
FIELD.....	WHITE OAK	COAL HILL	UNION CITY
WELL NAME.....	CONATZER NO. 1-35	HIGHFILL NO. 4-33	WELCH NO. 1-15
API.....			
LOCATION.....	SEC. 35, T10N, R28W	SEC. 33, T10N, R25W	SEC. 15, T9N, R25W
OWNER.....	SHRICO, INC.	SHRICO, INC.	SHRICO, INC.
COMPLETED.....	92/11/17	92/10/26	92/09/16
SAMPLED.....	93/02/19	93/02/18	92/12/07
FORMATION.....	PENN-CASEY	PENN-SELLS	PENN-SELLS
GEOLOGIC PROVINCE CODE...	345	345	345
DEPTH, FEET.....	3100	3104	4373
WELLHEAD PRESSURE, PSIG...	NOT GIVEN	NOT GIVEN	1248
OPEN FLOW, MCFD.....	3223	5020	1400
COMPONENT, MOLE PCT			
METHANE.....	98.0 -----	97.7 -----	93.9 -----
ETHANE.....	1.1 -----	0.9 -----	0.6 -----
PROPANE.....	0.1 -----	0.1 -----	0.1 -----
N-BUTANE.....	0.0 -----	0.0 -----	0.0 -----
ISOBUTANE.....	TRACE -----	TRACE -----	TRACE -----
N-PENTANE.....	0.0 -----	0.0 -----	0.0 -----
ISOPENTANE.....	0.0 -----	0.0 -----	0.0 -----
CYCLOPENTANE.....	0.0 -----	0.0 -----	0.0 -----
HEXANES PLUS.....	0.0 -----	0.0 -----	0.0 -----
NITROGEN.....	0.5 -----	0.7 -----	1.3 -----
OXYGEN.....	0.1 -----	0.2 -----	1.5 -----
ARGON.....	0.0 -----	0.0 -----	0.1 -----
HYDROGEN.....	0.0 -----	0.0 -----	0.0 -----
HYDROGEN SULFIDE**.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	0.1 -----	0.2 -----	0.3 -----
HELIUM.....	0.00 -----	0.11 -----	0.19 -----
HEATING VALUE*.....	1016 -----	1009 -----	965 -----
SPECIFIC GRAVITY.....	0.564	0.566	0.583

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

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INDEX 16			INDEX 17			INDEX 18		
SAMPLE 19667			SAMPLE 19537			SAMPLE 19520		
STATE.....	ARKANSAS		ARKANSAS			COLORADO		
COUNTY.....	JOHNSON		SEBASTIAN			DOLORES		
FIELD.....	UNION CITY		BONANZA			CANYON		
WELL NAME.....	DAVENPORT NO. 1-15		FORT CHAFFEE NO. 23-1			CANYON NO. 1		
API.....	03-071-10657		03-031-10479			05-033-06116		
LOCATION.....	SEC. 15, T9N, R25W		SEC. 23, T7N, R31W			SEC. 23, T38N, R20W		
OWNER.....	SRECO, INC.		SOUTHWESTERN ENERGY PRODUCTION			CELSIUS ENERGY CO		
COMPLETED.....	93/07/07		89/12/20			91/12/11		
SAMPLED.....	93/09/00		93/03/00			93/01/00		
FORMATION.....	PENN-ORR		DEVO-PENTERS			PENN-ISMAV L		
GEOLOGIC PROVINCE CODE...	345		345			585		
DEPTH, FEET.....	4887		7684			6052		
WELLHEAD PRESSURE, PSIG...	1400		2770			1450		
OPEN FLOW, MCFD.....	1502		17595			1029		
COMPONENT, MOLE PCT								
METHANE.....	97.5	-----	93.2	-----		76.6	-----	
ETHANE.....	1.0	-----	1.1	-----		8.9	-----	
PROPANE.....	0.1	-----	0.1	-----		2.9	-----	
N-BUTANE.....	0.0	-----	0.0	-----		0.6	-----	
ISOBUTANE.....	0.0	-----	0.0	-----		0.4	-----	
N-PENTANE.....	0.0	-----	0.0	-----		0.0	-----	
ISOPENTANE.....	0.0	-----	0.0	-----		0.2	-----	
CYCLOPENTANE.....	0.0	-----	0.0	-----		0.0	-----	
HEXANES PLUS.....	0.0	-----	0.0	-----		0.0	-----	
NITROGEN.....	0.6	-----	3.7	-----		7.7	-----	
OXYGEN.....	0.2	-----	0.6	-----		2.3	-----	
ARGON.....	0.0	-----	0.1	-----		0.1	-----	
HYDROGEN.....	0.0	-----	TRACE	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----		0.0	-----	
CARBON DIOXIDE.....	0.4	-----	1.2	-----		0.3	-----	
HELIUM.....	0.11	-----	0.07	-----		0.03	-----	
HEATING VALUE*.....	1010	-----	966	-----		1049	-----	
SPECIFIC GRAVITY.....	0.568		0.592			0.693		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19686	INDEX SAMPLE 19507	INDEX SAMPLE 19545
STATE.....	COLORADO	COLORADO	COLORADO
COUNTY.....	GARFIELD	LA PLATA	LA PLATA
FIELD.....	BRIDLE	BARKER DOME	BARKER DOME
WELL NAME.....	FEDERAL NO. 1-3-8-104	UTE NO. 16	UTE COM. NO. 1
API.....	05-045-06287	05-067-07821	05-067-07820
LOCATION.....	SEC. 3, T8S, R104W	SEC. 22, T32N, R13W	SEC. 13, T32N, R13W
OWNER.....	NATIONAL FUEL CORP.	MERIDIAN OIL, INC.	MERIDIAN OIL, INC.
COMPLETED.....	--/--/00	91/12/08	92/03/13
SAMPLED.....	93/10/27	93/01/02	93/03/15
FORMATION.....	CRET-DAKOTA	PENN-PARADOX	PENN-BARKER CREEK
GEOLOGIC PROVINCE CODE...	595	580	580
DEPTH, FEET.....	NOT GIVEN	9445	9221
WELLHEAD PRESSURE, PSIG...	610	2776	1545
OPEN FLOW, MCFD.....	100	7887	353
COMPONENT, MOLE PCT			
METHANE.....	90.4	91.9	86.8
ETHANE.....	3.8	3.8	0.7
PROPANE.....	0.9	1.3	0.1
N-BUTANE.....	0.3	0.6	0.2
ISOBUTANE.....	0.1	0.3	0.0
N-PENTANE.....	0.2	0.5	0.2
ISOPENTANE.....	TRACE	0.0	0.0
CYCLOPENTANE.....	0.0	0.1	0.0
HEXANES PLUS.....	0.1	0.6	0.1
NITROGEN.....	2.2	0.6	1.2
OXYGEN.....	0.1	0.1	0.2
ARGON.....	0.0	0.0	0.0
HYDROGEN.....	TRACE	0.0	TRACE
HYDROGEN SULFIDE**.....	0.0	0.0	0.1
CARBON DIOXIDE.....	1.9	0.3	10.1
HELIUM.....	0.17	0.01	0.12
HEATING VALUE*.....	1032	1118	920
SPECIFIC GRAVITY.....	0.620	0.631	0.675

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

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INDEX 22 SAMPLE 19620		INDEX 23 SAMPLE 19518		INDEX 24 SAMPLE 19657	
STATE.....	COLORADO	COLORADO		COLORADO	
COUNTY.....	MESA	MESA		MOFFAT	
FIELD.....	ASBURY	BUZZARD CREEK		NOT GIVEN	
WELL NAME.....	ASBURY NO. 13	BUZZARD CREEK NO. 3-11		FEDERAL NO. 1-20-11-94	
API.....	05-077-08474	05-077-08625		05-081-06747	
LOCATION.....	SEC. 13, T9S, R101W	SEC. 11, T9S, R93W		SEC. 20, T11N, R94W	
OWNER.....	PUBLIC SERVICE CO. OF COLORADO	UNOCAL CORP.		COASTAL OIL & GAS CORP.	
COMPLETED.....	06/08/13	92/08/01		92/--/00	
SAMPLED.....	93/06/09	93/01/00		93/08/11	
FORMATION.....	CRET-BUCKHORN	CRET-MESAVERDE, CANEO, COZZETT		CRET-ALMOND	
GEOLOGIC PROVINCE CODE...	595	595		535	
DEPTH, FEET.....	2886	6870		9529	
WELLHEAD PRESSURE, PSIG...	NOT GIVEN	NOT GIVEN		2600	
OPEN FLOW, MCFD.....	1200	1500		430	
COMPONENT, MOLE PCT					
METHANE.....	83.2	88.6		84.6	
ETHANE.....	2.6	5.3		4.9	
PROPANE.....	0.5	1.4		1.8	
N-BUTANE.....	0.2	0.3		0.5	
ISOBUTANE.....	0.1	0.2		0.1	
N-PENTANE.....	0.0	0.3		0.2	
ISOPENTANE.....	0.2	0.0		0.0	
CYCLOPENTANE.....	0.0	0.1		0.0	
HEXANES PLUS.....	0.0	0.2		0.1	
NITROGEN.....	1.3	0.3		4.4	
OXYGEN.....	0.1	0.1		1.3	
ARGON.....	0.0	TRACE		0.1	
HYDROGEN.....	0.0	TRACE		TRACE	
HYDROGEN SULFIDE**.....	0.0	0.0		0.0	
CARBON DIOXIDE.....	11.7	3.2		2.1	
HELIUM.....	0.09	0.01		0.01	
HEATING VALUE*.....	920	1071		1025	
SPECIFIC GRAVITY.....	0.699	0.647		0.658	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 25 SAMPLE 19577			INDEX 26 SAMPLE 19602			INDEX 27 SAMPLE 19614		
STATE.....	COLORADO		COLORADO			COLORADO		
COUNTY.....	RIO BLANCO		RIO BLANCO			RIO BLANCO		
FIELD.....	CATHEDRAL		CATHEDRAL			CATHEDRAL		
WELL NAME.....	FEDERAL NO. 25-3-21-2		FEDERAL C&K NO. 4-24			FEDERAL NO. 35-2		
API.....	05-103-08992					05-103-08007		
LOCATION.....	SEC. 25, T2S, R101W		SEC. 24, T3S, R101W			SEC. 35, T2S, R101W		
OWNER.....	GORDON ENGINEERING, INC.		TWIN ARROW, INC.			FUELCO		
COMPLETED.....	83/08/01		78/--/00			78/05/06		
SAMPLED.....	93/04/20		93/05/20			93/05/25		
FORMATION.....	CRET-MANCOS B		CRET-MANCOS			CRET-MANCOS B		
GEOLOGIC PROVINCE CODE...	595		595			595		
DEPTH, FEET.....	2742		3689			2243		
WELLHEAD PRESSURE, PSIG...	340		NOT GIVEN			NOT GIVEN		
OPEN FLOW, MCYD.....	274		10			NOT GIVEN		
COMPONENT, MOLE PCT								
METHANE.....	89.9	-----	78.7	-----		88.7	-----	
ETHANE.....	5.2		5.8			5.0		
PROPANE.....	2.4	-----	3.3	-----		2.8	-----	
N-BUTANE.....	0.9		1.1			0.9		
ISOBUTANE.....	0.1	-----	0.9	-----		0.7	-----	
N-PENTANE.....	0.3		0.0			0.0		
ISOPENTANE.....	0.1	-----	0.1	-----		0.0	-----	
CYCLOPENTANE.....	0.1		0.2			0.1		
HEXANES PLUS.....	0.2	-----	0.4	-----		0.3	-----	
NITROGEN.....	0.3		6.2			0.4		
OXYGEN.....	TRACE	-----	0.2	-----		0.0	-----	
ARGON.....	0.0		0.1			0.0		
HYDROGEN.....	0.0	-----	0.0	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.0		0.0			0.0		
CARBON DIOXIDE.....	0.4	-----	2.8	-----		1.1	-----	
HELIUM.....	0.02		0.29			0.02		
HEATING VALUE*.....	1132	-----	1084	-----		1134	-----	
SPECIFIC GRAVITY.....	0.640		0.714			0.653		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENNHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19615	INDEX SAMPLE 19616	INDEX SAMPLE 19617
STATE.....	COLORADO	COLORADO	COLORADO
COUNTY.....	RIO BLANCO	RIO BLANCO	RIO BLANCO
FIELD.....	CATHEDRAL	CATHEDRAL	CATHEDRAL
WELL NAME.....	FEDERAL NO. 22-1	FEDERAL NO. 31-1	FEDERAL NO. F-28
API.....	05-103-07746	05-103-07832	05-103-08343
LOCATION.....	SEC. 22, T2S, R101W	SEC. 31, T2S, R100W	SEC. 28, T3S, R101W
OWNER.....	FUELCO	FUELCO	FUELCO
COMPLETED.....	77/12/00	76/05/19	79/10/15
SAMPLED.....	93/05/00	93/05/25	93/05/25
FORMATION.....	CREY-MANCOS	CREY-MANCOS	CREY-MANCOS
GEOLOGIC PROVINCE CODE...	595	595	595
DEPTH, FEET.....	NOT GIVEN	NOT GIVEN	3119
WELLHEAD PRESSURE, PSIG...	NOT GIVEN	NOT GIVEN	NOT GIVEN
OPEN FLOW, MCFD.....	30	40	20
COMPONENT, MOLE PCT			
METHANE.....	89.6	91.9	83.1
ETHANE.....	4.9	3.8	6.3
PROPANE.....	2.6	1.6	3.4
N-BUTANE.....	0.9	0.5	0.9
ISOBUTANE.....	0.5	0.4	0.5
N-PENTANE.....	0.0	0.0	0.0
ISOPENTANE.....	0.1	0.1	0.1
CYCLOPENTANE.....	0.1	0.1	0.0
HEXANES PLUS.....	0.2	0.2	0.2
NITROGEN.....	0.6	0.3	3.7
OXYGEN.....	0.0	0.1	0.4
ARGON.....	0.0	0.0	0.1
HYDROGEN.....	TRACE	TRACE	TRACE
HYDROGEN SULFIDE**.....	0.0	0.0	0.0
CARBON DIOXIDE.....	0.5	1.0	1.2
HELIUM.....	0.04	0.01	0.18
HEATING VALUE*.....	1129	1091	1107
SPECIFIC GRAVITY.....	0.642	0.624	0.677

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 31			INDEX 32			INDEX 33		
SAMPLE 19618			SAMPLE 19632			SAMPLE 19634		
STATE.....	COLORADO		COLORADO			COLORADO		
COUNTY.....	RIO BLANCO		RIO BLANCO			RIO BLANCO		
FIELD.....	CATHEDRAL		CATHEDRAL			DOUGLAS CREEK		
WELL NAME.....	FEDERAL NO. 24-2		BIG HORSE DRAW FED. NO. 2-1			BIG HORSE DRAW NO. 1		
API.....	05-103-07814		05-103-08109			05-103-05106		
LOCATION.....	SEC. 24, T3S, R102W		SEC. 2, T3S, R101W			SEC. 32, T2S, R101W		
OWNER.....	FUELCO		WEIPRO CO.			WEIPRO CO.		
COMPLETED.....	--/--/00		78/04/04			65/08/05		
SAMPLED.....	93/05/25		93/06/03			93/06/03		
FORMATION.....	CRET-MANCOS A & B		CRET-MANCOS B			CRET-MANCOS B		
GEOLOGIC PROVINCE CODE...	595		595			595		
DEPTH, FEET.....	NOT GIVEN		2476			1608		
WELLHEAD PRESSURE, PSIG...	NOT GIVEN		80			NOT GIVEN		
OPEN FLOW, MCFD.....	7		10			40		
COMPONENT, MOLE PCT								
METHANE.....	82.3	-----	87.4	-----		86.7	-----	
ETHANE.....	5.1	-----	3.9	-----		5.4	-----	
PROPANE.....	3.4	-----	1.7	-----		3.0	-----	
N-BUTANE.....	1.1	-----	0.7	-----		1.1	-----	
ISOBUTANE.....	0.6	-----	0.0	-----		0.2	-----	
N-PENTANE.....	0.0	-----	0.1	-----		0.3	-----	
ISOPENTANE.....	0.0	-----	0.4	-----		0.3	-----	
CYCLOPENTANE.....	0.1	-----	0.0	-----		0.0	-----	
HEXANES PLUS.....	0.2	-----	0.0	-----		0.2	-----	
NITROGEN.....	6.0	-----	3.3	-----		2.1	-----	
OXYGEN.....	0.0	-----	1.4	-----		TRACE	-----	
ARGON.....	0.0	-----	0.1	-----		0.0	-----	
HYDROGEN.....	TRACE	-----	TRACE	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----		0.0	-----	
CARBON DIOXIDE.....	0.8	-----	1.1	-----		0.7	-----	
HELIUM.....	0.27	-----	0.02	-----		0.10	-----	
HEATING VALUE*.....	1085	-----	1044	-----		1128	-----	
SPECIFIC GRAVITY.....	0.678		0.643			0.661		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

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	INDEX SAMPLE 19582	INDEX SAMPLE 19584	INDEX SAMPLE 19580
STATE.....	COLORADO	COLORADO	COLORADO
COUNTY.....	RIO BLANCO	RIO BLANCO	RIO BLANCO
FIELD.....	DOUGLAS CREEK N	DOUGLAS CREEK N	DRAGON TRAIL
WELL NAME.....	N. DOUGLAS CRK. FLD. NO.11-6	FORK UN NO. 9-19-1-1	FORK UN NO. 1-31
API.....			
LOCATION.....	SEC. 6, T2S, R101W	SEC. 19, T1S, R101W	SEC. 31, T1S, R101W
OWNER.....	CHANDLER & ASSOCIATES, INC.	CHANDLER & ASSOCIATES, INC.	CHANDLER & ASSOCIATES, INC.
COMPLETED.....	93/--/00	93/--/00	--/--/00
SAMPLED.....	93/04/22	93/04/22	93/04/22
FORMATION.....	CRET-MANCOS B	CRET-MANCOS B	CRET-MANCOS B
GEOLOGIC PROVINCE CODE...	595	595	595
DEPTH, FEET.....	NOT GIVEN	NOT GIVEN	NOT GIVEN
WELLHEAD PRESSURE, PSIG...	NOT GIVEN	NOT GIVEN	NOT GIVEN
OPEN FLOW, MCFD.....	NOT GIVEN	NOT GIVEN	NOT GIVEN
COMPONENT, MOLE PCT			
METHANE.....	84.3 -----	79.9 -----	85.1 -----
ETHANE.....	6.3 -----	7.2 -----	5.6 -----
PROPANE.....	3.9 -----	5.0 -----	3.5 -----
N-BUTANE.....	1.5 -----	2.4 -----	1.3 -----
ISOBUTANE.....	0.5 -----	0.9 -----	0.4 -----
N-PENTANE.....	0.5 -----	0.9 -----	0.3 -----
ISOPENTANE.....	0.2 -----	0.3 -----	0.4 -----
CYCLOPENTANE.....	0.1 -----	0.2 -----	0.0 -----
HEXANES PLUS.....	0.3 -----	0.7 -----	0.2 -----
NITROGEN.....	2.0 -----	1.9 -----	2.5 -----
OXYGEN.....	0.0 -----	0.1 -----	0.2 -----
ARGON.....	0.0 -----	0.0 -----	0.0 -----
HYDROGEN.....	TRACE -----	TRACE -----	TRACE -----
HYDROGEN SULFIDE**.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	0.3 -----	0.3 -----	0.3 -----
HELIUM.....	0.12 -----	0.11 -----	0.14 -----
HEATING VALUE*.....	1184 -----	1275 -----	1152 -----
SPECIFIC GRAVITY.....	0.689 -----	0.746 -----	0.676 -----

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19581	INDEX SAMPLE 19579	INDEX SAMPLE 19601
STATE.....	COLORADO	COLORADO	COLORADO
COUNTY.....	RIO BLANCO	RIO BLANCO	RIO BLANCO
FIELD.....	DRAGON TRAIL	DRAGON TRAIL N	LOWER HORSE DRAW
WELL NAME.....	N. DOUGLAS CRK. FLD. NO. 3-7	GOVERNMENT NO. D-1	LOWER HORSE DRAW N NO. 3
API.....			05-103-07330
LOCATION.....	SEC. 7, T2S, R101W	SEC. 31, T1S, R101W	SEC. 21, T2S, R103W
OWNER.....	CHANDLER & ASSOCIATES, INC.	CHANDLER & ASSOCIATES, INC.	CONOCO, INC.
COMPLETED.....	93/--/00	93/--/00	71/03/21
SAMPLED.....	93/04/22	93/04/22	93/05/14
FORMATION.....	CRET-MANCOS B	CRET-MANCOS B	CRET-MANCOS B
GEOLOGIC PROVINCE CODE...	595	595	595
DEPTH, FEET.....	NOT GIVEN	NOT GIVEN	3059
WELLHEAD PRESSURE, PSIG...	NOT GIVEN	NOT GIVEN	255
OPEN FLOW, MCFD.....	NOT GIVEN	NOT GIVEN	55
COMPONENT, MOLE PCT			
METHANE.....	84.0 -----	83.1 -----	89.3 -----
ETHANE.....	6.4 -----	6.4 -----	5.3 -----
PROPANE.....	3.9 -----	3.9 -----	2.3 -----
N-BUTANE.....	1.5 -----	1.7 -----	0.7 -----
ISOBUTANE.....	0.6 -----	0.6 -----	0.5 -----
N-PENTANE.....	0.6 -----	0.6 -----	0.0 -----
ISOPENTANE.....	0.1 -----	0.3 -----	0.0 -----
CYCLOPENTANE.....	0.2 -----	0.1 -----	0.1 -----
HEXANES PLUS.....	0.4 -----	0.3 -----	0.2 -----
NITROGEN.....	2.0 -----	2.5 -----	1.2 -----
OXYGEN.....	0.0 -----	0.1 -----	0.1 -----
ARGON.....	0.0 -----	0.0 -----	0.0 -----
HYDROGEN.....	TRACE -----	TRACE -----	TRACE -----
HYDROGEN SULFIDE**.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	0.3 -----	0.3 -----	0.3 -----
HELIUM.....	0.12 -----	0.13 -----	0.06 -----
HEATING VALUE*.....	1190 -----	1191 -----	1109 -----
SPECIFIC GRAVITY.....	0.692 -----	0.699 -----	0.635 -----

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 40 SAMPLE 19635			INDEX 41 SAMPLE 19600			INDEX 42 SAMPLE 19578		
STATE.....	COLORADO		COLORADO			COLORADO		
COUNTY.....	RIO BLANCO		RIO BLANCO			RIO BLANCO		
FIELD.....	LOWER HORSE DRAW		MISSOURI CREEK			PHILADELPHIA CREEK		
WELL NAME.....	NFS FEDERAL NO. 10-1		MISSOURI CREEK NO. 28-1			FEDERAL NO. 10-1		
API.....	05-103-08236					05-103-83390		
LOCATION.....	SEC. 10, T2S, R103W		SEC. 28, T3S, R103W			SEC. 10, T2S, R101W		
OWNER.....	WEIPRO CO.		CONOCO, INC.			GORDON ENGINEERING, INC.		
COMPLETED.....	78/09/30		60/09/13			79/09/02		
SAMPLED.....	93/06/03		93/05/13			93/04/20		
FORMATION.....	CRET-MANCOS B		JURA-MORRISON			CRET-MANCOS B		
GEOLOGIC PROVINCE CODE...	595		595			595		
DEPTH, FEET.....	2831		5474			2790		
WELLHEAD PRESSURE, PSIG...	370		1450			390		
OPEN FLOW, MCFD.....	20		550			360		
COMPONENT, MOLE PCT								
METHANE.....	86.7	-----	85.1	-----		91.5	-----	
ETHANE.....	7.2		3.8			4.1		
PROPANE.....	3.0	-----	1.1	-----		2.0	-----	
N-BUTANE.....	1.0		0.4			0.9		
ISOBUTANE.....	0.3	-----	0.7	-----		TRACE	-----	
N-PENTANE.....	0.3		0.0			0.4		
ISOPENTANE.....	0.1	-----	0.0	-----		0.1	-----	
CYCLOPENTANE.....	0.1		0.3			0.1		
HEXANES PLUS.....	0.2	-----	0.2	-----		0.2	-----	
NITROGEN.....	0.8		7.1			0.3		
OXYGEN.....	0.0	-----	0.0	-----		0.0	-----	
ARGON.....	0.0		0.0			0.0		
HYDROGEN.....	TRACE	-----	0.0	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.0		0.0			0.0		
CARBON DIOXIDE.....	0.3	-----	0.7	-----		0.5	-----	
HELIUM.....	0.03		0.02			0.02		
HEATING VALUE*	1158	-----	1022	-----		1116	-----	
SPECIFIC GRAVITY.....	0.659		0.647			0.630		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19583	INDEX SAMPLE 19539	INDEX SAMPLE 19590
STATE.....	COLORADO	COLORADO	COLORADO
COUNTY.....	RIO BLANCO	RIO BLANCO	RIO BLANCO
FIELD.....	PHILADELPHIA CREEK	RANGELY SW	RANGELY SW
WELL NAME.....	DOUGLAS CREEK FPD. NO. 3-4-2	SW RANGELY FPD. NO.18-10-1-2	SW RANGELY FPD. NO. 10-7-1-2
API.....		05-103-94990	
LOCATION.....	SEC. 4, T2S, R101W	SEC. 18, T1S, R102W	SEC. 7, T1S, R102W
OWNER.....	CHANDLER & ASSOCIATES, INC.	CHANDLER & ASSOCIATES, INC.	CHANDLER & ASSOCIATES, INC.
COMPLETED.....	93/--/00	91/10/25	--/--/00
SAMPLED.....	93/04/22	93/03/11	93/04/23
FORMATION.....	CREY-MANCOS B	CREY-MANCOS B	CREY-MANCOS B
GEOLOGIC PROVINCE CODE...	595	595	595
DEPTH, FEET.....	NOT GIVEN	3113	NOT GIVEN
WELLHEAD PRESSURE, PSIG...	NOT GIVEN	560	NOT GIVEN
OPEN FLOW, MCFD.....	NOT GIVEN	1043	NOT GIVEN
COMPONENT, MOLE PCT			
METHANE.....	90.6	85.2	85.1
ETHANE.....	4.0	6.3	7.4
PROPANE.....	2.1	4.4	3.8
N-BUTANE.....	0.8	1.1	1.4
ISOBUTANE.....	0.1	0.4	0.4
N-PENTANE.....	0.1	0.3	0.6
ISOPENTANE.....	0.4	0.3	0.1
CYCLOPENTANE.....	0.0	0.1	0.2
HEXANES PLUS.....	0.0	0.2	0.4
NITROGEN.....	1.4	1.2	0.5
OXYGEN.....	0.2	0.0	0.1
ARGON.....	0.0	0.0	0.0
HYDROGEN.....	TRACE	TRACE	TRACE
HYDROGEN SULFIDE**.....	0.0	0.0	0.0
CARBON DIOXIDE.....	0.2	0.3	0.2
HELIUM.....	0.00	0.09	0.03
HEATING VALUE*.....	1097	1181	1207
SPECIFIC GRAVITY.....	0.628	0.679	0.686

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 46 SAMPLE 19619			INDEX 47 SAMPLE 19660			INDEX 48 SAMPLE 19522		
STATE.....	COLORADO		KANSAS			KANSAS		
COUNTY.....	RIO BLANCO		HAMILTON			KEARNY		
FIELD.....	TEXAS MOUNTAIN		HUGOTON			HUGOTON		
WELL NAME.....	TEXAS MOUNTAIN NO. 21-2		TRUSSEL GV A NO. 3 HI			CAMPBELL NO. 12-1		
API.....								
000689API.....	LOCATION.....05-103-070000. 21, T3S, R102W		15-067-210000. 35, T26S, R39W			15-093-210000. 8, T25S, R35W		
OWNER.....	FUELCO		AMOCO PRODUCTION CO.			PLAINS PETROLEUM OPERATING CO.		
COMPLETED.....	86/12/18		93/01/22			90/12/21		
SAMPLED.....	93/05/27		93/08/12			93/01/28		
FORMATION.....	CRET-MANCOS B		PERM-CHASE GROUP			PERM-CHASE GROUP		
GEOLOGIC PROVINCE CODE...	595		360			360		
DEPTH, FEET.....	3250		2370			2441		
WELLHEAD PRESSURE, PSIG...	20		93			108		
OPEN FLOW, MCFD.....	NOT GIVEN		1500			1107		
COMPONENT, MOLE PCT								
METHANE.....	87.8	-----	72.1	-----		72.2	-----	
ETHANE.....	3.2	-----	6.5	-----		6.5	-----	
PROPANE.....	2.5	-----	3.7	-----		3.7	-----	
N-BUTANE.....	1.3	-----	1.3	-----		1.1	-----	
ISOBUTANE.....	0.5	-----	0.1	-----		0.3	-----	
N-PENTANE.....	0.3	-----	0.3	-----		0.4	-----	
ISOPENTANE.....	0.8	-----	0.1	-----		TRACE	-----	
CYCLOPENTANE.....	0.2	-----	0.0	-----		0.1	-----	
HEXANES PLUS.....	0.0	-----	0.1	-----		0.2	-----	
NITROGEN.....	2.7	-----	15.3	-----		14.9	-----	
OXYGEN.....	0.0	-----	0.0	-----		0.0	-----	
ARGON.....	0.0	-----	0.1	-----		0.0	-----	
HYDROGEN.....	0.0	-----	TRACE	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----		0.0	-----	
CARBON DIOXIDE.....	0.6	-----	0.0	-----		0.1	-----	
HELIUM.....	0.10	-----	0.39	-----		0.41	-----	
HEATING VALUE*.....	1127	-----	1014	-----		1022	-----	
SPECIFIC GRAVITY.....	0.665		0.718			0.720		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19690	INDEX SAMPLE 19509	INDEX SAMPLE 19517
STATE.....	KANSAS	KANSAS	KANSAS
COUNTY.....	KEARNY	MORTON	SEWARD
FIELD.....	HUGOTON	KINSLER #	WIDE AWAKE
WELL NAME.....	SALYER NO. 1-2	KANSAS UNIVERSITY "A" NO. 5	BOLHS NO. 1-16
API.....	15-093-21193		15-175-21157
LOCATION.....	SEC. 27, T23S, R37W	SEC. 6, T32S, R39W	SEC. 16, T35S, R34W
OWNER.....	HELMERICH & PAYNE, INC.	OXY U.S.A., INC.	SIDWELL OIL & GAS, INC.
COMPLETED.....	92/06/08	91/12/03	91/02/12
SAMPLED.....	93/11/16	93/01/20	93/01/28
FORMATION.....	PERM-CHASE GROUP	PERM-MORROW	PERM-KEYES, MORROW
GEOLOGIC PROVINCE CODE...	360	360	360
DEPTH, FEET.....	2528	5468	6350
WELLHEAD PRESSURE, PSIG...	221	680	279
OPEN FLOW, MCFD.....	3243	2500	235
COMPONENT, MOLE PCT			
METHANE.....	69.0 -----	73.7 -----	80.2 -----
ETHANE.....	6.0 -----	10.5 -----	5.2 -----
PROPANE.....	3.5 -----	7.4 -----	3.5 -----
N-BUTANE.....	1.1 -----	1.4 -----	1.3 -----
ISOBUTANE.....	0.3 -----	0.6 -----	0.5 -----
N-PENTANE.....	0.3 -----	0.2 -----	0.4 -----
ISOPENTANE.....	0.1 -----	0.2 -----	0.1 -----
CYCLOPENTANE.....	0.0 -----	0.0 -----	0.1 -----
HEXANES PLUS.....	0.1 -----	0.1 -----	0.3 -----
NITROGEN.....	18.9 -----	4.9 -----	7.8 -----
OXYGEN.....	0.0 -----	0.4 -----	0.2 -----
ARGON.....	0.1 -----	0.0 -----	0.0 -----
HYDROGEN.....	TRACE -----	TRACE -----	TRACE -----
HYDROGEN SULFIDE**.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	0.1 -----	0.5 -----	0.3 -----
HELIUM.....	0.50 -----	0.05 -----	0.24 -----
HEATING VALUE*.....	968 -----	1218 -----	1091 -----
SPECIFIC GRAVITY.....	0.728	0.749	0.694

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 52 SAMPLE 19565			INDEX 53 SAMPLE 19640			INDEX 54 SAMPLE 19641		
STATE.....	KANSAS		KANSAS			KANSAS		
COUNTY.....	STANTON		STANTON			STANTON		
FIELD.....	ARROYO		ARROYO			ARROYO		
WELL NAME.....	SANTA FE NO. 22-2		PRO FARMS NO. 26-2			LAUMAN NO. 28-1		
API.....	15-187-20650		15-187-20649			15-187-20634		
LOCATION.....	SEC. 22, T29S, R41W		SEC. 26, T29S, R41W			SEC. 28, T29S, R41W		
OWNER.....	J. M. HUBER CORP.		J. M. HUBER CORP.			J. M. HUBER CORP.		
COMPLETED.....	92/10/01		92/09/21			92/05/06		
SAMPLED.....	93/04/01		93/07/08			93/07/08		
FORMATION.....	PENN-MORROW		PENN-MORROW L			PENN-MORROW L		
GEOLOGIC PROVINCE CODE...	360		360			360		
DEPTH, FEET.....	5397		5386			5444		
WELLHEAD PRESSURE, PSIG...	1080		1149			1170		
OPEN FLOW, MCFD.....	13564		8128			17649		
COMPONENT, MOLE PCT								
METHANE.....	76.3	-----	76.8	-----		77.5	-----	
ETHANE.....	4.4	-----	4.6	-----		4.1	-----	
PROPANE.....	2.7	-----	2.9	-----		2.5	-----	
N-BUTANE.....	1.1	-----	0.8	-----		0.8	-----	
ISOBUTANE.....	0.3	-----	0.3	-----		0.3	-----	
N-PENTANE.....	0.5	-----	0.2	-----		0.1	-----	
ISOPENTANE.....	0.1	-----	0.5	-----		0.4	-----	
CYCLOPENTANE.....	0.1	-----	0.0	-----		0.0	-----	
HEXANES PLUS.....	0.3	-----	0.1	-----		0.0	-----	
NITROGEN.....	12.7	-----	12.2	-----		12.5	-----	
OXYGEN.....	TRACE	-----	0.0	-----		0.2	-----	
ARGON.....	0.1	-----	0.1	-----		0.1	-----	
HYDROGEN.....	TRACE	-----	TRACE	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----		0.0	-----	
CARBON DIOXIDE.....	0.3	-----	0.4	-----		0.2	-----	
HELIUM.....	1.36	-----	1.21	-----		1.30	-----	
HEATING VALUE*.....	1005	-----	1006	-----		980	-----	
SPECIFIC GRAVITY.....	0.691	-----	0.688	-----		0.676	-----	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 55 SAMPLE 19642			INDEX 56 SAMPLE 19684			INDEX 57 SAMPLE 19685		
STATE.....	KANSAS		KANSAS			KANSAS		
COUNTY.....	STANTON		STANTON			STANTON		
FIELD.....	ARROYO		ARROYO			ARROYO		
WELL NAME.....	SANTA FE NO. 9-1		PRETZ NO. 16-2			SCOTT NO. 21-1		
API.....	15-187-20515		15-187-20668			15-187-20667		
LOCATION.....	SEC. 9, T29S, R41W		SEC. 16, T29S, R41W			SEC. 21, T29S, R41W		
OWNER.....	J. M. HUBER CORP.		J. M. HUBER CORP.			J. M. HUBER CORP.		
COMPLETED.....	90/11/29		93/04/13			93/03/17		
SAMPLED.....	93/07/00		93/11/00			93/11/00		
FORMATION.....	PENN-MORROW L		PENN-MORROW			PENN-MORROW		
GEOLOGIC PROVINCE CODE...	360		360			360		
DEPTH, FEET.....	5436		5452			5420		
WELLHEAD PRESSURE, PSIG...	1208		1101			948		
OPEN FLOW, MCFD.....	5416		3812			15732		
COMPONENT, MOLE PCT								
METHANE.....	76.1	-----	74.3	-----		74.4	-----	
ETHANE.....	3.6	-----	4.3	-----		4.6	-----	
PROPANE.....	2.4	-----	2.9	-----		3.0	-----	
N-BUTANE.....	0.9	-----	1.0	-----		1.0	-----	
ISOBUTANE.....	0.3	-----	0.4	-----		0.4	-----	
N-PENTANE.....	0.3	-----	0.3	-----		0.3	-----	
ISOPENTANE.....	0.4	-----	0.1	-----		0.2	-----	
CYCLOPENTANE.....	0.0	-----	0.0	-----		0.0	-----	
HEXANES PLUS.....	0.1	-----	0.1	-----		0.1	-----	
NITROGEN.....	13.7	-----	14.6	-----		14.1	-----	
OXYGEN.....	0.1	-----	0.2	-----		0.0	-----	
ARGON.....	0.1	-----	0.1	-----		0.1	-----	
HYDROGEN.....	TRACE	-----	TRACE	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----		0.0	-----	
CARBON DIOXIDE.....	0.3	-----	0.4	-----		0.3	-----	
HELIUM.....	1.76	-----	1.32	-----		1.38	-----	
HEATING VALUE*.....	972	-----	976	-----		993	-----	
SPECIFIC GRAVITY.....	0.684	-----	0.698	-----		0.699	-----	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 58 SAMPLE 19514		INDEX 59 SAMPLE 19598		INDEX 60 SAMPLE 19536	
STATE.....	KANSAS	LOUISIANA		MICHIGAN	
COUNTY.....	STANTON	ST. MARTIN		KALKASKA	
FIELD.....	HUGOTON	BROWSSARD H		KALKASKA	
WELL NAME.....	FIXTEL GW NO. 3H1	BALDWIN LUMBER CO. YEN NO. 4		HUFF NO. 1-32	
API.....	15-187-20524	17-099-21412		21-079-44882	
LOCATION.....	SEC. 35, T29S, R39W	SEC. 10, T10S, R5N		SEC. 32, T25N, R8W	
OWNER.....	AMOCO PRODUCTION CO.	TEIACO EXP. & PROD., INC.		MARATHON OIL CO.	
COMPLETED.....	91/10/02	93/01/19		92/05/00	
SAMPLED.....	93/01/26	93/05/17		92/02/18	
FORMATION.....	PERM-CHASE GROUP	MIOC-BOLIVINA, MEXICANA		ORDO-PRAIRIE DU CHIEN	
GEOLOGIC PROVINCE CODE...	360	220		305	
DEPTH, FEET.....	NOT GIVEN	13336		10172	
WELLHEAD PRESSURE, PSIG...	118	8500		3800	
OPEN FLOW, MCFD.....	1500	7000		1650	
COMPONENT, MOLE PCT					
METHANE.....	71.5	82.9		92.4	
ETHANE.....	6.7	7.4		2.0	
PROPANE.....	4.0	4.5		0.9	
N-BUTANE.....	1.3	0.9		0.7	
ISOBUTANE.....	0.4	2.0		0.6	
N-PENTANE.....	0.4	0.0		0.3	
ISOPENTANE.....	TRACE	0.0		0.2	
CYCLOPENTANE.....	0.1	0.1		0.0	
HEXANES PLUS.....	0.2	0.3		0.3	
NITROGEN.....	14.9	0.8		2.0	
OXYGEN.....	0.0	0.2		0.3	
ARGON.....	0.0	0.0		0.0	
HYDROGEN.....	TRACE	TRACE		TRACE	
HYDROGEN SULFIDE**.....	0.0	0.0		0.0	
CARBON DIOXIDE.....	0.1	0.9		0.2	
HELIUM.....	0.40	TRACE		0.03	
HEATING VALUE*.....	1036	1205		1074	
SPECIFIC GRAVITY.....	0.729	0.702		0.622	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19638	INDEX SAMPLE 19639	INDEX SAMPLE 19681
STATE.....	MISSISSIPPI	MISSISSIPPI	MONTANA
COUNTY.....	MARION	MARION	BLAINE
FIELD.....	HUB	HUB	SHERARD UNIT
WELL NAME.....	GEORGE HUNT ESTATE NO. 24-1	FRANCES MCKENZIE NO. 12-9	THIES NO. 14-8
API.....	23-091-20264	23-091-20260	25-005-22610
LOCATION.....	SEC. 24, T2N, R13E	SEC. 12, T2N, R13E	SEC. 14, T26N, R18E
OWNER.....	MOON-HINES-TIGRETT OPERS. CO.,	MOON-HINES-TIGRETT OPERS. CO.,	UMC PETROLEUM CORP.
COMPLETED.....	91/10/26	92/06/03	92/09/02
SAMPLED.....	93/07/01	93/07/01	93/10/21
FORMATION.....	CRET-PALUXY	CRET-PALUXY	CRET-EAGLE
GEOLOGIC PROVINCE CODE...	210	210	395
DEPTH, FEET.....	12576	11792	1944
WELLHEAD PRESSURE, PSIG...	6199	5329	370
OPEN FLOW, MCFD.....	2230	3950	1414
COMPONENT, MOLE PCT			
METHANE.....	96.0 -----	93.3 -----	94.3 -----
ETHANE.....	0.2 -----	1.2 -----	0.3 -----
PROPANE.....	0.1 -----	0.5 -----	0.0 -----
N-BUTANE.....	0.0 -----	0.5 -----	0.1 -----
ISOBUTANE.....	0.0 -----	0.1 -----	0.0 -----
N-PENTANE.....	0.0 -----	0.5 -----	0.1 -----
ISOPENTANE.....	0.1 -----	0.0 -----	0.0 -----
CYCLOPENTANE.....	0.0 -----	0.1 -----	0.0 -----
HEXANES PLUS.....	0.0 -----	0.4 -----	0.0 -----
NITROGEN.....	0.8 -----	1.4 -----	4.8 -----
OXYGEN.....	TRACE -----	0.1 -----	0.1 -----
ARGON.....	TRACE -----	0.0 -----	0.0 -----
HYDROGEN.....	TRACE -----	TRACE -----	TRACE -----
HYDROGEN SULFIDE**.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	2.7 -----	2.1 -----	0.1 -----
HELIUM.....	0.03 -----	0.02 -----	0.09 -----
HEATING VALUE*.....	983 -----	1042 -----	970 -----
SPECIFIC GRAVITY.....	0.588	0.621	0.581

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 64 SAMPLE 19567		INDEX 65 SAMPLE 19568		INDEX 66 SAMPLE 19585	
STATE.....	MONTANA	MONTANA		MONTANA	
COUNTY.....	PHILLIPS	PHILLIPS		PHILLIPS	
FIELD.....	ASHFIELD UNIT	BOWDOIN		LORING	
WELL NAME.....	FEDERAL NO. 1512-8	3134 NO. 3		1460 NO. 4	
API.....	25-071-22202				
LOCATION.....	SEC. 15, T31N, R32E	SEC. 31, T33N, R34E		SEC. 14, T36N, R30E	
OWNER.....	FREEPORT-MCMORAN OIL & GAS CO.	FREEPORT-MCMORAN OIL & GAS CO.		FREEPORT-MCMORAN OIL & GAS CO.	
COMPLETED.....	92/07/13	91/09/10		91/07/18	
SAMPLED.....	93/04/07	93/04/07		93/04/16	
FORMATION.....	CRET-BOWDOIN-GREENHORN-PHILL	CRET-GREENHORN, PHILLIPS		CRET-BOWDOIN, GREENHORN	
GEOLOGIC PROVINCE CODE...	395	395		395	
DEPTH, FEET.....	1014	1129		1218	
WELLHEAD PRESSURE, PSIG...	250	212		340	
OPEN FLOW, MCFD.....	1309	1295		36	
COMPONENT, MOLE PCT					
METHANE.....	92.6	92.9		89.7	
ETHANE.....	0.2	0.3		0.4	
PROPANE.....	0.1	0.1		0.1	
N-BUTANE.....	0.0	0.0		0.0	
ISOBUTANE.....	0.0	0.0		0.1	
N-PENTANE.....	0.0	0.0		0.0	
ISOPENTANE.....	0.0	0.0		0.1	
CYCLOPENTANE.....	0.0	0.0		0.0	
HEXANES PLUS.....	0.0	0.0		0.0	
NITROGEN.....	6.8	6.4		8.6	
OXYGEN.....	0.1	0.0		0.9	
ARGON.....	0.1	0.0		0.1	
HYDROGEN.....	TRACE	0.0		TRACE	
HYDROGEN SULFIDE**.....	0.0	0.0		0.0	
CARBON DIOXIDE.....	0.1	0.1		0.0	
HELIUM.....	0.05	0.06		0.07	
HEATING VALUE*.....	944	949		924	
SPECIFIC GRAVITY.....	0.586	0.585		0.601	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 67 SAMPLE 19534		INDEX 68 SAMPLE 19566		INDEX 69 SAMPLE 19501	
STATE.....	NEW MEXICO	NEW MEXICO		NEW MEXICO	
COUNTY.....	EDDY	EDDY		LEA	
FIELD.....	ILLINOIS CAMP N	PARKWAY		HAY MESA	
WELL NAME.....	CHALK BLUFF "6" NO. 1	SUPERIOR FEDERAL NO. 9		COMANCHE STATE "17" NO. 1	
API.....	30-015-26943				
LOCATION.....	SEC. 6, T18S, R28E	SEC. 1, T20S, R29E		SEC. 17, T21S, R33E	
OWNER.....	NEUBORNER OIL CO.	PETROLEUM CORP. OF DELAWARE		MITCHELL ENERGY CORP.	
COMPLETED.....	92/04/24	91/--/00		92/02/00	
SAMPLED.....	93/02/24	93/04/00		92/12/22	
FORMATION.....	PENN-MORROW L	PENN-STRAWN U & L, ATOKA		PENN-MORROW	
GEOLOGIC PROVINCE CODE...	430	430		430	
DEPTH, FEET.....	10084	10624		14000	
WELLHEAD PRESSURE, PSIG...	2960	NOT GIVEN		1500	
OPEN FLOW, MCFD.....	3500	2630		800	
COMPONENT, MOLE PCT					
METHANE.....	88.0	68.2		85.3	
ETHANE.....	7.1	13.3		7.2	
PROPANE.....	2.5	6.3		2.7	
N-BUTANE.....	0.7	2.0		0.8	
ISOBUTANE.....	0.2	0.5		0.2	
N-PENTANE.....	0.3	0.5		0.2	
ISOPENTANE.....	0.0	0.3		0.2	
CYCLOPENTANE.....	0.1	0.1		0.1	
HEXANES PLUS.....	0.3	0.2		0.1	
NITROGEN.....	0.5	6.7		1.6	
OXYGEN.....	0.1	1.5		0.6	
ARGON.....	TRACE	0.1		0.0	
HYDROGEN.....	TRACE	TRACE		TRACE	
HYDROGEN SULFIDE**.....	0.0	0.0		0.0	
CARBON DIOXIDE.....	0.4	0.3		1.1	
HELIUM.....	0.03	0.02		0.02	
HEATING VALUE*.....	1141	1228		1119	
SPECIFIC GRAVITY.....	0.646	0.784		0.664	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

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	INDEX 70 SAMPLE 19542		INDEX 71 SAMPLE 19570		INDEX 72 SAMPLE 19661
STATE.....	NEW MEXICO		NORTH DAKOTA		OHIO
COUNTY.....	RIO ARRIBA		MCKENZIE		COSHOCTON
FIELD.....	SAN JUAN BASIN		ANTELOPE		CLARK
WELL NAME.....	KLEIN NO. 28K		BRENNA-LACEY NO. 1-32		R. MARTIN DAUGHERTY NO. 22503
API.....	30-039-23937		33-053-02397		34-031-06385
LOCATION.....	SEC. 33, T26N, R6W		SEC. 1, T152N, R95W		MILL CREEK TWP., NEW BEDFORD Q
OWNER.....	MERIDIAN OIL, INC.		AMERADA HESS CORP.		COLUMBIA NATURAL RESOURCES
COMPLETED.....	92/12/15		92/12/15		92/10/19
SAMPLED.....	93/03/09		93/04/06		93/08/18
FORMATION.....	CRET-SANASTEE, GRNHR, GRANERO		ORDO-WINNIPEG, CANB-DEADWOOD		ORDO-ROSE RUN
GEOLOGIC PROVINCE CODE...	580		395		160
DEPTH, FEET.....	6770		14089		5990
WELLHEAD PRESSURE, PSIG...	1033		5300		1175
OPEN FLOW, MCFD.....	1800		7566		4000
COMPONENT, MOLE PCT					
METHANE.....	83.9	-----	79.9	-----	88.7
ETHANE.....	9.2	-----	1.9	-----	4.9
PROPANE.....	3.6	-----	0.3	-----	1.7
N-BUTANE.....	1.0	-----	0.2	-----	0.6
ISOBUTANE.....	0.2	-----	0.1	-----	0.2
N-PENTANE.....	0.3	-----	0.0	-----	0.3
ISOPENTANE.....	0.1	-----	0.0	-----	0.0
CYCLOPENTANE.....	0.1	-----	0.0	-----	0.1
HEXANES PLUS.....	0.1	-----	0.2	-----	0.2
NITROGEN.....	0.7	-----	11.7	-----	3.0
OXYGEN.....	0.0	-----	0.0	-----	0.0
ARGON.....	0.0	-----	0.1	-----	0.0
HYDROGEN.....	TRACE	-----	TRACE	-----	TRACE
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----	0.0
CARBON DIOXIDE.....	0.7	-----	5.5	-----	0.2
HELIUM.....	0.07	-----	0.17	-----	0.09
HEATING VALUE*.....	1175	-----	871	-----	1083
SPECIFIC GRAVITY.....	0.676		0.677		0.634

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 73 SAMPLE 19663			INDEX 74 SAMPLE 19662			INDEX 75 SAMPLE 19669		
STATE.....	OHIO		OHIO			OHIO		
COUNTY.....	COSHOCTON		HOLMES			NOBLE		
FIELD.....	MILL CREEK		CLARK			SUMMERFIELD		
WELL NAME.....	JAMES & BRULAN AMES NO.22521		NOAH B. MILLER NO. 22250			MYRON ROE NO. J-1		
API.....	34-031-06410		34-075-05054			34-012-13755		
LOCATION.....	MILL CREEK TWP., NEW BEDFORD Q		MECHANIC TOWNSHIP, KILLBUCK QW			SEC. 30, MARION DIST, SUMMERVI		
OWNER.....	COLUMBIA NATURAL RESOURCES		COLUMBIA NATURAL RESOURCES			OXFORD OIL CO., THE		
COMPLETED.....	92/10/30		92/10/19			91/10/08		
SAMPLED.....	93/08/18		93/08/18			93/11/22		
FORMATION.....	ORDO-ROSE RUN		ORDO-ROSE RUN			MISS-BUREA, DEVO-GORDON, CANY		
GEOLOGIC PROVINCE CODE...	160		160			160		
DEPTH, FEET.....	6026		5689			1450		
WELLHEAD PRESSURE, PSIG...	2340		2225			1000		
OPEN FLOW, MCFD.....	4000		4000			2500		
COMPONENT, MOLE PCT								
METHANE.....	89.5	-----	0.0	-----		72.5	-----	
ETHANE.....	5.7	-----	0.0	-----		12.5	-----	
PROPANE.....	1.0	-----	TRACE	-----		0.0	-----	
N-BUTANE.....	0.2	-----	0.0	-----		1.8	-----	
ISOBUTANE.....	0.0	-----	0.0	-----		0.6	-----	
N-PENTANE.....	0.2	-----	0.0	-----		0.2	-----	
ISOPENTANE.....	0.0	-----	0.1	-----		0.3	-----	
CYCLOPENTANE.....	0.0	-----	0.0	-----		0.0	-----	
HEXANES PLUS.....	0.1	-----	0.0	-----		0.1	-----	
NITROGEN.....	3.0	-----	78.1	-----		3.0	-----	
OXYGEN.....	0.2	-----	20.7	-----		0.7	-----	
ARGON.....	0.0	-----	0.9	-----		0.0	-----	
HYDROGEN.....	0.0	-----	TRACE	-----		0.1	-----	
HYDROGEN SULFIDE**.....	0.0	-----	TRACE	-----		0.0	-----	
CARBON DIOXIDE.....	0.1	-----	0.2	-----		0.1	-----	
HELIUM.....	0.06	-----	0.11	-----		0.13	-----	
HEATING VALUE*.....	1052	-----	3	-----		1274	-----	
SPECIFIC GRAVITY.....	0.615		1.000			0.762		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 76 SAMPLE 19478			INDEX 77 SAMPLE 19574			INDEX 78 SAMPLE 19543		
STATE.....	OKLAHOMA		OKLAHOMA			OKLAHOMA		
COUNTY.....	ALFALFA		BEAVER			CADDO		
FIELD.....	NOT GIVEN		HOCANE-LAVERNE			HYDRO N		
WELL NAME.....	HODGSON NO. 1		DUNLOP NO. 1			PAYNE NO. 1-6		
API.....	35-003-21554		35-007-23900			35-015-22188		
LOCATION.....	SEC. 11, T27N, R11W		SEC. 36, T3N, R 25EEN			SEC. 6, T12N, R13W		
OWNER.....	WILLIAM H. DAVIS		MARLIN OIL CORP.			AN-SON GAS CORP.		
COMPLETED.....	92/05/01		92/09/22			92/10/16		
SAMPLED.....	92/11/10		93/04/21			93/03/16		
FORMATION.....	PERM-COTTAGE GROVE		PERM-CHASE GROUP			PERM-ATOKA		
GEOLOGIC PROVINCE CODE...	360		360			360		
DEPTH, FEET.....	4485		3028			12490		
WELLHEAD PRESSURE, PSIG...	1750		760			5500		
OPEN FLOW, MCFD.....	1550		2505			1220		
COMPONENT, MOLE PCT								
METHANE.....	78.9	-----	84.3	-----		86.4	-----	
ETHANE.....	5.0	-----	5.9	-----		7.6	-----	
PROPANE.....	2.6	-----	2.3	-----		2.7	-----	
N-BUTANE.....	1.2	-----	0.8	-----		0.5	-----	
ISOBUTANE.....	0.3	-----	TRACE	-----		0.4	-----	
N-PENTANE.....	0.0	-----	0.2	-----		0.3	-----	
ISOPENTANE.....	0.6	-----	0.2	-----		0.0	-----	
CYCLOPENTANE.....	0.0	-----	0.0	-----		0.1	-----	
HEXANES PLUS.....	0.1	-----	0.2	-----		0.4	-----	
NITROGEN.....	10.4	-----	5.4	-----		0.7	-----	
OXYGEN.....	0.2	-----	0.3	-----		0.2	-----	
ARGON.....	0.0	-----	0.1	-----		TRACE	-----	
HYDROGEN.....	TRACE	-----	TRACE	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----		0.0	-----	
CARBON DIOXIDE.....	0.5	-----	0.2	-----		0.7	-----	
HELIUM.....	0.20	-----	0.21	-----		0.03	-----	
HEATING VALUE*.....	1039	-----	1072	-----		1148	-----	
SPECIFIC GRAVITY.....	0.691	-----	0.655	-----		0.660	-----	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 79 19515		INDEX SAMPLE 80 19625		INDEX SAMPLE 81 19676
STATE.....	OKLAHOMA		OKLAHOMA		OKLAHOMA
COUNTY.....	COMANCHE		CUSTER		CUSTER
FIELD.....	STERLING		ANTHON		ARAPAHO
WELL NAME.....	JOHNSON NO. 1-5		HATCHER NO. 1-3		LOCKHART NO. 9-4
API.....	35-031-21411		35-039-21513		35-039-21520
LOCATION.....	SEC. 5, T3N, R9W		SEC. 1, T14N, R18W		SEC. 9, T13N, R17W
OWNER.....	KERR-MCGEE CORP.		SONAT EXPLORATION CO.		SONAT EXPLORATION CO.
COMPLETED.....	92/03/29		93/03/31		93/04/23
SAMPLED.....	93/01/00		93/06/00		93/10/13
FORMATION.....	PENN-PUNK, YULK		PENN-RED FORK		PENN-BRITT
GEOLOGIC PROVINCE CODE...	350		360		360
DEPTH, FEET.....	7243		11086		14540
WELLHEAD PRESSURE,PSIG...	1800		5350		4562
OPEN FLOW, MCFD.....	2035		1500		2656
COMPONENT, MOLE PCT					
METHANE.....	85.7 -----		80.0 -----		96.8 -----
ETHANE.....	4.4 -----		10.4 -----		0.8 -----
PROPANE.....	2.4 -----		5.1 -----		0.1 -----
N-BUTANE.....	0.7 -----		1.2 -----		0.0 -----
ISOBUTANE.....	0.3 -----		1.2 -----		0.0 -----
N-PENTANE.....	0.3 -----		0.0 -----		0.1 -----
ISOPENTANE.....	0.0 -----		0.3 -----		0.0 -----
CYCLOPENTANE.....	0.0 -----		0.0 -----		0.0 -----
HEXANES PLUS.....	0.2 -----		0.4 -----		0.0 -----
NITROGEN.....	5.3 -----		0.6 -----		0.5 -----
OXYGEN.....	0.3 -----		0.1 -----		0.2 -----
ARGON.....	0.0 -----		0.0 -----		0.0 -----
HYDROGEN.....	TRACE -----		TRACE -----		TRACE -----
HYDROGEN SULFIDE**.....	0.0 -----		0.0 -----		0.0 -----
CARBON DIOXIDE.....	0.2 -----		0.7 -----		1.5 -----
HELIUM.....	0.09 -----		0.03 -----		0.02 -----
HEATING VALUE*.....	1067 -----		1242 -----		1001 -----
SPECIFIC GRAVITY.....	0.652		0.718		0.579

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

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	INDEX SAMPLE 19674	INDEX SAMPLE 19675	INDEX SAMPLE 19589
STATE.....	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY.....	CUSTER	CUSTER	GRADY
FIELD.....	CUSTER CITY	CUSTER CITY S	CHICKASHA
WELL NAME.....	COLLINS NO. 6-2A	OSCAR COLLINS NO. 7-3	MILEUR NO. 2-23
API.....	35-039-21463	35-039-21530	35-051-22266
LOCATION.....	SEC. 6, T13N, R17W	SEC. 7, T13N, R16W	SEC. 23, T4N, R8W
OWNER.....	SONAT EXPLORATION CO.	SONAT EXPLORATION CO.	CHESAPEAKE OPERATING, INC.
COMPLETED.....	91/11/25	93/07/19	92/09/23
SAMPLED.....	93/10/13	93/10/13	93/04/15
FORMATION.....	PENN-BRITT, MISS-BOATWRIGHT	MISS-BOATWRIGHT	PENN-CUNNINGHAM U
GEOLOGIC PROVINCE CODE...	360	360	360
DEPTH, FEET.....	14379	14798	13642
WELLHEAD PRESSURE, PSIG...	8950	7400	7125
OPEN FLOW, MCFD.....	1163	1285	2003
COMPONENT, MOLE PCT			
METHANE.....	96.3	96.8	94.1
ETHANE.....	1.3	0.8	3.0
PROPANE.....	0.2	0.1	0.7
N-BUTANE.....	0.1	0.0	0.0
ISOBUTANE.....	0.0	TRACE	0.2
N-PENTANE.....	0.0	0.0	0.0
ISOPENTANE.....	0.1	0.0	0.0
CYCLOPENTANE.....	0.0	0.0	0.0
HEXANES PLUS.....	0.0	0.0	0.0
NITROGEN.....	0.5	0.5	1.0
OXYGEN.....	0.2	0.2	0.4
ARGON.....	0.0	0.0	0.0
HYDROGEN.....	TRACE	TRACE	TRACE
HYDROGEN SULFIDE**.....	0.0	0.0	0.0
CARBON DIOXIDE.....	1.4	1.5	0.5
HELIUM.....	0.02	0.02	0.02
HEATING VALUE*.....	1008	1000	1033
SPECIFIC GRAVITY.....	0.581	0.578	0.591

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 85 SAMPLE 19673	INDEX 86 SAMPLE 19519	INDEX 87 SAMPLE 19541
STATE.....	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY.....	GRADY	GRANT	HARPER
FIELD.....	KNOX	GILBERT S	LAVERNE E
WELL NAME.....	JERRY BELL UNIT NO. 1	KRAUS NO. 1-A	JACKSON NO. 2
API.....	35-051-36274	35-053-22229	35-059-21779
LOCATION.....	SEC. 7, T3N, R5W	SEC. 5, T26N, R7W	SEC. 30, T26N, R23W
OWNER.....	CHEVRON CO., U.S.A., INC.	DUBLIN PETROLEUM CORP.	KEPCO, INC.
COMPLETED.....	93/03/25	92/04/20	92/10/25
SAMPLED.....	93/10/00	93/01/00	93/03/09
FORMATION.....	ORDO-VIOLA	MISS---	PENN-MORROW
GEOLOGIC PROVINCE CODE...	360	360	360
DEPTH, FEET.....	13772	5214	6925
WELLHEAD PRESSURE, PSIG...	3809	200	1250
OPEN FLOW, MCFD.....	2328	1400	820
COMPONENT, MOLE PCT			
METHANE.....	87.8 -----	86.6 -----	82.8 -----
ETHANE.....	5.5 -----	4.5 -----	4.5 -----
PROPANE.....	1.8 -----	1.3 -----	2.2 -----
N-BUTANE.....	0.4 -----	0.3 -----	0.7 -----
ISOBUTANE.....	0.5 -----	0.1 -----	0.1 -----
N-PENTANE.....	0.0 -----	0.0 -----	0.2 -----
ISOPENTANE.....	0.0 -----	0.1 -----	0.1 -----
CYCLOPENTANE.....	0.0 -----	0.0 -----	0.0 -----
HEXANES PLUS.....	0.2 -----	0.0 -----	0.1 -----
NITROGEN.....	2.5 -----	5.0 -----	6.9 -----
OXYGEN.....	0.5 -----	0.0 -----	1.8 -----
ARGON.....	0.0 -----	0.1 -----	0.1 -----
HYDROGEN.....	TRACE -----	TRACE -----	TRACE -----
HYDROGEN SULFIDE**.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	0.8 -----	1.2 -----	0.4 -----
HELIUM.....	0.02 -----	0.10 -----	0.10 -----
HEATING VALUE*.....	1074 -----	1009 -----	1024 -----
SPECIFIC GRAVITY.....	0.639	0.633	0.662

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

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	INDEX SAMPLE 19672	INDEX SAMPLE 19669	INDEX SAMPLE 19648
STATE.....	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY.....	HUGHES	LATIMER	LATIMER
FIELD.....	LEGAL H	RED OAK	SUMMERFIELD W
WELL NAME.....	SELLERS NO. 2	FREE NO. 3	HOUSTON NO. 1
API.....	35-063-23071	35-077-20728	35-077-20726
LOCATION.....	SEC. 35, T4N, R11E	SEC. 11, T6N, R21E	SEC. 17, T5N, R22E
OWNER.....	TRIO OPERATING CO.	AMOCO PRODUCTION CO.	MUSTANG FUEL CORP.
COMPLETED.....	92/02/29	93/--/00	93/03/15
SAMPLED.....	93/09/29	93/09/21	93/07/12
FORMATION.....	MISS-JEFFERSON	PENN-RED OAK	PENN-ATOKA L
GEOLOGIC PROVINCE CODE...	355	345	345
DEPTH, FEET.....	7503	7431	9745
WELLHEAD PRESSURE, PSIG...	1100	1206	4400
OPEN FLOW, MCFD.....	350	7924	2700
COMPONENT, MOLE PCT			
METHANE.....	88.9 -----	96.1 -----	95.7 -----
ETHANE.....	1.8 -----	1.9 -----	2.1 -----
PROPANE.....	0.3 -----	0.2 -----	0.3 -----
N-BUTANE.....	TRACE	0.1 -----	0.1 -----
ISOBUTANE.....	0.0 -----	0.0 -----	0.0 -----
N-PENTANE.....	0.0 -----	0.1 -----	0.0 -----
ISOPENTANE.....	0.1 -----	0.1 -----	0.1 -----
CYCLOPENTANE.....	0.0 -----	0.0 -----	0.0 -----
HEXANES PLUS.....	0.0 -----	0.0 -----	TRACE -----
NITROGEN.....	6.5 -----	0.1 -----	0.2 -----
OXYGEN.....	0.2 -----	0.0 -----	0.0 -----
ARGON.....	0.1 -----	0.0 -----	0.0 -----
HYDROGEN.....	1.1 -----	TRACE -----	TRACE -----
HYDROGEN SULFIDE**.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	1.1 -----	1.3 -----	1.5 -----
HELIUM.....	0.05 -----	0.02 -----	0.04 -----
HEATING VALUE*.....	946 -----	1024 -----	1020 -----
SPECIFIC GRAVITY.....	0.600	0.584	0.585

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 91 SAMPLE 19488		INDEX 92 SAMPLE 19650		INDEX 93 SAMPLE 19683	
STATE.....	OKLAHOMA	OKLAHOMA		OKLAHOMA	
COUNTY.....	LATIMER	LE FLORE		LOGAN	
FIELD.....	WILDCAT	BOKOSHOE		LAWRIE W	
WELL NAME.....	E. M. LAWLESS NO. 1-1	WASSON NO. 2		MORRISON NO. 1-11	
API.....	35-077-20620	35-079-20900		35-083-23210	
LOCATION.....	SEC. 1, T4N, R19E	SEC. 3, T7N, R23E		SEC. 11, T17N, R3W	
OWNER.....	MOBIL OIL CORP.	SONAT EXPLORATION CO.		SPRING DRILLING CORP.	
COMPLETED.....	91/06/24	93/04/12		93/05/25	
SAMPLED.....	92/11/24	93/07/15		93/11/00	
FORMATION.....	PENN-SPIRO	PENN-BRAZIL		PENN-CARMICHAEL	
GEOLOGIC PROVINCE CODE...	345	345		355	
DEPTH, FEET.....	14846	7667		3299	
WELLHEAD PRESSURE, PSIG...	4627	2695		1200	
OPEN FLOW, MCFD.....	17487	3299		1200	
COMPONENT, MOLE PCT					
METHANE.....	95.4	94.8		64.0	
ETHANE.....	0.6	1.2		5.1	
PROPANE.....	0.1	0.2		2.5	
N-BUTANE.....	0.0	0.0		0.6	
ISOBUTANE.....	0.0	0.1		0.1	
N-PENTANE.....	0.0	0.0		0.1	
ISOPENTANE.....	0.1	0.0		0.3	
CYCLOPENTANE.....	0.0	0.0		0.0	
HEXANES PLUS.....	0.0	0.2		0.0	
NITROGEN.....	0.4	0.3		21.8	
OXYGEN.....	0.1	TRACE		5.0	
ARGON.....	0.0	TRACE		0.2	
HYDROGEN.....	TRACE	TRACE		TRACE	
HYDROGEN SULFIDE**.....	0.0	0.0		TRACE	
CARBON DIOXIDE.....	3.1	3.3		0.1	
HELIUM.....	0.04	0.06		0.11	
HEATING VALUE*.....	985	999		846	
SPECIFIC GRAVITY.....	0.594	0.601		0.743	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19637	INDEX SAMPLE 19502	INDEX SAMPLE 19594
STATE.....	OKLAHOMA	OKLAHOMA	OKLAHOMA
COUNTY.....	OKLAHOMA	ROGER HILLS	TEXAS
FIELD.....	LUTHER W	MOOREWOOD NB	STONEBRAKER W
WELL NAME.....	ROBERTS A NO. 1-19	PAGE NO. 4-13	STONEBRAKER NO. A-120
API.....	35-109-21847	35-129-21664	35-139-22442
LOCATION.....	SEC. 19, T14N, R1E	SEC. 13, T15N, R21W	SEC. 17, T3N, R13E
OWNER.....	MARATHON OIL CO.	AM-SON GAS CORP.	OXY U.S.A., INC.
COMPLETED.....	92/07/15	92/09/06	92/10/22
SAMPLED.....	93/06/30	92/12/22	93/05/13
FORMATION.....	ORDO-VIOLA	PENN-SKINNER	PENN-KYES
GEOLOGIC PROVINCE CODE...	355	360	360
DEPTH, FEET.....	5624	11201	6464
WELLHEAD PRESSURE, PSIG...	1950	2400	1202
OPEN FLOW, MCFD.....	1950	5661	2196
COMPONENT, MOLE PCT			
METHANE.....	77.6	80.5	81.9
ETHANE.....	6.3	10.4	6.7
PROPANE.....	2.8	4.8	3.1
N-BUTANE.....	0.7	1.7	0.9
ISOBUTANE.....	0.2	0.2	0.0
N-PENTANE.....	0.0	0.4	0.3
ISOPENTANE.....	0.5	0.2	0.2
CYCLOPENTANE.....	0.0	0.1	0.0
HEXANES PLUS.....	0.0	0.2	0.2
NITROGEN.....	10.6	0.6	6.0
OXYGEN.....	1.0	TRACE	0.2
ARGON.....	0.1	0.0	0.0
HYDROGEN.....	TRACE	TRACE	TRACE
HYDROGEN SULFIDE**.....	0.0	0.0	0.0
CARBON DIOXIDE.....	0.2	1.0	0.4
HELIUM.....	0.15	0.03	0.19
HEATING VALUE*.....	1021	1226	1090
SPECIFIC GRAVITY.....	0.687	0.711	0.675

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 97			INDEX 98			INDEX 99		
SAMPLE 19626			SAMPLE 19678			SAMPLE 19682		
STATE.....	OKLAHOMA		OKLAHOMA			PENNSYLVANIA		
COUNTY.....	WASHITA		WOODS			CAMBRIA		
FIELD.....	BILL CITY		NOT GIVEN			ELK RUN		
WELL NAME.....	GENIE ADAMS NO. 2-6		IRISH NO. 1-6			BETHLEHEM STEEL "E" NO. 1		
API.....	35-149-20647		35-151-21947			37-021-20823		
LOCATION.....	SEC. 6, T9N, R19W		SEC. 6, T28N, R15W			JACKSON TOWNSHIP		
OWNER.....	KAISER-FRANCIS OIL CO.		JACK EXPLORATION, INC.			SHANNUT DEVELOPMENT CORP.		
COMPLETED.....	93/01/25		93/07/16			91/03/00		
SAMPLED.....	93/06/16		93/10/13			93/11/10		
FORMATION.....	PENN-PRUE		PENN-TONKAWA			DEVO-ORISKANY		
GEOLOGIC PROVINCE CODE...	360		360			160		
DEPTH, FEET.....	11112		4561			8788		
WELLHEAD PRESSURE, PSIG...	1450		1400			2850		
OPEN FLOW, MCFD.....	1200		1031			3200		
COMPONENT, MOLE PCT								
METHANE.....	91.2	-----	72.5	-----		97.7	-----	
ETHANE.....	4.6	-----	5.2	-----		1.3	-----	
PROPANE.....	1.9	-----	5.7	-----		0.1	-----	
N-BUTANE.....	0.6	-----	1.3	-----		0.0	-----	
ISOBUTANE.....	0.1	-----	1.3	-----		0.0	-----	
N-PENTANE.....	0.3	-----	0.0	-----		0.0	-----	
ISOPENTANE.....	0.0	-----	0.0	-----		0.0	-----	
CYCLOPENTANE.....	0.1	-----	0.1	-----		0.0	-----	
HEXANES PLUS.....	0.2	-----	0.4	-----		0.0	-----	
NITROGEN.....	0.4	-----	12.8	-----		0.3	-----	
OXYGEN.....	0.0	-----	0.0	-----		0.0	-----	
ARGON.....	0.0	-----	TRACE	-----		TRACE	-----	
HYDROGEN.....	TRACE	-----	0.0	-----		0.5	-----	
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----		0.0	-----	
CARBON DIOXIDE.....	0.5	-----	0.5	-----		0.0	-----	
HELIUM.....	0.03	-----	0.28	-----		0.03	-----	
HEATING VALUE*.....	1105	-----	1084	-----		1017	-----	
SPECIFIC GRAVITY.....	0.626		0.743			0.561		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

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INDEX 100 SAMPLE 19571		INDEX 101 SAMPLE 19572		INDEX 102 SAMPLE 19573	
STATE.....	PENNSYLVANIA	PENNSYLVANIA		PENNSYLVANIA	
COUNTY.....	CLINTON	CLINTON		CLINTON	
FIELD.....	BEND N	BEND N		VERTZ HOLLOW	
WELL NAME.....	PENNSYLVANIA TRACT 746 NO.1A	PENNSYLVANIA TRACT 746 NO.16		COMMONWEALTH OF PA 784 NO. 9	
API.....	37-035-20656	37-035-20772		37-035-20792	
LOCATION.....	YOUNG WOMANS CREEK Q, CHAPMAN	YOUNG WOMANS CREEK Q, CHAPMAN		GRUGAN TOWNSHIP, HOWARD NW QUA	
OWNER.....	CABOT OIL & GAS CORP.	CABOT OIL & GAS CORP.		EASTERN STATES EXPLORATION CO.	
COMPLETED.....	91/07/00	93/--/00		92/08/20	
SAMPLED.....	93/04/01	93/04/01		93/04/16	
FORMATION.....	DEVO-ELK	DEVO-ELK		DEVO-BRADFORD 3RD	
GEOLOGIC PROVINCE CODE...	160	160		160	
DEPTH, FEET.....	3488	3478		3462	
WELLHEAD PRESSURE, PSIG...	636	870		1150	
OPEN FLOW, MCFD.....	400	2144		2627	
COMPONENT, MOLE PCT					
METHANE.....	93.6	95.6		96.1	
ETHANE.....	2.5	2.2		2.3	
PROPANE.....	0.3	0.2		0.2	
N-BUTANE.....	0.0	0.0		0.0	
ISOBUTANE.....	0.1	0.0		0.0	
N-PENTANE.....	0.0	0.0		0.0	
ISOPENTANE.....	0.1	0.0		0.1	
CYCLOPENTANE.....	0.0	0.0		0.0	
HEXANES PLUS.....	0.0	0.0		0.0	
NITROGEN.....	2.4	1.1		0.8	
OXYGEN.....	0.6	0.4		0.1	
ARGON.....	0.1	0.0		0.0	
HYDROGEN.....	0.2	0.3		0.3	
HYDROGEN SULFIDE**.....	0.0	0.0		0.0	
CARBON DIOXIDE.....	0.1	0.1		TRACE	
HELIUM.....	0.18	0.09		0.17	
HEATING VALUE*.....	1007	1016		1025	
SPECIFIC GRAVITY.....	0.585	0.574		0.571	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 103 SAMPLE 19688			INDEX 104 SAMPLE 19687			INDEX 105 SAMPLE 19643		
STATE.....	PENNSYLVANIA		PENNSYLVANIA			TEXAS		
COUNTY.....	MERCER		MERCER			ARANSAS		
FIELD.....	COOL SPRING		GREENFIELD			MCCAMPBELL N		
WELL NAME.....	CRAWFORD NO. 2		MACRI NO. 1			GIBSON-SIEN NO. 1		
API.....	37-085-21277		37-085-21270			42-007-30791		
LOCATION.....	SEC. 1, COOL SPRING DIST.		SEC. 3, LACKAWANNOCK E DIST.			JAMES MCKAY SUR., A-160		
OWNER.....	ATLAS RESOURCES, INC.		ATLAS RESOURCES, INC.			MURPHY H. BAFFER.		
COMPLETED.....	91/03/26		92/--/00			91/01/28		
SAMPLED.....	93/11/16		93/11/16			93/06/29		
FORMATION.....	SILU-MEDINA, WHIRLPOOL		SILU-MEDINA, WHIRLPOOL			OLIG-FRIO		
GEOLOGIC PROVINCE CODE...	160		160			220		
DEPTH, FEET.....	5636		5630			10795		
WELLHEAD PRESSURE, PSIG...	1550		1600			6820		
OPEN FLOW, MCFD.....	1380		1220			26500		
COMPONENT, MOLE PCT								
METHANE.....	89.2	-----	90.0	-----		88.9	-----	
ETHANE.....	5.2	-----	4.7	-----		6.2	-----	
PROPANE.....	1.3	-----	1.0	-----		2.6	-----	
N-BUTANE.....	0.4	-----	0.3	-----		0.6	-----	
ISOBUTANE.....	0.1	-----	0.0	-----		0.7	-----	
N-PENTANE.....	0.2	-----	0.1	-----		0.0	-----	
ISOPENTANE.....	TRACE	-----	0.0	-----		0.6	-----	
CYCLOPENTANE.....	0.0	-----	0.0	-----		0.0	-----	
HEXANES PLUS.....	0.1	-----	0.1	-----		0.0	-----	
NITROGEN.....	3.3	-----	3.4	-----		0.3	-----	
OXYGEN.....	0.1	-----	0.1	-----		0.0	-----	
ARGON.....	0.0	-----	0.0	-----		0.0	-----	
HYDROGEN.....	0.0	-----	0.0	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----		0.0	-----	
CARBON DIOXIDE.....	0.1	-----	0.1	-----		0.2	-----	
HELIUM.....	0.10	-----	0.11	-----		TRACE	-----	
HEATING VALUE*.....	1060	-----	1046	-----		1146	-----	
SPECIFIC GRAVITY.....	0.621		0.613			0.645		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 106 SAMPLE 19692			INDEX 107 SAMPLE 19531			INDEX 108 SAMPLE 19599		
STATE.....	TEXAS		TEXAS			TEXAS		
COUNTY.....	BRATOS		CROCKETT			EASTLAND		
FIELD.....	WELLBORN		CLARION			SOVEREIGN-GENESIS		
WELL NAME.....	ARNOPULOS-CRENSHAW UNIT NO.1		GULF-MILLSPAUGH NO. 4101			SOVEREIGN NO. 1		
API.....	42-041-31768		42-105-36075			42-133-37601		
LOCATION.....	SAMUEL DAVIDSON SUR., A-13		SEC. 41, BLK. S, I&GH SUR.			THOMAS A. HOWELL SUR., A-152		
OWNER.....	CLAYTON WILLIAMS ENERGY, INC.		MERIDIAN OIL, INC.			FRUITT ENGINEERING & PETROLEUM		
COMPLETED.....	93/09/09		92/06/05			92/06/12		
SAMPLED.....	93/12/08		93/02/01			93/01/05		
FORMATION.....	CRET-AUSTIN CHALK		SILU-FUSSELMAN			MISS---		
GEOLOGIC PROVINCE CODE...	220		430			425		
DEPTH, FEET.....	10077		7824			3124		
WELLHEAD PRESSURE, PSIG...	2640		NOT GIVEN			1280		
OPEN FLOW, MCFD.....	2610		316			50		
COMPONENT, MOLE PCT								
METHANE.....	74.8	-----	83.9	-----		67.7	-----	
ETHANE.....	12.4	-----	7.9	-----		12.0	-----	
PROPANE.....	4.5	-----	3.5	-----		6.2	-----	
N-BUTANE.....	1.5	-----	1.0	-----		1.9	-----	
ISOBUTANE.....	0.6	-----	0.5	-----		1.2	-----	
N-PENTANE.....	0.6	-----	0.5	-----		0.0	-----	
ISOPENTANE.....	0.3	-----	0.1	-----		0.0	-----	
CYCLOPENTANE.....	0.2	-----	0.0	-----		0.1	-----	
HEXANES PLUS.....	0.5	-----	0.3	-----		0.4	-----	
NITROGEN.....	0.3	-----	2.0	-----		9.1	-----	
OXYGEN.....	0.0	-----	0.1	-----		0.1	-----	
ARGON.....	0.0	-----	0.0	-----		0.1	-----	
HYDROGEN.....	TRACE	-----	TRACE	-----		0.0	-----	
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----		0.0	-----	
CARBON DIOXIDE.....	4.4	-----	0.2	-----		0.7	-----	
HELIUM.....	0.01	-----	0.08	-----		0.58	-----	
HEATING VALUE*.....	1236	-----	1173	-----		1190	-----	
SPECIFIC GRAVITY.....	0.769		0.680			0.777		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX SAMPLE 19680	INDEX SAMPLE 19630	INDEX SAMPLE 19668
STATE.....	TEXAS	TEXAS	TEXAS
COUNTY.....	GOLIAD	HANSFORD	HARRIS
FIELD.....	JOBAR	HANSFORD	SRALLA ROAD
WELL NAME.....	WHEELER NO. 1	SHEETS NO. 1	CEDAR BAYOU NO. 1
API.....	42-175-32683	42-357-31954	
LOCATION.....	JOHN LEVERING SUR., A-183	SEC. 16, BLK. R, B&B SUR.	NOT GIVEN
OWNER.....	KEN PETROLEUM CORP.	STRAY LAND EXPLORATION CO.	COLUMBUS ENERGY CORP.
COMPLETED.....	93/01/15	92/05/00	92/12/00
SAMPLED.....	93/10/12	93/06/23	93/09/21
FORMATION.....	ROCK-YEGUA	PRHN-CLEVELAND	OLIG-VICKSBURG
GEOLOGIC PROVINCE CODE...	220	360	220
DEPTH, FEET.....	5512	7622	8400
WELLHEAD PRESSURE, PSIG...	2600	1150	2585
OPEN FLOW, MCFD.....	NOT GIVEN	7200	1500
COMPONENT, MOLE PCT			
METHANE.....	91.1 -----	86.0 -----	90.5 -----
ETHANE.....	5.6 -----	7.3 -----	4.5 -----
PROPANE.....	1.7 -----	3.4 -----	1.5 -----
N-BUTANE.....	0.4 -----	1.1 -----	0.4 -----
ISOBUTANE.....	0.5 -----	0.0 -----	0.2 -----
N-PENTANE.....	0.0 -----	0.4 -----	0.1 -----
ISOPENTANE.....	0.1 -----	0.1 -----	0.1 -----
CYCLOPENTANE.....	0.0 -----	0.1 -----	0.0 -----
HEXANES PLUS.....	0.2 -----	0.2 -----	0.1 -----
NITROGEN.....	0.2 -----	0.8 -----	1.7 -----
OXYGEN.....	0.0 -----	0.0 -----	0.6 -----
ARGON.....	TRACE	0.0	0.0
HYDROGEN.....	TRACE	TRACE	TRACE
HYDROGEN SULFIDE**.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	0.3 -----	0.4 -----	0.4 -----
HELIUM.....	0.00 -----	0.07 -----	0.00 -----
HEATING VALUE*	1110 -----	1165 -----	1069 -----
SPECIFIC GRAVITY.....	0.622	0.666	0.620

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

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	INDEX 112 SAMPLE 19623	INDEX 113 SAMPLE 19691	INDEX 114 SAMPLE 19647
STATE.....	TEXAS	TEXAS	TEXAS
COUNTY.....	HARTLEY	HEMPHILL	HIDALGO
FIELD.....	HARTLEY-HUGOTON	CANADIAN SW	CADRE
WELL NAME.....	READ ESTATE NO. 1	CAMPBELL NO. 1-58	JERICO LTD. G.U. NO. 1
API.....	42-205-30238	42-211-31985	42-215-32059
LOCATION.....	SEC. 425, BLK. 44, N&TC SUR.	SEC. 58, BLK. 1, I&GH SUR.	JUAN JOSE BALLI GRANT, A-290
OWNER.....	CAMBRIDGE PRODUCTION, INC.	BRACKEN ENERGY CO.	SHELL WESTERN EXP. & PROD., IN
COMPLETED.....	93/03/15	93/06/02	92/04/19
SAMPLED.....	93/06/00	93/12/08	93/07/14
FORMATION.....	PERM-CHASE GROUP	PERM-DOUGLAS	OLIG-VICKSBURG, PATRIOT
GEOLOGIC PROVINCE CODE...	435	360	220
DEPTH, FEET.....	3501	7312	14338
WELLHEAD PRESSURE, PSIG...	228	1477	8000
OPEN FLOW, MCFD.....	1850	2500	34200
COMPONENT, MOLE PCT			
METHANE.....	70.5	82.2	90.9
ETHANE.....	5.8	7.2	4.7
PROPANE.....	3.2	4.8	1.5
N-BUTANE.....	0.8	1.4	0.4
ISOBUTANE.....	0.4	0.5	0.4
N-PENTANE.....	0.0	0.4	0.3
ISOPENTANE.....	0.1	0.2	0.0
CYCLOPENTANE.....	0.0	0.1	0.1
HEXANES PLUS.....	0.2	0.2	0.3
NITROGEN.....	17.6	2.3	0.3
OXYGEN.....	0.0	0.1	0.0
ARGON.....	0.1	TRACE	TRACE
HYDROGEN.....	TRACE	TRACE	TRACE
HYDROGEN SULFIDE**.....	0.0	0.0	0.0
CARBON DIOXIDE.....	0.3	0.3	1.1
HELIUM.....	1.00	0.13	TRACE
HEATING VALUE*.....	955	1192	1103
SPECIFIC GRAVITY.....	0.712	0.698	0.632

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 115 SAMPLE 19666		INDEX 116 SAMPLE 19621		INDEX 117 SAMPLE 19622	
STATE.....	TEXAS	TEXAS		TEXAS	
COUNTY.....	JIM WELLS	LIPSOMB		LIPSOMB	
FIELD.....	REYNOLDS	BRADFORD		BRADFORD	
WELL NAME.....	M. M. ARNOLD NO. 2	HANSU NO. 3-859		HANSU NO. 2-859	
API.....	42-249-32209	42-295-31965		42-295-31180	
LOCATION.....	FRED FRANKS SUR., A-162	SEC. 859, BLK. 43, H&TC SUR.		SEC. 859, BLK. 43, H&TC SUR.	
OWNER.....	SOUTHERN ROYALTY, INC.	HANSU PRODUCTION CO.		HANSU PRODUCTION CO.	
COMPLETED.....	93/05/04	93/04/09		93/04/09	
SAMPLED.....	93/08/15	93/06/10		93/06/10	
FORMATION.....	OLIG-VICKSBURG	PERM-CLEVELAND		PERM-CLEVELAND	
GEOLOGIC PROVINCE CODE...	220	360		360	
DEPTH, FEET.....	5709	7486		7512	
WELLHEAD PRESSURE, PSIG...	2350	2364		2519	
OPEN FLOW, MCFD.....	3200	9000		3200	
COMPONENT, MOLE PCT					
METHANE.....	85.5 -----	86.6 -----		85.5 -----	
ETHANE.....	5.3 -----	4.4 -----		4.5 -----	
PROPANE.....	2.1 -----	4.1 -----		4.1 -----	
N-BUTANE.....	0.4 -----	1.4 -----		1.4 -----	
ISOBUTANE.....	0.4 -----	0.9 -----		1.0 -----	
N-PENTANE.....	0.1 -----	0.0 -----		0.0 -----	
ISOPENTANE.....	0.1 -----	0.1 -----		0.0 -----	
CYCLOPENTANE.....	0.0 -----	0.1 -----		0.2 -----	
HEXANES PLUS.....	0.1 -----	0.4 -----		0.4 -----	
NITROGEN.....	4.2 -----	1.1 -----		1.3 -----	
OXYGEN.....	1.4 -----	0.1 -----		0.1 -----	
ARGON.....	0.1 -----	TRACE		TRACE	
HYDROGEN.....	TRACE	TRACE		TRACE	
HYDROGEN SULFIDE**.....	0.0 -----	0.0 -----		0.0 -----	
CARBON DIOXIDE.....	0.4 -----	0.7 -----		1.4 -----	
HELIUM.....	TRACE	0.12 -----		0.12 -----	
HEATING VALUE*.....	1053 -----	1168 -----		1161 -----	
SPECIFIC GRAVITY.....	0.648	0.676		0.686	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 118 SAMPLE 19511		INDEX 119 SAMPLE 19575		INDEX 120 SAMPLE 19576	
STATE.....	TEXAS	TEXAS		TEXAS	
COUNTY.....	NATAGORDA	OCHELTREE		OCHELTREE	
FIELD.....	TURTLE CREEK	JOHN		JOHN	
WELL NAME.....	BAYCHILDER ET AL NO. 1	GRIGGS NO. 1		BUSCH NO. 1	
API.....	42-221-31632				
LOCATION.....	E. P. CROSBY SUR., A-133	SEC. 3, BLK. 12, N&TC SUR.		SEC. 14, BLK. 12, N&GN SUR.	
OWNER.....	COLUMBIA GAS DEVELOPMENT CORP.	PRINCESS THREE CORP.		PRINCESS THREE CORP.	
COMPLETED.....	91/02/25	92/--/00		92/04/00	
SAMPLED.....	93/01/25	93/04/20		92/04/20	
FORMATION.....	OLIG-PRIO	MISS-CHESTER BASAL		MISS-CHESTER	
GEOLOGIC PROVINCE CODE...	220	360		360	
DEPTH, FEET.....	10150	8044		9042	
WELLHEAD PRESSURE, PSIG...	4000	1393		NOT GIVEN	
OPEN FLOW, MCFD.....	5075	2300		1143	
COMPONENT, MOLE PCT					
METHANE.....	90.9	92.6		91.0	
ETHANE.....	4.8	3.4		3.7	
PROPANE.....	1.6	1.3		1.7	
N-BUTANE.....	0.3	0.5		0.8	
ISOBUTANE.....	0.5	0.0		0.0	
N-PENTANE.....	0.3	0.1		0.3	
ISOPENTANE.....	0.0	0.3		0.2	
CYCLOPENTANE.....	0.2	0.0		0.0	
HEXANES PLUS.....	0.3	0.0		0.2	
NITROGEN.....	0.2	0.8		1.0	
OXYGEN.....	0.0	0.2		0.2	
ARGON.....	TRACE	0.0		0.0	
HYDROGEN.....	TRACE	TRACE		TRACE	
HYDROGEN SULFIDE**.....	0.0	0.0		0.0	
CARBON DIOXIDE.....	1.0	0.7		0.7	
HELIUM.....	TRACE	0.00		0.00	
HEATING VALUE*.....	1109	1067		1091	
SPECIFIC GRAVITY.....	0.633	0.611		0.629	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 121 SAMPLE 19569		INDEX 122 SAMPLE 19508		INDEX 123 SAMPLE 19546	
STATE.....	TEXAS	TEXAS		TEXAS	
COUNTY.....	PALO PINTO	POLK		SAN PATRICIO	
FIELD.....	GIANT	NORTENSE		HARVEY DEEP	
WELL NAME.....	VAUGHAN-STEWART GAS UNIT NO1	W. T. CARTER BROTHERS NO. 1		W. H. MOORE NO. 2	
API.....	42-363-34131				
LOCATION.....	L. P. COOKE SUR., A-122	JAMES L. ELLIS SUR., A-31		SAGMG SUR., A-259	
OWNER.....	SPINDLETOP OIL & GAS CO.	ENRON OIL & GAS CO.		LOUIS BREYFUS NATURAL GAS CORP	
COMPLETED.....	92/06/27	91/01/22		91/--/00	
SAMPLED.....	93/04/09	93/01/14		93/03/08	
FORMATION.....	PENN-BEND CONGLOMERATE	OLIG-FRIO		OLIG-FRIO	
GEOLOGIC PROVINCE CODE...	425	220		220	
DEPTH, FEET.....	3730	2018		10073	
WELLHEAD PRESSURE, PSIG...	900	810		1000	
OPEN FLOW, MCFD.....	1770	1300		90	
COMPONENT, MOLE PCT					
METHANE.....	80.4	96.8		89.8	
ETHANE.....	9.7	0.0		5.6	
PROPANE.....	3.7	0.1		1.9	
N-BUTANE.....	1.1	0.0		0.6	
ISOBUTANE.....	0.4	0.0		0.5	
N-PENTANE.....	0.5	0.0		0.3	
ISOPENTANE.....	0.1	0.0		0.0	
CYCLOPENTANE.....	0.1	0.0		0.1	
HEXANES PLUS.....	0.4	0.0		0.2	
NITROGEN.....	3.1	2.6		0.2	
OXYGEN.....	0.0	0.2		0.0	
ARGON.....	0.0	0.0		TRACE	
HYDROGEN.....	TRACE	TRACE		TRACE	
HYDROGEN SULFIDE**.....	0.0	0.0		0.0	
CARBON DIOXIDE.....	0.4	0.2		0.9	
HELIUM.....	0.12	0.02		TRACE	
HEATING VALUE*.....	1183	983		1119	
SPECIFIC GRAVITY.....	0.701	0.569		0.638	

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 124 SAMPLE 19670			INDEX 125 SAMPLE 19671			INDEX 126 SAMPLE 19535		
STATE.....	TEXAS		TEXAS			TEXAS		
COUNTY.....	TARRANT		TARRANT			WUDD		
FIELD.....	AVONDALE		AVONDALE			BELL PEPPER		
WELL NAME.....	OLIVER NO. 1-A		SANDSTROM NO. 1-A			CULPEPPER NO. 1		
API.....	42-439-30167		42-439-30166			42-479-35157		
LOCATION.....	JACOB WILCOX SUR. 60, A-1722		T&P SUR. 27, A-1573			NGGN SUR., A-1427		
OWNER.....	ANADARKO PETROLEUM CO.		ANADARKO PETROLEUM CO.			KURON OIL & GAS CO.		
COMPLETED.....	93/06/09		93/05/21			91/02/19		
SAMPLED.....	93/09/27		93/09/27			93/02/20		
FORMATION.....	MISS-BARNETT		MISS-BARNETT			CRET-LOBO		
GEOLOGIC PROVINCE CODE...	415		415			220		
DEPTH, FEET.....	6682		6778			8059		
WELLHEAD PRESSURE, PSIG...	2950		2925			3654		
OPEN FLOW, MCFD.....	NOT GIVEN		NOT GIVEN			5189		
COMPONENT, MOLE PCT								
METHANE.....	91.9	-----	80.8	-----		89.3	-----	
ETHANE.....	1.3		1.1			5.4		
PROPANE.....	0.1	-----	0.1	-----		1.9	-----	
N-BUTANE.....	0.0		0.0			0.6		
ISOBUTANE.....	TRACE	-----	TRACE	-----		0.2	-----	
N-PENTANE.....	0.0		0.0			0.4		
ISOPENTANE.....	0.0	-----	0.0	-----		0.0	-----	
CYCLOPENTANE.....	0.0		0.0			0.2		
HEXANES PLUS.....	0.0	-----	0.0	-----		0.5	-----	
NITROGEN.....	4.3		13.3			0.2		
OXYGEN.....	0.1	-----	2.5	-----		0.1	-----	
ARGON.....	0.0		0.1			TRACE		
HYDROGEN.....	0.3	-----	0.6	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.0		TRACE			0.0		
CARBON DIOXIDE.....	1.8	-----	1.5	-----		1.4	-----	
HELIUM.....	0.08		0.05			0.01		
HEATING VALUE*.....	960	-----	842	-----		1125	-----	
SPECIFIC GRAVITY.....	0.597		0.603			0.609		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 127 SAMPLE 19665		INDEX 128 SAMPLE 19538		INDEX 129 SAMPLE 19524
STATE.....	TEXAS		TEXAS		TEXAS
COUNTY.....	WEBB		WEBB		WHARTON
FIELD.....	LA MANGADA		SCHWARTZ		LOST FORK
WELL NAME.....	H. L. PENA NO. 1		SCHWARTZ NO. 11		FENNER NO. 1
API.....	42-479-35752		42-479-35136		42-481-33471
LOCATION.....	MANUAL GARCIA HEIRS SUR. 38, A-		J. B. CHAPA SUR., A-410		H. E. ROGERS SUR., A-652
OWNER.....	ENRON OIL & GAS CO.		TRANSAMERICAN NATURAL GAS CORP		COX & PERKINS EXPLORATION, INC
COMPLETED.....	93/03/22		91/02/05		91/02/17
SAMPLED.....	93/08/26		93/03/04		93/02/03
FORMATION.....	CREY-LOBO		CREY-NAVARRO		ROCK-YEGUA
GEOLOGIC PROVINCE CODE...	220		220		220
DEPTH, FEET.....	7782		10181		6800
WELLHEAD PRESSURE, PSIG...	4450		1050		769
OPEN FLOW, MCFD.....	2735		7200		150
COMPONENT, MOLE PCT					
METHANE.....	92.5	-----	91.6	-----	87.8
ETHANE.....	4.0	-----	4.0	-----	6.3
PROPANE.....	1.1	-----	1.1	-----	2.6
N-BUTANE.....	0.3	-----	0.4	-----	0.7
ISOBUTANE.....	0.1	-----	0.2	-----	0.5
N-PENTANE.....	0.1	-----	0.3	-----	0.3
ISOPENTANE.....	0.1	-----	0.0	-----	0.1
CYCLOPENTANE.....	0.0	-----	0.1	-----	0.1
HEXANES PLUS.....	0.1	-----	0.3	-----	0.2
NITROGEN.....	0.3	-----	0.7	-----	0.8
OXYGEN.....	0.0	-----	0.2	-----	0.3
ARGON.....	0.0	-----	0.0	-----	0.0
HYDROGEN.....	TRACE	-----	TRACE	-----	TRACE
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----	0.0
CARBON DIOXIDE.....	1.5	-----	1.3	-----	0.5
HELIUM.....	TRACE	-----	0.01	-----	0.00
HEATING VALUE*.....	1062	-----	1074	-----	1137
SPECIFIC GRAVITY.....	0.613		0.622		0.652

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 130 SAMPLE 19644			INDEX 131 SAMPLE 19653			INDEX 132 SAMPLE 19655		
STATE..... TEXAS			TEXAS			TEXAS		
COUNTY..... WHEELER			WILLACY			TAPATA		
FIELD..... NO-THE			TORDILLA			HUGHES		
WELL NAME..... DUNCAN NO. 1			R. J. KLEBERG, JR., NO. 85			RUFINO & JOSEFA LOPEZ NO. 2		
API.....			42-489-38928			42-505-32994		
LOCATION..... SEC. 17, BLK. A5, N&GN SUR.			S. S. DEL TULE SUR., A-1			TTRR SUR. 257, A-188		
OWNER..... CAMBRIDGE PRODUCTION, INC.			EXXON CO., U.S.A.			DAN A. HUGHES, CO.		
COMPLETED..... 93/06/00			91/10/00			93/04/08		
SAMPLED..... 93/07/05			93/07/00			93/07/22		
FORMATION..... DEVO-WOODFORD			OLIG-FRIO M-10			ROCK-WILCOX		
GEOLOGIC PROVINCE CODE... 360			220			220		
DEPTH, FEET..... 12732			12650			13530		
WELLHEAD PRESSURE, PSIG... 3875			NOT GIVEN			9450		
OPEN FLOW, MCFD..... 2800			10424			17300		
COMPONENT, MOLE PCT								
METHANE..... 93.8 -----			91.6 -----			89.6 -----		
ETHANE..... 3.1 -----			4.2 -----			0.2 -----		
PROPANE..... 1.0 -----			1.4 -----			0.1 -----		
N-BUTANE..... 0.5 -----			0.5 -----			0.0 -----		
ISOBUTANE..... 0.0 -----			0.2 -----			0.0 -----		
N-PENTANE..... 0.1 -----			0.4 -----			0.0 -----		
ISOPENTANE..... 0.3 -----			0.0 -----			0.0 -----		
CYCLOPENTANE..... 0.0 -----			0.1 -----			0.0 -----		
HEXANES PLUS..... 0.0 -----			0.3 -----			0.0 -----		
NITROGEN..... 0.5 -----			0.9 -----			0.2 -----		
OXYGEN..... 0.0 -----			0.0 -----			0.0 -----		
ARGON..... 0.0 -----			0.0 -----			0.0 -----		
HYDROGEN..... 0.1 -----			0.0 -----			TRACE -----		
HYDROGEN SULFIDE**..... 0.0 -----			0.0 -----			0.0 -----		
CARBON DIOXIDE..... 0.7 -----			0.4 -----			9.8 -----		
HELIUM..... 0.03 -----			TRACE -----			0.01 -----		
HEATING VALUE*..... 1065 -----			1096 -----			915 -----		
SPECIFIC GRAVITY..... 0.603			0.623			0.654		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 127 SAMPLE 19665		INDEX 128 SAMPLE 19538		INDEX 129 SAMPLE 19524
STATE.....	TEXAS		TEXAS		TEXAS
COUNTY.....	WEBB		WEBB		WHARTON
FIELD.....	LA MARGANA		SCHWARTZ		LOST FORK
WELL NAME.....	E. L. PENA NO. 1		SCHWARTZ NO. 11		FENNER NO. 1
API.....	42-479-35752		42-479-35136		42-481-33471
LOCATION.....	HANNAH GARZA WEIRS SUR. 38, A-		J. B. CHAPA SUR., A-410		M. E. ROGERS SUR., A-652
OWNER.....	ENRON OIL & GAS CO.		TRANSAMERICAN NATURAL GAS CORP		COX & PERKINS EXPLORATION, INC
COMPLETED.....	93/03/22		91/02/05		91/02/17
SAMPLED.....	93/08/26		93/03/04		93/02/03
FORMATION.....	CREY-LOBO		CREY-NAVARRO		ROCK-YEGUA
GEOLOGIC PROVINCE CODE...	220		220		220
DEPTH, FEET.....	7782		10181		6800
WELLHEAD PRESSURE, PSIG...	4450		1050		769
OPEN FLOW, MCFD.....	2735		7200		158
COMPONENT, MOLE PCT					
METHANE.....	92.5	-----	91.6	-----	87.8
ETHANE.....	4.0	-----	4.0	-----	6.3
PROPANE.....	1.1	-----	1.1	-----	2.6
N-BUTANE.....	0.3	-----	0.4	-----	0.7
ISOBUTANE.....	0.1	-----	0.2	-----	0.5
N-PENTANE.....	0.1	-----	0.3	-----	0.3
ISOPENTANE.....	0.1	-----	0.0	-----	0.1
CYCLOPENTANE.....	0.0	-----	0.1	-----	0.1
HEXANES PLUS.....	0.1	-----	0.3	-----	0.2
NITROGEN.....	0.3	-----	0.7	-----	0.8
OXYGEN.....	0.0	-----	0.2	-----	0.3
ARGON.....	0.0	-----	0.0	-----	0.0
HYDROGEN.....	TRACE	-----	TRACE	-----	TRACE
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----	0.0
CARBON DIOXIDE.....	1.5	-----	1.3	-----	0.5
HELIUM.....	TRACE	-----	0.01	-----	0.00
HEATING VALUE [*]	1062	-----	1074	-----	1137
SPECIFIC GRAVITY.....	0.613		0.622		0.652

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

^{**} DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 130 SAMPLE 19644			INDEX 131 SAMPLE 19653			INDEX 132 SAMPLE 19655		
STATE.....	TEXAS		TEXAS			TEXAS		
COUNTY.....	WHEELER		WILLACY			ZAPATA		
FIELD.....	NO-YEI		YORDILLA			HUGHES		
WELL NAME.....	DUNCAN NO. 1		R. J. KLEBERG, JR., NO. 85			RUFINO & JOSEFA LOPEZ NO. 2		
API.....			42-489-30928			42-505-32994		
LOCATION.....	SEC. 17, BLK. A5, N&GH SUR.		S. S. DEL TULE SUR., A-1			TYRR SUR. 257, A-188		
OWNER.....	CAMBRIDGE PRODUCTION, INC.		EXION CO., U.S.A.			DAN A. HUGHES, CO.		
COMPLETED.....	93/06/00		91/10/00			93/04/08		
SAMPLED.....	93/07/05		93/07/00			93/07/22		
FORMATION.....	DEV0-WOODFORD		OLIG-PRIO M-10			NOCH-WILCOX		
GEOLOGIC PROVINCE CODE...	360		220			220		
DEPTH, FEET.....	12732		12650			13530		
WELLHEAD PRESSURE, PSIG...	3875		NOT GIVEN			9450		
OPEN FLOW, MCFD.....	2800		10424			17300		
COMPONENT, MOLE PCT								
METHANE.....	93.8	-----	91.6	-----		89.6	-----	
ETHANE.....	3.1		0.2			0.2		
PROPANE.....	1.0	-----	1.4	-----		0.1	-----	
N-BUTANE.....	0.5		0.5			0.0		
ISOBUTANE.....	0.0	-----	0.2	-----		0.0	-----	
N-PENTANE.....	0.1		0.4			0.0		
ISOPENTANE.....	0.3	-----	0.0	-----		0.0	-----	
CYCLOPENTANE.....	0.0		0.1			0.0		
HEXANES PLUS.....	0.0	-----	0.3	-----		0.0	-----	
NITROGEN.....	0.5		0.9			0.2		
OXYGEN.....	0.0	-----	0.0	-----		0.0	-----	
ARGON.....	0.0		0.0			0.0		
HYDROGEN.....	0.1	-----	0.0	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.0		0.0			0.0		
CARBON DIOXIDE.....	0.7	-----	0.4	-----		9.8	-----	
HELIUM.....	0.03		TRACE			0.01		
HEATING VALUE*.....	1065	-----	1096	-----		915	-----	
SPECIFIC GRAVITY.....	0.603		0.623			0.654		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 133 SAMPLE 19652	INDEX 134 SAMPLE 19533	INDEX 135 SAMPLE 19521
STATE.....	TEXAS	TEXAS	UTAH
COUNTY.....	ZAPATA	ZAPATA	SAN JUAN
FIELD.....	J. C. MARTIN	LOMA VIEJA	MANTREL
WELL NAME.....	J. H. WHITE NO. 1-A	EL PEYOTE MINERAL TRUST NO.3	NO. 23-1
API.....	42-505-32852		43-037-31564
LOCATION.....	J. V. BORRERO SUR., A-209	ARTHUR STEINLE SUR., A-497	SEC. 23, T37S, R23E
OWNER.....	SANCHEZ-O'BRIEN OIL & GAS CORP	ENERGY DEVELOPMENT CORP.	CELSUS ENERGY CO.
COMPLETED.....	92/06/16	92/--/00	91/03/07
SAMPLED.....	93/07/16	93/02/15	93/01/00
FORMATION.....	CRRY-LOBO	ROCK-WILCOX	PERM-ISHAY
GEOLOGIC PROVINCE CODE...	220	220	585
DEPTH, FEET.....	8455	11585	6078
WELLHEAD PRESSURE, PSIG...	NOT GIVEN	7600	1600
OPEN FLOW, MCFD.....	5571	1010	1457
COMPONENT, MOLE PCT			
METHANE.....	92.7 -----	92.5 -----	81.0 -----
ETHANE.....	3.8 -----	0.3 -----	9.4 -----
PROPANE.....	0.7 -----	0.1 -----	3.1 -----
N-BUTANE.....	0.1 -----	0.0 -----	0.6 -----
ISOBUTANE.....	0.1 -----	0.0 -----	0.2 -----
N-PENTANE.....	0.0 -----	0.0 -----	0.1 -----
ISOPENTANE.....	0.1 -----	0.0 -----	0.2 -----
CYCLOPENTANE.....	0.0 -----	0.0 -----	0.0 -----
HEXANES PLUS.....	0.1 -----	0.0 -----	0.0 -----
NITROGEN.....	0.3 -----	TRACE	3.8 -----
OXYGEN.....	0.0 -----	0.0 -----	1.1 -----
ARGON.....	TRACE	0.0 -----	0.1 -----
HYDROGEN.....	TRACE	TRACE	TRACE
HYDROGEN SULFIDE**.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	2.0 -----	7.1 -----	0.3 -----
HELIUM.....	TRACE	TRACE	0.04 -----
HEATING VALUE*	1043 -----	944 -----	1111 -----
SPECIFIC GRAVITY.....	0.609	0.626	0.676

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

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INDEX 136 SAMPLE 19544			INDEX 137 SAMPLE 19613			INDEX 138 SAMPLE 19628		
STATE.....	UTAH		WYOMING			WYOMING		
COUNTY.....	SAN JUAN		CARBON			LINCOLN		
FIELD.....	WILDCAT		MULLIGAN			NOXA ARCH		
WELL NAME.....	SHANE FEDERAL NO. 1		FAIRWAY NO. 1			SINGLER'S WASH NO. 1-2		
API.....			49-037-22999			49-023-20881		
LOCATION.....	SEC. 7, T37S, R24E		SEC. 4, T15N, R95W			SEC. 2, T19N, R113W		
OWNER.....	SANEDAN OIL CORP.		CELSUS ENERGY CO.			UNION PACIFIC RESOURCES CO.		
COMPLETED.....	89/07/31		93/02/02			93/02/09		
SAMPLED.....	93/03/16		93/05/14			93/06/16		
FORMATION.....	PERM-ISMAY		CRET-ALMOND			CRET-FRONTIER		
GEOLOGIC PROVINCE CODE...	585		535			535		
DEPTH, FEET.....	6240		13036			11320		
WELLHEAD PRESSURE, PSIG...	500		7500			3800		
OPEN FLOW, MCFD.....	200		4000			1135		
COMPONENT, MOLE PCT								
METHANE.....	76.3	-----	95.0	-----		79.2	-----	
ETHANE.....	12.0	-----	0.5	-----		11.0	-----	
PROPANE.....	6.0	-----	0.1	-----		4.2	-----	
N-BUTANE.....	2.0	-----	0.0	-----		1.0	-----	
ISOBUTANE.....	0.6	-----	0.0	-----		0.5	-----	
N-PENTANE.....	0.7	-----	0.0	-----		0.3	-----	
ISOPENTANE.....	0.2	-----	0.1	-----		0.4	-----	
CYCLOPENTANE.....	0.1	-----	0.0	-----		0.0	-----	
HEPTANES PLUS.....	0.4	-----	0.0	-----		0.3	-----	
NITROGEN.....	0.8	-----	0.2	-----		0.0	-----	
OXYGEN.....	0.0	-----	0.1	-----		0.0	-----	
ARGON.....	TRACE	-----	0.0	-----		0.0	-----	
HYDROGEN.....	TRACE	-----	TRACE	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----		0.0	-----	
CARBON DIOXIDE.....	0.2	-----	4.0	-----		1.6	-----	
HELIUM.....	0.02	-----	0.00	-----		0.01	-----	
HEATING VALUE*.....	1306	-----	977	-----		1216	-----	
SPECIFIC GRAVITY.....	0.750		0.600			0.716		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

	INDEX 139 SAMPLE 19596		INDEX 140 SAMPLE 19597		INDEX 141 SAMPLE 19624
STATE.....	WYOMING		WYOMING		WYOMING
COUNTY.....	LINCOLN		LINCOLN		SUBLETTE
FIELD.....	SEVEN MILE GULCH		SOUTH CREEK		LA BARGE
WELL NAME.....	CHAMPLIN 243 AMOCO A NO. 2		COW HOLLOW NO. 21		SOUTH LA BARGE NO. 5-33
API.....	49-023-20844		49-023-20854		49-035-21031
LOCATION.....	SEC. 31, T21N, R111W		SEC. 8, T22N, R112W		SEC. 33, T27N, R113W
OWNER.....	BANNOX ENERGY		BANNOX ENERGY		ENRON OIL & GAS CO.
COMPLETED.....	93/03/15		92/11/25		92/09/08
SAMPLED.....	93/05/14		93/05/14		93/05/25
FORMATION.....	CRET-FRONTIER		CRET-FRONTIER		CRET-BAITER
GEOLOGIC PROVINCE CODE..	535		535		535
DEPTH, FEET.....	11175		12017		5013
WELLHEAD PRESSURE, PSIG..	NOT GIVEN		NOT GIVEN		1100
OPEN FLOW, MCFD.....	644		806		1799
COMPONENT, MOLE PCT					
METHANE.....	85.8	-----	83.6	-----	86.5
ETHANE.....	9.3	-----	10.5	-----	6.7
PROPANE.....	2.4	-----	3.0	-----	3.2
N-BUTANE.....	0.5	-----	0.7	-----	0.8
ISOBUTANE.....	0.1	-----	0.2	-----	0.7
N-PENTANE.....	0.2	-----	0.2	-----	0.0
ISOPENTANE.....	0.2	-----	0.3	-----	0.1
CYCLOPENTANE.....	0.0	-----	0.0	-----	0.1
HEXANES PLUS.....	0.2	-----	0.2	-----	0.2
NITROGEN.....	0.6	-----	0.6	-----	1.2
OXYGEN.....	0.0	-----	0.0	-----	0.0
ARGON.....	0.0	-----	0.0	-----	0.0
HYDROGEN.....	TRACE	-----	TRACE	-----	TRACE
HYDROGEN SULFIDE**.....	0.0	-----	0.0	-----	0.0
CARBON DIOXIDE.....	0.7	-----	0.7	-----	0.4
HELIUM.....	0.01	-----	0.19	-----	0.03
HEATING VALUE*.....	1145	-----	1166	-----	1150
SPECIFIC GRAVITY.....	0.656		0.670		0.661

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H₂S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

INDEX 142 SAMPLE 19564			INDEX 143 SAMPLE 19523			INDEX 144 SAMPLE 19679		
STATE.....	WYOMING		WYOMING			WYOMING		
COUNTY.....	SUBLETTE		SWEETWATER			SWEETWATER		
FIELD.....	PINE GROVE CREEK		CEPO PROSPECT			WANSUTTER		
WELL NAME.....	BURLY NO. 1-19		CEPO NO. 44-9			TWO RIM NO. 8-1		
API.....	49-035-21147		49-037-22925			49-037-22906		
LOCATION.....	SEC. 19, T28N, R113W		SEC. 9, T14N, R95W			SEC. 25, T19N, R95W		
OWNER.....	ENRON OIL & GAS CO.		ENRON OIL & GAS CO.			BARRETT ENERGY RESOURCES		
COMPLETED.....	92/06/04		92/04/13			91/12/29		
SAMPLED.....	93/03/25		93/01/12			93/10/26		
FORMATION.....	CRET-DAXTER II		CRET-LEWIS			CRET-ALMOND		
GEOLOGIC PROVINCE CODE...	535		535			535		
DEPTH, FEET.....	4475		12572			9628		
WELLHEAD PRESSURE, PSIG...	1100		5700			2000		
OPEN FLOW, MCFD.....	2166		412			1041		
COMPONENT, MOLE PCT								
METHANE.....	84.8	-----	97.6	-----		75.9	-----	
ETHANE.....	3.8	-----	0.8	-----		9.6	-----	
PROPANE.....	1.3	-----	0.1	-----		4.5	-----	
N-BUTANE.....	0.5	-----	0.0	-----		0.8	-----	
ISOBUTANE.....	0.3	-----	0.0	-----		0.9	-----	
N-PENTANE.....	0.0	-----	0.0	-----		0.0	-----	
ISOPENTANE.....	0.4	-----	0.0	-----		0.0	-----	
CYCLOPENTANE.....	0.0	-----	0.0	-----		TRACE	-----	
HEPTANES PLUS.....	0.0	-----	0.0	-----		0.2	-----	
NITROGEN.....	8.5	-----	0.0	-----		4.0	-----	
OXYGEN.....	0.0	-----	0.0	-----		1.1	-----	
ARGON.....	0.1	-----	0.0	-----		0.1	-----	
HYDROGEN.....	TRACE	-----	TRACE	-----		TRACE	-----	
HYDROGEN SULFIDE**.....	0.1	-----	0.0	-----		0.0	-----	
CARBON DIOXIDE.....	0.3	-----	1.5	-----		3.1	-----	
HELIUM.....	0.06	-----	0.01	-----		0.01	-----	
HEATING VALUE*.....	1005	-----	1007	-----		1124	-----	
SPECIFIC GRAVITY.....	0.644		0.574			0.730		

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENNHIT AND 30 INCHES OF MERCURY

** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

	INDEX SAMPLE 19607	INDEX SAMPLE 19608	INDEX SAMPLE 19610
STATE.....	WYOMING	WYOMING	WYOMING
COUNTY.....	LINCOLN	LINCOLN	SWEETWATER
FIELD.....	LA BARGE-SHALLOW, NOXA	RILEY RIDGE AFTER PROCESSING	ANSCHUTZ, BRUFF U, BRIDGER LKS
LOCATION.....	OPAL TO M/L, 24" DISCHARGE	24" SHUTE CREEK INLET	NO. 1 & 13 LINE
OWNER.....	NORTHWEST PIPELINE CORP.	NORTHWEST PIPELINE CORP.	QUESTAR PIPELINE CORP.
SAMPLED.....	93/05/20	93/05/20	93/05/20
FORMATION.....	CRET-FRONTIER, MUDDY	MISS-MADISON	NOT GIVEN
GEOLOGIC PROVINCE CODE...	535	535	535
DEPTH, FEET.....	NOT GIVEN	NOT GIVEN	NOT GIVEN
PRESSURE, PSIG.....	700	NOT GIVEN	400
FLOW, MCFD.....	56000	5000	150000
COMPONENT, MOLE PCT			
METHANE.....	91.4 -----	97.7 -----	91.6 -----
ETHANE.....	5.6 -----	0.0 -----	3.6 -----
PROPANE.....	1.2 -----	0.1 -----	1.1 -----
N-BUTANE.....	0.3 -----	0.0 -----	0.4 -----
ISOBUTANE.....	0.1 -----	0.0 -----	0.0 -----
N-PENTANE.....	0.0 -----	0.0 -----	0.3 -----
ISOPENTANE.....	0.1 -----	0.0 -----	0.0 -----
CYCLOPENTANE.....	0.0 -----	0.0 -----	0.1 -----
HEXANES PLUS.....	0.2 -----	0.0 -----	0.3 -----
NITROGEN.....	0.7 -----	2.1 -----	0.1 -----
OXYGEN.....	0.0 -----	0.0 -----	0.0 -----
ARGON.....	0.0 -----	0.2 -----	TRACE -----
HYDROGEN.....	TRACE -----	TRACE -----	TRACE -----
HYDROGEN SULFIDE.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	0.5 -----	0.0 -----	2.5 -----
HELIUM.....	0.02 -----	TRACE -----	0.01 -----
HEATING VALUE*	1082 -----	992 -----	1066 -----
SPECIFIC GRAVITY.....	0.613	0.565	0.629

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

	INDEX SAMPLE 19609	INDEX SAMPLE 19604	INDEX SAMPLE 19611
STATE.....	WYOMING	WYOMING	WYOMING
COUNTY.....	SWEETWATER	SWEETWATER	SWEETWATER
FIELD.....	COLORADO W-WYOMING SW	DESERT SPRINGS	HITCHIS CULCH, DAXTER BASIN N
LOCATION.....	MAIN LINE 26" & 22"	DESERT SPRINGS INLET	NO. 85 INLET
OWNER.....	NORTHWEST PIPELINE CORP.	COLORADO INTERSTATE GAS CO.	QUESTAR PIPELINE CORP.
SAMPLED.....	93/05/20	93/05/19	93/05/20
FORMATION.....	NOT GIVEN	NOT GIVEN	NOT GIVEN
GEOLOGIC PROVINCE CODE...	535	535	535
DEPTH, FEET.....	NOT GIVEN	NOT GIVEN	NOT GIVEN
PRESSURE, PSIG.....	670	250	530
FLOW, MCFD.....	122000	15000	30000
COMPONENT, MOLE PCT			
METHANE.....	90.9 -----	85.4 -----	93.3 -----
ETHANE.....	6.1 -----	6.8 -----	3.8 -----
PROPANE.....	1.1 -----	3.2 -----	1.1 -----
N-BUTANE.....	0.2 -----	1.1 -----	0.4 -----
ISOBUTANE.....	0.1 -----	0.6 -----	0.0 -----
N-PENTANE.....	0.0 -----	0.4 -----	0.3 -----
ISOPENTANE.....	0.2 -----	0.3 -----	0.0 -----
CYCLOPENTANE.....	0.0 -----	0.1 -----	0.1 -----
HEXANES PLUS.....	0.0 -----	0.3 -----	0.2 -----
NITROGEN.....	0.9 -----	0.6 -----	0.3 -----
OXYGEN.....	TRACE -----	0.0 -----	0.0 -----
ARGON.....	0.0 -----	0.0 -----	TRACE -----
HYDROGEN.....	TRACE -----	TRACE -----	TRACE -----
HYDROGEN SULFIDE.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	0.5 -----	1.1 -----	0.4 -----
HELIUM.....	0.01 -----	0.01 -----	0.01 -----
HEATING VALUE*	1077 -----	1177 -----	1083 -----
SPECIFIC GRAVITY.....	0.613	0.682	0.608

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

	INDEX SAMPLE 19606	INDEX SAMPLE 19612	INDEX SAMPLE 19605
STATE.....	WYOMING	WYOMING	WYOMING
COUNTY.....	SWEETWATER	SWEETWATER	SWEETWATER
FIELD.....	RED LAKES, WILD ROSE	STORAGE TO CLAY BASIN	TABLE ROCK, ANTELOPE
LOCATION.....	INLET FROM SOUTH FIELDS	58 STORAGE BI-DIRECTIONAL	LATERAL FROM TABLE ROCK
OWNER.....	COLORADO INTERSTATE GAS CO.	QUESTAR PIPELINE CORP.	COLORADO INTERSTATE GAS CO.
SAMPLED.....	93/05/19	93/05/20	93/05/19
FORMATION.....	NOT GIVEN	NOT GIVEN	NOT GIVEN
GEOLOGIC PROVINCE CODE...	535	535	535
DEPTH, FEET.....	NOT GIVEN	NOT GIVEN	NOT GIVEN
PRESSURE, PSIG.....	NOT GIVEN	700	650
FLOW, MCFD.....	24000	137000	20800
COMPONENT, MOLE PCT			
METHANE.....	87.0 -----	93.8 -----	93.9 -----
ETHANE.....	6.4 -----	2.9 -----	1.5 -----
PROPANE.....	2.4 -----	0.8 -----	0.4 -----
N-BUTANE.....	0.7 -----	0.3 -----	0.2 -----
ISOBUTANE.....	0.2 -----	0.1 -----	0.1 -----
N-PENTANE.....	0.2 -----	0.0 -----	0.0 -----
ISOPENTANE.....	0.2 -----	0.0 -----	0.0 -----
CYCLOPENTANE.....	0.0 -----	0.0 -----	0.0 -----
HEXANES PLUS.....	0.2 -----	0.2 -----	9.2 -----
NITROGEN.....	0.1 -----	1.6 -----	0.8 -----
OXYGEN.....	0.0 -----	0.0 -----	0.0 -----
ARGON.....	0.0 -----	0.1 -----	0.0 -----
HYDROGEN.....	TRACE -----	TRACE -----	TRACE -----
HYDROGEN SULFIDE.....	0.0 -----	0.0 -----	0.0 -----
CARBON DIOXIDE.....	2.5 -----	0.3 -----	2.8 -----
HELIUM.....	0.01 -----	0.00 -----	0.03 -----
HEATING VALUE*.....	1120 -----	1045 -----	1000 -----
SPECIFIC GRAVITY.....	0.663	0.597	0.606

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

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