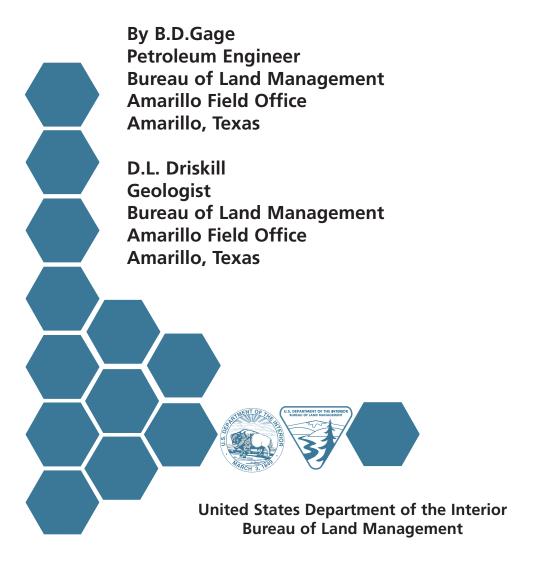
Analyses of Natural Gases, 1998–2001

Technical Note 412

May 2003



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Abstract

Technical Note 412 contains analyses and related source data for 311 natural gas samples from 13 States. Of the total samples, 309 were collected during calendar years 1998 through 2001. The analyses were made using mass spectroscopy and gas chromatography. None of the analyses have been published previously in other analyses reports. All samples were obtained and analyzed as

part of the United States Department of the Interior's Bureau of Land Management investigations of the occurrences of helium in natural gases of countries with free-market economies. The results of these investigations are published periodically to make the information available to members of the helium and petroleum industries and to the general public.

Introduction

Bureau of Land Management Technical Note 412, *Analyses of Natural Gases*, 1998–2001, contains analyses and related source data for 311 natural gas samples from 13 States. Of the total samples, 309 were collected during calendar years 1998 through 2001. The remaining two were collected earlier, but releases granting permission to publish them were received at a later date. None of these analyses have been published previously in other analyses reports.

The analyses were made using mass spectroscopy and gas chromatography. All samples were obtained and analyzed as part of the Bureau of Land Management investigations of the occurrences of helium in natural gases of countries with free-market economies. This helium survey program has been conducted since 1917. The results are published periodically to make the information available to members of the helium and petroleum industries and to the general public.

Forty-two publications have presented the results of 16,058 gas analyses performed through 1997. These publications are referenced at the end of this report in the section "Previous Publications in the Helium Survey Series."

The first three bulletins (1–3)¹ contain analyses and related source data on 5,218 gas samples collected from 1917 through

1960. These bulletins have been supplemented periodically by information circulars and technical notes (4–17, 19–24, 26–30, 32–36, 38–42) containing 10,840 analyses of samples collected since 1960.

In 1976, a compilation of the analyses made prior to 1975 was prepared by the United States Bureau of Mines (USBM) and published by the National Technical Information Service of the United States 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 USBM. The first of these was published in 1982 and contained analyses performed 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 performed prior to 1986. The samples were taken from gas and oil wells and natural gas pipelines in 40 States and 24 foreign countries (31). In 1991, a compilation of analyses was completed as a supplement to the 1987 publication and contains all analyses published from 1986

¹The numbers in parentheses refer to items in the list of previous publications at the end of this report.

through 1990. The 1991 publication contains 920 samples from gas and oil wells and natural gas pipelines in 26 States and 2 foreign countries (37).

In addition to appearing in the publications, all analyses and related information published through 1997 are available on CD-ROM from the National Technical Information Service (NTIS) in Springfield, Virginia (1-800-553-NTIS). Orders should refer to Bureau of Land Management CD-ROM PB98-502206. The update to the 1997 CD-ROM, which will include

the 1998–2001 analyses, should be available for purchase around the time this report is published.

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

Tables

Tables 1 and 2—the main focus of this technical note—include the results of analyses and related source data from the gas samples. This information is divided into two groups. Table 1 contains information on samples from gas and oil wells in the United States. Table 2 contains information on samples from natural gas pipelines in the United States. The following

chart indicates the sources of the samples listed in these tables. All components of the analyses in the tables are reported to the nearest 0.1 percent, except helium, which is reported to the nearest 0.01 percent. The word "trace" is used to denote quantities of helium of less than 0.005 percent and quantities of other components of less than 0.05 percent.

Source	Number of Samples	Table(s)	Source	Number of Samples	Table(s)
Arizona	1	1	Oregon	1	1
Arkansas	2	1	Pennsylvania	2	1
Colorado	35	1,2	Tennessee	1	1
Kansas	77	1	Texas	20	1
New Mexico	126	1	Utah	2	1
Ohio	2	1	Wyoming	3	1
Oklahoma	39	1			

Geologic Provinces of the United States

Tables 1 and 2 also 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. The provinces and their associated codes are provided in the list that follows and are also illustrated in Figure 1². They are

delineated by political boundaries for convenience and for accommodation of the data processing equipment. Because not all of the provinces shown are gas-producing areas, many of the codes are not used in this publication. In addition, since State or Federal ownership is not always known in offshore areas, only one code is used for each State. Due to the lack of information on the location of wells in Alaska, only one code (972) is used for all wells.

²The list and Figure 1 are taken from the article cited as: Meyer, R.F. 1970. Geologic provinces code map for computer use: American Association of Petroleum Geologists Bulletin, v. 54, n. 7, p.1301-1305.

Code	Province
100	New England Province
110	Adirondack Uplift
120	Atlantic Coast Basin
130	South Georgia-North Florida Sedimentary Province
140	South Florida Province
150	Piedmont-Blue Ridge Province
160	Appalachian Basin
200	Black Warrior Basin
210	Mid-Gulf Coast Basin
220	Gulf Coast Basin
230	Arkla Basin
240	Desha Basin
250	Upper Mississippi Embayment
260	East Texas Basin
300	Cincinnati Arch
305	Michigan Basin
310	Wisconsin Arch
315	Illinois Basin
320	Sioux Uplift
325	Iowa Shelf
330	Lincoln Anticline
335	Forest City Basin
340	Ozark Uplift
345	Arkoma Basin
350	South Oklahoma Folded Belt Province
355	Chautauqua Platform
360	Anadarko Basin
365	Cherokee Basin
370	Nemaha Anticline
375	Sedgwick Basin
380	Salina Basin
385	Central Kansas Uplift
390	Chadron Arch
395	Williston Basin
400	Ouachita Tectonic Belt Province
405	Kerr Basin
410	Llano Uplift
415	Strawn Basin

Code	Province
420	Fort Worth Syncline
425	Bend Arch
430	Permian Basin
435	Palo Duro Basin
440	Amarillo Arch
445	Sierra Grande Uplift
450	Las Animas Arch
455	Las Vegas-Raton Basin
460	Estancia Basin
465	Orogrande Basin
470	Pedregosa Basin
475	Basin-and-Range Province
500	Sweetgrass Arch
505	Montana Folded Belt Province
510	Central Montana Uplift
515	Powder River Basin
520	Big Horn Basin
525	Yellowstone Province
530	Wind River Basin
535	Green River Basin
540	Denver Basin
545	North Park Basin
550	South Park Basin
555	Eagle Basin
560	San Luis Basin
565	San Juan Mountain Province
570	Uinta Uplift
575	Uinta Basin
580	San Juan Basin
585	Paradox Basin
590	Black Mesa Basin
595	Piceance Basin
600	Northern Cascade Range-Okanagan Province
605	Eastern Columbia Basin
610	Idaho Mountains Province
615	Snake River Basin
620	Southern Oregon Basin
625	Great Basin Province

Code	Province
630	Wasatch Uplift
635	Plateau Sedimentary Province
640	Mojave Basin
645	Salton Basin
650	Sierra Nevada Province
700	Bellingham Basin
705	Puget Sound Province
710	Western Columbia Basin
715	Klamath Mountains Province
720	Eel River Basin
725	Northern Coast Range Province
730	Sacramento Basin
735	Santa Cruz Basin
740	Coastal Basins
745	San Joaquin Basin
750	Santa Maria Basin
755	Ventura Basin
760	Los Angeles Basin
765	Capistrano Basin
800	Heceta Island Area
805	Keku Islands Area
810	Gulf of Alaska Basin
815	Copper River Basin
820	Cook Inlet Basin
830	Kandik Province
835	Kobuk Province
840	Koyukuk Province
845	Bristol Bay Basin
850	Bethel Basin
855	Norton Basin
860	Selawik Basin
863	Yukon Flats Basin
865	Lower Tanana Basin
867	Middle Tanana Basin
870	Upper Tanana Basin
873	Galena Basin
875	Innoko Basin
877	Minchumina Basin

Code	Province
880	Holitna Basin
885	Arctic Foothills Province
890	Arctic Slope Basin
900	Maine Atlantic offshore–general
901	Maine Atlantic offshore–State
902	Maine Atlantic offshore–Federal
903	New Hampshire Atlantic offshore-general
904	New Hampshire Atlantic offshore–State
905	New Hampshire Atlantic offshore–Federal
906	Massachusetts Atlantic offshore–general
907	Massachusetts Atlantic offshore–State
908	Massachusetts Atlantic offshore–Federal
909	Rhode Island Atlantic offshore-general
910	Rhode Island Atlantic offshore–State
911	Rhode Island Atlantic offshore–Federal
912	Connecticut Atlantic off shore-general
913	Connecticut Atlantic offshore-State
914	Connecticut Atlantic offshore–Federal
915	New York Atlantic offshore-general
916	New York Atlantic offshore-State
917	New York Atlantic offshore-Federal
918	New Jersey Atlantic offshore-general
919	New Jersey Atlantic offshore-State
920	New Jersey Atlantic offshore–Federal
921	Delaware Atlantic offshore–general
922	Delaware Atlantic offshore-State
923	Delaware Atlantic offshore–Federal
924	Maryland Atlantic offshore-general
925	Maryland Atlantic offshore–State
926	Maryland Atlantic offshore–Federal
927	Virginia Atlantic offshore–general
928	Virginia Atlantic offshore–State
929	Virginia Atlantic offshore–Federal
930	North Carolina Atlantic offshore–general
931	North Carolina Atlantic offshore-State
932	North Carolina Atlantic offshore–Federal
933	South Carolina Atlantic offshore–general
934	South Carolina Atlantic offshore–State

Code	Province
935	South Carolina Atlantic offshore–Federal
936	Georgia Atlantic offshore–general
937	Georgia Atlantic offshore–State
938	Georgia Atlantic offshore–Federal
939	Florida Atlantic offshore–general
940	Florida Atlantic offshore–State
941	Florida Atlantic offshore–Federal
942	Florida Gulf of Mexico offshore-general
943	Florida Gulf of Mexico offshore-State
944	Florida Gulf of Mexico offshore-Federal
945	Alabama Gulf of Mexico offshore-general
946	Alabama Gulf of Mexico offshore-State
947	Alabama Gulf of Mexico offshore-Federal
948	Mississippi Gulf of Mexico offshore-general
949	Mississippi Gulf of Mexico offshore-State
950	Mississippi Gulf of Mexico offshore–Federal
951	Louisiana Gulf of Mexico offshore-general
952	Louisiana Gulf of Mexico offshore-State
953	Louisiana Gulf of Mexico offshore–Federal
954	Texas Gulf of Mexico offshore-general
955	Texas Gulf of Mexico offshore-State
956	Texas Gulf of Mexico offshore-Federal
957	California Pacific offshore–general
958	California Pacific offshore–State
959	California Pacific offshore–Federal
960	Oregon Pacific offshore–general
961	Oregon Pacific offshore–State
962	Oregon Pacific offshore–Federal
963	Washington Pacific offshore–general
964	Washington Pacific offshore–State
965	Washington Pacific offshore–Federal
972	Alaska Arctic offshore–general
973	Alaska Arctic offshore–State
974	Alaska Arctic offshore–Federal
975	Alaska Bering Sea offshore-general
976	Alaska Bering Sea offshore–State
977	Alaska Bering Sea offshore–Federal
978	Alaska Pacific offshore–general

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

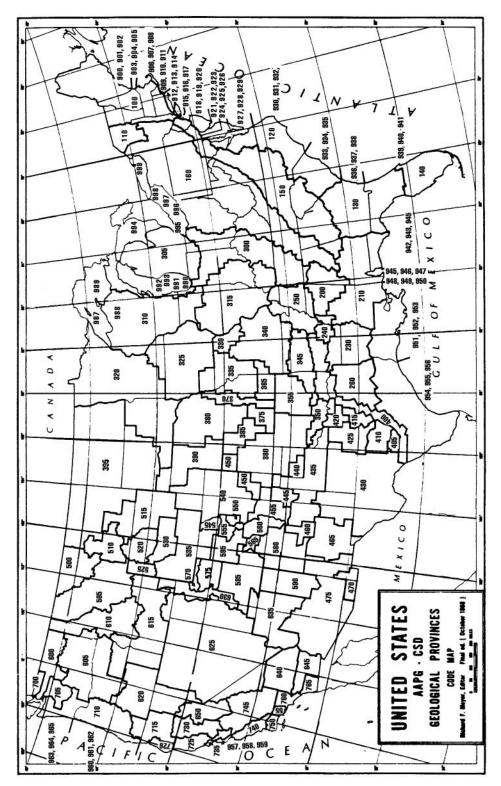


Figure 1. Geologic Provinces of the United States.

Table 1

Samples from Gas and Oil Wells in the United States

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

SAMPLE	20044	COMPONENT, MOLE PCT	
RTATE	ARIZONA	METHANE	0.1
	APACHE	ETHANE	TRACE
	WILDCAT	PROPANE	TRACE
		N-BUTANE	TRACE
	STATE NO. 3-1	ISOBUTANE	0.0
	0200120299	N-PENTANE	TRACE
LOCATION		ISOPENTANE	5.0
OWNERRU	GEWAY ARIZONA OIL CORP	CYCLOPENTANE	
COMPLETED	950913	HEXANES PLUS	0.0
SAMPLEO	991220	NITROGEN	
FORMATION	PERM-AMOS WASH	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	590	ARGON	
TRUE VERTICAL DEPTH (FT) _	1676	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULPIDE**	TRACE
	420	CARBON DIOXIDE	
	1347	HELIUM	
**************************************		HEATING VALUE*	
		SPECIFIC GRAVITY	1.50:
SAMPLE	20918	COMPONENT, MOLE PCT	
STATE	ARKANSAS	METHANE	95.8
STATE		METHANE	
COUNTY	POPE		1.0
COUNTY	POPE SILEX	ETHANE	1.6
FIELD	POPE SILEX SILEX 8-22-C	PROPANE	1.6 0.0
FIELD	POPE SILEX SILEX 8-22-C 0311510617	ETHANE	0.0 0.0 0.0
COUNTY FIELD WELL NAME API LOCATION	POPE SileX SileX 8-22-C 9311519617 SEC 22 T10N R21W	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	1.1 1.0 1.0 1.0 1.0 1.0
COUNTY FIELD WELL NAME API LOCATION OWNER	POPE SILEX SILEX 8-22-C 0311518617 SEC 22, T10N R21W XTO ENERGY INC.	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	1.1 1.0 1.0 1.0 1.0 1.0
COUNTY FIELD WELL NAME API LOCATION OWNER	POPE SILEX SILEX 8-22-C 0311518617 SEC 22, T10N R21W XTO ENERGY INC.	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	1.6 0.1 0.0 0.0 0.0 0.0
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED	POPE SiLEX SILEX 8-22-C 0311510617 SEC 22 T10N R21W XIO ENERGY INC. 001126 011029	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	1.6 0.1 0.6 0.6 0.6 0.6
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED	POPE SiLEX SILEX 8-22-C 0311510617 SEC 22 T10N R21W XIO ENERGY INC. 001126 011029	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	1.6 0.1 0.6 0.6 0.6 0.6 0.6 0.6 0.6
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATIONM	POPE SILEX SILEX 8-22-C 0311510617 SEC 22, T10N R21W XTO ENERGY, INC. 001126 011029	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	1.6 0.1 0.6 0.6 0.6 0.6 0.6 2.7 0.6 TRAGE
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATIONM GEOLOGIC PROVINCE CODE _	POPE SILEX SILEX 8-22-C 0311510617 SEC 22 T10N R21W XTO ENERGY INC. 001126 011029 ISS-BOONE, DEVO-PENTERS. 345	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	1.6 0.1 0.6 0.6 0.6 0.6 2.7 0.6 TRAGE
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATIONM GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	POPE SILEX SILEX 8-22-C 0311518617 SEC 22, T10N R21W XTO ENERGY INC. 091126 011029 IISS-BOONE, DEVO-PENTERS 345 4560	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	1.6 0.1 0.6 0.6 0.6 0.6 2.7 0.6 TRACE
COUNTY	POPE SILEX SILEX 8-22-C 0311510617 SEC 22, T10N R21W XTO ENERGY, INC. 001126 011029 ISS-BOONE, DEVO-PENTERS 345 4560	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	1.6 0.1 0.6 0.6 0.6 0.6 2.7 0.0 TRACE TRACE
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATIONM GEOLOGIC PROVINCE CODE _ TRUE VERTICAL DEPTH (FT) _ MEASURED DEPTH	POPE SiLEX SILEX 8-22-C 0311510617 SEC 22, T10N R21W XIO ENERGY INC. 001126 011029 USS-BOONE, DEVO-PENTERS 4550	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE HELIUM	1.6 0.1 0.0 0.0 0.0 0.0 2.7 0.0 TRACE TRACE 0.0
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATIONM GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH MEASURED DEPTH WELLHEAD PRESSURE, PSIG	POPE SiLEX SILEX 8-22-C 9311510617 SEC 22 T10N R21W XTO ENERGY INC 001126 011029 BISS-BOONE, DEVO-PENTERS 345 4560	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	1.6 0.1 0.0 0.0 0.0 0.0 2.7 0.0 TRACE TRACE 0.0 0.4 0.08

^{*}CALCULATED GROSS 8TU 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

95.6			
	METHANE	APKANSAS	STATE
2.0	ETHANE		COUNTY
0.2	PROPANE		
TRACE	N-BUTANE		FIELD
0.1	ISOBUTANE		WELL NAME
0.0	N-PENTANE		AP!
0.0	ISOPENTANE	SEC. 10. T5N, R25W	LOCATION
	CYCLOPENTANE	SEECO, INC.	OWNER
0.0	HEXANES PLUS	971201	COMPLETED
0.7	NITROGEN	980000	SAMPLED
0.0	OXYGEN	PENN-BORUM USL	FORMATION
0.0	ARGON	345	GEOLOGIC PROVINCE CODE
TRACE	HYDROGEN	6754	TRUE VERTICAL DEPTH (FT)
0.0	HYDROGEN SULFIDE**		MEASURED DEPTH
1.2	CARBON DIOXIDE		WELLHEAD PRESSURE, PSIG
	HELIUM		OPEN FLOW, MCFD
	HEATING VALUE*	11.22	CF ENT EGYF, AIGS &
0.582	SPECIFIC GRAVITY		
	COMPONENT, MOLE PCT	20915	SAMPLE
50.2	METHANE	COLORADO	STATE
2.3	ETHANE		
1.5	PROPANE		COUNTY
0.7	N-BUTANE		FIELD
0.3	ISOBUTANE		WELL NAME
0.2	N-PENTANE		API
0.2	ISOPENTANE	SEC. 16, T34S, R41W	LOCATION
	CYCLOPENTANE	KAISER-FRANCIS OIL CO.	OWNER
0.2	HEXANES PLUS	920813	COMPLETED
42.7	NITROGEN	011101	SAMPLED
	OXYGEN	PERM-RED CAVE	FORMATION
	ARGON	360	GEOLOGIC PROVINCE CODE
	HYDROGEN	1260	TRUE VERTICAL DEPTH (FT)
	HYDROGEN SULFIDE**		MEASURED DEPTH
	CARBON DIOXIDE		WELLHEAD PRESSURE, PSIG _
	HELIUM		OPEN FLOW, MCFD
	HEATING VALUE*		
	SPECIFIC GRAVITY		

^{*} 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

SAMPLE	20917	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	34.1
	BACA	ETHANE	1.7
		PROPANE	0.9
	GREENWOOD	N-BUTANE	0.4
	SEMINOLE 1-33	ISOBUTANE	0.3
API	0500906601	N-PENTANE	0.1
_OCATION	SEC, 33, T34S, R41W	ISOPENTANE	0.2
OWNER	ENERGY ALLIANCE CO., INC.	CYCLOPENTANE	
COMPLETED		HEXANES PLUS	0.2
SAMPLED	011101	NITROGEN	60.2
FORMATION	PERM-RED CAVE	OXYGEN	0.0
SEOLOGIC PROVINCE CO	DE360	ARGON	0.2
	-T)1290	HYDROGEN	0.1
,		HYDROGEN SULFIDE**	0.0
	SIG	CARBON DIOXIDE	TRACE
		HELIUM	1.51
DHEN FLOW, MICHU	147	HEATING VALUE*	444
		SPECIFIC GRAVITY	0.836
SAMPLE	20909	COMPONENT, MOLE PCT	
		COMPONENT, MOLE PCT METHANE	34.9
TATE	COLORADO		
COUNTY	COLORADO. BACA	METHANE	1.1
COUNTY	COLORADO BACA WALSH	METHANE	1.1 0.6
COUNTY	COLORADO. BACA	METHANE ETHANE PROPANE	1.1 0.6 0.2
STATE COUNTY HELD VELL NAME	COLORADO BACA WALSH	METHANE ETHANE PROPANE N-BUTANE	1.1 0.6 0.2 0.1
COUNTY	COLORADO BACA WALSH GREENSBURG STATE 1-16	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	1.1 0.6 0.2 0.1
COUNTY FIELD VELL NAME OCATION	COLORADO BACA WALSH GREENSBURG STATE 1-16 0500906560	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	1.1 0.6 0.2 0.1 0.1
STATE COUNTY FIELD VELL NAME API OCATION DWNER	COLORADO BACA WALSH GREENSBURG STATE 1-16 0500906560 SEC. 16, T33S, R43W	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	1.1 0.6 0.2 0.1 0.1
COUNTY FIELD VELL NAME OCATION OWNER COMPLETED	COLORADO BACA WALSH GREENSBURG STATE 1-16 0500906560 SEC. 16. T33S. R43W ENERGY ALLIANCE CO., INC.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	1.1 0.6 0.2 0.1 0.1 0.1
STATE COUNTY FELD VELL NAME OCATION OWNER COMPLETED SAMPLED	COLORADO BACA WALSH GREENSBURG STATE 1-16 0500906560 SEC. 16, T33S, R43W ENERGY ALLIANCE CO., INC., 960118	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	1.1 0.6 0.2 0.1 0.1 0.1
COUNTY CO	COLORADO BACA WALSH GREENSBURG STATE 1-16 0500906560 SEC. 16. T33S. R43W ENERGY ALLIANCE CO., INC. 960118 011031 PERM-RED CAVE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	1.1 0.6 0.2 0.1 0.1 0.1
STATE COUNTY FIELD VELL NAME OCATION DWNER COMPLETED SAMPLED CORMATION SEOLOGIC PROVINCE CO	COLORADO BACA WALSH GREENSBURG STATE 1-16 0500906560 SEC. 16, T33S, R43W ENERGY ALLIANCE CO., INC. 960118 011031 PERM-RED CAVE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	1.1 0.6 0.2 0.1 0.1 0.1 0.1 61.2 0.0
STATE COUNTY FIELD VELL NAME OCATION DWNER COMPLETED SAMPLED FORMATION SEOLOGIC PROVINCE CONTRUE VERTICAL DEPTH (F	COLORADO BACA WALSH GREENSBURG STATE 1-16 0500906560 SEC. 16, T33S, R43W ENERGY ALLIANCE CO., INC. 960118 011031 PERM-RED CAVE DE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	1.1 0.6 0.2 0.1 0.1 0.1
COUNTY FIELD VELL NAME OCATION OWNER COMPLETED CORMATION CORMATION COMPLETED	COLORADO BACA WALSH GREENSBURG STATE 1-16 0500906560 SEC. 16, T33S, R43W ENERGY ALLIANCE CO., INC. 960118 011031 PERM-RED CAVE DE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	1.1 0.6 0.2 0.1 0.1 0.1 61.2 0.0 0.2
COUNTY FIELD VELL NAME OCATION OWNER COMPLETED CORMATION CORMATION COMPLETED CORMATION COMPLETED CORMATION COMPLETED CORMATION COMPLETED CORMATION COMPLETED	COLORADO BACA WALSH GREENSBURG STATE 1-16 0500906560 SEC. 16, T33S, R43W ENERGY ALLIANCE CO., INC. 960118 011031 PERM-RED CAVE DE 360 T) 1609	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	1.1 0.6 0.2 0.1 0.1 0.1 51.2 0.0 0.2 0.0
STATE COUNTY FIELD WELL NAME API COCATION DWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE COINTER VERTICAL DEPTH (FIMEASURED DEPTH WELLHEAD PRESSURE PROVINCE COINTERNATION	COLORADO BACA WALSH GREENSBURG STATE 1-16 0500906560 SEC. 16, T33S, R43W ENERGY ALLIANCE CO., INC. 960118 011031 PERM-RED CAVE DE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	1.1 0.6 0.2 0.1 0.1 0.1 61.2 0.0 0.2 0.0 TRAGE

 $^{^{\}circ}$ CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY $^{\circ}$ DUS TO THE ABSORPTION OF H23 DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE 20911	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	34.1
COUNTY BACA	ETHANE	1.0
FIELD SPELUNKER	PROPANE	0.6
WELL NAME KITO 1-21	N-BUTANE	0.2
AP! 0500906588	ISOBUTANE	0.1
	N-PENTANE	
LOCATION SEC. 21, T33S, R43W	ISOPENTANE	
OWNERENERGY ALLIANCE CO., INC.	CYCLOPENTANE	
COMPLETED9812:7	HEXANES PLUS	
\$AMPLED	NITROGEN	
FORMATIONPERM-RED CAVE	OXYGEN	
GEOLOGIC PROVINCE CODE 360	ARGON	
TRUE VERTICAL DEPTH (FT)	HYDROGEN	
MEASURED CEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG 62	CARBON DIOXIDE	
OPEN FLOW, MOFD 480	HELIUM	
	HEATING VALUE*	
	SPECIFIC GRAVITY	
SAMPLE 20912	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	35.3
COUNTY BACA	ETHANE	1.1
FIELD WALSH	PROPANE	0.6
WELL NAME	N-BUTANE	0.3
API 0500906564	ISOBUTANE	
LOCATION SEC. 20. T33S. R43W	N-PENTANE	
	ISOPENTANE	
OWNER ENERGY ALLIANCE CO., INC.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	
SAMPLED	NITROGEN	
FORMATIONPERM-RED CAVE	OXYGEN	
	ARGON	
GEOLOGIC PROVINCE CODE	HYDROGEN	
GEOLOGIC PROVINCE CODE	I NAME AND THE OWNERS	
TRUE VERTICAL DEPTH (FT) 1624	HYDROGEN SULFIDE**	
TRUE VERTICAL DEPTH (FT) 1624 MEASURED DEPTH	CARBON DIOXIDE	0.1
		0.1 1.62

^{**}CALCULATED GROSS BTU PER CUET, DRY, AT RODEGREES PAHRENHEIT AND 38 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

	COMPONENT, MOLE PCT
STATECOLORADO	METHANE36
COUNTY BACA	ETHANE1
	PROPANE0
FIELD UNNAMED	N-BUTANE0
WELL NAME ALLEY 2-17	ISOBUTANED
API	N-PENTANE0
LOCATION SEC 17 T33S R43W	ISOPENTANE
OWNER ENERGY ALLIANCE CO. INC.	CYCLOPENTANE
COMPLETED 961005	HEXANES PLUS0
SAMPLED 011031	NITROGEN58
FORMATION PERM-RED CAVE PENN-WABAUNSEE	OXYGEN0
GEOLOGIC PROVINCE CODE	ARGOND
TRUE VERTICAL DEPTH (FT)	HYDROGENIRAC
MEASURED DEPTH	HYDROGEN SULFIDE**0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE0
OPEN FLOW, MCFD 1391	HELIUM 1.
	HEATING VALUE* 4: SPECIFIC GRAVITY
SAMPLE 20916	COMPONENT, MOLE PCT
SAMPLE 20916 STATECOLORADO	METHANE 66
STATECOLORADO	METHANE 66 ETHANE 6
STATE COLORADO COUNTY BACA	METHANE 66 ETHANE 6 PROPANE 4
STATE COLORADO COUNTY BACA FIELD GREENWOOD	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1
STATE COLORADO COUNTY BACA FIELD GREENWOOD WELL NAME BURGHART A-1 LEASE	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1 ISOBUTANE 0
STATE COLORADO COUNTY BACA FIELD GREENWOOD WELL NAME BURGHART A-1 LEASE API 0500905038	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1 ISOBUTANE 0 N-PENTANE 0
STATE COLORADO COUNTY BACA FIELD GREENWOOD WELL NAME BURGHART A-1 LEASE API 0500905038 LOCATION SEC 27 T34S, R41W	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1 ISOBUTANE 0 N-PENTANE 0 ISOPENTANE 0
STATE COLORADO COUNTY BACA FIELD GREENWOOD WELL NAME BURGHART A-1 LEASE API 0500905038 LOCATION SEC 22 T34S, R41W OWNER BEREXCO, INC.	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1 ISOBUTANE 0 N-PENTANE 0 ISOPENTANE 0 CYGLOPENTANE 0
STATE COLORADO COUNTY BACA FIELD GREENWOOD WELL NAME BURGHART A-1 LEASE API 0500905038 LOCATION SEC 22 T34S, R41W OWNER BEREXCO, INC. COMPLETED 560502	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1 ISOBUTANE 0 N-PENTANE 0 ISOPENTANE 0 CYCLOPENTANE 0 HEXANES PLUS 0
STATE COLORADO COUNTY BACA FIELD GREENWOOD WELL NAME BURGHART A-1 LEASE API 0500905038 LOCATION SEC 22 T34S, R41W OWNER BEREXCO, INC. COMPLETED 560502 SAMPLED 011101	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1 ISOBUTANE 0 N-PENTANE 0 ISOPENTANE 0 CYGLOPENTANE 0
STATE COLORADO COUNTY BACA FIELD GREENWOOD WELL NAME BURGHART A-1 LEASE API 0500905038 LOCATION SEC 22 T34S, R41W OWNER BEREXCO, INC. COMPLETED 560502 SAMPLED 011101 FORMATION PENN-TOPEKA	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1 ISOBUTANE 0 N-PENTANE 0 ISOPENTANE 0 CYCLOPENTANE 0 HEXANES PLUS 0 N/TROGEN 19
STATE COLORADO COUNTY BACA FIELD GREFNWOOD WELL NAME BURGHART A-1 LEASE API 0500905038 LOCATION SEC 22 T34S, R41W OWNER BEREXCO, INC. COMPLETED 560502 SAMPLED 011101 FORMATION PENN-TOPEKA GEOLOGIC PROVINCE CODE 360	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1 ISOBUTANE 0 N-PENTANE 0 ISOPENTANE 0 CYCLOPENTANE 0 HEXANES PLUS 0 NITROGEN 19 OXYGEN 0
STATE COLORADO COUNTY BACA FIELD GREENWOOD WELL NAME BURGHART A-1 LEASE API 0500905038 LOCATION SEC 22 T34S, R41W OWNER BEREXCO, INC. COMPLETED 560502 SAMPLED 011101 FORMATION PENN-TOPEKA GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2830	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1 ISOBUTANE 0 N-PENTANE 0 ISOPENTANE 0 CYGLOPENTANE 0 HEXANES PLUS 0 NITROGEN 19 OXYGEN 0 ARGON 0
STATE COLORADO COUNTY BACA FIELD GREENWOOD WELL NAME BURGHART A-1 LEASE API 0500905038 LOCATION SEC 27 T34S, R41W OWNER BEREXCO, INC. COMPLETED 560502 SAMPLED 011101 FORMATION PENN-TOPEKA GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2830 MEASURED DEPTH	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1 ISOBUTANE 0 N-PENTANE 0 ISOPENTANE 0 CYCLOPENTANE 0 HEXANES PLUS 0 NITROGEN 19 OXYGEN 0 ARGON 0 HYDROGEN 0
STATE COLORADO COUNTY BACA FIELD GREFNWOOD WELL NAME BURGHART A-1 LEASE API 0500905038 LOCATION SEC 22 T34S, R41W OWNER BEREXCO, INC. COMPLETED 560502 SAMPLED 011101 FORMATION PENN-TOPEKA GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2830 MEASURED DEPTH WELLHEAD PRESSURE, PSIG	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1 ISOBUTANE 0 N-PENTANE 0 ISOPENTANE 0 CYCLOPENTANE 0 HEXANES PLUS 0 NITROGEN 19 OXYGEN 0 ARGON 0 HYDROGEN 0 HYDROGEN SULFIDE** 0
STATE COLORADO COUNTY BACA FIELD GREENWOOD WELL NAME BURGHART A-1 LEASE API 0500905038 LOCATION SEC 22 T34S, R41W OWNER BEREXCO, INC. COMPLETED 560502 SAMPLED 011101 FORMATION PENN-TOPEKA GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2830	METHANE 66 ETHANE 6 PROPANE 4 N-BUTANE 1 ISOBUTANE 0 N-PENTANE 0 ISOPENTANE 0 CYCLOPENTANE 0 HEXANES PLUS 0 NITROGEN 19 OXYGEN 0 ARGON 0 HYDROGEN 0 HYDROGEN SULFIDE** 0 CARBON DIOXIDE 0

^{*} CALCULATED CROSS BTU PER CUIFT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REFORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE 20914	COMPONENT, MOLE PCT	
STATE COLORADO	METHANE	63.7
COUNTY BACA	ETHANE	5.8
	PROPANE	
FIELD MIDWAY	N-BUTANE	1.0
WELL NAMELEACH 1-10	ISOBUTANE	0.4
API0500906397.	N-PENTANE	0.3
LOCATION SEC. 10. T33S. R42W	ISOPENTANE	
OWNER SANDLIN OIL CORP.	CYCLOPENTANE	**
COMPLETED 991102	HEXANES PLUS	0.3
SAMPLED011101	NITROGEN	24.3
FORMATION PENN-TOPEKA	OXYGEN	0.0
GEOLOGIC PROVINCE CODE360	ARGON	0.1
TRUE VERTICAL DEPTH (FT) 3063	HYDROGEN	
MÉASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD150	HELIUM	
	HEATING VALUE*	
SAMPLE 20906	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	57,8
COUNTY BACA	ETHANE	5.5
FIELDGREENWOOD	PROPANE	3,6
WELL NAME MCCALL NO. 1-23	N-BUTANE	1.1
	ISOBUTANE	
ADI OFFICIORE A	and the state of t	0.3
	N-PENTANE	
LOCATION SEC. 23 T315 R42W	ISOPENTANE	
LOCATION SEC. 23 T315 R42W OWNER ENERGY ALLIANCE CO. INC.	ISOPENTANE	
LOCATION SEC. 23. T315, R42W. OWNER ENERGY ALLIANCE CO. INC. COMPLETED 950426	ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.3
LOCATION SEC. 23. T315. R42W. OWNER ENERGY ALLIANCE CO. INC. COMPLETED 950426 SAMPLED 011031	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.3 29.8
LOCATION SEC. 23 T315 R42W OWNER ENERGY ALLIANCE CO. INC. COMPLETED 950426 SAMPLED 011031 FORMATION PENN-TOPEKA	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	
LOCATION SEC. 23. T315, R42W OWNER ENERGY ALLIANCE CO. INC. COMPLETED 950426 SAMPLED 011031 FORMATION PENN-TOPEKA GEOLOGIC PROVINCE CODE 360	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0,3 29,8 0,0 0,1
SEC. 23. T315, R42W	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.3 29.8 0.0 0.1
SEC. 23. T315, R42W	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.3 29.8 0.0 0.1 0.0
SEC. 23 T315 R42W	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.3 29.8 0.0 0.1 0.0 0.0
API	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.3 29.8 0.0 0.1 0.0 0.0 0.1

 $^{^{\}circ}$ CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FABRE HIBIT AND 30 INCHES OF MERCURY $^{\circ}$ 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

SAMPLE 20875	COMPONENT, MOLE PCT	
STATE COLORADO	METHANE	89.2
COUNTY GARFIELD	ETHANE	4.8
	PROPANE	1.0
FIELD PARACHUTE	N-BUTANE	0.2
WELL NAME AMERICAN SODA GM 268-3	ISOBUTANE	0.2
API0504507313	N-PENTANE	0.1
LOCATION SEC. 3. T7S, R96W	ISOPENTANE	0.1
OWNER WILLIAMS PRODUCTION RMT CO.	CYCLOPENTANE	+-
COMPLETEDO00809	HEXANES PLUS	0.2
SAMPLED	NITROGEN	0.2
FORMATIONCRET-MESAVERDE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE595	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 6266	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG 2000	CARBON DIOXIDE	4.0
	HELIUM	0.01
OPEN FLOW, MCFD1128	HEATING VALUE*	1.041
	SPECIFIC GRAVITY	0.639
SAMPLE 20812	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	88.7
	ETHANE	6.3
COUNTY MESA	PROPANE	2.4
FIELD BRONCO FLATS	N-BUTANE	0.5
WELL NAMESULFUR GUECH 9-98-10	ISOBUTANE	0.3
API0507708682	N-PENTANE	0.1
LOCATION SEC. 10, T9S, R98W.	ISOPENTANE	
	ISOPENTANE	
OWNERMARALEX RESOURCES, INC.		
OWNER	CYCLOPENTANE	0.2
OWNERMARALEX RESOURCES, INC. COMPLETED950225 SAMPLED010828	CYCLOPENTANE	0.2 0.4
OWNER MARALEX RESOURCES, INC. COMPLETED 950225 SAMPLED 010828 FORMATION CRET-CAMEO	CYCLOPENTANE HEXANES PLUS NITROGEN	0.2 0.4 0.0
OWNER	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.2 0.4 0.0
OWNER MARALEX RESOURCES, INC. COMPLETED 950225 SAMPLED D10828 FORMATION CRET-CAMEO GEOLOGIC PROVINCE CODE 595. TRUE VERTICAL DEPTH (FT) 3052	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.2 0.4 0.0 0.0
OWNER MARALEX RESOURCES, INC. COMPLETED 950225 SAMPLED 010828 FORMATION CRET-CAMEO GEOLOGIC PROVINCE CODE 595 TRUE VERTICAL DEPTH (FT) 3052 MEASURED DEPTH	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.2 0.4 0.0 0.0 0.0 0.0
OWNER MARALEX RESOURCES, INC. COMPLETED 950225 SAMPLED D10828 FORMATION CRET-CAMEO GEOLOGIC PROVINCE CODE 595 TRUE VERTICAL DEPTH (FT) 3052 MEASURED DEPTH WELLHEAD PRESSURE, PSIG	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.2 0.4 0.0 0.0 0.0 0.0
LOCATION SEC. 10, T9S, R98W OWNER MARALEX RESOURCES, INC. COMPLETED 950225 SAMPLED 010828 FORMATION CRET-CAMEO GEOLOGIC PROVINCE CODE 595 TRUE VERTICAL DEPTH (FT) 3052 MEASURED DEPTH WELLHEAD PRESSURE, PSIG 0PEN FLOW, MCFD 368	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.2 0.4 0.0 0.0 0.0 0.0 1.0

^{*} CALCULATED GROSS BTU PER CUIFT, DRY, AT 80 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

SAMPLE	20811	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	91.5
	MESA	ETHANE	4.(
	BRONCO FLATS	PROPANE	1.6
	SULFUR GULCH 9-98-2	N-BUTANE	0.2
		ISOBUTANE	0.3
	0507708709	N-PENTANE	
	SEC. 2. T9S, R98W	ISOPENTANE	Q_1
	MARALEX RESOURCES, INC.	CYCLOPENTANE	
COMPLETED	000518	HEXANES PLUS	
SAMPLED	010828	NITROGEN	0.4
FORMATION	CRET-CAMEO.COAL	OXYGEN	0.0
GEOLOGIC PROVINCE COD	Ë <u>595</u>	ARGON	
TRUE VERTICAL DEPTH (FT)2600	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSI	IG	CARBON DIOXIDE	
	20	HELIUM	
		HEATING VALUE*	1,06
SAMPLE	20796	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	94.3
	MESA	ETHANE	
	SHIRE GULCH	PROPANE	
	FEDERAL 1-3	N-BUTANE	0.1
	0507708192	ISOBUTANE	
		N-PENTANE	
LOCATION	SEC. 1, T10S, R97W	ISOPENTANE	TRACE
LOCATION	SEC. 1, T10S, R97W IOUNTAIN OPERATING CO., INC.	ISOPENTANE	TRACE
LOCATIONROCKY M COMPLETED	SEC. 1, T10S, R97W IOUNTAIN OPERATING CO INC 791129	ISOPENTANE CYCLOPENTANE HEXANES PLUS	TRACE
LOCATIONROCKY M COMPLETED	SEC. 1, T10S, R97W IOUNTAIN OPERATING CO., INC.	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	TRACE
LOCATIONROCKY M COMPLETEDSAMPLED	SEC. 1, T10S, R97W IOUNTAIN OPERATING CO INC 791129	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	TRACE TRACE 0.1
LOCATIONROCKY M COMPLETED SAMPLED FORMATION	SEC. 1, T10S, R97W IOUNTAIN OPERATING COINC. 791129 010827	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	TRACE TRACE 0.1
LOCATION	SEC. 1, T10S, R97W IOUNTAIN OPERATING CO., INC. 791129 010827 CRET-CORCORAN	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	TRACE TRACE 0.1 0.0 0.0
LOCATION	SEC. 1, T10S, R97W IOUNTAIN OPERATING CO., INC., 791129 010827 CRET-CORCORAN E	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	TRACE TRACE 0.1 0.0 0.0 0.0
LOCATION	SEC. 1, T10S, R97W IOUNTAIN OPERATING COINC. 791129 010827 CRET-CORCORAN E 595 3262	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	TRACE TRACE 0.1 0.0 0.0 0.0 0.0 0.0 0.0
LOCATION	SEC. 1, T10S, R97W IOUNTAIN OPERATING CO INC. 791129 010827 CRET-CORCORAN E	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	TRACE TRACE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0
LOCATION	SEC. 1, T10S, R97W IOUNTAIN OPERATING COINC. 791129 010827 CRET-CORCORAN E	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	TRACE TRACE 0.0 0.0 0.0 0.0 0.0 1,020

^{*} 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

	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	87.9
COUNTYMESA	ETHANE	6.5
	PROPANE	2.3
FIELD SHIRE GULCH	N-BUTANE	9.6
WELL NAME	ISOBUTANE	0.4
API0507708178	N-PENTANE	0.2
LOCATION SEC. 35, T9S, R97W	ISOPENTANE	0.2
OWNER ROCKY MOUNTAIN OPERATING CO. INC.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0.4
SAMPLED	NITROGEN	0.5
FORMATIONCRET-CORCORAN	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG0	CARBON DIOXIDE	1.2
OPEN FLOW, MCFD1000	HELIUM	
	HEATING VALUE*	1.124
	SPECIFIC GRAVITY	0.651
\$AMPLE 20816		
SAMPLE 20010	COMPONENT, MOLE PCT	
	METHANE	87.5
STATE COLORADO		
STATECOLORADO_ COUNTYMESA_	METHANE	7.1
STATE COLORADO COUNTY MESA FIELD BRONCO FLATS	METHANE	7.1 2.6
STATE COLORADO COUNTY MESA FIELD BRONCO FLATS WELL NAME WAGON TRACK FEDERAL 12-16	METHANE ETHANE PROPANE	7.1 2.6 0.6
COLORADO	METHANE ETHANE PROPANE N-BUTANE	7.1 2.6 0.6
STATE COLORADO COUNTY MESA FIELD BRONCO FLATS WELL NAME WAGON TRACK FEDERAL 12-16 API 0507708700 LOCATION SEC. 12, T9S, R98W	METHANE ETHANE PROPANE N-BUTANE	7.1 2.6 0.6 0.4
STATE COLORADO COUNTY MESA FIELD BRONCO FLATS WELL NAME WAGON TRACK FEDERAL 12-16 API 0507708700 LOCATION SEC. 12, T9S, R98W	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	7.1 2.6 0.6 0.4 0.2
STATE COLORADO COUNTY MESA FIELD BRONCO FLATS WELL NAME WAGON TRACK FEDERAL 12-16 API 0507708700 LOCATION SEC. 12, T9S, R98W OWNER BLACK HILLS EXPL & PROD. INC.	METHANE ETHANE PROPANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	7.1 2.6 0.6 0.4 0.2
COLORADO COUNTY	METHANE ETHANE PROPANE PROPANE ISOBUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE	7.1 2.6 0.6 0.4 0.2 0.2
STATE COLORADO COUNTY MESA FIELD BRONCO FLATS WELL NAME WAGON TRACK FEDERAL 12-16 API 0507708700 LOCATION SEG 12, T9S, R98W OWNER BLACK HILLS EXPL & PROD. INC. COMPLETED 961226 SAMPLED 010828	METHANE ETHANE PROPANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	7.1 2.6 0.6 0.4 0.2 0.2
STATE COLORADO COUNTY MESA FIELD BRONCO FLATS WELL NAME WAGON TRACK FEDERAL 12-16 API 0507708700 LOCATION SEG. 12, T9S, R98W OWNER BLACK HILLS EXPL & PROD. INC. COMPLETED 961226 SAMPLED 010828 FORMATION CRET-CORCORAN	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	7.1 2.6 0.6 0.4 0.2 0.2 0.2 0.3 0.4 0.0
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	7.1 2.6 0.6 0.4 0.2 0.2 0.3 0.4 0.0
STATE COLORADO COUNTY MESA FIELD BRONCO FLATS WELL NAME WAGON TRACK FEDERAL 12-16. API 0507708700 LOCATION SEC. 12, T9S, R98W. OWNER BLACK HILLS EXPL & PROD. INC. COMPLETED 961226. SAMPLED 010828 FORMATION CRET-CORCORAN GEOLOGIC PROVINCE CODE 595 TRUE VERTICAL DEPTH (FT) 2879	METHANE ETHANE PROPANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	7.1 2.6 0.6 0.4 0.2 0.2 0.3 0.4 0.0
STATE COLORADO COUNTY MESA FIELD BRONCO FLATS WELL NAME WAGON TRACK FEDERAL 12-16 API 0507708700 LOCATION SEC 12, T9S, R98W OWNER BLACK HILLS EXPL & PROD. INC. COMPLETED 961226 SAMPLED 010828 FORMATION CRET-CORCORAN GEOLOGIC PROVINCE CODE 595 TRUE VERTICAL DEPTH (FT) 2879 MEASURED DEPTH	METHANE ETHANE PROPANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	7.1 2.6 0.6 0.4 0.2 0.2 0.3 0.4 0.0 0.0
STATE COLORADO COUNTY MESA FIELD BRONCO FLATS WELL NAME WAGON TRACK FEDERAL 12-16 API 0507708700 LOCATION SEC 12, T9S, R98W OWNER BLACK HILLS EXPL & PROD. INC. COMPLETED 961226 SAMPLED 010828 FORMATION CRET-CORCORAN GEOLOGIC PROVINCE CODE 595 TRUE VERTICAL DEPTH (FT) 2879 MEASURED DEPTH WELLHEAD PRESSURE, PSIG	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	7.1 2.6 0.6 0.4 0.2 0.3 0.4 0.0 0.0 0.0
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	7.1 2.6 0.6 0.4 0.2 0.3 0.4 0.0 0.0 0.0

^{*} 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

SAMPLE 20815	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	88.5
COUNTYMESA	ETHANE	5.8
	PROPANE	2.7
FIELDBRONCO FLATS	N-BUTANE	0.6
WELL NAME WAGON TRACK FEDERAL 12-14	ISOBUTANE	0.4
API0507708699	N-PENTANE	a_
LOCATIONSEC. 12. T9S. R98W.	ISOPENTANE	0.2
OWNERBLACK HILLS EXPL & PROD_INC	CYCLOPENTANE	····· ·
COMPLETED961228	HEXANES PLUS	0.3
SAMPLED010828	NITROGEN	0.3
FORMATIONCRET-CORCORAN.	OXYGEN	0.0
GEOLOGIC PROVINCE CODE595	ARGON	0.0
TRUE VERTICAL DEPTH (FT)2854_	HYDROGEN	0.0
MEASURED DEPTH	HYDRÖGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	0.5
OPEN FLOW, MCFD 475	HELIUM	
** **************************	HEATING VALUE*	
	SPECIFIC GRAVITY	0.642
SAMPLE 20819	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	92.5
COUNTY MESA	ETHANE	2.0
	PROPANE	0.5
FIELD SHIRE GULCH	N-BUTANE	0.1
WELL NAME HORSESHOE CANYON 4:21	ISOBUTANE	. 0.1
API	N-PENTANE	TRACE
LOCATIONSEC. 21. T9S, R97W	ISOPENTANE	0.1
OWNER KOCH EXPLORATION COLLIC	CYCLOPENTANE	- -
COMPLETED	HEXANES PLUS	0.1
SAMPLED010828	NITROGEN	0.3
FORMATIONCRET-CORCORAN_DAKOTA	OXYGEN	0.0
GEOLOGIC PROVINCE CODE595	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	HYDROGEN	0.0
MÉASURED DEPTH	HYDROGEN SULFIDE**	0.0
	CARBON DIOXIDE	4.2
WELLHEAD PRESSURE, PSIG 100		0.04
WELLHEAD PRESSURE, PSIG 100 OPEN FLOW, MCFD 2947	HELIUM	
WELLHEAD PRESSURE, PSIG	HELIUMHEATING VALUE*SPECIFIC GRAVITY	999

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 50 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY TO 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

SAMPLE 20803	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	89.8
COUNTY MESA	FTHANE	4.6
FIELD SHIRE GULCH	PROPANE	1.6
	N-BUTANE	0.4
WELL NAME HORSESHOE CANYON 3	ISOBUTANE	0.3
API	[4-1 mild 5-1140m	
LOCATION SEC. 28, T9S, R97W		0.1
OWNERKOCH EXPLORATION CO. 11C	CYCLOPENTANE	
COMPLETED 930315	HEXANES PLUS	0.2
SAMPLED010827	NITROGEN	0_8
FORMATION CRET-COZZETTE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE595	ARGON	_0.0
TRUE VERTICAL DEPTH (FT)	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	2.1
OPEN FLOW, MCFD501	HELIUM	0.03
OI ENT LOW, MOTO	HEATING VALUE*	1.071
	SPECIFIC GRAVITY	0.634
SAMPLE 20814	COMPONENT, MOLE PCT	
COLORADO	METHANE	87.3
STATECOLORADO	ETHANE	7.1
COUNTYMESA	L	2.7
	PROPANE	
FIELD BRONCO FLATS	PROPANE L	0.7
WELL NAMEWAGON TRAIL FEDERAL 44-11	N-BUTANE	
WELL NAMEWAGON TRAIL FEDERAL 44-11	N-BUTANE	0.5
WELL NAME <u>WAGON TRAIL FEDERAL 44-11</u> API <u>0507708606</u>	N-BUTANEISOBUTANE	0.5 0.1
WELL NAME WAGON TRAIL FEDERAL 44-11 API 0507708606 LOCATION SEC. 11, ISS, R98W	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	0.5 0.1 0.2
WELL NAME WAGON TRAIL FEDERAL 44-11 API 0507708606 ŁOCATION SEC. 11, ISS. R98W OWNER BŁACK HILLS EXPL. & PROD. INC.	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.5 0.1 0.2
WELL NAME WAGON TRAIL FEDERAL 44-11 API 0507708606 LOCATION SEC. 11, 19S, R98W OWNER BLACK HILLS EXPL, & PROD. INC. COMPLETED 911220	N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.5 0.1 0.2
WELL NAME WAGON TRAIL FEDERAL 44-11 API 0507708606 ŁOCATION SEC. 11, I9S, R98W OWNER BŁACK HILLS EXPL, & PROD. INC. COMPLETED 911220 SAMPLED 010828	N-BUTANE	0.5 - 0.1 - 0.2
FIELD BRONCO FLATS WELL NAME WAGON TRAIL FEDERAL 44-11 API 0507708606 ŁOCATION SEC. 11, 19S, R98W OWNER BŁACK HILLS EXPL, & PROD. INC. COMPLETED 911220 SAMPLED 010828 FORMATION CRET-COZZETTE GEOLOGIC PROVINCE CODE 595	N-BUTANE	0.5 0.1 0.2 0.3 0.3
WELL NAME WAGON TRAIL FEDERAL 44-11 API 0507708606 LOCATION SEC. 11, ISS, R98W OWNER BLACK HILLS EXPL, & PROD. INC. COMPLETED 911220 SAMPLED 010828 FORMATION CRET-COZZETTE GEOLOGIC PROVINCE CODE 595	N-BUTANE	0.5 0.1 0.2 0.3 0.3 0.0
WELL NAME WAGON TRAIL FEDERAL 44-11 API 0507708606 ŁOCATION SEC. 11, I9S, R98W OWNER BŁACK HILLS EXPL. & PROD. INC. COMPLETED 911220 SAMPLED 010828 FORMATION CRET-COZZETTE GEOLOGIC PROVINCE CODE 595 TRUE VERTICAL DEPTH (FT) 2790	N-BUTANE	0.5 0.1 0.2 0.3 0.3 0.0
WELL NAME WAGON TRAIL FEDERAL 44-11 API 0507708606 LOCATION SEC. 11, 19S, R98W OWNER BLACK HILLS EXPL. & PROD. INC. COMPLETED 911220 SAMPLED 010828 FORMATION CRET-COZZETTE GEOLOGIC PROVINCE CODE 595 TRUE VERTICAL DEPTH (FT) 2790 MEASURED DEPTH	N-BUTANE ISOBUTANE ISOBUTANE ISOPENTANE ISOP	0.5 0.2 0.3 0.3 0.0 0.0
WELL NAME WAGON TRAIL FEDERAL 44-11 API 0507708606 LOCATION SEC. 11, 19S, R98W OWNER BLACK HILLS EXPL. & PROD. INC. COMPLETED 911220 SAMPLED 010828 FORMATION CRET-COZZETTE GEOLOGIC PROVINCE CODE 595 TRUE VERTICAL DEPTH (FT) 2790 MEASURED DEPTH WELLHEAD PRESSURE, PSIG	N-BUTANE	0.5 0.1 0.2 0.3 0.0 0.0 0.0
WELL NAME WAGON TRAIL FEDERAL 44-11 API 0507708606 ¿OCATION SEC. 11, 19S, R98W OWNER BLACK HILLS EXPL. & PROD. INC. COMPLETED 911220 SAMPLED 010828 FORMATION CRET-COZZETTE GEOLOGIC PROVINCE CODE 595 TRUE VERTICAL DEPTH (FT) 2790 MEASURED DEPTH	N-BUTANE	0.5 0.1 0.2 0.3 0.3 0.0 0.0 0.0 0.0 0.0

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

SAMPLE 20820	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	89.1
	ETHANE	6.5
	PROPANE	2.2
FIELD SHIRE GULCH	N-BUTANE	0.5
WELL NAMEHORSESHOE CANYON 2-22	ISOBUTANE	0.3
API0507708654_	N-PENTANE	0.1
LOCATION SEC 22 T9S R97W	ISOPENTANE	<u>0.1</u>
OWNER KOCH EXPLORATION CO., LLC.	CYCLOPENTANE	
COMPLETED 930105	HEXANES PLUS	0.1
SAMPLED 010828	NITROGEN	0.2
FORMATIONCRET-COZZETTE_CORCORAN_	OXYGEN	0.0
GEOLOGIC PROVINCE CODE595	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 3175	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	1.0
OPEN FLOW, MCFD 905	HELIUM	0.01
OF ERF LOW, 880FD	HEATING VALUE*	1, 1 09
	SPECIFIC GRAVITY	D.634
SAMPLE 20817	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	89.5
COUNTY MESA	ETHANE	5.8
	PROPANE	1.9
FIELD SHIRE GULCH	N-BUTANE	0.5
WELL NAME HORSESHOE CANYON 3-16	ISOBUTANE	0.3
API	N-PENTANE	0.1
LOCATIONSEC. 16, T9S_R97W	ISOPENTANE	0.1
OWNER KOCH EXPLORATION COLLIC	CYCLOPENTANE	
COMPLETED 930106	HEXANES PLUS	0.3
SAMPLED010828	NITROGEN	0.3
FORMATIONCRET-COZZETTE_CORCORAN	OXYGEN	0.0
GEOLOGIC PROVINCE CODE 595	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 3190	HYDROGEN	0. 0
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG 300	CARBON DIOXIDE	
OPEN FLOW, MCFD 1357	HELIUM	0.02
O MIT BOTT, 1901 D	HEATING VALUE*	1,104
	SPECIFIC GRAVITY	0.635

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF H28 DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20818	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	89.6
	MESA.	ETHANE	5.
	SHIRE GULCH	PROPANE	1.!
•	HORSESHOE CANYON 1-16	N-BUTANE	0.:
	0507708650	ISOBUTANE	
		N-PEN TAN E	
	SEC. 16, T9S, R97W	ISOPENTANE	
	KOCH EXPLORATION CO., LLC	CYCLOPENTANE	
·	921216	HEXANES PLUS	
	010828	NITROGEN	
FORMATION	CRET-COZZETTE, CORCORAN	OXYGEN	
GEOLOGIC PROVINCE	CODE	ARGON	
TRUE VERTICAL DEPTI	H (FT)3165	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE	F, PSIG310	CARBON DIOXIDE	
OPEN FLOW, MCFD	745	HELIUM	
		HEATING VALUE*	_
		SPECIFIC GRAVITY	
SAMPLE	20824	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	89.
	MESA	ETHANE	5.
	SHIRE GULCH	PROPANE	1.
	HORSESHOE CANYON 3-27	N-BUTANE	
		ISOBUTANE	0.
	0507708655	N-PENTANE	0.
	SEC. 27, T9S, R97W	ISOPENTANE	
	KOCH EXPLORATION CO., LLC	CYCLOPENTANE	
	921229	HEXANES PLUS	
	010828	NITROGEN	
FORMATION	CRET-COZZETTE, CORCORAN	OXYGEN	
	CODE595	ARGON	
GEOLOGIC PROVINCE		HYDROGEN	0.
	H (FT)3091		
TRUE VERTICAL DEPTI	H (FT)3091	HYDROGEN SULFIDE**	0.
TRUE VERTICAL DEPTI		HYDROGEN SULFIDE** CARBON DIOXIDE	0_ 1.
TRUE VERTICAL DEPTI MEASURED DEPTH WELLHEAD PRESSURE		HYDROGEN SULFIDE**	0. 1. 0.0

^{*} 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

SAMPLE 20825	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	89.4
COUNTY MESA.	ETHANE	5.8
FIELD ROBERT'S CANYON	PROPANE	21
	N-BUTANE	0.5
WELL NAME HORSESHOE CANYON 1-27	ISOBUTANE	<u>0.3</u>
API0507708563	N-PENTANE	a
LOCATION SEC. 27, T9S, R97W	ISOPENTANE	0.
OWNER KOCH EXPLORATION CO. LLC	CYCLOPENTANE	
COMPLETED 930125	HEXANES PLUS	0.3
SAMPLEDQ10828	NITROGEN	Q.1
FORMATIONCRET-COZZETTE_CORCORAN	OXYGEN	0.0
GEOLOGIC PROVINCE CODE595	ARGON	0.0
TRUE VERTICAL DEPTH (FT)3126	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG 185	CARBON DIOXIDE	1.1
OPEN FLOW, MCFD555.	HELIUM	0.03
	HEATING VALUE*	
	SPECIFIC GRAVITY	0.63
SAMPLE 20823	COMPONENT, MOLE PCT	
STATE COLORADO	METHANE	88.2
COUNTY MESA	ETHANE	6.4
	PROPANE	2.
FIELD SHIRE GULCH	N-BUTANE	0.6
WELL NAME HORSESHOE CANYON 2-17	ISOBUTANE	0.4
API0507708651	N-PENTANE	0.2
LOCATION SEC. 17. T9S. R97W	ISOPENTANE	0.2
OWNER KOCH EXPLORATION CO. LLC	CYCLOPENTANE	·····
COMPLETED 930112	HEXANES PLUS	0.2
SAMPLED010828	NITROGEN	0.3
FORMATION CRET-COZZETTE CORCORAN	OXYGEN	0.0
GEOLOGIC PROVINCE CODE 595	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 2978	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
the state of the s	CARBON DIOXIDE	1.£
WELLHEAD PRESSURE PSIG 590		
	HELIUM	0.04
WELLHEAD PRESSURE, PSIG	HELIUM	

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENMEIT 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

SAMPLE 20806	COMPONENT, MOLE PCT
STATECOLORADO	METHANE92.8
COUNTY MESA	ETHANE1.8
	PROPANE0.5
FIELD SHIRE GULCH	N-BUTANE0.1
WELL NAMEHORSESHOE CANYON 3-29	ISUBUTANE U.1
API	THE STATE TO SEE
LOCATION SEC. 29, T9S, R97W	- ISOPENTANE TRACE
OWNER KOCH EXPLORATION CO., LLC	CYCLOPENTANE
COMPLETED921214	HEXANES PLUS0.1
SAMPLED010827	NITROGEN0.4
FORMATIONCRET-COZZETTE_DAKOTA	OXYGEN0.0
GEOLOGIC PROVINCE CODE595	ARGON0.0
TRUE VERTICAL DEPTH (FT) 7203	HYDROGEN0.0
MEASURED DEPTH	HYDROGEN SULFIDE**0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE4.2
	HÉLIUM
OPEN FLOW, MCFD	
OPEN FLOW, MCFD	HEATING VALUE*994
OPEN FLOW, MCFD1993	HEATING VALUE*
SAMPLE 20822	HEATING VALUE
SAMPLE 20822	SPECIFIC GRAVITY 0.614 COMPONENT, MOLE PCT
SAMPLE 20822 STATECOLORADO	SPECIFIC GRAVITY 0.614 COMPONENT, MOLE PCT METHANE 90.6 ETHANE 3.4
SAMPLE 20822 STATECOLORADO COUNTYMESA	SPECIFIC GRAVITY 0.614 COMPONENT, MOLE PCT METHANE 90.6 ETHANE 3.4 PROPANE 1.1
SAMPLE 20822 STATECOLORADO COUNTYMESA FIELDSHIRE GULCH	SPECIFIC GRAVITY
SAMPLE 20822 STATE COLORADO COUNTY MESA FIELD SHIRE GULCH WELL NAME HORSESHOE CANYON 2-20	SPECIFIC GRAVITY
SAMPLE 20822 STATE COLORADO COUNTY MESA FIELD SHIRE GULCH WELL NAME HORSESHOE CANYON 2-20 API 0507708645	SPECIFIC GRAVITY
SAMPLE 20822 STATE COLORADO COUNTY MESA FIELD SHIRE GULCH WELL NAME HORSESHOE CANYON 2-20	SPECIFIC GRAVITY
SAMPLE 20822 STATE COLORADO COUNTY MESA FIELD SHIRE GULCH WELL NAME HORSESHOE CANYON 2-20 API 0507708645 LOCATION SEC. 20, T9S, R97W	SPECIFIC GRAVITY
SAMPLE 20822 STATE	SPECIFIC GRAVITY

^{*} 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

SAMPLE 20821	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	85.7
COUNTY MESA	ETHANE	3.0
FIELD SHIRE GULCH	PROPANĖ	0.9
WELL NAME HORSESHOE CANYON 1-21	N-BUTANE	0.5
API	ISOBUTANE	a.:
	N-PENTANE	. 0.1
LOCATION SEC. 21, T9S, R97W	ISOPENTANE	
OWNER KOCH EXPLORATION CO. LLC	CYCLOPENTANE	
COMPLETED 820630	HEXANES PLUS	
SAMPLED010828	NITROGEN	
FORMATIONCRET-CZZT, CRCR, DKOT	OXYGEN	
GEOLOGIC PROVINCE CODE595	ARGON	
TRUE VERTICAL DEPTH (FT)	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE"	
WELLHEAD PRESSURE, PSIG300	CARBON DIOXIDE	
OPEN FLOW, MCPD3463	HELIUM	
	HEATING VALUE*	
	SPECIFIC GRAVITY	0.677
SAMPLE 20802	COMPONENT, MOLE PCT	
STATE COLORADO	METHANE	89.9
COUNTYMESA	ETHANE	4.6
FIELD SHIRE GULCH	PROPANE	1,7
	N-BUTANE	Q.4
WELL NAME HORSESHOE CANYON 1-33	ISOBUTANE	0.2
AP)0507708426	ISOBUTANE	
AP)		0.1
AP)0507708426	N-PENTANE	0.1
AP)	N-PENTANE	0.1
AP)	N-PENTANE	0.1 0.1
API	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0. 0.
API	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.1 0.1 0.2 0.5
API 0507708426 LOCATION SEC. 33, T9S, R97W OWNER KOCH EXPLORATION CO. LLC COMPLETED 820201 SAMPLED 010827 FORMATION CRET-DAKOTA	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.1 0.1 0.2 0.5 0.6
API	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.5 0.5 0.5 0.6 0.6
API	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.5 0.5 0.5 0.6 0.6
API	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	0.1 0.1 0.2 0.5 0.6 0.6 0.6 0.6 0.6
API	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.1 0.2 0.5 0.6 0.6 0.6 0.6 0.6 0.6 0.6

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 80 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF H28 DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	85.8
	ETHANE	6.1
COUNTY MESA	PROPANE	3.1
FIELD SHIRE GLICH	N-BUTANE	1.2
WELL NAME HORSESHOE CANYON 2-29	ISOBUTANE	0.9
API0507708657	N-PENTANE	0,3
LOCATION SEC. 29, T9S, R97W	(SOPENTANE	0.5
OWNER KOCH EXPLORATION CO. LLC.	CYCLOPENTANE	
COMPLETED 930301	HEXANES PLUS	0.4
SAMPLED010827_	NITROGEN	0.3
FORMATIONCRET-DAKOTA	OXYGEN	0.0
GEOLOGIC PROVINCE CODE595	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
	CARBON DIOXIDE	1.2
WELLHEAD PRESSURE. PSIG	HELIUM	0.09
OPEN FLOW, MCFD2106.	HEATING VALUE*	1.176
	SPECIFIC GRAVITY	0.682
SAMPLE 20809	COMPONENT, MOLE PCT	
	COMPONENT, MOLE PCT	90.5
STATECOLORADO		
STATECOLORADO_ COUNTYMESA_	METHANE	4.0
STATE COLORADO COUNTY MESA FIELD PLATEAU	METHANE	4.0
STATE COLORADO COUNTY MESA FIELD PLATEAU WELL NAME NICHOLS 2-26	METHANE ETHANE PROPANE	4,0 0.8 0.2
STATE COLORADO COUNTY MESA FIELD PLATEAU WELL NAME NICHOLS 2-26	METHANE ETHANE PROPANE N-BUTANE	4.0 0.8 0.2 0.2
STATE COLORADO COUNTY MESA FIELD PLATEAU WELL NAME NICHOLS 2-26 API 0507708332	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	4.0 0.8 0.2 0.2 TRACE
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	0.8 0.2 0.2 TRACE
STATE COLORADO COUNTY MESA FIELD PLATEAU WELL NAME NICHOLS 2-26 API 0507708332 LOCATION SEC. 26. T10S, R97W. OWNER ROCKY MOUNTAIN OPERATING CO. INC.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	0.8 0.2 0.2 0.2 TRACE
STATE COLORADO COUNTY MESA FIELD PLATEAU WELL NAME NICHOLS 2-26 API 0507708332 LOCATION SEC 26 T10S R97W OWNER ROCKY MOUNTAIN OPERATING CO. INC. COMPLETED 810527	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	4.0 0.8 0.2 0.2 TRACE 0.1
STATE COLORADO COUNTY MESA FIELD PLATEAU WELL NAME NICHOLS 2-26 API 0507708332 LOCATION SEC 26, T10S, R97W OWNER ROCKY MOUNTAIN OPERATING CO. INC. COMPLETED 810527 SAMPLED 010828	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	4.0 0.8 0.2 0.2 TRACE 0.1
STATE COLORADO COUNTY MESA FIELD PLATEAU WELL NAME NICHOLS 2-26 API 0507708332 LOCATION SEC. 26. T10S, R97W. OWNER ROCKY MOUNTAIN OPERATING CO. INC. COMPLETED 810527 SAMPLED 010828 FORMATION CRET-DAKOTA	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	4.0 0.8 0.2 0.2 TRACE 0.1
STATE COLORADO COUNTY MESA FIELD PLATEAU WELL NAME NICHOLS 2-26 API 0507708332 LOCATION SEC 26, T10S, R97W OWNER ROCKY MOUNTAIN OPERATING CO. INC. COMPLETED 810527 SAMPLED 010828 FORMATION CRET-DAKOTA GEOLOGIC PROVINCE CODE 595	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	4.0 0.8 0.2 0.2 TRACE 0.1 0.1
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	4.0 0.8 0.2 TRACE 0.1 0.1 0.5 0.0
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN ARGON HYDROGEN	4.0 0.8 0.2 TRACE 0.1 0.1 0.5 0.0 TRACE
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	4.0 0.8 0.2 TRACE 0.1 0.1 0.5 0.0 TRACE
STATE COLORADO	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	4.0 0.8 0.2 TRACE 0.1 0.1 0.5 0.0 TRACE 0.0 3.6

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 80 DEGREES FAMRENHEIT 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

SAMPLE	20795	COMPONENT, MOLE PCT	
QTATE	COLORADO	METHANE	93.2
		ETHANE	2.0
	MESA	PROPANE	0.1
	SHIRE GULCH	N-8UTANE	IRACE
	BLAIR NO. 1	ISOBUTANE	TRACE
	0507708156	N-PENTANE	0.0
	SEC. 1, T10S, R97W	ISOPENTANE	TRACE
OWNER ROCK	Y MOUNTAIN OPERATING CO., INC.	CYCLOPENTANE	
COMPLETED	790502	HEXANES PLUS	TRACE
SAMPLED	010827	NITROGEN	1.6
FORMATION	CRET-DAKOTA, FRONTIER	OXYGEN	0.0
GEOLOGIC PROVINCE C	CODE595_	ARGON	0.0
TRUE VERTICAL DEPTH	(FT)	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE,	PSIG0	CARBON DIOXIDE	
OPEN FLOW, MCFD	230	HELIUM	
		HEATING VALUE*	
		SPECIFIC GRAVITY	0.605
SAMPLE	20813	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	95.5
	MESA	ETHANE	1,5
	BRONCO FLATS	PROPANE	0.1
-	BRUNKU FLATS.	N-BUTANE	
	WACON TOALL NO. 4.3	N-DOTANE	TRACE
	WAGON TRAIL NO. 1-3	ISOBUTANE	
API	0507708672		0.1
API	0507708672 SEC_3_T9S_R98W	ISOBUTANE	0.1 TRACE
API	0507708672 SEC. 3, T9S, R98W MARALEX RESOURCES, INC.	ISOBUTANEISOPENTANE CYCLOPENTANE	0.1 TRACE TRACE
API	0507708672 SEC. 3, T9S, R98W MARALEX RESOURCES, INC.	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.1 TRACE TRACE
API LOCATION OWNER COMPLETED SAMPLED	0507708672 SEC. 3, T9S, R98W MARALEX RESOURCES, INC. 950511, 010828	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	TRACE TRACE TRACE TRACE
API LOCATION OWNER COMPLETED SAMPLED	0507708672 SEC. 3, T9S, R98W MARALEX RESOURCES, INC. 950511	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.1 TRACE TRACE TRACE O.1
API LOCATION OWNER COMPLETED SAMPLED FORMATION	0507708672 SEC. 3, T9S, R98W MARALEX RESOURCES, INC. 950511, 010828	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.1 TRACE TRACE TRACE O.1 0.0
API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE C	0507708672 SEC. 3, T9S, R98W MARALEX RESOURCES, INC. 950511, 010828 CRET-MESAVERDE	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.1 TRACE TRACE IRACE 0.1 0.0 0.0
API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE C	0507708672 SEC. 3. T9S. R98W MARALEX RESOURCES. INC. 950511 010828 CRET-MESAVERDE CODE 595 (FT) 2226	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.1 TRACE TRACE TRACE 0.1 0.0 0.0 0.0
API	0507708672 SEC. 3. T9S. R98W MARALEX RESOURCES. INC. 950511 010828 CRET-MESAVERDE CODE 595 (FT) 2226	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.1 TRACE TRACE TRACE 0.1 0.0 0.0 0.0 0.0 2.6
API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE C TRUE VERTICAL DEPTH MEASURED DEPTH WELLHEAD PRESSURE,	0507708672 SEC. 3, T9S, R98W MARALEX RESOURCES, INC. 950511 010828 CRET-MESAVERDE CODE 595 (FT) 2226	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE HELIUM	0.1 TRACE TRACE - TRACE 0.1 0.0 0.0 0.0 0.0 2.6
API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE COTRUE VERTICAL DEPTH MEASURED DEPTH WELLHEAD PRESSURE,	0507708672 SEC. 3, T9S, R98W MARALEX RESOURCES, INC. 950511 010828 CRET-MESAVERDE CODE 595 (FT) 2226 PSIG 290	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.1. TRACE TRACE TRACE 0.1. 0.0 0.0 0.0 0.0 0.0 1.002

^{*} CALCULATED GROSS BTU PER CUIFT, DRY, AT 80 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

SAMPLE 20805	COMPONENT, MOLE PCT	
STATECOLORADO	METHANE	85.8
COUNTY MESA	ETHANE	6.1
	PROPANE	3.1
FIELD SHIRE GULCH WELL NAME HORSESHOE CANYON 2-29	N-BUTANE	1.2
	ISOBUTANE	0.9
API	N-PENTANE	0.3
LOCATION SEC. 29, T9S, R97W	ISOPENTANE	•
OWNER KOCH EXPLORATION CO. LLC	CYCLOPENTANE	
COMPLETED930301_	HEXANES PLUS	
SAMPLED	NITROGEN	
FORMATIONCRET-MESAVERDE	OXYGEN	
GEOLOGIC PROVINCE CODE595	ARGON	
TRUE VERTICAL DEPTH (FT)2506.	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD	HELIUM	
	HEATING VALUE* SPECIFIC GRAVITY	
CAMPLE 0070F		
SAMPLE 20735	COMPONENT, MOLE PCT	
STATE KANSAS	METHANE	
COUNTY BARBER	ETHANE	
FIELD MEDICINE LODGE-BOGGS	PROPANE	
WELL NAME RICKE NO. 2	N-BUTANE	
API	N-PENTANE	
LOCATION SEC. 29, T338, R13W	ISOPENTANE	
OWNER CLARK EXPLORATION CO.	CYCLOPENTANE	
COMPLETED 000229	HEXANES PLUS	
SAMPLED 010712	NITROGEN	
FORMATION PENN-SNYDERVILLE	OXYGEN	
GEOLOGIC PROVINCE CODE375_	ARGON	0.0
	HYDROGEN	0.0
TRUE VERTICAL DEPTH (FT) 3990	HYDROGEN SULFIDE**	
MEASURED DEPTH	CARBON DIOXIDE	0.2
WELLHEAD PRESSURE, PSIG520	HELIUM	
OPEN FLOW, MCFD	HEATING VALUE*	1.020

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ASSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20405	COMPONENT MOLE PCT	
STATE	KANSAS	METHANE	71.5
		ETHANE	6.4
	FINNEY	PROPANE	3.4
FIELD	HUGOTON	N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	0.2
LOCATION	SEC. 6, T26S, R34W	ISOPENTANE	0.2
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	960423	HEXANES PLUS	0.2
SAMPLED	000815	NITROGEN	16.1
FORMATION	PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)	2668	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	.0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	0.1
OPEN FLOW, MCFD		HELIUM	0.4
OFER FLOYV, WIGFO		HEATING VALUE*	1,006
		SPECIFIC GRAVITY	0.723
SAMPLE	20406	COMPONENT, MOLE PCT	
		COMPONENT, MOLE PCT METHANE	71.5
STATE	KANSAS_	•	
STATE	KANSAS FINNEY	METHANE	5.5
STATECOUNTY	KANSAS FINNEY HUGOTON	METHANE	5.9 3.1
STATE	KANSAS FINNEY HUGOTON	METHANE ETHANE PROPANE	5.9 3.1
STATECOUNTY	KANSAS FINNEY HUGOTON JONES 6-2	METHANE ETHANE PROPANE N-BUTANE	5.9 3 - 0.9
STATE	KANSAS FINNEY HUGOTON JONES 6-2 1505521506	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	5.9 3.1 0.1 0.1
STATE COUNTY FIELD WELL NAME API	KANSAS FINNEY HUGOTON JONES 6-2 1505521506 SEC 29 1268 R34W	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	5.9 3.4 0.9 0.1 0.1
STATE COUNTY FIELD WE'LL NAME API LOCATION	KANSAS FINNEY HUGOTON JONES 6-2 1505521506 SEC. 29 T26S R34W CIMAREX ENERGY CO.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	5.9 3.1 0.3 0.3 0.3 0.3
STATE	KANSAS FINNEY HUGOTON JONES 6-2 1505521506 SEC. 29 T26S, R34W CIMAREX ENERGY CO. 970304	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE	5.9 3.3 0.3 0.3 0.3 0.3 0.3
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED	KANSAS FINNEY HUGOTON JONES 6-2 1505521506 SEC. 29 126S R34W CIMAREX ENERGY CO. 970304 000815	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	5.9 0.9 0.1 0.1 0.1 0.1 0.1
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION	KANSAS FINNEY HUGOTON JONES 6-2 1505521506 SEC. 29 126S R34W CIMAREX ENERGY CO. 970304 000815 PERM-CHASE GROUP	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	5.9 0.3 0.3 0.3 0.3 0.3 0.3 17.3
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	KANSAS FINNEY HUGOTON JONES 6-2 1505521506 SEC 29 126S R34W CIMAREX ENERGY CO 970304 000815 PERM-CHASE GROUP 360	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	5.9 0.3 0.3 0.3 0.3 0.3 0.3 17.3 0.4
STATE	KANSAS FINNEY HUGOTON JONES 6-2 1505521506 SEC. 29 126S R34W CIMAREX ENERGY CO. 970304 000815 PERM-CHASE GROUP 360 2726	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	5.9 0.5 0.5 0.7 0.7 0.7 0.7 0.0
STATE	KANSAS FINNEY HUGOTON JONES 6-2 1505521506 SEC 29 126S R34W CIMAREX ENERGY CO 970304 000815 PERM-CHASE GROUP 360 2726	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	5.9 0.9 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3
STATE	KANSAS FINNEY HUGOTON JONES 6-2 1505521506 SEC 29 126S R34W CIMAREX ENERGY CO 970304 000815 PERM-CHASE GROUP 360 2726	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	5.9 0.3 0.3 0.2 0.2 0.2 17.3 0.0 0.3 0.1 0.1 0.1 0.1
STATE	KANSAS FINNEY HUGOTON JONES 6-2 1505521506 SEC 29 126S R34W CIMAREX ENERGY CO 970304 000815 PERM-CHASE GROUP 360 2726	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	5.9 3.1 0.9 0.2 0.2 0.2 17.2 0.0 0.1 0.0 TRACE

^{*} CALCULATED GROSS BTU PER CUIFT, 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

SAMPLE 20004	COMPONENT, MOLÉ PCT	
STATE KANSAS	METHANE	61.2
	ETHANE	4.7
COUNTY FINNEY	PROPANE	2.5
FIELD HUGOTON	N-BUTANE	0.7
WELL NAME	ISOBUTANE	0.3
API1505521564_	N-PENTANE	0.1
LOCATION SEC. 33, T22S, R32W	ISOPENTANE	. 0.1
OWNER CROSS TIMBERS OPERATING CO.	CYCLOPENTANE	
COMPLETED 970829	HEXANES PLUS	0.1
SAMPLED 980127	NITROGEN	29.5
FORMATION PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	ARGON	0.1
TRUE VERTICAL DEPTH (FT)	HYDROGEN	TRACE
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG 70	CARBON DIOXIDE	0.1
,	HELIUM	0.65
OPEN FLOW, MCFD406.	HEATING VALUE*	817
	SPECIFIC GRAVITY	0.744
	Si Edil id Olaatii	U./.44
SAMPLE 20404	COMPONENT, MOLE PCT	U.133
STATE KANSAS	COMPONENT, MOLE PCT	71.5
STATE KANSAS COUNTY FINNEY	COMPONENT, MOLE PCT METHANE	71.5 6.3
STATE KANSAS COUNTY FINNEY FIELD PANOMA	COMPONENT, MOLE PCT METHANE ETHANE	71.5 6.3 3.4
STATE KANSAS COUNTY FINNEY FIELD PANOMA WELL NAME CARLTON B-1	COMPONENT, MOLE PCT METHANE ETHANE PROPANE	71.5 6.3 3.4
STATE KANSAS COUNTY FINNEY FIELD PANGMA WELL NAME CARLTON B-1 API 1505520270	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE	71.5 6.3 3.4 1.0
STATE KANSAS COUNTY FINNEY FIELD PANGMA WELL NAME CARLTON B-1 API 1505520270	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	71.5 6.3 3.4 1.0 0.4
SAMPLE 20404 STATE KANSAS COUNTY FINNEY FIELD PANOMA WELL NAME CARLTON B-1 API 1505520270 LOCATION SEC. 6, T26S, R34W OWNER CIMAREX ENERGY CO.	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	71.5 6.3 3.4 1.0 0.4 0.2
STATE KANSAS COUNTY FINNEY FIELD PANOMA WELL NAME CARLTON B-1 API 1505520270 LOCATION SEC. 6, T26S, R34W	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	71.5 6.3 3.4 1.0 9.4 0.2
STATE KANSAS COUNTY FINNEY FIELD PANGMA WELL NAME CARLTON B-1 API 1505520270 LOCATION SEC. 6, T26S, R34W OWNER CIMAREX ENERGY CO. COMPLETED 780216	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	71.5 6.3 3.4 1.0 0.4 0.2 0.2
STATE	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	71.5 6.3 3.4 1.0 9.4 0.2 9.2
ESTATE KANSAS COUNTY FINNEY FIELD PANOMA WELL NAME CARLTON B-1 API 1505520270 LOCATION SEC. 6, T26S, R34W DWNER CIMAREX ENERGY CO. COMPLETED 780216 SAMPLED 000815 FORMATION PERM-COUNCIL GROVE	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	71.5 6.3 3.4 1.0 0.4 0.2 0.2 0.2
KANSAS	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	71.5 6.3 3.4 1.0 0.4 0.2 0.2 0.2 16.3 0.0
STATE	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	71.5 6.3 3.4 1.0 9.4 0.2 9.2 16.3 0.0 9.1 TRACE
STATE	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	71.5 6.3 3.4 1.0 0.4 0.2 0.2 16.3 0.0 0.1 TRACE
STATE	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	71.5 6.3 3.4 1.0 0.4 0.2 0.2 16.3 0.0 0.1 TRACE

^{*} CALCULATED GROSS STU 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

SAMPLE	20407	COMPONENT, MOLE PCT	
STATE	KANGAG	METHANE	70.9
		ETHANE	6.0
	FINNEY	PROPANE	3.3
FIELD		N-BUTANE	
WELL NAME		ISOBUTANE	0.3
API		N-PENTANE	. 0.2
LOCATION	SEC. 34, T25S, R34W	ISOPENTANE	0.2
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	780726	HEXANES PLUS	.0.2
SAMPLED	000817	NITROGEN	17.6
FORMATION	PERM-COUNCIL GROVE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)	2891	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD		HELIUM	0.44
OF LIVY LOVY, IVICED	219	HEATING VALUE*	975
		SPECIFIC GRAVITY	0.717
SAMPLE	20288	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	73.0
		ETHANE	6.5
COUNTY		PROPANE	3.4
FIELD		N-BUTANE	1.0
WELL NAME	MEYERS 2-2	ISOBUTANE	
			0.4
API	1506720511	N-PENTANE	
			0.2
LOCATION	SEC. 17. T27S, R35W	N-PENTANE	0.2
LOCATION	SEC. 17. T27S, R35W SAMEDAN OIL CORP.	N-PENTANE	0.2
LOCATION OWNER COMPLETED	SEC. 17. T27S, R35W SAMEDAN OIL CORP. 780119	N-PENTANE ISOPENTANE CYCLOPENTANE	0.2
LOCATION OWNER COMPLETED SAMPLED	SEC. 17. T27S, R35W SAMEDAN OIL CORP. 780119 000612	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.2 0.2
LOCATION OWNER COMPLETED SAMPLED FORMATION	SEC. 17. T27S, R35W SAMEDAN OIL CORP. 780119 000612 PERM-COUNCIL GROVE	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.2 0.2 0.2 14.6 0.1
LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	SEC. 17. T27S, R35W SAMEDAN OIL CORP. 780119 000612 PERM-COUNCIL GROVE 360	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.2 0.2 0.2 14.6 0.1
LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	SEC. 17. 127S, R35W SAMEDAN OIL CORP. 780119 000612 PERM-COUNCIL GROVE 360 2946	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.2 0.2 0.2 14.6 0.1
LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	SEC. 17. 127S, R35W SAMEDAN OIL CORP. 780119 000612 PERM-COUNCIL GROVE	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.2 0.2 0.2 14.6 0.1 0.0
API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	SEC. 17. 127S, R35W SAMEDAN OIL CORP. 780119 000612 PERM-COUNCIL GROVE 360 2946	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.2 0.2 0.2 14.6 0.1 0.0 0.0
LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	SEC. 17. 127S, R35W SAMEDAN OIL CORP. 780119 000612 PERM-COUNCIL GROVE 360 2946	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.2 0.2 0.2 14.6 0.1 0.0 0.0 TRACE

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT BILDEGREES FAHRENHEIT AND 30 INCHES OF MERCURY TOUR TO THE ABSORPTION OF HZS DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20287	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	72.5
		ETHANE	6.5
COUNTY		PROPANE	3.4
FIELD	_	N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.4
API	1506720563	N-PENTANE	. 0.2
LOCATION	SEC. 9, T27S, R35W	ISOPENTANE	0.2
OWNER	SAMEDAN OIL CORP.	CYCLOPENTANE	
COMPLETED	791213	HEXANES PLUS	0.2
SAMPLED	000612	NITROGEN	14.6
FORMATION	PERM-COUNCIL GROVE	OXYGEN	0.1
GEOLOGIC PROVINCE CODE	360	ARGON	0,0
TRUE VERTICAL DEPTH (FT)	2840	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	ວ.ດ
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD		HELIUM	
OF ENT COVE, WICE D		HEATING VALUE*	
		SPECIFIC GRAVITY	0.714
SAMPLE	20437	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	
COUNTY		ETHANE	5.1
FIELD		PROPANE	2.7
		N-BUTANE	<u>0.8</u>
WELL NAME	GUNNELL 1-2	ISOBUTANE	0.3
WELL NAME	GUNNELL 1-2. 1508121175		0.3
WELL NAME	GUNNELL 1-2 1508121175 SEC. 11, 127S, R34W	ISOBUTANE	0.3
WELL NAME	GUNNELL 1-2 1508121175 SEC. 11, 127S, R34W	ISOBUTANE	0.3 0.2 0.1
WELL NAME	GUNNELL 1-2. 1508121175 SEC. 11, 127S. R34W CIMAREX ENERGY CO.	ISOBUTANEISOPENTANE	0.3 0.2 0.1
WELL NAME API LOCATION DWNER COMPLETED	GUNNELL 1-2 1508121175 SEC. 11, 127S, R34W CIMAREX ENERGY CO. 980414	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.3 0.2 0.1
WELL NAME API LOCATION OWNER COMPLETED SAMPLED	GUNNELL 1-2 1508121175 SEC. 11, 127S, R34W CIMAREX ENERGY CO. 980414	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.3 0.2 0.7 0.7 23.3
WELL NAME	GUNNELL 1-2. 1508121175 SEC. 11, 127S, R34W CIMAREX ENERGY CO. 980414 001107 PERM-CHASE GROUP	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.3 0.3 0.1 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3
	GUNNELL 1-2 1508121175 SEC. 11, 127S, R34W CIMAREX ENERGY CO. 980414 001107 PERM-CHASE GROUP	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.3 0.2 0.7 23.3 2.2 0.0
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	GUNNELL 1-2 1508121175 SEC. 11, 127S, R34W CIMAREX ENERGY CO. 980414 	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.3 0.2 0.2 0.2 23.3 2.2 0.0
WELL NAME API LOCATION DWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	GUNNELL 1-2 1508121175 SEC. 11, 127S, R34W CIMAREX ENERGY CO. 980414 001107 PERM-CHASE GROUP 360 2662	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.3 0.2 0.2 0.2 23.3 2.2 0.0
WELL NAME API LOCATION DWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	GUNNELL 1-2 1508121175 SEC. 11, 127S, R34W CIMAREX ENERGY CO. 980414	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.3 0.3 0.3 23.3 2.2 0.0 0.1 TRACE

^{*} CALCULATED GROSS 8TU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ASSORPTION OF HZS DURING SAMPLING. THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20444	COMPONENT, MOLE PCT	
STATE	RANSAS	METHANE	70.7
COUNTY		ETHANE	6.4
FIELD		PROPANE	3.8
WELL NAME	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N-BUTANE	1.3
		ISOBUTANE	0.5
API		N-PENTANE	0.3
LOCATION		ISOPENTANE	0.3
OWNER		CYCLOPENTANE	
COMPLETED		HEXANES PLUS	0.3
SAMPLED	001107	NITROGEN	16.0
FORMATION	PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)	2694	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG _	137	CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD	249	HELIUM	
		HEATING VALUE*	1.022
		SPECIFIC GRAVITY	0.735
SAMPLE	20442	COMPONENT, MOLE PCT	
STATE	KANCAG	METHANE	71.9
COUNTY		ETHANE	5.5
		PROPANE	3.0
FIELD		N-BUTANE	0.8
WELL NAME		ISOBUTANE	0.3
API		N-PENTANE	0.2
LOCATION	SEC. 4, T27S, R34W	ISOPENTANE	
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	480116	HEXANES PLUS	0.2
SAMPLED	001107	NITROGEN	17.1
		4	2.0
FORMATION	PERM-CHASE GROUP	OXYGEN	
FORMATIONGEOLOGIC PROVINCE CODE		OXYGEN	
GEOLOGIC PROVINCE CODE	360		TRACE
GEOLOGIC PROVINCE CODE	360_ 2740_	ARGON	TRACE
GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH		ARGON	TRACE
GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG		ARGONHYDROGENHYDROGEN SULFIDE**	TRACE 0.0 1RACE
GEOLOGIC PROVINCE CODE		ARGON	TRACE 0.0 10.0 TRACE 0.42

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 80 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY TO DUE TO THE ABSORPTION OF +125 DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20443	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	71.9
COUNTY	HASKELL	ETHANE	5.8
FIELD		PROPANE	3.1
		N-BUTANE	0.9
WELL NAME		ISOBUTANE	0.3
API		N-PENTANE	0.2
LOCATION		ISOPENTANE	0.2
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	970602	HEXANES PLUS	0.2
SAMPLED	001107	NITROGEN	17.0
FORMATION	PERM-CHASE GROUP	OXYGEN	
GEOLOGIC PROVINCE CODE	360	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)		HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE** _	0.0
WELLHEAD PRESSURE, PSIG _	129	CARBON DIOXIDE	
OPEN FLOW, MCFD		HELIUM	
		HEATING VALUE*	
		SPECIFIC GRAVITY	0.712
SAMPLE	20440	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	71.8
COUNTY		ETHANE	5.8
FIELD		PROPANE	3.1
		N-BUTANE	0.9
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	<u>0.2</u>
LOCATION		ISOPENTANE	<u></u>
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	930413	HEXANES PLUS	a.a.a
SAMPLED		NITROGEN	17.0
FORMATION	PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)	2701	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE"*	0.0
		CARSON DIOXIDE	
WELLHEAD PRESSURE, PSIG			
WELLHEAD PRESSURE, PSIG OPEN FLOW, MCFD		HELIUM	
WELLHEAD PRESSURE, PSIG OPEN FLOW, MCFD		HELIUM HEATING VALUE* SPECIFIC GRAVITY	970

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

SAMPLE	20436	COMPONENT, MOLE PCT	
STATE	KANSAR	METHANE	72.2
COUNTY		ETHANE	5.6
		PROPANE	2.9
FEED		N-BUTANE	3.0
WELL NAME		ISOBUTANE	0.3
API	,,,,,,	N-PENTANE	0.2
LOCATION	SEC. 2, T27S, R34W	ISOPENTANE	
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	490831	HEXANES PLUS	0.1
SAMPLED	001107	NITROGEN	17.3
FORMATION	PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)		HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE"	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIÓXIDE	TRACE
OPEN FLOW, MCFD		HELJUM	0.45
OF ERT COW, MCFO		HEATING VALUE*	958
		SPECIFIC GRAVITY	0.707
SAMPLE	20446	COMPONENT, MOLE PCT	
		COMPONENT, MOLE PCT METHANE	72.0
STATE	KANSAS	, , , , , , , , , , , , , , , , , , , ,	
STATE	KANSAS HASKELL	METHANE	5.5
STATE	KANSAS HASKELL HUGOTON	METHANE	5.5 2.5
STATE	KANSAS HASKELL HUGOTON	METHANE	5.5 2.5 0.8
STATE	KANSAS HASKELL HUGOTON GOVERNMENT 3-2	METHANE ETHANE PROPANE N-BUTANE	5.5 2.5 0.8 0.3
STATE	KANSAS HASKELL HUGOTON GOVERNMENT 3-2 1508121007	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	5.5 2.5 0.6 0.3
STATE COUNTY F ELD WELL NAME API LOCATION	KANSAS HASKELL HUGOTON GOVERNMENT 3-2 1508121007 SEC. 12, T27S, R34W	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	5.5 2.5 0.6 9.3 9.3
STATE COUNTY F ELD WELL NAME	KANSAS HASKELL HUGOTON GOVERNMENT 3-2 1508121007 SEC. 12, T27S, R34W CIMAREX ENERGY CO.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	5.5 2.5 0.6 0.3 0.7
STATE COUNTY F ELD WELL NAME API LOCATION OWNER	KANSAS HASKELL HUGOTON GOVERNMENT 3-2 1508121007 SEC 12, T27S, R34W CIMAREX ENERGY CO. 990726	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	5.5 2.5 0.6 0.3 0.2 0.1
STATE	KANSAS HASKELL HUGOTON GOVERNMENT 3-2 1508121007 SEC 12, T27S, R34W CIMAREX ENERGY CO. 990726 C01107	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	5.5 2.5 0.6 0.3 0.2 0.1
STATE COUNTY F ELD WELL NAME API LOCATION OWNER COMPLETED	KANSAS HASKELL HUGOTON GOVERNMENT 3-2 1508121007 SEC. 12, T27S, R34W CIMAREX ENERGY CO. 990726 C01107 PERM CHASE GROLP	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NUTROGEN	5.5 2.5 0.6 0.3 0.3 0.1 17.5
STATE COUNTY F ELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	KANSAS HASKELL HUGOTON GOVERNMENT 3-2 1508121007 SEC. 12, T27S, R34W CIMAREX ENERGY CO. 990726 C01107 PERM CHASE GROLP 360	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXAMES PLUS NUTROGEN OXYGEN	5.5 2.5 0.6 0.3 0.3 0.1 17.5 0.0
STATE COUNTY F ELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	KANSAS HASKELL HUGOTON GOVERNMENT 3-2 1508121007 SEC 12, T27S, R34W CIMAREX ENERGY CO. 990726 C01107 PERM CHASE GROLP 360	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	5.5 2.5 0.8 0.3 0.3 0.1 17.5 0.0 TRACE
STATE COUNTY F ELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	KANSAS HASKELL HUGOTON GOVERNMENT 3-2 1508121007 SEC. 12, T27S, R34W CIMAREX ENERGY CO. 990726 C01107 PERM CHASE GROLP 360 2762	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE MEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	5.5 0.6 0.3 0.2 0.1 17.5 0.0 TRACE
STATE COUNTY F ELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	KANSAS HASKELL HUGOTON GOVERNMENT 3-2 1508121007 SEC 12, T27S, R34W CIMAREX ENERGY CO. 990726 C01107 PERM CHASE GROLP 360 2762	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXAMES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	5.5 2.5 0.6 0.3 0.1 17.5 0.0 TRACE
STATE COUNTY F ELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	KANSAS HASKELL HUGOTON GOVERNMENT 3-2 1508121007 SEC 12, T27S, R34W CIMAREX ENERGY CO. 990726 C01107 PERM CHASE GROLP 360 2762	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXAMES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	5.5 2.5 0.6 0.3 0.3 0.1 17.5 0.0 TRACE 0.0 5.0

^{*} CALCULATED GROSS BITU FER OUTFT, URY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF HIS DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RECARLE

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

SAMPLE	20447	COMPONENT, MOLE PCT	
STATE	DASHAN	METHANE	71.9
		ETHANE	5.4
COUNTY		PROPANE	. 28
FIELD		N-BUTANE	0.8
WELL NAME		ISOBUTANE	0.3
API		N-PENTANE	0.2
LOCATION	SEC. 12, T27S, R34W	ISOPENTANE	0.1
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	490727	HEXANES PLUS	0.1
SAMPLED	001107	NITROGEN	17.9
FORMATION	PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)	2770	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD		HELIUM	
C. EIT ACT (TO C		HEATING VALUE*	
		SPECIFIC GRAVITY	0.706
SAMPLE	20439	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	68.9
	TATE OF THE PARTY		
CYCLE BUTCH		ETHANE	5.6
	HASKELL	ETHANE PROPANE	
FIELD	HASKELL PANOMA		2.9
FIELD	HASKELL PANOMA JONES U1	PROPANE	2.9 0.8
FIELD WELL NAMEAPI	HASKELL PANOMA JONES U1 1508120133	PROPANE	2.9 0.8 0.7
FIELD WELL NAMEAPI	HASKELL PANOMA JONES U1 1508120133	PROPANE N-BUTANE ISOBUTANE	2.5 0.6 0.2
FIELD WELL NAME API LOCATION	HASKELL PANOMA JONES U1 1508120133 SEC. 10, T27S, R34W	PROPANE N-BUTANE SOBUTANE N-PENTANE	2.9 0.8 0.2 0.2
FIELD WELL NAME API LOCATION OWNER	HASKELL PANOMA JONES U1 1508120133 SEC. 10, T27S, R34W CIMAREX ENERGY CO.	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	2.9 0.8 0.2 0.2
FIELD	HASKELL PANOMA JONES U1 1508120133 SEC. 10, T27S, R34W CIMAREX ENERGY CO. 781012	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	2.9 0.8 0.3 0.3 0.7
FIELD	HASKELL PANOMA JONES U1 1508120133 SEC. 10, T27S, R34W. CIMAREX ENERGY CO. 781012 001107	PROPANE N-BUTANE SOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	2.9 0.8 0.2 0.2 0.3
FIELD	HASKELL PANOMA JONES U1 1508120133 SEC. 10, T27S, R34W. CIMAREX ENERGY CO. 781012 001107 PERM-COUNCIL GROVE	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	2.9 0.8 0.3 0.3 0.3 19.3
FIELD	HASKELL PANOMA JONES U1 1508120133 SEC. 10, T27S, R34W CIMAREX ENERGY CO. 781012 001107 PERM-COUNCIL GROVE 360	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	2.9 0.6 0.2 0.1 0.1 19.7 1.6
FIELD	HASKELL PANOMA JONES U1 1508120133 SEC. 10, T27S, R34W. CIMAREX ENERGY CO. 781012 001107 PERM-COUNCIL GROVE 360 2858	PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	2.9 0.8 0.2 0.1 0.1 19.7 1.6 0.6
FIELD	HASKELL PANOMA JONES U1 1508120133 SEC. 10, T27S, R34W CIMAREX ENERGY CO 781012 001107 PERM-COUNCIL GROVE 360 2858	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	2.9 0.8 0.2 0.1 0.1 19.7 1.6 0.6
FIELD	HASKELL PANOMA JONES U1 1508120133 SEC. 10, T27S, R34W CIMAREX ENERGY CO. 781012 001107 PERM-COUNCIL GROVE 360 2858	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE HELIUM	2.9 0.6 0.2 0.1 0.1 19.7 1.6 0.6 0.6 TRACE
FIELD	HASKELL PANOMA JONES U1 1508120133 SEC. 10, T27S, R34W CIMAREX ENERGY CO. 781012 001107 PERM-COUNCIL GROVE 360 2858	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	2.9 0.8 0.2 0.1 0.1 19.7 1.6 0.6 0.6 TRAGE

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 80 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY TO DUE TO THE ABSORPTION OF H2S OF, RING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20438	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	72.6
COUNTY		ETHANE	5.7
FIELD		PROPANE	3.0
		N-BUTANE	1.0
WELL NAME	111111111111111111111111111111111111111	ISOBUTANE	0.3
	1508120157	N-PENTANE	0.2
LOCATION		ISOPENTANE	0.1
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	790227	HEXANES PLUS	0.
SAMPLED	001107	NITROGEN	17.3
FORMATION	PERM-COUNCIL GROVE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	D.:
TRUE VERTICAL DEPTH (FT)	2938	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	D.0
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD		HELIUM	0.43
CI CIT LOTT, NIOTO		HEATING VALUE*	962
		SPECIFIC GRAVITY	0.709
SAMPLE	20441	COMPONENT, MOLE PCT	
STATE	WANICAC	METHANE	71.7
		ETHANE	5.9
COUNTY		PROPANE	3.
FIELD		N-BUTANE	0.
WELL NAME		ISOBUTANE	0.4
API	1508120103	N-PENTANE	0
LOCATION	SEC. 7, T27S, R34W	ISOPENTANE	0,2
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	771215	HEXANES PLUS	0.3
		NITROGEN	17_
SAMPLED			
		OXYGEN	0.0
FORMATION	PERM-COUNCIL GROVE		
FORMATION GEOLOGIC PROVINCE CODE	PERM-COUNCIL GROVE	OXYGEN	TRACE
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	PERM-COUNCIL GROVE 360 2912	OXYGEN	TRACE
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	PERM-COUNCIL GROVE 360 2912	OXYGEN ARGON HYDROGEN	TRACE 0.0 0.0
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	PERM-COUNCIL GROVE 360 2912 248	OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	TRACE 0.0 0.0 TRACE
SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG OPEN FLOW, MCFD	PERM-COUNCIL GROVE 360 2912 248	OXYGEN	TRACE 0.0 0.0 TRACE 0.44

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

SAMPLE	20445	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	72.0
COUNTY		ETHANE	5.5
FIELD		PROPANE	2.9
		N-BUTANE	0 <u>.B</u>
WELL NAME		ISOBUTANE	0.3
AP}		N-PENTANE	0.2
LOCATION		ISOPENTANE	
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	80031B	HEXANES PLUS	0.1
SAMPLED	001107	NITROGEN	17.5
FORMATION	PERM-COUNCIL GROVE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)	2922	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD		HELIUM	0.48
OPEN FLOW, MICFO	254	HEATING VALUE*	954
		SPECIFIC GRAVITY	0.707
SAMPLE	50574	COMPONENT, MOLE PCT	
STATE	VANDAC	METHANE	77.4
		ETHANE	5.5
COUNTY		PROPANE	3.9
FIELD		N-BUTANE	2.0
WELL NAME	ADAMS 'L' NO. 2	ISOBUTANE	0.9
AP!	1508121093	N-PENTANE	0.8
LOCATION	SEC, 33, T29S, R34W	ISOPENTANE	0.7
OWNERANAI	DARKO PETROLEUM CORP.	CYCLOPENTANE	
COMPLETED	970221	HEXANES PLUS	
SAMPLED	970911	NITROGEN	5.9
		OXYGEN	
FORMATION	PENN-MORROW		
		ARGON	
GEOLOGIC PROVINCE CODE	360	ARGON	
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	360 5296		
GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH		HYDROGEN	0.0
GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	360 5296	HYDROGEN HYDROGEN SULFIDE**	0.0
GEOLOGIC PROVINCE CODE	360 5296	HYDROGEN HYDROGEN SULFIDE** CARBON DЮXIDE	0.0 0.4 0.63

^{*} CALCULATED GROSS SPU PER CU FT, URY, AT 50 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ASSORPTION OF HZS DURING SAMPLING. THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20060	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	71.7
COUNTY		ETHANE	6.5
FIELD		PROPANE	3.8
		N-BUTANE	1.2
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	
LOCATION		ISOPENTANE	0.3
OWNER		CYCLOPENTANE	
COMPLETED		HEXANES PLUS	0.3
SAMPLED	000413	NITROGEN	15.4
FORMATION	PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360.	ARGON	0.1
TRUE VERTICAL DEPTH (FT)		HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	0.1
OPEN FLOW, MCFD	305	MELIUM	
	***************************************	HEATING VALUE*	
		SPECIFIC GRAVITY	0.725
SAMPLE	20059	COMPONENT, MOLE PCT	
		COMPONENT, MOLE PCT METHANE	72.5
STATE	KANSAS		
STATE	KANSAS KEARNY	METHANE	6.6
STATECOUNTY	KANSAS KEARNY HUGOTON	METHANE	6.6
STATE	KANSAS KEARNY HUGOTON JOHNSON 4-19	METHANE	6.6 3.8 1.2
STATE COUNTY FIELD WELL NAME	KANSAS KEARNY HUGOTON JOHNSON 4-19 1509300320	METHANE ETHANE PROPANE N-BUTANE	6.6 3.8 1.2 0.4
STATE	KANSAS KEARNY HUGOTON JOHNSON 4-19 1509300320	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	6.6 3.8 3.2 0.4 0.2
STATE	KANSAS KEARNY HUGOTON JOHNSON 4-19 1509300320 SEC. 19, T25S, R36W OSBORN HEIRS CO.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	6.6 3.8 3.2 0.4 0.2
STATE	KANSAS KEARNY HUGOTON JOHNSON 4-19 1509300320 SEC. 19, T25S, R36W OSBORN HEIRS CO.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	6.6 3.8 3.2 0.4 0.2 0.3
STATE COUNTY FIELD WELL NAME	KANSAS KEARNY HUGOTON JOHNSON 4-19 1509300320 SEC. 19, 125S, R36W OSBORN HEIRS CO. 481027	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	6.6 3.8 3.2 0.4 0.2 0.3
STATE	KANSAS KEARNY HUGOTON JOHNSON 4-19 1509300320 SEC. 19, T25S, R36W OSBORN HEIRS CO. 481027 000413	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	6.6 3.8 3.2 0.4 0.2 0.3
STATE	KANSAS KEARNY HUGOTON JOHNSON 4-19 1509300320 SEC. 19, 125S, R36W OSBORN HEIRS CO. 481027, 000413 PERM-CHASE GROUP	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	6.6 3.8 3.2 0.4 0.2 0.3 0.3 14.4
STATE	KANSAS KEARNY HUGOTON JOHNSON 4-19 1509300320 SEC. 19, 125S, R36W OSBORN HEIRS CO. 481027 000413 PERM-CHASE GROUP 360	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	6.6 3.8 3.2 0.4 0.2 0.3 0.3 14.4 0.0
STATE	KANSAS KEARNY HUGOTON JOHNSON 4-19 1509300320 SEC. 19, 125S, R36W OSHORN HEIRS CO. 481027 000413 PERM-CHASE GROUP 360 2555	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE USOPENTANE USOPENTANE HEXANES PLUS NITROGEN ARGON HYDROGEN SULFIDE**	6.6 3.8 3.2 0.4 0.2 0.3 14.4 0.0 0.1
STATE	KANSAS KEARNY HUGOTON JOHNSON 4-19 1509300320 SEC. 19, 125S, R36W OSBORN HEIRS CO. 481027, 000413 PERM-CHASE GROUP 360 2555	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	6.6 3.8 3.2 0.4 0.2 0.3 14.4 0.0 0.1 0.0
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	KANSAS KEARNY HUGOTON JOHNSON 4-19 1509300320 SEC. 19, 125S, R36W OSBORN HEIRS CO. 481027 000413 PERM-CHASE GROUP 360 2555	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE USOPENTANE USOPENTANE HEXANES PLUS NITROGEN ARGON HYDROGEN SULFIDE**	6.6 3.8 3.2 0.4 0.2 0.3 14.4 0.0 0.1 0.0
STATE	KANSAS KEARNY HUGOTON JOHNSON 4-19 1509300320 SEC. 19, 125S, R36W OSBORN HEIRS CO. 481027 000413 PERM-CHASE GROUP 360 2555	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	6.6 3.8 3.2 0.4 0.2 0.3 14.4 0.0 0.1 0.0 TRACE 0.38

^{*} CALCULATED GROSS BTU PER CULFT, 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

SAMPLE 20305	COMPONENT, MOLE PCT	
STATE KANSAS	METHANE	73.0
COUNTY KEARNY	ETHANE	6.5
	PROPANE	3.3
FIELD HUGOTON	N-BUTANE	1.0
WELL NAMETATE 4-1	ISOBUTANE	0.4
API <u>1509320911</u>	N-PENTANE	0.2
LOCATION SEC. 11, T26S, R36W	ISOPENTANE	0.2
OWNER WILLIAMS PRODUCTION RMT CO.	CYCLOPENTANE	
COMPLETED 880129	HEXANES PLUS	0.2
SAMPLED	NITROGEN	14.7
FORMATION PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	ARGON	0.1
TRUE VERTICAL DEPTH (FT)	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG157_	CARBON DIOXIDE	
OPEN FLOW, MCFD 766	HELIUM	
	HEATING VALUE* SPECIFIC GRAVITY	
SAMPLE 20307	COMPONENT, MOLE PCT	
STATE KANSAS	METHANE	73.1
	ETHANE	6.5
COUNTY KEARNY	PROPANE	3.3
FIELD HUGOTON	N-BUTANE	1.0
WELL NAMETATE & L	SOBUTANE	0.4
A의 <u>1509320909</u>	N-PENTANE	0.2
LOCATION SEC. 23, T26S, R36W	ISOPENTANE	0.2
OWNER WILLIAMS PRODUCTION RMT CO.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0,2
SAMPLED000520	NITROGEN	14.7
FORMATION PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE360.	ARGON	0.1
TRUE VERTICAL DEPTH (FT)	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD889	HELIUM	
	HEATING VALUE*	1.018
	SPECIFIC GRAVITY	

^{*} CALCULATED GROSS STEPPR OFFT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ASSORPTION OF H2S DURING SAMPLING. THE REPORTED RESULTS MAY NOT BE REDABLE

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

	COMPONENT, MOLE PCT	
STATE KANSAS	METHANE	72.9
COUNTY KEARNY	ETHANE	6.4
FIELD HUGOTON	PROPANE	3.4
	N-BUTANE	1.6
WELL NAME MASONIC HOME 2-1	ISOBUTANE	0.4
API1509321264	N-PENTANE	<u>0</u> .:
LOCATION SEC. 6, T26S, R35W	ISOPENTANE	0.3
OWNER WILLIAMS PRODUCTION RMT CO.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	
SAMPLED	NITROGEN	15.
FORMATION PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE360	ARGON	0.
TRUE VERTICAL DEPTH (FT) 2716.	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE"	
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD	HELIUM	
	HEATING VALUE*	1.014
	SPECIFIC GRAVITY	0.716
SAMPLE 20303	COMPONENT, MOLE PCT	
CTATE	A SAMMAN A A A AMA	
SIAIF	METHANE	72.7
STATE KANSAS COLINTY KEADNY	ETHANE	
COUNTYKEARNY.		6.5
COUNTY KEARNY FIELD HUGOTON	ETHANE	6.5
COUNTY KEARNY FIELD HUGOTON WELL NAME TATE 3.	PROPANE	6.5 3.6 1.1
COUNTY KEARNY FIELD HUGOTON WELL NAME TATE 3 API 1509300514	PROPANE	6.5 3.6 1.7
COUNTY KEARNY FIELD HUGOTON WELL NAME TATE 3 API 1509300514	PROPANE	6.5 3.6 1.7 0.4
COUNTY KEARNY FIELD HUGOTON WELL NAME TATE 3. API 1509300514 LOCATION SEC. 13, T26S, R36W.	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	6.9 3.6 1.7 0.4 0.7
COUNTY KEARNY. FIELD HUGOTON. WELL NAME TATE 3. API 1509300514 LOCATION SEC. 13, T26S, R36W. OWNER WILLIAMS PRODUCTION RMT CO.	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	6.9 3.6 1.0 0.2 0.2
COUNTY KEARNY FIELD HUGOTON WELL NAME TATE 3 API 1509300514 LOCATION SEC 13. T26S, R36W OWNER WILLIAMS PRODUCTION RMT CO. COMPLETED 491019	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	6.9 3.6 1.0 0.2 0.3 0.3
COUNTY KEARNY FIELD HUGOTON WELL NAME TATE 3. API 1509380514 LOCATION SEC 13 T26S, R36W OWNER WILLIAMS PRODUCTION RMT CO. COMPLETED 491019 SAMPLED 000620	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	6.9 3.6 0.2 0.3 0.3 0.3
COUNTY KEARNY FIELD HUGOTON WELL NAME TATE 3. API 1509300514 LOCATION SEC. 13. T26S, R36W OWNER WILLIAMS PRODUCTION RMT CO. COMPLETED 491019 SAMPLED 000820 FORMATION PERM-CHASE GROUP	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	6.9 3.1 0.2 0.3 0.3 0.3 15.0
COUNTY KEARNY FIELD HUGOTON WELL NAME TATE 3 API 1509300514 LOCATION SEC 13, T26S, R36W OWNER WILLIAMS PRODUCTION RMT CO. COMPLETED 491019 SAMPLED 000620 FORMATION PERM-CHASE GROUP GEOLOGIC PROVINCE CODE 360	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	6.9 3.6 0.3 0.3 0.3 0.3 15.0 0.0
COUNTY KEARNY FIELD HUGOTON WELL NAME TATE 3. API 1509380514 LOCATION SEC. 13. T26S, R36W OWNER WILLIAMS PRODUCTION RMT CO. COMPLETED 491019 SAMPLED 000620 FORMATION PERM-CHASE GROUP GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2632	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	6.9 3.6 0.2 0.3 0.3 15.0 0.0 IRACE
COUNTY KEARNY FIELD HUGOTON WELL NAME TATE 3 API 1509300514 LOCATION SEC 13, T26S, R36W OWNER WILLIAMS PRODUCTION RMT CO COMPLETED 491019 SAMPLED 000620 FORMATION PERM-CHASE GROUP GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2632 MEASURED DEPTH TRUE VERTICAL DEPTH	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	6.9 3.6 0.2 0.3 0.3 0.3 15.0 0.0 TRAGE
COUNTY KEARNY FIELD HUGOTON WELL NAME TATE 3 API 1509300514 LOCATION SEC 13, T26S, R36W OWNER WILLIAMS PRODUCTION RMT CO. COMPLETED 491019 SAMPLED 000620 FORMATION PERM-CHASE GROUP GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2632 MEASURED DEPTH WELLHEAD PRESSURE, PSIG 402	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	6.9 3.1 0.2 0.3 0.3 15.0 18ACE 0.0 1RACE
COUNTY KEARNY FIELD HUGOTON WELL NAME TATE 3 API 1509300514 LOCATION SEC 13, T26S, R36W OWNER WILLIAMS PRODUCTION RMT CO COMPLETED 491019	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	6.9 3.6 0.3 0.3 0.3 15.0 0.0 TRACE 0.0 TRACE 0.40

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ASSORPTION OF H2S DURING SAMPLING. THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE 20308	COMPONENT, MOLE PCT	
STATE KANSAS	METHANE	73.0
	ETHANE	6.5
COUNTY KEARNY	PROPANE	3.3
FIELD HUGOTON	N-BUTANE	1_0
WELL NAMETATE 8	ISOBUTANE	0.4
API1509300524	N-PENTANE	0.2
LOCATION SEC. 23, T26S_R36W.	ISOPENTANE	0.2
OWNER WILLIAMS PRODUCTION RMT CO.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	9.2
SAMPLED000620_	NITROGEN	14.5
FORMATION PERM-CHASE GROUP	OXYGEN	3.0
GEOLOGIC PROVINCE CODE360_	ARGON	
TRUE VERTICAL DEPTH (FT)	HYDROĞEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	7.0
WELLHEAD PRESSURE, PSiG 409	CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD2587.	HELIUM	0.40
	HEATING VALUE*	1.021
	SPECIFIC GRAVITY	0.714
SAMPLE 20302	COMPONENT, MOLE PCT	
STATE KANSAS	METHANE	72.5
	ETHANE	6.4
COUNTY KEARNY	PROPANE	3.2
FIELD HUGOTON	N-BUTANE	1.0
WELL NAMEMASONIC HOME 2.	ISOBUTANE	0.4
API	N-PENTANE	0.2
LOCATION SEC. 6, T26S, R35W	ISOPENTANE	0.2
OWNER WILLIAMS PRODUCTION RMT CO.	CYCLOPENTANE	_
COMPLETED 380928	HEXANES PLUS	0.2
SAMPLED	NITROGEN	15.3
FORMATION PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE360_	ARGON	0.1
TRUE VERTICAL DEPTH (FT)	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG430	CARBON DIOXIDE	TRACE
	HELFUM	0.40
•		
OPEN FLOW, MCFD7000	HEATING VALUE*	1,009

^{*} CALCULATED GROSS BTU PER CUFT, 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

SAMPLE	20310	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	73.1
COUNTY	·	ETHANE	6.5
		PROPANE	3.3
·	HUGOTON	N-BUTANE	1,0
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	
LOCATION		ISOPENTANE	0.2
OWNERWILLIA		CYCLOPENTANE	
COMPLETED	900724	HEXANES PLUS	0.2
SAMPLED	000620	NITROGEN	14.6
FORMATION	PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	0.1
TRUE VERTICAL DEPTH (FT)	2773	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	177	CARBON DIOXIDE	
OPEN FLOW, MCFD	670	HELIUM	
		HEATING VALUE*	
		SPECIFIC GRAVITY	Q.7 12
SAMPLE	20282	COMPONENT, MOLE PCT	Q.712
SAMPLE STATE			
STATE	KANSAS	COMPONENT, MOLE PCT METHANE ETHANE	72.4 6.7
STATE	KANSAS KEARNY	COMPONENT, MOLE PCT METHANE	72.4 6.7
STATE COUNTY FIELD	KANSAS KEARNY HUGOTON	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE	72.4 6.7 4.0
STATE COUNTY FIELD WELL NAME	KANSAS KEARNY HUGOTON WHITE 2-2	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	72.4 6.7 4.0 1.1
STATE COUNTY FIELD WELL NAME	KANSAS KEARNY HUGOTON WHITE 2-2 1509321509	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	72.4 6.7 4.6 1.1 0.4
STATE COUNTY FIELD WELL NAME API LOCATION	KANSAS KEARNY HUGOTON WHITE 2-2 1509321509 SEC. 12, 126S, R35W	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	72.4 6.7 4.0 1.1 0.4 0.3
STATE COUNTY FIELD WELL NAME API LOCATION OWNER	KANSAS KEARNY HUGOTON WHITE 2-2 1509321509 SEC. 12, T26S, R35W CIMAREX ENERGY CO.	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	72.4 6.7 4.0 1.1 0.4 0.3
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED	KANSAS KEARNY. HUGOTON WHITE 2-2 1509321509 SEC. 12, T26S, R35W CIMAREX ENERGY CO. 960728	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	72.4 6.7 4.0 1.1 0.4 0.3 0.2
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED	KANSAS KEARNY HUGOTON WHITE 2-2 1509321509 SEC. 12, 126S, R35W CIMAREX ENERGY CO. 960728 000612	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	72.4 6.7 4.6 1.1 0.4 0.3 0.3
STATE	KANSAS KEARNY HUGOTON WHITE 2-2 1509321509 SEC. 12, 126S, R35W CIMAREX ENERGY CO. 960728 000612 PERM-CHASE GROUP	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	72.4 6.7 4.0 1.1 0.4 0.3 0.2 0.3 14.0
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED	KANSAS KEARNY HUGOTON WHITE 2-2 1509321509 SEC. 12, 126S, R35W CIMAREX ENERGY CO. 960728 000612 PERM-CHASE GROUP	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	72.4 6.7 4.0 1.1 0.4 0.3 0.2 0.3 14.0
STATE	KANSAS KEARNY. HUGOTON WHITE 2-2 1509321509 SEC. 12, T26S, R35W CIMAREX ENERGY CO. 960728 000612 PERM-CHASE GROUP 360	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN ARGON HYDROGEN	72.4 6.7 4.6 1.1 0.4 0.3 0.2 0.3 14.6 0.1
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	KANSAS KEARNY HUGOTON WHITE 2-2 1509321509 SEC. 12, 126S, R35W CIMAREX ENERGY CO. 960728 000612 PERM-CHASE GROUP 360, 2692	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	72.4 6.7 4.6 1.1 0.4 0.3 0.2 0.3 14.0 0.1 0.0
STATE	KANSAS KEARNY. HUGOTON WHITE 2-2 1509321509 SEC. 12, 126S, R35W CIMAREX ENERGY CO. 960728 000612 PERM-CHASE GROUP 360, 2692	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	72.4 6.7 4.6 1.1 0.4 0.3 0.2 0.3 14.0 0.1 0.0 0.0
STATE	KANSAS KEARNY. HUGOTON WHITE 2-2 1509321509 SEC. 12, 126S, R35W CIMAREX ENERGY CO. 960728 000612 PERM-CHASE GROUP 360 2692	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	72.4 6.7 4.0 1.1 0.4 0.3 0.2 0.3 14.0 0.0 0.0 0.0 0.1

^{*} 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

SAMPLE 20300	COMPONENT, MOLE PCT	
STATE KANSAS	METHANE	72.3
COUNTY KEARNY	ETHANE	6.5
	PROPANE	3.6
FIELD HUGOTON	N-BUTANE	1.0
WELL NAME MASONIC HOME 2-1	ISOBUTANE	0.4
API1509321264	N-PENTANE	0.2
LOCATION SEC. 6, T26S, R35W	ISOPENTANE	0.2
OWNER WILLIAMS PRODUCTION RMT.CO.	CYCLOPENTANE	
COMPLETED 930710	HEXANES PLUS	
SAMPLED	NITROGEN	15.1
FORMATION PERM-CHASE GROUP	OXYGEN	
GEOLOGIC PROVINCE CODE360	ARGON	0.1
TRUE VERTICAL DEPTH (FT) 2716	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	CARSON DIOXIDE	
ÓPEN FLÓW, MCFD	HELIUM	
VI EVI 1971, 1991 D	HEATING VALUE*	1,018
DAMPIE 00000	COMBONENT NOIS OCT	
SAMPLE 20306	COMPONENT, MOLE PCT	
STATEKANSAS	METHANE	
COUNTYKEARNY	ETHANE	
FIELD HUGOTON	PROPANE	3.5
The summer was the su	ALDUTANT	4.
	N-BUTANE	
WELL NAMETATE 4	ISOBUTANE	0.4
WELL NAME	ISOBUTANE	0.3
WELL NAME TATE 4 API 1509300512 LOCATION SEC. 11, 126S, R36W	N-PENTANEISOPENTANE	0.4 0.3 0.2
WELL NAME TATE 4 API 1509300512 LOCATION SEC. 11. T26S. R36W. OWNER WILLIAMS PRODUCTION RMT. CO.	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.4 0.3 0.2
WELL NAME TATE 4 API 1509300512 LOCATION SEC. 11, T26S, R36W OWNER WILLIAMS PRODUCTION RMT, CO. COMPLETED 491130	N-PENTANEISOPENTANE	0.3 0.3 0.2
WELL NAME TATE 4 API 1509300512 LOCATION SEC. 11. T26S. R36W. OWNER WILLIAMS PRODUCTION RMT CO. COMPLETED 491130 SAMPLED 000620	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.2 0.3 0.3 0.3
WELL NAME TATE 4 API 1509300512 LOCATION SEC. 11. T26S. R36W. OWNER WILLIAMS PRODUCTION RMT. CO. COMPLETED 491130 SAMPLED 000620 FORMATION PERM-CHASE GROUP	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.2 0.3 0.3 0.3 14.8
WELL NAME TATE 4 API 1509300512 LOCATION SEC 11 T26S R36W OWNER WILLIAMS PRODUCTION RMT CO. COMPLETED 491130 SAMPLED 000620 FORMATION PERM CHASE GROUP GEOLOGIC PROVINCE CODE 360	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.2 0.3 0.2 0.2 14.6 0.0
WELL NAME TATE 4 API 1509300512 LOCATION SEC. 11, T26S, R36W, OWNER WILLIAMS PRODUCTION RMT CO. COMPLETED 491130 SAMPLED 000620 FORMATION PERM-CHASE GROUP GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2627	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.2 0.3 0.3 0.3 14.8 0.0
WELL NAME TATE 4 API 1509300512 LOCATION SEC. 11. T26S. R36W. OWNER WILLIAMS PRODUCTION RMT. CO. COMPLETED 491130 SAMPLED 000620 FORMATION PERM-CHASE GROUP GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2627 MEASURED DEPTH	ISOBUTANE	0.2 0.3 0.3 0.3 14.6 0.0 0.1
WELL NAME TATE 4 API 1509300512 LOCATION SEC. 11. T26S. R36W. OWNER WILLIAMS PRODUCTION RMT CO. COMPLETED 491130. SAMPLED 000620. FORMATION PERM-CHASE GROUP GEOLOGIC PROVINCE CODE 360. TRUE VERTICAL DEPTH (FT) 2627. MEASURED DEPTH 406. WELLHEAD PRESSURE, PSIG 406.	ISOBUTANE	0.2 0.3 0.3 14.6 0.1 0.1 0.1 TRACE
WELL NAME TATE 4 API 1509300512 LOCATION SEC. 11. T26S. R36W. OWNER WILLIAMS PRODUCTION RMT. CO. COMPLETED 491130 SAMPLED 000620 FORMATION PERM-CHASE GROUP GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2627 MEASURED DEPTH	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	0.4 0.3 0.2 0.2 14.6 0.0 0.1 0.0 TRACE

^{&#}x27; CALCULATED GROSS 810 PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY "DUE TO THE ASSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT 8E RELIABLE

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

SAMPLE 20298	COMPONENT, MOLE PCT	
STATE KANSAS	METHANE	72.7
COUNTYKEARNY	ETHANE	6.5
FIELD HUGOTON	PROPANÉ	3.3
WELL NAME MASONIC HOME 6	N-BUTANE	1.0
	ISOBUTANE	0.4
API1509300501	N-PENTANE	0.2
LOCATION SEC. 2, T26S, R36W	ISOPENTANE	
OWNER WILLIAMS PRODUCTION RMT CO.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0.2
SAMPLED	NITROGEN	15.1
FORMATION PERM-CHASE GROUP	OXYGEN	<u>D.</u> (
GEOLOGIC PROVINCE CODE360_	ARGON	0.1
TRUE VERTICAL DEPTH (FT)2720	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD3240	HELIUM	
	HEATING VALUE*	
	SPECIFIC GRAVITY	0.7.14
SAMPLE 20299	COMPONENT, MOLE PCT	
STATEKANSAS	METHANE	72.6
COUNTYKEARNY	ETHANE	6.5
FIELD HUGOTON	PROPANE	3.3
	N-BUTANE	1_(
WELL NAME MASONIC HOME 9	ISOBUTANE	0.
API 1509300469	N-PENTANE	0.3
LOCATION SEC. 6, T26S, R35W	ISOPENTANE	0.3
OWNER WILLIAMS PRODUCTION RMT CO.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	
SAMPLED	NITROGEN	15.7
FORMATION PERM-CHASE GROUP	OXYGEN	
GEOLOGIC PROVINCE CODE360_	ARGON	
	HYDROGEN	0.0
TRUE VERTICAL DEPTH (FT)		0.0
TRUE VERTICAL DEPTH (FT)	HYDROGEN SULFIDE**	
	CARBON DIOXIDE	TRACE
TRUE VERTICAL DEPTH (FT)		TRACE

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 80 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ASSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE 20295	COMPONENT, MOLE PCT
CYATC VANDAC	METHANE72
STATE KANSAS	ETHANE6
COUNTY KEARNY.	PROPANE3
FIELD HUGOTON.	N-BUTANE1
WELL NAMELEE 6-L	ISOBUTANE
API1509320927_	N-PENTANE
LOCATION SEC. 27, T25S, R36W	ISOPENTANE
OWNER WILLIAMS PRODUCTION RMT CO.	CYCLOPENTANE
COMPLETED880329	HEXANES PLUS
SAMPLED <u>000620</u>	NITROGEN14
FORMATION PERM-CHASE GROUP	OXYGEN
GEOLOGIC PROVINCE CODE360	ARGON0
TRUE VERTICAL DEPTH (FT) 2676	HYDROGEN
MEASURED DEPTH	HYDROGEN SULFIDE**
WELLHEAD PRESSURE, PSIG153	CARBON DIOXIDETRAC
OPEN FLOW, MCFD 701	HELIUMO
	HEATING VALUE*10
	SPECIFIC GRAVITY0.7
SAMPLE 20331	COMPONENT, MOLE PCT
STATE KANSAS	METHANE 72
COUNTY KEARNY	ETHANE6
	PROPANE3
FIELD HUGOTON	N-BUTANE1
WELL NAMEJOHNSON_3	ISOBUTANE
API1509300319.	N-PENTANE
LOCATION SEC. 18. T25S R36W	ISOPENTANE
OWNER OSBORN HEIRS CO.	CYCLOPENTANE
COMPLETED 481103	HEXANES PLUS
SAMPLED000620	NITROGEN14
FORMATION PERM-CHASE GROUP	OXYGEN
GEOLOGIC PROVINCE CODE360_	ARGON
TRUE VERTICAL DEPTH (FT)	HYDROGEN
MEASURED DEPTH	HYDROGEN SULFIDE**
WELLHEAD PRESSURE, PSIG40.	CARBON DIOXIDE TRAC
	HELIUMQ.
OPEN FLOW, MCFD	HEATING VALUE*

^{*} CALCULATED GROSS BTU PER CU FT, ORY, AT 80 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

SAMPLE	20272	COMPONENT, MOLE PCT	
STATE	KANCAC	METHANE	72.0
COUNTY		ETHANE	6.4
		PROPANE	3.5
FIELD		N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	0.2
LOCATION	SEC. 22, T26S, R35W	ISOPENTANE	0.2
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	-
COMPLETED	480116	HEXANES PLUS	0.2
SAMPLED	000612	NITROGEN	15.6
FORMATION	PERM-CHASE GROUP,	OXYGEN	Q_1
GEOLOGIC PROVINCE CODE	360.	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	2699	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD		HÉLIÇM	0.41
or city corr, more		HEATING VALUE*	1.011
		SPECIFIC GRAVITY	0.718
SAMPLE	20275	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	72.1
COUNTY		ETHANE	6.4
		PROPANE	3.5
FIELD		N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	0.2
LOCATION	SEC. 10, T26S, R35W	ISOPENTANE	0.2
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	<u>480116</u>	HEXANES PLUS	0.2
SAMPLED	000612	NITROGEN	15.6
FORMATION	PERM-CHASE GROUP	OXYGEN	0.1
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	2750	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE"	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	TRACE
		HELIUM	0.41
OPEN FLOW MORD	70		
OPEN FLOW, MCFD	79	HEATING VALUE*	1,007

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE 10 THE ABSORPTION OF HZS DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20274	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	72.1
COUNTY		ETHANE	6.5
FIELD	HUGOTON	PROPANE	3.4
·		N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.4
API	1509321610	N-PENTANE	0,2
LOCATION		SOPENTANE	0.2
OWNER		CYCLOPENTANE	
COMPLETED	980209	HEXANES PLUS	0.2
SAMPLED	000612	NITROGEN	15.4
FORMATION	PERM-CHASE GROUP	OXYGEN	
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	2676	HYDROGEN	0.0
MEAŞURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	
OPEN FLOW, MCFD		HELIUM	
or Ex 1 con, nor o	15-44	HEATING VALUE*	1.012
		SPECIFIC GRAVITY	0.718
SAMPLE	20284	COMPONENT, MOLE PCT	
STATE	KANGAG	METHANE	71.9
COUNTY		ETHANE	6.5
COORT 1	NEADWI.	PROPANE	3.5
CUTI O			. 3.5
		N-BUTANE	•
WELL NAME	WHITE 1	N-BUTANE	1.1
WELL NAME	WHUTE 1 1509300472		0.4
WELL NAME	WHUTE 1 1509300472	ISOBUTANE	1.1 0.4 0.5
WELL NAMEAPI	WHITE 1 1509300472 SEC. 9, T26S, R35W	ISOBUTANE	0.4 0.3 0.2
WELL NAME API LOCATION OWNER	WHITE 1 1509300472 SEC. 9, T26S, R35W CIMAREX ENERGY CO.	ISOBUTANEISOPENTANE	0.4 0.3 0.2
WELL NAME API LOCATION OWNER COMPLETED	WHITE 1 1509300472 SEC. 9, T26S, R35W CIMAREX ENERGY CO. 450703	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.4
WELL NAME API LOCATION OWNER COMPLETED SAMPLED	WHITE 1 1509300472 SEC. 9, T26S, R35W CIMAREX ENERGY CO. 450703 000612	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.4 0.2 0.2 0.3 0.3
WELL NAME	WHITE 1 1509300472 SEC. 9, T26S, R35W CIMAREX ENERGY CO. 450703 000612 PERM-CHASE GROUP	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.4 0.3 0.2 0.2 0.3 15.4 TRACE
WELL NAME	WHITE 1 1509300472 SEC. 9, T26S, R35W CIMAREX ENERGY CO. 450703 000612 PERM-CHASE GROUP 360	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.3 0.2 0.3 0.2 0.3 15.4 TRACE
WELL NAME	WHITE 1 1509300472 SEC. 9, T26S, R35W CIMAREX ENERGY CO. 450703 000612 PERM-CHASE GROUP 360 2704	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.5 0.5 0.5 15.4 TRACE
WELL NAME	WHITE 1 1509300472 SEC. 9, T26S, R35W CIMAREX ENERGY CO. 450703 000612 PERM-CHASE GROUP 360 2704	ISOBUTANE	0.3 0.3 0.2 0.3 15.4 TRACE
WELL NAME	WHITE 1 1509300472 SEC. 9, T26S, R35W CIMAREX ENERGY CO. 450703 000612 PERM-CHASE GROUP 360 2704	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	9.3 9.3 15.4 TRACE 0.0 0.0
FIELD	WHITE 1 1509300472 SEC. 9, T26S, R35W CIMAREX ENERGY CO. 450703 000612 PERM-CHASE GROUP 360 2704	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	1.1 0.4 0.3 0.2 9.3 15.4 TRACE 0.0 0.0 TRACE

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

SAMPLE	20276	COMPONENT, MOLE PCT	
STATE	KANISAS	METHANE	72.2
	KEARNY	ETHANE	6.4
FIELD		PROPANE	3.3
		N-BUTANE	10
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	0.2
LOCATION		SOPENTANE	0.2
OWNER		CYCLOPENTANE	
COMPLETED	480116	HEXANES PLUS	0.2
SAMPLED	000612	NITROGEN	
FORMATION	PERM-CHASE GROUP	OXYGEN	0.1
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	2742	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	. 412	CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD	119	HELIUM	0.41
		HEATING VALUE*	1.006
		SPECIFIC GRAVITY	0.716
SAMPLE	20278	COMPONENT, MOLE PCT	
STATE	KANGAG	METHANE	72.2
COUNTY		ETHANE	6.5
		PROPANE	3.3
FIELD		N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.4
API	1509321557	N-PENTANE	0.2
LOCATION	SEC. 14, T26S, R35W	ISOPENTANE	0.2
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	970302	HEXANES PLUS	D.2
SAMPLED	000612	NITROGEN	15.5
FORMATION	PERM-CHASE GROUP	OXYGEN	0.1
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)		HYDROGEN	0.0
		HYDROGEN SULFIDE**	0.0
MEASURED DEPTH			
MEASURED DEPTH		CARBON DIOXIDE	IRACE
WELLHEAD PRESSURE, PSIG _	120	CARBON DIOXIDE	
	120		0.42

^{*} CALCULATED GROSS BTU PER CU FT. DRY, AT 80 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

SAMPLE	20277	COMPONENT, MOLE PCT	
STATE	KVWCVC	METHANE	72.2
		ETHANE	6.4
COUNTY	KEARNY	PROPANE	3.3
FIELD		N-BUTANE	1.0
WELL NAME	CB & L NO. 11	ISOBUTANÉ	0.4
API	1509300478	N-PENTANE	D.2
LOCATION	SEC. 15, I26S, R35W	ISOPENTANE	0.2
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	450221	HEXANES PLUS	0.2
SAMPLED	000612	NITROGEN	15.7
FORMATION	PERM-CHASE GROUP	OXYGEN	0.1
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERT CAL DEPTH (FT)	2720	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD		HELIGM	0.42
OPEN FLOW, MICED	230	HEATING VALUE*	1,304
		SPECIFIC GRAVITY	0.716
SAMPLE	20281	COMPONENT, MOLE PCT	
STATE	PARIAN	METHANE	71.8
COUNTY		ETHANE	6.4
		PROPANE	
	LEIGOTON		3. 5
	HUGOTON	N-BIJTANE	
WELL NAME	WHITE 2		1.0
WELL NAME	WHITE 2 1509300475	N-BUTANE	1.0
WELL NAME	WHITE 2 1509300475	N-BUTANE	1.0 0.4 0.2
WELL NAMEAPILOCATION	WHITE 2 - 509300475 SEC. 12, T26S, R35W	N-BUTANE	1.0 0.4 0.2 0.2
WELL NAME	WHITE 2 - 509300475 SEC. 12, "26S, R35W CIMAREX ENERGY CO.	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	1.0 0.4 0.2 0.2
WELL NAME	WHITE 2 	N-BUTANE	0.4 0.2 0.2 0.2
WELL NAME	WHITE 2	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	1.0 0.4 0.2 0.2 0.2
WELL NAME	WHITE 2	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	1.0 0.4 0.2 0.2 0.2 15.6 TRACE
WELL NAME	WHITE 2	N-BUTANE SOBUTANE SOBUTANE SOPENTANE	1.0 0.4 0.2 0.2 0.2 15.6 TRACE
WELL NAME	WHITE 2	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	1.0 0.4 0.2 0.2 0.2 15.6 TRACE
WELL NAME	WHITE 2	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	1.0 0.4 0.2 0.2 15.6 TRACE 0.0
WELL NAME	WHITE 2	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	1.0 0.4 0.2 0.2 0.2 15.8 TRACE 0.0 0.0
WELL NAME	WHITE 2	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	1.0 0.4 0.2 0.2 0.2 15.8 TRACE 0.0 0.0 TRACE

^{*}CALCULATED GROSS BTO PER OUFT, DRY, AT 80 DEGREES FAHRENHEIT AND 30 INCHES DE MERCURY TO THE ABSORPTION OF M2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20333	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	71.0
		ETHANE	6.4
COUNTY		PROPANE	3.4
FIELO		N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	0.2
LOCATION	SEC. 6, T26S, R35W	ISOPENTANE	0.2
OWNER	SAMEDAN OIL CORP.	CYCLOPENTANE	-
COMPLETED	791103	HEXANES PLUS	0.2
SAMPLED	000620	NITROGEN	16.3
FORMATION	PERM-COUNCIL GROVE	OXYGEN	0.3
GEOLOGIC PROVINCE CODE _	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	2852	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	IRACE
OPEN FLOW, MCFD		HELIUM	0.39
OPEN FEOVY, MIOFD		HEATING VALUE*	99
		SPECIFIC GRAVITY	0.722
SAMPLE	20286	COMPONENT, MOLE PCT	
STATE	PARIAN	METHANE	73.1
COUNTY		ETHANE	6.3
		PROPANE	3.
FIELD		N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	0.3
LOCATION	SEC, 20, 126S, R36W	ISOPENTANE	0.2
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	<u>751014</u>	HEXANES PLUS	0.2
SAMPLED	000612	NiTROGEN	13.9
FORMATION	PERM-COUNCIL GROVE	OXYGEN	0.1
GEOLOGIC PROVINCE CODE _	360	ARGON	a.c
TRUE VERTICAL DEPTH (FT)	2812	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	TRACE
		HELIUM	0.39
OPEN FLOW MOED			
OPEN FLOW, MCFD	149	HEATING VALUE*	1.035

^{*} 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

SAMPLE 20297		COMPONENT, MOLE PCT	
STATE	ΔΝΩΔΩ	METHANE	72.8
COUNTY K		ETHANE	6.5
FIELD P		PROPANE	3.3
WELL NAMEMASONIC.HI		N-BUTANE	1.0
		ISOBUTANE	Q.4
API1509		N-PENTANE	a.2
LOCATION SEC. 35, T258		ISOPENTANE	
OWNERWILLIAMS_PRODUCTION R		CYCLOPENTANE	
COMPLETED	760714	HEXANES PLUS	0.2
SAMPLED	000620	NITROGEN	
FORMATION PERM-COUNCIL	GROVE.	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	
TRUE VERTICAL DEPTH (FT)	2796.	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	199	CARBON DIOXIDE	
OPEN FLOW, MCFD	1200	HELIUM	
		HEATING VALUE*	
		SPECIFIC GRAVITY	
SAMPLE 20309		COMPONENT, MOLE PCT	
STATEk	ANSAS	METHANE	72.8
		ETHANE	6.5
	EVBNA		
elei n	EARNY.	PROPANE	3.5
	ANOMA.	PROPANE	
WELL NAME	ANOMA. ATE 8-2		1.0
WELL NAME	ANOMA. ATE 8-2 3320216	N-BUTANE	1.0 0.4
WELL NAME Total API 1509 LOCATION SEC. 23, T268	ANOMA. ATE 8-2 3320216 5. R36W	N-BUTANE	0.5 0.5
WELL NAME Total API 1509 LOCATION SEC. 23, T268	ANOMA. ATE 8-2 3320216 5. R36W	N-BUTANE ISOBUTANE N-PENTANE	1.0 0.4 0.2 0.2
WELL NAME	ANOMA. ATE 8-2 3320216 5. R36W	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	1.0 0.4 0.2 0.2
WELL NAME	ANOMA. ATE 8-2. 3320216 5. R36W MI CO. 751229	N-BUTANEISOBUTANEISOPENTANEISOPENTANE	1.0 0.4 0.5 0.2
WELL NAME T. API 1509 LOCATION SEC. 23, T268 OWNER WILLIAMS PRODUCTION R COMPLETED SAMPLED	ANCMA. ATE 8-2 3320216 5. R36W MI CO. 751229 000620	N-BUTANEISOBUTANEISOPENTANEISOPENTANE	0.2 0.2 0.2 0.2
WELL NAME	ANOMA. ATE 8-2. 3320216 5, R36W MT CO. 751229 .000620 GROVE.	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.2 0.2 0.2 0.2 0.2 0.2
WELL NAME	ANOMA. ATE 8-2. 3320216 5, R36W MT CO. 751229 .000620 GROVE.	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.2 0.2 0.2 0.2 0.2 0.2
WELL NAME	ANOMA. ATE 8-2 3320216 3. R36W MT CO. 751229 .000620 GROVE360 .2855	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	1.0 0.4 0.2 0.2 0.2 0.2 0.4 0.6 0.1
WELL NAME	ANOMA. ATE 8-2. 3320216 5. R36W MI CO. 751229 .000620 GROVE. 	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	0.2 0.2 0.2 0.2 0.2 0.0 0.0 0.1 0.0 0.0 0.0
WELL NAME	ANOMA. ATE 8-2. 3320216 5. R36W MI CO. 751229 .000620 GROVE. 360 _2855	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	1.0 0.4 0.2 0.2 0.2 14.6 0.0 0.1 0.0 TRACE
WELL NAME	ANOMA. ATE 8-2. 3320216 5. R36W MI CO. 751229 .000620 GROVE. 360 _2855	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	1.0 0.4 0.2 0.2 0.2 14.6 0.0 0.1 0.0 TRACE

^{*} 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

	20330	COMPONENT, MOLE PCT	
STATE	KANGAG	METHANE	72.7
		ETHANE	6.7
COUNTY		PROPANE	3.8
	PANOMA	N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.4
AP!		N-PENTANE	0.3
LOCATION	SEC. 19, T25S, R36W	ISOPENTANE	0.2
OWNER	OSBORN HEIRS CO.	CYCLOPENTANE	
COMPLETED	731128	HEXANES PLUS	0.2
SAMPLED	000619	NITROGEN	14.3
FORMATION	PERM-COUNCIL GROVE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)		HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD		HELIUM	0.40
OFEN FLOW, MIGED		HEATING VALUE*	1.035
		SPECIFIC GRAVITY	0.719
SAMPLE	20304	COMPONENT, MOLE PCT	
STATE	MANCAR	METHANE	72.3
COUNTY		ETHANE	6.5
		PROPANE	3.4
FIELD		N-BUTANE	1.1
WELL NAME	TATE 3-2	ISOBUTANE	0.4
		N-PENTANE	
			0.3
LOCATION	SEC. 13, 126S, R36W	N-PENTANE	0.3
API LOCATION OWNER WILLIA COMPLETED	SEC. 13. T26S, R36W MS PRODUCTION RMT CO.	N-PENTANE	0.3
LOCATIONOWNERWILLIA	SEC. 13. T26S, R36W MS PRODUCTION RMT CO. 751229	N-PENTANE ISOPENTANE CYCLOPENTANE	0.3
LOCATIONWILLIA COMPLETED SAMPLED	SEC. 13, T26S, R36W MS PRODUCTION RMT CO. 751229 000620	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.3 0.2 0.3
LOCATION WILLIA COMPLETED SAMPLED FORMATION	SEC. 13. T26S, R36W MS PRODUCTION RMT CO. 751229 000620 PERM-COUNCIL GROVE	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.3 0.2 0.3 15.1
LOCATION WILLIA COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	SEC. 13. T26S, R36W MS PRODUCTION RMT CO. 751229 000620 PERM-COUNCIL GROVE 360.	N-PENTANE	0.3 0.2 0.3 15.1 0.0
LOCATION	SEC. 13. T26S, R36W MS PRODUCTION RMT CO. 751228 000620 PERM-COUNCIL GROVE 360. 2803.	N-PENTANE	0.3 -0.2
LOCATION	SEC. 13. T26S, R36W MS PRODUCTION RMT CO. 751229 000620 PERM-COUNCIL GROVE 360. 2803	N-PENTANE	0.3 0.2 0.3 15.1 0.0 TRACE
LOCATION	SEC. 13. T26S, R36W MS PRODUCTION RMT CO. 751228 000620 PERM-COUNCIL GROVE 360. 2803	N-PENTANE	0.3 0.2 0.3 15.1 0.0 TRACE
LOCATIONWILLIA	SEC. 13. T26S, R36W MS PRODUCTION RMT CO. 751228 000620 PERM-COUNCIL GROVE 360. 2803	N-PENTANE	0.3 0.2 0.3 15.1 0.0 TRACE 0.0 TRACE

 $^{^{\}circ}$ CALCULATED GROSS BTU PER CB FT, DRY, AT 80 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY $^{\circ}$ 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

SAMPLE 20296	COMPONENT, MOLE PCT	
STATEKANSAS_	METHANE	72.7
COUNTY KEARNY	ETHANE	6.!
	PROPANE	3.4
	N-BUTANE	1.0
WELL NAME RODERICK 3-2.	ISOBUTANE	0.4
API1509320305.	N-PENTANE	0.2
LOCATION SEC. 26, T25S, R36W	ISOPENTANE	0.2
OWNER WILLIAMS PRODUCTION RMT CO.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0.2
SAMPLED000620	NITROGEN	15.0
FORMATION PERM-COUNCIL GROVE	OXYGEN	1.0
GEOLOGIC PROVINCE CODE360_	ARGON	0.1
TRUE VERTICAL DEPTH (FT) 2798	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG 207	CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD 1057	HELIUM	0.40
OF EN PLOYV, MOPE	HEATING VALUE*	1,013
	SPECIFIC GRAVITY	0.712
SAMPLE 20285	COMPONENT, MOLE PCT	
STATE KANSAS	METHANE	71.3
COUNTY KEARNY	ETHANE	6.6
	PROPANE	3.7
FIELD PANOMA	N-BUTANE	1.3
WELL NAME WHITE A-2	ISOBUTANE	0.5
API	N-PENTANE	0.4
LOCATIONSEC. 9, T26S, R35W_	ISOPENTANE	U.,
	ISOPENTANE	
OWNER CIMAREX ENERGY CO.		
OWNER CIMAREX ENERGY CO. COMPLETED 780111	CYCLOPENTANE	0.4
OWNER CIMAREX ENERGY CO. COMPLETED 780111 SAMPLED 000612	CYCLOPENTANE	0.4 15.1
OWNER CIMAREX ENERGY CO. COMPLETED 780111 SAMPLED 000612 FORMATION PERM-COUNCIL GROVE	CYCLOPENTANE HEXANES PLUS NITROGEN	0.4 15.1 TRACE
LOCATION SEC. 9, T26S, R35W OWNER CIMAREX ENERGY CO. COMPLETED 780111 SAMPLED 000612 FORMATION PERM-COUNCIL GROVE GEOLOGIC PROVINCE CODE 350 TRUE VERTICAL DEPTH (FT) 2962	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.4 15. TRACE
OWNER CIMAREX ENERGY CO. COMPLETED 780111 SAMPLED 000612 FORMATION PERM-COUNCIL GROVE GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2962	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.4 15.1 TRACE 0.0
OWNER CIMAREX ENERGY CO. COMPLETED 780111 SAMPLED 000612 FORMATION PERM-COUNCIL GROVE GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2962 MEASURED DEPTH	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.4 15.1 TRACE 0.0
OWNER CIMAREX ENERGY CO. COMPLETED 780111 SAMPLED 000612 FORMATION PERM-COUNCIL GROVE GEOLOGIC PROVINCE CODE 350 TRUE VERTICAL DEPTH (FT) 2962 MEASURED DEPTH WELLHEAD PRESSURE, PSIG	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.4 15. TRACE 0.0 0.0
OWNER CIMAREX ENERGY CO. COMPLETED 780111 SAMPLED 000612 FORMATION PERM-COUNCIL GROVE GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 2962	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.4 15. TRACE 0.0 0.0 TRACE

^{*} CALCULATED GROSS BTU, PER CU FT, DRY, AT 90 DEGREES FAHRONHEIT AND 30 INCHES OF MERCURY TO 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

SAMPLE	20334	COMPONENT, MOLE PCT	
STATE	LE A M O A SE	METHANE	72.5
		ETHANE	5.5
COUNTY		PROPANE	3.5
FIELD		N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.4
API	1509320697	N-PENTANE	0.2
LOCATION	SEC, 11, T26S, R36W	ISOPENTANE	0.2
OWNER	SAMEDAN OIL CORP.	CYCLOPENTANE	
COMPLETED	800816	HEXANES PLUS	0.2
SAMPLED	000620	NITROGEN	14,9
FORMATION	PERM-COUNCIL GROVE.	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	Ω.
TRUE VERTICAL DEPTH (FT)	2806	HYDROGEN	9.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	IRACE
OPEN FLOW, MCFD		HELROM	0.41
Omera regya, M.Cro		HEATING VALUE	1.020
		SPECIFIC GRAVITY	0,717
SAMPLE	20332	COMPONENT, MOLE PCT	
STATE	KAMPAS	METHANE	72.3
		ETHANE	6.5
COUNTY	KEARNY	PROPANE	2.0
mumu o		1101140	<u></u>
		N-BUTANE	
			1.0
WELL NAME	MASONIC HOME 9-2	N-BUTANE	1.0 0.4
WELL NAME	MASONIC HOME 9-2 1509320639	N-BUTANE	1.0 0.4 0.2
WELL NAME	MASONIC HOME 9-2 1509320639 SEC 6, 126S, R35W	N-BUTANE ISOBUTANE N-PENTANE	1.0 0.4 0.2 0.2
WELL NAME API LOCATION OWNER	MASONIC HOME 9-2 1509320639 SEC. 6, T26S, R35W SAMEDAN OIL CORP	N-BUTANEISOBUTANEISOPENTANEISOPENTANE	0.4 0.2 0.2
WELL NAME API LOCATION OWNER COMPLETED	MASONIC HOME 9-2 1509320639 SEC 6, T26S, R35W SAMEDAN OIL CORP 800605	N-BUTANE	1.0 0.4 8.2 0.2
WELL NAME API LOCATION OWNER COMPLETED SAMPLED	MASONIC HOME 9-2 1509320639 SEC 6, 126S, R35W SAMEDAN OIL CORP 800605 000620	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	1.0 0.4 0.2 0.2 0.2
WELL NAME AP; LOCATION OWNER COMPLETED SAMPLED FORMATION	MASONIC HOME 9-2 1509320639 SEC. 6, T26S, R35W SAMEDAN OIL CORP. 800605 000620 PERM. COUNCIL GROVE	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	1.0 0.4 9.2 0.2 0.2 15.3
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	MASONIC HOME 9-2 1509320639 SEC. 6, 1268, R35W SAMEDAN OIL CORP 800605 000620 PERM-COUNCIL GROVE 360	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	1.0 0.4 0.2 0.2 0.2 15.3
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (ET)	MASONIC HOME 9-2 1509320639 SEC 6, 126S, R35W SAMEDAN OIL CORP 800605 000620 PERM COUNCIL GROVE 360 2830	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	1.0 0.4 0.2 0.2 15.3 0.0 9.3
WELL NAME AP; LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MÉASURED DEPTH	MASONIC HOME 9-2 1509320639 SEC. 6. T26S. R35W SAMEDAN OIL CORP. 800605 000620 PERM. COUNCIL GROVE 360 2830.	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	1.0 0.4 0.2 0.2 15.3 0.0 9.3 0.0
FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (ET) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	MASONIC HOME 9-2 1509320639 SEC. 6. T26S. R35W SAMEDAN OIL CORP 800605 000620 PERM COUNCIL GROVE 360 2630	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	1.0 0.4 0.2 0.2 0.2 15.3 0.0 0.1
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MÉASURED DEPTH	MASONIC HOME 9-2 1509320639 SEC. 6. T26S. R35W SAMEDAN OIL CORP 800605 000620 PERM COUNCIL GROVE 360 2630	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	1.0 0.4 9.2 0.2 15.3 0.0 9.1 0.0 TRACE

I CALCULATED GROSS 610 PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY IN DUE TO THE ASSORPTION OF H2S DURING SAMPLING. THE REPORTED RESULTS MAY NOT 66 ABLIABLE

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

SAMPLE	20279	COMPONENT, MOLE PCT	
STATE	KANGAG	METHANE	71.5
		ETHANE	6.4
COUNTY		PROPANE	3.5
FIELD		N-BUTANÉ	1.0
WEL_ NAME	_	ISOBUTANE	0.4
API		N-PENTANE	0.2
LOCATION	SEC. 14. T26S. R35W	ISOPENTANE	0.2
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	_
COMPLETED	770816	HEXANES PLUS	0.2
SAMPLED	000612	NITROGEN	15.6
FORMATION	PERM-COUNCIL GROVE	OXYGEN	0.1
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	2886	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	
OPEN FLOW, MCFD		HELIUM	
O: ENT LOW, MICH D		HEATING VALUE*	1.013
		SPECIFIC GRAV:TY	0.72
SAMPLE	20273	COMPONENT, MOLE PCT	
STATE	KANEAG	METHANE	71.9
		ETHANE	ā.:
GOUNTY		PROPANE	3.:
FIELD		N-BUTANE	1.
WELL NAME	CB & LB C-1	ISOBUTANE	02
API	1509320518	N-PENTANE	0.:
LOCATION	SEC. 15, T26S, R35W	ISOPENTANE	0.3
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	_
			0.5
COMPLETED	780710	HEXANES PLUS	ш.,
COMPLETEDSAMPLED		HEXANES PLUS NITROGEN	
	000612		15.4
SAMPLEDFORMATION	000612 PERM-COUNCIL GROVE	NITROGEN	15 .4
SAMPLED	000612 PERM-COUNCIL GROVE 360	NITROGEN	15.4 0.1
SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	900612 PERM-COUNCIL GROVE 360 2930	NITROGEN OXYGEN ARGON	15.4 0.1 0.0
SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH		NITROGEN OXYGEN ARGON HYDROGEN	0.0 0.0 0.0 0.0
SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	060612 PERM-COUNCIL GROVE 360 2930	NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	15.4 0.1 0.0 0.0 0.0 TRACE
SAMPLED	060612 PERM-COUNCIL GROVE 360 2930	NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON D:OXIDE	15.4 0.1 0.0 0.0 0.0 TRACE

^{*} CALCULATED GROSS BTC PER CU FT, DRY, AT 61 DEGREES FAHRENHEIT AND 30 INCHES DE MERCURY ** DUE TO THE ABSORPTION DE H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20270	COMPONENT, MOLE PCT	
STATE	KANGAG	METHANE	72.0
		ETHANE	6.4
COUNTY		PROPANE	3.4
	PANOMA	N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.4
	1509320434	N-PENTANE	0.2
LOCATION		ISOPENTANE	0.2
OWNER	CIMAREX ENERGY CO	CYCLOPENTANE	***
COMPLETED	771122	HEXANES PLUS	0.2
SAMPLED	000612	NITROGEN	15.7
FORMATION	PERM-COUNCIL GROVE	OXYGEN	0.1
GEOLOGIC PROVINCE CODE _	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	2792	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD		HELIUM	
		HEATING VALUE*	
		SPECIFIC GRAVITY	
SAMPLE	20283	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	71.8
COUNTY		ETHANE	6.4
FIELD		PROPANE	3.4
WELL NAME		N-BUTANE	1.0
APJ		ISOBUTANE	0.4
		N-PENTANE	0.2
LOCATION		ISOPENTANE	
OWNER		CYCLOPENTANE	
COMPLETED		HEXANES PLUS	
SAMPLED		NITROGEN	
FORMATION		OXYGEN	
GEOLOGIC PROVINCE CODE	360	ARGON	
TRUE VERTICAL DEPTH (FT)	2888	HYDROGEN	
MEASURED DEPTH	***************************************	HYDROGEN SULFIDE**	
		CARBON DIOXIDE	
WELLHEAD PRESSURE, PSIG 🔔			ስ ላኃ
WELLHEAD PRESSURE, PSIG OPEN FLOW, MCFD		HELIUM	
		HEATING VALUE*SPECIFIC GRAVITY	1.007

^{*} 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 DIL WELLS IN THE UNITED STATES

SAMPLE	20271	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	72.1
		ETHANE	
COUNTY		PROPANE	3.4
FIELD		N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.4
A의		N-PENTANE	0.2
LOCATION	SEC. 35, T26S, R35W	ISOPENTANE	0.2
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	······································
COMPLETED		HEXANES PLUS	0.2
SAMPLEO		NITROGEN	15.9
FORMATION	PERM-COUNCIL GROVE	OXYGEN	0.1
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	2949	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	0,0
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD		HELIUM	Q.4á
OPEN PLOW, MOPO	<u></u>	HEATING VALUE*	1,003
		SPECIFIC GRAVITY	0.717
SAMP*LE	20280	COMPONENT, MOLE PCT	
STATE	KANCAC	METHANE	71.7
		ETHANE	6.3
COUNTY		PROPANE	3.4
FIELD		N-BUTANE	0.9
WELL NAME	WHITE A-3	SOBUTANE	0.4
API	1509320553	N-PENTANE	0.2
LOCATION	SEC. 13, T26S, R35W.	ISOPENTANE	0.2
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	781130	HEXANES PLUS	0.2
SAMPLED	000612	NITROGEN	16.2
FORMATION	PERM-COUNCIL GROVE.	OXYGEN	0.1
		ARGON	. 0.0
	360		
GEOLOGIC PROVINCE CODE		HYDROGEN	0.0
GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	2873		
GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	2873	HYDROGEN	. 0.0
GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	2873	HYDROGENHYDROGEN SULFIDE**	0.0 TRACE
GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD FRESSURE, PSIG OPEN FLOW, MCFD	2873	HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 TRACE 0.42

^{*} CALCULATED CROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 WICHES OF MERCURY TO DUE TO THE ABSORPTION OF BES DURING SAMPENG. THE REPORTED RESULTS MAY NOT BE REHABLE

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

SAMPLE	20290	COMPONENT, MOLE PCT	
STATE	KANCAC	METHANE	.67.5
COUNTY		ETHANE	5.8
		PROPANE	3.
FIELD		N-BUTANE	0.
WELL NAME		ISOBUTANE	
API		N-PENTANE	
LOCATION		ISOPENTANE	0.1
OWNER COM	ITINENTAL ENERGY CORP.	CYCLOPENTANE	
COMPLETED	781120	HEXANES PLUS	0.2
SAMPLED	000614	NITROGEN	20.8
FORMATION	PERM-COUNCIL GROVE	OXYGEN	0.
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	2978	HYDROGEN	.0.0
MEASURED DEPTH		HYDROGEN SULFIDE"	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	0.0
OPEN FLOW, MCFD		HELIUM	0.54
		HEATING VALUE*	
		SPECIFIC GRAVITY	0.727
SAMPLE	20144	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	62.3
COUNTY		ETHANE	5.5
		PROPANE	3.3
	INTERSTATE	N-BUTANE	1.0
WELL NAME		ISÓBUTANE	0.3
API		N-PENTANE	0.3
LOCATION	SEC. 18, T34S, R43W	ISOPENTANE	0.:
		44. 444	
OWNER	EDGAR W. WHITE	CYCLOPENTANE	
		CYCLOPENTANE	
OWNER COMPLETED	800604		0.4
COMPLETED	800604 000502	HEXANES PLUS	0.6 .25.7
COMPLETEDSAMPLEDFORMATION	800604 000502 PERM-RED CAVE	HEXANES PLUS NITROGEN	0.6 25.7 0.1
COMPLETEDSAMPLEDFORMATIONGEOLOGIC PROVINCE CODE	800604 000502 PERM-RED CAVE 360	HEXANES PLUS NITROGEN OXYGEN	0.4 25.7 0.1
COMPLETED		HEXANES PLUS NITROGEN OXYGEN ARGON	0.6 25.7 0.1 0.0
COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	800604 000502 PERM-RED CAVE 360 2564	HEXANES PLUS	0.6 25.7 0.1 0.5 TRACE
COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	800604 000502 PERM-RED CAVE 360 2564	HEXANES PLUS	0.4 25.7 0.1 0.0 TRACE
COMPLETED	800604 000502 PERM-RED CAVE 360 2564	HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.4 25.7 0.1 0.0 TRACE 0.0

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DECREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF HZS DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20045	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	.5.15
COUNTY	MORTON	ETHANE	1.7
		PROPANE	1.2
FIELD		N-BUTANE	1.2
WELL NAME		ISOBUTANE	0.1
	1512930085	N-PENTANE	0.2
LOCATION	SEC 9, T34S, R43W	ISOPENTANE	0.5
OWNER	BEARTOOTH OIL & GAS.CO.	CYCLOPENTANE	
COMPLETED	651202	HEXANES PLUS	0.6
SAMPLED	000200	NITROGEN	41.4
FORMATION	PERM-RED CAVE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE _	360	ARGON	0.1
TRUE VERTICAL DEPTH (FT) _	1358	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG.		CARBON DIOXIDE	0,
		HELIUM	0.89
OPEN FLOW, MCFD		HEATING VALUE*	689
		SPECIFIC GRAVITY	3.788
SAMPLE	20145	COMPONENT, MOLE PCT	
STATE	PAPINAN	METHANE	52.
COUNTY		ETHANE	2.4
		PROPANE	1.6
FIELD	·	N-BUTANE	.0.
WELL NAME		ISOBUTANE	0.:
API	1512920339	N-PENTANE	0,:
LOCATION	SEC. 18, T34S, R43W	ISOPENTANE	<u>0.:</u>
OWNER	EDGAR W. WHITE	CYCLOPENTANE	
COMPLETED	780313	HEXANES PLUS	0.5
SAMPLED	000501	NITROGEN	39.6
FORMATION	PERM-RED CAVE	OXYGEN	0.
GEOLOGIC PROVINCE CODE _	350	ARGON	O
TRUE VERTICAL DEPTH (FT)	1292	HYDROGEN	0.5
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
		CARBON DIOXIDE	TRACE
WELLHEAD PRESSURE, PSIG		HELIU.V	0.96
WELLHEAD PRESSURE, PSIG		HELIU.V HEATING VALUE*	

^{*}CALCULATED GROSS BTU PER C., FT. DRY, AT 80 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

SAMPLE	20148	COMPONENT, MOLE PCT	
STATE	MANICAC	METHANE	65.6
		ETHANE	6.3
COUNTY		PROPANE	4.5
FIELD	_	N-BUTANE	1.5
WELL NAME		ISOBUTANE	0.5
API		N-PENTANE	0,5
LOCATION		ISOPENTANE	0.4
OWNER	NADEL & GUSSMAN, LLC	CYCLOPENTANE	
COMPLETED	8203:7	HEXANES PLUS	0.6
SAMPLED	000502	NITROGEN	
FORMATION	PENN-SHAWNEE	OXYGEN	TRACE
GEOLOGIC PROVINCE CODE	360	ARGON	ე.(
TRUE VERTICAL DEPTH (FT)	3104	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	0.
OPEN FLOW, MCFD	····	HELIUM	
V. 411 4011, 1101 5	***************************************	HEATING VALUE*	1,05
		SPECIFIC GRAVITY	0.77
SAMPLE	20176	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	62.9
COUNTY		ETHANE	6.5
FIELD		PROPANE	4.2
	GIVEENWOOD		
IANELL NIA KAC		N-BUTANE	1,1
	CENTRAL LIFE 1-32	N-BUTANE	
API	CENTRAL LIFE 1-32 1512910350		0.5
API	CENTRAL LIFE 1-32 1512910350 SEC. 32, T34S, R42W	ISOBUTANE	0.1
API LOCATION OWNER	CENTRAL LIFE 1-32 1512910350 SEC. 32, T34S, R42W NADEL & GUSSMAN, LLC	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.1 0.1
WELL NAME	CENTRAL LIFE 1-32 1512910350 SEC. 32, T34S, R42W NADEL & GUSSMAN, LLC	ISOBUTANE N-PENTANE ISOPENTANE	0.1 0.1
API	SEC. 32, T34S, R42W NADEL & GUSSMAN, LLC 551214	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.1 0.4 0.4
API LOCATION OWNER COMPLETED SAMPLED	CENTRAL LIFE 1-32 1512910350 SEC. 32, T34S, R42W NADEL & GUSSMAN, LLC 551214 000509	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.5 0.5 0.6 0.6 22.6
API LOCATION OWNER COMPLETED SAMPLED FORMATION	CENTRAL LIFE 1-32 1512910350 SEC. 32, T34S, R42W NADEL & GUSSMAN, LLC 551214 000509 PENN-TOPEKA	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.9 0.4 0.4 22.5 TRACE
API	CENTRAL LIFE 1-32 1512910350 SEC. 32, T34S, R42W NADEL & GUSSMAN, LLC 551214 000509 PENN-TOPEKA 360	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.9 0.4 0.4 0.6 22.0 TRACE
API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	CENTRAL LIFE 1-32 1512910350 SEC. 32, T34S, R42W NADEL & GUSSMAN, LLC 551214 000509 PENN-TOPEKA 360 3646	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.9 0.1 0.2 22.6 TRACE
API	CENTRAL LIFE 1-32 1512910350 SEC. 32, T34S, R42W NADEL & GUSSMAN, LLC 551214 000509 PENN-TOPEKA 360 3646	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.5 0.4 0.6 0.6 22.0 TRACE 0.0 0.0
API LOCATION OWNER	CENTRAL LIFE 1-32 1512910350 SEC. 32, T34S, R42W NADEL & GUSSMAN, LLC 551214 000509 PENN-TOPEKA 360 3646	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.9 0.4 0.4 0.6 722.5 TRACE 0.0 0.0

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DECREES FAHRENHEIT AND 30 NICHES OF MERCURY TO 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

SAMPLE 20146	COMPONENT, MOLE PCT	
STATE KANSAS	METHANE	63.1
COUNTY MORTON	ETHANE	5.9
	PROPANE	3.6
FIELD GREENWOOD.	N-BUTANE	1.0
WELL NAMEINTERSTATE A1_	ISOBUTANE	0.3
API1512920377_	N-PENTANE	0.3
LOCATION SEC. 19, T34S, R43W	ISOPENTANE	0.2
OWNEREDGAR W. WHITE	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0.4
SAMPLED	NITROGEN	24.4
FORMATION PENN-TOPEKA	OXYGEN	0.1
GEOLOGIC PROVINCE CODE360.	ARGON	3.0
TRUE VERTICAL DEPTH (FT)	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	0.1
	HELIUM	0.64
OPEN FLOW, MCFD90	HEATING VALUE*	924
	SPECIFIC GRAVITY	0.757
SAMPLE 20041	COMPONENT, MOLE PCT	
SASIKAN STATS	METHANE	66.0
STATE KANSAS	ETHANE	5.7
COUNTYMORTON	PROPANE	3.7
FIELD GREENWOOD.	N-BUTANE	1.5
WELL NAMEINTERSTATE NO. 1-11	ISOBUTANE	0.3
API 1512910513	N-PENTANE	0.2
LOCATION SEC 11, T34S, R43W	ISOPENTANE	0.4
OWNER	CYCLOPENTANE	
COMPLETED550601	HEXANES PLUS	0.5
SAMPLED	NiTROGEN	21.5
FORMATION PENN-WABAUNSEE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	ARGON	0.1
TRUE VERTICAL DEPTH (FT) 2955	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	TRACE
	CARBON DIOXIDE	0.1
WELLHEAD PRESSURE, PSIG426	HELIUM	0.48
OPEN FLOW, MCFD5129	LIEATING VALUE	nac
	HEATING VALUE*	301

CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHE T AND 30 INCHES OF MERCURY TO 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

SAMPLE	20191	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	63.7
COUNTY		ETHANE	6.8
FIELD	_	PROPANE	4.5
		N-BUTANE	1.7
WELL NAME		ISOBUTANE	0.5
API		N-PENTANE	0.6
LOCATION	SEC. 4, 134S, R42W	ISOPENTANE	0.4
OWNER	NADEL & GUSSMAN, LLC	CYCLOPENTANE	_
COMPLETED	<u>550515</u>	HEXANES PLUS	0.7
SAMPLED	000509	NITROGEN	20.4
FORMATION	PENN-WABAUNSEE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE _	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	2537_	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG _		CARBON D OXIDE	0.1
OPEN FLOW, MCFD	"	HELIUM	0.53
	D-UNIT	HEATING VALUE*	1,039
		SPECIFIC GRAVITY	0.786
SAMPLE	20758	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	65.1
COUNTY		ETHANE	6.2
FIELD		PROPANE	3.8
· —		N-BUTANE	1.3
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	0.4
LOCATION		ISOPENTANE	0.3
OWNER	BEARTOOTH OIL & GAS CO.	CYCLOPENTANE	
COMPLETED	550601	HEXANES PLUS	0.5
SAMPLED		NITROGEN	21.4
SAMPLED	010731	NITROGEN	
SAMPLED	010731 PENN-WABAUNSEE		0.0
SAMPLED	D10731 PENN-WABAUNSEE 360	OXYGEN	0.0
SAMPLED	010731 PENN-WABAUNSEE 360 2955	OXYGEN	0.0 0.1 0.0
SAMPLED FORMATION GEOLOGIC PROVINCE CODE _ TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	D10731 PENN-WABAUNSEE 360 2955	OXYGEN ARGON HYDROGEN	0.0 0.1 0.0 0.0
SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIC _	010731 PENN-WABAUNSEE 360 2955	OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.0 0.1 0.0 0.0
SAMPLED FORMATION GEOLOGIC PROVINCE CODE _ TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	010731 PENN-WABAUNSEE 360 2955	OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 0.1 0.0 0.0 0.1 0.55

^{*} CALCULATED GROSS 810 PER CUFT, DRY, AT 80 DEGREES FAR/RENHEIT AND 30 INCHES OF MERCURY TO 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

KANSAS MORTON BERRYMAN 1T NO. 1-20 1512920006 33S, R41W & GAS CO. 800722 991202 ABAUNSEE 360	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	5.3 3.0 1.1 0.2 0.1 0.3 23.8
MORTON JERRYMAN	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	3.0 1.1 0.2 0.1 0.3 0.3 23.8
ERRYMAN. 1T.NO. 1-20. 1512920006. 33S, R41W. & GAS.CO. 800722. 991202. MBAUNSEE. 360.	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.1 0.2 0.1 0.3 0.3 23.8
1T.NO. 1-20 .512920006 .33S, R41W & GAS CO. 	ISOBUTANE	0.2 0.1 0.3 0.3 23.8
.512920006 .33S, R41W & GAS CO	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.1 0.3 0.3 23.8
8 GAS CO	ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.3
8 GAS CO. 800722 991202 ABAUNSEE 360	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.3
	HEXANES PLUS	0.3 23.8
991202 ABAUNSEE 360	NITROGEN	23.8
ABAUNSEE 360	OXYGEN	
360		0.0
	ARGON	0.1
2960	HYDROGEN	
	HYDROGEN SULFIDE**	D.C
231	CARBON DIOXIDE	O_1
	HELIUM	0.61
	HEATING VALUE*	906
	SPECIFIC GRAVITY	0.742
	COMPONENT, MOLE PCT	
KANSAS	METHANE	64.5
	ETHANE	5.5
	PROPANE	2.9
	N-BUTANE	3.0
	ISOBUTANE	0.5
	N-PENTANE	0.2
	ISOPENTANE	0_1
	CYCLOPENTANE	
800722	HEXANES PLUS	
010801	NITROGEN	
BAUNSEE	OXYGEN	
360	ARGON	
2960	HYDROGEN	0.0
	HYDROGEN SULFIDE**	
231_		
	HELIUM	
	HEATING VALUE*	
	231 104 KANSAS MORTON BERRYMAN AT NO. 1-20 1512920006 335. R41W & GAS CO. 800722 010801 ABAUNSEE 360 2960 231 104	CARBON DIOXIDE 104 HELIUM HEATING VALUE* SPECIFIC GRAVITY COMPONENT, MOLE PCT KANSAS METHANE ETHANE BERRYMAN N-BUTANE ISOBUTANE ISOBUTANE 33S. R41W ISOPENTANE BO0722 HEXANES PLUS D10801 NITROGEN ABAUNSEE AGON LYCOPEN SULFIDE** CARBON DIOXIDE HELIUM 104

^{*} CALCULATED GROSS BTU PER CU FY, DRY, AT 80 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

SAMPLE 20427		COMPONENT, MOLE PCT	
STATE KAN	CAC	METHANE	68.1
COUNTY SEW.		ETHANE	.9.1
		PROPANE	8.8
FIELD HI		N-BUTANE	3.3
WELL NAME HITCH		ISOBUTANE	1.3
API1517520	<u> 1961.</u>	N-PENTANE	1.0
LOCATION SEC. 36, T32S, R	34W_	ISOPENTANE	0.6
OWNER BEREXCO	INC	CYCLOPENTANE	
COMPLETED870	1722	HEXANES PLUS	1.3
SAMPLED	1107	NITROGEN	5.7
FORMATION PENN-MORE	ROW_	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)		HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WEILHEAD PRESSURE, PSIG	30	CARBON DIOXIDE	0.5
OPEN FLOW, MCFD		HELIUM	0,11
OFEN FLOW, MOPO	CAARA.	HEATING VALUE*	1,358
		SPECIFIC GRAVITY	0.852
SAMPLE 20358	· #4:	COMPONENT, MOLE PCT	
STATEKAN	CAC	METHANE	83.9
		ETHANE	5.1
STEVI STEVI		PROPANE	
FIELD WIDE AW		N-BUTANE	1.0
WELL NAMEBAKER		ISOBUTANE	0.4
API1518920	0860_	N-PENTANE	0.4
OCATION SEC. 3, T35S, R3	35W.	ISOPENTANE	0.3
OWNEROUINQUE OPERATING	CO.	CYCLOPENTANE	
COMPLETED850	1829.	HEXANES PLUS	0.4
		NUTDOOMN	5.2
SAMPLED	1711.	NITROGEN	
		OXYGEN	
ORMATION PENN-MORR	WOW		0.0
FORMATIONPENN-MORE SEOLOGIC PROVINCE CODE	WOW	OXYGEN	0.0
FORMATIONPENN:MORR SEOLOGIC PROVINCE CODE FRUE VERTICAL DEPTH (FT)6	360 372	OXYGEN	0.0 TRACE
FORMATION PENN-MORR SEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) 6 MEASURED DEPTH	360 3272	OXYGENARGONHYDROGEN	0.0 0.0 TRACE 0.0
FORMATION PENN-MORR SEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) 6 MEASURED DEPTH MELLHEAD PRESSURE, PSIG	360 36272	OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.0 0.0 TRACE 0.0
SAMPLED	360 36272	OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 TRACE 0.0 0.4 0.20

^{*} 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

SAMPLE	20357	COMPONENT, MOLE PCT	
STATE	PARIAN	METHANE	83.8
COUNTY		ETHANE	5.0
		PROPANE	2.7
FIELD		N-BUTANE	0.9
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	0.3
LOCATION	SEC. 3, T35S, R35W	ISOPENTANE	0.3
OWNER	AMERICAN WARRIOR, INC.	CYCLOPENTANE	
COMPLETED	861101	HEXANES PLUS	0.4
SAMPLED	.009711	NITROGEN	5,5
FORMATION	PENN-MORROW	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	<u>0.0</u>
TRUE VERTICAL DEPTH (FT)	6522	HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	0.5
OPEN FLOW, MCFD		HELIUM	0.21
O. E. C.	to an analysis of the second s	HEATING VALUE*	1.089
		SPECIFIC GRAVITY	0.67
SAMPLE	20356	COMPONENT, MOLE PCT	
STATE	PAPIAN	METHANE	82.9
COUNTY		ETHANE	5,1
		PROPANE	2.5
FIELD		N-BUTANE	1.2
WELL NAME		ISOBUTANE	0.5
API		N-PENTANE	0.5
LOCATION	SEC. 3, T35S, R35W	ISOPENTANE	0.3
OWNER	QUINQUE OPERATING CO.	CYCLOPENTANE	<u></u>
COMPLETED	870402	HEXANES PLUS	0.4
SAMPLED	000711	NITROGEN	5.7
FORMATION	PENN-MORROW	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	6254	HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	····
		CARBON DIOXIDE	0.4
WELLBEAD PRESSURE PSUS		HELIUM	0.21
,	ne	RECION	
OPEN FLOW, MCFD	20	HEATING VALUE*	

 $^{^\}circ$ CALCULATED GROSS BTU PER CU FT, DRY, AF 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

SAMPLE 2040B	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	0.1
COUNTYCATRON	ETHANE	0.1
FIELD WILDCAT	PROPANE	TRACE
	N-BUTANE	TRACE
WELL NAME STATE 1-4 NO. 1	ISOBUTANE	0.0
API	N-PENTANE	TRACE
LOCATION SEC. 4, T1N, R21W	ISOPENTANE	
OWNER RIDGEWAY ARIZONA OIL CORP.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0.0
SAMPLED	NITROGEN	
FORMATION PERM-FORT APACHE	OXYGEN	
GEOLOGIC PROVINCE CODE475	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)1783	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG 318	CARBON DIOXIDE	99.4
OPEN FLOW, MCFD	HELIUM	0.20
	HEATING VALUE*	£
	SPECIFIC GRAVITY	1.515
SAMPLE 20566	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	85.0
	ETHANE	5.1
COUNTY CHAVES	PROPANE	2.0
FIELDPECOS SLOPE	N-BUTANE	3.0
WELL NAME HELEN COLLINS FEDERAL NO. 3	ISOBUTANE	0.4
API	N-PENTANE	0.3
LOCATION SEC 9, 178, R26E	ISOPENTANE	. 0.3
OWNER PECOS RIVER OPERATING, INC.	CYCLOPENTANE	
	HEXANES PLUS	0.7
COMPLETED831211	HEARRES FLUS	
COMPLETED 831211 SAMPLED 001220	NITROGEN	4.9
SAMPLED		
SAMPLED 001220 FORMATION PERM-ABO	NITROGEN	0.0
SAMPLED 001220 FORMATION PERM-ABO GEOLOGIC PROVINCE CODE 430	NITROGEN	0.0
SAMPLED 001220 FORMATION PERM-ABO GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 4156	NITROGEN	0.0 TRACE
SAMPLED 001220 FORMATION PERM-ABO GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 4156 MEASURED DEPTH	NITROGEN OXYGEN ARGON HYDROGEN	TRACE
SAMPLED 001220 FORMATION PERM-ABO GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 4156 MEASURED DEPTH WELLHEAD PRESSURE, PSIG 962	NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	TRACE TRACE
SAMPLED 001220 FORMATION PERM-ABO GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 4156 MEASURED DEPTH	NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 TRACE TRACE 0.0 0.33

^{*} CALCULATED GROSS 8TU 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

SAMPLE 20567	COMPONENT, MOLE PCT
STATENEW_MEXICO	METHANE
COUNTY CHAVES	ETHANE 4.5
	PROPANE
FIELD PECOS SLOPE	N-BUTANE0.6
WELL NAMEHELEN COLLINS FEDERAL NO. 6	ISOBUTANEU3
API 3000562139	N-PENTANE
LOCATION SEC. 4. T7S, R26E	ISOPENTANE0,2
OWNER PECOS RIVER OPERATING, INC.	CYCLOPENTANE
COMPLETED840518	HEXANES PLUS0.5
SAMPLED001220	NITROGEN50
FORMATIONPERM-ABO	OXYGEN0.0
GEOLOGIC PROVINCE CODE430_	ARGONTRACE
TRUE VERTICAL DEPTH (FT)4271.	. HYDROGENTRACE
MEASURED DEPTH	HYDROGEN SULFIDE**0.0
WELLHEAD PRESSURE, PSIG739	CARBON DIOXIDE 0.1
OPEN FLOW, MCFD1455.	HELIUM
Of ER 1 5041, 1907 D	HEATING VALUE*1_062
	SPECIFIC GRAVITY
SAMPLE 20586	COMPONENT, MOLE PCT
·	METHANE 97.7
STATENEW_MEXICO	METHANE87.7 ETHANE5.4
STATENEW MEXICO COUNTYCHAVES	METHANE
STATE NEW MEXICO COUNTY CHAVES FIELD PECOS SLOPE S	METHANE
STATENEW MEXICO COUNTYCHAVES FIELDPECOS SLOPE S WELL NAMEPENJACK FEDERAL NO. 6	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.2
STATENEW MEXICO COUNTYCHAVES FIELDPECOS SLOPE S WELL NAMEPENJACK FEDERAL NO. 6	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.2
STATE NEW MEXICO COUNTY CHAVES FIELD PECOS SLOPE S WELL NAME PENJACK FEDERAL NO. 6 API 3000562562	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.2 N-PENTANE 0.1
STATENEW MEXICO COUNTYCHAVES FIELDPECOS SLOPE S WELL NAMEPENJACK FEDERAL NO. 6 API3000562562 LOCATIONSEC. 7, T10S, R26E	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.2 N-PENTANE 0.1 ISOPENTANE 0.1
STATE NEW MEXICO COUNTY CHAVES FIELD PECOS SLOPE S WELL NAME PENJACK FEDERAL NO. 6 API 3000562562 LOCATION SEC. 7. T10S. R26E OWNER CHESAPEAKE OPERATING. INC.	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.2 N-PENTANE 0.1 ISOPENTANE 0.1 CYCLOPENTANE -
STATE NEW MEXICO COUNTY CHAVES FIELD PECOS SLOPE S WELL NAME PENJACK FEDERAL NO. 6 API 3000562562 LOCATION SEC. 7, T10S, R26E OWNER CHESAPEAKE OPERATING INC. COMPLETED 871209	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.2 N-PENTANE 0.1 ISOPENTANE 0.1 CYCLOPENTANE HEXANES PLUS 0.1
STATENEW MEXICO COUNTYCHAVES	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.1 ISOPENTANE 0.1 CYCLOPENTANE HEXANES PLUS 0.1 NITROGEN 3.6
STATE NEW MEXICO COUNTY CHAVES FIELD PECOS SLOPE S WELL NAME PENJACK FEDERAL NO. 6 API 3000562562 LOCATION SEC. 7. T10S. R26E OWNER CHESAPEAKE OPERATING. INC. COMPLETED 871209 SAMPLED 010228	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.1 N-PENTANE 0.1 ISOPENTANE CYCLOPENTANE HEXANES PLUS 0.1 NITROGEN 3.6 OXYGEN 0.0
STATE NEW MEXICO COUNTY CHAVES FIELD PECOS SLOPE S WELL NAME PENJACK FEDERAL NO. 6 API 3000562562 LOCATION SEC. 7. T10S. R26E OWNER CHESAPEAKE OPERATING. INC. COMPLETED 871209 SAMPLED 010228 FORMATION PERM-ABO GEOLOGIC PROVINCE CODE 430	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.2 N-PENTANE 0.1 ISOPENTANE 0.1 CYCLOPENTANE HEXANES PLUS 0.1 NITROGEN 3.6 OXYGEN 0.0 ARGON 0.0
NEW MEXICO	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.1 ISOPENTANE 0.1 CYCLOPENTANE HEXANES PLUS 0.1 NITROGEN 3.6 OXYGEN 0.0 HYDROGEN TRACE HYDROGEN SHIEIDE*** 0.0
NEW MEXICO	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.1 ISOPENTANE 0.1 CYCLOPENTANE HEXANES PLUS 0.1 NITROGEN 3.6 OXYGEN 0.0 ARGON 0.0 HYDROGEN TRACE HYDROGEN SULFIDE** 0.0 CARBON DIOXIDE TRACE
NEW MEXICO	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.1 ISOPENTANE 0.1 CYCLOPENTANE HEXANES PLUS 0.1 NITROGEN 3.6 OXYGEN 0.0 ARGON 0.0 HYDROGEN TRACE HYDROGEN SULFIDE** 0.0 CARBON DIOXIDE TRACE HELIUM 0.34
NEW MEXICO	METHANE 87.7 ETHANE 5.4 PROPANE 1.8 N-BUTANE 0.5 ISOBUTANE 0.1 N-PENTANE 0.1 ISOPENTANE HEXANES PLUS 0.1 NITROGEN 3.6 OXYGEN 0.0 ARGON 0.0 HYDROGEN TRACE HYDROGEN SULFIDE** 0.0 CARBON DIOXIDE TRACE HELIUM 0.34

^{*} 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

	20563	COMPONENT, MOLE PCT	
STATE	NEW MEXICO.	METHANE	.86.8
	CHAVES.	ETHANE	4.7
·	111111111111111111111111111111111111111	PROPANE	1.7
	PECOS SLOPE	N-BUTANE	0.6
·	SUN FEDERAL NO. 4	ISOBUTANE	0.3
	3000561596	N-PENTANE	0.2
	SEC. 28. T7S. R26E	ISOPENTANE	0.2
OWNER	PECOS RIVER OPERATING, INC.	CYCLOPENTANE	
COMPLETED	820629	HEXANES PLUS	0.4
SAMPLED		NITROGEN	4.8
FORMATION	PERM-ABO	OXYGEN	0.0
SEOLOGIC PROVINCE	CODE430	ARGON	0.0
TRUE VERTICAL DEPT	TH (FT)4472	HYDROGEN	IRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
	E, PSIG1079	CARBON DIOXIDE	TRACE
	873	HELIUM	0.35
DI ENT LOW, MEI S	0/3	HEATING VALUE*	1.066
		SPECIFIC GRAVITY	0.643
SAMPLE	20548	COMPONENT, MOLE PCT	***************************************
STATE	NEW MEYICO	METHANE	86.1
	NEW MEXICO	METHANE	
COUNTY	CHAVES		4.9
COUNTY	CHAVES PECOS SLOPE	ETHANE	4.9
COUNTY	CHAVES PECOS SLOPE NICHOLS DALE FEDERAL NO. 5	PROPANE	4.9 1.8 0.6
COUNTY	CHAVES PECOS SLOPE	PROPANE	4.5 1.8 0.6
COUNTY FIELD WELL NAME	CHAVES PECOS SLOPE NICHOLS DALE FEDERAL NO. 5	PROPANEN-BUTANEISOBUTANE	4.9 1.8 0.6 0.3
COUNTY FIELD WELL NAME API LOCATION	CHAVES PECOS SLOPE NICHOLS DALE FEDERAL NO. 5 3000561806	PROPANE N-BUTANE ISOBUTANE	4.9 1.8 0.6 0.3 0.2
COUNTY FIELD WELL NAME API LOCATION DWNER	CHAVES PECOS SLOPE NICHOLS DALE FEDERAL NO. 5 3000561806 SEC. 33, T7S, R266	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	4.5 1.6 0.6 0.3 0.2
COUNTY FIELD WELL NAME API OCATION DWNER COMPLETED	CHAVES PECOS SLOPE NICHOLS DALE FEDERAL NO. 5 3000561806 SEC. 33, T7S, R26E PECOS RIVER OPERATING, INC.	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	4.5 1.6 0.6 0.3 0.2 0.2
COUNTY FIELD WELL NAME API LOCATION DWNER COMPLETED SAMPLED	CHAVES PECOS SLOPE NICHOLS DALE FEDERAL NO. 5 3000561806 SEC. 33, T7S, R26E PECOS RIVER OPERATING, INC. 821112	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	4.5 1.8 0.6 0.3 0.3 0.3
COUNTY FIELD WELL NAME API LOCATION DWNER COMPLETED SAMPLED FORMATION	CHAVES PECOS SLOPE NICHOLS DALE FEDERAL NO. 5 3000561806 SEC. 33, T7S, R266 PECOS BIVER OPERATING, INC. 821112 001219 PERM-ABO	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	4.5 1.6 0.5 0.3 0.2 0.2 0.5 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
COUNTY FIELD WELL NAME API OCATION DWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE	CHAVES PECOS SLOPE NICHOLS DALE FEDERAL NO. 5 3000561806 SEC. 33, T7S, R26E PECOS RIVER OPERATING, INC. 821112 001219 PERM-ABO CODE 430	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	4.5 0.6 0.3 0.3 0.2 0.2 0.5 5.0
COUNTY FIELD WELL NAME API LOCATION DWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE	CHAVES PECOS SLOPE NICHOLS DALE FEDERAL NO. 5 3000561806 SEC. 33, T7S, R26E PECOS RIVER OPERATING, INC. 821112 001219 PERM-ABO E CODE 430 TH (FT) 4197	ETHANE PROPANE N-BUTANE SOBUTANE SOPENTANE SOPENTANE SYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	4.5 0.6 0.3 0.2 0.2 0.5 0.5 0.5 TRACE
COUNTY FIELD WELL NAME API OCATION DWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE FRUE VERTICAL DEPT MEASURED DEPTH	CHAVES PECOS SLOPE NICHOLS DALE FEDERAL NO. 5 3000561806 SEC. 33, T7S, R26E PECOS RIVER OPERATING, INC. 821112 Q01219 PERM-ABO CODE 430 TH (FT) 4197	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	4.5 0.6 0.3 0.2 0.5 0.5 5.0 TRACE
COUNTY FIELD WELL NAME API OCATION DWNER COMPLETED FORMATION GEOLOGIC PROVINCE FRUE VERTICAL DEPT MEASURED DEPTH WELLHEAD PRESSUR	CHAVES PECOS SLOPE NICHOLS DALE FEDERAL NO. 5 3000561806 SEC. 33, T7S, R26E PECOS RIVER OPERATING, INC. 821112 001219 PERM-ABO CODE 430 TH (FT) 4197 E, PSIG 909	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE	4.9 1.8 0.6 0.3 0.2 0.2 0.5 0.0 TRACE TRACE
COUNTY FIELD WELL NAME API OCATION DWNER COMPLETED FORMATION GEOLOGIC PROVINCE FRUE VERTICAL DEPT MEASURED DEPTH WELLHEAD PRESSUR	CHAVES PECOS SLOPE NICHOLS DALE FEDERAL NO. 5 3000561806 SEC. 33, T7S, R26E PECOS RIVER OPERATING, INC. 821112 Q01219 PERM-ABO CODE 430 TH (FT) 4197	ETHANE	4.9 1.8 0.6 0.3 0.2 0.5 0.5 0.0 TRACE TRACE 0.0

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

\$AMPLE 20560	COMPONENT, MOLE PCT	
STATE NEW MEXICO	METHANE	86.9
COUNTY CHAVES	ETHANE	4.7
	PROPANE	1.7
FIELD PECOS SLOPE	N-BUTANE	0.6
WELL NAME VANCE FED. A NO. 1	ISOBUTANE	0.3
API	N-PENTANE	0.2
LOCATION SEC. 34, T7S, R26E	ISOPENTANE	0.2
OWNEREXCO RESOURCES, INC.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	G.3
SAMPLED 001220	NITROGEN	4.7
FORMATIONPERM-ABO	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	ARGON	IRACE
TRUE VERTICAL DEPTH (FT) 4508	HYDROGEN	TRACE
MEASURED DEPTH	HYDROĞEN SULFIDE**	
WELLHEAD PRESSURE, PSIG 891	CARBON DIOXIDE	
OPEN FLOW, MCFD 2527	HELIUM	
	HEATING VALUE*	1.064
	SPECIFIC GRAVITY	0.641
SAMPLE 20547	COMPONENT, MOLE PCT	
STATE NEW MEXICO	METHANE	86.1
STATENEW MEXICO	ETHANE	4.8
COUNTY CHAVES	PROPANE	1.7
FIELD PECOS SLOPE	N-BUTANE	
	14-12(2) PA N	0.6
WELL NAME NICHO S DALE FEDERAL NO. 6	ISOBUTANE	
		0.3
APi3000561854	ISOBUTANE	0.3
API 3000561854 LOCATION SEC. 33, T/S, R26E	ISOBUTANE	0.3 0.2 0.2
API 3000561854 LOCATION SEC. 33, T7S, R26E OWNER PECOS RIVER OPERATING, INC.	ISOBUTANE N-PENTANE ISOPENTANE	0.3 0.2 0.2
API	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.3 0.2 0.2
API 3000561854 LOCATION SEC. 33, T78, R26E OWNER PECOS RIVER OPERATING, INC. COMPLETED B21229, SAMPLED 001219	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.3 0.2 0.2 0.4 5.4
API 3000561854 LOCATION SEC. 33, TYS, R26E OWNER PECOS RIVER OPERATING, INC. COMPLETED 821229 SAMPLED 001219 FORMATION PERM-ABO	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.3 0.2 0.2 0.4 5.4
API 3000561854 LOCATION SEC. 33, T7S, R26E OWNER PECOS RIVER OPERATING, INC. COMPLETED B21229, SAMPLED 001219 FORMATION PERM-ABO GEOLOGIC PROVINCE CODE 430,	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.3 0.2 0.2 0.4 5.4 0.0
API	ISOBUTANE	0.3 0.2 0.2 0.4 5.4 0.0 0.0 TRACE
API	ISOBUTANE	0.3 0.2 0.2 0.4 5.4 0.0 0.0 TRACE
WELL NAME NICHO_S DALE FEDERAL NO. 6 API 3000561854 LOCATION SEC. 33, TYS, R26E OWNER PECOS RIVER OPERATING, INC. COMPLETED B21229 SAMPLED 001219 FORMATION PERM-ABO GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 4319 MEASURED DEPTH WELLHEAD PRESSURE, PSIG 832 OPEN E: OW: MCED 647	ISOBUTANE	0.3 0.2 0.2 0.4 5.4 0.0 TRACE
API	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.3 0.2 0.2 0.4 5.4 0.0 TRACE 0.3 TRACE

^{*} CALCULATED GROSS 5TU PER CUIFT, DRY, AT 60 DEGREES FAHRENHEIT AND 3D INCHES OF MERCURY ** DUF TO THE ASSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20602	COMPONENT, MOLE PCT	
QTATE	NEW MEXICO.	METHANE	86.1
		ETHANE	5,9
	CHAVES	PROPANE	2.1
	PECOS SLOPE S	N-BUTANE	0.5
	PENJACK FEDERAL NO. 2	ISOBUTANE	0.3
	3000562465	N-PENTANE	0.1
	SEC. 12, T10S, R25E	ISOPENTANE	0.1
OWNERC	HESAPEAKE OPERATING, INC.	CYCLOPENTANE	
COMPLETED	870428	HEXANES PLUS	0.1
SAMPLED	010228.	NITROGEN	4.3
FORMATION	PERM-ABO	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)	4421	HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
	980	CARBON DIOXIDE	0.0
	1600	HELIUM	0.38
or 2.11 20 W, Mor D		HEATING VALUE*	1,070
		SPECIFIC GRAVITY	0.64
SAMPLE	20562	COMPONENT, MOLE PCT	
STATE	NEW MEYICO	METHANE	86.4
	NEW MEXICO.	METHANE	
COUNTY	CHAVES		4.8
COUNTY	CHAVES PECOS SLOPE	ETHANE	4.8
COUNTYFIELD	CHAVES PECOS SLOPE VANCE FED. A NO. 2	ETHANE	4.8 1.7 0.6
COUNTY FIELD WELL NAME API	CHAVES PECOS SLOPE VANCE FED. A NO. 2 3000561752	ETHANEPROPANEN-BUTANE	4.8 1.7 0.6 0.5
COUNTY FIELD WELL NAME API LOCATION	CHAVES. PECOS SLOPE. VANCE FED. A NO. 2. 3000561762. SEC. 34, T7S, R26E.	PROPANEN-BUTANEISOBUTANE	4.8 1.7 0.6 0.7
COUNTY FIELD WELL NAME API LOCATION	CHAVES PECOS SLOPE VANCE FED. A NO. 2 3000561752	PROPANE	4.8 1.7 0.6 0.7 0.7
COUNTY FIELD WELL NAME API LOCATION OWNER	CHAVES. PECOS SLOPE. VANCE FED. A NO. 2. 3000561762. SEC. 34, T7S, R26E.	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	4.8 1.7 0.6 0.7 0.7 0.7
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED	CHAVES PECOS SLOPE VANCE FED. A NO. 2 3000561762 SEC. 34, T7S, R26E EXCO RESOURCES INC. 821028	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	4.8 1.7 0.6 0.5 0.7 0.7
COUNTY FIELD WELL NAME API ŁOCATION OWNER COMPLETED SAMPLED	CHAVES PECOS SLOPE VANCE FED. A NO. 2 3000561762 SEC. 34, T7S, R26E EXCO RESOURCES INC. 821028	ETHANEPROPANE	4.8 11 0.6 0.3 0.3 0.3 0.3
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION	CHAVES PECOS SLOPE VANCE FED. A NO. 2 3000561762 SEC. 34, T7S, R26E EXCO RESOURCES INC. 821028 001220	ETHANE	4.8 1.7 0.6 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7
COUNTY FIELD WELL NAME API LOCATION COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	CHAVES PECOS SLOPE VANCE FED. A NO. 2 3000561762 SEC. 34, T7S, R26E EXCO RESOURCES INC. 821028 001220 PERM-ABO.	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	4.8 1.7 0.6 0.5 0.7 0.7 0.7 5.0 0.0 TRACE
COUNTY FIELD WELL NAME API LOCATION COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	CHAVES PECOS SLOPE VANCE FED. A NO. 2 3000561762 SEC. 34, T7S, R26E EXCO RESOURCES INC. 821028 001220 PERM-ABO 430 4398	ETHANE	4.8 1) 0.6 0.3 0.2 0.2 5.0 TRACE
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) . MEASURED DEPTH	CHAVES PECOS SLOPE VANCE FED. A NO. 2 3000561762. SEC. 34, T7S, R26E EXCO RESOURCES INC. 821028 001220 PERM-ABO 430 4398.	ETHANE	4.8 1.7 0.6 0.7 0.7 0.7 5.0 TRACE TRACE
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	CHAVES PECOS SLOPE VANCE FED. A NO. 2 3000561762. SEC. 34, T7S, R26E EXCO RESOURCES INC. 821028 001220 PERM-ABO 430 4398	ETHANE	4.8 1.7 0.6 0.5 0.2 0.2 0.4 5.0 TRACE TRACE 0.1
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	CHAVES PECOS SLOPE VANCE FED. A NO. 2 3000561762. SEC. 34, T7S, R26E EXCO RESOURCES INC. 821028 001220 PERM-ABO 430 4398.	ETHANE	4.8 1.7 0.6 0.3 0.2 0.2 0.4 5.0 TRACE TRACE 0.0

^{*} 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

SAMPLE 20552	COMPONENT, MOLE PCT
PTATE NIEW MENO	METHANE
STATE NEW MEXICO	ETHANE4
COUNTY CHAVES	PROPANE1
FIELD PECOS SLOPE	N-BUTANE
WELL NAME VANCE FED. NO. 3	ISOBUTANE
API	N-PENTANEC
LOCATION SEC. 26, T7S, R26E	ISOPENTANE
OWNEREXCO RESOURCES, INC.	CYCLOPENTANE
COMPLETED 820709	HEXANES PLUS
SAMPLED	NITROGEN
FORMATION PERM-ASO	OXYGEN
GEOLOGIC PROVINCE CODE 430	ARGONC
TRUE VERTICAL DEPTH (FT) 4556	HYDROGENTRAC
MEASURED DEPTH	HYDROGEN SULFIDE**
WELLHEAD PRESSURE, PSIG 865	CARBON DIÓXIDETRAC
OPEN FLOW, MCFD1753.	HELIUMO.
Gren Flow, Micro	HEATING VALUE*1,0
	SPECIFIC GRAVITY06
SAMPLE 20573	COMPONENT, MOLE PCT
OTATE NEW MENO	METHANE 83
STATE NEW MEXICO	ETHANE
COUNTYCHAVES.	PROPANE
FIELD PECOS SLOPE	N-BUTANE
WELL NAMEO'CONNELL FEDERAL COM NO. 1	ISOBUTANE
API	N-PENTANE
LOCATION SEC. 15, T6S, R26E	ISOPENTANE
OWNERPECOS RIVER OPERATING INC.	CYCLOPENTANE
COMPLETED	HEXANES PLUS
SAMPLED001221_	NITROGEN
FORMATION PERM-ABO	OXYGEN
	ARGONTRAC
GEOLOGIC PROVINCE CODE430	
	HYDROGENTRAC
TRUE VERTICAL DEPTH (FT)4150.	HYDROGENTRAC
TRUE VERTICAL DEPTH (FT)	
TRUE VERTICAL DEPTH (FT)	HYDROGEN SULFIDE**
GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 4150 MEASURED DEPTH 800 OPEN FLOW, MCFD 1772	HYDROGEN SULFIDE**C

^{*} 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

SAMPLE	20608	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	87.0
	CHAVES	ETHANE	4.8
	PECOS SLOPE S	PROPANE	1.7
	PENJACK FEDERAL NO. 1	N-BUTANE	0.5
		ISOBUTANE	0.3
	3000560531	N-PENTANE	0.1
	SEC. 6, T10S, R26E	ISOPENTANE	0,1
	HESAPEAKE OPERATING, INC.	CYCLOPENTANE	
COMPLETED	790208	HEXANES PLUS	
SAMPLED	010228	N.TROGEN	4.5
FORMATION	PERM-ABO	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	
TRUE VERTICAL DEPTH (FT)	4334	HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIC	3961	CARBON DIOXIDE	
OPEN FLOW, MCFD	1272	HELIUM	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	HEATING VALUE*	
		SPECIFIC GRAVITY	0.633
SAMPLE	20603	COMPONENT, MOLE PCT	
STATE	NEW MEXICO.	METHANE	86.2
	CHAVES	ETHANE	4.9
		PROPANE	1.8
	PECOS SLOPE S	N-BUTANE	0.6
WELL NAME			
		ISOBUTANE	
	3000562678	ISOBUTANE N-PENTANE	0.0
LOCATION	3000562678 SEC. 1, T10S, R25E		0.3
LOCATION	3000562678	N-PENTANE	0.3 0.2 0.1
LOCATIONOWNERC	3000562678 SEC. 1, T10S, R25E	N-PENTANE	0.3 0.2 0.1
LOCATIONOWNERC	3000562678 SEC. 1, T10S, R25E HESAPEAKE OPERATING, INC. 890509	N-PENTANE ISOPENTANE CYCLOPENTANE	0.3 0.2 0.1
LOCATIONCOWNERCOMPLETEDSAMPLED	3000562678 SEC. 1, T10S, R25E HESAPEAKE OPERATING, INC. 890509	N-PENTANEISOPENTANE CYCLOPENTANE HEXANES PLUS	0.3 0.2 0.1
LOCATIONCOWNERCOMPLETEDSAMPLEDFORMATION	3000562678 SEC. 1, T10S, R25E HESAPEAKE OPERATING, INC. 890509 010228	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.5 0.2 0.1 0.2 0.5 5.3
LOCATIONCOMPLETEDSAMPLEDFORMATIONGEOLOGIC PROVINCE CODE	3000562678 SEC. 1, T10S, R25E HESAPEAKE OPERATING, INC. 890509 010228 PERM-ABO	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.3 0.2 0.1 0.2 5.3 0.1 TRACS
LOCATIONCOMPLETEDSAMPLEDFORMATIONGEOLOGIC PROVINCE CODE	3000562678 SEC. 1, T10S, R25E HESAPEAKE OPERATING, INC. 890509 010228 PERM-ABO 430	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.5 0.2 0.1 0.2 5.3 0.1 TRACE
LOCATION	3000562678 SEC. 1, T10S, R25E HESAPEAKE OPERATING, INC. 890509 010228 PERM-ABO 430 4307	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.5 0.2 0.1 0.2 5.3 0.0 TRACE
LOCATION	3000562678 SEC. 1, T10S, R25E HESAPEAKE OPERATING, INC. 890509 010228 PERM-ABO 4307	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE HELIUM	9.5 9.2 9.1 9.2 5.3 9.1 TRACE TRACE 9.1 9.1
LOCATION	3000562678 SEC. 1, T10S, R25E HESAPEAKE OPERATING, INC. 890509 010228 PERM-ABO 430 4307	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.3 0.2 0.1 0.2 5.3 0.0 TRACE TRACE 0.0

^{*} 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

	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	82.6
COUNTY CHAVES	ETHANE	4.3
FIELD PECOS SLOPE.	PROPANE	1.6
	N-BUTANE	0.6
WELL NAME COBIE-EBEID FEDERAL COM NO. 1.	ISOBUTANE	
API3000561350_	N-PENTANE	0.2
LOCATION SEC. 13 T8S R25E	ISOPENTANE	0.1
OWNERPECOS RIVER OPERATING INC.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0.3
SAMPLED	NITROGEN	9.3
FORMATION PERM-ABO.	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)4164	HYDROGEN	0.1
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG955_	CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD	HELIUM	0.50
OPEN FEOVY, MICFO	HEATING VALUE*	1,007
	SPECIFIC GRAVITY	0.654
SAMPLE 20534	COMPONENT, MOLE PCT	
BTATE AUCIAL MEMORY	METHANE	
STATE NEW MEXICO	ETHANE	4.5
COUNTY CHAVES	PROPANE	1.8
FIELD PECOS SLOPE	N-BUTANE	0.6
WELL NAME PECOS SLOPE 24 FEDERAL NO. 1	ISOBUTANE	0.3
	ISOBUTANE	
API3000563043		0.2
API	N-PENTANE	0.2 0.2
API	N-PENTANE	0.2 0.2
API	N-PENTANE ISOPENTANE CYCLOPENTANE	0.2 0.2 ————————————————————————————————
API	N-PENTANE	0.2 0.2
API	N-PENTANE	0.2 0.2 0.2 0.2 9.7 0.0
API	N-PENTANE	0.2 0.2 0.2 0.2 9.7 0.0
API	N-PENTANE	0.2 0.2 0.2 9.7 0.0 TRACE
API	N-PENTANE	0.2 0.2 0.2 9.7 0.0 TRACE
API	N-PENTANE	0.2 0.2 0.2 9.7 0.0 TRACE 0.0 0.0
WELL NAME PECOS SLOPE 24 FEDERAL NO. 1. API 3000563043. LOCATION SEC. 24, T8S, R25E. OWNER MEWBOURNE OIL CO. COMPLETED 950408. SAMPLED 001218. FORMATION PERM-ABO. GEOLOGIC PROVINCE CODE 430. TRUE VERTICAL DEPTH (FT) 4270. MEASURED DEPTH WELLHEAD PRESSURE, PSIG 195. OPEN FLOW, MCFD 195.	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.2 0.2 0.2 9.7 0.0 TRACE 0.0 1RACE

CALCULATED GROSS BYD PER CUFT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY TO 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

SAMPLE	20538	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	81.4
	CHAVES	ETHANE	4.3
	PECOS SLOPE	PROPANE	1.7
		N-BUTANE	0.8
	COBIE-EBEID FEDERAL COM NO. 2	ISOBUTANE	0.3
	3000561873	N-PENTANE	0.2
	SEC. 13, TBS, R25E	ISOPENTANE	0.2
	PECOS RIVER OPERATING, INC.	CYCLOPENTANE	
COMPLETED	830216	HEXANES PLUS	0.2
SAMPLED		NITROGEN	10.1
FORMATION	PERM-ASO	OXYGEN	0.0
GEOLOGIC PROVINCE	CODE430	ARGON	
TRUE VERTICAL DEPTI	H (FT)3892	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE	., PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD	881	HELIUM	
		HEATING VALUE*	•
		SPECIFIC GRAVITY	0.663
SAMPLE	20604	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	86.7
	CHAVES	ETHANE	4.0
	CHAVES	PROPANE	
	DECOC CLODE C		1.1
	PECOS SLOPE S	N-BUTANE	
WELL NAME	MM FEDERAL NO. 7	N-BUTANE	0.3
WELL NAME	MM FEDERAL NO. 7 3000562493.		0.3 0.1
WELL NAME	MM FEDERAL NO. 7 3000562493. SEC. 25, T9S, R25E.	ISOBUTANE	0.3 0.1 0.1
WELL NAME	MM FEDERAL NO. 7 3000562493.	ISOBUTANE	0.3 0.1 0.1 0.1
WELL NAME API LOCATION OWNER	MM FEDERAL NO. 7 3000562493. SEC. 25, T9S, R25E.	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.3 0.1 0.1 0.1
WELL NAME API LOCATION OWNER COMPLETED	MM FEDERAL NO. 7 3000562493 SEC. 25, T9S, R25E CHESAPEAKE OPERATING, INC.	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.3 0.1 0.1 0.1
WELL NAME	MM FEDERAL NO. 7 3000562493 SEC. 25, T9S, R25E CHESAPEAKE OPERATING, INC. 870730	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.3 0.1 0.1 0.1 0.2 6.7
WELL NAME	MM FEDERAL NO. 7 3000562493 SEC. 25, T9S, R25E CHESAPEAKE OPERATING, INC. 870730 010228	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.3 0.1 0.1 0.1 0.2 6.7 0.0
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE	MM FEDERAL NO. 7 3000562493 SEC. 25, T9S, R25E CHESAPEAKE OPERATING, INC. 870730 010228 PERM-ABO	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.3 0.1 0.1 0.1 0.2 6.7 0.0 0.1 TRACE
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE TRUE VERTICAL DEPTH	MM FEDERAL NO. 7 3000562493 SEC. 25, T9S, R25E CHESAPEAKE OPERATING, INC. 870730 010228 PERM-ABO CODE 430 H (FT) 4298	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	0.3 0.1 0.1 0.2 0.2 6.7 0.0 0.1 TRACE
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE TRUE VERTICAL DEPTH MEASURED DEPTH	MM FEDERAL NO. 7 3000562493 SEC. 25, T9S, R25E CHESAPEAKE OPERATING INC. 870730 010228 PERM-ABO CODE 430 4 (FT) 4298	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.3 0.1 0.1 0.2 6.7 0.0 1 TRACE
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE TRUE VERTICAL DEPTH MEASURED DEPTH WELLHEAD PRESSURE	MM FEDERAL NO. 7 3000562493. SEC. 25, T9S, R25E CHESAPEAKE OPERATING, INC. 870730 010228 PERM-ABO CODE 430 H (FT) 4298	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE HELIUM	0.3 0.1 0.1 0.2 0.2 6.7 0.0 0.1 TRACE 0.0 0.64
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE TRUE VERTICAL DEPTH MEASURED DEPTH WELLHEAD PRESSURE	MM FEDERAL NO. 7 3000562493 SEC. 25, T9S, R25E CHESAPEAKE OPERATING, INC. 870730 010228 PERM-ABO CODE 430 1 (FT) 4298.	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.3 0.1 0.1 0.2 0.2 6.7 0.0 0.1 TRACE 0.0 0.64

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 20 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

SAMPLE	20605	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	84.
COUNTY		ETHANE	4.5
FIELD		PROPANE	1.6
WELL NAME		N-BUTANE	0.6
	•	ISOBUTANE	
	3000562215	N-PENTANE	0.2
LOCATION		ISOPENTANE	
OWNERCHE		CYCLOPENTANE	
COMPLETED	841220	HEXANES PLUS	
SAMPLED	D10228	NITROGEN	
FORMATION	PERM-ABO	OXYGEN	<u>0.</u> (
GEOLOGIC PROVINCE CODE	430	ARGON	0.1
TRUE VERTICAL DEPTH (FT)	4104	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	
OPEN FLOW, MCFD		HELIUM	
OF ERRI EGYR, MOF D		HEATING VALUE*	1,02
		SPECIFIC GRAVITY	0.64
SAMPLE	20514	COMPONENT, MOLE PCT	
		COMPONENT, MOLE PCT METHANE	82.
STATE	NEW MEXICO.		
STATE	NEW MEXICO.	METHANE	4.
STATECOUNTY	NEW MEXICO CHAVES PECOS SLOPE	METHANE	1.
STATE	NEW MEXICO. CHAVES. PECOS SLOPE. COYOTE FEDERAL NO. 3.	METHANE ETHANE PROPANE	4.
STATE	NEW MEXICO. CHAVES. PECOS SLOPE. COYOTE FEDERAL NO. 3.	METHANE ETHANE PROPANE N-BUTANE	1. 0.
STATE COUNTY FIELD WELL NAME	NEW MEXICO. CHAVES. PECOS SLOPE COYOTE FEDERAL NO. 3. 3000561099	METHANE ETHANE PROPANE N-BUTANE	1.1 0.
STATE	NEW MEXICO CHAVES PECOS SLOPE COYOTE FEDERAL NO. 3 3000561099 SEC. 7, T8S, R25E	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	4. 1. 0. 0. 0.
STATE	NEW MEXICO CHAVES PECOS SLOPE COYOTE FEDERAL NO. 3 3000561099 SEC. 7, T8S, R25E SAPEAKE OPERATING, INC.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	1.: 0.: 0.: 0.:
STATE	NEW MEXICO. CHAVES PECOS SLOPE COYOTE FEDERAL NO. 3. 3000561099 SEC. 7, T8S, R25E SAPEAKE OPERATING, INC. 820226	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE	4. 1. 0. 0. 0. 0.
STATE	NEW MEXICO CHAVES PECOS SLOPE COYOTE FEDERAL NO. 3. 3000561099 SEC. 7, T8S, R25E SAPEAKE OPERATING, INC. 820226 001207	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	4. 1. 0. 0. 0. 0. 0.
STATE COUNTY FIELD WELL NAME API LOCATION OWNER CHE COMPLETED SAMPLED FORMATION	NEW MEXICO CHAVES PECOS SLOPE COYOTE FEDERAL NO. 3 3000561099 SEC. 7, T8S, R25E SAPEAKE OPERATING, INC. 820226 001207 PERM-ABO	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	4. 1. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
STATE	NEW MEXICO CHAVES PECOS SLOPE COYOTE FEDERAL NO. 3 3000561099 SEC. 7, TBS, R25E SAPEAKE OPERATING, INC. 820226 001207 PERM-ABO 430	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	4. 1. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
STATE	NEW MEXICO CHAVES PECOS SLOPE COYOTE FEDERAL NO. 3. 3000561099 SEC. 7. TBS, R25E SAPEAKE OPERATING, INC. 820226 001207 PERM-ABO 430 3589	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	4. 1. 0. 0. 0. 0. 0. 8. 8. 0. 0.
STATE	NEW MEXICO CHAVES PECOS SLOPE COYOTE FEDERAL NO. 3 3000561099 SEC. 7, T8S, R25E SAPEAKE OPERATING INC. 820226 001207 PERM-ABO 430 3589	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	4. 1. 0. 0. 0. 0. 0. 0. 8. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
STATE COUNTY FIELD WELL NAME API LOCATION OWNER CHE COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	NEW MEXICO. CHAVES PECOS SLOPE COYOTE FEDERAL NO. 3. 3000561099 SEC. 7, T8S, R25E SAPEAKE OPERATING, INC. 820226 001207 PERM-ABO. 430 3589	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE HELIUM	4. 1. 0. 0. 0. 0. 8. 0. 0. 0. 0. TRACE
SAMPLE STATE	NEW MEXICO. CHAVES PECOS SLOPE COYOTE FEDERAL NO. 3. 3000561099 SEC. 7, T8S, R25E SAPEAKE OPERATING, INC. 820226 001207 PERM-ABO. 430 3589	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	4. 1. 0. 0. 0. 0. 8. 0. 0. 0. 0. TRACE

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 80 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

SAMPLE 20513	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	83.1
COUNTYCHAVES	ETHANE	
FIELD PECOS SI OPE	PROPANE	
WELL NAME COYOTE FEDERAL NO. 4-Y	N-BUTANE	
API	ISOBUTANE	
LOCATION SEC. 7. T8S. R25E	N-PENTANE	
	ISOPENTANE	
OWNERCHESAPEAKE OPERATING INC.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	
SAMPLED001207	NITROGEN	
FORMATION PERM-ABO	OXYGEN	
GEOLOGIC PROVINCE CODE430	ARGON	0.1
TRUE VERTICAL DEPTH (FT)	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSiG	CARBON DIOXIDE	
OPEN FLOW, MCFD1129	HELIUM	
	HEATING VALUE* SPECIFIC GRAVITY	.,
SAMPLE 20606	COMPONENT, MOLE PCT	
STATE NEW MEXICO	METHANE	83.5
COUNTY CHAVES	ETHANE	4.3
FIELDCHAVES CO. UNDESIGNATED	PROPANE	1.6
WELL NAME PECOS RIVER FEDERAL NO. 1	N-BUTANE	0.5
	ISOBUTANE	0.3
API 3000561237	N-PENTANE	0.2
LOCATION SEC. 23, T9S, R25E	ISOPENTANE	
DWNER CHESAPEAKE OPERATING INC.	CYCLOPENTANE	
COMPLETED 820119	HEXANES PLUS	0.2
SAMPLED010228	NITROGEN	
FORMATION PERM-ABO	OXYGEN	<u>c.</u> 0
GEOLOGIC PROVINCE CODE430_	ARGON	0.1
	HYDROGEN	0.0
		n n
TRUE VERTICAL DEPTH (FT)	HYDROGEN SULFIDE**	
TRUE VERTICAL DEPTH (FT) 4036 WEASURED DEPTH	CARBON DIOXIDE	TRACE
TRUE VERTICAL DEPTH (FT) 4036 MEASURED DEPTH 971	CARBON DIOXIDE	TRACE
TRUE VERTICAL DEPTH (FT) 4036 WEASURED DEPTH	CARBON DIOXIDE	TRACE 0.79 1,009

^{*} CALCULATED GROSS BTU PER CU FT, ORY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF HZS DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE REBABLE

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

METHANE 82
ETHANE4_
PROPANE1.
N-BUTANE0
ISOBUTANE0
1. N-PENTANE0.
ISOPENTANE0:
CYCLOPENTANE
L HEXANES PLUS
NITROGEN 8
OXYGENO
1 ARGON0
1 HYDROGEN
HYDROGEN SULFIDE** 0.
CARBON DIOXIDETRAC
HELIUM0.8
HEATING VALUE*1.03
SPECIFIC GRAVITY0.6
COMPONENT, MOLE PCT
METHANE
ETHANE4.
PROPANE1
N-BUTANE0
SUBUTANEO
N-PEN (ANE
SOPENTANE Q
CYCLOPENTANE
L HEXANES PLUS
NITROGEN9
OXYGENO
ARGON
L HYDROGENQ
HYDROGEN SULFIDE**0.
CARBON DIOXIDETRACI
HELIUM 0.8
HEATING VALUE*1_01

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 50 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

SAMPLE 20529	COMPONENT, MOLE PCT
STATE NEW MEXICO	METHANE 82.5
COUNTY CHAVES	ETHANE 4.2
FIELD PECOS SLOPE	PROPANE14
WELL NAME	N-BUTANE0.5
	ISOBUTANE0.2
	N-PENTANE U.4
LOCATION SEC. 3, T9S, R25E	NOOT ENTINITE
OWNERCHESAPEAKE OPERATING, INC.	O TOCOT ENTINE
COMPLETED 821111	
SAMPLED	_
FORMATIONPERM-ABO	_
GEOLOGIC PROVINCE CODE430	_
TRUE VERTICAL DEPTH (FT) 4007	•
MEASURED DEPTH	HYDROGEN SULFIDE**0.0
WELLHEAD PRESSURE. PSIG	CARBON DIOXIDE TRACE
OPEN FLOW, MCFD	HELIUM
	HEATING VALUE*
SAMPLE 20528	COMPONENT, MOLE PCT
	METHANE 84.2
STATENEW MEXICO	ETHANE 4.7
COUNTYCHAVES	PROPANE 1.8
FIELDPECOS SLOPE	N-BUTANE0.7
WELL NAME DANA FED. NO. 3	T ISOBUTANE0.3
API	N-PENTANE 0.3
LOCATION SEC. 3, T9S, R25E	ISOPENTANE0_2
OWNERCHESAPEAKE OPERATING INC.	CYCLOPENTANE
COMPLETED 820423	HEXANES PLUS 0.3
SAMPLED	NITROGEN6.4
FORMATIONPERM-ABO	OXYGEN 0.0
GEOLOGIC PROVINCE CODE	ARGON0.1
	HYDROGENTRACE
TRUE VERTICAL DEPTH (FT)4011	LIVERGOEN OUR FIREM A A
MEASURED DEPTH	CARBON DIOXIDE
MEASURED DEPTH	CARBON DIOXIDE 0.1 HELIUM 0.97
MEASURED DEPTH	CARBON DIOXIDE 0.1

^{*} CALCULATED GROSS BTU PER CU F1, DRY, AT 60 DEGRI-REARTHEIT 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

SAMPLE	20500	COMPONENT, MOLE PCT	
STATE	NEW/ MEYICO	METHANE	81.0
		ETHANE	9.1
COUNTY		PROPANE	4.8
FIELD		N-BUTANE	1.6
WELL NAME		ISOBUTANE	0.7
API	3000562701	N-PENTANE	0.5
LOCATION	SEC. 35, T14S, R27E	ISOPENTANE	0.5
OWNER	SNOW OIL & GAS, INC.	CYCLOPENTANE	⊢
COMPLETED	890824	HEXANES PLUS	0.9
SAMPLED	001206	NITROGEN	0.4
FORMATION	PENN-ATOKA	OXYGEN	a.c
SEOLOGIC PROVINCE CODE	430.	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	8387	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	0.4
, –		HELIUM	0.02
OPEN FLOW, MCFD	1038	HEATING VALUE*	1,263
		SPECIFIC GRAVITY	0.73
SAMPLE	20502	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	87.4
COUNTY		ETHANE	7_3
		PROPANE	2.5
FIELD		N-8UTANE	0.£
WELL NAME		ISOBUTANE	0.3
API		N-PENTANE	0.2
_OCATION	SEC. 13. 115S, 27E	ISOPENTANE	0.2
OWNER	READ & STEVENS, INC.	CYCLOPENTANE	····· ·
COMPLETED	821206	HEXANES PLUS	0.£
SAMPLED	001206	NITROGEN	0.5
FORMATION	PENN-ATOKA	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	8789	HYDROGEN	0_0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	0.4
OPEN FLOW, MCFD		HELIUM	0.03
JECT LIVE LOSS. MILEO		HEATING VALUE*	1.460
		HEATING VALUE	

^{*} CALCULATED GROSS 6TU 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

SAMPLE	20503	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	87.0
		ETHANE	7.5
	CHAVES.	PROPANE	2.8
	RUFFALO VALLEY	N-BUTANE	0.7
	HARRIS FEDERAL COM NO. 2	ISOBUTANE	0.4
API	3000560277	N-PENTANE	0.2
LOCATION	SEC. 24, T15S, R27E	ISOPENTANE	0.2
OWNER	READ & STEVENS, INC.	CYCLOPENTANE	
COMPLETED	740401	HEXANES PLUS	0.3
SAMPLED	001206	NITROGEN	0.6
FORMATION	PENN-ATOKA.	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	0.0
TRUE VERTICAL DEPTH (FT) .	8807	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	0.3
OPEN FLOW, MCFD		HELIUM	0.03
OFER FLOW, MICEO		HEATING VALUE*	1,150
		SPECIFIC GRAVITY	0.656
SAMPLE	20504	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	83.7
	CHAVES	ETHANE	8.7
	DIAMOND MOUND	PROPANE	3.7
		N-BUTANE	1.1
	MESA STATE COM NO. 3	ISOBUTANE	0.5
	3000562255	N-PENTANE	0.3
LOCATION	SEC. 31, T15S, R28E	ISOPENTANE	0,3
OWNER	OCEAN ENERGY, INC.	CYCLOPENTANE	
COMPLETED	851009	HEXANES PLUS	0.6
SAMPLED	001206	NITROGEN	0.8
FORMATION	PENN-MORROW	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	9050	HYDROGEN	0.0
• •		HYDROGEN SULFIDE**	o.o
	2320	CARBON DIOXIDE	0.4
	14569	HELIUM	0.03
OF MATEMOTE, WICEO	(Apart)	HEATING VALUE*	1.198

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ASSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20493	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	26.1
		ETHANE	10.9
COUNTY		PROPANE	8.0
FIELD		N-BUTANE	2.5
WELL NAME		ISOBUTANE	1.2
API		N-PENTANE	0.6
LOCATION		SOPENTANE	0.0
OWNER	ELK ÖIL CO.	CYCLOPENTANE	
COMPLETED	700210	HEXANES PLUS	0.6
SAMPLED	001205	NITROGEN	49.4
FORMATION	PERM-OUEEN	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	. 0.0
TRUE VERTICAL DEPTH (FT)		HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD	<u> </u>	HELIUM	
DI EN 1 EO 17, NICI D		HEATING VALUE*	859
		SPECIFIC GRAVITY	0.986
SAMPLE	20570	COMPONENT, MOLE PCT	
STATE	NEW MEYICO	METHANE	86.
COUNTY		ETHANE	5.1
		PROPANE	2.
FIELD		N-BUTANE	0.:
WELL NAMEWEST		ISOBUTANE	0.3
API	3000560290	N-PENTANE	۵.
LOCATION	SEC. 19. T6S, R27E	ISOPENTANE	
OWNER	READ & STEVENS, INC.	CYCLOPENTANE	
COMPLETED	811117	HEXANES PLUS	
SAMPLED	001220	NITROGEN	4.
FORMATION	PENN-VIRGIL	OXYGEN	
GEOLOGIC PROVINCE CODE	430	ARGON	TRACI
TRUE VERTICAL DEPTH (FT)	5704	HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	
		CARBON DIOXIDE	0.
WELLHEAD PRESSURE PSIG	1734	HELIUM	0.34
WELCHEAD PRESSURE, PSIG _ OBEN ELOW, NOED	C+4	LICEIDIA	
WELCHEAD PRESSURE, PSIG _ OPEN FLOW. MCFD	611	HEATING VALUE*	1.06

TOALCULATED GROSS BTU PER CUIFT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY TOUR TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20571	COMPONENT, MOLE PCT	
STATE	NEW MÉXICO	METHANE	85.9
COUNTY	CHAVES.	ETHANE	5.3
	HAYSTACK	PROPANE	2.2
		N-BUTANE	0.8
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	0.2
LOCATION		ISOPENTANE	0.2
OWNER		CYCLOPENTANE	
COMPLETED	700921	HEXANES PLUS	0.2
SAMPLED	001220	NITROGEN	4.3
FORMATION	PENN-VIRGIL	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	
TRUE VERTICAL DEPTH (FT)	5977	HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	
OPEN FLOW, MCFD	5714	HELIUM	
	The second secon	HEATING VALUE* SPECIFIC GRAVITY	
SAMPLE	20697	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	82.4
COUNTY		ETHANE	9.0
FIELD		PROPANE	3.8
WELL NAME LITT		N-BUTANE	1.1
		ISOBUTANE	0.5
API		N-PENTANE	0.3
LOCATION	•	ISOPENTANE	0.3
OWNER	2	CYCLOPENTANE	
COMPLETED	770328	HEXANES PLUS	
SAMPLED	010619	NITROGEN	
FORMATION	PENN-ATOKA MORROW	OXYGEN	
	430	ARGON	
GEOŁOGIC PROVINCE CODE _	750		0.0
GEOLOGIC PROVINCE CODE _ TRUE VERTICAL DEPTH (FT)		HYDROGEN	
	11102	HYDROGEN SULFIDE**	0.0
TRUE VERTICAL DEPTH (FT)	11102	HYDROGEN SULFIDE** CARBON DIOXIDE	0.0
TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	3103	HYDROGEN SULFIDE**	0.0 0.1 0.04

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 6g DEGREES FARRENIER! 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

SAMPL	.E 20695	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	59.8
	EDDY	ETHANE	14.4
	POWER	PROPANE	10.1
	SHINNERY FEDERAL NO. 1	N-BUTANE	3.2
·		ISOBUTANE	1_3
	3001529976	N-PENTANE	C_9
	SEC. 5, T18S, R31E	ISOPENTANE	
	ROBERT H. FORREST, JR. OIL LLC	CYCLOPENTANE	
	980201	HEXANES PLUS	
SAMPLED	010619	NITROGEN	
FORMATION	PERM-GRAYBURG	OXYGEN	
GEOLOGIC PROVING	CE CODE430	ARGON	
TRUE VERTICAL DEI	PTH (FT)3442	HYDROGEN	
MEASURED DEPTH.		HYDROGEN SULFIDE"	
WELLHEAD PRESSU	IRE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD		HËLIUM	
		HEATING VALUE* SPECIFIC GRAVITY	
		METHANE	20.0
STATE	NEW MEXICO	ETHANE	
COUNTY	EDDY	PROPANE	
EIELD			15.6
1 1 to be by by an armony and a second and a	GRAYBURG JACKSON		
	GRAYBURG JACKSON SKELLY UNIT NO. 274	N-BUTANE	5.0
WELL NAME		N-BUTANE	5.0 2.2
WELL NAME	SKELLY UNIT NO. 274	N-BUTANE	5.0 2.2 2.2
WELL NAME	SKELLY UNIT NO. 274 3001529210	N-BUTANE ISOBUTANE	5.0 2.2 2.2 1.9
WELL NAME API LOCATION OWNER	SKELLY UNIT NO. 274 3001529210 SEC. 28, T17S, R31E	N-BUTANEISOBUTANE N-PENTANEISOPENTANE	5.0 2.2 2.2 1.9
WELL NAME API LOCATION OWNER COMPLETED	SKELLY UNIT NO. 274 3001529210 SEC. 28, T17S, R31E WISER OIL CO.	N-BUTANEISOBUTANEISOPENTANEISOPENTANE	5.0 2.2 2.3 1.5
WELL NAME API LOCATION OWNER COMPLETED SAMPLED	SKELLY UNIT NO. 274 3001529210 SEC. 28, T17S, R31E WISER OIL CO. 970110	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	5.0 2.2 2.3 1.5 2.4 12.7
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION	SKELLY UNIT NO. 274 3001529210 SEC. 28, T17S, R31E WISER OIL CO. 970110. 010619	N-BUTANEISOBUTANEISOPENTANEISOPENTANE CYCLOPENTANEHEXANES PLUS	5.0 2.2 2.2 1.5 2.6 12.7
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVING	SKELLY UNIT NO. 274 3001529210 SEC. 28, T17S, R31E WISER OIL CO. 970110. 010619 PERM-GRAYBURG.	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	5.0 2.2 2.2 1.5 2.4 12.7 0.0 0.0 TRACE
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVING	SKELLY UNIT NO. 274 3001529210 SEC. 28, T17S, R31E WISER OIL CO. 970110. 010619 PERM-GRAYBURG. DE CODE 430	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	5.0 2.2 2.2 1.5 2.4 12.7 0.0 0.0 TRACE
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVING TRUE VERTICAL DE	SKELLY UNIT NO. 274 3001529210 SEC. 28, T17S, R31E WISER OIL CO. 970110. 010619 PERM-GRAYBURG. DE CODE 430 PTH (FT) 3541	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	5.0 2.2 2.3 1.5 2.4 12.7 0.0 TRACE
WELL NAME	SKELLY UNIT NO. 274 3001529210 SEC. 28, T17S, R31E WISER OIL CO. 970110 010619 PERM-GRAYBURG CE CODE 430 PTH (FT) 3541	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	5.0 2.2 1.9 1.2 1.2 1.2 0.0 TRACE 0.0 1.4
WELL NAME	SKELLY UNIT NO. 274 3001529210 SEC. 28, T17S, R31E WISER OIL CO. 970110. 010619 PERM-GRAYBURG. DE CODE 430 PTH (FT) 3541	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	5.0 2.2 1.9 1.2 1.2 1.2 0.0 TRACE 0.0 1.4

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAMILINHELT AND 30 INCHES OF MERCURY ** DUE YO THE ABSORPTION OF HZS DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE 20509	COMPONENT, MOLE PCT	
STATENEW MEXICO.	METHANE	
COUNTY EDDY	ETHANE	7.7
FIELD LOGAN DRAW	PROPANE	
WELL NAMEOXY HARVESTER FEDERAL NO. 1.	N-BUTANE	
API	ISOBUTANE	
LOCATION SEC. 26 T17S, R27E	N-PENTANE	
OWNER OXY USA WTP LIMITED PARTNERSHIP	ISOPENTANE	
	CYCLOPENTANE	
COMPLETED 000519	HEXANES PLUS	
SAMPLED	NITROGÉN	
FORMATIONPENN-MORROW_	OXYGEN	
GEOLOGIC PROVINCE CODE 430	ARGON	
TRUE VERTICAL DEPTH (FT) 9640	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD 1738	HELIUM	
	HEATING VALUE* SPECIFIC GRAVITY	
SAMPLE 20508	COMPONENT, MOLE PCT	
	METHANE	86.9
STATENEW_MEXICO.	ETHANE	
COUNTYEDDY	PROPANE	
FIELD LOGAN DRAW	N-BUTANE	
WELL NAMEOXY SKINNY SALOON FEDERAL NO. 1	ISOBUTANE	
API3001530756	N-PENTANE	0.2
LOCATIONSEC. 11. T17S, R27E	ISOPENTANE	0.2
OWNER OXY USA WTP LIMITED PARTNERSHIP	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	Ω.4
	NITROGEN	0.5
SAMPLED001206	CHACCE	0.0
	OXYGEN	
FORMATION PENN-MORROW	ARGON	0.0
FORMATION PENN-MORROW GEOLOGIC PROVINCE CODE 430		
SAMPLED 001206 FORMATION PENN-MORROW GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 9394 MEASURED DEPTH	ARGON	0.0
FORMATION PENN-MORROW GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 9394 MEASURED DEPTH	ARGON	0.0
FORMATION PENN-MORROW GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 9394 MEASURED DEPTH 880 WELLHEAD PRESSURE, PSIG 880	ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE HELIUM	0.0 .0.0 .0.4 0.02
FORMATION PENN-MORROW GEOLOGIC PROVINCE CODE 430	ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 . 0.0 0.4 0.02

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

SAMPLE	20455	COMPONENT, MOLE PCT	
STATE	NEW MEXICO.	METHANE	91.9
		ETHANE	4.0
COUNTY		PROPANE	0.8
FIELD		N-BUTANE	0.1
	NCASTER SPRING COM NO. 3	ISOBUTANE	0.1
	3001530965	N-PENTANE	TRACE
LOCATION	SEC. 8, T22S, R26E	ISOPENTANE	0.1
OWNER RICKS EXPLO	RATION ACQUISITION CORP	CYCLOPENTANE	<u>-</u>
COMPLETED	001101	HEXANES PLUS	. 0.1
SAMPLED	001127	NITROGEN	0.3
FORMATION	PENN-MORROW	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	0.0
TRUE VERTICAL DEPTH (FT) _	11486.	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	2.5
OPEN FLOW, MCFD		HELIUM	0.03
OF ENT LOW, MOI D	31.	HEATING VALUE*	1,038
		SPECIFIC GRAVITY	.0.616
SAMPLE	20456	COMPONENT, MOLE PCT	
		COMPONENT, MOLE PCT METHANE	95.3
STATE	NEW MEXICO.		
STATE	NEW MEXICO. EDDY	METHANE	2.5
STATE COUNTY	NEW MEXICO EDDY EDDY UNDESIGNATED	METHANE	2.5
STATE COUNTY FIELD WELL NAME	NEW MEXICO EDDY EDDY UNDESIGNATED FEDERAL AA NO. 1	METHANE ETHANE PROPANE	2.5 0.4 0.1
STATE COUNTY FIELD WELL NAME	NEW MEXICO EDDY EDDY UNDESIGNATED	METHANE ETHANE PROPANE N-BUTANE	2.5 0.4 0.1
STATE	NEW MEXICO EDDY EDDY UNDESIGNATED FEDERAL AA NO. 1	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	2.5 0.4 0.1 0.1 TRACE
STATE COUNTY FIELD WELL NAME APILOCATION	NEW MEXICO EDDY EDDY UNDESIGNATED FEDERAL AA NO. 1 3001522926	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	2.5 0.4 0.1 0.1 TRACE
STATE COUNTY FIELD WELL NAME API LOCATION RICKS EXPLO	NEW MEXICO EDDY EDDY UNDESIGNATED FEDERAL AA NO. 1 3001522926 SEC. 17, T22S, R26E	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	2.5 0.2 0.1 0.1 TRACE
STATE COUNTY FIELD WELL NAME API LOCATION OWNER RICKS EXPLO	NEW MEXICO EDDY EDDY UNDESIGNATED FEDERAL AA NO. 1 3001522926 SEC. 17, T22S, R26E RATION ACQUISITION CORP.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	2.5 0.4 0.1 0.1 TRACE TRACE
STATE COUNTY FIELD WELL NAME API LOCATION COWNER RICKS EXPLOIT COMPLETED SAMPLED	NEW MEXICO EDDY EDDY UNDESIGNATED FEDERAL AA NO. 1 3001522926 SEG. 17, T22S, R26E RATION ACQUISITION CORP. 791009	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	2.5 0.4 0.1 0.1 TRACE TRACE
STATE COUNTY FIELD WELL NAME API LOCATION OWNER RICKS EXPLO COMPLETED SAMPLED FORMATION	NEW MEXICO EDDY EDDY UNDESIGNATED FEDERAL AA NO. 1 3001522926 SEC. 17, T22S, R26E DRATION ACQUISITION CORP. 791009 001127 PENN-MORROW	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	2.5 0.4 0.1 0.1 TRACE TRACE 0.1
STATE COUNTY FIELD WELL NAME API LOCATION OWNER RICKS EXPLO COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	NEW MEXICO EDDY EDDY UNDESIGNATED FEDERAL AA NO. 1 3001522926 SEC. 17, T22S, R26E DRATION ACOUISITION CORP. 791009 001127 PENN-MORROW 430	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	2.5 0.4 0.1 TRACE TRACE
STATE COUNTY FIELD WELL NAME API LOCATION COWNER RICKS EXPLO COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	NEW MEXICO EDDY EDDY UNDESIGNATED FEDERAL AA NO. 1 3001522926 SEC. 17, T22S, R26E RATION ACQUISITION CORP. 791009 001127 PENN-MORROW 430 11290	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	2.5 0.4 0.1 TRACE TRACE 0.1 0.1 0.0
STATE COUNTY FIELD WELL NAME LOCATION OWNER RICKS EXPLO COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) L MEASURED DEPTH	NEW MEXICO EDDY EDDY UNDESIGNATED FEDERAL AA NO. 1 3001522926 SEC. 17, T22S, R26E RATION ACOUISITION CORP. 791009 001127 PENN-MORROW 430	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	2.5 0.4 0.7 TRACE TRACE 0.5 0.6 0.6
STATE COUNTY FIELD WELL NAME API LOCATION OWNER RICKS EXPLO COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	NEW MEXICO EDDY EDDY UNDESIGNATED FEDERAL AA NO. 1 3001522926 SEG. 17, T22S, R26E RATION ACOUISITION CORP. 791009 001127 PENN-MORROW 430 11290	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN ARGON HYDROGEN SULFIDE**	2.5 0.4 0.1 TRACE TRACE 0.1 0.2 0.0 0.0
STATE COUNTY FIELD WELL NAME API LOCATION OWNER RICKS EXPLO COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	NEW MEXICO EDDY EDDY UNDESIGNATED FEDERAL AA NO. 1 3001522926 SEC. 17, T22S, R26E RATION ACOUISITION CORP. 791009 001127 PENN-MORROW 430	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	2.5 0.4 0.1 TRACE TRACE 0.1 0.6 0.0 0.0

^{*} 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

SAMPLE 20457	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	94.9
COUNTY	ETHANÉ	2.7
FIELD HAPPY VALLEY	PROPANE	0.5
WELL NAME FEDERAL BN NO. 1	N-BUTANE	0.1
	ISOBUTANE	0.1
API 3001523498	N-PENTANE	TRACE
LOCATION SEC. 17, T22S, R26E	ISOPENTANE	
OWNER RICKS EXPLORATION ACQUISITION CORP.	CYCLOPENTANE	
COMPLETED B10113	HEXANES PLUS	0.1
SAMPLED	NITROGEN	0.6
FORMATION PENN-MORROW	OXYGEN	
GEOLOGIC PROVINCE CODE 439	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 11668	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG1778_	CARBON DIOXIDE	
OPEN FLOW, MCFD 6500	HELIUM	
	HEATING VALUE*	
	SPECIFIC GRAVITY	0.59
SAMPLE 20459	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	95.8
	ETHANE	2.1
COUNTY FDDY	PROPANE	0.3
FIELD HAPPY VALLEY	N-BUTANE	0.1
WELL NAME LANCASTER SPRING COM NO. 1	ISOBUTANE	0.1
API	N-PENTANE	TRACE
LOCATION SEC. 8, T22S, R26E	ISOPENTANE	TRACE
OWNER RICKS EXPLORATION ACQUISITION CORP.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0.1
SAMPLED	NITROGEN	3.0
FORMATION PENN-MORROW	OXYGEN	0.0
GEOLOGIC PROVINCE CODE430	ARGON	9.0
TRUE VERTICAL DEPTH (FT) 11330	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	0.7
אבודוובעה בעבפסחעבי גפוס	HELIUM	0.03
ODEN ELONI MAED		
OPEN FLOW, MCFD 13000	HEATING VALUE*	1,026

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

SAMPLE	20507	COMPONENT, MOLE PCT	
STATE	NEW MEYICO	METHANE	86.8
		ETHANE	7.1
COUNTY		PROPANE	2.9
FIELD	CROW FLATS	N-BUTANE	0.8
WELL NAME		ISOBUTANE	0.4
	3001524025	N-PENTANE	
LOCATION	SEC. 12, T17S, R27E	ISOPENTANE	0.5
OWNER RICKS EXPLOR	ATION ACQUISITION CORP.	CYCLOPENTANE	
COMPLETED	820222	HEXANES PLUS	0.6
SAMPLED	001206	NITROGEN	0.5
FORMATION	PENN-MORROW	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	0.0
TRUE VERTICAL DEPTH (FT)		HYDROGEN	0
MEASURED DEPTH		HYDROGEN SULFIDE"	0.0
		CARBON DIOXIDE	0.4
WELLHEAD PRESSURE, PSIG		HELIUM	0.00
OPEN FLOW, MCFD	1410	HEATING VALUE*	1.16
		SPECIFIC GRAVITY	0.667
SAMPLE	20458	COMPONENT, MOLE PCT	
STATE	NEWNEVICO	METHANE	<u>91.9</u>
		ETHANE	4.
COUNTY		PROPANE	1.3
FIELD		N-BUTANE	D.4
WELL NAME	STATE IM COM NO. 1	ISOBUTANE	D.:
API	3001523461	N-PENTANE	D.:
LOCATION	SEC. 16, T22S, R26E	ISOPENTANE	. 0.3
OUNTED DIGUE TUE OF	ATION ACQUISITION CORP.	CYCLOPENTANE	
OWNER RICKS EXPLOR	THE STATE OF THE S		
		HEXANES PLUS	
COMPLETED	810622	HEXANES PLUS	
COMPLETED	810622 001127		1.1
COMPLETEDSAMPLEDFORMATION	810622 001127 PENN-MORROW	NITROGEN	1.d D.0
COMPLETEDSAMPLEDFORMATIONGEOLOGIC PROVINCE CODE	810622 001127 PENN-MORROW 430	NITROGEN	0.0 0.0
COMPLETEDSAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	810622 001127 PENN-MORROW 430 11542	NITROGEN OXYGEN ARGON	D.C D.C D.C
COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	810622 001127 PENN-MORROW 430 11542	NITROGEN OXYGEN ARGON HYDROGEN	D.C D.C D.C
COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	810622 001127 PENN-MORROW 430 11542	NITROGEN	0.0 0.0 0.0 0.0
COMPLETEDSAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	810622 001127 PENN-MORROW 430 11542	NITROGEN	0.0 0.0 0.0 0.0 0.0

 $^{^{\}circ}$ CALCULATED GROSS 8TU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY $^{\circ}$ DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE REFISAL FOR THE PROPERTY OF THE PROPERTY O

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

SAMPLE	20460	COMPONENT, MOLE PCT	
STATE	NEW MEYICO	METHANE	81.3
		ETHANE	11.2
COUNTY	<u> </u>	PROPANE	3.7
FIELD		N-BUTANE	1.2
WELL NAME		ISOBUTANE	3.0
API		N-PENTANE	0.4
LOCATION	SEC. 26, T21S, R27E	ISOPENTANE	0.3
OWNER	DELTA PETROLEUM CORP.	CYCLOPENTANE	
COMPLETED	790220	HEXANES PLUS	0.4
SAMPLED	001127	NITROGEN	. 0.8
FORMATION	PENN-MORROW	OXYGEN	0.0
GEOLOGIC PROVINCE CODE _	430.	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	11616	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	. 0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	0.1
OPEN FLOW, MCFD		HELIUM	
	1080.	HEATING VALUE*	1.219
		SPECIFIC GRAVITY	0.701
SAMPLE	20485	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	78.6
COUNTY		ETHANE	10.3
		PROPANE	4.£
FIELD		N-BUTANE	1.4
WELL NAME		ISOBUTANE	0.5
API		N-PENTANE	0.4
LOCATION		ISOPENTANE	0.3
OWNER		CYCLOPENTANE	
COMPLETED	971027	HEXANES PLUS	0.8
SAMPLED	001129	NITROGEN	2.5
FORMATION	PERM-BLINEBRY	OXYGEN	0.0
GEOLOGIC PROVINCE CODE _	430	ARGON	00
TRUE VERTICAL DEPTH (FT) _	6387	HYDROGEN	0.0
MEASURED DEPTH		HYDRÖGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	
OPEN FLOW, MCFD		HELIUM	
		HEATING VALUE*	1,217
		SPECIFIC GRAVITY	0.726

¹ CALCULATED GROSS BTU PER CUIFT DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY 10 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

SAMPLE	20484	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	77.3
COUNTY		ETHANE	10.9
		PROPANE	5.3
FIELD		N-BUTANE	1.8
WELL NAME		ISOBUTANE	0.6
	3002507029	N-PENTANE	0.6
LOCATION	SEC. 35, T21S, R37E	ISOPENTANE	0.4
OWNER	CONOCO, INC.	CYCLOPENTANE	
COMPLETED	980323	HEXANES PLUS	3.0
SAMPLED	001129	NITROGEN	2.1
FORMATION	PERM-BLINEBRY	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	6226	HYDROGEN	0.0
MEA\$URED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	TRACE
OPEN FLOW, MCFD		HELIUM	
OFEN FLOW, MICFO	455	HEATING VALUE*	1,269
		SPECIFIC GRAVITY	0.747
SAMPLE	20684	COMPONENT, MOLE PCT	
STATE	NEW MEYICO	METHANE	70.4
		METHANE	
COUNTY	LEA	ETHANE	11.5
COUNTY	LFA YOUNG N		11.5 6.3
COUNTY	LFA YOUNG N	PROPANE	11.5 6.3 2.5
STATE COUNTY FIELD WELL NAME	LFA YOUNG N	PROPANE	11.5 6.3 2.5 0.9
COUNTY FIELD WELL NAME API	LEA. YOUNG N R.E. GRAHAM 7 NO. 1 3002529002	ETHANE PROPANE N-BUTANE ISOBUTANE	11.5 6.3 2.5 0.9
COUNTY FIELD WELL NAME API LOCATION	LFA YOUNG N R.E. GRAHAM 7 NO. 1 3002529002 SEC. 7, T18S, R32E	PROPANE	11.5 6.3 2.5 0.9 0.9
COUNTY FIELD WELL NAME API LOCATION OWNER	LFA YOUNG N R.E. GRAHAM 7 NO. 1 3002529002 SEC. 7, T18S, R32E CIMAREX ENERGY CO.	PROPANE	11.5 6.3 2.5 0.9 0.9
COUNTY FIELD WELL NAME API LOCATION COMPLETED	LEA YOUNG N R.E. GRAHAM 7 NO. 1 3002529002 SEC. 7, T18S, R32E CIMAREX ENERGY CO. 850415	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	11.5 6.3 2.5 0.9 0.9
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED	LFA YOUNG N R.E. GRAHAM 7 NO. 1 3002529002 SEC. 7, T18S, R32E CIMAREX ENERGY CO. 850415 010618	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	11.5 6.3 2.5 0.9 0.9 0.9
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION	LFA YOUNG N R.E. GRAHAM 7 NO. 1 3002529002 SEC. 7, T18S, R32E CIMAREX ENERGY CO. 850415 010618 PERM-BONE SPRING	PROPANE	11.5 6.3 2.5 0.9 0.9 0.9 1.6 4.7
COUNTY FIELD WELL NAME API LOCATION COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	LEA YOUNG N R.E. GRAHAM 7 NO. 1 3002529002 SEC. 7, T18S, R32E CIMAREX ENERGY CO. 850415 010618 PERM-BONE SPRING 430	PROPANE	11.5 6.3 2.5 0.9 0.9 0.9 1.6 4.7 0.0
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	LFA YOUNG N R.E. GRAHAM 7 NO. 1 3002529002 SEC. 7, T18S, R32E CIMAREX ENERGY CO. 850415 010618 PERM-BONE SPRING 430 8546	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	11.5 6.3 2.5 0.9 0.9 0.9 1.6 4.7 0.0 0.0
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	LEA YOUNG N R.E. GRAHAM 7 NO. 1 3002529002 SEC. 7, T18S, R32E CIMAREX ENERGY CO. 850415 010618 PERM-BONE SPRING 430 8546	ETHANE	11.5 6.3 2.5 0.9 0.9 1.6 4.7 0.0 0.0 TRACE
COUNTY FIELD WELL NAME API LOCATION COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	LEA YOUNG N R.E. GRAHAM 7 NO. 1 3002529002 SEC. 7, T18S, R32E CIMAREX ENERGY CO. 850415 010618 PERM-BONE SPRING 430 8546	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE ISOPENTANE ISOPENTANE OYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	11.5 6.3 2.5 0.9 0.9 1.6 4.7 0.0 0.0 TRACE
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	LEA YOUNG N R.E. GRAHAM 7 NO. 1 3002529002 SEC. 7, T18S, R32E CIMAREX ENERGY CO. 850415 010618 PERM-BONE SPRING 430 8546	ETHANE	11.5 6.3 2.5 0.9 0.9 1.6 4.7 0.0 0.0 TRACE

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSCRPTION OF H2S CURING SAMPLING. THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20465	COMPONENT, MOLE PCT	
STATE	NEW MEYICO	METHANE	65.7
		ETHANE	12.1
	LEA	PROPANE	7.3
FIELD		N-BUTANE	2.7
WELL NAME		ISOBUTANE	1.0
API		N-PENTANE	0.8
LOCATION		ISOPENTANE	0.8
OWNER	AMTEX ENERGY, INC.	CYCLOPENTANE	
COMPLETED	880421	HEXANES PLUS	1.2
SAMPLED	.001127	NITROGEN	4.5
FORMATION	PERM-BONE SPRING	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	9975	HYDROGEN	<u> </u>
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	
OPEN FLOW, MCFD		HELIUM	
or election, more		HEATING VALUE*	1.30
		SPECIFIC GRAVITY	U.053
SAMPLE	20679	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	67.3
COUNTY	LEA	ETHANE	13.3
FIELD		PROPANE	
WELL NAME		N-BUTANE	2
		ISOBUTANE	1.5
API		N-PENTANE	0.
LOCATION		ISOPENTANE	0.
OWNER	BTA OIL PRODUCERS	CYCLOPENTANE	
COMPLETED	871119	HEXANES PLUS	
SAMPLED	010618	NITROGEN	
FORMATION	PERM-BONE SPRING	OXYGEN	0
GEOLOGIC PROVINCE CODE	430	ARGON	
TRUE VERTICAL DEPTH (FT)	8435	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	
OPEN FLOW, MCFD		HELIUM	
		HEATING VALUE*	1 256
		REATING VALUE	1,000

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 50 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

SAMPLE 2070	D	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	55.7
		ETHANE	9.5
COUNTY		PROPANE	10.3
FIELD		N-BUTANE	3.6
WELL NAME PEAR		ISOBUTANE	1.8
API	3002534119	N-PENTANE	0.9
LOCATIONS	SEC. 33, T19S, R34E	ISOPENTANE	1.3
OWNERREA	O & STEVENS, INC.	CYCLOPENTANE	
COMPLETED	980929	HEXANES PLUS	1.3
SAMPLED	010619	NITROGEN	15.3
FORMATION	PERM-DELAWARE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	5640	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	0.1
OPEN FLOW, MCFD		HELIUM	0.16
OFEN FLOW, MICH		HEATING VALUE*	1,320
		SPECIFIC GRAVITY	
SAMPLE 2048	6	COMPONENT, MOLE PCT	
STATE	NEW MEYICO	METHANE	76.7
		ETHANE	10.6
COUNTY		PROPANE	5.5
FIELD		N-BUTANE	2.0
WELL NAMECENTRALI		ISOBUTANE	0.6
API	3002506845	N-PENTANE	0.7
LOCATION	SEC 28 T215 R37E	ISOPENTANE	05
OWNERCH	Children and Children and Children		
		CYCLOPENTANE	
COMPLETED	IEVRON U.S.A., INC.	CYCLOPENTANE	
COMPLETED	IEVRON U.S.A., INC. 540423.		1.0
SAMPLED	S40423 001130	HEXANES PLUS	1.0 2.2
	JEVRON U.S.A., INC. 540423 001130 PERM-DRINKARD	HEXANES PLUSNITROGEN	1.0 2.2 0.0
SAMPLEDFORMATIONGEOLOGIC PROVINCE CODE	540423 001139 PERM-DRINKARD 430	HEXANES PLUS NITROGEN OXYGEN	1.0 2.2 9.0 0.0
SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	540423 	HEXANES PLUS NITROGEN OXYGEN ARGON	1.0 2.2 0.0 0.0
SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	96379	HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	1.0 2.2 0.0 0.0 0.0
SAMPLED FORMATION FORMATION FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	1EVRON U.S.A., INC. 540423 001130 PERM-DRINKARD 430 6379	HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	1.0 2.2 9.0 9.0 9.0 9.0
SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	1EVRON U.S.A., INC. 540423 001130 PERM-DRINKARD 430 6379	HEXANES PLUS	1.0 2.2 9.0 0.0 0.0 0.0 0.0 0.2

^{*}CALCULATEU GROSS BTU PER CUIFT, DRY, AT 60 DEGREES FAHRENREIT AND 30 INCHES OF MERCURY **DUE TO THE ABSORPTION DE H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20488	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	73.5
		ETHANE	8.0
COUNTY		PROPANE	4.8
FIELD		N-BUTANE	1.7
WELL NAME GILLULLY F		ISOBUTANE	0.8
API		N-PENTANE	0.4
LOCATION	SEC 24 120S R36E	ISOPENTANE	0.6
OWNEROC	CIDENTAL PERMIAN LTD	CYCLOPENTANE	
COMPLETED	531128	HEXANES PLUS	0.6
SAMPLED	001130	NITROGEN	3.5
FORMATION	PERM-GRAYBURG	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	3470	HYDROGEN	0.1
MEASURED DEPTH		HYDROGEN SULFIDE**	1.3
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	4.6
OPEN FLOW, MCFD		HËLIUM	0.02
OF ENT LOW, MICH D	B000	HEATING VALUE*	1.167
		SPECIFIC GRAVITY	0.782
SAMPLE	20693	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	58.2
COUNTY		ETHANE	15.5
		PROPANE	.9.8
FIELD	MALJAMAR	N-BUTANE	
WELL NAME		14-001744L	3.3
		ISOBUTANE	
API			1.1
API	3002530199	ISOBUTANE	1.4
	3002530199 SEC. 31, T17S, R32E	ISOBUTANE	1.4 1.2
LOCATION	3002530199 SEC, 31, T17S, R32E MACK ENERGY CORP.	ISOBUTANE	1.1 1.4 1.2
LOCATION	3002530199 SEC. 31, T17S, R32E MACK ENERGY CORP. 880225	ISOBUTANE	1.1 1.4 1.2
LOCATION OWNER COMPLETED	3002530199 SEC. 31, T17S, R32E MACK ENERGY CORP. 880225. 010619	ISOBUTANE	1.1 1.4 1.2 ———————————————————————————————————
LOCATION	3002530199 SEC. 31, T17S, R32E MACK ENERGY CORP. 880225 010619 PERM-GRAYBURG	ISOBUTANE	1.1 1.4 1.2 1.7 6.8 0.0
LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	3002530199 SEC. 31, T17S, R32E MACK ENERGY CORP. 680225 010619 PERM-GRAYBURG.	ISOBUTANE	1.1 1.4 1.2 1.7 6.8 0.0
LOCATION	3002530199 SEC, 31, T17S, R32E MACK ENERGY CORP. 880225 010619 PERM-GRAYBURG. 430 3820	ISOBUTANE	1.1 1.4 1.2 1.7 6.8 9.0 9.0
LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	3002530199 SEC. 31, T17S, R32E MACK ENERGY CORP. 880225 010619 PERM-GRAYBURG. 430	ISOBUTANE	1.1 1.4 1.2 1.2 6.8 0.0 0.0
LOCATION	3002530199 SEC. 31, T17S, R32E MACK ENERGY CORP. 880225 010619 PERM-GRAYBURG 430 3820	ISOBUTANE	1.1 1.4 1.2 1.7 6.8 0.0 0.0 0.0
LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	3002530199 SEC. 31, T17S, R32E MACK ENERGY CORP. 880225 010619 PERM-GRAYBURG 430 3820	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	1.1 1.4 1.2 1.7 6.8 0.0 0.0 0.5 0.4

^{*} 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

SAMPLE 20471	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	90.4
	ETHANE	4.8
COUNTY LEA	PROPANE	1.8
FIELDRUFFALO.	N-BUTANE	0.6
WELL NAMENELLIS C FEDERAL GAS COM NO. 1	ISOBUTANE	0.3
API3002526799	N-PENTANE	0.2
LOCATION SEC. 8. T19S. R33E	ISOPENTANE	0.2
OWNERPENROC OIL CO.	CYCLOPENTANE	
COMPLETED830711	HEXANES PLUS	0.4
SAMPLED001128.	NITROGEN	0_8
FORMATIONPENN-MORROW	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 13620	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE. PSIG	CARBON DIOXIDE	0.7
OPEN FLOW, MCFD	HELIUM	0.01
	HEATING VALUE*	1,106
	SPECIFIC GRAVITY	0.635
SAMPLE 20470	COMPONENT, MOLE PCT	··········
STATENEW MEXICO	METHANE	87.8
COUNTY LEA	ETHANE	5.7
	PROPANE	2.5
FIELD BUFFALO	N-BUTANE	0.8
WELL NAME KUDU 9 FEDERAL COM 1	ISOBUTANE	0.4
API	N-PENTANE	0.2
LOCATION SEC. 9, I198, R33E	ISOPENTANE	0.2
OWNER NEARBURG PRODUCING CO.	CYCLOPENTANE	
COMPLETED 000612	HEXANES PLUS	0.3
SAMPLED	NITROGEN	0.5
FORMATION PENN-MORROW	OXYGEN	
GEOLOGIC PROVINCE CODE 430	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 13373	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD	HELJUM	
	HEATING VALUE*	1.125
	SPECIFIC GRAVITY	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 8E RELIABLE

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

SAMPLE 20468	COMPONENT, MOLE PCT	
STATE NEW MEXICO	METHANE	87.2
COUNTY	ETHANE	6.2
FIELD GEM E	PROPANE	2.6
WELL NAME LAGUNA DEEP FEDERAL UNIT NO. 2	N-BUTANE	8.0
	ISOBUTANE	. 0.4
API 3002526440	N-PENTANE	0.3
LOCATION SEC. 26, T19S, R33E	ISOPENTANE	0.3
OWNER MATADOR OPERATING CO.	CYCLOPENTANE	
COMPLETED <u>830705</u>	HEXANES PLUS	0_6
SAMPLED	NITROGEN	0.9
FORMATIONPENN-MORROW	OXYGEN	0.0
GEOLOGIC PROVINCE CODE430_	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 13390	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	0.7
OPEN FLOW, MCFD344	HELIUM	
VI = VI 111 V	HEATING VALUE*	1.146
	SPECIFIC GRAVITY	U.003
SAMPLE 20012	COMPONENT, MOLE PCT	
STATE NEW MEXICO.	METHANE	84.6
COUNTYLEA	ETHANE	
FIELD TOWNSEND	PROPANE	3.5
WELL NAME BUFFALO ARU STATE COM NO. 1	N-BUTANE	1.0
	ISOBUTANE	0.5
API3002502801	N-PENTANE	0.3
LOCATIONSEC. 18. T16S. R35E	ISOPENTANE	0.3
OWNERYATES PETROLEUM.CORP.	CYCLOPENTANE	
COMPLETED971222	HEXANES PLUS	
SAMPLED	NITROGEN	
	OXYGEN	
FORMATION PENN-MORROW	ARGON	
GEOLOGIC PROVINCE CODE		
	HYDROGEN	
GEOLOGIC PROVINCE CODE	HYDROGENHYDROGEN SULFIDE** _	0.0
GEOLOGIC PROVINCE CODE	HYDROGENHYDROGEN SULFIDE**CARBON DIOXIDE	0.0
GEOLOGIC PROVINCE CODE	HYDROGENHYDROGEN SULFIDE** _	0.0 0.7 0.06

^{*} CALCULATED GROSS BTU PER OUFT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** OUE TO THE ASSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20489	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	75.3
	LEA	ETHANE	6.6
	EUMONT	PROPANE	4.7
		N-BUTANE	1.9
	FUMONT 21 FEDERAL NO. 1	ISOBUTANE	0.9
	3002533170	N-PENTANE	
	SEC. 21, T20S, R37E	ISOPENTANE	0.6
	MEWBOURNE OIL CO.	CYCLOPENTANE	
COMPLETED	951203	HEXANES PLUS	0.8
SAMPLED	. 001130	NITROGEN	1.1
FORMATION	PERM-QUEEN	OXYGEN	0.0
GEOLOGIC PROVINCE CO	DE430_	ARGON	0.0
TRUE VERTICAL DEPTH (F	FT)3550	HYDROĞEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, P	'SIG	CARBON DIOXIDE	5.9
•	250	HELIUM	
5. E		HEATING VALUE*	1,182
		SPECIFIC GRAVITY	0.79
SAMPLE	20491	COMPONENT, MOLE PCT	
CTATE	NEW MEN AND	METHANE	70.0
		171211111111111111111111111111111111111	/ b.t
	NEW MÉXICO	ETHANE	
COUNTY	LEA		7.1
COUNTY	LEA EUMONT	ETHANE	7.1 4.4
COUNTY	LEA EUMONT. GILLULLY B FEDERAL RA A NO. 7.	PROPANE	7.5 4.4 1.5
COUNTY FIELD WELL NAMEAPI	LEA EUMONT GILLULLY B FEDERAL RA A NO. 7 3002506236	ETHANE PROPANE N-BUTANE	7.1 4.4 1.5 0.7
COUNTY FIELD WELL NAME API	LEA EUMONT. GILLULLY B FEDERAL RA A NO. 7.	ETHANE PROPANE N-BUTANE ISOBUTANE	7.5 4.4 1.8 0.3
COUNTY FIELD WELL NAME API LOCATION	LEA EUMONT GILLULLY B FEDERAL RA A NO. 7 3002506236	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	7.5 4.4 1.5 0.5 0.5
COUNTY FIELD WELL NAME API LOCATION OWNER	LEA EUMONT GILLULLY B FEDERAL RA A NO. 7 3002506236 SEC. 22, T20S, R37E	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	7.5 4.4 1.6 0.5 0.6
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED	LEA FUMONT GILLULLY B FEDERAL RA A NO. 7 3002506236 SEC. 22, T20S, R37E OCCIDENTAL PERMIAN LTD	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	7. 4.4 1.5 0.5 0.5 0.4
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED	LEA EUMONT GILLULLY B FEDERAL RA A NO. 7 3002506236 SEC. 22, T20S, R37E OCCIDENTAL PERMIAN LTD 560329	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	7.5 4.4 1.5 0.5 0.5 0.4
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION	LEA EUMONT GILLULLY B FEDERAL RA A NO. 7 3002506236 SEC. 22, T20S, R37E OCCIDENTAL PERMIAN LTD 560329 001130	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	7.3 4.4 1.5 0.7 0.3 0.4 0.5
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CO	LEA EUMONT GILLULLY B FEDERAL RA A NO. 7 3002506236 SEC. 22, T20S, R37E OCCIDENTAL PERMIAN LTD 560329 001130 PERM-QUEEN 0DE 430	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	7.5 4.4 1.5 0.7 0.3 0.4 0.5 0.6
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CO	LEA EUMONT GILLULLY B FEDERAL RA A NO. 7 3002506236 SEC. 22, T20S, R37E OCCIDENTAL PERMIAN LTD. 560329 001130 PERM-OUEEN DDE 430 430 ET) 3858	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	7.5 4.4 1.5 0.7 0.5 0.4 0.5 1.0 0.6 TRACE
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CO TRUE VERTICAL DEPTH (F	LEA EUMONT GILLULLY B FEDERAL RA A NO. 7 3002506236 SEC. 22, T20S, R37E OCCIDENTAL PERMIAN LTD 560329 001130 PERM-QUEEN 00E 430 57) 3658	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	7.5 4.4 1.5 0.5 0.3 0.4 0.5 0.6 TRACE
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CO TRUE VERTICAL DEPTH (F MEASURED DEPTH WELLHEAD PRESSURE, P	LEA EUMONT GILLULLY B FEDERAL RA A NO. 7 3002506236 SEC. 22, T20S, R37E OCCIDENTAL PERMIAN LTD. 560329 001130 PERM-QUEEN DDE 430	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	7.2 4.4 1.5 0.7 0.3 0.4 0.6 0.6 TRACE
COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CO TRUE VERTICAL DEPTH (F MEASURED DEPTH WELLHEAD PRESSURE, P	LEA EUMONT GILLULLY B FEDERAL RA A NO. 7 3002506236 SEC. 22, T20S, R37E OCCIDENTAL PERMIAN LTD 560329 001130 PERM-QUEEN 00E 430 57) 3658	ETHANE	7.5 4.4 1.5 0.7 0.3 0.4 0.5 0.6 TRACE 1.5 6.4

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

SAMPLE 2D487	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	77.0
COUNTY LEA	ETHANE	8.0
	PROPANE	4.3
FIELDEUMONT	N-BUTANE	1.3
WELL NAME GILLULLY FEDERAL GAS COM NO. 15	ISOBUTANE	0.6
API3002525866	N-PENTANE	
LOCATION SEC. 24, T20S, R36E	ISOPENTANE	0.4
OWNER OCCIDENTAL PERMIAN LTD	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	Q.4
SAMPLED	NITROGEN	1.8
FORMATIONPERM-QUEEN	OXYGEN	0.0
GEOLOGIC PROVINCE CODE430	ARGON	TRACE
TRUE VERTICAL DEPTH (FT) 3610	HYDROGEN	0.3
MEASURED DEPTH	HYDROGEN SULFIDE**	0.4
	CARBON DIOXIDE	5.2
WELLHEAD PRESSURE, PSIG	HELIUM	0.01
OPEN FLOW, MCFD	HEATING VALUE*	1.141
	SPECIFIC GRAVITY	0.748
SAMPLE 20490	COMPONENT, MOLE PCT	
STATENEW MEXICO.	METHANE	74.8
	ETHANE	9.6
COUNTY LEA	PROPANE	4.5
FIELD <u>EUMONT</u>	N-BUTANE	1.2
WELL NAME GILLULLY B FEDERAL RA A NO. 4	ISOBUTANE	0.6
API3002506234	N-PENTANE	0.3
. * a . = . a	ISOPENTANE	0.3
LOCATIONSEC. 22, T20S, R37E	1905 ENTANE	
	CYCLOPENTANE	
OWNEROCCIDENTAL PERMIAN LTD		
LOCATION SEC. 22, T20S, R37E OWNER OCCIDENTAL PERMIAN LTD COMPLETED 540317 SAMPLED 001130	CYCLOPENTANE	0.3
OWNER OCCIDENTAL PERMIAN LTD COMPLETED 540317 SAMPLED 001130	CYCLOPENTANE	0.3 5.6
OWNER OCCIDENTAL PERMIAN LTD COMPLETED 540317 SAMPLED 001130 FORMATION PERM-SEVEN RIVERS	CYCLOPENTANE HEXANES PLUS NITROGEN	0.3 5.6
OWNER OCCIDENTAL PERMIAN LTD COMPLETED 540317 SAMPLED 001130 FORMATION PERM-SEVEN RIVERS GEOLOGIC PROVINCE CODE 430	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.3 5.6
OWNER OCCIDENTAL PERMIAN LTD COMPLETED 540317 SAMPLED 001130 FORMATION PERM-SEVEN RIVERS GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 3550	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.3 5.6 0.0 0.0 TRACE
OWNER OCCIDENTAL PERMIAN LTD COMPLETED 540317 SAMPLED 001130 FORMATION PERM-SEVEN RIVERS GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 3550 MEASURED DEPTH	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.3 5.6 0.0 0.0 TRACE
OWNEROCCIDENTAL PERMIAN LTD COMPLETED	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.3 5.6 0.0 0.0 TRACE 0.0
OWNER OCCIDENTAL PERMIAN LTD COMPLETED 540317 SAMPLED 001130 FORMATION PERM-SEVEN RIVERS GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 3550 MEASURED DEPTH	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.3 5.6 0.0 0.0 TRACE 0.0 2.9

^{*} 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

SAMPLE	20473	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	66.1
***************************************		ETHANE	10.8
COUNTY		PROPANE	0.8
FIELD		N-BUTANE	3.1
WELL NAME		ISOBUTANE	1.3
API	3002534529	N-PENTANE	1.0
LOCATION	SEC. 17, T22S, R36E	ISOPENTANE	1.0
OWNER	DOYLE.HARTMAN	CYCLOPENTANE	-
COMPLETED	981231	HEXANES PLUS	1.4
SAMPLED	001128	NITROGÉN	1.0
FORMATION	PERM-SEVEN RIVERS	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	430_	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	3607	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.7
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	
OPEN FLOW, MCFD		HELIUM	
SI EN I ESTI, (30) 5		HEATING VALUE*	1,355
		SPECIFIC GRAVITY	0.888
SAMPLE	20043	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	83.2
		ETHANE	9.6
COUNTY		PROPANE	3.7
FIELD		N-BUTANE	1.3
WELL NAME TRIS		ISOBUTANE	0.5
API		N-PENTANE	0.2
LOCATION	SEC. 34, T245, R33E	ISOPENTANÉ	0.3
OWNER	EAG RESOURCES	CYCLOPENTANE	
	EOG NESOUNCES		
COMPLETED		HEXANES PLUS	0.3
COMPLETED	980930		
	980930 991209	HEXANES PLUS	0.5
SAMPLED	980930 991209 PERM-WOLFCAMP	HEXANES PLUS	0.5
SAMPLED	980930 991209 PERM-WOLFCAMP 430	HEXANES PLUS NITROGEN OXYGEN	0.5 0.0 TRACE
SAMPLED	980930 991209 PERM-WOLFCAMP 430 13636	HEXANES PLUS NITROGEN OXYGEN ARGON	0.5 0.0 TRACE 0.0
SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	980930 991209 PERM-WOLFCAMP 430 13636	HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.5 0.0 TRACE 0.0
SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	980930 991209 PERM-WOLFCAMP 430 13636	HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.5 0.0 TRACE 0.0 0.0
SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	980930 991209 PERM-WOLFCAMP 430 13636	HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.5 0.0 TRACE 0.0 0.0

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 80 DEGREES FAHRENHEIT AND 33 :NCHES OF MERCURY ** DUE TO THE ABSORPTION OF HZS DURING SAMPLING. THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE 20469	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	81.4
COUNTY	ETHANE	7.1
FIELD GEM.N	PROPANE	4.0
WELL NAME SUN BRIGHT FEDERAL NO. 1	N-BUTANE	1.7
	ISOBUTANE	0.8
API 3002529140	N-PENTANE	1.0
LOCATION SEC. 21, T19S, R33E	ISOPENTANE	
OWNEREGLRESOURCES_INC_	CYCLOPENTANE	
COMPLETED000331	HEXANES PLUS	
SAMPLED	NITROGEN	
FORMATION PERM-WOLFCAMP	OXYGEN	
GEOLOGIC PROVINCE CODE 438	ARGON	
TRUE VERTICAL DEPTH (FT)11108	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD	HELIUM	
	SPECIFIC GRAVITY	
STATENEW MEXICO	METHANE	74.2
COUNTY	ETHANE	10.7
FIELD RHODES	DEGRANE	E 0
	PROPANE	<u>:J.2</u>
	N-BUTANE	
WELL NAME H.G. MOBERLY C FEDERAL NO. 1		,2.2
WELL NAME H.G. MOBERLY C FEDERAL NO. 1 API 3002511993	N-BUTANE	2.2 0.9
WELL NAME H.G. MOBERLY C FEDERAL NO. 1 API 3002511993 LOCATION SEC. 17, T26S, R37E	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	2.2 0.5 0.6 1.0
WELL NAME	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	,2.2 0.9 0.8 1.0
WELL NAME H.G. MOBERLY C FEDERAL NO. 1 API 3002511993 LOCATION SEC. 17, T26S, R37E OWNER LANEXCO. INC. COMPLETED 290311	N-BUTANEISOBUTANEISOBUTANEISOPENTANECYCLOPENTANE	22 0.9 0.8 1.0
WELL NAME H.G. MOBERLY C FEDERAL NO. 1 API 3002511993 LOCATION SEC. 17, T26S, R37E OWNER LANEXCO. INC. COMPLETED 290311 SAMPLED 001129	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	22 0.8 0.8 1.0
WELL NAME H.G. MOBERLY C FEDERAL NO. 1 API 3002511993 LOCATION SEC. 17, T26S, R37E OWNER LANEXCO. INC. COMPLETED 290311 SAMPLED 001129 FORMATION PERM-YATES	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	2.2 0.5 0.6 1.0 1.5 1.8
WELL NAME H.G. MOBERLY C FEDERAL NO. 1 API 3002511993 LOCATION SEC. 17, T26S, R37E OWNER LANEXCO. INC. COMPLETED 290311 SAMPLED 001129 FORMATION PERM-YATES GEOLOGIC PROVINCE CODE 430	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	2.2 0.8 0.8 1.0 1.9 1.8 0.0
WELL NAME H.G. MOBERLY C FEDERAL NO. 1 API 3002511993 LOCATION SEC. 17, T26S, R37F OWNER LANEXCO. INC. COMPLETED 290311 SAMPLED 001129 FORMATION PERM-YATES GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 3075	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	2.2 0.8 0.8 1.0 1.8 0.0 0.2
WELL NAME H.G. MOBERLY C FEDERAL NO. 1 API 3002511993 LOCATION SEC. 17, T26S, R37E OWNER LANEXCO. INC. COMPLETED 290311 SAMPLED 001129 FORMATION PERM-YATES GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 3075 MEASURED DEPTH	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	2.2 0.8 0.8 1.0 1.8 1.8 0.0 0.2
WELL NAME H.G. MOBERLY C FEDERAL NO. 1 API 3002511993 LOCATION SEC. 17, T26S, R37E OWNER LANEXCO. INC. COMPLETED 290311 SAMPLED 001129 FORMATION PERM-YATES GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 3075 MEASURED DEPTH WELLHEAD PRESSURE, PSIG	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	2.2 0.8 0.8 1.0 1.8 0.0 0.2 0.0 0.0 0.0
WELL NAME H.G. MOBERLY C FEDERAL NO. 1 API 3002511993 LOCATION SEC. 17, T26S, R37E OWNER ŁANEXCO. INC. COMPLETED 290311 SAMPLED 001129 FORMATION PERM-YATES GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 3075 MEASURED DEPTH	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	2.2 0.8 0.8 1.0 1.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT SO DEGREES FAHRENHEIT AND 32 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

SAMPLE 20482	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	71.0
COUNTY	ETHANE	10.7
FIELD JALMAT	PROPANE	7.4
	N-BUTANE	3.1
WELL NAME MYERS B FED. NO. 33.	ISOBUTANE	1.3
API 3002525973	N-PENTANE	1.0
LOCATION SEC. 7. T24S, R37E	ISOPENTANE	1_1
OWNERDOYLE HARTMAN	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	1.5
SAMPLED	NITROGEN	1.3
FORMATION PERM-YATES.	OXYGEN	0.0
GEOLOGIC PROVINCE CODE 430	ARGON	0.0
TRUE VERTICAL DEPTH (FT)3207_	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD 580	HÉLIUM	
	HEATING VALUE*	
	SPECIFIC GRAVITY	0.844
SAMPLE 20480	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	70.0
	ETHANE	11.3
COUNTY LEA	PROPANE	7.5
FIELDJALMAT	N-BUTANE	3.0
WELL NAME LANGUE C FEDERAL NO. 1	ISOBUTANE	1.3
API3002525898	N-PENTANE	0.8
LOCATION SEC. 9, T25S, R37E	ISOPENTANE	1.1
OWNEROCCIDENTAL PERMIAN LTD	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	1.2
SAMPLED	NITROGEN	1.0
FORMATION PERM-YATES & SEVEN RIVERS	OXYGEN	. 0.0
GEOLOGIC PROVINCE CODE430_	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	HYDROGEN	TRACE
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	2.7
	HELIUM	0.00
OPEN FLOW, MCFD279	HEATING VALUE*	1.377

^{*} CALCULATED GROSS BTILPER CILFT, 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

SAMPLE 20474	COMPONENT, MOLE PCT	
STATE NEW MEXICO	METHANE	75.2
COUNTY LEA	ETHANE	11.5
FIELDEUMONT	PROPANE	5.7
WELL NAME ELLIOTT B NO. 6	N-BUTANE	1.8
	ISOBUTANE	
	N-PENTANE	0.5
LOCATION SEC. 17, T228, R37E	ISOPENTANE	
OWNER ZIA ENERGY, INC.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	
SAMPLED	NITROGEN	
FORMATION PERM-YATES SVN RVRS OUFEN	OXYGEN	
GEOLOGIC PROVINCE CODE430	ARGON	
TRUE VERTICAL DEPTH (FT) 3480	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD58	HELIUM	
	HEATING VALUE*SPECIFIC GRAVITY	
SAMPLE 20657	COMPONENT, MOLE PCT	
2000/	METHANE	70.0
STATENEW MEXICO	ETHANE	
COUNTY RIO ARRIBA	PROPANE	
FIELDBASIN_	N-BUTANE	
WELL NAME SAN JUAN 28-6 UNIT NO. 99	ISOBUTANE	
API3003908141	N-PENTANE	0.3
OCATION SEC. 24, T28N, R6W	ISOPENTANE	
OWNER BURLINGTON RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED651014	HEXANES PLUS	
	NITROGEN	0.3
SAMPLED 010412		0.0
	OXYGEN	
FORMATIONCRET-DAKQTA	OXYGEN	0.0
FORMATIONCRET-DAKQTA GEOLOGIC PROVINCE CODE580		
FORMATION CRET-DAKOTA GEOLOGIC PROVINCE CODE 580 FRUE VERTICAL DEPTH (FT) 7749	ARGON	0.0
### CRET-DAKQTA GEOLOGIC PROVINCE CODE	ARGON	0.0
FORMATIONCRET-DAKOTA GEOLOGIC PROVINCE CODE580 FRUE VERTICAL DEPTH (FT)7749 MEASURED DEPTH WELLHEAD PRESSURE, PSIG2678.	ARGON HYDROGEN HYDROGEN SULFIDE**	0.0
### SAMPLED	ARGON HYDROGEN HYDROGEN SULFIDE** CARBON D;OXIDE	0.0 0.0 1.0 0.08

^{*} CALGULATED CROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF H2\$ DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

	COMPONENT, MOLE PCT	
STATE NEW MEXICO	METHANE	
COUNTY RIO ARRIBA	ETHANE	B.7
FIELD BASIN	PROPANE	3.1
WELL NAME SAN JUAN 28-5 UNIT NO 58M	N-BUTANE	
API 3003925597.	ISOBUTANE	
LOCATION SEC. 30, T28N, R5W	N-PENTANE	
OWNER BURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	
	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	
SAMPLED 010412	NITROGEN	
FORMATION CRET-DAKOTA MESAVERDE	OXYGEN	
GEOLOGIC PROVINCE CODE580_	ARGON	
TRUE VERTICAL DEPTH (FT) 7792	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD2205.	HELIUM	
	HEATING VALUE* SPECIFIC GRAVITY	
SAMPLE 20663	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	
	ETHANE	0.3
COUNTY RIO ARRIBA	ETHANE	0.0
FIELD	PROPANE	0.3 0.0 TRACE
FIELD	ETHANEPROPANEN-BUTANEISOBUTANE	0.3 0.0 TRACE
COUNTY RIO ARRIBA FIELD BASIN. WELL NAME SAN, ILIAN 29-5 UNIT NO. 226 API 3003925076	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	0.3 0.0 TRACE TRACE
COUNTY RIO ARRIBA FIELD	ETHANE	0.3 C.C TRACE TRACE
COUNTY RIO ARRIBA FIELD BASIN WELL NAME SAN JUAN 29-5 UNIT NO. 226 API 3003925076 LOCATION SEC. 7. T29N. R5W. OWNER PHILLIPS PETROLEUM CO., NW.	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.3 C.C TRACE TRACE 0.C
COUNTY RIO ARRIBA FIELD BASIN WELL NAME SAN, JUAN 29-5 UNIT NO. 226 API 3003925076 LOCATION SEC. 7. T29N, R5W OWNER PHILLIPS PETROLEUM CO., NW COMPLETED 921001	ETHANE	0.3 TRACE TRACE 0.0 0.0 TRACE
COUNTY RIO ARRIBA FIELD BASIN WELL NAME SAN JUAN 29-5 UNIT NO. 226 API 3003925076 LOCATION SEC. 7. T29N. R5W OWNER PHILLIPS PETROLEUM CO NW COMPLETED 921001 SAMPLED 010412	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.3 CC TRACE TRACE O.C O.C TRACE
COUNTY RIO ARRIBA FIELD BASIN WELL NAME SAN, JUAN 29.5 UNIT NO. 226 API 3003925076 LOCATION SEC. 7, T29N, R5W OWNER PHILLIPS PETROLEUM CO., NW COMPLETED 921001 SAMPLED 010412 FORMATION GRET-FRUITLAND	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.3 0.0 TRACE TRACE 0.0 0.0 TRACE
RIO ARRIBA BASIN	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.3 0.0 TRACE TRACE 0.0 0.0 TRACE
RIO ARRIBA RIO ARRIBA RASIN RELD RASIN RAS	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.3
COUNTY RIO ARRIBA FIELD BASIN WELL NAME SAN, JUAN 29.5 UNIT NO. 226 API 3003925076 LOCATION SEC. 7, T29N, R5W OWNER PHILLIPS PETROLEUM CO., NW COMPLETED 921001 SAMPLED 010412 FORMATION CRET-FRUITLAND GEOLOGIC PROVINCE CODE 580 TRUE VERTICAL DEPTH (FT) 3330 MEASURED DEPTH	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.3
RIO ARRIBA BASIN	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	0.3 0.0 TRACE TRACE 0.0 0.0 TRACE 0.0 0.0
NEW MEXICO	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.3

^{*} 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

SAMPLE 20664	COMPONENT, MOLE PCT	
STATENEW MEXICO.	METHANE	76.3
	ETHANE	
COUNTY RIO ARRIBA	PROPANE	0.0
FIELD BASIN.	N-BUTANE	0.0
WELL NAME SAN JUAN 30-6 UNIT NO. 459	ISOBUTANE	0.0
API3003924289	N-PENTANE	<u> </u>
LOCATION SEC. 20, T30N, R6W	ISOPENTANE	0.0
OWNER BURLINGTON RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0.0
SAMPLED010412	NITROGEN	0.0
FORMATIONCRET-FRUITLAND	OXYGEN	0.0
GEOLOGIC PROVINCE CODE580_	ARGON	Ω.0
TRUE VERTICAL DEPTH (FT) 3157	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG356.	CARSON DIOXIDE	23.4
OPEN FLOW, MCFD	HELIUM	TRACE
07 E147 E044, MOT D	HEATING VALUE*	777
SAMPLE 20662	COMPONENT, MOLE PCT	
CAMINE SEC. EUGE	METHANE	
STATE NEW MEXICO	ETHANE	
COUNTY RIO ARRIBA	PROPANE	
FIELD BASIN	N-BUTANE	
	14-00 AINE	
WELL NAME SAN JUAN 29-5 UNIT NO. 32M		Δ.4
	ISOBUTANE	
API3003925817.	ISOBUTANE	0.1
API	ISOBUTANE	0.1 0.2
API	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.1 0.2
API	ISOBUTANE N-PENTANE ISOPENTANE	0.1 0.2 — — 0.3
API	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.1 0.2 — 0.3 0.2
WELL NAME SAN JUAN 29-5 UNIT NO. 32M API 3003925817 LOCATION SEC. 29 T29N R5W OWNER PHILLIPS PETROLEUM CO., NW COMPLETED 991019 SAMPLED 010412 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	9.1 0.2 - 0.3 0.2 0.0
API	ISOBUTANE	0.1 0.2 - 0.3 0.2 0.0
API	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.1 0.2 - 0.3 0.2 0.0 0.0
API	ISOBUTANE	0.1 0.2 - 0.3 0.2 0.0 0.0
API	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	0.1 0.2 - 0.3 0.2 0.0 0.0 0.0
API	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	0.1 0.2 - 0.3 0.2 0.0 0.0 0.0 1.6

^{*}CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY **DUE TO THE ABSORPTION OF H2S DURBIG SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

	COMPONENT, MOLE PCT	
STATE NEW MEXICO	METHANE	82.4
COUNTY RIO ARRIBA	ETHANE	9.8
	PROPANE	3.9
FIELD BLANCO	N-BUTANE	1.0
WELL NAME SAN JUAN 28-5 UNIT NO. 14A	ISOBUTANE	0.6
API3003922205	N-PENTANE	0.3
LOCATION SEC. 20, T28N, R5W	ISOPENTANE	0.3
OWNER BURLINGTON RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED000530	HEXANES PLUS	0.4
SAMPLED	NITROGEN	6.3
FORMATION CRET-MESAVERDE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE580_	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 5000	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	1.0
OPEN FLOW, MCFD	HELIUM	0.06
OPEN FLOW, MOPO	HEATING VALUE*	1,199
	SPECIFIC GRAVITY	0.693
SAMPLE 20656	COMPONENT, MOLE PCT	
ÉTATE MEGICA	METHANE	<u></u>
STATE NEW MEXICO	ETHANE	
COUNTY RIO ARRIBA		
	PROPANE	4.1
FIELD BLANCO.		
	PROPANE N-BUTANE ISOBUTANE	1.0
FIELD BLANCO WELL NAME SAN JUAN 28-6 UNIT NO. 5A	N-BUTANE	1.0
FIELD BLANCO WELL NAME SAN JUAN 28-6 UNIT NO. 5A	N-BUTANE	1.0 0.7 0.2
FIELD	N-BUTANE ISOBUTANE N-PENTANE	0.7 0.2 0.3
FIELD BLANCO. WELL NAME SAN JUAN 28-6 UNIT NO. 5A. API 3003921869 LOCATION SEC. 14, T28N, R6W.	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	0.7 0.2 0.3
FIELD BLANCO. WELL NAME SAN JUAN 28-6 UNIT NO. 5A API 3003921869 LOCATION SEC. 14, T28N, R6W OWNER BURLINGTON RESOURCES OIL & GAS CO.	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	1.0 0.7 0.2 0.3 -
FIELD BLANCO. WELL NAME SAN JUAN 28-6 UNIT NO. 5A. API 3003921869 LOCATION SEC. 14, T28N, R6W. OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 790728	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	1.0 0.7 0.2 0.3 - 0.3 0.3
FIELD BLANCO. WELL NAME SAN JUAN 28-6 UNIT NO. 5A API 3003921869 LOCATION SEC. 14, 128N, R6W OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 790728 SAMPLED 010412 FORMATION CRET-MESAVERDE	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	1.0 0.7 0.2 0.3 - 0.3 0.3
FIELD BLANCO. WELL NAME SAN JUAN 28-6 UNIT NO. 5A. API 3003921869 LOCATION SEC. 14, T28N, R6W. OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 790728 SAMPLED 010412 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	1.0 0.7 0.2 0.3 - 0.3 0.3 0.0
FIELD BLANCO. WELL NAME SAN JUAN 28-6 UNIT NO. 5A API 3003921869 LOCATION SEC. 14, T28N, R6W OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 790728 SAMPLED 910412 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580 TRUE VERTICAL DEPTH (FT) 5875	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	1.0 0.7 0.2 0.3 0.3 0.3 0.0 0.0
FIELD BLANCO. WELL NAME SAN JUAN 28-6 UNIT NO. 5A. API 3003921869 LOCATION SEC. 14, T28N, R6W. OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 790728 SAMPLED 010412 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580 TRUE VERTICAL DEPTH (FT) 5875 MEASURED DEPTH	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	1.0 0.7 0.2 0.3 0.3 0.0 0.0 TRACE
FIELD BLANCO. WELL NAME SAN JUAN 28-6 UNIT NO. 5A. API 3003921869 LOCATION SEC. 14, 128N, R6W. OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 790728 SAMPLED 010412 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580 TRUE VERTICAL DEPTH (FT) 5875 MEASURED DEPTH WELLHEAD PRESSURE, PSIG 663	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	1.0 0.7 0.2 0.3 - 0.3 0.0 0.0 1RACE
FIELD BLANCO. WELL NAME SAN JUAN 28-6 UNIT NO. 5A API 3003921869 LOCATION SEC. 14, T28N, R6W OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 790728 SAMPLED 910412 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580 TRUE VERTICAL DEPTH (FT) 5875	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	1.0 0.7 0.2 0.3 0.3 0.0 0.0 TRACE 0.0 1.0

^{*} CALCULATED GROSS BTU PER CU FY, URY, AT 50 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

SAMPLE	20658	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	81.4
	RIO ARRIBA	ETHANÉ	10.2
		PROPANE	4.0
	BLANCO.	N-BUTANE	1.1
	SAN JUAN 28-6 UNIT NO. 65	ISOBUTANE	0.7
	3003907375	N-PENTANE	0.3
LOCATION	SEC. 24, T28N, R6W	ISOPENTANE	0.4
OWNER <u>BURLINGTO</u>	N RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED	561108	HEXANES PLUS	0.5
SAMPLED	010412	NITROGEN	0.3
FORMATION	CRET-MESAVERDE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	580	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	5730	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
	1032	CARBON DIOXIDE	1.0
	3897	HELIUM	0.07
OI ENT EOW, MOI &		HEATING VALUE*	1,214
		SPECIFIC GRAVITY	0.703
SAMPLE	20872	COMPONENT, MOLE PCT	
STATE	NEW MEXICO.	METHANE	81.6
		ETHANE	10.1
	RIO ARRIBA	PROPANE	4.2
	BLANCO	N-BUTANE	1.1
	JICARILLA 96 NO. 6C	ISOBUTANE	D.E
API	3003926549	N-PENTANE	0.3
	SEC. 2, T26N, H3W	ISOPENTANE	0.3
OWNER E	NERGEN RESOURCES CORP.	CYCLOPENTANE	
COMPLETED		LIEVANIEC DU LIC	0.4
	010417	HEXANES PLUS	
SAMPLED	010417	NITROGEN	
			0.5
FORMATION	011003	NITROGEN	0.5
FORMATION	011003 CRET-MESAVERDE 580	NITROGEN	0.5 0.0 0.0
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) _	011003 CRET-MESAVERDE 580 5477	NITROGEN OXYGEN ARGON	0.5 0.0 0.0
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	011003 CRET-MESAVERDE 580 5477	NITROGEN OXYGEN ARGON HYDROGEN	0.5 0.0 0.0 0.0
FORMATION	011003 CRET-MESAVERDE 580 5477	NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE HELIUM	0.5 0.0 0.0 0.0 0.0 0.7
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	011003 CRET-MESAVERDE 580 5477	NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.5 0.0 0.0 0.0 0.0 0.7 0.07

CALCULATED GROSS BTU PER CULFT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS WAY NOT BE RELIABLE

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

SAMPLE 20661	COMPONENT, MOLE PCT	
STATENEW MEXICO.	METHANE	82.8
COUNTY RIQ ARRIBA	ETHANE	9.6
	PROPANE	3.7
	N-BUTANE	1.0
WELL NAME SANJUAN 28-5 UNIT NO. 33	ISOBUTANE	0.6
API3003907413.	N-PENTANE	0.3
LOCATION SEC. 17, T28N, R5W	ISOPENTANE	0.3
OWNER BURLINGTON RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED 590624	HEXANES PLUS	0.3
SAMPLED010412	NITROGEN	0.3
FORMATIONCRET-MESAVERDE_DAKOTA.	OXYGEN	0.0
GEOLOGIC PROVINCE CODE580	ARGON	
TRUE VERTICAL DEPTH (FT)8041	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE"	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD	HELIUM	
	HEATING VALUE*	1.194
	SPECIFIC GRAVITY	0.689
SAMPLE 20580	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	63.0
COUNTY ROOSEVELT	ETHANE	11.1
FIELD ALLISON	PROPANE	7.2
WELL NAME FL ZORRO NO. 1	N-BUTANE	2.7
	ISOBUTANE	1.1
API 3004120797	N-PENTANE	0.5
LOCATION SEC. 25, IBS, R36E	ISOPENTANE	0.5
OWNERLAYTON ENTERPRISES_INC.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0.5
SAMPLED	NITROGEN	10.6
FORMATION PENN-CISCO	OXYGEN	1.1
GEOLOGIC PROVINCE CODE430_	ARGON	
TRUE VERTICAL DEPTH (FT) 9614	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	
	CARBON DIOXIDE	
WELLHEAD PRESSURE, PSIG	HELIUM	
	HEATING VALUE* SPECIFIC GRAVITY	1.217

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 80 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE 10 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

SAMPLE	20578	COMPONENT, MOLE PCT	
STATE	NEW MEXICO.	METHANE	74.3
·	ROOSEVELT	ETHANE	7.3
	BLUITT	PROPANE	3.0
FIELD		N-BUTANE	0.8
	AN ANDRES 18 FEDERAL NO. 14	ISOBUTANE	0.4
	3004120855	N-PENTANE	0.2
	SEC. 18, T8S, R38E	ISOPENTANE	0.2
OWNER	SAGA PETROLEUM LLC.	CYCLOPENTANE	
COMPLETED	900601	HEXANES PLUS	0.3
SAMPLED	001221	NITROGEN	6.8
FORMATION	PERM-SAN ANDRES	OXYGEN	0.0
GEOLOGIC PROVINCE COL	DE430_	ARGON	0.0
TRUE VERTICAL DEPTH (F	r)4712	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.1
WELLHEAD PRESSURE, PS	SIG.	CARBON DIOXIDE	6.6
•		HELIUM	
OI EN EON , NOI D	***************************************	HEATING VALUE*	1,026
SAMPLE	20574	COMPONENT, MOLE PCT	
		METHANE	74.2
	NEW MEXICO	ETHANE	
COUNTY	ROOSEVELT	PROPANE	
FIELD	BLUITT	N-BUTANE	
WELL NAME	FEDERAL BL 1	ISOBUTANE	
API	3004110135	N-PENTANE	
LOCATION	SEC. 8, T8S, R37E.	ISOPENTANE	
OWNER	BRECK OPERATING CORP.	CYCLOPENTANE	
COMPLETED	641115	HEXANES PLUS	0.3
SAMPLED	001221	NITROGEN	7.5
FORMATION	PERM-SAN ANDRES	OXYGEN	0.0
GEOLOGIC PROVINCE COE	DE430_	ARGON	0.0
	[}	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.2
WELLHEAD PRESSURE, PS		CARBON DIOXIDE	6.3
·	85	HELIUM	0.08
OF LIN FLOWY, WICED	02	HEATING VALUE*	1.014

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

	20575	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	75.8
COUNTY		ETHANE	7.7
FIELD		PROPANE	4.0
WELL NAME		N-BUTANE	1_6
		ISOBUTANE	
API		N-PENTANE	
LOCATION		ISOPENTANE	
OWNER H	"	CYCLOPENTANE	
COMPLETED		HEXANES PLUS	
SAMPLED	001221	NITROGEN	
FORMATION	PERM-WOLFCAMP	OXYGEN	
GEOLOGIC PROVINCE CODE L	430	ARGON	
TRUE VERTICAL DEPTH (FT) _	8011	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE***	
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	
OPEN FLOW, MCFD	7680	HELIUM	
		HEATING VALUE* SPECIFIC GRAVITY	-
SAMPLE	20863	COMPONENT, MOLE PCT	
O/ 11411 EE	2000		
			87 4
STATE	NEW MEXICO	METHANE	
COUNTY	SANJUAN	METHANE	6.9
COUNTY	SANJUAN	METHANE	6.9
COUNTY	SAN JUAN. BLANCO	METHANE ETHANE PROPANE	6.9 2.2 0.6
COUNTY	SAN JUAN BLANCO PAYNE NO. 5	METHANE ETHANE PROPANE N-BUTANE	6.9 2.2 0.6 0.4
COUNTY FIELD WELL NAME API	SAN JUAN BLANCO PAYNE NO. 5 3004511280	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	6.9 2.2 0.6 0.4
COUNTY FIELD WELL NAME API LOCATION	SAN JUAN BLANCO PAYNE NO. 5 3004511280 SEC. 27, T32N, R10W	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	6.9 2.2 0.6 0.4 0.2
COUNTY FIELD WELL NAME API LOCATION OWNER BURLINGTON:	SAN JUAN BLANCO PAYNE NO. 5 3004511280 SEC. 27, T32N, R10W RESOURCES OIL & GAS CO.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	6.5 2.2 0.6 0.4 0.2
COUNTY FIELD WELL NAME API LOCATION OWNER BURLINGTON COMPLETED	SAN JUAN BLANCO PAYNE NO. 5 3004511280 SEC. 27, T32N, R10W RESOURCES OIL & GAS CO 600607	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	6.9 2.2 0.6 0.4 0.2 0.2
COUNTY FIELD WELL NAME API LOCATION OWNER BURLINGTON COMPLETED SAMPLED	SAN JUAN BLANCO PAYNE NO. 5 3004511280 SEC. 27, T32N, R10W RESOURCES OIL & GAS CO. 600607 011003	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	6.9 2.2 0.6 0.4 0.2 0.2
COUNTY FIELD WELL NAME API LOCATION OWNERBURLINGTON COMPLETED SAMPLED FORMATION	SAN JUAN BLANCO PAYNE NO. 5 3004511280 SEC. 27, T32N, R10W RESOURCES OIL & GAS CO. 600607 011003 CRET-CL!EF HOUSE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	6.9 2.2 0.6 0.4 0.2 0.2 0.3 0.1
COUNTY FIELD WELL NAME API LOCATION OWNER BURLINGTON COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	SAN JUAN BLANCO PAYNE NO. 5 3004511280 SEC. 27, T32N, R10W RESOURCES OIL & GAS CO 600607 011003 CRET-CLIFF HOUSE 580,	METHANE	6.9 2.2 0.6 0.4 0.2 0.2 0.3 0.1 0.0
COUNTY FIELD WELL NAME API LOCATION OWNER BURLINGTON COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	SAN JUAN BLANCO PAYNE NO. 5 3004511280 SEC. 27, T32N, R10W RESOURCES OIL & GAS CO. 600607 011003 CRET-CL!EF HOUSE 580,	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	6.9 2.2 0.6 0.4 0.2 0.3 0.1 0.0 0.0
STATE COUNTY FIELD WELL NAME API LOCATION COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE PSIG	SAN JUAN BLANCO PAYNE NO. 5 3004511280 SEC. 27, T32N, R10W RESOURCES OIL & GAS CO 600607 011003 CRET-CLIFF HOUSE 580 6262	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN ARGON HYDROGEN	0.5 0.6 0.4 0.2 0.3 0.1 0.0 TRACE
COUNTY FIELD WELL NAME API LOCATION OWNER BURLINGTON COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	SAN JUAN BLANCO PAYNE NO. 5 3004511280 SEC. 27, T32N, R10W RESOURCES OIL & GAS CO. 600607 011003 CRET-CL!EF HOUSE 580, 6262	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	6.9 2.2 0.6 0.4 0.2 0.2 0.1 0.0 TRACE 0.0
COUNTY FIELD WELL NAME API LOCATION OWNERBURLINGTON COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	SAN JUAN BLANCO PAYNE NO. 5 3004511280 SEC. 27, T32N, R10W RESOURCES OIL & GAS CO. 600607 011003 CRET-CL!EF HOUSE 580, 6262	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	6.9 2.2 0.6 0.4 0.2 0.2 0.3 0.1 0.0 TRACE 0.0 0.2

^{*} CALCULATED GROSS BTU PER CU FT, DRY, A * 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE 10 THE ASSORPTION OF H28 DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20858	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	88.3
	SANJUAN	ETHANE	6.0
	BLANCO	PROPANE	1.8
		N-BUTANE	0.5
	SAN JUAN 32-9 UNIT NO. 38	ISOBUTANE	0.3
	3004511192	N-PENTANE	0.1
	SEC. 35, T32N, R10W	ISOPENTANE	0,2
	ON RESOURCES ON & GAS CO.	CYCLOPENTANE	
COMPLETED	560922	HEXANES PLUS	
SAMPLED	011002	NITROGEN	0.2
FORMATION	CRET-CLIEF HOUSE.	OXYGEN	
GEOLOGIC PROVINCE COD	DE580	ARGON	
TRUE VERTICAL DEPTH (FT	5420	HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	
	IG1050_	CARBON DIOXIDE	2.2
	5389	HELIUM	
or Entre Editi, Mor d'amminu		HEATING VALUE*	1.099
		SPECIFIC GRAVITY	0.647
SAMPLE	20864	COMPONENT, MOLE PCT	***************************************
STATE	NEW MEXICO	METHANE	95.0
	SAN JUAN	ETHANE	
		PROPANE	TRACE
FIELD		N-BUTANE	TRACE
	PAYNE NO. 4-A	ISOBUTANE	TRACE
	3004523911	N-PENTANE	D (
LOCATION	SEC. 22, T32N, R10W.	ISOPENTANE	2.0
OWNER BURLINGT	ON RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED	800812	HEXANES PLUS	TRACE
SAMPLED	011003	NITROGEN	0.2
	CRET-DAKOTA	OXYGEN	0.0
FORMATION	URET-DAKUTA.		
	CRET-DAROTA 580	ARGON	0.0
GEOLOGIC PROVINCE COD	E580	ARGON	
GEOLOGIC PROVINCE COD TRUE VERTICAL DEPTH (FT	E	•	0.0
GEOLOGIC PROVINCE COD TRUE VERTICAL DEPTH (FT MEASURED DEPTH	580 ()	HYDROGEN	0.0
GEOLOGIC PROVINCE COD TRUE VERTICAL DEPTH (FT MEASURED DEPTH WELLHEAD PRESSURE, PS	580 580 6353 16 2748	HYDROGEN SULFIDE**	0.0 0.0 4.4
TRUE VERTICAL DEPTH (FT MEASURED DEPTH WELLHEAD PRESSURE, PS	580 ()	HYDROGENHYDROGEN SULFIDE** CARBON DIOXIDE	0.0 0.0 4.4 0.02

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

SAMPLE	20647	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	85.8
COUNTY		ETHANE	7.6
FIELD		PROPANE	3.0
		N-BUTANE	0.9
WELL NAME		ISOBUTANE	0.5
AP:		N-PENTANE	0.3
LOCATION	SEC. 35, T32N, R14W	ISOPENTANE	0.3
OWNER	XTO ENERGY, INC.	CYCLOPENTANE	
COMPLETED	810326	HEXANES PLUS	0.4
SAMPLED	010411	NITROGEN	0.7
FORMATION	CRET-DAKOTA	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	580	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	2268	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	576	CARBON DIOXIDE	
OPEN FLOW, MCFD		HELIUM	
OI EIVI EOVI, MOI D) Midel	HEATING VALUE*	1.164
		SPECIFIC GRAVITY	0.667
SAMPLE	20632	COMPONENT, MOLE PCT	
STATE	NEW MEYICO	METHANE	80.7
		ETHANE	11.9
COUNTY		PROPANE	3.9
FIELD		N-BUTANE	8.0
WELL NAME		ISOBUTANE	0.5
API	3004529426	N-PENTANE	0.2
LOCATION	SEC. 19, T25N, R11W	ISOPENTANE	0.2
OWNED		OVOLODENTANE	
OWNER	ELM RIDGE RESOURCES	CYCLOPENTANE	***
COMPLETED		HEXANES PLUS	
	970414		0.4
COMPLETED	970414 010410	HEXANES PLUS	0.4
COMPLETED	970414 010410 CRET-DAKOTA	HEXANES PLUS	0.4 0.9 0.0
COMPLETEDSAMPLED FORMATION GEOLOGIC PROVINCE CODE	970414 010410 CRET-DAKOTA 580	HEXANES PLUS NITROGEN OXYGEN	0.4 0.9 0.0
COMPLETEDSAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	970414 010410 CRET-DAKOTA 580 5784	HEXANES PLUS NITROGEN OXYGEN ARGON	0.4 0.9 0.0 0.0
COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	970414 010410 CRET-DAKOTA 580 5784	HEXANES PLUS	0.4 0.9 0.0 0.0
COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	970414 010410 CRET-DAKOTA 580 5784	HEXANES PLUS	0.4 0.9 0.0 0.0 0.0 0.0
COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	970414 010410 CRET-DAKOTA 580 5784	HEXANES PLUS	0.4 0.9 0.0 0.0 0.0 0.0 0.4 0.10

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 80 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUF TO THE ABSCRIPTION OF H2S DURING SAMPLING. THE REPORTED RESULTS MAY NOT BE RELIABLE.

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

SAMPLE	20848	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	92.2
	SANJUAN	ETHANE	3.0
	BASIN	PROPANE	0.8
	PAYNE NO. 2-A	N-BUTANE	0.2
		ISOBUTANE	0.2
	3004523910	N-PENTANE	0.1
	SEC. 21, T32N, R10W	ISOPENTANE	
	GTON RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED	800903	HEXANES PLUS	0.1
SAMPLED	011002	NITROGEN	
FORMATION	CRET-DAKOTA, MESAVERDE	OXYGEN	0.0
GEOLOGIC PROVINCE C	ODE580	ARGON	0.0
TRUE VERTICAL DEPTH	(FT)	HYDROGEN	0.0
MEASURED DEPTH	***************************************	HYDROGEN SULFIDE**	
	PSIG645	CARBON DIOXIDE	3.2
	2445	HELIUM	
	TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	HEATING VALUE*	1.031
		SPECIFIC GRAVITY	0.618
SAMPLE	20655	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	82.6
		ETHANE	0.4
	SANJUAN	PROPANE	0.0
	BASIN	N-BUTANE	TRACE
	HOWELL E.NO. 300	ISOBUTANE	TRACE
API	3004526918	N-PENTANE	0.0
	SEC_14_T30N, R8W	ISOPENTANE	0.0
OWNER BURLIN	GTON RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED	880910	HEXANES PLUS	TRACE
SAMPLED	010412	NITROGEN	0.0
370/11 EED			
	CRET-FRUITI AND	OXYGEN	0.0
FORMATION		OXYGEN	
FORMATION GEOLOGIC PROVINCE CO	CRET-FRUITI AND DDE580		0.0
FORMATION GEOLOGIC PROVINCE CO TRUE VERTICAL DEPTH (CRET-FRUITI AND. 00E	ARGON	0.0
FORMATION GEOLOGIC PROVINCE CO TRUE VERTICAL DEPTH (MEASURED DEPTH	CRET_FRUITI AND ODE	ARGON	0.0 0.0 0.0
FORMATION GEOLOGIC PROVINCE CO TRUE VERTICAL DEPTH (MEASURED DEPTH WELLHEAD PRESSURE, I	CRET-FRUITI AND DDE	ARGONHYDROGEN SULFIDE**	0.0 0.0 0.0 17.0
FORMATION GEOLOGIC PROVINCE CO TRUE VERTICAL DEPTH (MEASURED DEPTH WELLHEAD PRESSURE, I	CRET_FRUITI AND ODE	ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 0.0 0.0 17.0 TRACE

^{*} CALCULATED GROSS BTU PER CUIFT, DRY, AT 50 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

SAMPLE	20652	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	92.3
	SAN JUAN	ETHANE	4.4
	BASIN	PROPANE	1.5
	FLORANCE 119 NO. 120	N-BUTANE	0.2
		ISOBUTANE	0.3
	3004528727	N-PENTANE	0.1
	SEC. 21, T29N, R9W	ISOPENTANE	0.1
	CONOCO, INC.	CYCLOPENTANE	<u></u>
COMPLETED	930422	HEXANES PLUS	<u>0.1</u>
SAMPLED	010412	NITROGEN	0.2
FORMATION	CRET-FRUITLAND	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	580	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	1964	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	
	130	HELIUM	
		HEATING VALUE*	1,075
		SPECIFIC GRAVITY	0.611
SAMPLE	20633	COMPONENT, MOLE PCT	
ETATE:	NEW MEXICO.	METHANE	79.4
SINIE	NEW MENTAL		
COUNTY		ETHANE	0.3
	SAN JUAN	ETHANEPROPANE	
FIELD	SAN JUAN CEDAR HILL		0.0
FIELD	SAN JUAN	PROPANE	0.0 IRACE
FIELDF.C. [SAN JUAN CEDAR HILL	PROPANE	0.0 TRACE
FIELD	SAN JUAN CEDAR HILL DECKER PRIMO COM 2 UNIT H	PROPANE N-BUTANE ISOBUTANE	0.0 TRACE TRACE
FIELD	SAN JUAN CEDAR HILL DECKER PRIMO COM 2 UNIT H 3004527480	PROPANE N-BUTANE ISOBUTANE N-PENTANE	TRACE TRACE 0.0
FIELD	SAN JUAN CEDAR HILL DECKER PRIMO COM 2 UNIT H 3004527480 SEC. 19, T32N, R10W	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	TRACE TRACE
FIELD	SAN JUAN CEDAR HILL DECKER PRIMO COM 2 UNIT H 3004527480 SEC. 19, T32N, R10W CONOCO, INC.	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.0 TRACE TRACE 0.0 0.0
FIELD	SAN JUAN CEDAR HILL DECKER PRIMO COM 2 UNIT H 3004527480 SEC. 19, T32N, R10W CONOCO, INC. 910411	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	TRACE
FIELD	SAN JUAN CEDAR HILL DECKER PRIMO COM 2 LINIT H 3004527480 SEC. 19, T32N, R10W CONOCO, INC. 910411 010410 CRET-FRUITLAND COAL	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.0 TRACE TRACE 0.0 0.0 TRACE
FIELD	SAN JUAN CEDAR HILL DECKER PRIMO COM 2 UNIT H 3004527480 SEC. 19, T32N, R10W CONOCO, INC. 910411	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGER	0.0 TRACE TRACE 0.0 0.0 TRACE 0.0 0.0 0.0 0.0 0.0
FIELD	SAN JUAN CEDAR HILL DECKER PRIMO COM 2 UNIT H 3004527480 SEC. 19, T32N, R10W CONOCO, INC. 910411 010410 CRET-FRUITLAND COAL 580 2848	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGER ARGON	TRACE TRACE 1RACE 0.0 0.0 TRACE 0.0 0.0 0.0 0.0
FIELD	SAN JUAN CEDAR HILL DECKER PRIMO COM 2 UNIT H 3004527480 SEC. 19, T32N, R10W CONOCO, INC. 910411 010410 CRET-FRUITLAND COAL 580	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	TRACE TRACE 0.0 0.0 TRACE 0.0 0.0 0.0 0.0 0.0 0.0
FIELD	SAN JUAN CEDAR HILL DECKER PRIMO COM 2 UNIT H 3004527480 SEC. 19, T32N, R10W CONOCO, INC. 910411 010410 CRET-FRUITLAND COAL 580 2848	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	1RACE 1RACE 0.0 0.0 1RACE 0.0 0.0 0.0 0.0 0.0 20.2
FIELD	SAN JUAN CEDAR HILL DECKER PRIMO COM 2 UNIT H 3004527480 SEC. 19, T32N, R10W CONOCO, INC. 910411 010410 CRET-FRUITLAND COAL 580	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 TRACE TRACE 0.0 0.0 TRACE 0.0 0.0 0.0 0.0 20.2

^{*} CALCULATED GROSS B*U PER CU FT, DRY AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** BUE TO THE ABSORPT ON OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20871	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	MET∺ANE	75.9
COUNTY		ETHANE	9.1
		PROPANE	4.0
FIELD		N-BUTANE	1.4
WELL NAME		ISOBUTANE	0.7
API		N-PENTANE	0.4
LOCATION	SEC. 17, T26N, R18W.	ISOPENTANE	0.4
OWNER	ROBERT L. BAYLESS	CYCLOPENTANE	
COMPLETED	630421	HEXANES PLUS	8.0
SAMPLED	011003	NITROGEN	5.7
FORMATION	PENN-HERMOSA	OXYGEN	0.0
GEOLÓGIC PROVINCE CODE	580	ARGON	0.0.0
TRUE VERTICAL DEPTH (FT)	6410	HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	1.:
OPEN FLOW, MCFD		HELIUM	
OPEN FLOW, MCFD	<u> </u>	HEATING VALUE"	1,169
		SPECIFIC GRAVITY	0.734
SAMPLE	20648	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	68,4
		ETHANE	3.3
COUNTY		PROPANE	1.1
FIELD		N-BUTANE	0.4
WELL NAME	UTE MOUNTAIN NO. 40.	ISOBUTANE	0.7
API	3004529354	N-PENTANE	0.1
LOCATION	SEC. 20, T32N, R14W	ISOPENTANE	0.1
OWNER BURLINGTON R	ESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED	960805	HEXANES PLUS	0.3
	*****	NITROGEN	19.0
SAMPLED	<u> </u>	· · · · · · · · · · · · · · · · · · ·	
		OXYGEN	32
FORMATION	PENN-ISMAY, PARADOX	OXYGEN	
FORMATION	PENN-ISMAY, PARADÓX 580		3.0
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	PENN-ISMAY, PARADOX 580 7430	ARGON	3.0 3.0
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	PENN-ISMAY, PARADOX 580 7430	ARGON	3.0 3.0 1.0
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	PENN-ISMAY, PARADOX 580 7430	ARGON HYDROGEN HYDROGEN SULFIDE**	0.0 0.0 0.0 3.5
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	PENN-ISMAY, PARADOX 580 7430	ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 0.0 0.0 3.5

^{*} CALCOUATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF HZS DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE 20846		COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	92.6
COUNTY		ETHANE	3.2
		PROPANE	3.0
FIELD		N-BUTANE	0.2
WELL NAMEF		ISOBUTANE	0.2
API		N-PENTANE	0.1
LOCATIONSEC_2		ISOPENTANE	0.1
OWNER BURLINGTON RESOURCES	OIL & GAS CO.	CYCLOPENTANE	
COMPLETED	780720	HEXANES PLUS	01
SAMPLED	011002	NITROGEN	0.1
FORMATIONCRE	L-MESAVERDE	OXYGEN	
GEOLOGIC PROVINCE CODE	580	ARGON	O.(
TRUE VERTICAL DEPTH (FT)	5515.	HYDROGEN	Q.£
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	2.7
OPEN FLOW, MCFD		HELIUM	
C. C. 1 2017, 1101 D	5705	HEATING VALUE*	
		SPECIFIC GRAVITY	0.614
SAMPLE 20861	·····	COMPONENT, MOLE PCT	***************************************
STATE	NEW MEYICO	METHANE	91.4
COUNTY		ETHANE	4.4
	SANSOAN	PROPANE	4.4
FIELD	m: 41100		
		N-BUTANE	
WELL NAMESAN JUAN 32-5	HUNIT NO. 49A		0.3
WELL NAMESAN JUAN 32-5	HUNIT NO. 49A	N-BUTANE	0.3
WELL NAME SAN JUAN 32-9	3004529443	N-BUTANE	0.3 0.2 0.1
WELL NAME SAN JUAN 32-5 API LOCATION SEC. 2	3004529443 3, T32N, R10W	N-BUTANE ISOBUTANE N-PENTANE	0.3 0.2 0.1
WELL NAME SAN JUAN 32-5 API LOCATION SEC. 2 OWNER BURLINGTON RESOURCES	3. T32N, R10W OR & GAS CO	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	0.3 0.2 0.1
WELL NAME SAN JUAN 32-5 API LOCATION SEC. 2 OWNER BURLINGTON RESOURCES COMPLETED	314NIT.NO. 49A. 3004529443. 3, T32N, R10W OR & CAS CO. 970823	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.5 0.2 0.1 0.1
WELL NAME SAN JUAN 32-5 API LOCATION SEC. 2 OWNER BURLINGTON RESOURCES. COMPLETED SAMPLED	311NIT NO. 49A 3004529443 3, T32N, R10W 08 & GAS CO 970823 011003	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.3 0.2 0.1 0.1 0.2 0.2
WELL NAME SAN JUAN 32-5 API LOCATION SEC. 2 OWNER BURLINGTON RESOURCES COMPLETED SAMPLED FORMATION CRE	014NIT NO. 49A 3004529443 3, T32N, R10W OR & GAS CO 970823 011003 I-MESAVEROE	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.3 0.2 0.1 0.1 0.2 0.2
WELL NAME SAN JUAN 32-5 API LOCATION SEC. 2 OWNER BURLINGTON RESOURCES COMPLETED SAMPLED FORMATION CRE GEOLOGIC PROVINCE CODE	314NIT NO. 49A 3004529443 3, T32N, R10W OR & GAS CO 970823 011003 I-MESAVEROE 580	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.3 0.2 0.1 0.1 0.2 0.1 0.2
WELL NAME SAN JUAN 32-5 API LOCATION SEC. 2 OWNER BURLINGTON RESOURCES COMPLETED SAMPLED FORMATION CRE GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	311NIT NO. 49A 3004529443 3, T32N, R10W ON & GAS CO 970823 011003 I-MESAVERDE 580 6327	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	0.3 0.2 0.1 0.1 0.2 0.1 0.6 TRACE
WELL NAME SAN JUAN 32-9 API LOCATION SEC. 2 OWNER BURLINGTON RESOURCES COMPLETED SAMPLED FORMATION CRE GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	014NIT NO. 49A 3004529443 3, T32N, R10W OR & GAS CO. 970823 011003 I-MESAVEROE 580 6327	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.3 0.2 0.1 0.1 0.2 0.1 0.6 TRACE
WELL NAME SAN JUAN 32-5 API LOCATION SEC. 2 OWNER BURLINGTON RESOURCES COMPLETED SAMPLED FORMATION CRE GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	014NIT NO. 49A 3004529443 3, T32N, R10W OR & CAS CO 970823 011003 I-MESAVEROE 580 6327	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE HELIUM	0.3 0.2 0.1 0.1 0.2 0.1 0.6 TBACE 0.0
WELL NAME SAN JUAN 32-5 API LOCATION SEC. 2 OWNER BURLINGTON RESOURCES COMPLETED SAMPLED FORMATION CRE GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG OPEN FLOW, MCFD	014NIT NO. 49A 3004529443 3, T32N, R10W OR & CAS CO 970823 011003 I-MESAVEROE 580 6327	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE*** CARBON DIOXIDE	0.3 0.2 0.1 0.1 0.2 0.1 0.6 TBACE 0.0

^{*}CALCULATED GROSS STUPER OFF, DRY, AT 60 DEGREES FARRENHEIT 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

SAMPLE	20869	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	95.9
-	SAN JUAN	ETHANE	1.3
	BLANCO	PROPANE	0.2
		N-BUTANE	TRACE
	SAN JUAN 32-9 UNIT NO. 75	ISOBUTANE	0.1
	3004511427	N-PENTANE	TRACE
	SEC. 18. T32N. R9W	ISOPENTANE	TRACE
OWNERBURLINGTO	ON RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED	600607	HEXANES PLUS	TRACE
SAMPLED	011003	NITROGEN	0.1
FORMATION	CRET-MESAVERDE	OXYGEN	3.0
GEOLOGIC PROVINCE CODE	580	ARGON	3.0
TRUE VERTICAL DEPTH (FT)		HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIC	G 1021	CARBON DIOXIDE	2.3
	2559	HELIUM	0.01
OI EIVI CON, MOI D	20,13	HEATING VALUE*	1,004
		SPECIFIC GRAVITY	0.587
SAMPLE	20850	COMPONENT, MOLE PCT	
CTATE	NEW MEXICO	METHANE	90.5
		ETHANE	4.5
	SAN JUAN	PROPANE	1.4
	BLANCO	N-BUTANE	0.4
	PAGE 1-A.	ISOBUTANE	0.3
API	3004522455	N-PENTANE	0.1
LOCATION	SEC. 18, T32N, R10W.	ISOPENTANE	0.1
OWNER BURLINGTO	ON RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED		HEXANES PLUS	0.2
SAMPLED	011092	NITROGEN	0.1
FORMATION	CRET-MESAVERDE	OXYGEN	0.0
	580	ARGON	3.0
TRUE VERTICAL DEPTH (FT)		HYDROGEN	TRACE
		HYDROGEN SULFIDE**	0.0
		CARRON DIOVIDE	2.1
MEASURED DEPTH		CARBON DIOXIDE	
MEASURED DEPTH WELLHEAD PRESSURE, PSK	G863	HELIUM	
MEASURED DEPTH	G863		0.01

^{*} 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

SAMPLE 20849	(COMPONENT, MOLE PCT	
STATENEW ME	EXICO	METHANE	90.7
COUNTY SAN		ETHANE	4.8
		PROPANE	1.3
FIELD BL		N-BUTANE	0.3
WELL NAME VANDERSLICE N		ISOBUTANE	0,2
API30045		N-PENTANE	0.1
LOCATIONSEC. 18, T32N,		ISOPENTANE	0.1
OWNER BURLINGTON RESOURCES OIL & GA	S CO.	CYCLOPENTANE	
COMPLETED 9	30821	HEXANES PLUS	0.2
SAMPLED	11002	NITROGEN	0.1
FORMATIONCRET-MESAV	ERDE.	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	580	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	5430	HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE** _	
WELLHEAD PRESSURE, PSIG	875	CARBON DIOXIDE	2.2
OPEN FLOW, MCFD		HELIUM	0.02
OF CHI LON, WOLD		HEATING VALUE*	1.070
	1	SPECIFIC GRAVITY	0.627
	·		
SAMPLE 20844		COMPONENT, MOLE PCT	
	(95.1
STATENEW ME	EXICO_	COMPONENT, MOLE PCT	
STATENEW ME COUNTYSAN	EXICO. JUAN	COMPONENT, MOLE PCT	1.6
STATE NEW ME COUNTY SAN FIELD 81	EXICO LIUAN ANCO	COMPONENT, MOLE PCT METHANE	1.6
STATE NEW ME COUNTY SAN FIELD BL WELL NAME HARRISON	EXICO LIUAN ANCO, NO. 1.	COMPONENT, MOLE PCT METHANE ETHANE PROPANE	1.6 0.1 TRACE
STATE NEW ME COUNTY SAN FIELD BL WELL NAME HARRISON API 30045	EXICO. JUAN ANCO. NO. 1. 11124.	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE	1.6 0. TRACE
STATE NEW ME COUNTY SAN FIELD BL WELL NAME HARRISON API 30045	EXICO. JUAN ANCO. NO. 1. 11124.	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	1.6 0.1 TRACE TRACE
STATE NEW ME COUNTY SAN FIELD 8L WELL NAME HARRISON API 30045 LOCATION SEC. 31, T32N	EXICO LIUAN ANCO NO. 1. 11124. R10W	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	1.6 0. TRACE TRACE 0.0 TRACE
NEW ME COUNTY	EXICO. JUAN ANCO. NO.1. 11124. R10W S CO.	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	1.6 0. TRACE TRACE 0.0 TRACE
STATENEW ME COUNTYSAN	EXICO JUAN ANCO NO. 1. 11124 R10W S CO. 90325	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	TRACE TRACE TRACE TRACE TRACE
STATE	EXICO. .iUAN. ANCO. .NO. 1. .11124. R10W. S. CO. .90325.	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	TRACE TRACE TRACE TRACE TRACE
NEW ME COUNTY	EXICOiUAN. ANCONO. 1. 11124. R10W. S CO. 90325. 11002. ERDE.	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	1.6 0.1 TRACE TRACE O.1 TRACE TRACE
STATE NEW ME COUNTY SAN FIELD 81 WELL NAME HARRISON API 30045 LOCATION SEC. 31, T32N OWNER BURLINGTON RESOURCES OIL & GA COMPLETED 6 SAMPLED 0 FORMATION CRET-MESAV GEOLOGIC PROVINCE CODE	EXICO JUAN ANCO NO. 1. 11124 R10W S CO 90325 11002 ERDE 580	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	1.6 0.1 TRACE TRACE 0.1 TRACE 0.1
STATE NEW ME COUNTY SAN FIELD BL WELL NAME HARRISON API 30045 LOCATION SEC. 31, T32N. OWNER BURLINGTON RESOURCES OIL & GA COMPLETED 6 SAMPLED 0 FORMATION CRET-MESAV GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	EXICO JUAN ANCO NO. 1. 11124 R10W S CO 90325 11002 ERDE 580	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	1.6 0.1 TRACE TRACE TRACE TRACE 0.1 0.1
STATE NEW ME COUNTY SAN FIELD BL WELL NAME HARRISON API 30045 LOCATION SEC. 31, T32N, OWNER BURLINGTON RESOURCES OIL & GA COMPLETED 6 SAMPLED 0 FORMATION CRET-MESAV GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	EXICOiUAN ANCONO. 1. 11124. R10W S CO. 90325 11002. ERDE. 580. 5060.	COMPONENT, MOLE PCT METHANE ETHANE PROPANE ISOBUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	1.6 0.1 TRACE TRACE TRACE TRACE 0.1 0.1
STATE NEW ME COUNTY SAN FIELD BI WELL NAME HARRISON API SC. 31, T32N OWNER BURLINGTON RESOURCES OIL & GA COMPLETED 6 SAMPLED 0 FORMATION CRET-MESAV GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	EXICO JUAN ANCO NO. 1. 11124 R10W S CO. 90325 11002 ERDE 580 5060	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	1.6 0.1 TRACE TRACE TRACE TRACE 0.1 0.1 0.1
STATE NEW ME COUNTY SAN FIELD BL WELL NAME HARRISON API 30045 LOCATION SEC. 31, T32N, OWNER BURLINGTON RESOURCES OIL & GA COMPLETED 6 SAMPLED 0 FORMATION CRET-MESAV GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	EXICOJUAN. ANCONO. 1	COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	1.6 0.1 TRACE TRACE TRACE TRACE 0.1 0.0 0.0 0.0 0.0

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF HZS DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

	COMPONENT, MOLE PCT	
STATE NEW MEXICO	METHANE	88,8
COUNTY SAN JUAN	ETHANE	6.2
	PROPANE	1.9
	N-BUTANE	0.5
WELL NAMEPAYNE NO. 4-A	ISOBUTANE	. 0.3
API3004523911_	N-PENTANE	0.1
LOCATION SEC. 22, T32N, R10W	ISOPENTANE	0.1
OWNER BURLINGTON RESOURCES OIL & GAS CO.	CYCLOPENTANE	 -
COMPLETED	HEXANES PLUS	0.2
SAMPLED011003	NITROGEN	0.1
FORMATION CRET-MESAVERDE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE580	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 6298	HYDROGEN	TRACE
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG 754	CARBON DIOXIDE	1.7
OPEN FLOW, MCFD 2784	HELIUM	0.03
OF 214 PLOVY, MOFB	HEATING VALUE*	1,102
	SPECIFIC GRAVITY	0.641
STATENEW MEXICO	METHANE	88.3
- 1-1-	METHANÉ	
COUNTY SAN JUAN	ETHANE	6.2 2.0
COUNTY SANJUAN FIELD BLANCO	ETHANE PROPANE N-BUTANE	6.2 2.0 0.5
COUNTY SAN_IUAN FIELD BLANCO WELL NAME SAN_IUAN 32-9 UNIT NO. 68	PROPANEN-BUTANEISOBUTANE	6.2 2.0 0.5 0.3
COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 68 API 3004511316	PROPANE N-BUTANE ISOBUTANE N-PENTANE	6.2 2.0 0.5 0.3
COUNTY SAN_IUAN FIELD BLANCO WELL NAME SAN_IUAN 32-9 UNIT NO. 68 API 3004511316 LOCATION SEC. 24, T32N, R10W	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	0.5 0.5 0.3 0.1
COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 68 API 3004511316 LOCATION SEC. 24, T32N, R10W OWNER BURLINGTON RESQUECES OIL & GAS CO.	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	6.2 2.0 0.5 0.3 0.1
COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 68 API 3004511316 LOCATION SEC. 24, T32N, R10W OWNER BURLINGTON RESQUECES OIL & GAS CO. COMPLETED 590423	PROPANE	6.2 2.0 0.5 0.3 0.1 0.2
COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 68 API 3004511316 LOCATION SEC. 24, T32N, R10W OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 590423 SAMPLED 011003	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	6.2 2.0 0.5 0.3 0.3 0.2 0.3
COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 68 API 3004511316 LOCATION SEC. 24, T32N, R10W OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 590423 SAMPLED 011003	PROPANE	6.2 2.0 0.5 0.3 0.5 0.2 0.3 0.1
COUNTY SAN_JUAN FIELD BLANCO WELL NAME SAN_JUAN 32-9 LINIT_NO_68 API 3004511316 LOCATION SEC_24_T32N, R10W OWNER BURLINGTON RESQUECES OIL & GAS CO. COMPLETED 590423 SAMPLED 011003 FORMATION CRET-MESAVERDE	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.5 0.5 0.5 0.2 0.2 0.3 0.1 0.0
COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 68 API 3004511316 LOCATION SEC. 24, T32N, R10W OWNER BURLINGTON RESQUECES OIL & GAS CO. COMPLETED 590423 SAMPLED 011003 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580	PROPANE	0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.0 0.0
COUNTY SAN_JUAN FIELD BLANCO WELL NAME SAN_JUAN 32-9 LINIT_NO_68 API 3004511316 LOCATION SEC_24_T32N, R10W OWNER BURLINGTON RESQUECES OIL & GAS CO_ COMPLETED 590423 SAMPLED 011003 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580 TRUE VERTICAL DEPTH (FT) 6040	ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE ISOPENTANE OYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	0.5 0.3 0.5 0.3 0.1 0.2 0.3 0.1 0.0 0.0 TRACE
STATE	PROPANE	6.2 2.0 0.5 0.3 0.5 0.2 0.3 0.1 0.0 0.0 TRACE
COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 68 API 3004511316 LOCATION SEC. 24, T32N, R10W OWNER BURLINGTON RESQUECES OIL & GAS CO. COMPLETED 590423 SAMPLED 011003 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580 TRUE VERTICAL DEPTH (FT) 6040 MEASURED DEPTH MEASURED DEPTH WELLHEAD PRESSURE, PSIG 1020	PROPANE	0.5 0.3 0.5 0.3 0.5 0.2 0.3 0.1 0.0 0.0 TRACE 0.0 0.03
COUNTY SAN_JUAN FIELD BLANCO WELL NAME SAN_JUAN 32-9 LINIT_NO. 68 API 3004511316 LOCATION SEC_24_T32N, R10W OWNER BURLINGTON RESQUECES OIL & GAS_CO. COMPLETED 590423 SAMPLED 011003 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580 TRUE VERTICAL DEPTH (FT) 6040 MEASURED DEPTH 6040	PROPANE	0.5 0.3 0.3 0.3 0.3 0.3 0.1 0.0 0.0 TRACE 0.0 0.03

^{*} 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

SAMPLE	20847	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	88.5
COUNTY		ETHANE	5.8
	_	PROPANE	1.9
FIELD	BLANCO	N-BUTANE	0.5
WELL NAME		ISOBUTANE	0.4
API		N-PENTANE	0.1
LOCATION		ISOPENTANE	0.2
OWNER BURLINGTON F	RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED	97,1115	HEXANES PLUS	0.3
SAMPLED	011002	NITROGEN	0.1
FORMATION	CRET-MESAVERDE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE _	580	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	5701	HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	2.3
OPEN FLOW, MCFD	·		0.03
or en equi, more	797	HEATING VALUE*	1,098
		SPECIFIC GRAVITY	0.648
SAMPLE	20845	COMPONENT, MOLE PCT	
STATE	NEW MENIOO	METHANE	89.7
		ETHANE	5.0
COUNTY		PROPANE	1.6
FIELD		N-BUTANE	0.4
WELL NAME	PAYNE NO. 1-B	ISOBUTANE	0.3
API	3004530432	N-PENTANE	0.1
LOCATION	SEC. 20_T32N, R10W	SOPENTANE	Ω.1
OWNER <u>BURLINGTON F</u>	RESOURCES OIL & GAS CO.	CYCLOPENTANE	<u> </u>
COMPLETED	010319.	HEXANES PLUS	0.2
SAMPLED	011002	NITROGEN	0.1
FORMATION	CRET-MESAVERDE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	580	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	5644	HYDROGEN	
		HYDROGEN SULFIDE**	0.0
MEASURED DEPTH			
		CARBON DIOXIDE	
MEASURED DEPTH WELLHEAD PRESSURE, PSIG _ OPEN FLOW, MCFD	307	HELIUM	0.03
	307		0.03

^{*} CALCULATED GROSS BTU PER CB FT, DRY, AT 60 DEGREES FAHRENBED AND 30 INCHES OF MERCURY ** DUE TO THE ASSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

	20653	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	
COUNTY	SANJUAN	ETHANE	6.6
FIELD	BLANCO	PROPANE	
WELL NAME	HOWELL J NO. 3A	N-BUTANE	
API		ISOBUTANE	
LOCATION	·-	N-PENTANE	
OWNER BURLINGTON RI	· · · · · · · · · · · · · · · · · · ·	ISOPENTANE	
COMPLETED		CYCLOPENTANE HEXANES PLUS	
		NITROGEN	
SAMPLED		OXYGEN	
FORMATION			
GEOLOGIC PROVINCE CODE		ARGON	
TRUE VERTICAL DEPTH (FT)	5161	HYDROGEN SULFIDE**	
MEASURED DEPTH		CARBON DIOXIDE	
WELLHEAD PRESSURE, PSIG		HELIUM	
OPEN FLOW, MCFD	3660	HEATING VALUE*	•
		SPECIFIC GRAVITY	
SAMPLE	20654	COMPONENT, MOLE PCT	
		COMPONENT, MOLE PCT METHANE	86.9
STATE	NEW MEXICO	,	
STATE	NEW MEXICO SAN JUAN	METHANE	7.6
STATECOUNTY	NEW MEXICO SAN JUAN BLANCO	METHANE	7.0
STATE COUNTY FIELD WELL NAME	NEW MEXICO SAN JUAN BLANCO HOWELL E NO. 2R	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	7.0 2.4 0.6
STATE COUNTY FIELD WELL NAME	NEW MEXICO SAN JUAN BLANCO HOWELL E NO. 2R 3004527563	METHANE ETHANE PROPANE N-BUTANE	7.0 2.4 0.6
STATE COUNTY FIELD WELL NAME API LOCATION	NEW MEXICO SAN JUAN BLANCO HOWELL E NO. 2R 3004527563 SEC. 14, T30N, R8W	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	7.0 2.4 0.6 0.4 0.2
STATE COUNTY FIELD WELL NAME API LOCATION OWNERBURLINGTON RI	NEW MEXICO SAN JUAN BLANCO HOWELL E NO. 2R 3004527563 SEC. 14, T30N, R8W ESQUIRCES OIL & GAS CO.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE	7.0 2.4 0.6 0.4 0.2
STATE COUNTY FIELD WELL NAME API LOCATION OWNER BURLINGTON RI COMPLETED	NEW MEXICO SAN JUAN BLANCO HOWELL E NO. 2R 3004527563 SEC. 14, T30N, R8W ESOURCES OIL & GAS CO. 900915	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	7.6 2.4 0.6 0.4 0.2 0.2
STATE COUNTY FIELD WELL NAME API LOCATION OWNERBURLINGTON RI COMPLETED SAMPLED	NEW MEXICO SAN JUAN BLANCO HOWELL E NO. 2R 3004527563 SEC. 14, T30N, R8W ESOURCES OIL & GAS CO. 900915	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	7.6 2.4 0.6 0.2 0.2 0.3
STATE COUNTY FIELD WELL NAME API LOCATION OWNER BURLINGTON RI COMPLETED SAMPLED FORMATION	NEW MEXICO SAN JUAN BLANCO HOWELL F NO. 2R 3004527563 SEC. 14, T30N, R8W ESOURCES OIL & GAS CO. 900915 010412 CRET-MESAVERDE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	7.0 2.4 0.6 0.4 0.2 0.2 0.2
STATE COUNTY FIELD WELL NAME API LOCATION OWNER BURLINGTON R COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	NEW MEXICO SAN JUAN BLANCO HOWELL E NO. 2R 3004527563 SEC. 14, T30N, R8W ESOURCES OIL & GAS CO. 900915 010412 CRET-MESAVERDE 580	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN ARGON	7.0 2.4 0.6 0.4 0.2 0.2 0.3 0.4 0.6
STATE COUNTY FIELD WELL NAME API LOCATION OWNER BURLINGTON R COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	NEW MEXICO SAN JUAN BLANCO HOWELL E NO. 2R 3004527563 SEC. 14, T30N, R8W ESOURCES OIL & GAS CO. 900915 010412 CRET-MESAVERDE 580	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	7.0 2.4 0.6 0.2 0.2 0.3 0.3 0.4 0.0
STATE COUNTY FIELD WELL NAME API LOCATION OWNER BURLINGTON RI COMPLETED SAMPLED FORMATION	NEW MEXICO SAN JUAN BLANCO HOWELL E NO. 2R 3004527563 SEC. 14, T30N, R8W ESOURCES OIL & GAS CO. 900915 010412 CRET-MESAVERDE 580	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE"	7.6 2.4 0.6 0.2 0.2 0.3 0.3 0.4 0.0 0.0
STATE	NEW MEXICO SAN JUAN BLANCO HOWELL F NO. 2R 3004527563 SEC. 14, T30N, R8W ESOURCES OIL & GAS CO. 900915 010412 CRET-MESAVERDE 580	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	7.0 2.4 0.6 0.4 0.2 0.2 0.3 0.4 0.6 0.0 0.0
STATE COUNTY FIELD WELL NAME API LOCATION OWNER BURLINGTON RI COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	NEW MEXICO SAN JUAN BLANCO HOWELL E NO. 2R 3004527563 SEC. 14, T30N, R8W ESOURCES OIL & GAS CO. 900915 010412 CRET-MESAVERDE 580 6664	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE"	7.0 2.4 0.6 0.4 0.2 0.2 0.3 0.4 0.0 0.0 0.0 0.0

^{*} 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 SE RELIABLE

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

SAMPLE 20866	COMPONENT, MOLE PCT	
STATENEW MEXICO_	METHANE	86 B
COUNTY SAN JUAN	ETHANE	7.2
	PROPANE	2.2
FIELD BLANCO	N-BUTANE	0.5
WELL NAME SAN JUAN NO. 28-A	ISOBUTANE	0.4
API3004522916.	N-PENTANE	0.1
LOCATION SEC. 26, T32N, R10W	ISOPENTANE	0.2
OWNER BURLINGTON RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0.4
SAMPLED011003	NITROGEN	0,2
FORMATIONCRET-MESAVERDE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE580		0.0
TRUE VERTICAL DEPTH (FT) 6357.	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD	HELIUM	
	HEATING VALUE*	
\$AMPLE 20669	COMPONENT, MOLE PCT	***************************************
SAIVIFEE 2000	METHANE	86.9
STATENEW MEXICO	ETHANE	
COUNTY SAN JUAN	PROPANE	
FIELD BLANCO	N-BUTANE	
WELL NAMEHOWELL A NO. 3	ISOBUTANE	
API3004509794	N-PENTANE	
LOCATION SEC. 4 T30N, R8W.	ISOPENTANE	0.2
OWNER BURLINGTON RESOURCES OIL & GAS CO.	CYCLOPENTANE	_
COMPLETED940125	HEXANES PLUS	0.4
SAMPLED010412.	NITROGEN	0.1
FORMATIONCRET-MESAVERDE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE580_	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 5374	HYDROGEN	TRACE
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	1.5
	HELIUM	0.04
OPEN FLOW, MCFD	HEATING VALUE*	1,138

^{*}CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENMEIT 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

	COMPONENT, MOLE PCT	
STATENEW MEXICO.	METHANE	85.8
COUNTY SAN JUAN	ETHANE	7.8
	PROPANE	2.7
FIELD BI ANCO	N-BUTANE	0.7
WELL NAMEVANDERSLICE NO. 1	ISOBUTANE	0.5
API3004511365	N-PENTANE	0.2
LOCATION SEC, 19, T32N, R10W	ISOPENTANE	0.2
OWNER BURLINGTON RESOURCES OIL & GAS CO.	CYCLOPENTANE	<u> </u>
COMPLETED	HEXANES PLUS	0.3
SAMPLED011002_	NITROGEN	0.1
FORMATIONCRET-MESAVERDE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE580_	ARGON	0.0
TRUÉ VERTICAL DEPTH (FT)5240_	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD2542	HELIUM	
	HEATING VALUE*	- "
	SPECIFIC GRAVITY	U.DDE
	0.0140.01151.17 1.10.10 1.0-	
SAMPLE 20860	COMPONENT, MOLE PCT	
	COMPONENT, MOLE PCT METHANE	86.2
STATE NEW MEXICO.	METHANE	7.4
STATE NEW MEXICO. COUNTY SAN JUAN	METHANE	7.4
STATE NEW MEXICO. COUNTY SAN JUAN FIELD BLANCO	METHANE	2.5
STATE NEW MEXICO. COUNTY SAN JUAN FIELD BLANCO. WELL NAME SAN JUAN 32-9 UNIT NO. 9A	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	7.4 2.5 0.7
STATE NEW MEXICO. COUNTY SAN JUAN FIELD BLANCO. WELL NAME SAN JUAN 32-9 UNIT NO. 9A. API 3004529736.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	7.4 2.5 0.7 0.4
STATE NEW MEXICO. COUNTY SAN JUAN FIELD BLANCO. WELL NAME SAN JUAN 32-9 UNIT NO. 9A. API 3004529736. LOCATION SEC. 25, T32N, R10W.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	7.4 2.5 0.7 0.4 0.2
STATE NEW MEXICO. COUNTY SAN JUAN FIELD BLANCO. WELL NAME SAN JUAN 32-9 LINIT NO. 9A API 3004529736 LOCATION SEC. 25, T32N, R10W OWNER BURLINGTON RESOURCES OIL & GAS CO.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE	7.4 2.5 0.7 0.2 0.2
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	7.4 2.5 0.7 0.4 0.2 0.2
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	7.4 2.5 0.7 0.4 0.2 0.2
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	7.4 2.5 0.7 0.4 0.2 0.2 0.3 0.1
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	7.4 2.5 0.7 0.4 0.2 0.2 0.3 0.1 0.1
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN ARGON HYDROGEN	7.4 2.5 0.7 0.2 0.2 0.3 0.1 0.1 0.1
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	7.4 2.5 0.7 0.4 0.2 0.3 0.1 0.1 0.1 TRACE
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	7.4 2.5 0.7 0.2 0.2 0.3 0.1 0.1 0.1 TRACE
STATE NEW MEXICO. COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 9A API 3004529736 LOCATION SEC. 25, T32N, R10W OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 991022 SAMPLED 011002 FORMATION CRET-MESAVERDE GEOLOG C PROVINCE CODE 580 TRUE VERTICAL DEPTH (FT) 6102 MEASURED DEPTH	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	7.4 2.5 0.7 0.2 0.2 0.3 0.1 0.1 TRACE 0.5

^{*} CALCULATED GROSS BTU PER CUIFT, 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

	COMPONENT, MOLE PCT	
STATENEW MEXICO.	METHANE	
COUNTYSAN JUAN	ETHANE	
FIELD BLANCO	PROPANE	
WELL NAME VANDERSLICE NO. 1-B.	N-BUTANE	
API 3004530014	ISOBUTANE	
LOCATION SEC. 19 T32N R10W	N-PENTANE	
OWNERBURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	
COMPLETED000324	CYCLOPENTANE HEXANES PLUS	
	NITROGEN	
	OXYGEN	
FORMATIONCRET-MESAVERDE	ARGON	
GEOLOGIC PROVINCE CODE	HYDROGEN	
TRUE VERTICAL DEPTH (FT)5440.	HYDROGEN SULFIDE**	
MEASURED DEPTH	CARBON DIOXIDE	
WELLHEAD PRESSURE, PSIG187_	HELIUM	
OPEN FLOW, MCFD217.	HEATING VALUE*	
	SPECIFIC GRAVITY	
SAMPLE 20857	COMPONENT, MOLE PCT	
	COMPONENT, MOLE PCT METHANE	85.7
STATE NEW MEXICO		
STATE NEW MEXICO COUNTY SANJUAN	METHANE	7.8
STATE NEW MEXICO COUNTY SAN JUAN FIELD BLANCO	METHANE	7.8 2.6
STATE NEW MEXICO COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 34A	METHANE ETHANEPROPANE	7.8 2.6 0.7
STATE	METHANE ETHANE PROPANE N-BUTANE	7.8 2.6 0.7 0.5
STATE NEW MEXICO COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 34A API 3004522917 LOCATION SEC. 35. T32N, R10W	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	7.8 2.6 0.7 0.5
STATE NEW MEXICO COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 34A API 3004522917 LOCATION SEC. 35 T32N R10W OWNER BURLINGTON RESOURCES OIL & GAS CO.	METHANE ETHANE PROPANE PROPANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE	7.8 2.6 0.7 0.5 0.2
STATE NEW MEXICO COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 34A API 3004522917 LOCATION SEC 35 T32N R10W OWNER BURLINGTON RESOURCES OIL 8 GAS CO COMPLETED 780717	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	7.8 2.6 0.7 0.5 0.2 0.2
STATE NEW MEXICO COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 34A API 3004522917 LOCATION SEC 35 T32N R10W OWNER BURLINGTON RESOURCES OIL 8 GAS CO COMPLETED 780717	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	7.8 2.6 0.7 0.5 0.2 0.2
STATE NEW MEXICO COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 34A API 3004522917 LOCATION SEC 35 T32N R10W OWNER BURLINGTON RESOURCES OIL 8 GAS CO COMPLETED 780717 SAMPLED 011002	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	7.8 2.6 0.7 0.5 0.2 0.2 0.3 0.3
STATE NEW MEXICO COUNTY SÂN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 34A API 3004522917 LOCATION SEC. 35 T32N R10W OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 780717 SAMPLED 011002 FORMATION CRET-MESAVERDE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	7.8 2.6 0.7 0.5 0.2 0.2 0.3 0.1
STATE NEW MEXICO COUNTY SAN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 34A API 3004522917 LOCATION SEC 35 T32N R10W OWNER BURLINGTON RESOURCES OIL & GAS CO COMPLETED 780717 SAMPLED 011002 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	7.8 2.6 0.7 0.5 0.2 0.2 0.3 0.1 0.0 0.0 TRACE
SAMPLE 20857 STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	7.8 2.6 0.7 0.5 0.2 0.2 0.3 0.1 0.0 0.0 TRACE
NEW MEXICO	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	7.8 2.6 0.7 0.5 0.2 0.2 0.3 0.1 0.0 TRACE
STATE NEW MEXICO COUNTY SÂN JUAN FIELD BLANCO WELL NAME SAN JUAN 32-9 UNIT NO. 34A API 3004522917. LOCATION SEC. 35 T32N R10W OWNER BURLINGTON RESOURCES OIL & GAS CO COMPLETED 780717. SAMPLED 011002 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580 TRUE VERTICAL DEPTH (FT) 5636 MEASURED DEPTH	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	7.8 2.6 0.7 0.5 0.2 0.2 0.3 0.1 0.0 TRACE 0.0 1.8

^{*} 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

SAMP	re.	20859		COMPONENT, MOLE PCT	
QTATE		NEW MEXIC	יח	METHANE	85.2
				ETHANE	7.9
		SANJU		PROPANE	2.8
FIELD	_	BLANC		N-BUTANE	8.0
		AN JUAN 32-9 UNIT NO		ISOBUTANE	0.5
API	······································	30045112	19.	N-PENTANE	0.2
LOCATION		SEC. 25, T32N, R10	W.	ISOPENTANE	<u>0.3</u>
OWNERBL	URLINGTON RES	SOURCES OIL & GAS C	<u>o</u> _	CYCLOPENTANE	
COMPLETED		6108	02	HEXANES PLUS	Ω4
SAMPLED		0110	02	NITROGEN	0.3
FORMATION	***************************************	CRET-MESAVERI	DE.	OXYGEN	0.0
GEOLOGIC PROVIN	ICE CODE	5	80_	ARGON	0.0
TRUE VERTICAL DE	≘PTH (FT)	56	50	HYDROGEN	0.0
		TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESS			81	CARBON DIOXIDE	1.7
		4		HELIUM	0.05
OFER FLOW, MORE	,		ga.	HEATING VALUE*	1.151
				SPECIFIC GRAVITY	0.674
SAMP		20856		COMPONENT, MOLE PCT	
	PLE		~	COMPONENT, MOLE PCT METHANE	84.3
STATE	PLË	NEW MEXIC			
STATE	PLË	NEW MEXIC	AN.	METHANE	8.5
STATE	PLE	NEW MEXIC SAN JUL BLANC	AN. ΩΩ.	METHANE	8.5 3.0
STATE	PLE	NEW MEXIC	AN. ΩΩ.	METHANE ETHANE PROPANE	8.5 3.0 0.8
STATE COUNTY FIELD	PLE	NEW MEXIC SAN JUL BLANC	AN. 20. 5R.	METHANE ETHANE PROPANE N-BUTANE	8.5 3.0 8.0
STATE	PLE	NEW MEXIC SAN JUJ BLANC SCOTT NO	AN. CO. 5R.	METHANE	3.0 0.8 0.5
STATE COUNTY FIELD WELL NAME API LOCATION	PLE	NEW MEXIC SAN JUL BLANC SCOTT NO. 30045285	AN. 2Ω. 5R. 19.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	8.5 3.0 0.8 0.5 0.3
STATE COUNTY FIELD WELL NAME API LOCATION OWNERBL	URLINGTON RES	NEW MEXIC SAN JUL BLANC SCOTT NO. 30045285 SEC. 34, T32N, R10	AN. CO. 5R. 19. WW.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	8.5 0.8 0.5 0.2 0.3
STATE	URLINGTON RES	NEW MEXIC SAN JUL BLANC SCOTT NO 30045285 SEC. 34, T32N, R10 SOURCES OIL & GAS C	AN. CO. 5B. 19. W. O.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	8.5 0.8 0.5 0.2 0.3
STATE COUNTY FIELD WELL NAME API LOCATION OWNER BL COMPLETED SAMPLED	URLINGTON RES	NEW MEXIC SAN JUL BLANC SCOTT NO 30045285 SEC. 34, T32N, R10 SOURCES OIL & GAS CO 9109	AN. CO. 5B. 19. W.V. O 04.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	8.5 0.8 0.5 0.5 0.3 0.3
STATE COUNTY FIELD WELL NAME API LOCATION OWNERBL COMPLETED SAMPLED FORMATION	URLINGTON RES	NEW MEXIC SAN JUL BLANC SCOTT NO. 30045285 SEC, 34, T32N, R10 SOURCES OIL & GAS C 9109	AN. CO. 19. W. O. 04. 02.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	8.5 3.0 0.8 0.5 0.2 0.3 0.5
STATE	URLINGTON RES	NEW MEXIC SAN JUL BLANC SCOTT NO 30045285 SEC. 34, T32N, R30 SOURCES OIL & GAS, C 9109 0110 CRET-MESAVERI	AN. CO. 19. W. O. 04. 02.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	8.5 0.8 0.5 0.2 0.3 0.5 0.2
STATE COUNTY FIELD WELL NAME API LOCATION OWNER BL COMPLETED SAMPLED FORMATION GEOLOGIC PROVIN TRUE VERTICAL DE	URLINGTON RES	NEW MEXIC SAN JUJ BLANC SCOTT NO. 30045285 SEC, 34, T32N, R10 SOURCES OIL & GAS C 9109 0110 CRET-MESAVERI	AN. ΔΩ. 19. W. Ω. 04. 02. 0E. 80.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.5 0.0 0.5 0.5 0.5 0.5 0.5 0.5
STATE COUNTY FIELD WELL NAME API LOCATION OWNER BL COMPLETED SAMPLED FORMATION GEOLOGIC PROVIN TRUE VERTICAL DE MEASURED DEPTH	URLINGTON RES	NEW MEXIC SAN JUL BLANC SCOTT NO 30045285 SEC. 34, T32N, R10 SOURCES OIL & GAS C 9109 Q110 CRET-MESAVERI 56	AN. CO. 19. W. O. 04. 02. DE. 80.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.0 0.0 0.0
STATE	URLINGTON RES	NEW MEXIC SAN JUL BLANC SCOTT NO. 30045285 SEC. 34, T32N, R10 SOURCES OIL & GAS. C 9109 0110 CRET-MESAVERI 56	AN. 2Ω. 5B. 19. W. Ω. 04. 02. DE. 80. 35.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	0.5 0.2 0.3 0.5 0.2 0.3 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
STATE	URLINGTON RES	NEW MEXIC SAN JUL BLANC SCOTT NO 30045285 SEC. 34, T32N, R10 SOURCES OIL & GAS C 9109 Q110 CRET-MESAVERI 56	AN. 2Ω. 5B. 19. W. Ω. 04. 02. DE. 80. 35.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	0.5 0.2 0.3 0.5 0.2 0.0 0.0 1RACE 0.0 1.7

^{*} 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

SAMPLE	20855	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	84.2
COUNTY		ETHANE	8.6
FIELD		PROPANE	3.0
		N-BUTANE	3.0
WELL NAME		ISOBUTANE	0.5
API		N-PENTANE	
LOCATION	-	SOPENTANE	0.3
OWNER BURLINGTON		CYCLOPENTANE	
COMPLETED		HEXANES PLUS	
SAMPLED		NITROGEN	
FORMATION	CRET-MESAVERDE	OXYGEN	
GEOLOGIC PROVINCE CODE .	580	ARGON	
TRUE VERTICAL DEPTH (FT) _	5408	HYDROGEN	
MEASURED DEPTH	<u> </u>	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	199	CARBON DIOXIDE	
OPEN FLOW, MCFD	4933	HELIUM	
		HEATING VALUE*SPECIFIC GRAVITY	
SAMPLE	20853	COMPONENT, MOLE PCT	
STATE	MEM MEXICO	METHANE	83.3
COUNTY		ETHANE	9.2
	BLANCO	PROPANE	3.3
WELL NAME		N-BUTANE	0.9
WELL NAME			
A701	· · · · · · · · · · · · · · · · · · ·	ISOBUTANE	
API	3004521967	ISOBUTANE	0.f
LOCATION	3004521967 SEC. 3, T31N, R10W	N-PENTANE	0.6 0.2 0.3
LOCATIONBURLINGTON	3004521967 SEC. 3, T31N, R10W I RESOURCES OIL & GAS CO.	N-PENTANE ISOPENTANE CYCLOPENTANE	0.6 0.2 0.3
LOCATIONBURLINGTON COMPLETED	3004521967 SEC. 3, T31N, R10W LRESOURCES OIL & GAS CO. 760707	N-PENTANEISOPENTANECYCLOPENTANEHEXANES PLUS	0.6 0.2 0.3
LOCATION	3004521967 SEC. 3, T31N, R10W IRESOURCES OIL & GAS CO	N-PENTANEISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.6 0.2 0.3 0.3
LOCATIONBURLINGTON COMPLETED	3004521967 SEC. 3, T31N, R10W IRESOURCES OIL & GAS CO	N-PENTANEISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.6 0.2 0.3 0.4 0.4
LOCATION	3004521967 SEC. 3, T31N, R10W I RESOURCES OIL & GAS CO. 760707 011002 CRET-MESAVERDE	N-PENTANE	0.6 0.2 0.3 0.4 0.4 0.0 0.0
LOCATIONBURLINGTON COMPLETED SAMPLED FORMATION	3004521967 SEC. 3, T31N, R10W LRESOURCES OIL & GAS CO. 760707 011902 CRET-MESAVERDE 580.	N-PENTANE	0.6 0.2 0.3 0.4 0.4 0.0 0.0 TRACE
LOCATION	3004521967 SEC. 3, T31N, R10W IRESOURCES OIL & GAS CO. 760707 011002 CRET-MESAVERDE 580. 5337	N-PENTANE	0.6 0.3 0.3 0.4 0.2 0.0 0.0 TRACE
LOCATION	3004521967 SEC. 3, T31N, R10W IRESOURCES OIL & GAS CO. 760707 011002 CRET-MESAVERDE 580. 5337.	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	0.6 0.2 0.3 0.4 0.6 0.0 TRACE
LOCATION	3004521967 SEC. 3, T31N, R10W LRESOURCES OIL & GAS CO. 760707 011902 CRET-MESAVERDE 580. 5337	N-PENTANE	0.6 0.2 0.3 0.4 0.6 0.0 TRACE

^{*} CALCULATED GROSS BTJ PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ASSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE 20668	COMPONENT, MOLE PCT	
STATE NEW MEXICO.	METHANE	83.4
COUNTY SANJUAN	ETHANE	9.1
	PROPANE	3.6
	N-BUTANE	1.0
WELL NAMEHOWELL C NO. 3C	ISOBUTANE	0.7
AP)3004530009	N-PENTANE	9.3
OCATION SEC. 7, T30N, R8W	ISOPENTANE	0.5
OWNER BURLINGTON RESOURCES ON & GAS CO.	CYCLOPENTANE	
COMPLETED000416	HEXANES PLUS	0.5
SAMPLED 010412	NITROGEN	0.2
FORMATIONCRET-MESAVERDE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE580.	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 5298	HYDROGEN	TRACE
MEASURED DEPTH	HYDRÓGEN SULFIDE**	0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	0.7
OPEN FLOW, MCFD870.	HELIUM	0.07
OPEN FLOW, MCFD	HEATING VALUE*	1.200
	SPECIFIC GRAVITY	0.688
SAMPLE 20843	COMPONENT, MOLE PCT	
STATE NEW MEXICO	METHANE	82.3
	ETHANE	9.1
COUNTYSAN JUAN	PROPANE	3.7
FIELD BLANCO	N-BUTANE	
	N-DOTANG	1.
WELL NAME HARRISON NO. 1-R.	ISOBUTANE	
		0.
API	ISOBUTANE	0.1 0.1
API 3004529533 .OCATION SEC. 31 T32N, R10W.	ISOBUTANE	0.5
API 3004529533 OCATION SEC. 31 T32N R10W OWNER BURLINGTON RESOURCES OIL & GAS CO.	ISOBUTANEISOPENTANE	0.0
API 3004529533 LOCATION SEC. 31 T32N, R10W, DWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 980514	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.0
API 3004529533 .OCATION SEC. 31 T32N, R10W, DWNER BURLINGTON RESOURCES OIL & GAS. CO. COMPLETED 980514 SAMPLED 011002	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.0
API 3004529533 OCATION SEC. 31 T32N, R10W, DWNER BURLINGTON RESOURCES OIL & GAS. CO. COMPLETED 980514 SAMPLED 011002 FORMATION CRET-MESAVERDE	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.5
API 3004529533 LOCATION SEC. 31 T32N, R10W, DWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 980514 SAMPLED 011002 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.7 0.3 0.4 0.4 0.4 0.1
API 3004529533 LOCATION SEC. 31 T32N, R10W, DWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 980514 SAMPLED 011002 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580 IRUE VERTICAL DEPTH (FT) 5786	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.7 0.3 0.4 0.4 0.1 0.5 TRAGE
API 3004529533 LOCATION SEC. 31 T32N, R10W, DWNER BURLINGTON RESOURCES OIL & GAS. CO. COMPLETED 980514 SAMPLED 011002 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580 IRUE VERTICAL DEPTH (FT) 5786	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.7 0.3 0.4 0.4 0.1 0.0 0.0 TRACE
API 3004529533 LOCATION SEC. 31 T32N, R10W, DWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 980514 SAMPLED 011002 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580 IRUE VERTICAL DEPTH (FT) 5786. MEASURED DEPTH WELLHEAD PRESSURE, PSIG 317.	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	0.7 0.2 0.4 0.1 0.1 0.1 TRAGE
WELL NAME HARRISON NO. 1-R. API 3004529533 LOCATION SEC. 31 T32N, R10W OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 980514 SAMPLED 011002 FORMATION CRET-MESAVERDE GEOLOGIC PROVINCE CODE 580 TRUE VERTICAL DEPTH (FT) 5786 MEASURED DEPTH WELLHEAD PRESSURE, PSIG 317. OPEN FLOW, MCFD 1150	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.7 0.2 0.4 0.4 0.5 0.5 TRACE 0.5

^{*}CALCULATED GROSS BTU PER CU FT, DRY, AT 50 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY **DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT SE RELIABLE

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

\$AMPLE 20651	COMPONENT, MOLE PCT	
STATENEW MEXICO	METHANE	79.2
	ETHANE	10.8
COUNTY SAN JUAN	PROPANE	5.0
FIELD BLANCO	N-BUTANÉ	1.4
WELL NAMEFLORANCE NO. 41	ISOBUTANE	
API3004508105	N-PENTANE	. 0.4
LOCATIONSEC. 21. T29N, R9W	ISOPENTANE	0.4
OWNERCONOCO_INC.	CYCLOPENTANE	
COMPLETED 510806	HEXANES PLUS	0.5
SAMPLED	NITROGEN	Q.4
FORMATIONCRET-MESAVERDE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE580_	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 4694	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSiG	CARSON DIOXIDE	
OPEN FLOW, MCFD 3120	HELIUM	
	HEATING VALUE*	1_246
	SPECIFIC GRAVITY	0.725
SAMPLE 20670	COMPONENT, MOLE PCT	
STATE NEW MEXICO.	METHANE	86.3
COUNTYSAN JUAN	ETHANE	7.3
	PROPANE	2.7
	N-BUTANE	0.7
WELL NAME WOODRIVER NO. 2	N-BUTANE	
WELL NAME		0.5
WELL NAME WOODRIVER NO. 2 API 3004513226 LOCATION SEC. 9, T30N, R8W	ISOBUTANE	0.5 0.2
WELL NAME WOODRIVER NO. 2 API 3004513226 LOCATION SEC. 9, T30N, R8W	ISOBUTANE	0.5 0.2 0.3
WELL NAME WOODRIVER NO. 2 API 3004513226 LOCATION SEC. 9. T30N, R8W OWNER BURLINGTON RESOURCES OIL & GAS CO.	ISOBUTANE	0.5 0.2 0.3
WELL NAME	ISOBUTANEISOPENTANE	0.5 0.2 0.3
WELL NAME WOODRIVER NO. 2 API 3004513226 LOCATION SEC. 9. T30N, R6W OWNER BURLINGTON RESOURCES OIL & GAS. CO. COMPLETED 560227 SAMPLED 010412	ISOBUTANE	0.5 0.2 0.3
WELL NAME WOODRIVER NO. 2 API 3004513226 LOCATION SEC. 9. T30NL R8W OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 560227 SAMPLED 010412 FORMATION CRET-MESAVERDE MANGOS	ISOBUTANE	0.5 0.2 0.3 0.4 0.4
### ##################################	ISOBUTANE	0.5 0.2 0.3 0.4 0.1 0.0
WELL NAME	ISOBUTANE	0.5 0.2 0.3 0.4 0.1 0.0 TRACE
WELL NAME WOODRIVER NO. 2 API 3004513226 LOCATION SEC. 9, T30N, R8W OWNER BURLINGTON RESOURCES OIL & GAS CO. COMPLETED 560227 SAMPLED D10412 FORMATION CRET-MESAVERDE MANCOS GEOLOGIC PROVINCE CODE 580 TRUE VERTICAL DEPTH (FT) 4865	ISOBUTANE	0.5 0.2 0.3 0.4 0.1 0.0 TRACE
WELL NAME	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE HELIUM	0.5 0.2 0.3 0.4 0.1 0.0 TRACE 0.0
WELL NAME	ISOBUTANE	0.5 0.2 0.3 0.4 0.1 0.0 TRACE 0.0 0.0 1.147

^{*} 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

SAMPLE	20868	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	78.0
COUNTY		ETHANE	8.7
	_	PROPANE	3.5
FIELD		N-BUTANE	1.1
WELL NAME		ISOBUTANE	0.6
API		N-PENTANE	0.3
LOCATION		ISOPENTANE	0.3
OWNER	ROBERT L BAYLESS	CYCLOPENTANE	- -
COMPLETED	700130	HEXANES PLUS	
SAMPLED	011003	NITROGEN	
FORMATION	PENN-PARADOX	OXYGEN	
GEOLOGIC PROVINCE CODE _	580	ARGON	
TRUE VERTICAL DEPTH (FT)	6390.	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	
OPEN FLOW, MCFD		HELIUM	
OT ALL THE PARTY WITH A MINISTER OF THE PARTY OF THE PART		HEATING VALUE*	
		SPECIFIC GRAVITY	
SAMPLE	20867	COMPONENT, MOLE PCT	<u></u>
STATE	NEW MEXICO	METHANE	89.5
COUNTY		ETHANE	5.5
		PROPANE	1.6
FIELD		N-BUTANE	0.4
WELL NAME		ISOBUTANE	<u>0.</u>
API		N-PENTANE	0.1
LOCATION		ISOPENTANE	0.2
OWNER BURLINGTON	RESOURCES OIL & GAS CO.	CYCLOPENTANE	············
COMPLETED	561017	HEXANES PLUS	0.3
		NITROGEN	0.
SAMPLED	011003		
		OXYGEN	0.0
FORMATION	CRET-PICTURED CLIEFS		
FORMATION	CRET-PICTURED CLIFFS. 580	OXYGEN	0.0 TRACE
FORMATIONGEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	CRET-PICTURED CLIFES. 580 6197	OXYGENARGONHYDROGENHYDROGEN SULFIDE**	0.0 TRACE
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	CRET-PICTURED CLIFES 580 6197	OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 TRACE 0.0
SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG OPEN FLOW, MCFD		OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 TRACE 0.0 2.0
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH		OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 TRACE 0.0 2.0

^{*} 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

SAMPLE	20854	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	
COUNTY	SANJUAN	ETHANE	
FIELD	BLANCO	PROPANE	
WELL NAME	_	N-BUTANE	
	3004521622	ISOBUTANE	
LOCATION		N-PENTANE	
OWNER BURLINGTON F		ISOPENTANE	
·	_	CYCLOPENTANE	
COMPLETED		HEXANES PLUS	
SAMPLED	011002	NITROGEN OXYGEN	
FORMATION			
GEOLOGIC PROVINCE CODE	580	ARGÓN	
TRUE VERTIÇAL DEPTH (FT)	2806	HYDROGEN CHI FIDE**	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG _	944	CARBON DIOXIDE HELIUM	0.04
OPEN FLOW, MCFD	2999.	HEATING VALUE*	
		SPECIFIC GRAVITY	
SAMPLE	20862	COMPONENT, MOLE PCT	
		COMPONENT, MOLE PCT METHANE	88.8
STATE	NEW MEXICO.	•	
STATE	NEW MEXICO. SAN JUAN	METHANE	6.2
STATE	NEW MEXICO SAN JUAN BLANCO	METHANE	5.2
STATE	NEW MEXICO SAN JUAN BLANCO SAN JUAN NO. 27	METHANE ETHANE PROPANE	6.2 1.9 0.5
STATE	NEW MEXICO SAN JUAN BLANCO SAN JUAN NO. 27 3004511314	METHANE ETHANE PROPANE N-BUTANE	5.2 1.9 0.5
STATE	NEW MEXICO SAN JUAN BLANCO SAN JUAN NO. 27 .3004511314 SEC. 23, T32N, R10W	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	5.2 1.9 0.5 0.3
STATE	NEW MEXICO SAN JUAN BLANCO SAN JUAN NO. 27 .3004511314 SEC. 23, T32N, R10W RESOURCES OIL & GAS CO.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE	6.2 1.9 0.5 0.3 0.1
STATE	NEW MEXICO SAN JUAN BLANCO SAN JUAN NO. 27 .3004511314 SEC. 23, T32N, R10W RESOURCES OIL & GAS CO.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	6.2 0.5 0.5 0.3 0.1 0.2
STATE	NEW MEXICO. SAN JUAN BLANCO SAN JUAN NO. 27 .3004511314. SEC. 23, T32N, R10W RESOURCES OIL & GAS CO551111	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE HEXANES PLUS NITROGEN	6.2 0.5 0.5 0.3 0.1 0.2 0.3 0.1
STATE COUNTY FIELD WELL NAME API LOCATION OWNERBURLINGTON F COMPLETED SAMPLED	NEW MEXICO SAN JUAN BLANCO SAN JUAN NO. 27 .3004511314 SEC. 23, T32N, R10W RESOURCES OIL & GAS CO. .551111 011003	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	6.2 1.9 0.5 9.3 9.1 0.2 0.3 0.1
STATE COUNTY FIELD WELL NAME API LOCATION OWNERBURLINGTON F COMPLETED SAMPLED FORMATION	NEW MEXICO SAN JUAN BLANCO SAN JUAN NO. 27 3004511314 SEC. 23, T32N, R10W RESOURCES OIL & GAS CO. 551111 011003 CRET-PICTURED CLIFFS	METHANE	6.2 1.9 0.5 0.3 0.1 0.2 0.3 0.1 0.0
STATE COUNTY FIELD WELL NAME API LOCATION COMPLETED SAMPLED FOR WATION GEOLOGIC PROVINCE CODE	NEW MEXICO SAN JUAN BLANCO SAN JUAN NO. 27 3004511314 SEC. 23, T32N, R10W RESOURCES OIL & GAS CO. 551111 011003 CRET-PICTURED CLIFES 580	METHANE	6.2 0.5 0.3 0.1 0.2 0.3 0.1 0.0 0.0
STATE	NEW MEXICO. SAN JUAN BLANCO. SAN JUAN NO. 27 .3004511314. SEC. 23, T32N, R10W. RESOURCES OIL & GAS CO. .551111. .011003. .CRET-PICTURED CLIFFS. .580. 6109.	METHANE	6.2 0.5 0.3 0.1 0.2 0.3 0.1 0.0 0.0 TRACE
STATE COUNTY FIELD WELL NAME LOCATION COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	NEW MEXICO. SAN JUAN BLANCO. SAN JUAN NO. 27 3004511314 SEC. 23, T32N, R10W RESOURCES OIL & GAS CO. 551111 011003 CRET-PICTURED CLIFFS. 580 6109	METHANE	6.2 0.5 0.3 0.1 0.2 0.3 0.1 0.0 0.0 TRACE
STATE	NEW MEXICO. SAN JUAN BLANCO. SAN JUAN NO. 27 3004511314. SEC. 23, T32N, R10W RESOURCES OIL & GAS CO. 551111. 011003. CRET-PICTURED CLIFES. 580 6109	METHANE	6.2 1.9 0.5 9.3 9.1 0.2 0.3 0.1 0.0 TRACE

^{*} 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

\$AMPLE	20927	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	0.0
		ETHANE	0.0
	SOCORRO	PROPANE	0.0
	WILDCAT	N-BUTANE	0.0
	DULCE DRAW STATE NO. 1	ISOBUTANE	0.0
API	3005320014	N-PENTANE	0.0
LOCATION	SEC. 2, T4S, R9E	ISOPENTANE	0.0
OWNER	PRIMERO OPERATING, INC.	CYCLOPENTANE	
COMPLETED	010431	HEXANES PLUS	0.0
SAMPLED	010808	NITROGEN	8.3
FORMATION	PERM-ABO	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	465	ARGON	0.2
TRUE VERTICAL DEPTH (FT) _	2846	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE"	0.0
		CARBON DIOXIDE	91.4
		HELIUM	0.09
OPEN PLOW, MICPU		HEATING VALUE*	0
		SPECIFIC GRAVITY	1.472
SAMPLE	20873	COMPONENT, MOLE PCT	
OTATE	NEW HEYEO	METHANE	0.8
	NEW MEXICO	ETHANE	0.0
	SOCORRO	PROPANÉ	0.0
FIELD	WILDCAT	N-BUTANE	
WELL NAME	DULCE DRAW STATE NO. 1	ISOBUTANE	0.0
API	3005320014	N-PENTANE	0.0
LOCATION	SEC. 2. T4S, R9E.	ISOPENTANE	0.0
OWNER	PRIMERO OPERATING, INC.	CYCLOPENTANE	
COMPLETED	010431	HEXANES PLUS	0.0
SAMPLED	010808	NITROGEN	.65.6
FORMATION	PERM-ABO	OXYGEN	
		ARGON	0.4
GEOLOGIC PROVINCE CODE	465		
	465 2650	HYDRÓGEN	TRACE
TRUE VERTICAL DEPTH (FT)	2650	HYDROGENHYDROGEN SULFIDE**	
TRUE VERTICAL DEPTH (FT) _ MEASURED DEPTH	2650		0.0
TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	2650	HYDROGEN SULFIDE**	0.0 31.1
TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	2650	HYDROGEN SULFIDE**	0.0 31.1 2.02

^{*} CALCULATED SKCSS BTU PER CU ET, DRY, AT 60 DEGREES FAHRENHEIT AND 33 INCHES DE MERCURY** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT 8E RELIABLE

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

	•	
STATEOHIO	METHANE	83.6
COUNTY HOCKING	ETHANE	A.5
FIELD HAYNES	PROPANE	1.9
WELL NAMEAZBELL NO. 2	N-BUTANÉ	0.6
API 3407323485	ISOBUTANE	0.3
	N-PENTANE	0.1
LOCATION SEC. 5N. SALT CREEK TWP	SOPENTANE	
OWNERCOLUMBIA NATURAL RESOURCES, INC.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	
SAMPLED	NITROGEN	
FORMATIONORDO-ROSE RUN_	OXYGEN	
GEOLOGIC PROVINCE CODE	ARGON	
TRUE VERTICAL DEPTH (FT)3530.	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG1330	CARBON DIOXIDE	
OPEN FLOW, MCFD 5700.	HELIUM	
<u></u>	HEATING VALUE*	1.017
	SPECIFIC GRAVITY	W.045
SAMPLE 20046	COMPONENT, MOLE PCT	
	METHANE	88.5
STATE OHIO		
STATE OHIO COUNTY POPTAGE	ETHANE	6.6
COUNTY PORTAGE	ETHANE	
COUNTYPORTAGE		2.7
COUNTYPORTAGE FIELDRAVENNA WELL NAMESHEWELL UNIT NO. P-11	PROPANE	2.7 0.8
COUNTY PORTAGE FIELD RAVENNA WELL NAME SHEWELL UNIT NO. P-11 API 3413324209	PROPANE N-BUTANE	2.7 0.8 0.3
COUNTYPORTAGE	PROPANEN-BUTANE	0.8 0.3 0.1
COUNTY PORTAGE FIELD RAVENNA WELL NAME SHEWELL UNIT NO. P-11 API 3413324209 LOCATION EDINBURG TWP, ATWATER QUAD, LOT 4SW	PROPANE N-BUTANE ISOBUTANE N-PENTANE	2.7 0.8 0.3 0.1 0.2
COUNTY PORTAGE FIELD RAVENNA WELL NAME SHEWELL UNIT NO. P-11 API 3413324209 LOCATION EDINBURG TWP, ATWATER OUAD, LOT 4SW OWNER EASTERN STATES OIL & GAS, INC.	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	2.7 0.8 0.3 0.1
COUNTY PORTAGE FIELD RAVENNA WELL NAME SHEWELL UNIT NO. P-11 API 3413324209 LOCATION FDINBURG TWP, ATWATER QUAD, LOT 4SW OWNER EASTERN STATES OIL & GAS, INC. COMPLETED 980924	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	2.7 0.8 0.3 0.1 0.2
COUNTY PORTAGE FIELD RAVENNA WELL NAME SHEWELL UNIT NO. P-11 API 3413324209 LOCATION EDINBURG TWP, ATWATER QUAD, LOT 4SW OWNER EASTERN STATES OIL & GAS, INC. COMPLETED 980924 SAMPLED 000211	PROPANE	2.7 0.8 0.3 0.1 0.2 0.1 0.7 0.7
COUNTY PORTAGE FIELD RAVENNA WELL NAME SHEWELL UNIT NO. P-11 API 3413324209 LOCATION EDINBURG TWP, ATWATER OUAD, LOT 45W, OWNER EASTERN STATES OIL & GAS, INC. COMPLETED 980924 SAMPLED 000211 FORMATION ORDO-ROSE RUN. KNOX	PROPANE	2.7 0.8 0.3 0.1 0.2 0.1 0.7 0.7
COUNTY PORTAGE FIELD RAVENNA WELL NAME SHEWELL UNIT NO. P-11 API 3413324209	PROPANE	0.5 0.3 0.1 0.2 0.1 0.7 0.0 0.0
COUNTY PORTAGE FIELD RAVENNA WELL NAME SHEWELL LINIT NO. P-11 API 3413324209 LOCATION EDINBURG TWP, ATWATER OUAD, LOT 4SW OWNER EASTERN STATES OIL & GAS, INC. COMPLETED 980924 SAMPLED 000211 FORMATION ORDO-ROSE RUN, KNOX GEOLOGIC PROVINCE CODE 160 TRUE VERTICAL DEPTH (FT) 7376	PROPANE	2.7 0.8 0.3 0.1 0.2 0.1 0.7 0.0 0.0
COUNTY PORTAGE FIELD RAVENNA WELL NAME SHEWELL UNIT NO. P-11 API 3413324209 LOCATION EDINBURG TWP, ATWATER OUAD, LOT 4SW, OWNER EASTERN STATES OIL & GAS, INC. COMPLETED 980924 SAMPLED 000211 FORMATION ORDO-ROSE RUN, KNOX GEOLOGIC PROVINCE CODE 160 TRUE VERTICAL DEPTH (FT) 7376 MEASURED DEPTH	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	2.7 0.8 0.3 0.1 0.2
COUNTY PORTAGE FIELD RAVENNA WELL NAME SHEWELL UNIT NO. P-11 API 3413324209 LOCATION EDINBURG TWP, ATWATER QUAD, LOT 45W OWNER EASTERN STATES OIL & GAS, INC. COMPLETED 980924 SAMPLED 000211 FORMATION ORDO-ROSE RUN. KNOX GEOLOGIC PROVINCE CODE 160 TRUE VERTICAL DEPTH (FT) 7376 MEASURED DEPTH WELLHEAD PRESSURE, PSIG 2550	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	2.7 0.8 0.3 0.1 0.2 0.1 0.7 0.0 0.0 0.0 0.0 0.0
COUNTY PORTAGE FIELD RAVENNA WELL NAME SHEWELL UNIT NO. P-11 API 3413324209 LOCATION EDINBURG TWP, ATWATER OUAD, LOT 4SW, OWNER EASTERN STATES OIL & GAS, INC. COMPLETED 980924 SAMPLED 000211 FORMATION ORDO-ROSE RUN, KNOX GEOLOGIC PROVINCE CODE 160 TRUE VERTICAL DEPTH (FT) 7376 MEASURED DEPTH	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	2.7 0.8 0.3 0.1 0.2 0.1 0.7 0.0 0.0 0.0 TRACE

^{*} CALCULATED GROSS BTU PER CUIFT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY TO DUE TO THE ABSCRIPTION OF H2S DURING SAMPLING. THE REPORTED RESULTS MAY NOT BE RELIABLE

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

	COMPONENT, MOLE PCT	
STATE OKLAHOMA	METHANE	75.6
COUNTY CUSTER	ETHANE	13_4
	PROPANE	6.3
TELD WEATHEREORD	N-BUTANE	1.4
WELL NAMECRALL NO. 12-1	ISOBUTANE	3.0
API3503920567,	N-PENTANE	0.4
OCATION SEC 12 I13N R15W	ISOPENTANE	0.4
OWNER CHESAPEAKE OPERATING INC.	CYCLOPENTANE	
OMPLETED	HEXANES PLUS	0.6
SAMPLED010711	NITROGEN	0.5
FORMATION PENN-ATOKA	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	ARGON	
TRUE VERTICAL DEPTH (FT) 12246	HYDROGEN	
MEASURED DEPTH	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD 950	HELIUM	
	HEATING VALUE*	
2010		
SAMPLE 20732	COMPONENT, MOLE PCT	
STATE OKLAHOMA	METHANE	
COUNTYCUSTER	ETHANE	
		2.1
FIELD FAY E	PROPANE	
	N-BUTANE	
WELL NAME MILTON NO. 1-25	N-BUTANE	0.3
WELL NAME MILTON NO. 1-25 API 3503921581	N-BUTANEISOBUTANE	0.3 0.1
WELL NAME MILTON NO. 1-25 API 3503921581 COCATION SEC. 25, T15N, R14W.	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	0.1 0.1
WELL NAME MILTON NO. 1-25 API 3503921581 LOCATION SEC. 25, T15N, R14W OWNER MARSHALL OIL CORP.	N-BUTANEISOBUTANEISOPENTANEISOPENTANE	0.3 0.1 0.1
WELL NAME MILTON NO. 1-25 API 3503921581 LOCATION SEC. 25, T15N, R14W, OWNER MARSHALL OIL CORP. COMPLETED 940904	N-BUTANEISOBUTANEISOPENTANEISOPENTANE CYCLOPENTANE	0.3 0.1 0.3
WELL NAME MILTON NO. 1-25 API 3503921581 LOCATION SEC. 25, T15N, R14W OWNER MARSHALL OIL CORP COMPLETED 940904 SAMPLED 010711	N-BUTANEISOBUTANEISOPENTANEISOPENTANE CYCLOPENTANEHEXANES PLUSNITROGEN	0.3 0.1 0.3 0.3 5.5
WELL NAME MILTON NO. 1-25 API 3503921581 LOCATION SEC. 25, T15N, R14W OWNER MARSHALL OIL CORP COMPLETED 940904 SAMPLED 010711 FORMATION PENN-ATOKA, MORROW	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	9.3 0.1 0.1 0.3 5.5 1.2
WELL NAME MILTON NO. 1-25 API 3503921581 LOCATION SEC. 25, T15N, R14W OWNER MARSHALL OIL CORP COMPLETED 940904 SAMPLED 010711 FORMATION PENN-ATOKA, MORROW GEOLOGIC PROVINCE CODE 380	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	9.3 0.1 0.3 0.3 5.5 1.2
WELL NAME MILTON NO. 1-25 API 3503921581 LOCATION SEC. 25, T15N, R14W OWNER MARSHALL OIL CORP COMPLETED 940904 SAMPLED 010711 FORMATION PENN-ATOKA, MORROW GEOLOGIC PROVINCE CODE 380 TRUE VERTICAL DEPTH (FT) 10766	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.3 0.1 0.3 0.5 5.5 1.2 0.0
WELL NAME MILTON NO. 1-25 API 3503921581 LOCATION SEC. 25, T15N, R14W OWNER MARSHALL OIL CORP COMPLETED 940904 SAMPLED 010711 FORMATION PENN-ATOKA, MORROW GEOLOGIC PROVINCE CODE 380 TRUE VERTICAL DEPTH (FT) 10766	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	9.3 9.1 9.3 9.3 5.5 1.2 9.0
WELL NAME MILTON NO. 1-25 API 3503921581 COCATION SEC. 25, T15N, R14W DWNER MARSHALL OIL CORP COMPLETED 940904 SAMPLED 910711 FORMATION PENN.ATOKA, MORROW GEOLOGIC PROVINCE CODE 380 FRUE VERTICAL DEPTH (FT) 10766 MEASURED DEPTH WELLHEAD PRESSURE, PSIG 4100	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	9.3 0.1 0.1 0.3 5.5 1.2 0.0 0.0
FIELD	N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	9.1 9.1 9.3 9.3 5.5 1.2 9.0 9.0 9.0 9.0

^{*} CALCULATED GROSS 8TU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE 10 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

SAMPLE	20705	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	88.8
COUNTY	CUSTER	ETHANE	6.0
	HAMMON E.	PROPANE	2.1
		N-BUTANE	0.4
	WHITE NO. 1-13	ISOBUTANE	0.4
	3503921437	N-PENTANE	0.1
LOCATION	SEC. 13. T13N. R20W	ISOPENTANE	0.2
OWNER	APACHE CORP.	CYCLOPENTANE	
COMPLETED	920928	HEXANES PLUS	0.4
SAMPLED	010709	NITROGEN	0.3
FORMATION	PENN-CHEROKEE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	3.0
TRUE VERTICAL DEPTH (FT)	13000	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	4633	CARBON DIOXIDE	1.1
OPEN FLOW, MCFD		HELIUM	0.04
OI EI41 E014, MOI D		HEATING VALUE"	1,12
		SPECIFIC GRAVITY	0.645
SAMPLE	20707	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	79.8
	CUSTER	ETHANE	10.5
		PROPANE	5.0
	HAMMON E	N-BUTANE	1.4
	SM(TH B21 NO. 2	ISOBUTANE	0.8
	3503921375	N-PENTANE	0.3
LOCATION	SEC. 21, T14N, R20W	ISOPENTANÉ	0.4
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	900409	HEXANES PLUS	0.4
SAMPLED	010709	NITROGEN	Ω,4
	PENN-CHEROKEE.	OXYGEN	0.0
FORMATION		ARGON	D.C
· · · · · · · · · · · · · · · · · · ·	360		
GEOLOGIC PROVINCE CODE		HYDROGEN	0.0
GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	12242	· •	
GEOLOGIC PROVINCE CODE . TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	12242	HYDROGEN	0.0
GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) " MEASURED DEPTH WELLHEAD PRESSURE, PSIG	12242	HYDROGEN	0.0 1.0
GEOLOGIC PROVINCE CODE . TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	12242	HYDROGEN SULFIDE** CARBON DIOXIDE	1.0 0.04

^{*}CALCULATED GROSS 8TU 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

SAMPLE	20725	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	78.4
		ETHANE	10.4
	CUSTER	PROPANE	6.1
	WEATHERFORD	N-BUTANE	1.5
	HORSE CREEK NO. 13-1	ISOBUTANE	0.7
	3503921652	N-PENTANE	0.5
	SEC. 13. T13N. R15W	ISOPENTANE	
OWNER <u>SURLINGT</u>	ON RESOURCES OIL & GAS CO.	CYCLOPENTANE	
COMPLETED	960805	HEXANES PLUS	. 0.6
SAMPLED	010711	NITROGEN	8.0
FORMATION	PENN-CHEROKEE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	E360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)) 11330	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
	G3900	CARBON DIOXIDE	
OPEN FLOW, MCFD	3822	HELIUM	
		HEATING VALUE* SPECIFIC GRAVITY	

SAMPLE	20734	COMPONENT, MOLE PCT	
	4-1-1-1	METHANE	
STATE	20734 OKLAHOMA CUSTER	METHANE	2.2
STATE	OKLAHOMA CUSTER	METHANE ETHANE PROPANE	2,2 0.3
STATECOUNTY	OKLAHOMA CUSTER CLINTON S	METHANE ETHANE PROPANE N-BUTANE	2.2 0.3 TRACE
STATE	OKLAHOMA CUSTER CLINTON S CLINTON NO. 13-31	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	2.2 0.3 TRACE TRACE
STATE COUNTY FIELD WEL_ NAMEAPI	OKLAHOMA CUSTER CLINTON S CLINTON NO. 13-31 3503920825	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	2.2 0.3 IRACE TRACE
STATE	OKLAHOMA CUSTER CLINTON S CLINTON NO. 13-31 3503920825 SEC. 31, T12N, R16W	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	2.2 0.3 TRACE TRACE TRACE TRACE
STATE COUNTY FIELD WEL_NAME API LOCATION OWNER	OKLAHOMA CUSTER CLINTON S CLINTON NO. 13-31 3503920825 SEC. 31, T12N, R16W PETRO ENGINEERING, INC.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE	2.2 D.: TRACE TRACE TRACE
STATE COUNTY FIELD WEL_NAME API LOCATION OWNER COMPLETED	OKLAHOMA CUSTER CLINTON S CLINTON NO. 13-31 3503920825 SEC. 31, T12N, R16W PETRO ENGINEERING, INC. 821108	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	2.2 D.: TRACE TRACE TRACE TRACE TRACE TRACE
STATE COUNTY FIELD WEL_NAME API LOCATION OWNER COMPLETED SAMPLED	OKLAHOMA CUSTER CLINTON S. CLINTON NO. 13-31 3503920825 SEC. 31. T12N. R16W PETRO ENGINEERING. INC. 821108	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	2.2 0.3 TRACE TRACE TRACE TRACE TRACE TRACE
STATE COUNTY FIELD WEL_NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION	OKLAHOMA CUSTER CLINTON S. CLINTON NO. 13-31 3503920825 SEC. 31, T12N, R16W PETRO ENGINEERING, INC. 821108 010711 PENN-MORROW	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	2.2 0.3 IRACE TRACE TRACE TRACE TRACE TRACE O.3
STATE COUNTY FIELD WEL_NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODI	OKLAHOMA CUSTER CLINTON S CLINTON NO. 13-31 3503920825 SEC. 31, T12N, R16W PETRO ENGINEERING, INC. 821108 010711 PENN-MORROW E 350	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	2.2 0.3 IRACE TRACE TRACE TRACE TRACE TRACE O.3
STATE COUNTY FIELD WEL_NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODITRUE VERTICAL DEPTH (FT	OKLAHOMA CUSTER CLINTON S. CLINTON NO. 13-31 3503920825 SEC. 31. T12N. R16W PETRO ENGINEERING. INC. 821108 010711 PENN-MORROW E. 360) 15472	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	TRACE TRACE TRACE TRACE TRACE TRACE TRACE O.3 O.0 O.0
STATE COUNTY FIELD WEL_NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODITRUE VERTICAL DEPTH (FT	OKLAHOMA CUSTER CLINTON S CLINTON NO. 13-31 3503920825 SEC. 31, T12N, R16W PETRO ENGINEERING, INC. 821108 010711 PENN-MORROW E 350	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	2.2 0.3 TRACE TRACE TRACE TRACE 0.3 0.0 0.0
STATE COUNTY FIELD WEL_NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODI TRUE VERTICAL DEPTH (FT	OKLAHOMA CUSTER CLINTON S. CLINTON NO. 13-31 3503920825 SEC. 31. T12N. R16W PETRO ENGINEERING. INC. 821108 010711 PENN-MORROW E. 360) 15472	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	2.2 0.3 IRACE TRACE TRACE TRACE 0.3 0.0 0.0 0.0 0.0
STATE	OKLAHOMA CUSTER CLINTON S CLINTON NO. 13-31 3503920825 SEC. 31, T12N, R16W PETRO ENGINEERING, INC. 821108 010711 PENN-MORROW E 360) 15472	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	2.2 0.3 IRACE TRACE TRACE TRACE O.3 0.0 0.0 0.0 0.0

^{**}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

SAMPLE 20728	COMPONENT, MOLE PCT
STATEOKLAHOMA	METHANE87.9
	ETHANE 6.7
COUNTYCUSTER	PROPANE2.4
FIELDCUSTER CITY E	N-BUTANE0.5
WELL NAMEDECKER NO. 1-23	SOBUTANE
API3503920338	- N-PENTANEU.1
LOCATION SEC. 23, T14N, R15W	
OWNER WARREN AMERICAN OIL CO	CYCLOPENTANE
COMPLETED	HEXANES PLUS 0.4
SAMPLED	L NITROGEN0.5
FORMATION PENN-MORROW	C OXYGENO
GEOLOGIC PROVINCE CODE	1 ARGON 0.0
TRUE VERTICAL DEPTH (FT)	HYDROGEN0.0
MEASURED DEPTH	HYDROGEN SULFIDE**0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE0.8
OPEN FLOW, MCFD1150	HELIUM0.04
	HEATING VALUE
	SPECIFIC GRAVITY0.649
SAMPLE 20727	COMPONENT, MOLE PCT
	COMPONENT, MOLE PCT
STATEOKLAHOMA	COMPONENT, MOLE PCT METHANE 91.8 ETHANE 4.8
STATEOKLAHOMA COUNTYCUSTEE	COMPONENT, MOLE PCT METHANE
STATEOKLAHOMA COUNTYCUSTER FIELDCUSTER CITY E	COMPONENT, MOLE PCT METHANE 91.8 ETHANE 4.8 PROPANE 1.2 N-BUTANE 0.3
STATE OKLAHOMA COUNTY CUSTER FIELD CUSTER CITY E WELL NAME BLACK WOLF NO. 1-25	COMPONENT, MOLE PCT METHANE 91.8 ETHANE 4.8 PROPANE 1.2 N-BUTANE 0.3 ISOBUTANE 0.3
STATEOKLAHOMA COUNTYCUSTER FIELDCUSTER CITY F WELL NAMEBLACK WOLF NO. 1-25 API3503920485	COMPONENT, MOLE PCT METHANE 91.8 ETHANE 4.6 PROPANE 1.2 N-BUTANE 0.3 ISOBUTANE 0.3 N-PENTANE 0.4
STATE OKLAHOMA COUNTY CUSTER FIELD CUSTER CITY WELL NAME BLACK WOLF NO. 1-25 API 3503920485 LOCATION SEC. 25 T14N R15W	COMPONENT, MOLE PCT METHANE 91.8 ETHANE 1.2 PROPANE 1.2 N-BUTANE 0.3 ISOBUTANE 0.2 N-PENTANE 0.1
STATEOKLAHOMA COUNTYCUSTER FIELDCUSTER CITY E WELL NAMEBLACK WOLF NO. 1-25 API3503920485 LOCATIONSEC. 25 T14N_R15W OWNERWARREN AMERICAN OIL CO	COMPONENT, MOLE PCT METHANE 91.8 ETHANE 4.8 PROPANE 1.2 N-BUTANE 0.3 ISOBUTANE 0.3 N-PENTANE 0.3 CYCLOPENTANE 0.3
STATEOKLAHOMA COUNTYCUSTER FIELDCUSTER CITY.E WELL NAMEBLACK WOLF NO. 1-25 API3503920485 LOCATIONSEC. 25_T14N_R15W OWNERWARREN AMERICAN OIL CO COMPLETEDB11101	COMPONENT, MOLE PCT METHANE 91.6 ETHANE 4.6 PROPANE 1.2 N-BUTANE 0.3 ISOBUTANE 0.3 N-PENTANE 0.1 CYCLOPENTANE 0.1 HEXANES PLUS 0.2
STATEOKLAHOMA COUNTYCUSTER FIELDCUSTER CITY E WELL NAMEBLACK WOLF NO. 1-25 API3503920485 LOCATIONSEC. 25 T14N_R15W OWNERWARREN AMERICAN OIL CO	COMPONENT, MOLE PCT METHANE 91.6 ETHANE 4.6 PROPANE 1.2 N-BUTANE 0.3 ISOBUTANE 0.2 ISOPENTANE 0.4 ISOPENTANE 0.4 CYCLOPENTANE 0.4 HEXANES PLUS 0.4 NITROGEN 0.4
STATEOKLAHOMA COUNTYCUSTER FIELDCUSTER CITY.E WELL NAMEBLACK WOLF NO. 1-25 API3503920485 LOCATIONSEC. 25_T14N_R15W OWNERWARREN AMERICAN OIL CO COMPLETEDB11101	COMPONENT, MOLE PCT METHANE 91.6 ETHANE 4.6 PROPANE 1.2 N-BUTANE 0.3 ISOBUTANE 0.1 ISOPENTANE 0.1 CYCLOPENTANE 0.1 HEXANES PLUS 0.2 NITROGEN 0.4
STATEOKLAHOMA COUNTYCUSTER FIELDCUSTER CITY.E WELL NAMEBLACK WOLE NO. 1-25 API3503920485 LOCATIONSEC. 25 T14N_R15W OWNERWARREN AMERICAN.OIL.CO COMPLETEDB11101 SAMPLED010711	COMPONENT, MOLE PCT METHANE 91.6 ETHANE 4.6 PROPANE 1.2 N-BUTANE 0.3 ISOBUTANE 0.3 N-PENTANE 0.1 CYCLOPENTANE 0.1 HEXANES PLUS 0.2 NITROGEN 0.4 ARGON 0.0
STATEOKLAHOMA COUNTYCUSTER FIELDCUSTER CITY F WELL NAMEBLACK WOLF NO. 1-25 API3503920485 LOCATIONSEC. 25_T14N_R15W OWNERWARREN AMERICAN OIL CO COMPLETEDB11103 SAMPLED010711 FORMATIONPENN_MORROW, SPRINGER GEOLOGIC PROVINCE CODE360	COMPONENT, MOLE PCT METHANE 91.8 ETHANE 4.8 PROPANE 1.2 N-BUTANE 0.3 ISOBUTANE 0.3 N-PENTANE 0.1 ISOPENTANE 0.1 L ISOPENTANE 0.1 INTROGEN 0.2 ARGON 0.0 HYDROGEN 0.0
STATEOKLAHOMA COUNTYCUSTEE FIELDCUSTER CITY E WELL NAMEBLACK WOLF NO. 1-25 API3503920485 LOCATIONSEC. 25_T14N_R15W OWNERWARREN AMERICAN OIL CO COMPLETEDB11103 SAMPLED010711 FORMATIONPENN_MORROW, SPRINGEE GEOLOGIC PROVINCE CODE360	COMPONENT, MOLE PCT METHANE 91.8 ETHANE 4.8 PROPANE 1.2 N-BUTANE 0.3 ISOBUTANE 0.3 ISOPENTANE 0.1 ISOPENTANE 9.1 INTROGEN 0.4 ARGON 0.6 HYDROGEN 0.6 HYDROGEN 0.6 HYDROGEN 0.6
STATEOKLAHOMA COUNTYCUSTER FIELDCUSTER CITY E WELL NAMEBLACK WOLF NO. 1-25 API3503920485 LOCATIONSEC. 25 T14N_R15W OWNERWARREN AMERICAN OIL CO COMPLETED811193 SAMPLED010713 FORMATIONPENN_MORROW, SPRINGER GEOLOGIC PROVINCE CODE360 TRUE VERTICAL DEPTH (FT)13016 MEASURED DEPTH	COMPONENT, MOLE PCT METHANE 91.6 ETHANE 4.6 PROPANE 1.2 N-BUTANE 0.3 ISOBUTANE 0.3 N-PENTANE 0.1 ISOPENTANE 0.1 L ISOPENTANE 0.2 NITROGEN 0.4 OXYGEN 0.6 HYDROGEN 0.0 CARBON DIOXIDE 1.0
STATEOKLAHOMA COUNTYCUSTEE FIELDCUSTER CITY E WELL NAMEBLACK WOLF NO. 1-25 API3503920485 LOCATIONSEC. 25_T14N_R15W OWNERWARREN AMERICAN OIL CO COMPLETED811107 SAMPLED811107 FORMATIONPENN_MORROW, SPRINGEE GEOLOGIC PROVINCE CODE360 TRUE VERTICAL DEPTH (FT)13016	COMPONENT, MOLE PCT METHANE 91.8 ETHANE 4.8 PROPANE 1.2 N-BUTANE 0.3 ISOBUTANE 0.3 ISOPENTANE 0.1 ISOPENTANE 0.1 ISOPENTANE 0.1 INTROGEN 0.2 ARGON 0.2 HYDROGEN 0.2 HYDROGEN 0.2 CARBON DIOXIDE 1.2 CARBON DIOXIDE 1.2 HELIUM 0.03

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF H23 DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20730	COMPONENT, MOLE PCT	
STATE	OKLAHOMA.	METHANE	83.1
		ETHANE	8.6
	CUSTER	PROPANE	4.1
	FAY E	N-BUTANE	1.1
	CATTLE 4-D. NO. 1-24	ISOBUTANE	0.7
API	3503920156	N-PENTANE	0.2
LOCATION	SEC. 24, T15N, R14W	ISOPENTANE	0.4
OWNER	APACHE CORP	CYCLOPENTANE	
COMPLETED	770616	HEXANES PLUS	0.5
SAMPLED	010711	NITROGEN	0.4
FORMATION	PENN-MORROW, SPRINGER	OXYGEN	۵.۵
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	10897_	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIC		CARBON DIOXIDE	8.0
OPEN FLOW, MCFD		HELIUM	0.05
OF EIVT EOVY, WICH D	<u> </u>	HEATING VALUE*	1.204
		SPECIFIC GRAVITY	0.694
SAMPLE	20729	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	87.3
COUNTY	CUSTER	ETHANE	6.8
	THOMAS S.	PROPANE	
-	HALLE NO. 1-7	N-BUTANE	0.7
	3503920956	ISOBUTANE	
		N-PENTANE	
	SFC. 7 T14N R14W	ISOPENTANE	
OWNER	-	CYCLOPENTANE	
COMPLETED	831004	HEXANES PLUS	0.5
COMPLETED	-	HEXANES PLUS	0.5 0.5
COMPLETED	831004	HEXANES PLUS	0.5 0.5 0.0
COMPLETEDSAMPLEDFORMATION	831004 010711	HEXANES PLUS	0.5 0.5 0.0
COMPLETEDSAMPLEDFORMATIONGEOLOGIC PROVINCE CODE		HEXANES PLUS	0.5 0.5 0.0 0.0 TRACE
COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	831004 010711 PENN-RED FORK	HEXANES PLUS	0.5 0.5 0.0 0.0 TRACE
COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	831004 010711 PENN-RED FORK 360 10885	HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.5 0.0 0.0 0.0 TRACE 0.0
COMPLETED	831004 910711 PENN-RED FORK 360 10885	HEXANES PLUS	0.5 0.0 0.0 0.0 TRACE 0.0 0.7

^{*} 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

SAMPLE	20731	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	83.7
COUNTY		ETHANE	8.3
		PROPANE	4.0
FIELD		N-BUTANE	1.0
WELL NAME		ISOBUTANE	0.7
API	3503921461	N-PENTANE	0.2
LOCATION	SEC, 24, T15N, R14W	ISOPENTANE	0.4
OWNER	MARSHALL O'L CORP.	CYCLOPENTANE	
COMPLETED	920821	HEXANES PLUS	0.5
SAMPLED	010711	NITROGEN	3.4
FORMATION	PENN-SPRINGER	OXYGEN	
GEOLOGIC PROVINCE CODE		ARGON	0.0
TRUE VERTICAL DEPTH (FT)		HYDROGEN	D.C
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE. PSIG _		CARBON DIOXIDE	3.0
		HELRUM	0.05
OPEN FLOW, MCFD	1/50	HEATING VALUE*	1 197
		SPECIFIC GRAVITY	0.69
SAMPLE	20721	COMPONENT, MOLE PCT	
\$TATE	OKI VHOMV	METHANE	84.1
		ETHANE	8.8
COUNTY		PROPANE	3.0
FIELD		N-BUTANE	0.8
WELL NAME	SEIRLEY NO. 1-22	ISOBUTANE	D.:
A의	3504321704	N-PENTANE	0.3
LOCATION	SEC 22 T17N R18W	ISOPENTANE	D.:
OWNER	EXOK, INC.	CYCLOPENTANE	
COMPLETED	830802	HEXANES PLUS	D.:
SAMPLED	010710	NITROGEN	0.5
FORMATION	PENN-MORROW	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)		HYDROGEN	. 0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
		CARBON DIOXIDE	1.0
WELLHEAD PRESSURE, PSIG _ OPEN FŁOW, MCFD		HELIUM	0.04
[] [] = [] [] [] [] [] [] [] [
OF EN FEOW, NICED		HEATING VALUE*	1,173

^{*} CALCULATED GROSS ATU PER CU FT, DRY AT 50 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

SAMPLE	20715	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	
COUNTY	DEWEY	ETHANE	
FIELD	NOBSCOT NW	PROPANE	0.9
WELL NAME	FRANS USA NO. 1	N-BUTANE	
API	3504321760	ISOBUTANE	
LOCATION		N-PENTANE	
OWNER VER		ISOPENTANE	
COMPLETED		CYCLOPENTANE	
	·	NITROGEN	
SAMPLED			0.0
FORMATION		ARGON	
GEOLOGIC PROVINCE CODE		HYDROGEN	
TRUE VERTICAL DEPTH (FT)	10243	HYDROGEN SULFIDE**	
MEASURED DEPTH		CARBON DIOXIDE	
WELLHEAD PRESSURE, PSIG	2245	HELIUM	0.04
OPEN FLOW, MCFD	1297	HEATING VALUE*	
SAMPLE	20720	SPECIFIC GRAVITY	0.602
<u>-</u>		SPECIFIC GRAVITY	0.602
STATE	OKLAHOMA	SPECIFIC GRAVITY	0.602 79.9
STATE	OKLAHOMA DEWEY	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE	79.9 10.6
STATE COUNTY FIELD	OKLAHOMA DEWEY PUTNAM	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE	79.9 10.6 4.F
STATE	OKLAHOMA DEWEY PETNAM SHIRLEY NO. 4-22	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE PROPANE	79.9 10.6 4.8
STATE COUNTY FIELD WELL NAMEAPI	OKLAHOMA DEWEY PITNAM SHIRLEY NO. 4-22	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE	79.9 10.6 4.8 1.2
STATE	OKLAHOMA DEWEY PUTNAM SHIRLEY NO. 4-223504322517 SEC. 22, 117N, R18W	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	79.9 10.6 4.8 1.2 0.7
STATE COUNTY FIELD WELL NAMEAPI	OKLAHOMA DEWEY PUTNAM SHIRLEY NO. 4-223504322517 SEC. 22, 117N, R18W	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE	79.9 10.6 4.8 1.2 0.7 0.4
STATE	OKLAHOMA DEWEY PUTNAM SHIRLEY NO. 4-22 3504322517 SEC. 22, T17N, R18W EXOK, INC.	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	79.9 10.6 4.8 1.2 0.7 0.4
STATE	OKLAHOMA DEWEY PUTNAM SHIRLEY NO. 4-22	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	79.9 10.6 4.8 1.4 0.7 0.4 0.4
STATE	OKLAHOMA DEWEY PUTNAM SHIRLEY NO. 4-22 3504322517 SEC. 22. I17N, R18W EXOK, INC. 960121	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	79.9 10.6 4.8 1.2 0.7 0.4 0.4
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED	OKLAHOMA DEWEY PUTNAM SHIRLEY NO. 4-22 3504322517 SEC. 22, T17N, R18W EXOK, INC. 960121 010710 PENN-MORROW	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	79.9 10.6 4.8 1.2 0.7 0.4 0.4 0.9
STATE	OKLAHOMA DEWEY PUTNAM SHIRLEY NO. 4-22	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE OYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	79.9 10.6 4.8 1.2 0.7 0.4 0.4 0.5 0.0 0.0
STATE	OKLAHOMA DEWEY PUTNAM SHIRLEY NO. 4-22 3504322517 SEC. 22. T17N, R18W EXOK, INC. 960121 010710 PENN-MORROW 360 10786	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE OYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	79.9 10.6 4.8 1.6 0.7 0.4 0.9 0.9 0.0 0.0
STATE	OKLAHOMA DEWEY PUTNAM SHIRLEY NO. 4-22 3504322517 SEC. 22, I17N, R18W EXOK, INC. 960121 010710 PENN-MORROW 360 10786	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE OYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	79.9 10.6 4.8 1.2 0.7 0.4 0.5 0.5 0.0 0.0 0.0
STATE	OKLAHOMA DEWEY PUTNAM SHIRLEY NO. 4-22	SPECIFIC GRAVITY COMPONENT, MOLE PCT METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE OYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	79.9 10.6 4.8 1.2 0.7 0.4 0.5 0.5 0.0 0.0 0.0 0.0

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ASSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE 20718	COMPONENT, MOLE PCT	
STATEOKLAHOMA	METHANE	80.6
	ETHANE	10,4
COUNTY DEWEY	PROPANE	4.5
FIELD PUTNAM	N-BUTANE	1.2
WELL NAMEGORE UNIT NO. 1-23.	ISOBUTANE	0.6
API3504320618	N-PENTANE	0.4
LOCATION SEC. 23, T17N, R18W	ISOPENTANE	0.4
OWNERCONTINENTAL OPERATING CO.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	3.0
SAMPLED010710_	NITROGEN	0.5
FORMATION PENN-OSWEGO	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 9248.	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	
	CARBON DIOXIDE	0.7
WELLHEAD PRESSURE, PSIG	HELIUM	0.05
OPEN FLOW, MCFD1250.	HEATING VALUE*	1.239
	SPECIFIC GRAVITY	0.716
SAMPLE 20722	COMPONENT, MOLE PCT	
CTATE CM AUCAIA	METHANE	7.11
STATE CKLAHOMA	ETHANE	14.5
COUNTY	PROPANE	7.5
FIELD PUTNAM	N-BUTANE	2.1
WELL NAME FAIRCHILD A.NO. 1	ISOBUTANE	1.
API3504350100	N-PENTANE	0.6
LOCATION SEC. 8, T17N, R19W	ISOPENTANE	0.6
OWNERCHESAPEAKE OPERATING INC.	CYCLOPENTANE	
COMPLETED 640116	HEXANES PLUS	0.7
	NITROGEN	0.7
SAMPLED 010710		0.0
	OXYGEN	
FORMATIONPENN-QSWEGO	OXYGEN	
FORMATIONPENN-OSWEGO_ GEOLOGIC PROVINCE CODE360_		0.0
FORMATIONPENN-OSWEGO_ GEOLOGIC PROVINCE CODE360_ TRUE VERTICAL DEPTH (FT)9494_	ARGON	0.0
FORMATION PENN-OSWEGO GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 9494 MEASURED DEPTH	ARGON	0.0 0.0 0.0
FORMATIONPENN-OSWEGO GEOLOGIC PROVINCE CODE360 TRUE VERTICAL DEPTH (FT)9494. MEASURED DEPTH WELLHEAD PRESSURE, PSIG4128.	ARGONHYDROGENHYDROGEN SULFIDE**	0.0 0.0 0.0
SAMPLED 010710 FORMATION PENN-OSWEGO GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 9494 MEASURED DEPTH WELLHEAD PRESSURE, PSIG 4128 OPEN FLOW, MCFD 3174	ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 0.0 0.0 2.0

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

SAMPLE 20724	COMPONENT, MOLE PCT	
STATE OKLAHOMA	METHANE	76.5
	ETHANE	11.9
COUNTY DEWEY	PROPANE	5.9
FIELD PUTNAM	N-BUTANE	1.7
WELL NAMEGOVERNMENT-SPAID NO. 1-5.	SOBUTANE	9.0
API3504350098	N-PENTANE	0.5
LOCATION SEC 5 T17N R19W	ISOPENTANE	0.5
OWNERCHESAPEAKE OPERATING INC.	CYCLOPENTANE	
COMPLETED 630320	HEXANES PLUS	0.8
SAMPLED010710	NITROGEN	0.6
FORMATIONPENN-OSWEGO	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	ARGON	0.0
TRUE VERTICAL DEPTH (FT) 9436	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG4372	CARBON DIOXIDE	0.8
	HELIUM	0.07
OPEN FLOW, MCFD5500	HEATING VALUE*	1,292
	SPECIFIC GRAVITY	0.753
SAMPLE 20719	COMPONENT, MOLE PCT	
STATE OVI AHOMA	METHANE	78.7
	METHANE	
COUNTY		10.7
FIELDPUTNAM	ETHANE	10.7 5.2
COUNTY	PROPANE	10.7 5.2 1.4
STATE OKLAHOMA COUNTY DEWEY FIELD PUTNAM WELL NAME COLLIER ESTATE NO. 1 API 3504320543	PROPANE	10.7 5.2 1.4 0.7
COUNTY DEWEY FIELD PUTNAM WELL NAME COLLIER ESTATE NO. 1 API 3504320543	ETHANE PROPANE N-BUTANE ISOBUTANE	10.7 5.2 1.4 0.7 0.4
COUNTY DEWEY. FIELD PUTNAM. WELL NAME COLLIER ESTATE NO. 1. API 3504320543. LOCATION SEC. 21, T17N, R18W.	ETHANE	10.7 5.2 1.4 0.7 0.4
COUNTY DEWEY FIELD PUTNAM WELL NAME COLLIER ESTATE NO. 1 API 3504320543 LOCATION SEC. 21, T17N, R18W OWNER VERNON E. FAULCONER, INC.	ETHANEPROPANEISOBUTANEN-PENTANEISOPENTANE	10.7 5.2 1.4 0.7 0.4
COUNTY DEWEY FIELD PUTNAM WELL NAME COLLIER ESTATE NO. 1 API 3504320543 LOCATION SEC. 21, T17N, R18W OWNER VERNON E. FAUL CONER. INC. COMPLETED 741117	ETHANEPROPANEISOBUTANEISOPENTANEISOPENTANECYCLOPENTANE	10.7 5.2 1.4 0.7 0.4 0.4
COUNTY DEWEY. FIELD PUTNAM. WELL NAME COLLIER ESTATE NO. 1	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	10.7 5.2 1.4 0.7 0.4 0.4
COUNTY DEWEY FIELD PUTNAM WELL NAME COLLIER ESTATE NO. 1 API 3504320543 LOCATION SEC. 21, T17N, R18W OWNER VERNON E. FALL CONER. INC. COMPLETED 741117 SAMPLED 010710 FORMATION PENN-TONKAWA	ETHANE	10.7 5.2 1.4 0.7 0.4 0.4 0.8 1.2
COUNTY DEWEY FIELD PUTNAM WELL NAME COLLIER ESTATE NO. 1 API 3504320543 LOCATION SEC. 21, T17N, R18W OWNER VERNON E. FAUL CONER. INC. COMPLETED 741117 SAMPLED 010710 FORMATION PENN-TONKAWA GEOLOGIC PROVINCE CODE 360	ETHANE	10.7 5.2 1.4 0.7 0.4 0.4
COUNTY DEWEY FIELD PUTNAM WELL NAME COLLIER ESTATE NO. 1 API 3504320543 LOCATION SEC. 21, T17N, R18W OWNER VERNON E. FAUL CONER. INC. COMPLETED 741117 SAMPLED 010710 FORMATION PENN-TONKAWA GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 7826	ETHANE	10.7 5.2 1.4 0.7 0.4 0.4
COUNTY DEWEY FIELD PUTNAM WELL NAME COLLIER ESTATE NO. 1 API 3504320543 LOCATION SEC. 21, T17N, R18W OWNER VERNON E FAUL CONER INC COMPLETED 741117 SAMPLED 010710 FORMATION PENN-TONKAWA GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 7826 MEASURED DEPTH T826	ETHANE	10.7 5.2 1.4 0.7 0.4 0.4 0.8 0.8 1.2 0.0 TRACE
DEWEY PUTNAM	ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	10.7 5.2 1.4 0.7 0.4 0.4 0.8 0.8 1.2 0.0 TRACE
COUNTY DEWEY FIELD PUTNAM WELL NAME COLLIER ESTATE NO. 1 API 3504320543 LOCATION SEC. 21, T17N, R18W OWNER VERNON E. FAUL CONER. INC. COMPLETED 741117 SAMPLED 010710 FORMATION PENN-TONKAWA GEOLOGIC PROVINCE CODE 360 TRUE VERTICAL DEPTH (FT) 7826	ETHANE PROPANE N-BUTANE ISOBUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	10.7 5.2 1.4 0.7 9.4 0.4 0.6 0.0 TRACE 0.0 0.12

^{*} CALCULATED GROSS BTU PER CU FT, ORY, 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 PROM GAS AND OIL WELLS IN THE UNITED STATES

• • • • • • • • • • • • • • • • • • • •	20022	COMPONENT, MOLE PCT	
CTATE:	OKLAHOMA	METHANE	98.3
	KIOWA	ETHANE	1.0
	MOUNTAIN VIEW W	PROPANE	0.2
		N-BUTANE	TRACE
***************************************	HAWKINS NO. 1-13	ISOBUTANE	TRACE
	3507521917	N-PENTANE	
	SEC. 13. T7N. R15W	ISOPENTANE	TRACE
OWNER	CIMAREX ENERGY CO.	CYCLOPENTANE	
COMPLETED	980616	HEXANES PLUS	
SAMPLED	990111	NITROGEN	0.2
FORMATIONP	ENN-SPRINGER (OVERTURNED)	OXYGEN	0.0
GEOLOGIC PROVINCE COD	E350	ARGON	
TRUE VERTICAL DEPTH (FT	11391	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
	IG4250	CARBON DIOXIDE	
	31000	HELIUM	
		HEATING VALUE*	
		SPECIFIC GRAVITY	0.565
SAMPLE	20874	COMPONENT, MOLE PCT	
• • • • • • • • • • • • • • • • • • • •		COMPONENT, MOLE PCT METHANE	94.4
STATE	OKLAHOMA	• •	
STATE	OKLAHOMA.	METHANE	0.6
STATE	OKLAHOMA LATIMER WILBURTON	METHANE	0.6 TRACE
STATE	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15	METHANE	0.6 TRACE
STATE COUNTY FIELD WELL NAME	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15 3507721167	METHANE ETHANE PROPANE N-BUTANE	0.6 TRACE 0.0
STATE	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15 3507721167 SEC. 15, T5N, R18E	METHANE LIHANE PROPANE N-BUTANE ISOBUTANE	0.6 TRACE 0.0
STATE	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15 3507721167	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	0.0 TRACE 0.0 0.0
STATE	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15 3507721167 SEC. 15, T5N, R18E	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	0.6 TRACE 0.0 0.0 0.0
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15 3507721167 SEC. 15, T5N, R18E BP AMERICA PRODUCTION CO.	METHANE LIHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	9.0 TRACE 0.0 0.0 0.0
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15 3507721167 SEC. 15, T5N R18E BP AMERICA PRODUCTION CO. 001003	METHANE LITHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.6 TRACE 0.6 0.0 0.0 0.0
STATE	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15 3507721167 SEC. 15, T5N, R18E BP AMERICA PRODUCTION CO. 001003 011011	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.5 TRACE 0.0 0.0 0.0 0.0 0.0
STATE	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15 3507721167 SEC. 15, T5N, R18E BP AMERICA PRODUCTION CO 001003 011011 PENN-CROMWELL 2	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.5 TRACE 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6
STATE COUNTY FIELD WELL NAME API LOCATION COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE COD TRUE VERTICAL DEPTH (FT	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15 3507721167 SEC. 15, T5N, R18E BP AMERICA PRODUCTION CO. 001003 011011 PENN-CROMWELL 2 E	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.5 TRACE 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6
STATE	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15 3507721167 SEC. 15, T5N, R18E BP AMERICA PRODUCTION CO 001003 011011 PENN-CROMWELL 2 E 345	METHANE LITHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.6 TRACE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE COD TRUE VERTICAL DEPTH (FT MEASURED DEPTH WELLHEAD PRESSURE, PS	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15 3507721167 SEC. 15, T5N R18E BP AMERICA PRODUCTION CO 001003 011011 PENN-CROMWELL 2 E 345 11462	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.5 TRACE 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE COD TRUE VERTICAL DEPTH (FT MEASURED DEPTH WELLHEAD PRESSURE, PS	OKLAHOMA LATIMER WILBURTON YOURMAN NO. 7-15 3507721167 SEC. 15, T5N, R18E BP AMERICA PRODUCTION CO 001003 011011 PENN-CROMWELL 2 E 345	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	0.5 TRACE 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6

^{*} 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 RECLABLE

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

SAMPLE	20788	COMPONENT, MOLE PCT	
\$TATE	OKLAHOMA	METHANE	72.6
•	·	ETHANE	10.3
	LINCOLN	PROPANE	5.4
	RED MOUND W	N-BUTANE	1.0
	WILKERSON NO. 2-3	ISOBUTANE	0.4
	3508123598	N-PENTANE	0.1
LOCATION	SEC. 3, T15N, R2E	ISOPENTANE	0.1
OWNER	MARJO OPERATING CO., INC.	CYCLOPENTANE	
COMPLETED	001115	HEXANES PLUS	TRACE
SAMPLED	010813	NITROGEN	9.2
FORMATION	DEVO-HUNTON	OXYGEN	8.0
GEOLOGIC PROVINCE CODE		ARGON	0.0
TRUE VERTIÇAL DEPTH (FT) _	•	HYDROGEN	TRACE
, , ,	6276	HYDROGEN SULFIDE**	0.0
	950	CARBON DIOXIDE	0.1
•	1170	HELIUM	0.09
OPEN FLOW, WOFD		HEATING VALUE*	1,104
		SPECIFIC GRAVITY	0.722
SAMPLE	20409	COMPONENT, MOLE PCT	
RTATE	OKLAHOMA	METHANE	81.8
		ETHANE	8.8
	MAJOR	PROPANE	3.8
	RINGWOOD	N-BUTANE	1.4
	FISHER NO. 6	ISOBUTANE	. 0.5
API	3509323677	N-PENTANE	0.5
LOCATION	SEC. 3, T20N, R10W	ISOPENTANE	0.4
	SEC. 3, T20N, R10W ONEOK RESOURCES CO.	ISOPENTANE	
OWNER	• •		
OWNER	ONEOK RESOURCES CO.	CYCLOPENTANE	1.0
OWNERCOMPLETEDSAMPLED	ONEOK RESOURCES CO. 920625	CYCLOPENTANE	1.0
OWNER COMPLETED SAMPLED FORMATION	ONEOK RESOURCES CO. 920625 001023	CYCLOPENTANE HEXANES PLUS NITROGEN	1.0 1.2 0.0
OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	ONEOK RESOURCES CO. 920625 001023 CAMO-ARBUCKLE 360	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	1.0 1.2 0.0 TRACE
OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE . TRUE VERTICAL DEPTH (FT) _	ONEOK RESOURCES CO. 920625 001023 CAMO-ARBUCKLE .360 9291	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	1.0 1.2 0.0 TRACE
OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE . TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	ONEOK RESOURCES CO	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	1.0 1.2 0.0 TRACE TRACE
OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE _ TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	ONEOK RESOURCES CO. 920625 001023 CAMO-ARBUCKLE360 9291	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	1.0 1.2 0.0 TRACE TRACE 0.0
OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE _ TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	ONEOK RESOURCES CO	CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	1.0 1.2 0.0 TRACE TRACE 0.0 0.8

 $^{^{\}star}$ CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENJIEIT AND 30 INCHES OF MERCURY TO 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

SAMPLE	20410	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	73.6
COUNTY	MAJOR	ETHANE	11.7
	_	PROPANE	5.8
FIELD		N-BUTANE	2.5
WELL NAME		ISOBUTANE	0.8
API	3509320854	N-PENTANE	1.2
LOCATION	SEC. 3, T20N, R10W	ISOPENTANE	0.7
OWNER	ONEOK RESOURCES CO.	CYCLOPENTANE	
COMPLETED	740321	HEXANES PLUS	1.9
SAMPLED	. 001023	NITROGEN	1.3
FORMATION	DEVO-HUNTON	OXYGEN	0.0
GEOLOGIC PROVINCE CODE _	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	8086	HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	0.4
OPEN FLOW, MCFD		HELIUM	0.06
OPEN PLOW, NICED	462224	HEATING VALUE*	1.372
		SPECIFIC GRAVITY	0.811
SAMPLE	20411	COMPONENT, MOLE PCT	
CTATE	DIZI NUDITA	METHANE	60.7
STATE		ETHANE	16.8
COUNTY	MAJOR.	PROPANE	10.1
FIELD		N-BUTANE	
WELL NAME	COLLEY NO. 2	ISOBUTANE	1.3
API	3509320578	N-PENTANE	1.6
LOCATION	SEC. 10, T20N, R10W	ISOPENTANE	0.9
OWNER	ONEOK RESOURCES CO.	CYCLOPENTANE	
COMPLETED	710917	HEXANES PLUS	3.2
SAMPLED	001023	NITROGEN	. 1.1
EODMATION	BENO HINTON	OXYGEN	0.0
FURWATION	DEVO-HUNTON		
		ARGON	0.0
GEOLOGIC PROVINCE CODE _	360	ARGON HYDROGEN	
GEOLOGIC PROVINCE CODE _ TRUE VERTICAL DEPTH (FT)	360		0.1
GEOLOGIC PROVINCE CODE _ TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	360 8344	HYDROGEN	0.1
GEOLOGIC PROVINCE CODE _ TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG _	360 8344	HYDROGEN HYDROGEN SULFIDE**	0.1 0.0 0.3
GEOLOGIC PROVINCE CODE _ TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	360 8344	HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.1 0.0 0.3 0.10

 $^{^{\}circ}$ CALCULATED GROSS 8TU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY TO 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

SAMPLE	20412	COMPONENT, MOLE PCT	
STATE	AMOHA INO	METHANE	83.2
	MAJOR	ETHANE	8.1
FIELD		PROPANE	3.7
		N-BUTANE	1.4
WELL NAME		ISOBUTANE	0.6
API		N-PENTANE	0.5
LOCATION	•	ISOPENTANE	0.4
OWNER	• •	CYCLOPENTANE	· · · · · · · · · · · · · · · · · · ·
COMPLETED		HEXANES PLUS	
SAMPLED	001023	NITROGEN	
FORMATION	MISS-MISSISSIPPIAN LIME	OXYGEN	
GEOLOGIC PROVINCE CODE	360	ARGON	
TRUE VERTICAL DEPTH (FT)	7748	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	
OPEN FLOW, MCFD	380.	HELIUM	
		HEATING VALUE*	•
		SPECIFIC GRAVITY	0.705
SAMPLE	20451	COMPONENT, MOLE PCT	
STATE	OKI AHOMA	METHANE	74.9
		PROF. 1 4 1 1 PR	
	TEYAS	ETHANE	6.3
	TEXAS	PROPANE	
FIELD	GUYMON-HUGOTON		3.6
FIELD	GUYMON-HUGOTON LONG NO. B1	PROPANE	3.6
FIELD WELL NAMEAPI	GUYMON-HUGOTON LONG.NO. B1 3513900489	PROPANE	3.6 1.1 0.4
FIELD	GUYMON-HUGOTON LONG.NO. B1 3513900489	PROPANE N-BUTANE ISOBUTANE	3.6 1.: 0.:
FIELD WELL NAME API LOCATION	GUYMON-HUGOTON LONG.NO. B1 3513900489	PROPANE N-BUTANE ISOBUTANE N-PENTANE	3.6
FIELD WELL NAME API LOCATION OWNER	GUYMON-HUGOTON LONG NO. B1 3513900489 SEC. 12, T4N. R15E CONOCO. INC.	PROPANE N-BUTANE N-PENTANE ISOPENTANE	3.6 1.1 9.3 9.3
FIELD WELL NAME API LOCATION OWNER COMPLETED	GUYMON-HUGOTON LONG NO. B1 3513900489 SEC. 12, T4N. R15E CONOCO. JNC. 460425	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	3.6 1.1 0.3 0.3 0.3
FIELD	GUYMON-HUGOTON LONG NO. B1 3513900489 SEC. 12, T4N. R15E CONOCO. JNC. 460425	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	3.6 0.2 0.3 0.3 0.3
FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION	GUYMON-HUGOTON LONG NO. B1 3513900489 SEC. 12, T4N. R15E CONOCO. INC. 460425	PROPANE	3.6 9.2 9.3 9.3 9.3 12.1 0.0
FIELD	GUYMON-HUGOTON LONG NO. B1 3513900489 SEC. 12, T4N. R15E CONOCO. JNC. 460425 .001108 PERM-CHASE GROUP 360.	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	3.6 0.2 0.3 0.3 - 0.3 - 12. 0.6 TRACE
FIELD	GUYMON-HUGOTON LONG NO. B1 3513900489 SEC. 12, T4N. R15E CONOCO. JNC. 460425 .001108 PERM-CHASE GROUP 360.	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	3.6 0.3 0.3 0.3 12. 0.6 TRACE
FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	GUYMON-HUGOTON LONG NO. B1 3513900489 SEC. 12, T4N. R15E CONOCO. INC. 460425 .001108 PERM-CHASE GROUP 360. 2800	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	3.6 9.3 9.3 9.3 9.3 12.3 0.0 TRACE
FIELD	GUYMON-HUGOTON LONG NO. B1 3513900489 SEC. 12, T4N. R15E CONOCO. JNC. 460425 .001108 PERM-CHASE GROUP 360 2800	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE HELIUM	1.1 9.4 9.3 9.3 12.1 0.6 TRACE 9.0 9.1
FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	GUYMON-HUGOTON LONG NO. B1 3513900489 SEC. 12, T4N. R15E CONOCO. JNC. 460425 .001108 PERM-CHASE GROUP 360 2800	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	3.6 9.4 9.3 9.2 9.3 12.1 0.0 TRACE 9.0

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 80 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF H28 DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

20450	COMPONENT, MOLE PCT	
OKLAHOMA	METHANE	74.8
	ETHANE	6.7
	PROPANE	3.7
	N-BUTANE	1_1
	N-PENTANE	0.3
	ISOPENTANE	0.2
CONOCO, INC.	CYCLOPENTANE	
451130	HEXANES PLUS	0.3
001108	NITROGEN	12.1
PERM-CHASE GROUP	OXYGEN	a.c
360		
2775		
	HYDROGEN SULFIDE**	0.0
		0.7.13
20740	COMPONENT, MOLE PCT	
OKI AHOMA	METHANE	73.8
	ETHANE	6.6
	PROPANE	3.7
	ISOBUTANE	0.5
	N-PENTANE	0.3
XTO ENERGY INC.	CYCLOPENTANE	······
480520		
010730		
PERM-CHASE GROUP		
360		
2888	HYDROGEN	
	HVDDOOGN OH COCK	0.0
······································	HYDROGEN SULFIDE**	
37.	CARBON DIOXIDE	Q.1
		0.1 0.46
	OKLAHOMA TEXAS GUYMON-HUGOTON TARVER NO. 1. 3513900488 SEC. 2. T4N. R15E CONOCO. INC. 451130 001108 PERM-CHASE GROUP 360. 2775 383. 31909 20740 OKLAHOMA TEXAS GUYMON-HUGOTON TILGHMAN NO. 1 3513900567 SEC. 28. T1N. R13E XTO ENERGY, INC. 480520 010730 PERM-CHASE GROUP 360	OKLAHOMA TEXAS GLYMON-HUGOTON TARVER NO. 1. 3513900488 N-PENTANE SEC. 2. TAN R15E CONOCO INC CYCLOPENTANE 451130 HEXANES PLUS 001108 PERM-CHASE GROUP 360 ARGON 2775 HYDROGEN SULFIDE** SPECIFIC GRAVITY 20740 COMPONENT, MOLE PCT OKLAHOMA TEXAS GUYMON-HUGOTON TILGHMAN NO. 1 3513900567 SEC. 28. T1N. R13E SPECIFIC GROUP ARGON PERM-CHASE GROUP OXYGEN METHANE TEXAS GUYMON-HUGOTON TILGHMAN NO. 1 SOBUTANE SPECIFIC GRAVITY SPECIFIC GRAVITY TISOBUTANE SEC. 28. T1N. R13E SOPENTANE ARGON HYDROGEN N-PENTANE SEC. 28. T1N. R13E SOPENTANE ARGON HYDROGEN NITROGEN OXYGEN NITROGEN OXYGEN ARGON HYDROGEN OXYGEN NITROGEN OXYGEN ARGON HYDROGEN OXYGEN ARGON HYDROGEN OXYGEN ARGON HYDROGEN OXYGEN ARGON HYDROGEN

^{*} 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

5	AMPLE 20741		COMPONENT, MOLE PCT	
STATE		OKI AHOMA	METHANE	72.8
		_	ETHANE	6.4
			PROPANE	3.6
	GUY		N-BUTANE	1,1
	BURROWS G		ISOBUTANE	0.5
			N-PENTANE	0.3
LOCATION	SE	C. 20, T1N, R13E	ISOPENTANE	0.2
OWNER	XT	O ENERGY, INC.	CYCLOPENTANE	
COMPLETED_		500116	HEXANES PLUS	0.3
SAMPLED		010730	NITROGEN	14.7
FORMATION _	PERM	-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PR	OVINCE CODE	360	ARGON	0.5
	AL DEPTH (FT)		HYDROGEN	0.6
MEASURED D	• •		HYDROGEN SULFIDE**	0.0
	RESSURE, PSIG		CARBON DIOXIDE	0.1
	MCFD		HELIUM	0.49
OFENTLOW, I	1CFD	4 4.	HEATING VALUE*	1,025
			SPECIFIC GRAVITY	0.716
	SAMPLE 20882		COMPONENT, MOLE PCT	
STATE		OKLAHOMA	METHANE	71.2
			ETHANE	6.3
			PROPANE	3.f
	GUY		N-BUTANE	1.
			ISOBUTANE	0.5
			N-PENTANE	0.2
	SE		ISOPENTANE	0.3
OWNER	CRAWLEY PET	ROLEUM CORP.	CYCLOPENTANE	
		781022	HEXANES PLUS	0.2
COMPLETED			NITROGEN	16.0
		011030	MITTOOLIN	
SAMPLED	PERM		OXYGEN	0.0
SAMPLED	1114	-CHASE GROUP		
SAMPLED FORMATION _ GEOLOGIC PR	PERM	-CHASE GROUP 360	OXYGEN ARGON HYDROGEN	0.0
SAMPLED FORMATION _ GEOLOGIC PR TRUE VERTICA	PERM OVINCE CODE AL DEPTH (FT)	-CHASE GROUP 360 2955	OXYGEN	0.0
SAMPLED FORMATION GEOLOGIC PR TRUE VERTICA MEASURED DE	PERM OVINCE CODE AL DEPTH (FT)	LCHASE GROUP 360 2955	OXYGEN ARGON HYDROGEN	0.c 0.c
SAMPLED FORMATION GEOLOGIC PR TRUE VERTICA MEASURED DE	PERM OVINCE CODE AL DEPTH (FT) EPTH RESSURE, PSIG	2955	OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	0.6 0.6 0.6
SAMPLED FORMATION GEOLOGIC PR TRUE VERTICA MEASURED DE	PERM OVINCE CODE AL DEPTH (FT)	2955	OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.1 0.0 0.1 0.5

[.] 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

SAMPLE	20673	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	62.1
		ETHANE	5.4
COUNTY		PROPANE	3.5
FIELD		N-BUTANE	1.1
WELL NAME	_	ISOBUTANE	Q.4
API	3513901074	N-PENTANE	0.2
LOCATION	SEC. 20, T4N, R12E	ISOPENTANE	0.2
OWNER	DONALD W. JACKSON.	CYCLOPENTANE	
COMPLETED	521106	HEXANES PLUS	0.1
SAMPLED	010511	NITROGEN	26.1
FORMATION	PERM-CHASE GROUP	OXYGEN	0.0
GEOLOGIC PROVINCE CODE		ARGON	0.1
TRUE VERTICAL DEPTH (FT)	2479	HYDROGEN	0.0
MEAŞURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	0.1
OPEN FLOW, MCFD		HELIUM	0.68
O1 E141 E044, MICI D	2020	HEATING VALUE*	
		SPECIFIC GRAVITY	0.754
SAMPLE	20015	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	78.2
		ETHANE	5,0
COUNTY		PROPANE	1.7
FIELD		N-BUTANE	0.4
WELL NAME		ISOBUTANE	0.2
AP}	3513922835	N-PENTANE	TRACE
LOCATION	SEC. 34, T6N, R17ECM	ISOPENTANE	0.1
OWNER	RICKS EXPLORATION, INC.	CYCLOPENTANE	
OWNER	•	CYCLOPENTANE	
	980207		TRACE
COMPLETED	980207 981201	HEXANES PLUS	TRACE
COMPLETED	980207 981201 PERM-COLINGIL GROVE	HEXANES PLUS	TRACE 13.4
COMPLETEDSAMPLEDFORMATION	980207 981201 PERM-COLINGIL GROVE 360	HEXANES PLUS	13.4 0.5 0.1
COMPLETEDSAMPLEDFORMATIONGEOLOGIC PROVINCE CODETRUE VERTICAL DEPTH (FT)	980207 981201 PERM-COLINGIL GROVE 360 3162	HEXANES PLUS	13.4 0.5 0.1 0.0
COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	980207 981201 PERM-COUNCIL GROVE 360 3162	HEXANES PLUS	13.4 0.5 0.1 0.0
COMPLETEDSAMPLEDFORMATIONGEOLOGIC PROVINCE CODETRUE VERTICAL DEPTH (FT)	980207 981201 PERM-COLINGIL GROVE 360 3162	HEXANES PLUS	13.4 0.5 0.1 0.0 0.0 0.0

^{*} 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

SAMPLE	20752	COMPONENT, MOLE PCT	
STATE	OKI AHOMA	METHANE	94.4
COUNTY	-	ETHANE	2.8
		PROPANE	1.1
FIELD	RANGE SW.	N-BUTANÉ	0.3
WELL NAME		ISOBUTANE	0.1
API	3513921220	N-PENTANE	0_1
LOCATION	SEC. 19, T1N, R18E	ISOPENTANE	0.1
OWNER	XTO ENERGY, INC.	CYCLOPENTANE	
COMPLETED	790723	HEXANES PLUS	0.2
SAMPLED	010731	NITROGEN	0.6
FORMATION	PENN-MORROW	OXYGEN	۵.۵
GEOLOGIC PROVINCE CODE	360_	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	7069	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	0.2
OPEN FLOW, MCFD		HELIUM	
OF ENT LOW, MICED		HEATING VALUE*	1,062
		SPECIFIC GRAVITY	0.596
SAMPLE	20749	COMPONENT. MOLE PCT	
STATE	OKLVHOMV	METHANE	77.8
COUNTY	_	ETHANE	8.1
		PROPANE	6.7
FIELD		N-BUTANE	2.3
WELL NAME		ISOBUTANE	0.7
API	3513935526	N-PENTANE	0.7
LOCATION	SEC, 30, T2N, R19E	ISOPENTANE	0.5
OWNER CHES	SAPEAKE OPERATING, INC.	CYCLOPENTANE	
COMPLETED	560111	HEXANES PLUS	0.9
		NITROGEN	1.7
SAMPLED	010730		
SAMPLEDFORMATION		OXYGEN	0.0
	PENN-MORROW	OXYGEN	
FORMATION	PENN-MORROW 360		.0.0
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	PENN-MORROW 	ARGON	0.0
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	PENN-MORROW 360 6542	ARGON	0.0
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	PENN-MORROW 	ARGONHYDROGENHYDROGEN SULFIDE**	0.0
FORMATION	PENN-MORROW 	ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 0.0 0.0 0.6 0.16

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE 70 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

SAMPLE	20756	COMPONENT, MOLE PCT	
STATE	OKI AHOMA	METHANE	80.7
*****		ETHANE	6.9
COUNTY		PROPANE	5.1
FIELD		N-BUTANE	1_8
WELL NAME		ISOBUTANE	Ω.6
API		N-PENTANE	o.7
LOCATION	SEC. 26, T2N, R18E	ISOPENTANE	0.2
OWNERCHI	ESAPEAKE OPERATING, INC.	CYCLOPENTANE	
COMPLETED	<u>551214</u>	HEXANES PLUS	1.0
SAMPLED	010731	NITROGEN	2.1
FORMATION	PENN-MORROW	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)	6457	HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	o.c
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	0.6
OPEN FLOW, MCFD		HELIUM	0.20
OFEN FLOW, WOFD		HEATING VALUE*	1,231
		SPECIFIC GRAVITY	0.727
SAMPLE	20883	COMPONENT, MOLE PCT	
STATE	OKI AHOMA	METHANE	78.9
	_	ETHANE	
GOON 1	TEVAC	44 / 1 (FW 11	
يهن وختوجتم	TEXAS	PROPANE	
	TEXHOMA N		4.2
WELL NAME	TEXHOMA N SERIGHT NO. 1-36	PROPANE	4.2 1.5
WELL NAME	TEXHOMA N SERIGHT NO. 1-36	PROPANE	4.2 1.5 0.5
WELL NAME	TEXHOMA N. SERIGHT NO. 1-36. 3513921971	PROPANE	4.2 1.5 0.5
WELL NAME	TEXHOMA N SERIGHT NO. 1-36 3513921971 SEC. 36. T1N. R12E	PROPANE N-BUTANE ISOBUTANE N-PENTANE	4.2 1.5 0.5 0.6
WELL NAME API LOCATION OWNER	TEXHOMA N. SERIGHT NO. 1-36. 3513921971. SEC. 36. T1N. R12E. H & L OPERATING CO., LLP.	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	4.2 1.5 0.5 0.6
WELL NAME API LOCATION OWNER COMPLETED	TEXHOMA N. SERIGHT NO. 1-36 3513921971 SEC. 36. T1N. R12E H & L OPERATING CO., LLP 850221	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	4.2 1.5 0.6 0.6 0.3
WELL NAME API LOCATION OWNER COMPLETED SAMPLED	TEXHOMA N SERIGHT NO. 1-36 3513921971 SEC. 36. T1N. R12E H & L OPERATING CO., LLP 850221 011030	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	4.2 1.5 0.5 0.6 0.3 0.7
WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION	TEXHOMA N. SERIGHT NO. 1-36 3513921971 SEC. 36. T1N. R12E H & L OPERATING CO., LLP 850221 011030 PENN-MORROW	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	4.2 1.5 0.5 0.6 0.3 0.7 5.0
WELL NAME	TEXHOMA N SERIGHT NO. 1-36 3513921971 SEC. 36 T1N R12E H & L OPERATING CO., LLP 850221 011030 PENN-MORROW 360	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	4.2 1.5 0.5 0.6 0.3
FIELD	TEXHOMA N SERIGHT NO. 1-36 3513921971 SEC. 36. T1N. R12E H & L OPERATING CO., LLP 850221 011030 PENN-MORROW 360 6743	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	4.2 1.5 0.5 0.6 0.3 0.7 5.0 0.0 0.0
WELL NAME	TEXHOMA N SERIGHT NO. 1-36 3513921971 SEC. 36. T1N. R12E H & L OPERATING CO., LLP 850221 011030 PENN-MORROW 360 6743	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	4.2 1.5 0.5 0.6 0.3 0.7 5.0 0.0 TRACE
WELL NAME	TEXHOMA N SERIGHT NO. 1-36 3513921971 SEC. 36. T1N. R12E H & L OPERATING CO., LLP 850221 011030 PENN-MORROW 360 6743	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	4.2 1.5 0.5 0.6 0.3 0.7 5.0 0.0 TRACE
WELL NAME	TEXHOMA N SERIGHT NO. 1-36 3513921971 SEC. 36. T1N. R12E H & L OPERATING CO., LLP 850221 011030 PENN-MORROW 360 6743	PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	4.2 1.5 0.5 0.6 0.3 0.7 5.0 0.0 TRACE

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 50 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY TOUE 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

SAMPLE	20753	COMPONENT, MOLE PCT	
STATE	CAN VITAMA	METHANE	91.0
		ETHANÉ	2.6
COUNTY		PROPANE	1.1
FIELD		N-BUTANE	0.2
WELL NAMF	MURRAY NO. 1	ISOBUTANE	0.1
API	3513921400	N-PENTANE	TRACE
LOCATION	SEC. 34, T1N, R18E.	ISOPENTANE	TRACE
OWNER	SPESS OIL CO.	CYCLOPENTANE	
COMPLETED	801030	HEXANES PLUS	TRACE
SAMPLED	010731	NITROGEN	4.1
FORMATION	PENN-MORROW	OXYGEN	0.0
GEOLOGIC PROVINCE CODE _	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT)		HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG _	825	CARBON DIOXIDE	0.5
		HELIUM	0.31
OPEN FLOW, MCFD	1300	HEATING VALUE*	1,006
		SPECIFIC GRAVITY	0.603
SAMPLE	50583	COMPONENT, MOLE PCT	
STATE		METHANE	67.3
COUNTY		ETHANE	7.7
		PROPANE	4.9
FIELD	•	N-BUTANE	1.5
WELL NAME	_	ISOBUTANE	0.5
API	3513923074	N-PENTANE	0.5
LOCATION	SFC 2, T2N, R15ECM.	ISOPENTANE	0.3
OWNER	REPUBLIC ENERGY, INC.	CYCLOPENTANE	
COMPLETED	000114	HEXANES PLUS	D.8
SAMPLED	000117	NITROGEN	16.2
FORMATION	PENN-TORONTO	OXYGEN	0.0
GEOLOGIC PROVINCE CODE _	360	ARGON	
TRUE VERTICAL DEPTH (FT)		HYDROGEN	0.0
' '		HYDROGEN SULFIDE**	
MEASURED DEPTH		CARBON DIÓXIDE	0.1
MEASURED DEPTH			
WELLHEAD PRESSURE, PSIG _		FELIUM	0.26
MEASURED DEPTH WELLHEAD PRESSURE, PSIG _ OPEN FLOW, MCFD			

^{*} CALCULATED GROSS BTU PER CU FT, DRY, A* 50 DECREES FAHRENHEIT AND 30 INCHES DE 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

SAMPLE	50584	COMPONENT, MOLE PCT	
STATE	OKI AHOMA	METHANE	69.4
COUNTY	***************************************	ETHANE	7.4
FIELD	TEXHOMA N	PROPANE	4.4
		N-BUTANE	1.4
WELL NAME	· · · · · · · · · · · · · · · · · · ·	ISOBUTANE	0.4
API	_	N-PENTANE	0.4
LOCATION	SEC 25, T2N, R12ECM	ISOPENTANE	0.3
OWNER	EOG RESOURCES, INC.	CYCLOPENTANE	
COMPLETED	991213	HEXANES PLUS	0.5
SAMPLED	991229	NITROGEN	15.5
FORMATION	PENN-TORONTO	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	360	ARGON	
TRUE VERTIGAL DEPTH (FT)	4414	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	0.1
OPEN FLOW, MCFD		HELIUM	0.33
OF ENT LOW, MOI D		HEATING VALUE*	1.052
		SPECIFIC GRAVITY	0.75
SAMPLE	20027	COMPONENT, MOLE PCT	
STATE	OPEGON	METHANE	42.8
		ETHANE	0.0
COUNTY		PROPANE	TRACE
FIELD		N-BUTANE	. 0.0
WELL NAME <u>LONGVIEW FIBRI</u>	,	ISOBUTANE	0.0
API	3600900338	N-PENTANE	0.0
LOCATION	SEC 22, T7N, R5W	ISOPENTANE	ο.
OWNER	FNFRFIN RESOURCES	CYCLOPENTANE	
COMPLETED	990210	HEXANES PLUS	0.0
CAMPLED	990422	NITROGEN	57.0
SAMPLED	3.10-22		
	· ·	OXYGEN	0,2
FORMATION	EOCE-CLARK, WILSON	OXYGEN	
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT)	FOCE-CLARK, WILSON 710		TRACE
FORMATION	FOCE-CLARK, WILSON, 710, 3011.	ARGON	TRACE
FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	FOCE-CLARK WILSON 710 .3011	ARGON	TRACE
FORMATION	FOCE-CLARK, WILSON. 710	ARGON HYDROGEN HYDROGEN SULFIDE**	TRACE
FORMATION	FOCE-CLARK, WILSON. 710	ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	1RACE 0.0 0.0 1RACE 0.01

^{*} CALCULATED GROSS BITU PER CUIFT, DRY, AT 60 DEGREES FAHRENHEIT AND 32 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

STATE	SAMPLE	20702	COMPONENT, MOLE PCT	
COUNTY	STATE	PENNSYI VANIA	METHANE	94.0
PROPANE C			ETHANE	3.0
WELL NAME		· ———	PROPANE	0.5
API			N-BUTANE	0.1
DOCATION SEC B.BRUSH VAL.EY 7.50UAD, CHRY HILL TWP	<u>'</u>	,	ISOBUTANE	1
OWNER SK OPERATING, INC. CYCLOPENTANE COMPLETED 990331 HEXANES PLUS TRAC SAMPLED 010700 NITROCEN 2 FORMATION DEVO-WRRN.SPC_BLTN.BRED. OXYGEN 2 GEOLOGIC PROVINCE CODE 160 ARGON 0 GEOLOGIC PROVINCE CODE 160 ARGON 0 TRUE VERT.CAL DEPTH (FT) 3085 HYDROGEN 0 MEASURED DEPTH CARBON D OXIDE TRAC WELLHEAD PRESSURE, PSIC 990 HELIUM 0 OPEN FLOW, MCFD 1342 HELIUM 0 SAMPLE 20028 COMPONENT, MOLE PCT 10 STATE PENNSYLVANIA METHANE 9 STATE			N-PENTANE	TRACE
COMPLETED \$90331 HEXANES PLUS TRAC SAMPLED 010700 NITROCEN 2 FORMATION DEVO-WRRN.SPC_BLTN.BRED. OXYGEN 0 GEOLOGIC PROVINCE CODE 160 ARGON 0 GEOLOGIC PROVINCE CODE 160 ARGON 0 TRUE VERT.CAL DEPTH (FT) 3085 HYDROGEN SULFIDE*** 0 MEASURED DEPTH CARBON D OXIDE TRAC WELLHEAD PRESSURE, PSIC 990 HELIUM 0 OPEN FLOW, MCFD 1342 HEATING VALUE* 1.0 STATE PENNSYLVANIA METHANE 92	LOCATION <u>SEC B,BRUSH V</u>	ALLEY 7.50UAD,CHRY HILL TWP	ISOPENTANE	TRACE
SAMPLED	OWNER	SK OPERATING, INC.	CYCLOPENTANE	
FORMATION	COMPLETED	990331	HEXANES PLUS	TRACE
GEOLOGIC PROVINCE CODE	SAMPLED	010700	NITROGEN	2.0
TRUE VERT.CAL DEPTH (FT)	FORMATION	DEVO-WRRN,SPC., BLTN.BRFD.	OXYGEN	0.0
MEASURED DEPTH	GEOLOGIC PROVINCE COS	DE	ARGON	0.0
MEASURED DEPTH	TRUE VERTICAL DEPTH (F	7)3085.	HYDROGEN	0.2
WELLHEAD PRESSURE, PSIC 990 CARBON D OXIDE TRAC OPEN FLOW, MCFD .1342. HELIUM 0. SAMPLE 20028 COMPONENT, MOLE PCT .10 STATE PENNSYLVANIA METHANE .92 COUNTY LAWRENCE PROPANE .1 FIELD MERCER N-BUTANE .1 WELL NAME BYLER NO. 24 ISOBUTANE .7 LOCATION SEC B.NEW CASTLE NORTH 7.5 QUAD ISOPENTANE .1 LOCATION SEC B.NEW CASTLE NORTH 7.5 QUAD ISOPENTANE .1 COMPLETED .980308 HEXANES PLUS .1 COMPLETED .990419 NITROGEN .3 FORMATION .SILL MEDINA, WEIRLPOOL OXYGEN .1 GEO_OGIC PROVINCE CODE .160 ARGON TRAC TRAC MEASURED DEPTH WELL HEAD PRESSURE, 2SIG			HYDROGEN SULFIDE**	0.0
Departed			CARBON D OXIDE	TRACE
SAMPLE 20028 COMPONENT, MOLE PCT			HELIUM	0_08
SAMPLE 20028 COMPONENT, MOLE PCT STATE PENNSYLVANIA METHANE 92 COUNTY LAWRENCE PROPANE FIELD MERGER N-BUTANE SOBUTANE STATE SOBUTANE SOPENTANE SOBUTANE SO	OI ENT CONT, MOI D		HEATING VALUE*	1.026
STATE			SPECIFIC GRAVITY	0.585
### PINNSYLVANIA COUNTY	SAMPLE	20028	COMPONENT, MOLE PCT	
COUNTY	STATE	PENNSYL VANIA	METHANE	92.7
MERCER MERCER MERCER MEDITANE MEDI			ETHANE	2.9
N-BUTANE			PROPANE	0.3
API			N-BUTANE	0.1
N-PENTANE			ISOBUTANE	TRACE
OWNER ATLAS RESOURCES, INC. CYCLOPENTANE COMPLETED 980308 HEXANES PLUS 0 SAMPLED 990419 NITROGEN 3 FORMATION SIL, MEDINA, WHIRLPOOL OXYGEN 0 GEOLOGIC PROVINCE CODE 160 ARGON TRAC TRUE VERTICAL DEPTH (FT) 5988 HYDROGEN 0 MEASURED DEPTH CARBON DIOXIDE TRAC WELLHFAD PRESSURE, PSIG 800 HELIUM 0 DEPTH IOW MCFD 610 HELIUM 0			N-PENTANE	n
COMPLETED 980308 HEXANES PLUS C SAMPLED 990419 NITROGEN 3 FORMATION SIL, MEDINA, WHIRLPOOL OXYGEN C GEOLOGIC PROVINCE CODE 160 ARGON TRAC TRUE VERTICAL DEPTH (FT) 5988 HYDROGEN C MEASURED DEPTH CARBON DIOXIDE TRAC WELLHEAD PRESSURE, PSIG 800 HELIUM 0 DEPTH ELIUM 0			ISOPENTANE	Ο.
SAMPLED	OWNER	ATLAS RESOURCES, INC.	CYCLOPENTANE	-
CARBON DIOXIDE FORMATION SILL MEDINA, WHIRLPOOL OXYGEN CARBON TRACE TRAC	COMPLETED	980308	HEXANES PLUS	0.0
GEOLOGIC PROVINCE CODE 160 ARGON TRAC TRUE VERTICAL DEPTH (FT) 5988 HYDROGEN	SAMPLED		NITROGEN	3.5
### ##################################	FORMATION	SILL MEDINA, WEIRLPOOL	OXYGEN	D.2
HYDROGEN SULFIDE** CARBON DIOXIDE TRAC	GEOLOGIC PROVINCE COL	DF160_		
WELLHFAD PRESSURE, PSIG 800 FELIUM 0. OPEN FLOW, MCFD 810 FELIUM 0.	TRJE VERTIÇAL DEPTH (F	T)5988	HYDROGEN	<u></u>
WELLHEAD PRESSURE, PSIG 800 CARBON DIOXIDE TRAC OPEN FLOW MCFD 810 HELIUM 0.			HYDROGEN SULFIDE**	
OPEN FLOW MCFD 810			CARBON DIOXIDE	TRACE
HEATING VALUE'	·		HELIUM	30.0
	OF EN FEWAY, MIGED	810	HEATING VALUE'	1,002

 $^{^{\}star}$ CALCULATED GROSS STUPER CUIFT, DRY, AT 80 DEGREES FAHREN-IDIT AND 30 INCHES OF MERCURY $^{\star\prime}$ DUE TO THE ABSORPT ON OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RE. ABLE

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

SAMPLE	20029	COMPONENT, MOLE PCT	
STATE	TENNESSEE	METHANE	79.4
	CAMPBELL	ETHANE	8.3
	SELLICO MOUNTAIN	PROPANE	4.2
		N-BUTANE	. 1.3
	ROBERT SHARP NO. 1	ISOBUTANE	0.4
	4101320178	N-PENTANE	0.2
	4-A-65E	ISOPENTANE	0.2
OWNER	MILLER PETROLEUM INC.	CYCLOPENTANE	
COMPLETED	981019.	HEXANES PLUS	0.3
SAMPLED	990511	NITROGEN	
FORMATION	MISS-MONTEAGLE	OXYGEN	
GEOLOGIC PROVINCE CODE	160.	ARGON	
TRUE VERTICAL DEPTH (FT)	1824	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	300	CARBON DIOXIDE	
OPEN FLOW, MCFD	300	HELIUM	
		HEATING VALUE*	
		SPECIFIC GRAVITY	U.U.SU
SAMPLE	50577	COMPONENT, MOLE PCT	
STATE	TEXAS	METHANE	54.4
	CLAY	ETHANE	1.8
-	BARBARA M	PROPANE	1.1
	MCCORMICK ED GRAF NO. 1	N-BUTANE	0.6
		ISOBUTANE	0.3
	4207733802	N-PENTANE	0.1
	BLK 64, PCSL SUR, A-374	ISOPENTANE	
	UCERS OPERATING COINC	CYCLOPENTANE	
	970731	HEXANES PLUS	
SAMPLED	981030	NITROGEN	
FORMATION	PENN-CISCO.	OXYGEN	
GEOLOGIC PROVINCE CODE	420	ARGON	
TRUE VERTICAL DEPTH (FT)	<u>1519</u>	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	400	CARBON DIOXIDE	
OPEN FLOW, MCFD	412	HELIUM	
		HEATING VALUE*	660
		SPECIFIC GRAVITY	_ ++

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF H25 DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

	COMPONENT, MOLE PCT	
STATETEXAS.	METHANE	95.0
COUNTY CROCKETT	ETHANE	1.5
FIELD OZONA SW.	PROPANE	0.3
	N-BUTANE	0.1
WELL NAME	ISOBUTANE	0.1
API	N-PENTANE	TRACE
LOCATION SEC. 14, BLK M, GC&SF SUR, A-4607.	ISOPENTANE	TRACE
OWNER HARRISON INTERESTS LIMITED	CYCLOPENTANE	
COMPLETED 980212	HEXANES PLUS	TRACE
SAMPLED980928	NITROGEN	0.9
FORMATION DEVO-DEVONIAN PENN-STRAWN	OXYGEN	0.0
GEOLOGIC PROVINCE CODE430_	ARGON	0.1
TRUE VERTICAL DEPTH (FT)	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	2.0
OPEN FLOW, MCFD4300_	HELIUM	0.04
SPERT LOW, MOI D	HEATING VALUE*	1,004
SAMPLE 20919	COMPONENT, MOLE PCT	
	COMPONENT, MOLE PCT METHANE	96.5
STATE TEXAS	·	
STATE	METHANE	2.1
STATE TEXAS_ COUNTY CULBERSON FIELD FORD_	METHANE	0.5
STATE TEXAS_ COUNTY CULBERSON FIELD FORD_ WELL NAME TEXAS PACIFIC LAND TRUST 23-1	METHANE ETHANE PROPANE	0.3 0.1
STATE TEXAS COUNTY CULBERSON FIELD FORD WELL NAME TEXAS PACIFIC LAND TRUST 23-1 API 4210932199	METHANE ETHANE PROPANE N-BUTANE	2.1 0.3 0.1
STATE	METHANE ETHANE PROPANE N-BUTANE	0.3 0.1 0.1 TRACE
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.3 0.3 0.1 TRACE
STATE TEXAS COUNTY CULBERSON FIELD FORD WELL NAME TEXAS PACIFIC LAND TRUST 23-1	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE GYCLOPENTANE HEXANES PLUS	2.1 0.3 0.1 TRACE TRACE
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	2.1 0.3 0.1 TRACE TRACE TRACE
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	2.1 0.3 0.1 0.1 TRACE TRACE TRACE
STATE TEXAS COUNTY CULBERSON FIELD FORD WELL NAME TEXAS PACIFIC LAND TRUST 23-1 API 4210932199 LOCATION SEC. 23. BLK 58. T1. T&PRR SUR, A-2650. OWNER CONOCO, INC. COMPLETED 004012 SAMPLED 011101. FORMATION PERM-WOLFCAMP M.	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	2.1 0.3 0.1 TRACE TRACE TRACE
STATE	METHANE	2.1 0.3 0.1 TRACE TRACE TRACE 0.8 0.0
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE ISOPENTANE OYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	2.1 0.3 0.1 TRACE TRACE TRACE 0.8 0.0
STATE	METHANE	2.1 0.3 0.1 TRACE TRACE TRACE 0.8 0.0 0.0
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE ISOPENTANE OYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	2.1 0.3 0.1 TRACE TRACE TRACE 0.6 0.0 0.0

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 50 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

SAMPLE 20789	COMPONENT, MOLE PCT	
STATE TEXAS	METHANE	95.4
COUNTY HEMPHILL	ETHANE	0.9
"	PROPANE	0.1
FIELD MENDOTA SE	N-BUTANE	TRACE
WELL NAME ROSS AA No. 9-71	ISOBUTANE	TRACE
API4221132431_	N-PENTANE	0.0
LOCATION SEC. 71. BLK A-2. H&GN SUR. A-122	ISOPENTANE	0.0
OWNERCHEVRON U.S.A. INC.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0.0
SAMPLED010814_	NITROGEN	1.4
FORMATION PENN-MORROW U	OXYGEN	ი.ი
GEOLOGIC PROVINCE CODE 360	ARGON	0.1
TRUE VERTICAL DEPTH (FT)	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE"	0.0
WELLHEAD PRESSURE, PSIG4225.	CARBON DIOXIDE	2.0
OPEN FLOW, MCFD6734	HELIUM	
O) E14 / EQVY, 19(0) D	HEATING VALUE*	985
	SPECIFIC GRAVITY	0.58
SAMPLE 20014	COMPONENT, MOLE PCT	
STATE TEXAS.	METHANE	45.5
	ETHANE	o.o
COUNTY LOYING	PROPANE	0.0
FIELD VERMEJO	N-BUTANE	0.0
WELL NAME GRAYLING GAS UNIT NO. 1	ISOBUTANE	0.0
API 4230130060	N-PENTANE	0.0
LOCATION SEC. 68. BLK 1. W&NW SUR, A-920.	ISOPENTANE	0.0
OWNERFOREST OIL CORP.	CYCLOPENTANE	
COMPLETED 980204	HEXANES PLUS	0.0
SAMPLED981013	NITROGEN	1.1
FORMATION ORDO-ELLENBURGER	OXYGEN	
	ARGON	
GEOLOGIC PROVINCE CODE430_	LIVODOCEN	o_a
	HYDROGEN	
TRUE VERTICAL DEPTH (FT) 21904	HYDROGEN SULFIDE**	0.0
TRUE VERTICAL DEPTH (FT) 21904 MEASURED DEPTH		
TRUE VERTICAL DEPTH (FT) 21004 MEASURED DEPTH	HYDROGEN SULFIDE**	53.2
GEOLOGIC PROVINCE CODE 430 TRUE VERTICAL DEPTH (FT) 21004 MEASURED DEPTH 3140 WELLHEAD PRESSURE, PSIG 50491	HYDROGEN SULFIDE** CARBON DIOXIDE	53.2 0.03

^{*}CALCULATED GROSS 8TU 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

SAMPLE 20772	COMPONENT, MOLE PCT	
STATETEXAS.	METHANE	71.6
COUNTYPOTTER	ETHANE	5.3
FIELD TECOVAS CREEK	PROPANE	3.0
	N-BUTANE	1.0
WELL NAME MARSH RANCH 13-14, SEPARATOR, 2 INCH OF	ISOBUTANE	0.5
API	N-PENTANE	0.3
LOCATION SEC. 14. BLK 21W, EL&RR SUR	ISOPENTANE	0.3
OWNER SUNLIGHT EXPLORATION INC.	CYCLOPENTANE	
COMPLETED 010523	HEXANES PLUS	0.6
SAMPLED010808	NITROGEN	
FORMATIONPERM-BROWN DOLOMITE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE 440	ARGON	
TRUE VERTICAL DEPTH (FT)	HYDROGEN	
MEASURED DEPTH4991	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	
OPEN FLOW, MCFD	HELIUM	
	HEATING VALUE*	
	SPECIFIC GRAVITY	0.729
SAMPLE 20737	COMPONENT, MOLE PCT	
STATETEXAS	METHANE	71.5
	ETHANE	4.9
	PROPANE	2.6
FIELD TECOVAS CREEK		
	N-BUTANE	1.0
	N-BUTANE	
API 4237531630		0.4
API 4237531630	ISOBUTANE	0.4 0.3
API <u>4237531630</u> LOCATION <u>SEC. 14. BLK 21W. FL&RR SUR</u>	ISOBUTANE	0.4 0.3 0.3
API 4237531630 LOCATION SEC. 14. BLK 21W, EL&RR SUR OWNER SUNLIGHT EXPLORATION, INC.	ISOBUTANE N-PENTANE ISOPENTANE	0.4 0.3 0.3
WELL NAME MARSH RANCH NO. 13-14. SEPARATOR GAS API 4237531630 LOCATION SEC. 14. BLK 21W. EL&RR SUR OWNER SUNLIGHT EXPLORATION INC. COMPLETED 010523 SAMPLED 010720	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.4 0.3 0.3 -
API	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.4 0.3 0.3 - 0.5
API	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.4 0.3 0.3 - 0.5 15.7
API	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	0.4 0.3 0.3 - 0.5 15.7 0.0
API	ISOBUTANE	0.4 0.3 0.3 0.5 15.7 0.0 TRACE
API	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.4 0.3 0.3 0.5 15.7 0.0 TRACE
API	ISOBUTANE	0.4 0.3 0.3 0.5 15.7 0.0 TRAGE
API	ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.4 0.3 0.3 0.5 15.7 0.0 0.1 TRACE

^{**}CALCULATED GROSS BTU PER CUIFT, DRY, AT 50 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

SAMPLE 20773	COMPONENT, MOLE PCT	
STATETEXAS	METHANE	71.9
COUNTY POTTER	ETHANE	5.0
	PROPANE	2.7
FIELDTECOVAS CREEK	N-BUTANE	1.0
WELL NAMEMARSH RANCH 13-14, CASING ANULUS	ISOBUTANE	0.4
API	N-PENTANE	0.3
LOCATION SEC. 14. BLK 21W. EL&RR SUR	ISOPENTANE	0.3
OWNER SUNLIGHT EXPLORATION, INC.	CYCLOPENTANE	
COMPLETED010523	HEXANES PLUS	0.2
SAMPLED010808_	NITROGEN	15.3
FORMATIONPERM-BROWN DOLOMITE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE440	ARGON	0.1
TRUE VERTICAL DEPTH (FT)	HYDROGEN	TRACE
MEASURED DEPTH 4991	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	1.7
OPEN FLOW, MCFD	HELIUM	1.03
OPEN FLOW, MICFO	HEATING VALUE*	969
	SPECIFIC GRAVITY	0.72
SAMPLE 20672	COMPONENT, MOLE PCT	
STATE TEXAS.	METHANE	72.0
COUNTY POTTER	ETHANE	4.7
	PROPANE	2.4
FIELD TECOVAS CREEK	N-BUTANE	
WELL NAME MARSH RANCH NO. 13-14	ISOBUTANE	0.4
API 4237531630	N-PENTANE	0.2
LOCATION SEC. 14, BLK 21W, FL&RR SUR	ISOPENTANE	0.2
OWNERSUNLIGHT EXPLORATION, INC.	CYCLOPENTANE	
	HEVANES BLUS	0.4
COMPLETED	HEXANES PLUS	
	NITROGEN	15.7
SAMPLED 010424		
SAMPLED 010424 FORMATION PERM-BROWN DOLOMITE	NITROGEN	0.0
SAMPLED 010424 FORMATION PERM-BROWN DOLOMITE GEOLOGIC PROVINCE CODE 440	NITROGEN	0.0 TRACE
D10424	NITROGENOXYGENARGON	0.0 TRACE TRACE
### SAMPLED	NITROGEN OXYGEN ARGON HYDROGEN	0.0 TRACE TRACE
### SAMPLED	NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE**	TRACE TRACE 0.0
COMPLETED 001025 SAMPLED 010424 FORMATION PERM-BROWN DOLOMITE GEOLOGIC PROVINCE CODE 440 TRUE VERTICAL DEPTH (FT) 3602 MEASURED DEPTH WELLHEAD PRESSURE, PSIG OPEN FLOW, MCFD 8	NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 TRACE TRACE 0.0 2.0

^{*} 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

SAMPLE 20790	COMPONENT, MOLE PCT	
STATETEXAS	METHANE	73.1
COUNTY POTTER	ETHANE	4.8
	PROPANE	2.4
FIELD TECOVAS CREEK	N-BUTANE	0.8
WELL NAMEMARSH RANCH 13-14. GAS SEPARATOR	ISOBUTANE	0.4
API 4237531630	N-PENTANE	0.2
LOCATION SEC. 14 BLK 21W FL&RR SUR	ISOPENTANE	0.2
OWNERSUNLIGHT EXPLORATION, INC.	CYCLOPENTANE	
COMPLETED 010523	HEXANES PLUS	0.2
SAMPLED010824_	NITROGEN	15.7
FORMATIONPERM-BROWN DOLOMITE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE 440	ARGON	0.1
TRUE VERTICAL DEPTH (FT)	HYDROGEN	TRACE
MEASURED DEPTH4991	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	1.1
OPEN FLOW, MCFD	HELIUM	1.05
OPEN FLOW, MOFD	HEATING VALUE*	949
	SPECIFIC GRAVITY	0.702
SAMPLE 20610	COMPONENT, MOLE PCT	
CTATE TEVAS	METHANE	64.3
STATE TEXAS	ETHANE	3.6
COUNTY POTTER	PROPANE	1.4
FIELD BIVINS RANCH	N-BUTANE	0.4
WELL NAMEBIVINS RANCH 1-212	ISOBUTANE	02
API	N-PENTANE	0.1
LOCATION SEC. 212 BLK 2 ABAM SUR	ISOPENTANE	0.1
OWNER SAND RIVER O & E 11C	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	0.1
SAMPLED 010405	NITROGEN	24.4
FORMATION PERM-BROWN DOLOMITE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE440	ARGON	0.1
TRUE VERTICAL DEPTH (FT) 3467	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG	CARBON DIOXIDE	3.5
FELLI ILDO FILOGORE, FOR	HELIUM	1.49
OPEN FLOW, MCFD	HEATING VALUE*	783

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 50 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

SAMPLE	20841	COMPONENT, MOLE PCT	
STATE	TEYAR	METHANE	64.2
		ETHANE	3.6
COUNTY		PROPANE	1.4
FIELD		N-BUTANE	0.4
WELL NAME		ISOBUTANE	0.2
API		N-PENTANE	0.1
LOGATION		ISOPENTANE	9.1
OWNER	SAND RIVER O & E. LLC	CYCLOPENTANE	
COMPLETED	900615	HEXANES PLUS	1
SAMPLED	010913	NITROGEN	24.5
FORMATION	PERM-BROWN COLOMITE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	440	ARGON	0.2
TRUE VERTICAL DEPTH (FT) _	3467	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	3.7
OPEN FLOW, MCFD		HELIUM	
OPEN FLOW, MORD	-	HEATING VALUE*	783
		SPECIFIC GRAVITY	0.733
SAMPLE	20842	COMPONENT, MOLE PCT	
STATE	TEVAC	METHANE	62.5
		ETHANE	3.9
COUNTY		PROPANE	. 1.8
FIELD		N-BUTANE	0.5
WELL NAME	BIVINS RANCH 1A-212	ISOBUTANE	0.3
API	4237531628	N-PENTANE	0.1
LOCATION	SEC, 212, BLK 2, AB&M SUR	ISOPENTANE	0_1
OWNER	SAND RIVER O & F. LLC	CYCLOPENTANE	
COMPLETED	010103	HEXANES PLUS	0.1
SAMPLED	010913	NITROGEN	28.2
FORMATION	PERM-BROWN DOLOMITE	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	440.	ARGON	0.2
TRUE VERTICAL DEPTH (FT)		HYDROGEN	TRACE
MEASURED DEPTH		HYDROGEN SULFIDE"	0,0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	0.5
		HELIUM	1.83
	43	NATIONAL AND A SECOND	700
OF EN FLOVE, WOF D		HEATING VALUE*	1.80

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSCRPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE	20609	COMPONENT, MOLE PCT	
STATE	TEXAS	METHANE	62.5
	POTTER	ETHANE	3.5
	BIVINS RANCH	PROPANE	1.8
		N-BUTANE	0.5
	BIVINS RANCH 1A-212	SOBUTANE	0.3
	4237531628	N-PENTANE	0.1
	SEC. 212 BLK 2 AB&M SUR	SOPENTANE	0.1
	SAND RIVER O & E, LLC	CYCLOPENTANE	
COMPLETED	010103	HEXANES PLUS	
SAMPLED	010404	NITROGEN	
FORMATION	PERM-BROWN DOLOMITE	OXYGEN	
GEOLOGIC PROVINCE CODE	440	ARGON	
TRUE VERTICAL DEPTH (FT) _		HYDROGEN	
MEASURED DEPTH	5170	HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG	583	CARBON DIOXIDE	
OPEN FLOW, MCFD	43.	HELIUM	
		HEATING VALUE* SPECIFIC GRAVITY	
SAMPLE	20523	COMPONENT, MOLE PCT	
		COMPONENT, MOLE PCT METHANE	62.(
STATE	TEXAS	• • • • •	
STATE	TEXAS POTTER	METHANE	3.
STATE	TEXAS. POTTER BIVINS RANCH	METHANE	3.5 1.5
STATE	POTTER BIVINS RANCH BIVINS RANCH 1A-212	METHANEPROPANE	3.1 1.3 0.5
STATE	POTTER BIVINS RANCH BIVINS RANCH 1A-212 4237531628	METHANEPROPANE	3.1 1.3 0.5
STATE COUNTY FIELD WELL NAME API LOCATION	POTTER BIVINS RANCH BIVINS RANCH 1A-212 4237531628 SEC 212 BLK 2 AB&M SUR	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	3.1 0.1 0.1 0.1
STATE COUNTY FIELD WELL NAME API LOCATION OWNER	POTTER BIVINS RANCH BIVINS RANCH 1A-212 4237531628 SEC, 212 BLK 2 AB&M SUR SAND RIVER O & E. LLC	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE	3.1 0.1 0.1 0.1 0.1
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED	TEXAS POTTER BIVINS RANCH BIVINS RANCH 1A-212 4237531628 SEC 212 BLK 2 AB&M SUR SAND RIVER O & E. LLC 001128	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	3. 1. 0. 0. 0.
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED	TEXAS POTTER BIVINS RANCH BIVINS RANCH 1A-212 4237531628 SEC 212 BLK 2 AB&M SUR SAND RIVER 0 & E. LLC 001128 001219	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	3. 1. 0. 0. 0. 0.
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED	TEXAS POTTER BIVINS RANCH BIVINS RANCH 1A-212 4237531628 SEC 212 BLK 2 AB&M SUR SAND RIVER O & E. LLC 001128	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	3. 1. 0. 0. 0. 0. 0. 28.
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION	TEXAS POTTER BIVINS RANCH BIVINS RANCH 1A-212 4237531628 SEC 212 BLK 2 AB&M SUR SAND RIVER 0 & E. LLC 001128 001219	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	3. 0. 0. 0. 0. 0. 0. 28. 0.
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	TEXAS POTTER BIVINS RANCH BIVINS RANCH 1A-212 4237531628 SEC. 212. BLK 2. AB&M SUR SAND RIVER O & E. LLC 001128 001219 PERM-BROWN DOLOMITE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE	TEXAS POTTER BIVINS RANCH BIVINS RANCH 1A-212 4237531628 SEC 212 BLK 2 AB&M SUR SAND RIVER 0 & E. LLC 001128 001219 PERM-BROWN DOLOMITE 440 3585	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	0.1 0.1 0.1 0.1 0.1 0.1 28.1 0.1 TRACE
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH	TEXAS POTTER BIVINS RANCH BIVINS RANCH 1A-212 4237531628 SEC 212 BLK 2 AB&M SUR SAND RIVER 0 & E. LLC 001128 001219 PERM-BROWN DOLOMITE 440 3585	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	3.5 0.5 0.5 0.7 0.7 28.7 0.7 TRAGE
STATE COUNTY FIELD WELL NAME API LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE TRUE VERTICAL DEPTH (FT) MEASURED DEPTH WELLHEAD PRESSURE, PSIG	TEXAS POTTER BIVINS RANCH BIVINS RANCH 1A-212 4237531628 SEC 212 BLK 2 AB&M SUR SAND RIVER O & E. L.C. 001128 001219 PERM-BROWN DOLOMITE 440 3585	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	3.5 0.5 0.5 0.7 0.7 28.7 0.0 1BACE 0.5

^{*} CALCULATED GROSS BTU PER CUIFT, DRY, AT 80 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF H28 DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

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

SAMPLE 20026	COMPONENT, MOLE PCT	
STATETEXAS	METHANE	97.8
COUNTY REEVES	ETHANE	0.6
·	PROPANE	0.1
FIELD MI VIDA	N-BUTANE	TRACE
WELL NAME HUMPHREY UNIT NO. 2	ISOBUTANE	0.0
API	N-PENTANE	TRACE
LOCATION SEC. 4, BLK 4, H&GN SUR, A-5273	ISOPENTANE	0.0
OWNER TITAN RESOURCES I, INC.	CYCLOPENTANE	
COMPLETED	HEXANES PLUS	. 0.0
SAMPLED	NITROGEN	0.2
FORMATION PENN-ATOKA	OXYGEN	0.0
GEOLOGIC PROVINCE CODE430_	ARGON	0.0
TRUE VERTICAL DEPTH (FT)14492	HYDROGEN	0.0
MEASURED DEPTH	HYDROGEN SULFIDE"	0.0
WELLHEAD PRESSURE, PSIG 9300	CARBON DIOXIDE	1.3
·	HELIUM	TRACE
OPEN FLOW, MCFD 6969	HEATING VALUE*	1,004
	SPECIFIC GRAVITY	0.572
SAMPLE 20002	COMPONENT, MOLE PCT	
	COMPONENT, MOLE PCT METHANE	90.3
STATETEXAS	·	
STATE	METHANE	0.9
STATE TEXAS COUNTY REEVES FIELDNINE MILE DRAW	METHANE	0.1
STATE TEXAS COUNTY REEVES FIELD NINE MILE DRAW WELL NAME NINE MILE DRAW 135507 NO. 1	METHANE ETHANEPROPANE	0.5 0.1 0.0
STATE TEXAS COUNTY REEVES FIELD NINE MILE DRAW WELL NAME NINE MILE DRAW 135507 NO. 1	METHANE ETHANE PROPANE N-BUTANE	0.1 0.1 0.0 TRACE
STATE TEXAS COUNTY REEVES FIELD NINE MILE DRAW WELL NAME NINE MILE DRAW 135507 NO. 1 API 4238932104	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE	0.1 0.1 0.0 TRACE
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE	0.0 0.1 0.0 TRACE 0.0
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE	0.5 0.1 0.0 TRACE 0.0 0.0
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE	0.0 0.1 0.0 TRACE 0.0 0.0
### TEXAS #### COUNTY REEVES FIELD NINE MILE DRAW	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.0 0.1 0.1 TRACE 0.0 0.0
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.5 0.1 0.0 TRACE 0.0 0.0 0.0 0.0
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN	2.0. 0.1 0.1 TRACE 0.0 0.0 TRACE 0.0 0.0 0.0 0.0 TRACE
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE N-PENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON	0.5 0.1 0.1 TRACE 0.0 0.0 0.0 TRACE
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.0 0.1 TRACE 0.1 0.0 0.0 TRACE TRACE
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE**	0.0 0.1 TRACE 0.0 0.0 0.0 TRACE TRACE
STATE	METHANE ETHANE PROPANE N-BUTANE ISOBUTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 TRACE 0.0 0.0 0.0 0.0 TRACE TRACE

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 50 DEGREES FAHRFNHFIT 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

SAMPLE 20009	COMPONENT, MOLE PCT	
STATE TEX	AS METHANE	72.
COUNTYSTEPHEI	FTH AN F	7.6
	PROPANE	4.1
	N-BUTANE	1.
WELL NAME GREEN NO	ISOBUTANE	0.4
API 42429358	N-MENTANE	0.3
LOCATION P. SAMPSON SUR A-1	130FENTANE	0.3
OWNERTEXAS UNITED GEOPRODUCTION, IN	NC. CYCLOPENTANE	
COMPLETED9709	HEXANES PLUS	0.:
SAMPLED	525 NITROGEN	12.4
FORMATION PENN-CADI	DO OXYGEN	0.0
GEOLOGIC PROVINCE CODE4	125 ARGON	0.3
TRUE VERTICAL DEPTH (FT)34	HYDROGEN	TRACE
MEASURED DEPTH	HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG12	CARBON DIOXIDE	0.3
OPEN FLOW, MCFD	HELIUM	
	HEATING VALUE*	1,08
	SPECIFIC GRAVITY	0.736
SAMPLE 20024	COMPONENT, MOLE PCT	
STATETEX	METHANE	81.4
COUNTY	ETHANE	B.:
	PROPANE	4.
FIELDK	N-BUTANÉ	1.1
WELL NAMEMITCHELL STATE 10 NO	ISOBUTANE	0.0
API 42443307	781 N-PENTANÉ	0.3
LOCATIONSEC_10_BLK 1.CCSD&RGNG SUR A-16	S77. ISOPENTANE	
·	IDOI ENTAGE	0.4
OWNERENRON OIL & GAS C	CYCLOPENTANE	<u></u>
OWNER ENRON OIL & GAS C	CO. CYCLOPENTANE	0.4 - - 0.1
OWNER ENRON OIL & GAS C COMPLETED 9807 SAMPLED 9902	CYCLOPENTANE	0.4 - 0.1 0.1
OWNER ENRON OIL & GAS C COMPLETED 9807 SAMPLED 9902 FORMATION PERM-WOLFCAN	CYCLOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN DOXYGEN	0.4
OWNER ENRON OIL & GAS C COMPLETED 9807 SAMPLED 9902 FORMATION PERM-WOLFCAN GEOLOGIC PROVINCE CODE 4	CYCLOPENTANE	0.6 0.8 0.2 0.2
OWNER ENRON OIL & GAS C COMPLETED 9807 SAMPLED 9902 FORMATION PERM-WOLFCAN GEOLOGIC PROVINCE CODE 4 TRUE VERTICAL DEPTH (FT) 114	CYCLOPENTANE T12. HEXANES PLUS 206. NITROGEN MP. OXYGEN 130. ARGON HYDROGEN HYDROGEN SULFIDE**	0.1 0.1 0.1 0.1
OWNER ENRON OIL & GAS C COMPLETED 9807 SAMPLED 9902 FORMATION PERM-WOLFCAN GEOLOGIC PROVINCE CODE 4 TRUE VERTICAL DEPTH (FT) 114 MEASURED DEPTH	CYCLOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN MP OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.0 2.0 2.0 2.0 1.0 2.0
OWNER ENRON OIL & GAS C COMPLETED 9807 SAMPLED 9902 FORMATION PERM-WOLFCAN GEOLOGIC PROVINCE CODE 4 TRUE VERTICAL DEPTH (FT) 114 MEASURED DEPTH WELLHEAD PRESSURE, PSIG 48	CYCLOPENTANE	0.4 0.1 0.2 0.2 0.1 0.1
SAMPLED 9902 FORMATION PERM-WOLFCAN GEOLOGIC PROVINCE CODE 4 TRUE VERTICAL DEPTH (FT) 114	CYCLOPENTANE	0.0 0.1 0.1 0.1 0.1 0.1 0.1 0.0

^{*} 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

SAMPLE	20023	COMPONENT, MOLE PCT	
STATE	TEYAS	METHANE	78.5
COUNTY		ETHANE	11.9
		PROPANE	5.
FIELD		N-BUTANE	1.3
WELL NAME		ISOBUTANE	06
API		N-PENTANE	0.1
LOCATION SEC. 4		ISOPENTANE	o
OWNER	CHEVRON USA INC.	CYCLOPENTANE	-
COMPLETED	980505	HEXANES PLUS	. 0.2
SAMPLED	990127	NITROGEN	1.0
FORMATION	PENN-GRANITE WASH	OXYGEN	TRACE
GEOLOGIC PROVINCE CODE _	360	ARGON	0.0
TRUE VERTICAL DEPTH (FT) _	12094	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	
OPEN FLOW, MCFD		HELIUM	
		HEATING VALUE*	
		SPECIFIC GRAVITY	Q.Z15
SAMPLE	20836	COMPONENT, MOLE PCT	
STATE	ΙΙΤΆΗ	METHANE	34.0
COUNTY	SANJUAN	ETHANE	3.0
FIELD		PROPANE	1.
		N-BUTANE	o:
WELL NAME	HUSKY FEDERAL NO. 15-25		
ΔDI		ISOBUTANE	0.4
	4303730317	N-PENTANE	
LOCATION	SEC. 25, T29S, R23E		Δ.:
LOCATION	SEC. 25, T29S, R23E	N-PENTANE	0.: 0.:
OWNER	SEC. 25. T29S, R23E TOM BROWN, INC.	N-PENTANE	0.: 0.:
OWNERCOMPLETED	SEC. 25. T29S, R23E TOM BROWN, INC 770412	N-PENTANE ISOPENTANE CYCLOPENTANE	0.: 0.: 0.:
OWNERCOMPLETED	SEC. 25. T29S, R23E TOM BROWN, INC 770412	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS	0.: 0.: 0.: 36.
LOCATION OWNER COMPLETED SAMPLED FORMATION	SEC. 25. T29S, R23E TOM BROWN, INC. 770412 010829 MISS-LEADVILLE	N-PENTANEISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN	0.7 0.7 0.7 36. 0.7
LOCATION OWNER COMPLETED SAMPLED FORMATION GEOLOGIC PROVINCE CODE _	SEC. 25. T29S, R23E TOM BROWN, INC 770412 010829 MISS-LEADVILLE 586	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN	0.: 0.: 0.: 36.: 0.:
LOCATION	SEC. 25. T29S, R23E TOM BROWN, INC. 770412 010829 MISS-LEADVILLE 585 9080	N-PENTANE	0. 0. 36. 0. 0.
LOCATIONOWNER	SEC. 25. T29S, R23E TOM BROWN, INC. 770412 010829 MISS-LEADVILLE 585 9080	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0. 36. 0. 0. 0. 0.
LOCATIONOWNER	SEC. 25. T29S, R23E TOM BROWN, INC 770412 010829 MISS-LEADVILLE 585 9080	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.: 0.: 36.: 0.: 0.: 0.: 20.:
LOCATIONOWNER	SEC. 25. T29S, R23E TOM BROWN, INC 770412 010829 MISS-LEADVILLE 585 9080	N-PENTANE ISOPENTANE CYCLOPENTANE HEXANES PLUS NITROGEN OXYGEN ARGON HYDROGEN HYDROGEN SULFIDE** CARBON DIOXIDE	0.: 0.: 36.: 0.: 0.: 0.: 20.: 1.2:

^{*} CALCULATED GROSS BITU 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 66 RELIABLE

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

SAMPLE	505 78	COMPONENT, MOLE PCT	
STATE	LETAN	METHANE	91.4
COUNTY	<u> </u>	ETHANE	3.9
	_	PROPANE	1.3
	WONSITS VALLEY	N-BUTANE	0.4
WELL NAMEW		ISOBUTANE	0.3
API		N-PENTANE	0.2
LOCATION	SEC. 12, T8S, R21E	ISOPENTANE	0.2
OWNER	CHEVERON USA	CYCLOPENTANE	
COMPLETED	980518	HEXANES PLUS	1.6
SAMPLED	990120	NITROGEN	0.7
FORMATION	EOCE-WASATCH	OXYGEN	D.C
GEOLOGIC PROVINCE CODE _	575	ARGON	· · · · · · · · · · · · · · · · · · ·
TRUÉ VERTIGAL DEPTH (FT)	7600	HYDROGEN	
MEASURED DEPTH		HYDROGEN SULFIDE**	
WELLHEAD PRESSURE, PSIG _		CARBON DIOXIDE	0.2
OPEN FLOW, MCFD		HELIUM	<u></u>
or Est 2017, Mor D		HEATING VALUE*	1 148
		SPECIFIC GRAVITY	0.646
SAMPLE	20020	COMPONENT, MOLE PCT	***************************************
STATE	WANG	METHANE	79.9
		ETHANE	12.0
COUNTY		PROPANE	4.3
FIELD		N-BUTANE	D.7
WELL NAME		ISOBUTANE	0.6
API	4902321259	N-PENTANE	0.1
LOCATION	SEC. 19, T23N, R111W	ISOPENTANE	0.2
OWNER	MARATHON OIL CO.	CYCLOPENTANE	
COMPLETED	981229	HEXANES PLUS	0.5
SAMPLED	980126.	NITROGEN	1.0
FORMATION	CRET-FRONTIER	OXYGEN	9.1
GEOLOGIC PROVINCE CODE _	535.	ARGON	TRACE
TRUE VERTICAL DEPTH (FT)	10496	HYDROGEN	0.0
		HYDROGEN SULFIDE**	0.0
MEASURED DEPTH		CARBON DIOXIDE	<u> 0.e</u>
MEASURED DEPTH WELLHEAD PRESSURE, PS/G _	640	CARBON DIOXIDE	
MEASURED DEPTH WELLHEAD PRESSURE, PS/G _ OPEN FLOW, MCFD	640		TRACE

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF H2S CURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RECLABLE

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

SAMPLE	20010	COMPONENT, MOLE PCT	
STATE	WYOMING	METHANE	89.8
COUNTY	PARK	ETHANE	5.3
		PROPANE	1.8
FIELD		N-BUTANE	0.5
WELL NAME		ISOBUTANE	0.3
API	4902905708	N-PENTANE	0.1
LOCATION		ISOPENTANE	0.2
OWNER	MARATHON OIL CO.	CYCLOPENTANE	
COMPLETED	970728	HEXANES PLUS	0.2
SAMPLED	980610	NITROGEN	1.7
FORMATION	TRIA-CHUGWATER	OXYGEN	0.0
GEOLOGIC PROVINCE CODE	520	ARGON	0.1
TRUE VERTICAL DEPTH (FT)	2408	HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
WELLHEAD PRESSURE, PSIG		CARBON DIOXIDE	0.1
		HELIUM	0.02
OPEN FLOW, MCFD		HEATING VALUE*	1.101
		SPECIFIC GRAVITY	0.629
SAMPLE	20011	COMPONENT, MOLE PCT	
STATE	MYOMING	METHANE	90.0
		ETHANE	4.7
COUNTY		PROPANE	1.4
FIELD		N-BUTANE	0.4
WELL NAME		ISOBUTANE	0.2
API	4902906866	N-PENTANE	0.1
LOCATION	SEC. 31, T51N, R100W.	ISOPENTANE	0.1
OWNER	MARATHON OIL CO.	CYCLOPENTANE	
COMPLETED	970321	HEXANES PLUS	0.2
SAMPLED	980610	NITROGEN	2.7
FORMATION	TRIA-CHUGWATER	OXYGEN	0.0
GEOLOGIC PROVINCE CODE		ARGON	0.1
TRUE VERTICAL DEPTH (FT)		HYDROGEN	0.0
MEASURED DEPTH		HYDROGEN SULFIDE**	0.0
		CARBON DIOXIDE	0.1
	450	HELIUM	0.04
WELLHEAD PRESSURE, PSIG _	555	UETION	
WELLHEAD PRESSURE, PSIG _ OPEN FLOW, MCFD	325	HEATING VALUE*	

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 80 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY ** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

Table 2

Samples from Natural Gas Pipelines in the United States

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

SAMPLE	20006	COMPONENT, MOLE PCT	
STATE	COLODADO	METHANE	98.9
SIAIE	COLORADO	ETHANE	0.0
COUNTY	LAS ANIMAS	PROPANE	0.0
EIE D	SPANISH PEAK	N-BUTANE	0.0
FIELD	SPANISH PEAN.	ISOBUTANE	0.0
PLANT	EVERGREEN COMP. STATION	N-PENTANE	0.0
LOCATION	24" INLET	ISOPENTANE	0.0
LOOK HOW	25 110.61	CYCLOPENTANE	
OWNER	EVERGREEN OPERATING CORP.	HEXANES PLUS	0.0
SAMPLED	980317	NITROGEN	0.4.
OAM LLD	3003.17	OXYGEN	0.0
FORMATION	TERT-RATON.CRET-VERMEJO	ARGON	TRACE
GEOLOGIC PROVINCE CODE 455.	HYDROGEN	0.0	
GLOLOGIC PROVINCE C		HYDROGEN SULFIDE	0,0
PRESSURE, PSIG		CARBON DIOXIDE	8.0
ELOW MOED	28000	HELIUM	TRACE
TEOW, INOCD	25000	HEATING VALUE*	1,002
		SPECIFIC GRAVITY	0.563

^{*} CALCULATED GROSS BTU PER CU FT, DRY, AT 50 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

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