



**Westtech  
Laboratories  
Inc.**  
The Quality People  
Since 1957

375 West Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-8796

**DRAFT**

PB 22  
TO: LYNN SHELTON  
3-1-93

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304477  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 1

CLIENT SAMPLE ID : POND #8  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: --

Inorganic Chemistry - Total Metals

D A T A T A B L E

Parameter	Result	Unit	Detection Limit	Analysis Date
Total Aluminum	1.0	mg/L	0.05	02-26-93
Total Antimony	<0.05	mg/L	0.05	02-26-93
Total Arsenic	0.11	mg/L	0.05	02-26-93
Total Barium	0.09	mg/L	0.05	02-26-93
Total Beryllium	<0.05	mg/L	0.05	02-26-93
Total Cadmium	<0.05	mg/L	0.05	02-26-93
Total Calcium	780.	mg/L	0.05	02-26-93
Total Copper	<0.05	mg/L	0.05	02-28-93
Total Iron	1.2	mg/L	0.05	02-26-93
Total Lead	<0.05	mg/L	0.05	02-26-93
Total Magnesium	370.	mg/L	0.10	02-28-93
Total Manganese	3.5	mg/L	0.05	02-26-93
Total Mercury	<0.001	mg/L	0.001	02-26-93
Total Nickel	<0.05	mg/L	0.05	02-26-93
Total Potassium	200.	mg/L	1.0	02-26-93
Total Selenium	<0.05	mg/L	0.05	02-26-93
Total Sodium	7200.	mg/L	0.05	02-26-93
Total Tin	<0.05	mg/L	0.05	02-28-93
Total Vanadium	<0.05	mg/L	0.05	02-26-93
Total Zinc	0.06	mg/L	0.05	02-26-93
Total Platinum		mg/L	0.5	02-26-93



**Westech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
602-437-1039 • fax 437-3706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304477  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 1

CLIENT SAMPLE ID : POND #8  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: --

Cation/Anion Balance

D A T A T A B L E

Parameter	Result	Unit	Detection Limit	Analysis Date
Total Calcium .....	780.	mg/L	0.05	02-28-93
Total Magnesium .....	370.	mg/L	0.10	02-28-93
Total Potassium .....	200.	mg/L	1.0	02-26-93
Total Sodium .....	7200.	mg/L	0.05	02-28-93
Dissolved Calcium .....	870.	mg/L	0.05	02-28-93
Dissolved Magnesium .....	420.	mg/L	0.10	02-28-93
Dissolved Sodium .....	8300.	mg/L	0.05	02-28-93
Carbonate .....	<2.0	mg/L	2.0	02-25-93
Bicarbonate .....	120.	mg/L	2.0	02-25-93
Hydroxide .....	<2.0	mg/L	2.0	02-25-93
Alkalinity, Total .....	120.	mg/L	2.0	02-25-93
Hardness .....	3700.	mg/L	0.53	02-28-93



**Westech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304477  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 2

CLIENT SAMPLE ID : POND #8  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --  
ANALYST .....: L. ANTONY

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: 02-24-93  
ANALYSIS DATE .: 02-24-93

Method 8010 - Halogenated Volatile Organics

D A T A T A B L E

Parameter	Result	Unit	Detection Limit
Bromochloromethane	<1.0	ug/L	1.0
Bromodichloromethane	<1.0	ug/L	1.0
Bromoform	<1.0	ug/L	1.0
Bromomethane	<1.0	ug/L	1.0
Carbon tetrachloride	<0.5	ug/L	0.5
Chlorobenzene	<1.0	ug/L	1.0
Chloroethane	<1.0	ug/L	1.0
Chloroform	<0.5	ug/L	0.5
Chloromethane	<1.0	ug/L	1.0
Dibromochloromethane	<1.0	ug/L	1.0
1,2-Dichlorobenzene	<1.0	ug/L	1.0
1,3-Dichlorobenzene	<1.0	ug/L	1.0
1,4-Dichlorobenzene	<1.0	ug/L	1.0
Dichlorodifluoromethane	<1.0	ug/L	1.0
1,1-Dichloroethane	<0.5	ug/L	0.5
1,2-Dichloroethane	<0.5	ug/L	0.5
1,1-Dichloroethene	<0.5	ug/L	0.5
cis 1,2-Dichloroethene	<0.5	ug/L	0.5
trans 1,2-Dichloroethene	<1.0	ug/L	1.0
1,2-Dichloropropane	<0.5	ug/L	0.5
trans 1,3-Dichloropropene	<0.5	ug/L	0.5
cis 1,3-Dichloropropene	<0.5	ug/L	0.5
Dichloromethane	<5.0	ug/L	5.0
1,1,2,2-Tetrachloroethane	<0.5	ug/L	0.5
1,1,2,2-Tetrachloroethene	<0.5	ug/L	0.5
1,1,1-Trichloroethane	<0.5	ug/L	0.5
1,1,2-Trichloroethane	<0.5	ug/L	0.5
Trichloroethene	<0.5	ug/L	0.5
Trichlorofluoromethane	<1.0	ug/L	1.0
Vinyl chloride	<1.0	ug/L	1.0

(1) Copy to Client



**Westech  
Laboratories  
Inc.**  
The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1060 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304477  
INVOICE NO. : 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 2 OF 2

D A T A T A B L E (Cont.)

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Detection Limit</u>
2-Chloroethylvinyl Ether .....	<200.	ug/L	200.



**Westech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3727 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-0706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304477  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 1

CLIENT SAMPLE ID : POND #8  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --  
ANALYST .....: L. ANTONY

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: 02-24-93  
ANALYSIS DATE ..: 02-24-93

Method 8020 - Aromatic Volatiles

D A T A T A B L E

Parameter	Result	Unit	Detection Limit
Chlorobenzene .....	<1.0	ug/L	1.0
1,2-Dichlorobenzene .....	<1.0	ug/L	1.0
1,3-Dichlorobenzene .....	<1.0	ug/L	1.0
1,4-Dichlorobenzene .....	<1.0	ug/L	1.0
Ethylbenzene .....	<1.0	ug/L	1.0
Toluene .....	<1.0	ug/L	1.0
Total Xylenes .....	<0.3	ug/L	0.3
Benzene .....	<1.0	ug/L	1.0



**Westech  
Laboratories  
Inc.**  
The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-8796

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304480  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 1

CLIENT SAMPLE ID : POND #8-DUP  
SAMPLE TYPE : WATER  
SAMPLED BY : L. SHELTON  
SUBMITTED BY : L. SHELTON  
SAMPLE SOURCE : --

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE : 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: --

Inorganic Chemistry - Total Metals

D A T A T A B L E

Parameter	Result	Unit	Detection Limit	Analysis Date
Total Aluminum	0.62	mg/L	0.05	02-26-93
Total Antimony	<0.05	mg/L	0.05	02-26-93
Total Arsenic	0.11	mg/L	0.05	02-26-93
Total Barium	0.09	mg/L	0.05	02-26-93
Total Beryllium	<0.05	mg/L	0.05	02-26-93
Total Cadmium	<0.05	mg/L	0.05	02-26-93
Total Calcium	840.	mg/L	0.05	02-28-93
Total Copper	<0.05	mg/L	0.05	02-26-93
Total Iron	1.4	mg/L	0.05	02-26-93
Total Lead	<0.05	mg/L	0.05	02-26-93
Total Magnesium	400.	mg/L	0.10	02-28-93
Total Manganese	3.6	mg/L	0.05	02-26-93
Total Mercury	<0.001	mg/L	0.001	02-26-93
Total Nickel	<0.05	mg/L	0.05	02-26-93
Total Potassium	190.	mg/L	1.0	02-26-93
Total Selenium	<0.05	mg/L	0.05	02-26-93
Total Sodium	7900.	mg/L	0.05	02-28-93
Total Tin	0.12	mg/L	0.05	02-26-93
Total Vanadium	<0.05	mg/L	0.05	02-26-93
Total Zinc	0.07	mg/L	0.05	02-26-93
Total Platinum		mg/L	0.5	



**Westtech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304480  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 1

CLIENT SAMPLE ID : POND #8-DUP  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: --

Cation/Anion Balance

D A T A T A B L E

Parameter	Result	Unit	Detection Limit	Analysis Date
Total Calcium .....	840.	mg/L	0.05	02-28-93
Total Magnesium .....	400.	mg/L	0.10	02-28-93
Total Potassium .....	190.	mg/L	1.0	02-26-93
Total Sodium .....	7900.	mg/L	0.05	02-28-93
Dissolved Calcium .....	860.	mg/L	0.05	02-28-93
Dissolved Magnesium .....	430.	mg/L	0.10	02-28-93
Dissolved Sodium .....	8400.	mg/L	0.05	02-28-93
Carbonate .....	<2.0	mg/L	2.0	02-25-93
Bicarbonate .....	120.	mg/L	2.0	02-25-93
Hydroxide .....	<2.0	mg/L	2.0	02-25-93
Alkalinity, Total .....	120.	mg/L	2.0	02-25-93
Hardness .....	3700.	mg/L	0.53	02-28-93



**Westech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304480  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 2

CLIENT SAMPLE ID : POND #8-DUP  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --  
ANALYST .....: L. ANTONY

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: 02-24-93  
ANALYSIS DATE ..: 02-24-93

Method 8010 - Halogenated Volatile Organics

D A T A T A B L E

Parameter	Result	Unit	Detection Limit
Bromochloromethane	<1.0	ug/L	1.0
Bromodichloromethane	<1.0	ug/L	1.0
Bromoform	<1.0	ug/L	1.0
Bromomethane	<1.0	ug/L	1.0
Carbon tetrachloride	<0.5	ug/L	0.5
Chlorobenzene	<1.0	ug/L	1.0
Chloroethane	<1.0	ug/L	1.0
Chloroform	<0.5	ug/L	0.5
Chloromethane	<1.0	ug/L	1.0
Dibromochloromethane	<1.0	ug/L	1.0
1,2-Dichlorobenzene	<1.0	ug/L	1.0
1,3-Dichlorobenzene	<1.0	ug/L	1.0
1,4-Dichlorobenzene	<1.0	ug/L	1.0
Dichlorodifluoromethane	<1.0	ug/L	1.0
1,1-Dichloroethane	<0.5	ug/L	0.5
1,2-Dichloroethane	<0.5	ug/L	0.5
1,1-Dichloroethene	<0.5	ug/L	0.5
cis 1,2-Dichloroethene	<0.5	ug/L	0.5
trans 1,2-Dichloroethene	<1.0	ug/L	1.0
1,2-Dichloropropane	<0.5	ug/L	0.5
trans 1,3-Dichloropropene	<0.5	ug/L	0.5
cis 1,3-Dichloropropene	<0.5	ug/L	0.5
Dichloromethane	<5.0	ug/L	5.0
1,1,2,2-Tetrachloroethane	<0.5	ug/L	0.5
1,1,2,2-Tetrachloroethene	<0.5	ug/L	0.5
1,1,1-Trichloroethane	<0.5	ug/L	0.5
1,1,2-Trichloroethane	<0.5	ug/L	0.5
Trichloroethene	<0.5	ug/L	0.5
Trichlorofluoromethane	<1.0	ug/L	1.0
Vinyl chloride	<1.0	ug/L	1.0





**Westtech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-3706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304480  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 2 OF 2

D A T A      T A B L E      (Cont.)

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Detection Limit</u>
2-Chloroethylvinyl Ether .....	<200.	ug/L	200.



**Westech  
Laboratories  
Inc.**  
The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85046  
(602) 437-1080 • fax 437-8796

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304480  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 1

CLIENT SAMPLE ID : POND #8-DUP  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --  
ANALYST .....: L. ANTONY

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: 02-24-93  
ANALYSIS DATE ..: 02-24-93

Method 8020 - Aromatic Volatiles

D A T A T A B L E

Parameter	Result	Unit	Detection Limit
Chlorobenzene .....	<1.0	ug/L	1.0
1,2-Dichlorobenzene .....	<1.0	ug/L	1.0
1,3-Dichlorobenzene .....	<1.0	ug/L	1.0
1,4-Dichlorobenzene .....	<1.0	ug/L	1.0
Ethylbenzene .....	<1.0	ug/L	1.0
Toluene .....	<1.0	ug/L	1.0
Total Xylenes .....	<0.3	ug/L	0.3
Benzene .....	<1.0	ug/L	1.0



**Westech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304481  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 2

CLIENT SAMPLE ID : TRIP BLANK  
SAMPLE TYPE .....: D.I. WATER  
SAMPLED BY .....: WL/PERSONNEL  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: WESTECH LABS.  
ANALYST .....: L. ANTONY

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: 02-24-93  
ANALYSIS DATE ..: 02-24-93

Method 8010 - Halogenated Volatile Organics

D A T A T A B L E

Parameter	Result	Unit	Detection Limit
Bromochloromethane	<1.0	ug/L	1.0
Bromodichloromethane	<1.0	ug/L	1.0
Bromoform	<1.0	ug/L	1.0
Bromomethane	<1.0	ug/L	1.0
Carbon tetrachloride	<0.5	ug/L	0.5
Chlorobenzene	<1.0	ug/L	1.0
Chloroethane	<1.0	ug/L	1.0
Chloroform	<0.5	ug/L	0.5
Chloromethane	<1.0	ug/L	1.0
Dibromochloromethane	<1.0	ug/L	1.0
1,2-Dichlorobenzene	<1.0	ug/L	1.0
1,3-Dichlorobenzene	<1.0	ug/L	1.0
1,4-Dichlorobenzene	<1.0	ug/L	1.0
Dichlorodifluoromethane	<1.0	ug/L	1.0
1,1-Dichloroethane	<0.5	ug/L	0.5
1,2-Dichloroethane	<0.5	ug/L	0.5
1,1-Dichloroethene	<0.5	ug/L	0.5
cis 1,2-Dichloroethene	<0.5	ug/L	0.5
trans 1,2-Dichloroethene	<1.0	ug/L	1.0
1,2-Dichloropropane	<0.5	ug/L	0.5
trans 1,3-Dichloropropene	<0.5	ug/L	0.5
cis 1,3-Dichloropropene	<0.5	ug/L	0.5
Dichloromethane	<5.0	ug/L	5.0
1,1,2,2-Tetrachloroethane	<0.5	ug/L	0.5
1,1,2,2-Tetrachloroethene	<0.5	ug/L	0.5
1,1,1-Trichloroethane	<0.5	ug/L	0.5
1,1,2-Trichloroethane	<0.5	ug/L	0.5
Trichloroethene	<0.5	ug/L	0.5
Trichlorofluoromethane	<1.0	ug/L	1.0
Vinyl chloride	<1.0	ug/L	1.0



**Westtech  
Laboratories  
Inc.**  
The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304481  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 2 OF 2

D A T A      T A B L E      (Cont.)

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Detection Limit</u>
2-Chloroethylvinyl Ether .....	<200.	ug/L	200.



**Westech  
Laboratories  
Inc.**  
The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304478  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 2

CLIENT SAMPLE ID : UPSTREAM  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --  
ANALYST .....: L. ANTONY

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: 02-24-93  
ANALYSIS DATE .: 02-24-93

Method 8010 - Halogenated Volatile Organics

D A T A T A B L E

Parameter	Result	Unit	Detection Limit
Bromochloromethane	<1.0	ug/L	1.0
Bromodichloromethane	<1.0	ug/L	1.0
Bromoform	<1.0	ug/L	1.0
Bromomethane	<1.0	ug/L	1.0
Carbon tetrachloride	<0.5	ug/L	1.0
Chlorobenzene	<1.0	ug/L	0.5
Chloroethane	<1.0	ug/L	1.0
Chloroform	<0.5	ug/L	1.0
Chloromethane	<1.0	ug/L	0.5
Dibromochloromethane	<1.0	ug/L	1.0
1,2-Dichlorobenzene	<1.0	ug/L	1.0
1,3-Dichlorobenzene	<1.0	ug/L	1.0
1,4-Dichlorobenzene	<1.0	ug/L	1.0
Dichlorodifluoromethane	<1.0	ug/L	1.0
1,1-Dichloroethane	<0.5	ug/L	1.0
1,2-Dichloroethane	<0.5	ug/L	0.5
1,1-Dichloroethene	<0.5	ug/L	0.5
cis 1,2-Dichloroethene	<0.5	ug/L	0.5
trans 1,2-Dichloroethene	<0.5	ug/L	0.5
1,2-Dichloropropane	<1.0	ug/L	1.0
trans 1,3-Dichloropropene	<0.5	ug/L	0.5
cis 1,3-Dichloropropene	<0.5	ug/L	0.5
Dichloromethane	<5.0	ug/L	0.5
1,1,2,2-Tetrachloroethane	<0.5	ug/L	5.0
1,1,2,2-Tetrachloroethene	<0.5	ug/L	0.5
1,1,1-Trichloroethane	<0.5	ug/L	0.5
1,1,2-Trichloroethane	<0.5	ug/L	0.5
Trichloroethene	<0.5	ug/L	0.5
Trichlorofluoromethane	<0.5	ug/L	0.5
Vinyl chloride	<1.0	ug/L	1.0
	<1.0	ug/L	1.0



**Westtech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1880 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304478  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 2 OF 2

D A T A      T A B L E      (Cont.)

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Detection Limit</u>
2-Chloroethylvinyl Ether .....	<200.	ug/L	200.



**Westech  
Laboratories  
Inc.**  
The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304478  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 1

CLIENT SAMPLE ID : UPSTREAM  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --  
ANALYST .....: L. ANTONY

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: 02-24-93  
ANALYSIS DATE ..: 02-24-93

Method 8020 - Aromatic Volatiles

D A T A T A B L E

Parameter	Result	Unit	Detection Limit
Chlorobenzene .....	<1.0	ug/L	1.0
1,2-Dichlorobenzene .....	<1.0	ug/L	1.0
1,3-Dichlorobenzene .....	<1.0	ug/L	1.0
1,4-Dichlorobenzene .....	<1.0	ug/L	1.0
Ethylbenzene .....	<1.0	ug/L	1.0
Toluene .....	<1.0	ug/L	1.0
Total Xylenes .....	<0.3	ug/L	0.3
Benzene .....	<1.0	ug/L	1.0



**Westech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304478  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 1

CLIENT SAMPLE ID : UPSTREAM  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: --

Inorganic Chemistry - Total Metals

D A T A T A B L E

Parameter	Result	Unit	Detection Limit	Analysis Date
Total Aluminum	270.	mg/L	0.05	02-26-93
Total Antimony	<0.05	mg/L	0.05	02-26-93
Total Arsenic	0.08	mg/L	0.05	02-26-93
Total Barium	1.8	mg/L	0.05	02-26-93
Total Beryllium	<0.05	mg/L	0.05	02-26-93
Total Cadmium	<0.05	mg/L	0.05	02-26-93
Total Calcium	430.	mg/L	0.05	02-28-93
Total Copper	<0.05	mg/L	0.05	02-26-93
Total Iron	140.	mg/L	0.05	02-26-93
Total Lead	0.09	mg/L	0.05	02-26-93
Total Magnesium	230.	mg/L	0.10	02-28-93
Total Manganese	3.9	mg/L	0.05	02-26-93
Total Mercury	<0.001	mg/L	0.001	02-26-93
Total Nickel	0.10	mg/L	0.05	02-26-93
Total Potassium	130.	mg/L	1.0	02-26-93
Total Selenium	<0.05	mg/L	0.05	02-26-93
Total Sodium	3200.	mg/L	0.05	02-28-93
Total Tin	<0.05	mg/L	0.05	02-26-93
Total Vanadium	0.29	mg/L	0.05	02-26-93
Total Zinc	0.47	mg/L	0.05	02-26-93
Total Platinum		mg/L	0.5	





**Westech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-0706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304478  
INVOICE NO. : 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 1

CLIENT SAMPLE ID : UPSTREAM  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE .....: --

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: --

Cation/Anion Balance

D A T A T A B L E

Parameter	Result	Unit	Detection Limit	Analysis Date
Total Calcium .....	430.	mg/L	0.05	02-28-93
Total Magnesium .....	230.	mg/L	0.10	02-28-93
Total Potassium .....	130.	mg/L	1.0	02-26-93
Total Sodium .....	3200.	mg/L	0.05	02-28-93
Dissolved Calcium .....	390.	mg/L	0.05	02-28-93
Dissolved Magnesium .....	180.	mg/L	0.10	02-28-93
Dissolved Sodium .....	3500.	mg/L	0.05	02-28-93
Carbonate .....	<2.0	mg/L	2.0	02-25-93
Bicarbonate .....	140.	mg/L	2.0	02-25-93
Hydroxide .....	<2.0	mg/L	2.0	02-25-93
Alkalinity, Total .....	140.	mg/L	2.0	02-25-93
Hardness .....	2000.	mg/L	0.53	02-28-93



**Westech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602)437-1080 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304479  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 2

CLIENT SAMPLE ID : DOWNSTREAM  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --  
ANALYST .....: L. ANTONY

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: 02-24-93  
ANALYSIS DATE ..: 02-24-93

Method 8010 - Halogenated Volatile Organics

D A T A T A B L E

Parameter	Result	Unit	Detection Limit
Bromochloromethane	<1.0	ug/L	1.0
Bromodichloromethane	<1.0	ug/L	1.0
Bromoform	<1.0	ug/L	1.0
Bromomethane	<1.0	ug/L	1.0
Carbon tetrachloride	<0.5	ug/L	0.5
Chlorobenzene	<1.0	ug/L	1.0
Chloroethane	<1.0	ug/L	1.0
Chloroform	<0.5	ug/L	0.5
Chloromethane	<1.0	ug/L	1.0
Dibromochloromethane	<1.0	ug/L	1.0
1,2-Dichlorobenzene	<1.0	ug/L	1.0
1,3-Dichlorobenzene	<1.0	ug/L	1.0
1,4-Dichlorobenzene	<1.0	ug/L	1.0
Dichlorodifluoromethane	<1.0	ug/L	1.0
1,1-Dichloroethane	<0.5	ug/L	0.5
1,2-Dichloroethane	<0.5	ug/L	0.5
1,1-Dichloroethene	<0.5	ug/L	0.5
cis 1,2-Dichloroethene	<0.5	ug/L	0.5
trans 1,2-Dichloroethene	<1.0	ug/L	1.0
1,2-Dichloropropane	<0.5	ug/L	0.5
trans 1,3-Dichloropropene	<0.5	ug/L	0.5
cis 1,3-Dichloropropene	<0.5	ug/L	0.5
Dichloromethane	<5.0	ug/L	5.0
1,1,2,2-Tetrachloroethane	<0.5	ug/L	0.5
1,1,2,2-Tetrachloroethene	<0.5	ug/L	0.5
1,1,1-Trichloroethane	<0.5	ug/L	0.5
1,1,2-Trichloroethane	<0.5	ug/L	0.5
Trichloroethene	<0.5	ug/L	0.5
Trichlorofluoromethane	<1.0	ug/L	1.0
Vinyl chloride	<1.0	ug/L	1.0



**Westech  
Laboratories  
Inc.**  
The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304479  
INVOICE NO.: 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 2 OF 2

D A T A T A B L E (Cont.)

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Detection Limit</u>
2-Chloroethylvinyl Ether .....	<200.	ug/L	200.



Westech Laboratories Inc. The Quality People Since 1955

3737 East Broadway Road Phoenix, Arizona 85040 (602) 437-1080 • fax 437-8706

DRAFT

CLIENT GIANT REFINING COMPANY ATTN: LYNN SHELTON ROUTE 3, BOX 7 GALLUP, NM 87301

SAMPLE NO. : 9304479 INVOICE NO.: 22130625 REPORT DATE: 03-01-93 REVIEWED BY: PAGE : 1 OF 1

CLIENT SAMPLE ID : DOWNSTREAM SAMPLE TYPE : WATER SAMPLED BY : L. SHELTON SUBMITTED BY : L. SHELTON SAMPLE SOURCE : -- ANALYST : L. ANTONY

AUTHORIZED BY : L. SHELTON CLIENT P.O. : -- SAMPLE DATE : 02-23-93 SUBMITTAL DATE : 02-24-93 EXTRACTION DATE: 02-24-93 ANALYSIS DATE : 02-24-93

Method 8020 - Aromatic Volatiles

DATA TABLE

Table with 4 columns: Parameter, Result, Unit, Detection Limit. Rows include Chlorobenzene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Ethylbenzene, Toluene, Total Xylenes, and Benzene.



**Westech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602)437-1080 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY

ATTN: LYNN SHELTON

ROUTE 3, BOX 7

GALLUP, NM 87301

SAMPLE NO. : 9304479

INVOICE NO.: 22130625

REPORT DATE: 03-01-93

REVIEWED BY:

PAGE : 1 OF 1

CLIENT SAMPLE ID : DOWNSTREAM  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --

AUTHORIZED BY : L. SHELTON

CLIENT P.O. : --

SAMPLE DATE ...: 02-23-93

SUBMITTAL DATE : 02-24-93

EXTRACTION DATE: --

Inorganic Chemistry - Total Metals

D A T A T A B L E

Parameter	Result	Unit	Detection Limit	Analysis Date
Total Aluminum	32.	mg/L	0.05	02-26-93
Total Antimony	<0.05	mg/L	0.05	02-26-93
Total Arsenic	<0.05	mg/L	0.05	02-26-93
Total Barium	0.40	mg/L	0.05	02-26-93
Total Beryllium	<0.05	mg/L	0.05	02-26-93
Total Cadmium	<0.05	mg/L	0.05	02-26-93
Total Calcium	250.	mg/L	0.05	02-26-93
Total Copper	<0.05	mg/L	0.05	02-28-93
Total Iron	20.	mg/L	0.05	02-26-93
Total Lead	<0.05	mg/L	0.05	02-26-93
Total Magnesium	120.	mg/L	0.10	02-28-93
Total Manganese	1.3	mg/L	0.05	02-26-93
Total Mercury	<0.001	mg/L	0.001	02-26-93
Total Nickel	<0.05	mg/L	0.05	02-26-93
Total Potassium	45.	mg/L	1.0	02-26-93
Total Selenium	<0.05	mg/L	0.05	02-26-93
Total Sodium	2200.	mg/L	0.05	02-28-93
Total Tin	<0.05	mg/L	0.05	02-26-93
Total Vanadium	0.06	mg/L	0.05	02-26-93
Total Zinc	0.29	mg/L	0.05	02-26-93
Total Platinum		mg/L	0.5	02-26-93

(1) Copy to Client



**Westech  
Laboratories  
Inc.**

The Quality People  
Since 1955

3737 East Broadway Road  
Phoenix, Arizona 85040  
(602) 437-1080 • fax 437-8706

**DRAFT**

CLIENT GIANT REFINING COMPANY  
ATTN: LYNN SHELTON  
ROUTE 3, BOX 7  
GALLUP, NM 87301

SAMPLE NO. : 9304479  
INVOICE NO. : 22130625  
REPORT DATE: 03-01-93  
REVIEWED BY:  
PAGE : 1 OF 1

CLIENT SAMPLE ID : DOWNSTREAM  
SAMPLE TYPE .....: WATER  
SAMPLED BY .....: L. SHELTON  
SUBMITTED BY .....: L. SHELTON  
SAMPLE SOURCE ....: --

AUTHORIZED BY : L. SHELTON  
CLIENT P.O. : --  
SAMPLE DATE ...: 02-23-93  
SUBMITTAL DATE : 02-24-93  
EXTRACTION DATE: --

Cation/Anion Balance

D A T A T A B L E

Parameter	Result	Unit	Detection Limit	Analysis Date
Total Calcium .....	250.	mg/L	0.05	02-28-93
Total Magnesium .....	120.	mg/L	0.10	02-28-93
Total Potassium .....	45.	mg/L	1.0	02-26-93
Total Sodium .....	2200.	mg/L	0.05	02-28-93
Dissolved Calcium .....	320.	mg/L	0.05	02-28-93
Dissolved Magnesium .....	150.	mg/L	0.10	02-28-93
Dissolved Sodium .....	2900.	mg/L	0.05	02-28-93
Carbonate .....	<2.0	mg/L	2.0	02-25-93
Bicarbonate .....	120.	mg/L	2.0	02-25-93
Hydroxide .....	<2.0	mg/L	2.0	02-25-93
Alkalinity, Total .....	120.	mg/L	2.0	02-25-93
Hardness .....	1100.	mg/L	0.53	02-28-93