

HIP - 17

**GENERAL
CORRESPONDENCE**

YEAR(S):

1993 - 1991



OIL CONSERVATION DIVISION
RECEIVED

'93 NOV 24 AM 10 08

P. O. BOX 1492
EL PASO, TEXAS 79978
PHONE: 915-541-2600

November 23, 1993

Mr. Roger Anderson
New México Oil Conservation Division
State Land Office Building
310 Old Santa Fé Trail
Santa Fé, NM 87504

**Subject: Approval for Minor Discharge of Hydrostatic Test Water
from New Pipe into Lined Pond in McKinley County, New
México**

Dear Mr. Anderson:

El Paso Natural Gas Company (EPNG) plans to conduct hydrostatic test on a section of natural gas pipeline at our Bluewater Compressor Station located near Thoreau, New México. Due to potential low ambient temperatures during the test, EPNG may have to add small volumes of methanol to the fresh water to avoid freezing problems. After the test, EPNG plans to dewater the pipeline into the station's lined pond for further evaporation.

Other than the requested method of disposal, the above proposal will meet all required NMOCD conditions for the discharge of hydrostatic test water.

EPNG is seeking NMOCD approval to proceed as described above and provides the following additional information relevant to the location in question:

VOLUME (Gallons)	PIPE LENGTH (Feet)	SECTION	TOWNSHIP	RANGE
11,000	385	33	T-14-N	13-W

The source of fresh water will be Bluewater Compressor Station.

Should additional information be required, please contact me at 915/541-2164.

Sincerely.

Joe M. Narváez, P.E.

El Paso
Natural Gas Company

OIL CONSERVATION DIVISION
RECEIVED

01 SEP 17 AM 9 31

3801 ATRISCO, N. W.
ALBUQUERQUE, NEW MEXICO 87120
PHONE: 505-831-7700

September 23, 1991

Mr. Roger Anderson
New Mexico Oil Conservation Division
P.O. Box 2088; Land Office Building
Santa Fe, New Mexico 87504-5885

RE: Hydrostatic Test Discharge Water Analyses

Dear Mr. Anderson:

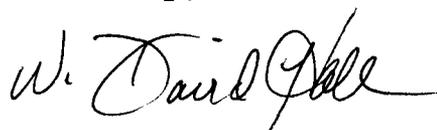
Per the requirements of the New Mexico Oil Conservation Division approval to discharge hydrostatic test water, dated August 7, 1991, the attached analyses are submitted.

The test was conducted as detailed in the discharge request with the exception that the water was discharged into an unlined retention pond instead of the pipeline ditch. Large quantities of rock were encountered and ditch space was limited. The assurance of containing all the water in the ditch was questionable, therefore, a site was obtained through an agreement with the Laguna Tribe.

The pipeline was washed and rinsed with this water being contained and transported to a lined pond at our Bluewater Station. The test water was discharged through hay bales and no visible hydrocarbon sheen was observed on the water surface after discharge was completed.

If you have any questions, please give me a call at 505/831-7759.

Sincerely,



W. David Hall, P.E.
Senior Engineer

Attachments
WDH/rp



Analytical Technologies, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

ATI I.D. 108758

September 6, 1991

El Paso Natural Gas Company
P.O. Box 4990
Farmington, NM 87499



Project Name/Number: Hydrostatic Dewatering

Attention: John Lambdin

On 08/20/91, Analytical Technologies, Inc. received a request to analyze aqueous sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

Method 610 analyses were performed by ATI, Fort Collins.

Additional compounds were found by EPA Method 601/602 in samples N11527, N11528, and N11529. It was not possible to identify or quantify these additional compounds by 601/602 analysis.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

Mary Tyer
Project Manager

Robert V. Woods
Laboratory Manager

RVW:clf
Enclosure



CLIENT : EL PASO NATURAL GAS, NEW MEXICO
PROJECT # : (NONE)
PROJECT NAME : HYDROSTATIC
ATI I.D. : 108758

DATE RECEIVED : 08/20/91
REPORT DATE : 09/05/91

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	N11526	AQUEOUS	08/17/91
02	N11527	AQUEOUS	08/17/91
03	N11528	AQUEOUS	08/17/91
04	N11529	AQUEOUS	08/17/91

----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	4

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



GENERAL CHEMISTRY RESULTS

ATI I.D. : 108758

CLIENT : EL PASO NATURAL GAS, NEW MEXICO
 PROJECT # : (NONE)
 PROJECT NAME : HYDROSTATIC

DATE RECEIVED : 08/20/91

REPORT DATE : 09/05/91

PARAMETER	UNITS	01	02	03	04
CARBONATE (CACO3)	MG/L	<1	<1	<1	<1
BICARBONATE (CACO3)	MG/L	304	273	277	286
HYDROXIDE (CACO3)	MG/L	<1	<1	<1	<1
TOTAL ALKALINITY (AS CACO3)	MG/L	304	273	277	286
CHLORIDE	MG/L	67	58	50	70
CONDUCTIVITY, (UMHOS/CM)		1530	1350	1210	1480
FLUORIDE	MG/L	1.58	1.30	1.15	1.49
PH	UNITS	8.2	7.9	8.1	7.9
SULFATE	MG/L	380	320	280	360
TOTAL DISSOLVED SOLIDS	MG/L	1000	880	800	980
TOTAL SUSPENDED SOLIDS	MG/L	40	20	30	50

01 - source

02 - 1ST 3RD03 - 2ND 3RD04 - 3RD 3RD



GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : EL PASO NATURAL GAS, NEW MEXICO
 PROJECT # : (NONE)
 PROJECT NAME : HYDROSTATIC

ATI I.D. : 108758

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CARBONATE	MG/L	10875802	<1	<1	NA	NA	NA	NA
BICARBONATE	MG/L		273	277	1	NA	NA	NA
HYDROXIDE	MG/L		<1	<1	NA	NA	NA	NA
TOTAL ALKALINITY	MG/L		273	277	1	NA	NA	NA
CHLORIDE	MG/L	10880101	260	260	0	510	250	100
CONDUCTIVITY (UMHOS/CM)		10875804	1480	1470	1	NA	NA	NA
FLUORIDE	MG/L	10875801	1.58	1.57	0.6	3.06	1.50	99
PH	UNITS	10875802	7.9	7.9	0	NA	NA	NA
SULFATE	MG/L	10872901	160	160	0	300	160	88
TOTAL DISSOLVED SOLIDS	MG/L	10875701	350	360	3	NA	NA	NA
TOTAL SUSPENDED SOLIDS	MG/L	10875801	40	40	0	NA	NA	NA

*Acceptable
J.S.
9-12-91*

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



METALS RESULTS

ATI I.D. : 108758

CLIENT : EL PASO NATURAL GAS, NEW MEXICO
PROJECT # : (NONE)
PROJECT NAME : HYDROSTATIC

DATE RECEIVED : 08/20/91

REPORT DATE : 09/05/91

PARAMETER	UNITS	01	02	03	04
CALCIUM	MG/L	21.6	33.0	39.6	24.9
POTASSIUM	MG/L	2.9	2.5	2.2	2.8
MAGNESIUM	MG/L	8.5	10.3	11.4	9.0
SODIUM	MG/L	323	263	226	300



METALS - QUALITY CONTROL

CLIENT : EL PASO NATURAL GAS, NEW MEXICO
PROJECT # : (NONE)
PROJECT NAME : HYDROSTATIC

ATI I.D. : 108758

Table with 9 columns: PARAMETER, UNITS, ATI I.D., SAMPLE RESULT, DUP. RESULT, RPD, SPIKED SAMPLE CONC, SPIKE CONC, % REC. Rows include CALCIUM, POTASSIUM, MAGNESIUM, and SODIUM.

Acceptable 9-12-91

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration X 100

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result) / Average Result X 100



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 10875801

Source

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: EL PASO NATURAL GAS, NEW MEXICO	DATE SAMPLED	: 08/17/91
PROJECT #	: (NONE)	DATE RECEIVED	: 08/20/91
PROJECT NAME	: HYDROSTATIC	DATE EXTRACTED	: N/A
CLIENT I.D.	: N11526	DATE ANALYZED	: 08/20/91
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	118
BROMOFLUOROBENZENE (%)	85



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 10875802

1ST 3RD

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: EL PASO NATURAL GAS, NEW MEXICO	DATE SAMPLED	: 08/17/91
PROJECT #	: (NONE)	DATE RECEIVED	: 08/20/91
PROJECT NAME	: HYDROSTATIC	DATE EXTRACTED	: N/A
CLIENT I.D.	: N11527	DATE ANALYZED	: 08/20/91
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	5.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	0.6
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	2.6
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	20.0
1,1,1-TRICHLOROETHANE	0.6
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	22.5
TRICHLOROTRIFLUOROETHANE	<2.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	110
BROMOFLUOROBENZENE (%)	81



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 10875803

2nd 3rd

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: EL PASO NATURAL GAS, NEW MEXICO	DATE SAMPLED	: 08/17/91
PROJECT #	: (NONE)	DATE RECEIVED	: 08/20/91
PROJECT NAME	: HYDROSTATIC	DATE EXTRACTED	: N/A
CLIENT I.D.	: N11528	DATE ANALYZED	: 08/20/91
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	0.8
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	0.3
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	1.6
1,1,1-TRICHLOROETHANE	0.5
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	114
BROMOFLUOROBENZENE (%)	83



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 10875804
3rd 3rd

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: EL PASO NATURAL GAS, NEW MEXICO	DATE SAMPLED	: 08/17/91
PROJECT #	: (NONE)	DATE RECEIVED	: 08/20/91
PROJECT NAME	: HYDROSTATIC	DATE EXTRACTED	: N/A
CLIENT I.D.	: N11529	DATE ANALYZED	: 08/20/91
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	1.6
1,1,1-TRICHLOROETHANE	2.0
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	113
BROMOFLUOROBENZENE (%)	81



GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT	: EL PASO NATURAL GAS, NEW MEXICO	ATI I.D.	: 108758
PROJECT #	: (NONE)	DATE EXTRACTED	: 08/20/91
PROJECT NAME	: HYDROSTATIC	DATE ANALYZED	: 08/20/91
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
2-CHLOROETHYL VINYL ETHER	<0.5
1,3-DICHLOROBENZENE	<0.5
1,2 & 1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
1,2-DICHLOROETHENE (TOTAL)	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<0.5
VINYL CHLORIDE	<0.2
TOTAL XYLENES	<0.5
TRICHLOROTRIFLUOROETHANE	<2.0

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	93
BROMOFLUOROBENZENE (%)	100



QUALITY CONTROL DATA

ATI I.D. : 108758

TEST : VOLATILE HALOCARBONS/AROMATICS (EPA 601/602)

CLIENT : EL PASO NATURAL GAS, NEW MEXICO
 PROJECT # : (NONE)
 PROJECT NAME : HYDROSTATIC
 REF I.D. : 10875801

DATE ANALYZED : 08/21/91
 SAMPLE MATRIX : AQUEOUS
 UNITS : UG/L

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE		RPD
	RESULT	SPIKED			% REC.	% REC.	
1,1-DICHLOROETHENE	<0.2	20	16	80	16	80	0
TRICHLOROETHENE	<0.2	20	17	85	17	85	0
TETRACHLOROETHENE	<0.2	20	18	90	19	95	5
BENZENE	<0.5	20	17	85	18	90	6
BROMODICHLOROMETHANE	<0.2	20	18	90	17	85	6
CHLOROFORM	<0.2	20	18	90	18	90	0
1,1,1-TRICHLOROETHANE	<0.2	20	18	90	18	90	0
TOLUENE	<0.5	20	17	85	19	95	11
CHLOROBENZENE	<0.5	20	17	85	17	85	0
M-XYLENE	<0.5	20	17	85	19	95	11

*Acceptable
 J.P.
 9-12-91*

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 10875801

Source

TEST : POLYNUCLEAR AROMATICS (EPA 610)

CLIENT	: EL PASO NATURAL GAS, NEW MEXICO	DATE SAMPLED	: 08/17/91
PROJECT #	: (NONE)	DATE RECEIVED	: 08/20/91
PROJECT NAME	: HYDROSTATIC	DATE EXTRACTED	: 08/22/91
CLIENT I.D.	: N11526	DATE ANALYZED	: 08/28/91
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
NAPHTHALENE	<0.30
ACENAPHTHYLENE	<0.30
ACENAPHTHENE	<0.50
FLUORENE	<0.04
PHENANTHRENE	<0.03
ANTHRACENE	<0.01
FLUORANTHENE	0.11
PYRENE	0.15
BENZO(A)ANTHRACENE	<0.01
CHRYSENE	0.09
BENZO(B)FLUORANTHENE	0.03
BENZO(K)FLUORANTHENE	0.05
BENZO(A)PYRENE	<0.01
DIBENZ(a,h)ANTHRACENE	<0.10
BENZO(g,h,i)PERYLENE	<0.04
INDENO(1,2,3-CD)PYRENE	<0.03

SURROGATE PERCENT RECOVERIES

2-CHLOROANTHRACENE (%)	NA
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GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 10875802

1ST 3RD

TEST : POLYNUCLEAR AROMATICS (EPA 610)

CLIENT	: EL PASO NATURAL GAS, NEW MEXICO	DATE SAMPLED	: 08/17/91
PROJECT #	: (NONE)	DATE RECEIVED	: 08/20/91
PROJECT NAME	: HYDROSTATIC	DATE EXTRACTED	: 08/22/91
CLIENT I.D.	: N11527	DATE ANALYZED	: 08/28/91
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
NAPHTHALENE	<0.30
ACENAPHTHYLENE	0.43
ACENAPHTHENE	<0.50
FLUORENE	<0.04
PHENANTHRENE	<0.03
ANTHRACENE	<0.01
FLUORANTHENE	<0.03
PYRENE	<0.04
BENZO(A)ANTHRACENE	<0.01
CHRYSENE	<0.02
BENZO(B)FLUORANTHENE	0.02
BENZO(K)FLUORANTHENE	0.04
BENZO(A)PYRENE	<0.01
DIBENZ(a,h)ANTHRACENE	<0.10
BENZO(g,h,i)PERYLENE	<0.04
INDENO(1,2,3-CD)PYRENE	<0.03

SURROGATE PERCENT RECOVERIES

2-CHLOROANTHRACENE (%)	NA
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GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 10875803

2nd 3rd

TEST : POLYNUCLEAR AROMATICS (EPA 610)

CLIENT : EL PASO NATURAL GAS, NEW MEXICO
 PROJECT # : (NONE)
 PROJECT NAME : HYDROSTATIC
 CLIENT I.D. : N11528
 SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 08/17/91
 DATE RECEIVED : 08/20/91
 DATE EXTRACTED : 08/22/91
 DATE ANALYZED : 08/28/91
 UNITS : UG/L
 DILUTION FACTOR : 1

COMPOUNDS	RESULTS
NAPHTHALENE	<0.30
ACENAPHTHYLENE	<0.30
ACENAPHTHENE	<0.50
FLUORENE	<0.04
PHENANTHRENE	0.07
ANTHRACENE	<0.01
FLUORANTHENE	0.33
PYRENE	0.41
BENZO(A)ANTHRACENE	0.03
CHRYSENE	<0.02
BENZO(B)FLUORANTHENE	<0.01
BENZO(K)FLUORANTHENE	<0.01
BENZO(A)PYRENE	<0.01
DIBENZ(a,h)ANTHRACENE	<0.10
BENZO(g,h,i)PERYLENE	<0.04
INDENO(1,2,3-CD)PYRENE	<0.03

SURROGATE PERCENT RECOVERIES

2-CHLOROANTHRACENE (%)

NA



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 10875804
 3RD 3RD

TEST : POLYNUCLEAR AROMATICS (EPA 610)

CLIENT	: EL PASO NATURAL GAS, NEW MEXICO	DATE SAMPLED	: 08/17/91
PROJECT #	: (NONE)	DATE RECEIVED	: 08/20/91
PROJECT NAME	: HYDROSTATIC	DATE EXTRACTED	: 08/22/91
CLIENT I.D.	: N11529	DATE ANALYZED	: 08/28/91
SAMPLE MATRIX	: AQUEOUS	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
NAPHTHALENE	<0.30
ACENAPHTHYLENE	0.70
ACENAPHTHENE	<0.50
FLUORENE	<0.04
PHENANTHRENE	<0.03
ANTHRACENE	<0.01
FLUORANTHENE	<0.03
PYRENE	<0.04
BENZO(A)ANTHRACENE	<0.01
CHRYSENE	<0.02
BENZO(B)FLUORANTHENE	0.04
BENZO(K)FLUORANTHENE	0.02
BENZO(A)PYRENE	0.07
DIBENZ(a,h)ANTHRACENE	<0.10
BENZO(g,h,i)PERYLENE	<0.04
INDENO(1,2,3-CD)PYRENE	<0.03

SURROGATE PERCENT RECOVERIES

2-CHLOROANTHRACENE (%) NA



REAGENT BLANK

TEST : POLYNUCLEAR AROMATICS (EPA 610)

CLIENT : EL PASO NATURAL GAS, NEW MEXICO
PROJECT # : (NONE)
PROJECT NAME : HYDROSTATIC
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 108758
DATE EXTRACTED : 08/22/91
DATE ANALYZED : 08/28/91
UNITS : UG/L
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
NAPHTHALENE	<0.30
ACENAPHTHYLENE	<0.30
ACENAPHTHENE	<0.50
FLUORENE	<0.04
PHENANTHRENE	<0.03
ANTHRACENE	<0.01
FLUORANTHENE	<0.03
PYRENE	<0.04
BENZO(A)ANTHRACENE	<0.01
CHRYSENE	<0.02
BENZO(B)FLUORANTHENE	<0.01
BENZO(K)FLUORANTHENE	<0.01
BENZO(A)PYRENE	<0.01
DIBENZ(a,h)ANTHRACENE	<0.10
BENZO(g,h,i)PERYLENE	<0.04
INDENO(1,2,3-CD)PYRENE	<0.03

SURROGATE PERCENT RECOVERIES

2-CHLOROANTHRACENE (%)

NA



QUALITY CONTROL DATA

ATI I.D. : 108758

TEST : POLYNUCLEAR AROMATICS (EPA 610)

CLIENT : EL PASO NATURAL GAS, NEW MEXICO
 PROJECT # : (NONE)
 PROJECT NAME : HYDROSTATIC
 REF I.D. : 10999901

DATE ANALYZED : 08/28/91
 SAMPLE MATRIX : AQUEOUS
 UNITS : UG/L

COMPOUNDS	SAMPLE CONC.		SPIKED %	DUP. SPIKED %		RPD	
	RESULT	SPIKED		SAMPLE REC.	SAMPLE REC.		
ACENAPHTHYLENE	<0.30	150	81	54	62	41	27
PYRENE	<0.04	20	12.6	63	12.6	63	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

OIL CONSERVATION DIVISION
RECEIVED

El Paso
Natural Gas Company

'91 AUG 5 AM 9 41

3801 ATRISCO, N. W.
ALBUQUERQUE, NEW MEXICO 87120
PHONE: 505-831-7700

August 2, 1991

Mr. Roger Anderson
New Mexico Oil Conservation Division
P.O. Box 2088; Land Office Building
Santa Fe, New Mexico 87504-5885

RE: Request for Discharge Permit - Hydrostatic Test Water Discharge

Dear Mr. Anderson:

El Paso Natural Gas Company respectfully requests a discharge permit for hydrostatic test water discharge as detailed by the attached information. As noted, we will be testing one 30" pipeline consisting of used pipe. El Paso is requesting to discharge the bulk of the water in the pipeline ditch. Per the recent meeting between OCD and El Paso, the following procedures will be followed:

- The line will be pigged and washed with soapy water and then rinsed. The wash and rinse water will be collected and transported to an existing lined pond at El Paso's Bluewater Station.
- The test water will be sampled at the source and at the beginning, middle and end of the dewater. Analyses will be made of the major anions/cations, BETX, and PAH's.
- During test water discharge, hay bales will be used to contain any oil or grease. If an oil sheen is observed in the pipe ditch, a sweep or other oil containing device will be used to collect the visible oil.

If you have any questions, please give me a call at 505/831-7759.

Sincerely,

W. David Hall
W. David Hall, P.E.
Senior Engineer

Attachments
WDH/rp

NEW MEXICO

HYDROSTATIC TEST INFORMATION FORM

Request Date AUGUST 2, 1991
Person Requesting W. DAVID HALL
Title SENIOR ENGINEER

A. FACILITY DESCRIPTION

1. Facility Name PLAINS TO SAN JUAN LINE (1300)

2. Facility Owner EL PASO NATURAL GAS CO.

3. Beginning Of Test Section:	End Of Test Section:
Quarter Section <u>SW 4</u>	Quarter Section <u>NE 4</u>
Section <u>1</u>	Section <u>2</u>
Township <u>8N</u>	Township <u>8N</u>
Range <u>4W</u>	Range <u>4W</u>
County <u>CIBOLA</u>	County <u>CIBOLA</u>
Nearest City <u>MESITA, NM</u>	Nearest City <u>MESITA</u>
State <u>NEW MEXICO (LAGUNA RESERVATION)</u>	State <u>NEW MEXICO</u>

4. Diameter Of Line 30" Total Length ≈ 4,280 Feet To Be Tested

5. Length Of Longest Test Section 4,280 (Ft)

6. Number of Test Sections ONE

7. Check Type Of Line:
Used Pipe New Pipe

8. Check Pipeline Use:
Gathering Transmission

9. Will The Line Be Pigged Prior To Test?
Yes No

If yes, how will these fluids and/or solids be disposed? COLLECTED AND TRANSPORTED TO LINED POND AT EPNG'S BLUEWATER STATION.

10. Will the line be washed prior to test?
Yes No

If yes, how will these fluids and/or solids be disposed? SEE ABOVE

B. TEST DESCRIPTION

1. Water Source And Location EPNG LAGUNA STA. WATER SUPPLY WELLS

2. Test Start Date APPROX. AUGUST 12, 1991

B. TEST DESCRIPTION (Continued)

3. Discharge Volume Approx. 150,000 GALLONS

4. Check Discharge Path:

Lined Pond (WASH WATER) 30 Mils Thickness Liner

Unlined Pond

Pond Size _____ (Ft) By _____ (Ft)

Other PIPELINE DITCH

5. Location Of Discharge: Quarter Section _____
Section 1 & 2
Township 8N
Range 4W
County CIBOLA
Nearest City MESITA
State NEW MEXICO

6. Describe the geologic characteristics of the subsurface at the proposed discharge site: _____

7. Depth to groundwater at discharge location: Approx. 70'-100'

8. Quality of groundwater at discharge location: SEE ATTACHED ANALYSIS

9. Depth to groundwater at collection/retention site: ~ 70'-100'

10. Proposed method of disposal of fluids and solids after test completion including closure of any pits: WATER SETTLE
PIPELINE DITCH.

11. Landowner at discharge and collection/retention site? NA

12. Landowner adjacent to discharge and collection/retention site? NA

13. Is written permission from the landowner of the collection/retention site attached?

Yes No

If no, please explain: NA

Characterization of Hydrostatic Test Waters

From

El Paso Natural Gas Company's
Bluewater Encroachment Project

Prepared by

El Paso Natural Gas Company

November 14, 1983

Characterization of Hydrostatic Test Waters

From

El Paso Natural Gas Company's
Bluewater Encroachment Project

El Paso Natural Gas Company (El Paso) constructed approximately 7,700 feet of 36-inch diameter pipeline to replace two 30-inch parallel pipelines which in part transports natural gas from southeastern New Mexico to northwest New Mexico. The new pipeline begins near engineering station 2050 + 48' and ends near 2127 + 62' which is adjacent to the community of Continental Divide, New Mexico. This line was pressure tested using water (hydrostatically tested) as required by the U. S. Department of Transportation (DOT) on October 21, 1983. Water from a holding pond located at El Paso's Bluewater Station was used and then disposed of in an excavated earthen pond upon completion of the hydrostatic test. At the request of the New Mexico Oil Conservation Division a discharge procedure was prepared and utilized during the discharge. A site investigation of the holding pond at Bluewater Station was conducted prior to testing and a chemical analysis performed on the fill water to establish a baseline. Analysis of discharge water samples were also made. The results of the chemical analyses are presented herein in graphical and tabular form.

This report describes in some detail the procedure used for filling, testing, sampling, discharge, and analysis. A discussion of analytical results is also included.

Fill Water

Water for the hydrostatic test was obtained from a fresh water pond located at El Paso's Bluewater Station about 6 miles east of Continental Divide. Four 10,000 gallon water trucks were used to haul the water from the pond to the fill point. Each truck was filled using a 250 gallon per minute pump which contained an inline water filter. At the fill point a 100-mesh screen was used to filter the water prior to injecting it into the pipeline.

The source of fresh water in the pond was from the Bluewater Station drinking water wells. Water analyses conducted by El Paso's Southern Division Laboratory over the past several years indicate the water contains about 500 mg/L total dissolved solids. The chemical analyses are shown in Table 1. The analyses indicates the water is of good quality relative to other groundwaters in the Southwest.

Table 1
Chemical Analyses of Bluewater Station
Water Supply Wells

Constituent	Well #1	Well #2	Well #3
Sample Date	3/04/83	3/10/83	3/15/80
pH	8.0	8.0	7.1
Specific Conductance, μ mhos/cm	612	577	627
M-Alkalinity, mg/L	215	200	240
Chloride, mg/L	11	7	4
Sulfate, mg/L	75	60	110
Total Hardness as CaCO_3 , mg/L	280	306	318
Calcium as CaCO_3 , mg/L	152	230	242
Magnesium as CaCO_3 , mg/L	128	76	76
Iron, mg/L	0.2	0.1	0.05
Fluoride, mg/L	0	0	0.15
Silica, mg/L	17.5	17.5	7.5
Sodium, mg/L	69	9	19
Total Dissolved Solids, mg/L	525	430	549

Filling Procedure

The 7,700 foot pipeline was filled at Station 2127 + 62' (Section 27 TWS. 14-N, Range 14-W NMPM). See Figure 1 in map pocket. As water filled the line a squeegee fill pig was pushed toward the other end of the line. Some of the debris left in the line during construction mixed with the water and accumulated ahead of the pig as shown in Photograph No. 1. By the time the fill pig reached the end of the line a relatively small quantity of sediment had accumulated. The discharge was red in color indicating the majority of the sediment was probably iron oxide from the pipeline cutting and welding operation and some orange-red paint overspray used for coating the interior of the pipe. A small amount of solids and water discharged during this initial filling of the line was deposited in the pipeline ditch and buried. The pipeline was



Photograph No. 1

Showing the end of the 36-inch pipeline with a squeegee pig. The debris shown in the pipeline accumulated in front of the pig as it moved down the pipeline.

October 22, 1983

filled with about 396,000 gallons of water. A sample of the fill water was obtained after it was filtered through a 100-mesh screen and just prior to entering the 36-inch diameter pipeline.

Testing Procedure

Once the line was filled with water, it was pressured to a minimum pressure of 1650 psig and held for a duration of 8 hours. After the pipeline had been tested, the pressure was relieved and the dewatering process started.

Dewatering and Sampling Procedure

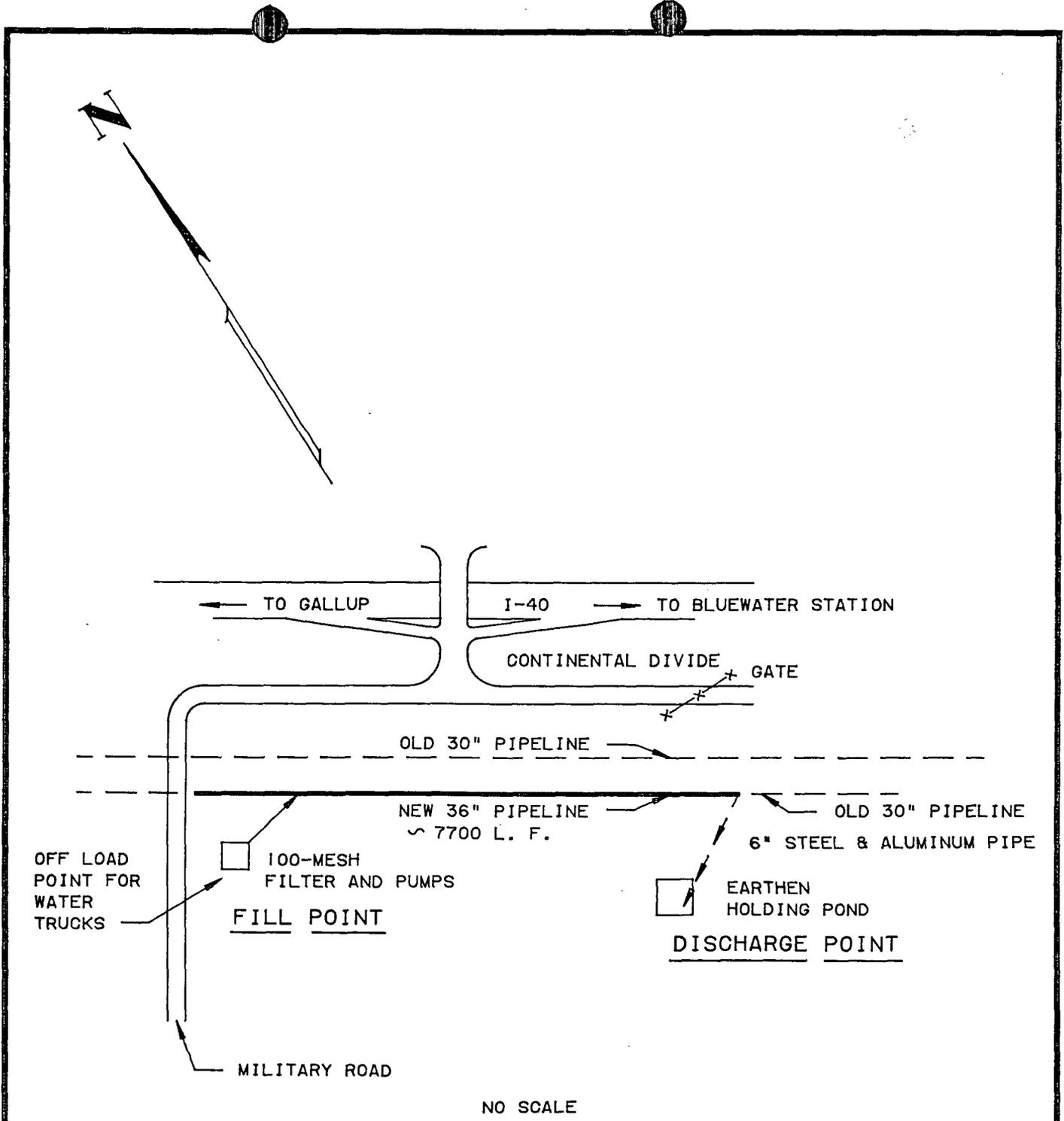
The water was discharged from the pipeline by pushing the water ahead of a squeegee discharge pig propelled by natural gas. The gas was obtained from the existing 30" line using a cross-over tie. The average rate of discharge was calculated to be about 1930 gallons per minute.

At the discharge point an earthen holding pond 115 feet by 138 feet had been excavated to a depth of about eight feet. The discharged water was transported to the pond through a combination of six and eight inch steel and aluminum pipe. The discharge pipeline and holding pond are shown in Figure 2 and Photograph No. 2.

Samples of the discharge were collected at 30 minute intervals from the end of the 36-inch pipeline test head before it entered the six-inch diameter steel discharge line. A total of ten samples of the fill and discharge water were collected and analyzed.

Analyses were performed in the field for temperature, specific conductance, pH and turbidity. Three samples were collected, properly preserved and transported to Raba-Kistner Laboratory where chemical oxygen demand, oil and grease, total iron, total dissolved solids and other constituents of concern were determined.

The samples were collected and preserved in accordance with criteria set out in the U. S. Environmental Protection Agencies Methods for Chemical Analysis of Water and Wastes (EPA 600/4-79-020). The containers were



NO SCALE

- REFERENCE: 1. EL PASO DRAWING NO. 1300.0-73A
 2. U.S.G.S. 7 1/2 MINUTE QUAD., CONTINENTAL DIVIDE, N. MEX.

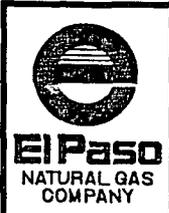


FIGURE 2
 DESCRIPTION OF HYDROSTATIC TEST
 FOR 36" DIAMETER PIPELINE
 TOP-O-WORLD ENCROACHMENT
 CONTINENTAL DIVIDE,
 MC KINLEY COUNTY, NEW MEXICO



Photograph No. 2

Showing the six-inch discharge pipe into the earthen holding pond. After discharging all the water in the pipeline into the pond the maximum depth measured was three feet.

labeled with a unique sample number, time and date of collection, field measurements taken at the time of sampling, and initialed by the collectors. In addition, a field log was completed to record sufficient information so that the sampling procedure could be reconstructed without reliance upon the collector's memory.

The analyses were performed in accordance with Standard Methods for the Examination of Water and Wastewater, 15th edition, published by the American Public Health Association, et al.

The earthen pond which was used to contain the discharge water filled to an estimated depth of three feet. It was allowed to dry by evaporation and infiltration. Once dry, the pond was graded to the approximate original contour and reseeded with native vegetation.

Findings and Discussion

The hydrostatic test water was evaluated as to its physical and chemical character. The baseline analysis of the fill water was used for comparison to the discharge water analyses. The results of the field analyses are shown in tabular form in Table 2 and laboratory results are presented in Table 3.

Specific conductance, pH and temperature fluctuated only slightly. The specific conductance ranged from 500 $\mu\text{mhos/cm}$ to 600 $\mu\text{mhos/cm}$ which was very nearly equal to the 550 $\mu\text{mhos/cm}$ of the fill water. The pH fluctuated from a low of 7.40 to a high of 7.75 but is not considered significantly different from the fill water of 7.88. The ambient temperature ranged from 50°F down to 32°F during the period of discharge. Turbidity was measured to monitor the general water quality. The low values of turbidity measured (less than 500 FTU) indicates that the water was of relatively good quality throughout the discharge. Of these four quality parameters, New Mexico has a standard only for pH which ranges from 6 to 9. Hence, the discharged water met the state criteria.

The results of the laboratory analyses indicate that the discharge water was not significantly degraded below the fill water quality. For example, the Chemical Oxygen Demand (COD) of the initial discharge which

Table 2

Field Analyses of Samples from Bluewater
Encroachment Hydrostatic Test Water Discharge

Sample Description	Sample Number	pH	Temp.	E.C. umhos/cm	Turbidity F.T.U.	Date	Time (Hrs.)
Fill Water	83-053	7.88	58°F	550	<10	20 Oct. 83	1345
Ambient Temp at Beginning of Discharge 50°F							
Discharge Water Sampling	83-054	7.40	50°F	600	80	21 Oct. 83	2050
		7.75	55°F	550	70	21 Oct. 83	2125
		7.57	55°F	550	140	21 Oct. 83	2145
		7.55	55°F	530	50	21 Oct. 83	2215
	83-055	7.51	55°F	525	20	21 Oct. 83	2230
		7.60	55°F	550	25	21 Oct. 83	2250
		7.57	55°F	500	20	21 Oct. 83	2315
		7.52	53°F	550	20	21 Oct. 83	2345
End of Dewater							
End of Dewater	83-056	7.69	55°F	500	300	22 Oct. 83	0015

Ambient Temp at End of Discharge 32°F

Dewater of 36" Diameter pipeline at Continental Divide, New Mexico

All new pipe was used in this segment having about 7,700 LF containing 396,000 gallons of water for hydrostatic test. The line was tested at 1,650 psig for eight hours on 21 Oct. 83 and immediately dewatered. The pressure on the pig remained at 38 psig during dewater operations. The pipeline was not cleaned prior to filling. The average dewater rate was 1,930 gallons per minute.

Table 3

Chemical Analyses of Samples from Top-0-World
Encroachment Hydrostatic Test Water Discharge

	Sample Number (Results in mg/L)				NMWQCC ^{2/} Standards
	83-053 ^{1/}	83-054	83-055	83-056	
Sample Time (Oct. 21 83) ^{3/}	Fill Water	2050 Hrs.	2250 Hrs.	0015 Hrs.	
Nitrate as Nitrogen	<0.05	0.175	<0.05	0.138	10.0
Total Dissolved Solids	542	354	375	180	1000
Total Suspended Solids	12	8	10	22	-
Oil and Grease	1780	1170	909	1180	-
Aluminum	14.4	0.6	19.1	1.2	5.0
Arsenic	0.004	0.003	0.003	0.006	0.1
Barium	0.29	0.93	0.46	0.25	1.0
Boron	3.6	<0.5	3.3	<0.5	0.75
Cadmium	<0.0025	<0.0025	0.008	0.019	0.01
Chromium	<0.01	<0.01	<0.01	<0.01	0.05
Cobalt	<0.01	<0.01	<0.01	<0.01	0.05
Copper	0.02	0.007	0.009	<0.02	1.0
Iron	1.73	5.10	1.24	17.0	1.0
Lead	0.006	0.15	0.13	0.19	0.05
Magnesium	0.04	0.04	0.05	0.33	0.2
Mercury	<0.001	<0.001	<0.001	<0.001	0.002
Molybdenum	<0.05	<0.05	<0.05	<0.05	1.0
Nickel	<0.05	<0.05	<0.05	<0.05	0.2
Selenium	<0.001	<0.001	<0.001	<0.001	0.05
Silver	<0.005	<0.005	<0.005	<0.005	0.05
Zinc	0.04	0.05	0.06	0.25	10.0
Chemical Oxygen Demand ^{4/}	16	21	15	15	-

1/ Fill water sample collected October 20, 1983

2/ New Mexico Water Quality Control Commission Regulation Section 3-103
(Groundwater Regulations).

3/ 24-Hour clock

4/ Filtered samples used for COD analyses only.

was expected to have the worst quality was only 21 mg/L; the fill water COD was 16 mg/L. Hence, the worst case condition measured in the three discharge samples was an additional 5 mg/L COD. Such a small increase is to be expected since there was no known organic constituent added to the water to cause an increase in COD. The slight increase over baseline can be attributed to dirt and dust accumulation in the pipeline during construction. For comparison, drinking water usually has a COD of 10 mg/L or less and the COD of raw wastewater ranges from 200 to 600 mg/L.

The concentration of certain heavy metals, such as iron, cadmium and lead, increased slightly in some, but not all, samples. As the pipe ends were welded together, fumes and solids were left in the pipeline as a residue. An example of cutting and welding residue is shown in Photograph No. 3.

The differences in concentrations of some constituents among the fill water and the three samples of the discharge are generally small. There is no apparent reason for some of the differences shown in Table 3. They are of similar magnitude as the differences among wells, shown in Table 1.

The suspended solids were naturally filtered as the discharged water infiltrated the soil surface. The dissolved portion would be absorbed by the clay and silt as it passes downward through the soil. Since continuous hydraulic loading of the area will not occur to force the heavy metal further downward after this one time discharge there should be no concern over potential pollution of the groundwater.

Conclusion

The analytical information indicates that no significant environmental problem was created by discharging the hydrostatic test water into an earthen holding pond. Because the water was not discharged directly into a stream or lake, no New Mexico water quality standard was exceeded during this operation.



Photograph No. 3

Showing the end of the 36-inch pipeline where welding and cutting residue has accumulated. This residue is readily filtered by the soil and poses no significant environmental problem.

October 22, 1983

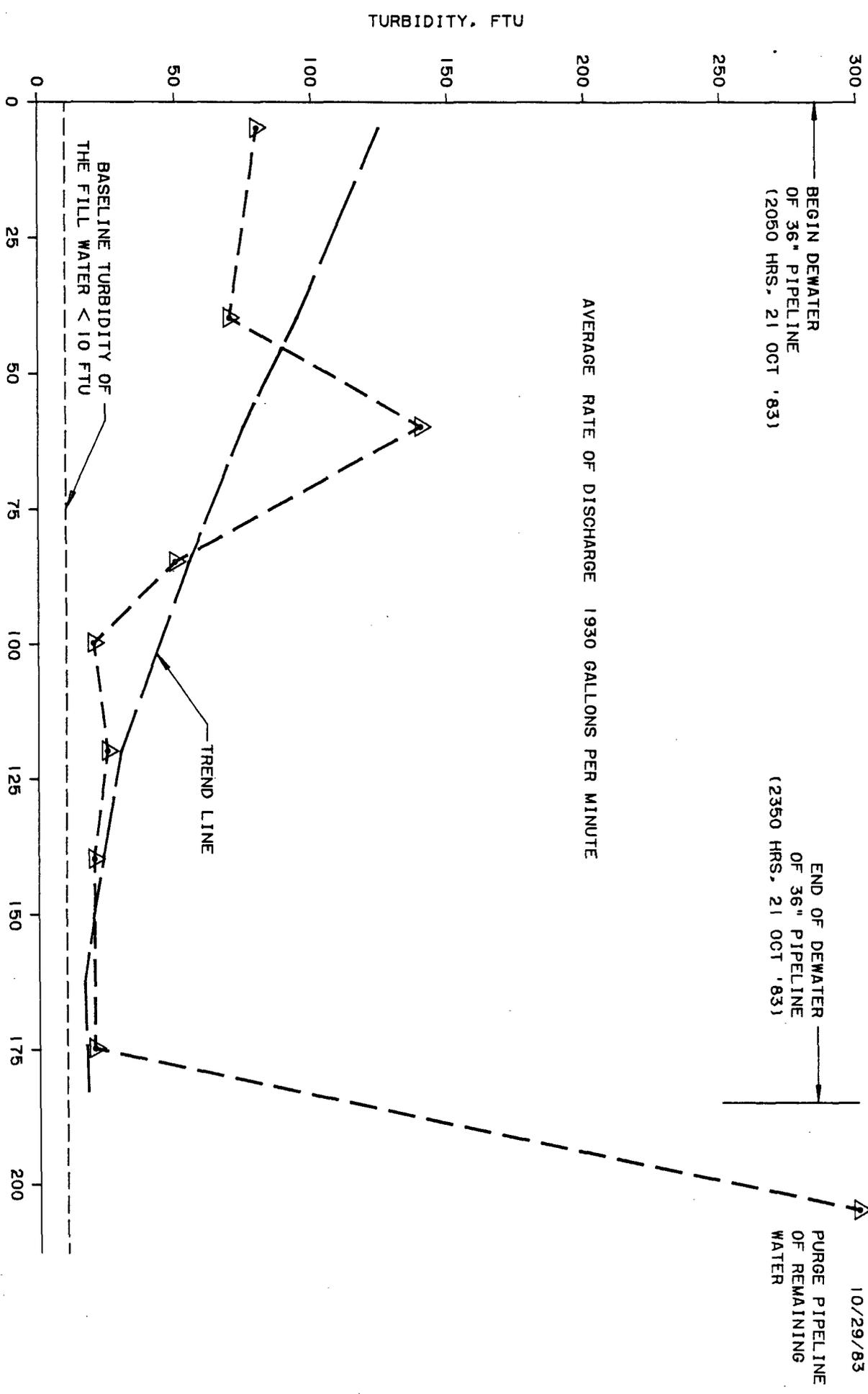
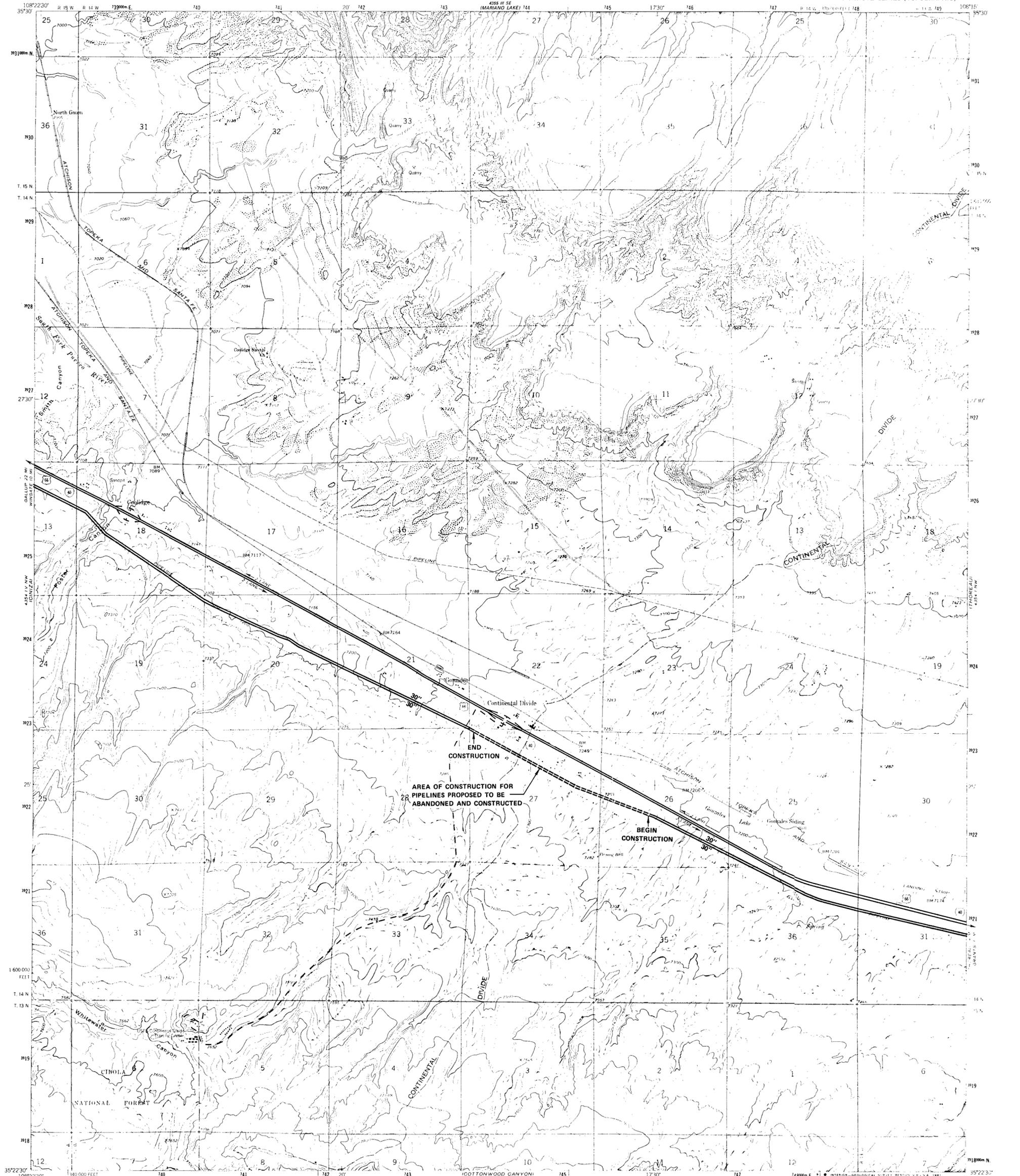
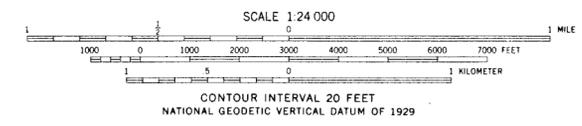
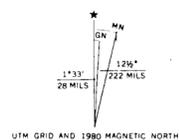


FIGURE 3
 VARIATION OF THE TURBIDITY OF
 THE DISCHARGE WATER WITH TIME
 TOP-0-WORLD ENCROACHMENT PROJECT



Mapped, edited, and published by the Geological Survey
Control by USGS and NOS/NOAA
Topography by photogrammetric methods from aerial
photographs taken 1961. Field checked 1962.
Polyconic projection. 1927 North American datum.
10,000 foot grid based on New Mexico coordinate system, west zone.
1000 meter Universal Transverse Mercator grid ticks,
zone 12, shown in blue.
Fine red dashed lines indicate selected fence lines.
There may be private inholdings within the boundaries
of the National or State reservations shown on this map.
To place on the predicted North American Datum 1983
move the projection lines 56 meters east as
shown by dashed corner ticks.



THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

FIGURE 1
ROAD CLASSIFICATION

Heavy duty	Light duty
Medium duty	Unimproved dirt

Interstate Route U.S. Route

**LOCATION MAP OF TOP-O-WORLD
ENCROACHMENT HYDROSTATIC TEST**

QUADRANGLE LOCATION

**PERMIAN-SAN JUAN CROSSOVER
REPLACEMENT**

CONTINENTAL DIVIDE, N. MEX.

1962
DMA 4354 IV NF-SERIES V881
MR-002