3R - 299

GENERAL CORRESPONDENCE

YEAR(S):
1988 - 1978

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

March 14, 1988

Mr. Richard Patton
Box 1725
Bloomfield, New Mexico 87413

Dear Mr. Patton:

Enclosed are the results of the water analysis of the samples taken from your water well on January 13, 1988 by Oil Conservation Division personnel, and previously by EID Farmington staff.

The results show no dissolved hydrocarbon contamination which would indicate that there are no oil or gas wells or facilities that have contaminated the ground water in the area of your well. The water bearing strata in your well is very shallow, from 15 to 21 feet, and composed of river sand and gravel. It is therefore very susceptible to contamination from the surface. However, a bacterial analysis did not show likely surface or septic tank contamination. As seen at other shallow wells in the valley, there is likely shale or clay containing organic matter immediately beneath the bottom of the well. The methane detected in the headspace of the sample is most likely the natural decomposition product of this natural organic material.

Methane gas is potentially a highly flammable gas. Care should be taken not to allow large quantities of the gas to accumulate in an area where there is an ignition source.

If there are any questions, please do not hesitate to call me at 827-5885.

Sincerely,

Roger Anderson

Roger Anderson
Environmental Engineer

RA:sl

cc: OCD - Aztec
EID - Farmington

State of New Mexico
HEALTH and ENVIRONMENT DEPARTMENT
SCIENTIFIC
LABORATORY DIVISION

CHEMICAL and PHYSICAL ANALYSES for WATER SAMPLES

UNM

Date received	Lab No.	SLD user code No.
1-11-88	UNC-A117	

FOR PROPER PRESERVATION OF SAMPLES. CONSULT DEFINITIONS ON REVERSE. TYPE OR PRINT WITH BALL POINT PEN.

CHEMICAL ANALYSES: *Check individual items for analysis [Mark appropriate box(es)]*

INTERIM PRIMARY PARAMETER GROUP ☐ 1 ☐ 2 ☐ 3

TYPE of CHEMICAL ANALYSIS ☐ Complete Secondary ☐ Organic ☐ Radiological

Water Supply System Name	Water Supply System Code No.	City or Location	County	Check one:
RICHARD PATTON		FARMINGTON		☐ TREATED WATER ☒ RAW WATER

Collection Date	Collection Time	Collection Point	Collector's remarks	Report to
1/13/88	1415	PUMP HOUSE		OIL CONSERVATION DIVISION

Collected By	Owner	Address
ANDERSON	PATTON	Box 2088 SANTA FE NM 87504-2088

TYPE of SYSTEM *(Check one)* ☒ PRIVATE PUBLIC: ☐ Community ☐ Non-community

SOURCE: ☐ Spring ☐ Lake ☒ Well-Depth 21 ft. ☐ Drain ☐ Stream ☐ Pool ☐ Other *(specify)*

LAT. ° ' "

LONG ° ' "

CATIONS	mg/l	ANIONS	mg/l	PHYSICAL		HEAVY METALS	mg/l*	PARAMETER		ORGANIC	mg/l
☒ 00930 Sodium (as Na)	670	☒ 00940 Chloride (as Cl)	12	☐ 70300 Total Filterable Residue	mg/l 541	☐ 01000 Arsenic				☐ 39390 Endrin	
☒ 00935 Potassium (as K)	287	☒ 00950 Fluoride (as F)	0.63	☐ 38260 Foaming Agents (as Las)		☐ 01005 Barium				☐ 39732 Lindane	
☒ 00900 Tot.Hardness (as $CaCO_3$)	300	☐ 00620 Nitrate (as N)		☐ 00095 Conductance Micromhos 25°C		☐ 01025 Cadmium				☐ 38270 Methoxychlor	
☒ 00915 Calcium (as Ca)	1120	☐ 00430 Alkalinity (as $CaCO_3$)		☐ 00400 pH	8.09	☐ 01030 Chromium		RADIOLOGICAL pCi/l ☐ 01501 Gross Alpha		☐ 39400 Toxaphene	
☒ 00925 Magnesium (as Mg)	49	☒ 00440 Bicarbonate (as HCO_3)	255	☐ 01330 Odor		☐ 01049 Lead		☐ 03501 Gross Beta	pCi/l	☐ 39730 2, 4-D	
☒ 01045 Iron-Total (as Fe)		☒ 00445 Carbonate (as CO_3)	0	☐ 00080 Color	mg/l	☐ 07180 Mercury		☐ 09501 Radium-226	pCi/l	☐ 39740 2, 4, 5-TP (Silvex)	
☒ 01056 Manganese (as Mn)		☒ 00945 Sulfate (as SO_4)	179	☐ 00070 Turbidity		☐ 01145 Selenium		☐ 11501 Radium-228	pCi/l		
☒ TDS	546	☒ ion balance	108%			☐ 01075 Silver					

LABORATORY REMARKS:

Reviewed by

Date reported 3/21/88

SLD 702 Form Rev. 9/84

DISTRIBUTION: **White** - Water Supply Regulation, SF • **Canary** - WS System • **Pink** - EIA Regional Office • **Goldenrod** - SLD Lab

State of New Mexico
HEALTH and ENVIRONMENT DEPARTMENT
SCIENTIFIC
LABORATORY DIVISION

CHEMICAL and PHYSICAL ANALYSES for WATER SAMPLES

Date received	Lab No.	SLD user code No.
1-11-88	WC-A117	

FOR PROPER PRESERVATION OF SAMPLES, CONSULT DEFINITIONS ON REVERSE. TYPE OR PRINT WITH BALL POINT PEN.

CHEMICAL ANALYSES: *Check individual items for analysis [Mark appropriate box(es)]*

INTERIM PRIMARY PARAMETER GROUP: ☐ 1 ☐ 2 ☐ 3 ☐ Complete Secondary

TYPE of CHEMICAL ANALYSIS: ☐ Organic ☐ Radiological

Water Supply System Name	Water Supply System Code No.	City or Location	County	Check one:
RICHARD PATTON		FARMINGTON		☐ TREATED WATER ☒ RAW WATER

Collection Date	Collection Time	Collection Point	Collector's remarks	Report to
1/13/88	1415	PUMP HOUSE		OIL CONSERVATION DIVISION

Collected By	Owner	Address
ANDERSON	PATTON	Box 2088 Santa Fe NM 87504-2088

TYPE of SYSTEM *(Check one)*: ☒ PRIVATE PUBLIC: ☐ Community ☐ Non-community

SOURCE: ☐ Spring ☐ Lake ☒ Well-Depth 21 ft. ☐ Drain ☐ Stream ☐ Pool ☐ Other *(specify)*

LAT. ° ' "
LONG ° ' "

CATIONS	mg/l	ANIONS	mg/l	PHYSICAL		HEAVY METALS	mg/l	PARAMETER		ORGANIC	mg/l
☒ 00930 Sodium (as Na)	670	☒ 00940 Chloride (as Cl)	12	70300 Total Filterable Residue	mg/l 514	01000 Arsenic				39390 Endrin	
☒ 00935 Potassium (as K)	287	☒ 00950 Fluoride (as F)	0.63	38260 Foaming Agents (as Las)		01005 Barium				39732 Lindane	
☒ 00900 Tot. Hardness (as $CaCO_3$)	300	00620 Nitrate (as N)		00095 Conductance Micromhos 25°C		01025 Cadmium				38270 Methoxychlor	
☒ 00915 Calcium (as Ca)	120	00430 Alkalinity (as $CaCO_3$)		00400 pH	8.09	01030 Chromium		RADIOLOGICAL pCi/l 01501 Gross Alpha		39400 Toxaphene	
☒ 00925 Magnesium (as Mg)	49	☒ 00440 Bicarbonate (as HCO_3)	255	01330 Odor		01049 Lead		03501 Gross Beta	pCi/l	39730 2, 4-D	
☒ 01045 Iron-Total (as Fe)		☒ 00445 Carbonate (as CO_3)	0	00080 Color	mg/l	07180 Mercury		09501 Radium-226	pCi/l	39740 2, 4, 5-TP (Silvex)	
☒ 01056 Manganese (as Mn)		☒ 00945 Sulfate (as SO_4)	179	00070 Turbidity		01145 Selenium		11501 Radium-228	pCi/l		
☒ TPS	546	☒ ion balance	108%			01075 Silver					

LABORATORY REMARKS:

Reviewed by

Date reported 3/21/88

SLD 702 Form Rev. 9/84

DISTRIBUTION: **White** - Water Supply Regulation, SF • **Canary** - WS System • **Pink** - EIA Regional Office • **Goldenrod** - SLD Lab

STATE OF NEW MEXICO
SCIENTIFIC LABORATORY DIVISION (HED)
700 Camino de Salud, NE
Albuquerque, New Mexico 87106
(505) 841-2537

MICROBIOLOGICAL WATER REPORT

Date Received | Time Received

SAMPLE IDENTIFICATION

Water Supply System Name

SLD User Code No.

County

WSS Code No.

COLLECTION INFORMATION

Date Collected Mo Day Year

Time Collected : ☐ AM ☐ PM

Collected By

Collection Location

TYPE OF SYSTEM

Check One:

☐ Community ☐ Non-Community ☐ Private Well

☐ Other - Specify _____ (999)

Disinfected? ☐ Yes ☐ No Residual: _____ mg/L

TESTING REQUIRED

Check One:

☐ Potability – MF (180) ☐ Fecal – MF (181)

☐ Potability – MPN (183) ☐ Fecal – MPN (184)

☐ Other _____

REASON FOR SAMPLING

Check One:

☐ Routine Sample ☐ Special Sample

☐ Check Sample ☐ Monitoring Sample (EID use only)

Send Report to the following (Name and Address)

SLD 521 (Rev. 5/86)

LABORATORY TEST RESULTS

Type of T

Total _____ per 100 ml MF

Confirmed _____ positive tubes MPN

Fecal _____ per 100 ml MPN

Fecal _____ per 100 ml MF

Noncoliforms _____ per 100 ml MF

Other _____

UNSATISFACTORY SAMPLE

If one of the following is checked, please resample.

☐ Excessive noncoliforms present. Resample—request MPN method.

☐ Sample too old. Not received within _____ hours of collection.

☐ Temperature violation (above 10 °C)

☐ Form incomplete. See circled item.

☐ Date discrepancy.

☐ Leaking sample.

☐ Quantity insufficient for testing.

☐ Quantity too great to permit agitation.

☐ Other _____

Analyst _____

Date reported _____

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

WPU 153 0038 C

WPU 154 0039 C

REPORT TO: David Boyer
N.M. Oil Conservation Div.
P.O. Box 2088
Santa Fe, N.M. 87504-2088

S.L.D. No. OR- 0038/0039 ADB
DATE REC. 1-14-88
PRIORITY 2
PHONE(S): 827-5812

Farmington ; COUNTY: San Juan

/TIME CODE: (Year-Month-Day-Hour-Minute) |8|8|0|1|1|3|1|4|1|5|

(Township-Range-Section-Tracts) |2|9|N|+|1|2|W|+|2|9|+| | | |(10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: Olson CODE: | | | |

SAMPLE TYPE: WATER |X|, SOIL | |, FOOD | |, OTHER: _____

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature. .
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [X] (753) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: _____

FIELD DATA:

pH=_____; Conductivity= 750 umho/cm at 13.5 °C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ _____/_____

Depth to water 8 ft.; Depth of well 21 ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Richard Patton - Pump House

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): William Olson Method of Shipment to the Lab: Hand

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

ANALYSES PERFORMED

LAB. No.: OR-00[illegible]/0037

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- [x] (753) Aliphatic Purgeables (1-3 Carbons)
- [ ] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
Non-PACE			
Methane MDL = 5000	N.D.		
Others MDL = 5000	N.D.		
aromatic purgeables	N.D.		
halogenated purgeables	N.D.		
* DETECTION LIMIT * *	1/95/1	+ DETECTION LIMIT + +	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes [ ] No [ ]. Seal(s) broken by: No [illegible] date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 1/25/88 1/25/88 Analyst's signature: [illegible]

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyerhen

NPH - 2133 C
754

SCIENTIFIC LABORATORY DIVISION

1400 Camino de Salud NE
Albuquerque, NM 87106 841-2570

CC: EID
724 W. Animas
Farmington, NM 87

REPORT TO: David Boyer
OCD
P.O. Box 2088
Santa Fe, NM 87501

S.L.D. No. OR- 2133 - A+B / 2134 - A+B
DATE REC. 12-10-87
PRIORITY 2
PHONE(S): 827-5812

NPH 754 2134 C

COLLECTION CITY: Wild Horse Valley ; COUNTY: San Juan

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|7|1|2|0|8|1|0|3|0|

LOCATION CODE: (Township-Range-Section-Tracts) |2|9|N+|1|3|W+|1|6+| | | (10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: Lew Murray CODE: | | |

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____

This form accompanies 2 Septum Vials, ____ Glass Jugs, and/or ____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice: Sample stored in an ice bath (Not Frozen).
- [X] P-$Na_2S_2O_3$: Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [X] (753) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: Vials: Blank-1 and Blank-2

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ _____/_____

Depth to water _____ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Farmington Field office sink. City of Farmington tap water.

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): Lew Murray Method of Shipment to the Lab: Purolator

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

ANALYSES PERFORMED

LAB. No.: OR- 2133/2134

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- [x] (753) Aliphatic Purgeables (1-3 Carbons)
- [x] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
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- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
ALIPHATIC PURGEABLES MDL = 5000		ND <500	
		aromatic purgeables †	N.D.
		halogenated purgeables †	
		chloroform	16
		dichlorobromomethane	10
		dibromochloromethane	4
* DETECTION LIMIT * ✳		+ DETECTION LIMIT - †	1 49/L

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☐. Seal(s) broken by: No seals date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 12/22/87 12/30/87 Analyst's signature: C. S. Lowery ; Mary C. Eden

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: R Menchen

NPW 753 2136-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

CC: EID
724 W. Animas
Farmington, NM 8740

NPW 754 2137-C

REPORT TO: David Boyer
OCD
P.O. Box 2088
Santa Fe, NM 87501

S.L.D. No. OR- 2136 A & B / 2137 A & B
DATE REC. 12-10-87
PRIORITY 2
PHONE(S): 827-5812

COLLECTION CITY: Wild Horse Valley ; COUNTY: San Juan

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|7|1|2|0|8|1|4|1|0|

LOCATION CODE: (Township-Range-Section-Tracts) |2|9|N|+|1|2|W|+|2|9|+| | | | (10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: Lew Murray CODE: | | |

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [X] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [X] (753) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: Vials: RP-1 and RP-2

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water 5 ft.; Depth of well 35 ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Richard Patten kitchen sink, County Road 5772, #9. Private well used for drinking & bathing.

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): Lew Murray Method of Shipment to the Lab: Purolator

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

ANALYSES PERFORMED LAB. NO. OR-2256/2257

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- [x] (753) Aliphatic Purgeables (1-3 Carbons)
- [x] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
ALIPHATIC PURGEABLES, METHANE		MDL = 5000 31000	
		aromatic purgeables †	N.D.
		halogenated purgeables †	N.D.
* DETECTION LIMIT * *		+ DETECTION LIMIT = †	1 49/L

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT
T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)
[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes [ ] No [ ]. Seal(s) broken by: NO SEALS date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 12/22/87 12/30/87 Analyst's signature: C S Barney ; Gary C. Edens

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Meyerhen

NEY 751 2138-B

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

CC: EIU
724 W. Animas
Farmington, NM 87401

2138 A&B
S.L.D. No. OR- 2139 A&B

NEY 764 2139-B

REPORT TO: David Boyer
OCD
P.O. Box 2088
Santa Fe, NM 87501

DATE REC. 12-10-87
PRIORITY 2
PHONE(S): 827-5812

COLLECTION CITY: Wild Horse Valley ; COUNTY: San Juan

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|7|/|2|0|8|/|1|4|/|5|

LOCATION CODE: (Township-Range-Section-Tracts) |2|9|N+|1|2|W+|2|9|+| | | | |(10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: Len Murray CODE: | | | |

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER: _____

This form accompanies ____ Septum Vials, 1 Glass Jugs, and/or ____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [ ] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [ ] (753) Aliphatic Headspace (1-5 Carbons)
- [ ] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [X] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [X] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: One Amber Bottle

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ ____/____

Depth to water 5 ft.; Depth of well 35 ft.; Perforation Interval ____-____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Richard Patten Kitchen Sink, County Road 5772, #9. Private Well that use for drinking & bathing.

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): Len Murray Method of Shipment to the Lab: Purolator

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on ____/____/____ - ____:____ and that the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

ANALYSES PERFORMED

LAB. No.: OR- 23 P/2 T 6

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- ☐ (753) Aliphatic Purgeables (1-3 Carbons)
- ☐ (754) Aromatic & Halogenated Purgeables
- ☐ (765) Mass Spectrometer Purgeables
- ☐ (766) Trihalomethanes

Other Specific Compounds or Classes

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

EXTRACTABLE SCREENS

- ☑ (751) Aliphatic Hydrocarbons
- ☐ (760) Organochlorine Pesticides
- ☐ (755) Base/Neutral Extractables
- ☐ (758) Herbicides, Chlorophenoxy acid
- ☐ (759) Herbicides, Triazines
- ☐ (760) Organochlorine Pesticides
- ☐ (761) Organophosphate Pesticides
- ☐ (767) Polychlorinated Biphenyls (PCB's)
- ☑ (764) Polynuclear Aromatic Hydrocarbons
- ☐ (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
ALIPHATIC HYDROCARBONS	MDL = 250	NO < 250	
PNAO	MDL = 5	NO < 5	
* DETECTION LIMIT * ✳		+ DETECTION LIMIT + ┼	

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

Manual

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes ☐ No ☐. Seal(s) broken by: NO SEALS date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 12/07/87. Analyst's signature: C S Bruner

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

753 & 2140-C

SCIENTIFIC LABORATORY DIVISION

700 Camino de Salud NE
Albuquerque, NM 87106 841-2570

cc: ETD
724 W. Animas
Farmington, NM 87401

2140-A&B
2135-A&B

REPORT TO: David Boyer
OCD
P.O. Box 2088
Santa Fe, NM 87501

S.L.D. No. OR-
DATE REC.
PRIORITY 2
PHONE(S): 827-5812

754 2135-C

COLLECTION CITY: Wild Horse Valley ; COUNTY: San Juan

COLLECTION DATE/TIME CODE: (Year-Month-Day-Hour-Minute) |8|7|1|2|0|8|1|4|3|5|

LOCATION CODE: (Township-Range-Section-Tracts) |2|9|N|+|1|2|W|+|2|9|+| | | |(10N06E24342)

USER CODE: |8|2|2|3|5| SUBMITTER: Lew Murray CODE: | | | |

SAMPLE TYPE: WATER [X], SOIL [ ], FOOD [ ], OTHER:

This form accompanies 2 Septum Vials, _____ Glass Jugs, and/or _____ _____

Samples were preserved as follows:

- [ ] NP: No Preservation; Sample stored at room temperature.
- [X] P-Ice Sample stored in an ice bath (Not Frozen).
- [X] P-$Na_2S_2O_3$ Sample Preserved with Sodium Thiosulfate to remove chlorine residual.

ANALYSES REQUESTED: Please check the appropriate box(es) below to indicate the type of analytical screens required. Whenever possible list specific compounds suspected or required.

PURGEABLE SCREENS

- [X] (753) Aliphatic Headspace (1-5 Carbons)
- [X] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

Remarks: Vials; BW-1 and BW-2

FIELD DATA:

pH=_____; Conductivity=_____umho/cm at _____°C; Chlorine Residual=_____mg/l

Dissolved Oxygen=_____mg/l; Alkalinity=_____mg/l; Flow Rate_____ _____/_____

Depth to water 5 ft.; Depth of well_____ft.; Perforation Interval _____-_____ft.; Casing:_____

Sampling Location, Methods and Remarks (i.e. odors, etc.)

Bruce Williams kitchen sink, County Road 5787, #25. Approximately 0.2 mile southwest of Richard Patten home. Private well. No drinking, just bathing.

I certify that the results in this block accurately reflect the results of my field analyses, observations and activities.(signature collector): Lew Murray Method of Shipment to the Lab: Purolator

CHAIN OF CUSTODY

I certify that this sample was transferred from _____ to _____

at (location) _____ on _____/_____/_____ - _____:_____ and that

the statements in this block are correct. Evidentiary Seals: Not Sealed [ ] OR Seals Intact: Yes [ ] No [ ]

Signatures _____ _____

ANALYSES PERFORMED

LAB. No.: OR- 22740

THIS PAGE FOR LABORATORY RESULTS ONLY

This sample was tested using the analytical screening method(s) checked below:

PURGEABLE SCREENS

- [x] (753) Aliphatic Purgeables (1-3 Carbons)
- [x] (754) Aromatic & Halogenated Purgeables
- [ ] (765) Mass Spectrometer Purgeables
- [ ] (766) Trihalomethanes

Other Specific Compounds or Classes

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

EXTRACTABLE SCREENS

- [ ] (751) Aliphatic Hydrocarbons
- [ ] (760) Organochlorine Pesticides
- [ ] (755) Base/Neutral Extractables
- [ ] (758) Herbicides, Chlorophenoxy acid
- [ ] (759) Herbicides, Triazines
- [ ] (760) Organochlorine Pesticides
- [ ] (761) Organophosphate Pesticides
- [ ] (767) Polychlorinated Biphenyls (PCB's)
- [ ] (764) Polynuclear Aromatic Hydrocarbons
- [ ] (762) SDWA Pesticides & Herbicides

ANALYTICAL RESULTS

COMPOUND(S) DETECTED	CONC. [PPB]	COMPOUND(S) DETECTED	CONC. [PPB]
Aliphatic purgeables, methane		MDL = 5000 8000	
		aromatic purgeables †	N.D.
		halogenated purgeables †	N.D.
* DETECTION LIMIT * *		+ DETECTION LIMIT - +	1-99/L

ABBREVIATIONS USED:

N D = NONE DETECTED AT OR ABOVE THE STATED DETECTION LIMIT

T R = DETECTED AT A LEVEL BELOW THE STATED DETECTION LIMIT (NOT CONFIRMED)

[RESULTS IN BRACKETS] ARE UNCONFIRMED AND/OR WITH APPROXIMATE QUANTITATION

LABORATORY REMARKS: _____

CERTIFICATE OF ANALYTICAL PERSONNEL

Seal(s) Intact: Yes [x] No [ ]. Seal(s) broken by: NO SEALS date: _____

I certify that I followed standard laboratory procedures on handling and analysis of this sample unless otherwise noted and that the statements on this page accurately reflect the analytical results for this sample.

Date(s) of analysis: 12/22/87 12/30/87 Analyst's signature: A.S. Burnley; Mary L. Ellen

I certify that I have reviewed and concur with the analytical results for this sample and with the statements in this block.

Reviewers signature: K Menahem

well in Wild Horse Valley - 1 mi W of Lee Acres

Richard Patton 327-6473 (H) 326-3368 (W)
Road 5772, Lot 9 Farmington
P.O. Box 1725, Bloomfield

4 corners Dil - S up hill
3rd intersection on R. - yellow mobile Home -

smells of HC - rainbows - feels oily

4 weeks - Black, with rainbows sheen

~~Bay~~ S.W. - Amoco Down by the River

3 companies

Dec 9 - Fecal Coliform OK
Methane - 3½, 000 ppb (5000 lb)

between 2+3 Wednesday

Check Gary

WELL SERVICE COMPANY INSPECTION JB

NAME OF COMPANY: 4 CORNERS DRILLING COMPANY

LOCATION: Bloomfield Hwy P. O. Box 1067

INSPECTION DATE: Charles Shepard _ Inspecton guide 10/22/85

REPORT: Lee Acres Water; septic tank. Paved yard.

UST: (1) 10,000 Gal. gasoline

(1) 10,000 Gal. Diesel

Trucks washed to sump to septic tank

Waste oil stored in barrels, then sold Old barrels sold to Dial Oil Co.

(Aztec)

WELL SERVICE COMPANY INSPECTION

NAME OF COMPANY: DRILLING FLUIDS INC.

LOCATION: 657 Wildhorse Dr. 326-2264

INSPECTION DATE: 10/22/85

REPORT: Bob Whitingslo - inspection guide

Lee Acres water; septic system. Gravel yard. No pits.

Chemical warehouse. No UST. Spills swept up to dumpster

5000 gal. diesel tank showed leaks at pump. New filter being installed.

Subsidary of 4-Corners Drilling Company

Waste oil stored in barrels, given away.

Gas Wells Surrounding the Patton Domestic Well
(29N 12W sec 29 NW 1/4)

sec 19 (29N 12W)

BHP	- GCU # 300	2015 from South,	905 from East
	GCU # 306	2015 " " ,	830 " "

sec 20 (29N 12W)

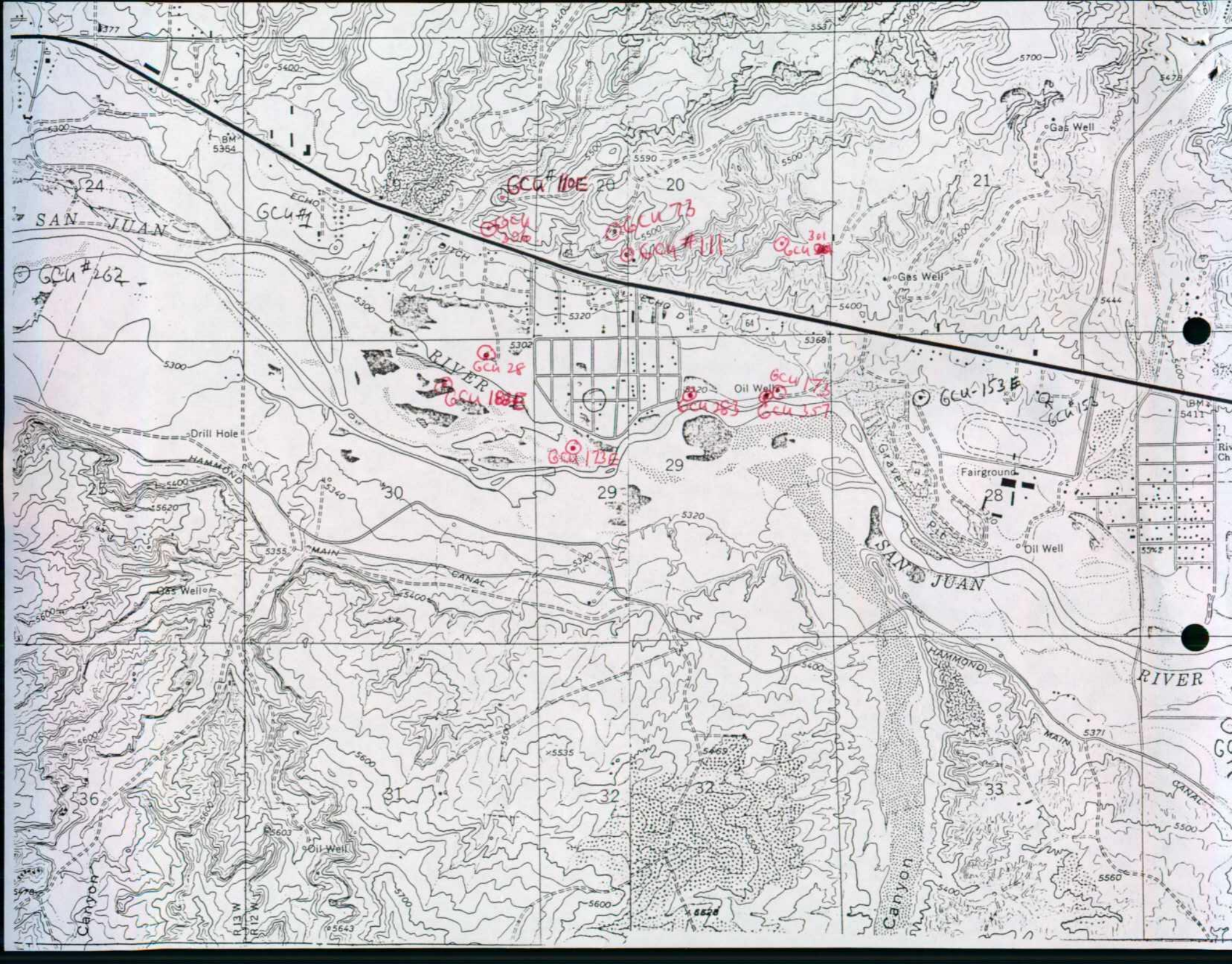
Amoco	- GCU # 111	1450 from South,	1635 from West
BHP	- GCU # 73	1780 " " ,	1450 " "
	GCU # 301	1620 " " ,	900 " East

sec 29 (29N 12W)

Amoco	- GCU # 173	1025 from North,	905 from East
	GCU # 173E	1925 " " ,	635 " West
BHP	- GCU # 283	990 " " ,	2580 " East
	GCU # 357	970 " " ,	890 " "

sec 30 (29N 12W)

Amoco	- GCU # 188E	790 from North,	1620 from East
	GCU # 28	400 " " ,	770 " "
	GCU # 292	1825 " " ,	1795 " West


GCU #110E
GCU #111
GCU #262
GCU #1
GCU 28
GCU 188E
GCU 173E
GCU 173
GCU 283
GCU 357
GCU-153E
GCU #153
Gas Well
Oil Well
Drill Hole
Fairground
SAN JUAN
RIVER
ECHO
DITCH
HAMMOND
MAIN
CANAL
Gravel Pit
Canyon
BM 5364
BM 5411
R13W
R12W
20
21
24
25
29
30
28
32
33
36
31

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

IN ACCORDANCE WITH SECTION 75-11-1 NEW MEXICO STATUTES

1. Name and Address of Applicant:

C. Michael Patton

Box 1725

Bloomfield, N.M. 87413

File No. SJ-786

2. Describe well location under one of the following subheadings:

a. SE ¼ NW ¼ NW ¼ of Sec. 29 Twp. 29N. Rge. 12 W. N. M. P. M., in San Juan County.

b. Tract No. _____ of Map No. _____ of the _____

c. Lot No. 15 of Block No. 12 of the Wildhorse Subdivision, recorded in _____ County.

d. X = _____ feet, Y = _____ feet, N. M. Coordinate System _____ Zone in the _____ Grant.

e. Give street address or route and box No. of property upon which well is to be located, or location by direction and distance from known landmarks Corner of Wildhorse Drive and Lark in Wildhorse Valley

3. Approximate depth (if known) 25 feet; outside diameter of casing 6 3/4 inches.

Name of driller (if known) Bill Hargis

4. Use of water (check appropriate box or boxes):

- [X] Household, non-commercial trees, lawn and garden not to exceed 1 acre.
- [ ] Livestock watering.
- [ ] Drinking and sanitary purposes and the irrigation of non-commercial trees, shrubs and lawns in conjunction with a commercial operation.
- [ ] Prospecting, mining or drilling operations to discover or develop natural resources.
- [ ] Construction of public works, highways and roads.

If any of the last three were marked, give name and nature of business under Remarks. (Item 5)

STATE ENGINEER OFFICE SANTA FE, N.M. 87501 Received AUG 24 PM 12 53

5. Remarks: _____

I, C. Michael Patton, affirm that the foregoing statements are true to the best of my knowledge and belief and that development shall not commence until approval of the permit has been obtained.

C. Michael Patton, Applicant

By: _____ Date: August 22, 1978

ACTION OF STATE ENGINEER

This application is approved for the use indicated, subject to all general conditions and to the specific conditions numbered 4 on the reverse side hereof. This permit will automatically expire unless this well is drilled or driven and the well record filed on or before Aug. 31, 1979.

S. E. Reynolds, State Engineer

By: E. C. Barry

E. C. Barry, Engr-Tech. Water Rights Bureau

Date: Aug. 25, 1978 File No. SJ-786

Section 1. GENERAL INFORMATION

(A) Owner of well MIKE PATTON Owner's Well No. 2

Street or Post Office Address BOX 1725

City and State Bloomfield, N.M. 87413

STATE ENGINEER OFFICE
SANTA FE, N.M. 87501

Well was drilled under Permit No. SJ 786 and is located in the:

a. SE ¼ NW ¼ NW ¼ ¼ of Section 29 Township 29 N Range 12 W N.M.P.M.

b. Tract No. _____ of Map No. _____ of the _____

c. Lot No. _____ of Block No. _____ of the _____
Subdivision, recorded in _____ County.

d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____ Zone in the _____ Grant.

(B) Drilling Contractor Bill's Water Well Drlg. Ser. License No. W.D 799

Address P.O. Box 448 Bloomfield, N.M. 87413

Drilling Began 9-9-78 Completed 9-11-78 Type tools Cable Size of hole 6 5/8 in.

Elevation of land surface or 5100 at well is 5100 ft. Total depth of well 21' ft.

Completed well is ☒ shallow ☐ artesian. Depth to water upon completion of well 8' ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
15'	21'	6'	River Sand & Gravel	30 gal

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To
6 5/8	12	-0-	0	21		NONE	-0-	-0-

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement

Section 5. PLUGGING RECORD

Plugging Contractor _____

Address _____

Plugging Method _____

Date Well Plugged _____

Plugging approved by:

_____
State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received 9/13/78

Quad _____ FWL _____ FSL _____

File No. SJ-786 Use Dom. Location No. 29N.12W.29 114

San Juan Co.

JLW

Section 6. LOG OF HOLE

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color and Type of Material Encountered
0'	15'	15'	SAND
15'	21'	6'	RIVER SAND & GRAVEL

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Driller

IN ACCORDANCE WITH SECTION 75-11-1 NEW MEXICO STATUTES