STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 SOUTH PACHECO
SANTA FE, NEW MEXICO 87505

WTX 5/15/00 760

FORM C-108
Revised 4-1-98

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: ____X____ Secondary Recovery _____Pressure Maintenance _____Disposal _____Storage
Application qualifies for administrative approval? ____X____ Yes _____No

II. OPERATOR: **Chevron U.S.A. Production Co.**

ADDRESS: **P. O. Box 1150 Midland, TX 79702**

CONTACT PARTY: **C J Affeld – Petroleum Engineer** PHONE: **(915) 687-7271**

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____X_____Yes _____No
If yes, give the Division order number authorizing the project: **R - 9483**

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V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: **C J Affeld** TITLE: **Petroleum Engineer**

SIGNATURE: _____ DATE: April 18, 2000

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: **03/08/91 Case No. 10260 (Order No. 9483 – Effective 06/01/91)**

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Chevron U.S.A. Production Company

WELL NAME & NUMBER: AGU 133 (30-025-04939)

WELL LOCATION: 1980' FSL & 660' FWL | L | 36 | 21-S | 36-E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

WELL DATA SHEET

FIELD: Arrowhead

WELL NAME: AGU No. 133
(Orig. Cities Svce. State "M" #2)

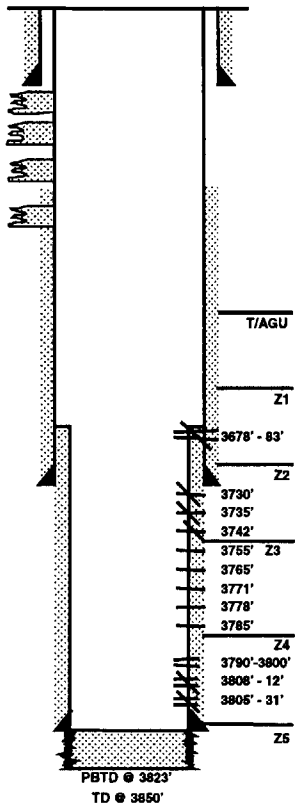
FORMATION: Grayburg

LOC: 1980' FSL & 660' FWL
TOWNSHIP: 21-S
RANGE: 36-E

SEC: 36
COUNTY: Lea
STATE: NM

GL: 3555'
KB to GL: 11'
DF to GL:

CURRENT STATUS: Producer
API NO: 30-025-04939
CHEVNO: FA-6078



Date Completed: 05-10-40
Initial Production: 592 BOPD / 2,750 MCFGPD
Initial Formation: Grayburg **From:** 3700' **To:** 3850'
Completion Data:
OH completion.

Workover History:

06-04-54 Clean out to 3850. Set pkr @ 3797' & tested 100% w/t. PB to 3832', pkr @ 3785'. ACDZ w/ 500 gals.

02-14-57 Clean out to 3832'. PB to 3790' w/ Calseal sqz w/ 100 sxs. Drill out to 3832'. Ran 4" liner 3676' - 3832' w/ 20 sxs cmt. Perf 3805' - 3831'. (Zn 4). ACDZ w/ 1500 gals.

06-29-89 Well producing 200 BWPD. SI.

12-19-89 Repair csg leak 345-510' w/ 350 sxs. SQZ perfs 3805-31' w/ 100 sxs. Perf 3808-12'. ACDZ w/ 450 gals 15%. SQZ 3808-12' w/ 60 sxs. Perf 3790' - 3800'. ACDZ w/ 1000 gals 15% HCL.

08/04/91 Perf 3730', 3735', 3742' (Zn 2), 3755', 3765', 3771', 3778' & 3785' (Zn 3). ACDZ w/ 1000 gals 15% HCL.

06-02-97 Repaired casing leak at 503' - 688' w/ 250 sxs. Repaired casing leaks 1670' - 1701w/ 1500 gals Rockack + 300 sxs cmt. Leaks @ 2618' - 2650' SQZD w/ 150 sxs. ACDZ perfs 3730' - 3800' w/ 1000 gals 15% HCL.

02-26-92 RU HLS & log DSN/GR, loggers TD 3791'. Perf 3678'-83' w/ 2SPF. Spot 300 gals acid across perfs. Swb Rec 9 BW (trace oil), SFL @ 3300', FER 1 BPH. TIH w/ prod tbg & TO to production.

03-06-92 Test Pump 20 BOPD + 22 MCFGPD + 180 BWPD.
04-12-92 Test Pump 8 BOPD + 321 MCFGPD + 226 BWPD.
04-09-97 Spot sd f/3745-3832. Set pkr @ 3416. Cmt sqz w/250 sx cl c. Poh w/pkr. Tag cmt @ 3284. D/O cmt to 3745. C/O sd to 3823. Pickle w/400 gals 15% HCL. Acdz w/1500 gals Resisol II.

07-29-97 Well status changed to TA.

Additional Data:
T/Queen @ 3367'
T/Penrose @ 3468'
T/AGU @ 3650'
T/Grayburg Zone 1 @ 3645'
T/Grayburg Zone 2 @ 3685'
T/Grayburg Zone 3 @ 3752'
T/Grayburg Zone 4 @ 3786'
T/Grayburg Zone 5 @ 3825'

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 9 7/8" — Casing Size: 8 5/8"

Cemented with: 225 sx. — *or* 225 ft³

Top of Cement: Surface — Method Determined: Calculation

Production Casing

Hole Size: 6 3/4" — Casing Size: 5 1/2"

Cemented with: 200 sx. — *or* 200 ft³

Top of Cement: 2633 — Method Determined: Calculation

4" Liner (3676' – 3832')

Hole Size: 4 3/4" — Casing Size: 4

Cemented with: 20 sx. — *or* 20 ft³

Top of Cement: 3676 — Method Determined: Calculation

Total Depth: 3823'

Injection Interval

3755 (Perforated) feet to 3800 (Perforated) feet

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

WELL NAME & NUMBER: AGU 133

Tubing Size: 2 3/8" Lining Material: Internally Plastic Coated (IPC) or Cement Lined (Duoline)

Type of Packer: Baker LOK-SET Packer

Packer Setting Depth: 3650'

Other Type of Tubing/Casing Seal (if applicable): N/A

Additional Data

1. Is this a new well drilled for injection? ____Yes __X__No

   If no, for what purpose was the well originally drilled? Oil Well

2. Name of the Injection Formation: Grayburg Unit

3. Name of Field or Pool (if applicable): Arrowhead Grayburg Unit

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. N/A

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Yates 2723', 7-Rivers 2912', Queen 3368', Penrose 3468'

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Chevron U.S.A. Production Company

WELL NAME & NUMBER: AGU 151 (30-025-08738)

WELL LOCATION: 660' FNL & 1980' FEL | B | 2 | 22-S | 36-E

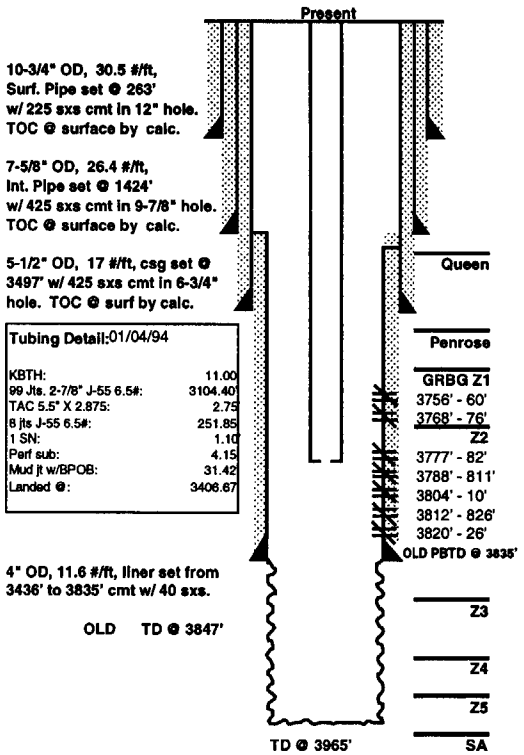
FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME: AGU No. 151** **FORMATION: Grayburg**

LOC: 660' FNL & 1980' FEL **SEC: 2** **GL: 3557'** **CURRENT STATUS: Producer**
TOWNSHIP: 22-S **COUNTY: Lea** **KB to GL: 11.0'** **API NO: 30-025-08738**
RANGE: 36-E **STATE: NM** **DF to GL: 10.0'** **CHEVNO: FA9798**



Date Completed: 5/04/38
Initial Production:384 BOPD / 0 BWPD / 310 MCFGPD
Initial Formation: Qn/Pnrs/Grbg **From:** 3497' **To:** 3800'
Completion Data: Open hole natural.

Workover History:
10-25-40 Deepen to 3847'.

07-10-52 Acidize perfs w/ 500 gals. 15% HCl.

01-26-59 Clean out to 3835'. Set 4" liner from 3436' to 3835' w/ 40 sxs cement. Perf 3804' - 10' and 3820' - 26'. Acidize w/ 2000 gallons 15% HCl.

06-10-86 Clean out to 3835'. Run GR correlation log 3835' - 3400'. Perforate 3788' - 826' w/ 4 spf. Set 4" pkr @ 3718'. Acidize w/ 3780 gallons 15% HCl in 3 stages. Swab. RTP.

12-03-87 Acidize w/ 750 gallons 15% HCl.

09-26-88 Clean out. Perforate 3756' - 60' and 3768' - 82' w/ 4 spf. Acidize w/ 2100 gallons 15% HCl. RTP.

12-15-93 MIRU to deepen well. Tag fill @ 3838'. Mill on junk 3841' - 3847'. Deepen hole from 3847' to 3965'. Run logs. Acidize OH w/ 2520 gals in 5 stages. Swab back R/ 36 Bbls SFL @ 2500', EFL @ 3681', FSC 2% oil. Sand PB prior to wtr shutoff cmt. sqz. Dump 11 sxs sand in OH from 3964' - 3811' & tag w/ WL. Test TBG to 3000# & CSG to 300#. Water shut off cmt sqz w/ 250 sx 2% CaCl2 (nitrified) + 50 sx 2% CaCl2 @ 2000# psi. DO cmt from wtr shut off sqz to top of sand PB. No fluid entry from sqz'd portion (wtr shut off) of hole (zn 1& 2 perfs). Clean out sand to TD. Run prod. eulp.

Additional Data:
T/Queen @ 3443'
T/Penrose @ 3561'
T/AGU @ 3718'
T/Grayburg Zone 1 @ 3740'
T/Grayburg Zone 2 @ 3777'
T/Grayburg Zone 3 @ 3839'
T/Grayburg Zone 4 @ 3873'
T/Grayburg Zone 5 @ 3926'
T/San Andres @ 3966'

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12" Casing Size: 10 3/4"

Cemented with: 225 sx. *or* 225 ft³

Top of Cement: Surface Method Determined: Calculation

Intermediate Casing

Hole Size: 9 7/8" Casing Size: 7 5/8"

Cemented with: 425 sx. *or* 425 ft³

Top of Cement: Surface Method Determined: Calculation

Production Casing

Hole Size: 6 3/4" Casing Size: 5 1/2"

Cemented with: 425 sx. *or* 425 ft³

Top of Cement: Surface Method Determined: Calculation

4" Liner (3436' – 3835')

Hole Size: 4 3/4" Casing Size: 4

Cemented with: 40 sx. *or* 40 ft³

Top of Cement: 3436' Method Determined: Calculation

Total Depth: 3965'

Injection Interval

3436 (Open Hole) feet to 3965 (Open Hole) feet

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

WELL NAME & NUMBER: AGU 151

Tubing Size: 2 3/8" Lining Material: Internally Plastic Coated (IPC) or Cement Lined (Duoline)

Type of Packer: Baker LOK-SET Packer

Packer Setting Depth: 3720'

Other Type of Tubing/Casing Seal (if applicable): N/A

Additional Data

1. Is this a new well drilled for injection? ____Yes __X__No

   If no, for what purpose was the well originally drilled? Oil Well

2. Name of the Injection Formation: Grayburg Unit

3. Name of Field or Pool (if applicable): Arrowhead Grayburg Unit

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. The Penrose and Queen were originally open but were isolated from the unitized interval by the 4" liner (40 sks).

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

   Yates 2810', 7-Rivers 3042', Queen 3444', Penrose 3560'

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Chevron U.S.A. Production Company

WELL NAME & NUMBER: AGU 159 (30-025-08723)

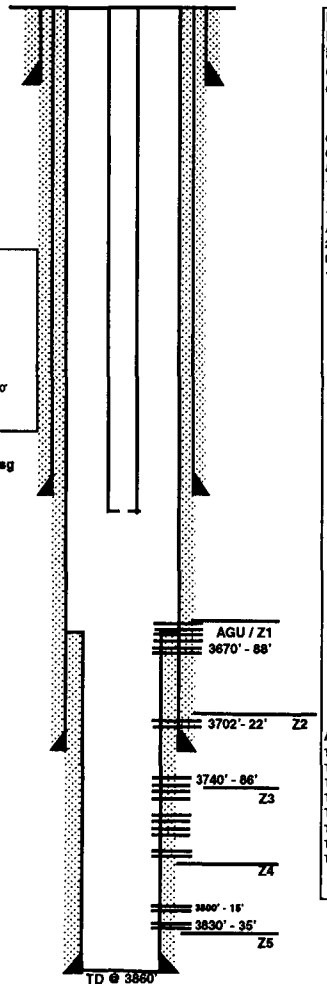
WELL LOCATION:	1980' FNL & 1980' FWL	F	1	22-S	36-E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

WELL DATA SHEET

FIELD: **WELL NAME: AGU No.** (Orig Conoco Lockhart "B-1" #2) **FORMATION:**

LOC: 1980' FNL & 1980' FWL
TOWNSHIP: 22-S
RANGE: 36-E
SEC: 1
COUNTY: Lea
STATE: NM
GL: 3514'
KB to GL: 11'
DF to GL: 10'
CURRENT STATUS: Producer
API NO: 30-025-08723
CHEVNO: FA9785



Date Completed: 11-11-38
Initial Production: 1800 BOPD / 1400 MCFGPD
Initial Formation: Grayburg **From:** 3731' **To:** 3810'
Completion Data:
OH completion.

Workover History:
01-09-50 ACDZ w/ 1000 gals.
02-01-61 Deepen to 3860'. Set 3-1/2" liner 3678'-3860'. Perf 3800-35' (OA) & ACDZ w/ 6000 gals 15% HCL.
12-18-85 Perf 3740-86' & ACDZ w/ 1680 gals 15% HCL. Clean out to 3847'.

10-20-91 Perf 3670-88' (Zn 1) & 3702-22' (Zn 2) w/ 2SPF. Circ hole clean & ACZE 3670' - 3835' (Zn's 1-4) w/ 800 gals 15% NEFE HCL. Swb Rec 2 BW / 2 runs; SFL 3400', FER not rept'd. TIH w/ prod tbg & TO to production. Pump 10 BO + 35 MCF + 109 BWPD; Pmp 21 BO + 35 MCF + Wtr.
11-7-91 IP pump 30 BOPD + 63 MCFGPD + 290 BWPD.

Additional Data:
T/Queen @ 3370'
T/Penrose @ 3478'
T/AGU @ 3670'
T/Grayburg Zone 1 @ 3668'
T/Grayburg Zone 2 @ 3703'
T/Grayburg Zone 3 @ 3756'
T/Grayburg Zone 4 @ 3788'
T/Grayburg Zone 5 @ 3836'

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12" Casing Size: 10 3/4"
Cemented with: 225 sx. *or* 225 ft³
Top of Cement: Surface Method Determined: Calculation

Intermediate Casing

Hole Size: 9 7/8" Casing Size: 7 5/8"
Cemented with: 425 sx. *or* 425 ft³
Top of Cement: Surface Method Determined: Calculation

Production Casing

Hole Size: 6 3/4" Casing Size: 5 1/2"
Cemented with: 425 sx. *or* 425 ft³
Top of Cement: Surface Method Determined: Calculation

4" Liner (3678' – 3860')

Hole Size: 4 3/4" Casing Size: 3 1/2"
Cemented with: 40 sx. *or* 40 ft³
Top of Cement: 3678' Method Determined: Well Files
Total Depth: 3860'

Injection Interval

3670 (Perforated) feet to 3835 (Perforated) feet

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

WELL NAME & NUMBER: AGU 159

Tubing Size: 2 3/8" Lining Material: Internally Plastic Coated (IPC) or Cement Lined (Duoline)

Type of Packer: Baker LOK-SET Packer

Packer Setting Depth: 3630'

Other Type of Tubing/Casing Seal (if applicable): N/A

Additional Data

1. Is this a new well drilled for injection? ____Yes __X__No

   If no, for what purpose was the well originally drilled? Oil Well

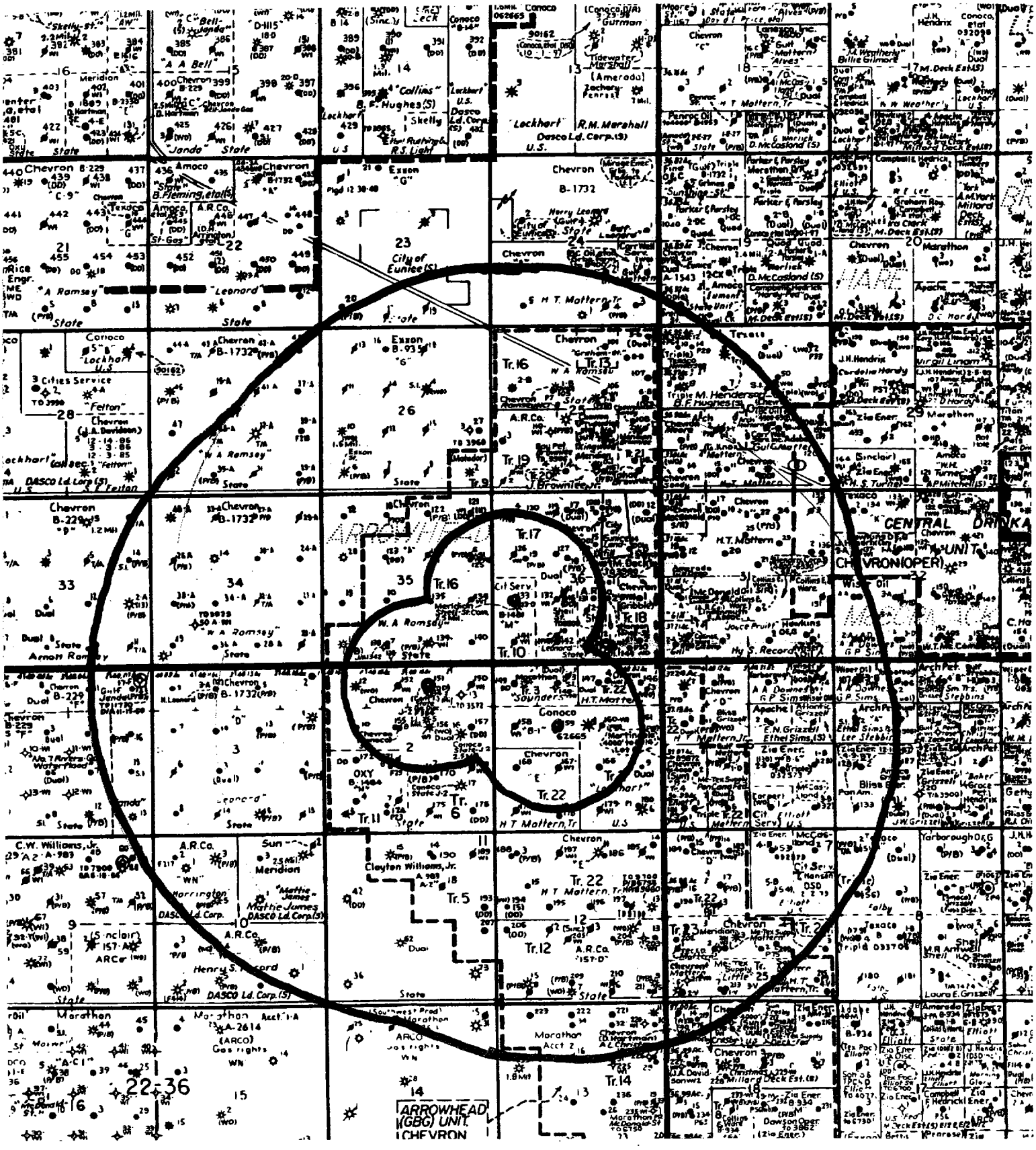
2. Name of the Injection Formation: Grayburg Unit

3. Name of Field or Pool (if applicable): Arrowhead Grayburg Unit

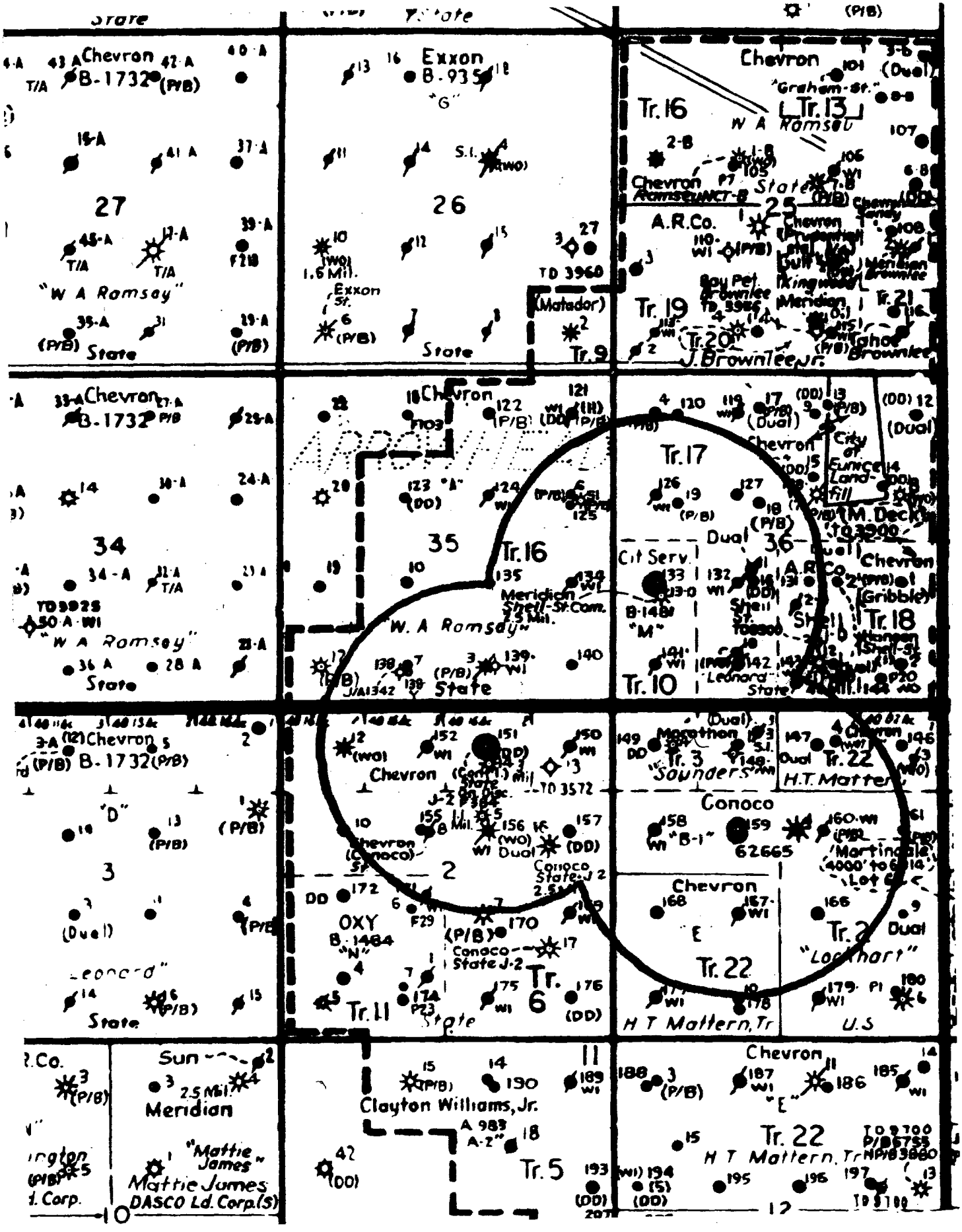
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. N/A

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

   Yates 2710', 7-Rivers 2900', Queen 3370', Penrose 3475'



Map identifying all wells and leases within a ½ mi. and 2 mi. radius of proposed conversions.



Map identifying all wells and leases within a ½ mi. radius of proposed conversions.

lease_name	well_number	api12	current_operator_name	pi_md	spud_date	completion_date	current_status	chevno	survey_location	
ARROWHEAD GRAYBURG UNIT	125	300253143300	CHEVRON USA INC	3953	6/2/1992	9/3/1992	OIL	KZ3258	Sect: 35 TWP: 21 Rng: 36 Mrdn: 21	2075' FNL & 660' FEL
ARROWHEAD GRAYBURG UNIT	131	300253124700	CHEVRON USA INC	3898	9/23/1991	4/7/1992	OIL	KZ1469	Sect: 36 TWP: 21 Rng: 36 Mrdn: 21	1980' FSL & 2080' FEL
ARROWHEAD GRAYBURG UNIT	138	300253278800	CHEVRON USA INC	1342	1/7/1995	1/9/1995	J&A	QW4622	Sect: 35 TWP: 21 Rng: 36 Mrdn: 21	560' FSL & 1880' FWL
ARROWHEAD GRAYBURG UNIT	138Y	300253282700	CHEVRON USA INC	4068	1/10/1995	3/15/1995	OIL	QX2104	Sect: 35 TWP: 21 Rng: 36 Mrdn: 21	560' FSL & 1900' FWL
ARROWHEAD GRAYBURG UNIT	139	300253130500	CHEVRON USA INC	3990	7/9/1992	10/13/1992	W-INJ	OQ9617	Sect: 35 TWP: 21 Rng: 36 Mrdn: 21	660' FSL & 1870' FEL
ARROWHEAD GRAYBURG UNIT	148	300253139300	CHEVRON USA INC	3915	10/17/1991	1/17/1992	WI-O	KZ3254	Sect: 1 TWP: 22 Rng: 36 Mrdn: 21	785' FNL & 1905' FWL
ARROWHEAD GRAYBURG UNIT	155	300253141700	CHEVRON USA INC	4020	5/19/1992	6/12/1992	OIL	OQ9522	Sect: 2 TWP: 22 Rng: 36 Mrdn: 21	1980' FNL & 2276' FWL
ARROWHEAD GRAYBURG UNIT	171	300253173400	CHEVRON USA INC	3995	9/23/1992	11/4/1992	W-INJ	OU5316	Sect: 2 TWP: 22 Rng: 36 Mrdn: 21	2305' FSL & 2215' FWL
ARROWHEAD GRAYBURG UNIT	335	300253463600	CHEVRON USA INC	3889	7/22/1999	10/7/1999	OIL	BW6908	Sect: 36 TWP: 21 Rng: 36 Mrdn: 21	1310' FNL & 1330' FEL
ARROWHEAD GRAYBURG UNIT	336	300253429700	CHEVRON USA INC	3800	3/10/1998	9/13/1998	OIL	BQ5149	Sect: 2 TWP: 22 Rng: 36 Mrdn: 21	50' FNL & 55' FEL
ARROWHEAD GRAYBURG UNIT	342	300253463700	CHEVRON USA INC	3948	7/10/1999	9/7/1999	OIL	BW6909	Sect: 2 TWP: 22 Rng: 36 Mrdn: 21	1310' FNL & 1330' FEL
ARROWHEAD GRAYBURG UNIT	344	300253466500	CHEVRON USA INC	0	8/2/1999		START	BW9365	Sect: 1 TWP: 22 Rng: 36 Mrdn: 21	1334' FNL & 1300' FWL
ARROWHEAD GRAYBURG UNIT	600	300253123400	CHEVRON USA INC	5000	7/1/1991	8/16/1991	SERVCE	KX3277	Sect: 35 TWP: 21 Rng: 36 Mrdn: 21	1220' FSL & 1220' FEL
ARROWHEAD GRAYBURG UNIT	601	300253130300	CHEVRON USA INC	5000	9/22/1991	1/29/1992	SERVCE	KZ1468	Sect: 1 TWP: 22 Rng: 36 Mrdn: 21	2540' FNL & 1220' FWL
LEONARD HARRY NCT-C	10	300250493700	CHEVRON USA INC	9930	10/13/1956	4/23/1972	P&A	FA6076	Sect: 36 TWP: 21 Rng: 36 Mrdn: 21	760' FSL & 2080' FWL
LOCKHART 'B-1'	10	300253409900	CONOCO INC	3700	10/27/1997	12/12/1997	GAS	BR1388	Sect: 1 TWP: 22 Rng: 36 Mrdn: 21	1980' FNL & 1550' FWL
MATTERN H T /NCT-E/	16	300253424100	CHEVRON USA INC	3620	2/8/1998	6/5/1998	GAS	BQ3303	Sect: 1 TWP: 22 Rng: 36 Mrdn: 21	1670' FSL & 685' FWL
WA RAMSAY-STATE	3	300250492200	CHEVRON USA INC	3810	6/20/1938	9/25/1938	P&A	FA6061	Sect: 35 TWP: 21 Rng: 36 Mrdn: 21	660' FSL & 1980' FEL
RAMSAY W A /NCT-A/	52	300253424200	CHEVRON USA INC	3620	1/19/1998	4/5/1998	GAS	BQ0697	Sect: 35 TWP: 21 Rng: 36 Mrdn: 21	910' FSL & 990' FEL
SAUNDERS C J	4	300253269200	MARATHON OIL	3810	10/31/1994	12/5/1994	GAS	QX0823	Sect: 1 TWP: 22 Rng: 36 Mrdn: 21	660' FNL & 960' FWL
SHELL STATE COM "D"	13	300253168400	GRUY PETROLEUM MANA	3600	12/26/1992	1/18/1993	GAS	QU2591	Sect: 36 TWP: 21 Rng: 36 Mrdn: 21	1780' FSL & 760' FWL
STATE "J-2"	14	300253241200	CONOCO INC	3700	3/7/1994	4/7/1994	GAS	QU2776	Sect: 2 TWP: 22 Rng: 36 Mrdn: 21	910' FNL & 1980' FEL
STATE "J-2"	15	300253241100	CONOCO INC	3750	3/14/1994	5/29/1994	GAS	QU2093	Sect: 2 TWP: 22 Rng: 36 Mrdn: 21	1780' FNL & 2080' FEL
STATE "J-2"	16	300253299400	CONOCO INC	3675	6/26/1995	7/21/1995	GAS	BC4553	Sect: 2 TWP: 22 Rng: 36 Mrdn: 21	2200' FNL & 990' FEL

WELL DATA SHEET

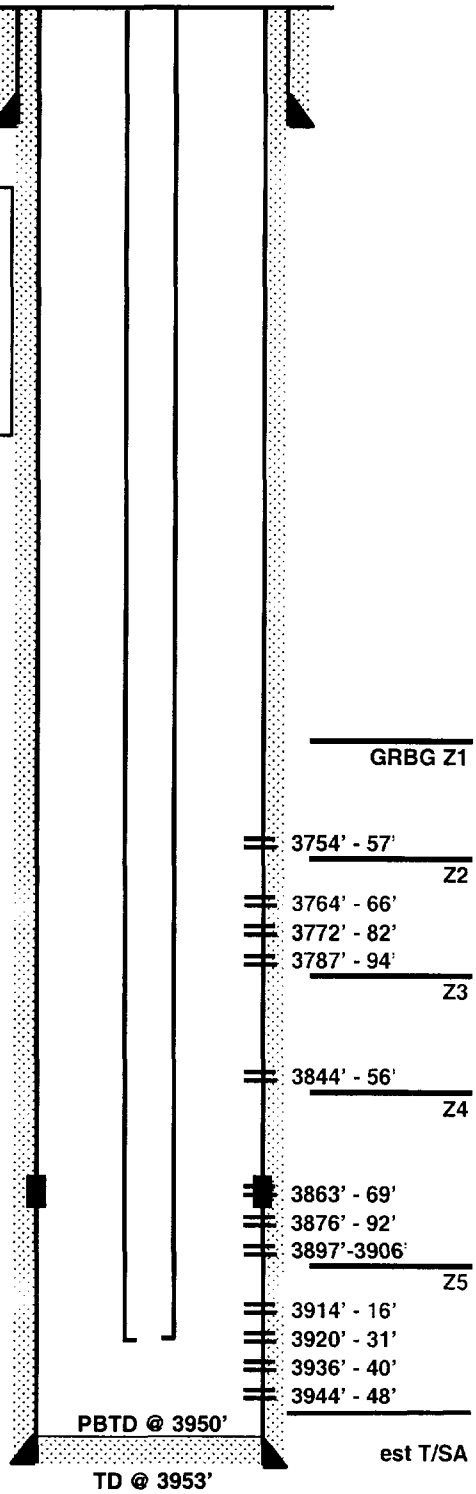
FIELD: Arrowhead **WELL NAME:** AGU No. 125 **FORMATION:** Grayburg

LOC: 2075' FNL & 660' FEL **SEC:** 35 **GL:** 3550' **CURRENT STATUS:** Producer
TOWNSHIP: 21-S **COUNTY:** Lea **KB to GL:** 13' **API NO:** 30-025-31433
RANGE: 36-E **STATE:** NM **DF to GL:** 12' **CHEVNO:** KZ3258

8-5/8", 23 #/ft, M-50, set @ 1330' w/ 830 sxs cmt. Circ. 266 sxs to surf. 12-1/4" hole.

Tubing Detail: 11/30/95

KBTH:	11.00'
118 Jts. 2-7/8" J-55 8rd:	3600.45'
Tbg sub:	4.08'
Sub Pump:	140.00'
Landed @:	3755.53'



Float Collar @ 3865'

5-1/2", 15.5 #/ft, K-55, set @ 3953' w/ 1090 sxs cmt. Circ. 235 sxs cmt. to surf. 7-7/8" hole.

FILE: WBS125.XLS
MRV: 12/23/97

Date Completed: 07/09/92
Initial Production: 10 BOPD / 86 MCFGPD / 152 BWPD
Initial Formation: Grayburg **From:** 3754' **To:** 3948'

Completion Data:

06-22-92 Drill to 3953' & circ. clean. Run Sch. DLL-MSFL / CNL-LDT / ARI-GR logs. Set 5-1/2" csg. MIRU completion rig. Drill out to PBTD @ 3950'. Selectively perf 3876-92' & 3897'-3906' (Zn 4) w/ 2 SPF. Selectively ACDZ (PPI pkr) w/ 300 gals 15% HCL across both sets perfs. Swb Rec 43 BF (10% oil) / 9 runs; SFL 1800', FER 3 BPH, good blow gas after last 5 runs. Selectively perf 3844-56' (Zn 3) & 3787-94' (Zn 2) w/ 2 SPF. Selectively ACDZ (PPI pkr) w/ 168 gals 15% HCL. Swb 43 BF (5% oil) / 16 runs; SFL 2400', FER 6 BPH. Selectively perf 3944-48', 3936-40', 3920-31', 3914-16' (Zn 5), 3863-69' (Zn 4), 3772-82', 3764-66' & 3754-57' (Zn 2) w/ 2 SPF. ACDZ (PPI pkr) 3754' - 3948' w/ 672 gals 15% HCL. Swb Rec 75 BF (5-10% oil) in 28 runs w/ good gas blows after runs; SFL 3000', FER 10 BPH. Run production equip.

07-03-92 Pmp 14 BOPD + 63 MCFGPD + 346 BWPD.
07-09-92 IP Pmp 10 BOPD + 86 MCFGPD + 152 BWPD.

Workover History:

05-21-95 POOH w/ ESP pump. RIH w/ PPI pkr. Selectively breakdown all perf w/ acid (found all perfs open). Used 1800 gal. 15% HCl total. Swab back. Pump scale inhibitor sqz using 275 gallons chemical and flush w/ 500 bbls water. Return to prod w/ ESP Pump. (Operations Group did wellwork).

11/95 Set RBP @ 3830' w/treating pkr @ 3683'. Poly treat perfs f/3754-3794 w/3000 bbls 3000-5000 ppm x-linked polymer. ISIP (BHP) 1299 psi. Swb tst 2 hrs f/3754-3794, SFL @ 160, EFL @ 2000. Rec 59 bbls slick wtr. TOH w/pkr, rlse RBP. Swb 5 hrs 3754-3948. SFL @1600, EFL @2000. Rec 151 bbls slick wtr w/tr oil. Fer 31-37 bbls/hr. TOH w/RBP. TOP.

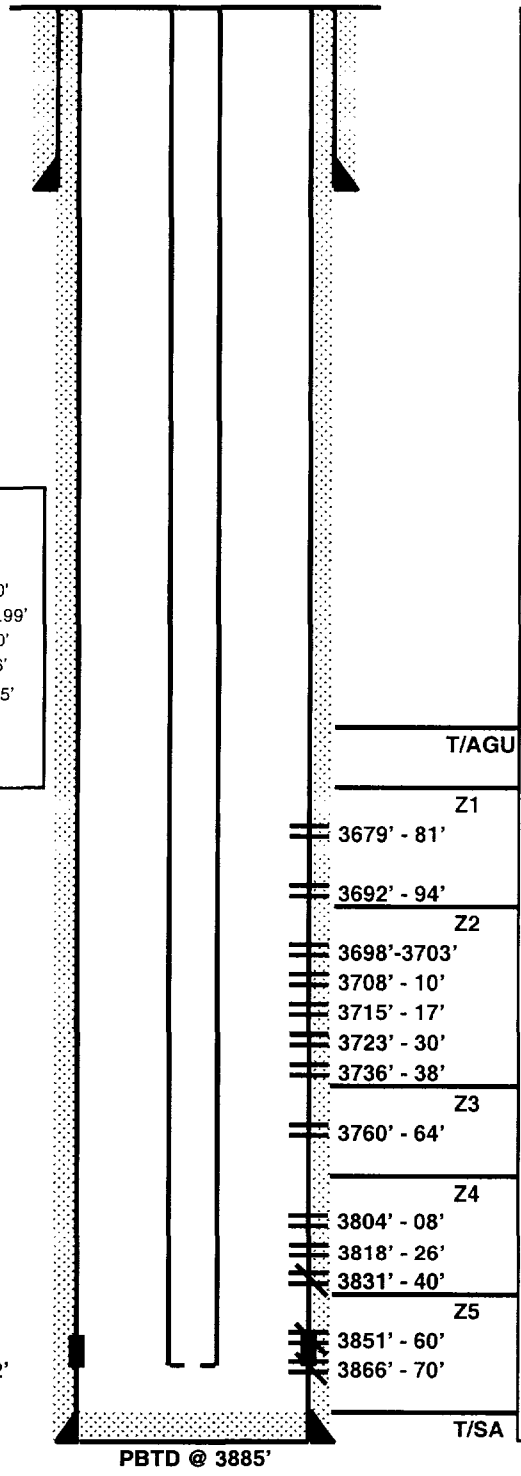
Additional Data:

T/Queen @ 3429
T/Penrose @ 3536'
T/AGU @ 3713'
T/Grayburg Zone 1 @ 3713'
T/Grayburg Zone 2 @ 3758'
T/Grayburg Zone 3 @ 3818'
T/Grayburg Zone 4 @ 3859'
T/Grayburg Zone 5 @ 3909'
Est T/San Andres @ 3954'

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME: AGU No. 131** **FORMATION: Grayburg**

LOC: 1980' FSL & 2080' FEL **SEC: 36** **GL: 3504'** **CURRENT STATUS: Producer**
TOWNSHIP: 21-S **COUNTY: Lea** **KB to GL: 13.0'** **API NO: 30-025-31247**
RANGE: 36-E **STATE: NM** **DF to GL: 12.0'** **CHEVNO: KZ-1469**



Tubing Detail: 11/12/91

KBTH:	13.00'
122 Jts. 2-7/8" J-55 8rd tbg:	3815.99'
Seat Nipple:	1.10'
MAJ, BPOB:	31.36'
Landed @:	3865.25'

Date Completed: 04/07/92
Initial Production: 1 BOPD / -0- BWPD / -0- MCFGPD
Initial Formation: Grayburg **From:** 3679' **To:** 3866'
Completion Information:

09-23-91 Spud and Drill to 3655'. Core 3655' - 3874' in 4 runs. Drill 3874' - 3895' & circ hole clean. Log ATLAS CNL-LDT-PE-GR, BHC-SONIC, DLL-MLL, DIELECTRIC & FMT. Run 5-1/2" csg. DO cmt & FC to 3885' & circ hole clean. Run SCHL depth ctl log & **selectively perf 3679' - 3870'** w/ 2 SPF. **Selectively ACDZ** (PPI pkr) w/ 1950 gals 15% NEFE HCL (could not BD 3736-38'). **Swb** Rec 242 BW, SFL 1100'. **Swb 3804'-70'** (Zn's 4-5) Rec 69 BW; SFL 1100', FER 39 BPH. **Swb 3679'-3764'** (Zn's 1-3) Rec 101 BW / 10 runs; SFL @ 1100', FER 33 BPH. **Swb 3679'-3738'** (Zn's 1&2) Rec 15 BW / 2 runs & swb dry; SFL @ 1100', FER 1.5 BPH (ONFE 7.8 Bbls). CICR @ 3750'. **SQZ 3679' - 3870'** (Zn's 1-5) w/ 200 sxs cmt. DO cmt & circ clean. **Perf 3818-26'** (Zn 4) w/ 2 SPF. **Swb** Rec 21 BW / 6 runs; IFL @ surf, FER 0.5 BPH. **ACDZ** w/ 150 gals 15% NEFE HCL. **Swb** Rec 25 BW / 7 runs in 7 hrs.; IFL @ 250', FER 1 BPH. **Selectively perf 3679'-3808'** (Zn's 1-4) w/ 2 SPF (ttl 62 holes). **Selectively ACDZ** (PPI pkr) w/ 1,350 gals 15% NEFE HCL (150 gals in each of 9 intervals). **Swb** 33 BW / 13 runs in 8 hrs. & swb dry; IFL @ 3000', FER 1 BPH. RIH w/ prod. tbg & TO to production.

Workover History:

Additional Data:
T/Queen @ 3382'
T/Penrose @ 3468'
T/AGU @ 3664'
T/Grayburg Zone 1 @ 3664'
T/Grayburg Zone 2 @ 3697'
T/Grayburg Zone 3 @ 3759'
T/Grayburg Zone 4 @ 3791'
T/Grayburg Zone 5 @ 3840'
est T/San Andres @ 3879'

FILE: WBS131.XLS
MRV: 12/23/97

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME: AGU No. 138** **FORMATION:**

LOC: 560' FSL & 1880' FWL	**SEC: 35**	**GL: 3578.4'**	**CURRENT STATUS: J&A**
TOWNSHIP: 21-S	**COUNTY: Lea**	**KB to GL: 11.6'**	**API NO: 30-025-32788**
RANGE: 36-E	**STATE: NM**	**DF to GL: 12.5'**	**CHEVNO: QW4622**

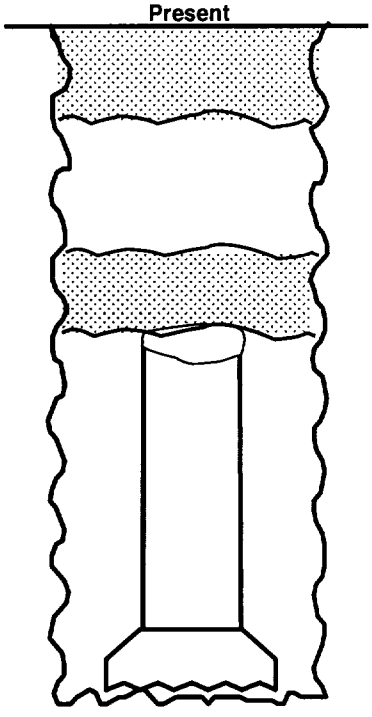
Present

Cmt Plug f/ 300' to surface.

Cmt Plug f/ 761' to 961'

Backed off drill collars @ 961'

Drill Collars



TD @ 1342'

Date Spudded: 1/7/1995
Date Plugged:

Completion Data:
MIRU. Spud well (AGU #138) and drill 12.25" hole to 1342'. Stuck pipe. Backed off drill collars at 961'. Attempt to fish collars with no success. Set cmt plug f/ 761'- 961' w/ 345 sx cmt. Set 2nd plug f/ 300' to surface. Cmt w/ Class "C" Neat cmt. Set Dry Hole Marker. Skid rig 20' east. Re-spud well (AGU #138Y).

Workover History:

Additional Data:

FILE: WBS138_Plugd.xls
DLMc: 4/12/2000

WELL DATA SHEET

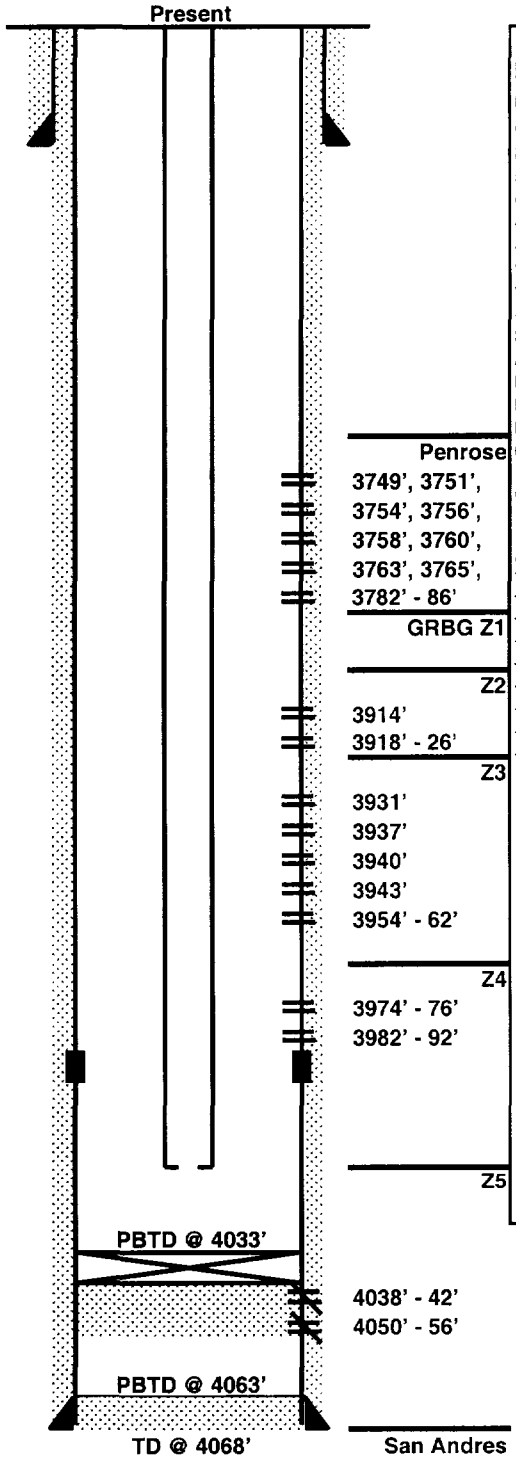
FIELD: Arrowhead | **WELL NAME:** AGU No. 138Y | **FORMATION:** Grayburg

LOC: 560' FSL & 1900' FWL
TOWNSHIP: 21-S
RANGE: 36-E

SEC: 35
COUNTY: Lea
STATE: NM

GL: 3578.4'
KB to GL: 11.6'
DF to GL: 12.5'

CURRENT STATUS: New Drill
API NO: 30-025-32827
CHEVNO: QX2104



Date Completed: 02/06/95
Initial Production: 14 BOPD/245 MCFGPD/128 BWPD
Initial Formation: Penrose/Grayburg **From:** 3749' **To:** 3992'

Completion Data:

MIRU. Spud well (AGU #138) and drill to 1342'. Stuck pipe. Plug drill hole and skid rig. Re-spud well (AGU #138Y). Drill to 4068'. Log. Set prod. csg. MIRU completion rig. Drill out to PBTD @ 4063'. Run cmt bond logs. Selectively perf 4038' - 4056' w/ 4 spf. Selectively BD perfs 4038' - 4056' w/ acid. Swab test 4038' - 4056'. FER 25 BPH. Set CICR @ 4033' and cmt sqz perfs 4038' - 4056' w/ 150 sxs cmt. Selectively perf 3974' - 92' w/ 4 spf. Selectively BD 3974' - 92' w/ acid. Swab 3974' - 92'. FER 1 BPH. Selectively perf 3943', 3940', 3937', 3931', 3914', 3763', 3758', 3754', 3749', 3954' - 62', 3918' - 26', 3782' - 86', 3765', 3760', 3756', and 3751'. Selectively BD perfs 3962' to 3749'. Swab back. Acidize perfs 3765' to 3749' w/ 500 gals. 15% HCl. Swab test 3749' to 3765'. FER 28 BPH. Swab test 3914' to 3992'. FER 18 BPH. Run prod. equip (2-6-95). Pumping 4 bopd/77 bwpd/28 mcfgpd. MIRU 2-22-95. POOH w/ prod. equip. Fracture treat perfs 3749' to 3786' w/ 10,000 gals. gel and 30,000 pounds sand. Clean out to 4033'. Run prod. equip. Pumping 14 bopd/128 bwpd/245 mcfgpd.

Workover History:

Additional Data:

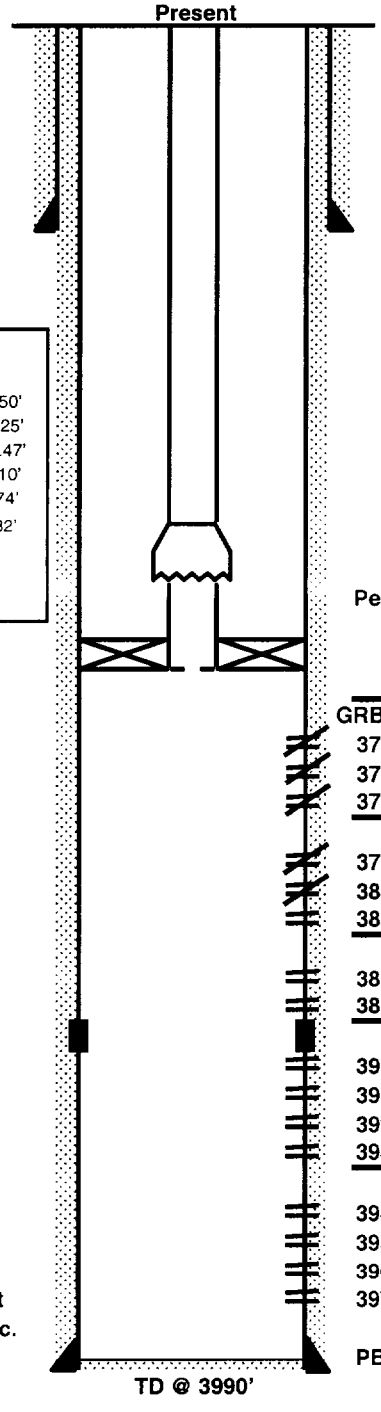
T/Queen @ 3538'
T/Penrose @ 3659'
T/AGU @ 3743'
T/Grayburg Zone 1 @ 3830'
T/Grayburg Zone 2 @ 3866'
T/Grayburg Zone 3 @ 3930'
T/Grayburg Zone 4 @ 3968'
T/Grayburg Zone 5 @ 4020'
T/San Andres @ 4051'

FILE: WBS138.XLS
MRV: 12/23/97

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME: AGU No. 139 WIC** **FORMATION: Grayburg**

LOC: 660' FSL & 1870' FEL	SEC: 35	GL: 3571.0'	CURRENT STATUS: Injector
TOWNSHIP: 21-S	COUNTY: Lea	KB to GL: 13.5'	API NO: 30-025-31305
RANGE: 36-E	STATE: NM	DF to GL: 12.5'	CHEVNO: OQ9617



Date Completed: 8/29/92
Initial Injection: 846 BWIPD @ 0 PSI
Initial Formation: Grayburg **From:** 3769' **To:** 3978'
Completion Data: Drill out to PBTD @ 3990'. Test casing. Run GR-CCL-Neutron and CBL-CET logs. Selectively perf 3900' to 3978'. Breakdown perfs w/ acid. Swab. Selectively perf 3769' to 3883'. Breakdown perfs w/ acid. Swab. Run injection equipment.

Workover History:

09-20-99 Acdz perfs 3769'-3978' w/2000 gals 15% NE HCL. Dmp 3500# 20/40 sand down csg. CO sd to 3820'. Acdz w/1000 gals 15% HCL. Pull pkr to 3546'. Sqz perfs 3769'-3810' w/250 sx Class "C". DO cmt to 3819'. WO sd f/3819'-3990'.

Additional Data:
T/AGU @ 3735'
T/Grayburg Zone 1 @ 3752'
T/Grayburg Zone 2 @ 3790'
T/Grayburg Zone 3 @ 3849'
T/Grayburg Zone 4 @ 3886'
T/Grayburg Zone 5 @ 3938'
T/San Andres @ 3986'

FILE: WBS139.XLS
Last Updated: 4/4/00

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME: AGU No. 148 WIW** **FORMATION: Grayburg**

LOC: 785' FNL & 1905' FWL
TOWNSHIP: 22-S
RANGE: 36-E

SEC: 1
COUNTY: Lea
STATE: NM

GL: 3527'
KB to GL: 6'
DF to GL: 5'

CURRENT STATUS: Injector
API NO: 30-025-31393
CHEVNO: KZ3254

8-5/8" OD, 23#, M-50
Surf. Pipe set @ 1175' w/
750 sxs cmt. Circ. 89 sxs
to surf.

Tubing Detail: 12-13-91

KBTH:	6.00'
Cmtlined X-O:	0.41'
116 Jts. 2-3/8" Cmtlined tbg:	3615.60'
Cmtlined X-O:	
0.81'	
On-off tool w/ 1.43" F prof:	1.95'
Guiberson G-6 pkr:	3.73'
Wireline guide:	0.38'

Guiberson G-VI pkr @ 3629'

Float Collar @ 3834'

5-1/2" OD, Grade K-55,
15.5# csg set @ 3915'
w/600 sxs cmt.
Circ 45 sxs cmt. to surf.

Z1
3674' - 76'
3686' - 92'
Z2
3706' - 10'
3714' - 30'
3734' - 36'
3740' - 46'
3752' - 56'
3762' - 65'
Z3
3774' - 80'
3784' - 86'
3794' - 98'
Z4
3808' - 10'
3814' - 16'
3822' - 24'
3832' - 44'
Z5
3850' - 54'
3862' - 72'
3878' - 86'

PBTD @ 3895'
T/SA
TD @ 3915'

Date Completed: 03/03/92
Initial Injection: 991 BWIPD @ Vacuum
Initial Formation: Grayburg **From:** 3674' **To:** 3886'
Completion Data:
10-17-91 Drill to 3915' (3909' wireline). Log ATLAS ZDL-CN-GR, BHC-SONIC, DIL-MLL & FMT. Set 5-1/2" csg. DO FC & cmt to 3895' and circ hole clean. Run SCHL logs for depth ctl **Selectively perf 3862' - 3886'** (Zn 5) w/ 2 SPF. **Swb** Rec 23 BW / 8 runs in 4 hrs.; FFL @ SN, FER 1 BPH. **Selectively perf 3674' - 3854'** (Zn's 1-4) w/ 2 SPF. Selectively breakdown and acidize w/ 2,062 gals. **Swb 3674' - 3886'** Rec 4 BO + 45 BW (10% OC) / 1 run in 1 hr.; FFL @ 2000', FER 10 BPH. **Swb 3674' - 3886'** Rec 37 BF (3% OC) / 10 runs; SFL @ 900', FER 12 BPH. RIH w/ cmt-lined injection tbg and equipment. 03-02-92 Place well on injection.

Workover History:

Additional Data:
T/Queen @ 3368'
T/Penrose @ 3478'
T/AGU @ 3670'
T/Grayburg Zone 1 @ 3670'
T/Grayburg Zone 2 @ 3704'
T/Grayburg Zone 3 @ 3766'
T/Grayburg Zone 4 @ 3803'
T/Grayburg Zone 5 @ 3852'
T/San Andres @ 3891'

FILE : WBS148.XLS
MRV: 12/23/97

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME:** AGU No. 155 **FORMATION:** Grayburg

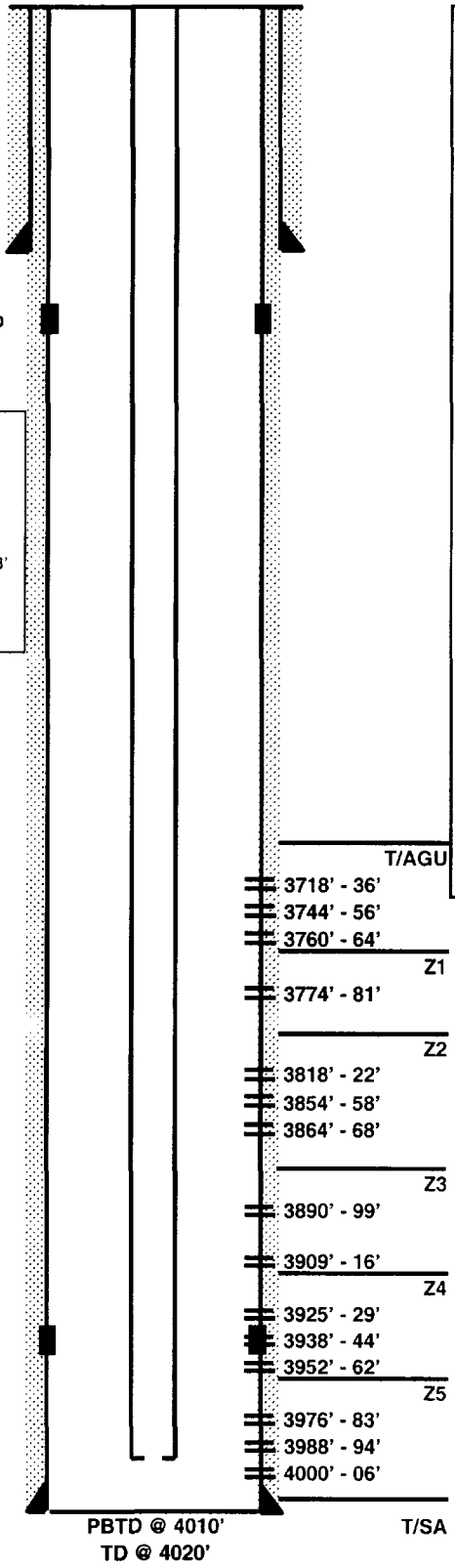
LOC: 1980' FNL & 2276' FWL **SEC:** 2 **GL:** 3552' **CURRENT STATUS:** Producer
TOWNSHIP: 22-S **COUNTY:** Lea **KB to GL:** 13' **API NO:** 30-025-31417
RANGE: 36-E **STATE:** NM **DF to GL:** 12' **CHEVNO:** OQ-9522

8-5/8" OD, 23#, M-50
Surf. Pipe set @ 1320' w/
900 sxs cmt.
Circ. 130 sxs to Surface.

DV tool @ 2774', 2nd stg cmt
785 sxs, circ 70 sxs to surf.
Circ 75 sxs from 1st stg off top
DV tool prior to 2nd stg.

Tubing Detail: 11-30-92

KBTH:	13.00'
127 Jts. 2-3/8" 8RD J-55 tbg:	3949.07'
SN:	1.10'
Perf Sub:	4.00'
Tapped BP J-55 EUE 8rd:	31.38'
Landed @:	3996.55'



FC @ 3936'

5-1/2" OD, Grade K-55,
15.5# csg set @ 4020'
w/400 sxs cmt., 1st Stage.
TOC not rept'd

PBTD @ 4010'
TD @ 4020'

Date Completed: 06/09/92
Initial Production: 1 BOPD / 10 MCFGPD / 67 BWPD
Initial Formation: Grayburg **From:** 3976' **To:** 4006'

Completion Data:
05-19-92 Drill to 4020'. Log SCHL CNL-LDT-GR, DLL-MLL, MDT & RFT. Perf 3976-83', 3988-94' & 4000-06' (Zn 5). **ACDZ** w/ 300 gals (100 gals per set). **Swb** Rec 15.3 BO + 134.7 BW / 30 runs in 6.5 hrs.; SFL @ 1500', FER 9.4 BPH. TIH w/ prod tbg & TO to production. Test pump 1 BOPD + 10 MCFGPD + 67 BWPD.

Workover History:
10-19-92 Perf 3938-44' & 3952-62' (Zn 4). **ACDZ** w/ 84 gals NEFE HCL. **Swb 3938' - 4006'** Rec 160 BW / 36 runs; SFL @ 2000', FER 198 BPH. TIH w/ prod. tbg & TO to production.

11-23-92 Selectively perf 3718' -3929' (AGU - Zn 4) w/ 2 SPF. **Selectively ACDZ** w/ est. 840 gals (42 gals per set). **Swb** Rec 39 BW / 6 runs in 1-1/2 hrs.; SFL @ 2200', **Swb 3718' - 3962'** (AGU - Zn 4) Rec 47 BW / 10 runs in 2 1/2 hrs.; SFL @ 2200', FER 17 BPH. **Swb 3718' - 3916'** (AGU-Zn 3) Rec 56 BW / 12 runs in 3 hrs.; SFL @ 2200', ON-FER 5 BF w/ 12% OC on top. 2% OC on bottom. TIH w/ prod. tbg & TO to production.
12-15-92 Test pump 17 BOPD + 93 MCFGPD + 301 BWPD

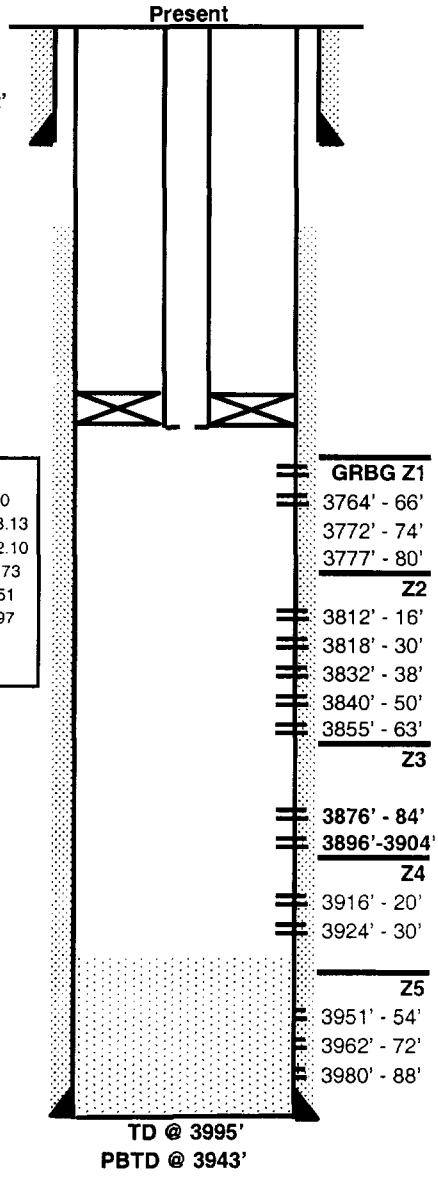
Additional Data:
T/Queen @ 3477'
T/Penrose @ 3590'
T/AGU @ 3715'
T/Grayburg Zone 1 @ 3773'
T/Grayburg Zone 2 @ 3810'
T/Grayburg Zone 3 @ 3881'
T/Grayburg Zone 4 @ 3918'
T/Grayburg Zone 5 @ 3970'
est. T/San Andres @ 4013'

FILE : WBS155.XLS
MRV: 12/23/97

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME: AGU No. 171 WIC** **FORMATION: Grayburg**

LOC: 2305' FSL & 2215' FWL **SEC: 2** **GL: 3537.2'** **CURRENT STATUS: Injector**
TOWNSHIP: 22-S **COUNTY: Lea** **KB to GL: 13.5'** **API NO: 30-025-31734**
RANGE: 36-E **STATE: NM** **DF to GL: 12.5'** **CHEVNO: OU5316**



Tubing Detail: 10/31/92

KBTH:	11.50
120 Jts. 2-3/8" Duoline Tbg:	3708.13
Guiberson N-P On-Off Tool:	2.10
Guiberson G-6 Inj. Pkr:	3.73
Wireline guide:	0.51
Landed @:	3725.97

Date Completed: 11-02-92
Initial Injection: 1020 BWPD, TBG on Vacuum
Initial Formation: Grayburg **From:** 3764' **To:** 3988 '

Completion Data:

09-23-92 MIRU. Drill to 1432'. RU Csg crew. Set 8-5/8" csg w/ 900 sxs class "C" cmt w/ 2% cacl2. Displaced cmt w/ 89.5 BFW. Bump plug w/1200# psi & float held OK. DO cmt. Drld to 3995', RU Computalog. Run DLL-MLL, SDL-CNL, SFT. Cond hole & set 5-1/2" csg w/ 500 sxs class "C" + 16% gel + 1.88 pps salt + 0.2% HR-7. Follow w/ tail cmt of 325 sxs Class "H" + 2 pps Calseal + 1 pps KCL + 0.5% Halad-344. Displaced w/ 94 BFW. Bumped plug to 1200# and circ. 112 sxs to surf. ND BOP & NU Tbg Head. Tst to 2800# - OK. RDMO.
10-26-92 DO cmt. Float & collar to 3992'. Run CBL/CCL/CET logs. Selectively perf 3951-54' (zn 4), 3962-72' & 3980-88' (zn 5) w/ 2SPF. Selectively acdz 3951-54' w/ 126 gals, 3962-72' w/ 84 gals & 3980-88' w/ 84 gals. Swb perfs Rec 11 BW/3runs and sandline parted; SFL @ 1500'. TIH w/ pkr & set @ 3908'. Swb 3951-88' Rec 10 BO + 94 BW ISC 50% oil + 50% BS&W; 16 runs. SFL @ 1900' FER 27 BPH. Selectively perf 3924-30', 3916-20' (zn 4); 3896-3904' & 3876-84' (zn 3) w/ 2SPF. TIH w/ PPI pkr. Set pkr in blank pipe & tst to 2000#. Set RBP @ 3945'. Selectively acdz perfs 3876' - 3930', volumes not reported. Set pkr @ 3860'. Swb perfs 3876' - 3930 (zn 3&4) Rec 189 BW (1% oil)/24 runs.
SFL @ 1500', EFL @ 1550' FER 32 BPH. SI for 60 mins, TP 10#, FL @ 1500'. Selectively perf 3855-63', 3840-50', 3832-38', 3818-30', 3812-16' (Zn 2); 3777-80',
3772-74' and 3764-66' (zn 1). Selectively acdz w/ 663 gals. Swb perfs 3764' - 3863' (zn 1&2) Rec 78 BW (1% BS)/4runs; 38 Bbls over load, FER 26 BPH, -0- oil. Set RBP @ 3871' & pkr @ 3754'.
10-31-92 Run 2-3/8" tbg & tst to 3000# below slips. Set pkr @ 3725'. ND BOP, NU wellhead & TO to prod.

Workover History:

11-05-92 Injection rage 772 BWPD, Tbg on vacuum.
04-13-93 TIH and set injection pkr. Tst csg to 300# psi/30". Fish stuck Profile Injection Logging tool.
09/98 Pumped in 7sx of subangular blasting sand. B: 1100 BWIPD @ 650# A: 1240 BWIPD @660#. Tagged TD @ 3983'.
10/98 Pumped another 7sx of blasting sand - no rate change noticed. Tagged TD @ 3996'.
11/98 Pumped 4sx 20/40 sand and capped w/ 2 sx of subangular blasing sand. Reduced rate to 436 BWIPD @ 744# until it quit taking fluid in January. Tagged TD @3943'
2/10/99 Pumped 500 gal HCL down tbg B: 0 BW @ 745# A: 1120 BW @ 652# (same as before sand)
5/4/99 Tagged TD @ 3946' (1100 BW @ 700#)

Additional Data:

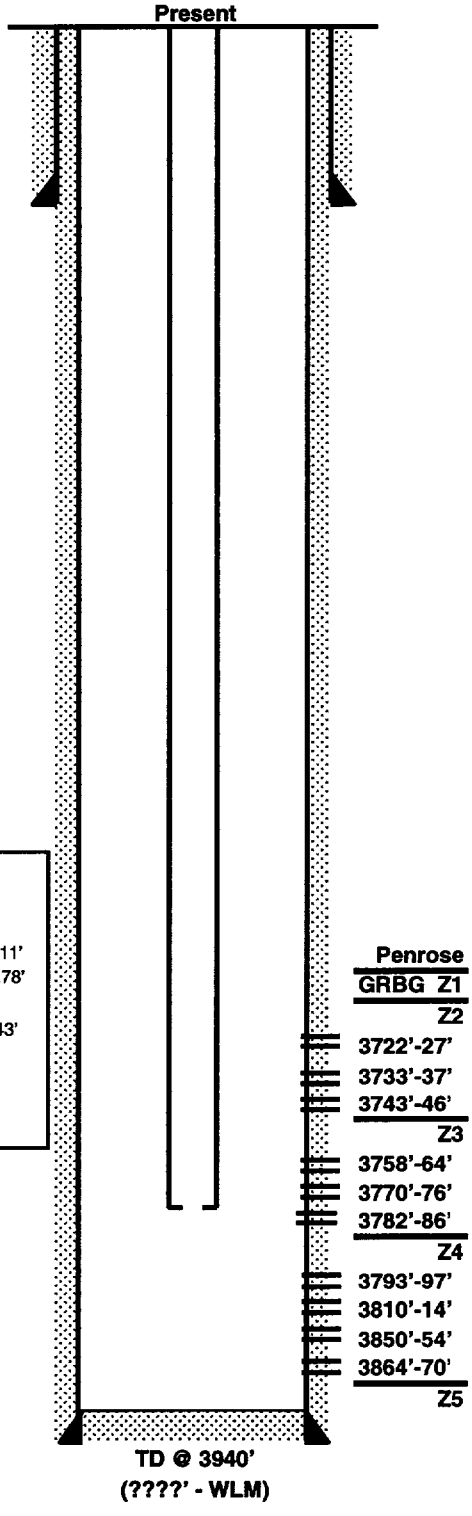
T/Queen @ 3465'
T/Penrose @ 3585'
T/AGU @ 3701'
T/Grayburg Zone 1 @ 3761'
T/Grayburg Zone 2 @ 3802'
T/Grayburg Zone 3 @ 3868'
T/Grayburg Zone 4 @ 3907'
T/Grayburg Zone 5 @ 3958'
TD @ 3995'
T/San Andres @ 3994'

FILE: WBS171.XLS
AJE: 2/22/99
Revised: Fm Tops 01/26/95

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME: AGU No. 335** **FORMATION: Grayburg**

LOC: 1310' FNL & 1330' FEL **SEC: 36** **GL: 3527'** **CURRENT STATUS: Producer**
TOWNSHIP: 21-S **COUNTY: Lea** **KB to GL: 11.0'** **API NO: 30-025-34636**
RANGE: 36-E **STATE: NM** **DF to GL: 11.0'** **CHEVNO: ??????**



8-5/8" OD, 24# K-55
Surf. Pipe set @ 510'
w/ 350 sxs cmt. Circ.
125 sxs to surf.
11" hole size

Tubing Detail:

KBTH:	11'
116 Jts. 2-7/8" J-55 6.5#/ft tbg:	3659.78'
ESP RD 1200 153 Stage Sub Pump	
Landed @:	3715.43'

5-1/2" OD, Grade K-55,
15.5# csg set @ 3948'
w/ 850 sxs cmt. Circ.
30 sxs to surf.
7 7/8" hole size
FILE: WBS335.XLS
CJA: 11/12/99

Date Completed: 10/5/99
Initial Production: 140 BOPD / 350 BWPD / 0 MCFGPD
Initial Formation: Penrose/Grayburg **From:** 3740' **To:** 3912'
Completion Data: Run CBL/CET log. Selectively perf charges 3 JSPF @ 120 phasing (159 shots): 3722'-27', 3733'-37', 3743'-46', 3758'-64', 3770'-76', 3782'-86', 3793'-97', 3810'-14', 3850'-54', & 3864'-70'. Break down perfs w/ 500 gals 15% NEFE HCl acid. Acidize W/ 4,000 gal of 50Q CO2 Acid. Run production equip.

Workover History:

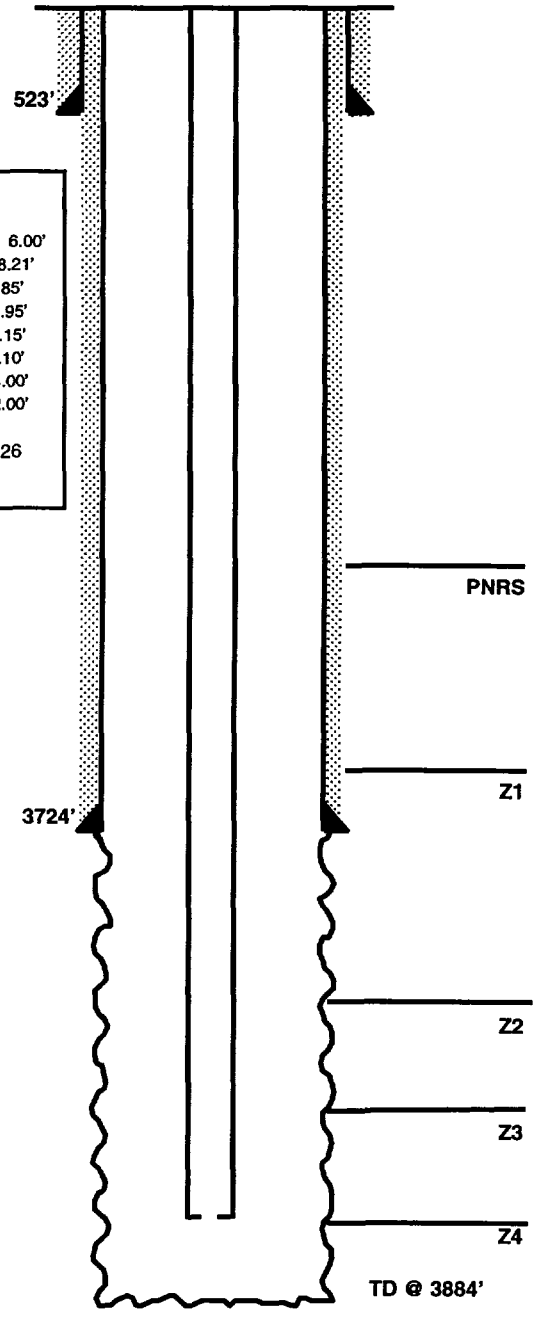
Additional Data:
T/Penrose @ ????'
T/AGU @ ????'
T/Grayburg Zone 1 @ 3658'
T/Grayburg Zone 2 @ 3691'
T/Grayburg Zone 3 @ 3753'
T/Grayburg Zone 4 @ 3789'
T/Grayburg Zone 5 @ '
T/San Andres @ '

WELL DATA SHEET

FIELD: Arrowhead | **WELL NAME: AGU No. 336** | **FORMATION: Grayburg**

LOC: 50' FNL & 55' FEL | **SEC: 2** | **GL: 3548'** | **CURRENT STATUS: Producer**
TOWNSHIP: 22S | **COUNTY: Lea** | **KB to GL: 6'** | **API NO: 30-025-34297**
RANGE: 36E | **STATE: NM** | **DF to GL: 6'** | **CHEVNO: BQ5149**

9-5/8", 36#/ft, Surf. Pipe
set @ 523' w/ 300 sxs cmt.
TOC @ Surf' by circ.
12-1/4" hole.



Tubing Detail: 08/18/98
NOT YET RECEIVED

KBTH:	6.00'
112 Jts. 2-7/8" J-55 6.5#:	3368.21'
2-7/8" X 7 TAC (set @ 3391):	2.85'
2 Jts. 2-7/8" Tbg	30.95'
10 Jts. 3-1/2" J-55 8 RD Tbg	317.15'
2.25" Tbg Pmp w/ Centrlzr	33.10'
2-7/8" Perf Sub	4.00'
3-1/2" BPMAJ	32.00'
Landed @	3794.26

7", 23#/ft, csg set @
3724' w/ cmt. as follows:

1st Stage
150 sxs cmt.

2nd Stage
600 sxs cmt.

TOC @ Surf' by circ.
8-3/4" hole.

Date Completed: 6-18-98
Initial Production: 2 BOPD/ 459 BWPD/ 10 MCFGPD
Initial Formation: Pnrs/Grayburg **From:** 3540' **To:** 3715'
Completion Data:
03-09-98 Drill to 3724, circ & clean hole. Run 7" csg to 3724'. Drlg cmt, FC & FS to 3725'. Circ hole clean. Deepen well to 3884'.

Workover History:
08-10-98 Tag TD @ 3879'. No fill. ACDZ Zns 3 & 4 w/ 3500 gal 15% AntiSludge HCl and 1050 gal VES. Dump 1 SX 100 mesh sd. ACDZ Zn 2 w/ 3500 gal 15% AntiSludge HCl and 1500 gal VES. Fish Vortech tool, then swb. PIP pkr @ 3786'. RIH w/ prod tbg and TOTP.

Additional Data:
T/Queen @ 3346'
T/Penrose @ 3493'
T/AGU @ N/A
T/Grayburg Zone 1 @ 3676'
T/Grayburg Zone 2 @ 3737'
T/Grayburg Zone 3 @ 3787'
T/Grayburg Zone 4 @ 3820'
T/San Andres @ 3950'

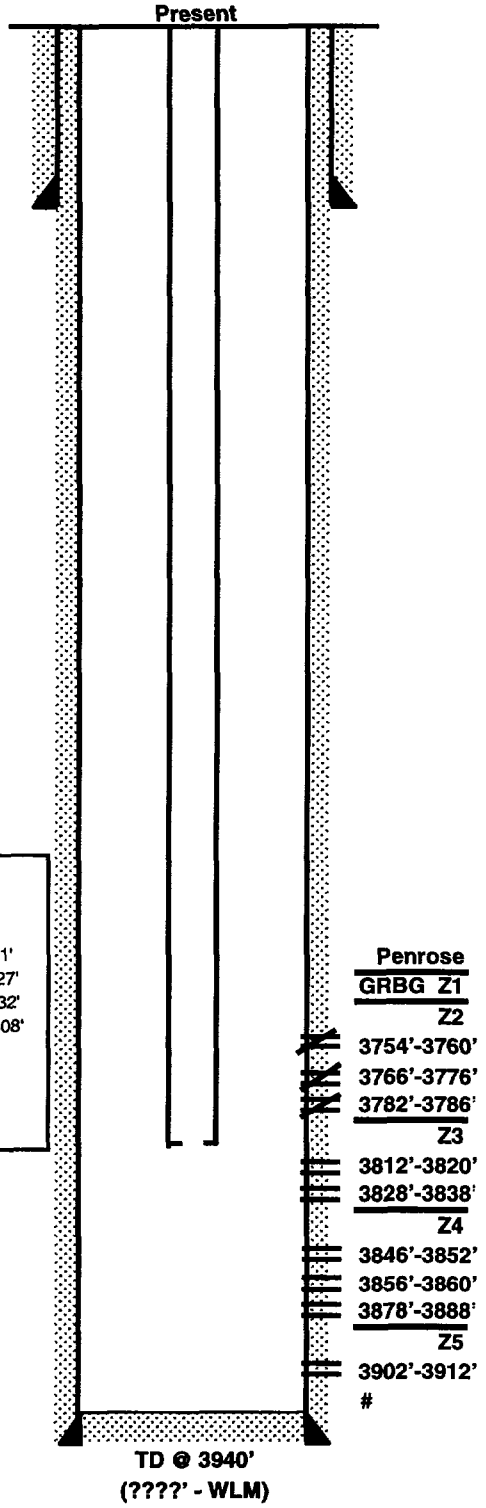
Rod Detail: 08-18-98
NOT YET RECEIVED
1 1-1/2" x 26' Polish Rod
140 7/8 " N-97 Rods
10 1-1/2" Wt Bars
2.250" Plgr

FILE: WBS336.XLS
CJA: 8/25/98

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME: AGU No. 342** **FORMATION: Grayburg**

LOC: 1310' FNL & 1330' FEL **SEC: 2** **GL: 2740'** **CURRENT STATUS: Producer**
TOWNSHIP: 22-S **COUNTY: Lea** **KB to GL: 11.0'** **API NO: 30-025-34637**
RANGE: 36-E **STATE: NM** **DF to GL: 11.0'** **CHEVNO: ??????**



8-5/8" OD, 24# K-55
Surf. Pipe set @ 510'
w/ 350 sxs cmt. Circ.
125 sxs to surf.
11" hole size

Tubing Detail: 10-14-99

KBTH:	11'
119 Jts. 2-7/8" J-55 6.5#/ft tbg @	3727'
2-7/8" x 5' Tubing Sub @	3732'
ESP TD 1750 Stage Sub Pump @	3808'

5-1/2" OD, Grade K-55,
15.5# csg set @ 3948'
w/ 850 sxs cmt. Circ.
30 sxs to surf.
7 7/8" hole size
FILE: WBS342.XLS
Last Updated: 4/11/00

Date Completed: 9/7/99
Initial Production: 10 BOPD / 3000 BWPD / 40 MCFGPD
Initial Formation: Penrose/Grayburg **From:** 3740' **To:** 3912'
Completion Data: Run CBL/CET log. Selectively perf charges 3 JSPF @ 120 phasing (204 shots): 3754 – 3760, 3766 – 3776, 3782 – 3786, 3812 – 3820, 3828 – 3838, 3846 – 3852, 3856 – 3860, 3878 – 3888, & 3902 - 3912. Break down perfs w/ 500 gals 15% NEFE HCl acid. Acidize W/ 6,000 gal of 50Q CO2 Acid. Run production equip.

Workover History:

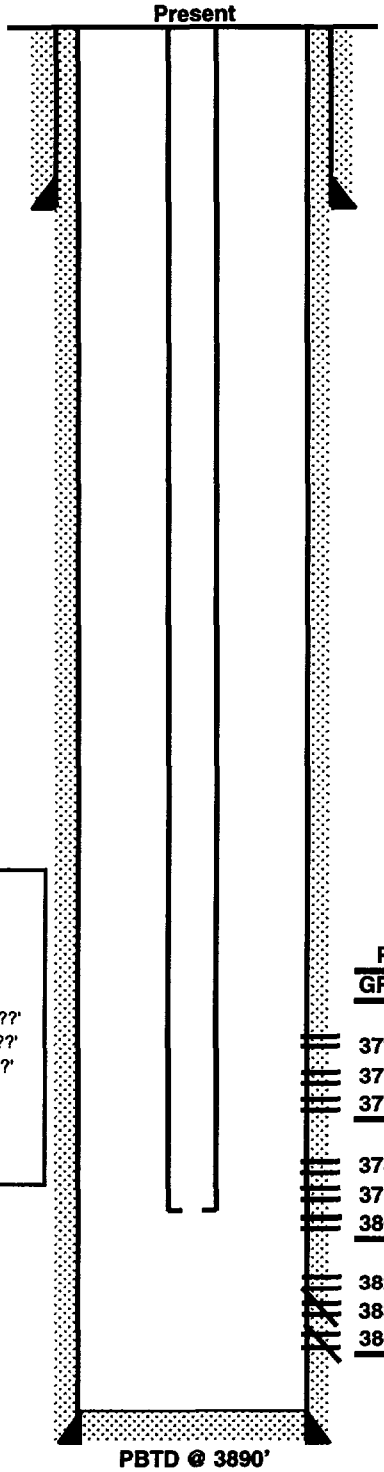
09-28-99 Set CIBP @ 3797'. Sqz perfs 3754'-3786' w/375 sx cmt. DO cmt and CIBP to 3932'. Perf 3812'-20', 3828'-38', 3846'-52', 3856'-60', 3878'-88', & 3902'-12' w/4" csg guns, 3 JHPF, 120 deg phsg. Acdz w/2000 gals 15% NEFE HCL.

Additional Data:
T/Penrose @ ????'
T/AGU @ ????'
T/Grayburg Zone 1 @ 3701'
T/Grayburg Zone 2 @ 3739'
T/Grayburg Zone 3 @ 3806'
T/Grayburg Zone 4 @ 3839'
T/Grayburg Zone 5 @ 3892'
T/San Andres @ 3964'

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME: AGU No. 344** **FORMATION: Grayburg**

LOC: 1334' FNL & 1300' FWL **SEC: 1** **GL: 3532'** **CURRENT STATUS: Producer**
TOWNSHIP: 22-S **COUNTY: Lea** **KB to GL: 11.0'** **API NO: 30-025-34665**
RANGE: 36-E **STATE: NM** **DF to GL: 10.0'** **CHEVNO: ??????**



8-5/8" OD, 24# K-55
Surf. Pipe set @ 518'
w/ 350 sxs cmt. Circ.
120 sxs to surf.
11" hole size

Tubing Detail: ??/??/??

KBTH:	??
??? Jts. 2-7/8" J-55 6.5#/ft tbg:	????
2-7/8" Seat Nipple:	????
2-7/8" Perf Sub:	????
2-7/8" MAJ w/ Tapped BPOB:	????
Landed @:	????

5-1/2" OD, Grade K-55,
15.5# csg set @ 3908'
w/ 750 sxs cmt. Circ.
10 sxs to surf.
7 7/8" hole size
FILE: WBS344.XLS
RLM: 10/21/99

PBTD @ 3890'
TD @ 3908'
(3890' - WLM)

Date Completed: 11/10/99
Initial Production: 6 BOPD / 1400 BWPD / 23 MCFGPD
Initial Formation: Penrose/Grayburg **From:** ' **To:** '
Completion Data: 10/18/99 Run CASTV log. Selectively perf with 3 JSPF @ 120 phasing (153 shots): 3733 – 43, 3748 – 52, 3758 – 64, 3783 – 87, 3792 – 95, 3802 – 3810, 3820 – 3826, 3832 – 38, & 3863-67. Break down perfs w/ 2000 gals 15% NEFE HCl acid dropping 230 7/8" - 1.1 sg BS, Avg PIR 3.5 BPM @ 780 psi, ISIP 520 psi, 6 min SI VAC. Acidize W/ 4,000 gal of 50Q CO2 Acid. Avg PIR 4BPM @ 750 psi, ISIP 595psi, 15 min SI 590 psi. Flow well back. Rec 293 bbls. Swab 103 bbls. 100% wtr.

Workover History:

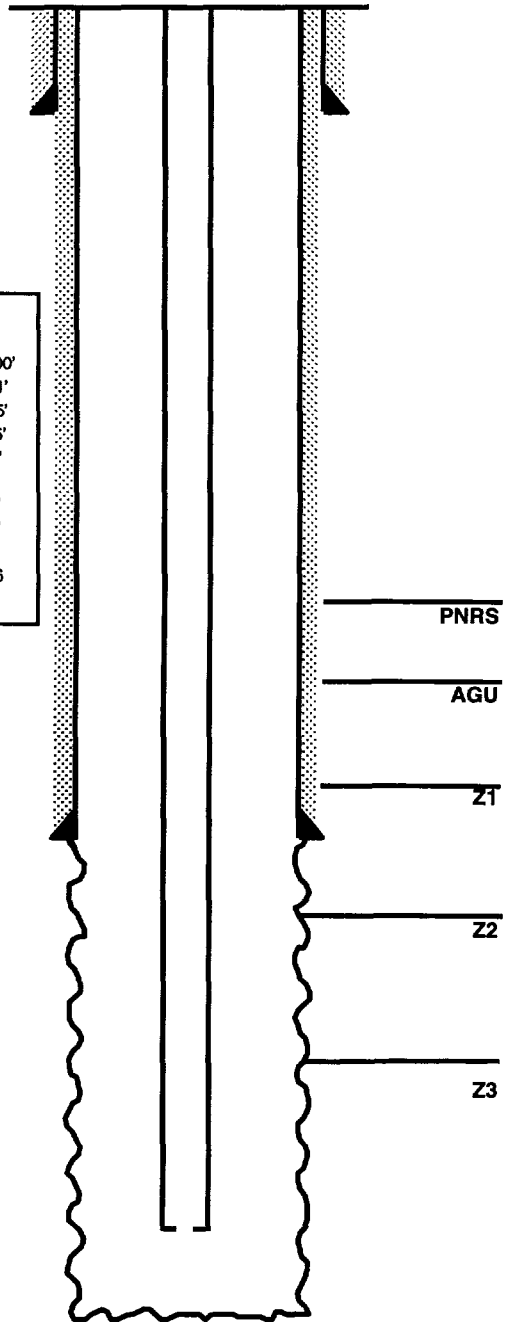
Additional Data:
T/Penrose @ 3486'
T/AGU @ 3693'
T/Grayburg Zone 1 @ 3674'
T/Grayburg Zone 2 @ 3708'
T/Grayburg Zone 3 @ 3778'
T/Grayburg Zone 4 @ 3813'
T/Grayburg Zone 5 @ 3869'
T/San Andres @ 3920+/-'

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME: AGU No. 369** **FORMATION: Grayburg**

LOC: 170' FNL & 1220' FWL **SEC: 12** **GL: 3484'** **CURRENT STATUS: Producer**
TOWNSHIP: 22S **COUNTY: Lea** **KB to GL: 6'** **API NO: 30-025-34298**
RANGE: 36E **STATE: NM** **DF to GL: 5'** **CHEVNO: BQ5150**

9-5/8", 36#/ft, Surf. Pipe set @ 550' w/ 300 sxs cmt. TOC @ Surf' by circ. 12-1/4" hole.



Tubing Detail: 08/18/98

KBTH:	6.00'
110 Jts. 2-7/8" J-55 6.5#:	3368.21'
2-7/8" X 7 TAC:	2.85'
2-7/8" Tbg	30.95'
3-1/2" J-55 8 RD Tbg	317.15'
2.25" Tbg Pmp w/ Centrlzr	33.10'
2-7/8" Perf Sub	4.00'
3-1/2" BPMAJ	32.00'
Landed @	3794.26

7", 23#/ft, csg set @ 3736' w/ 650 SX cmt. TOC @ Surf' by circ. 8-3/4" hole.

Date Completed: 8-12-98
Initial Production: 18 BOPD/ 428 BWPD/ 10 MCFGPD
Initial Formation: Pnrs/Grayburg **From:** 3512' **To:** 3802'
Completion Data:
3-16-98 Drill to 3736, run 7" csg to 3736'. DO cmt to 3830'.

Workover History:
Next on schedule after AGU 336

8/19/98 ACDZ Zn 2 & 3 w/ 3000 gal 15% AntiSludge HCL & 1200 gal VES. Swb.

Additional Data:
T/Queen @ 3389'
T/Penrose @ 3512'
T/AGU @ N/A
T/Grayburg Zone 1 @ 3700'

Rod Detail: 08-18-98

1 1-1/2" x 26' Polish Rod
140 7/8 " N-97 Rods
10 1-1/2" Wt Bars
2.250" Plgr

FILE: WBS369.XLS
CJA: 8/10/98

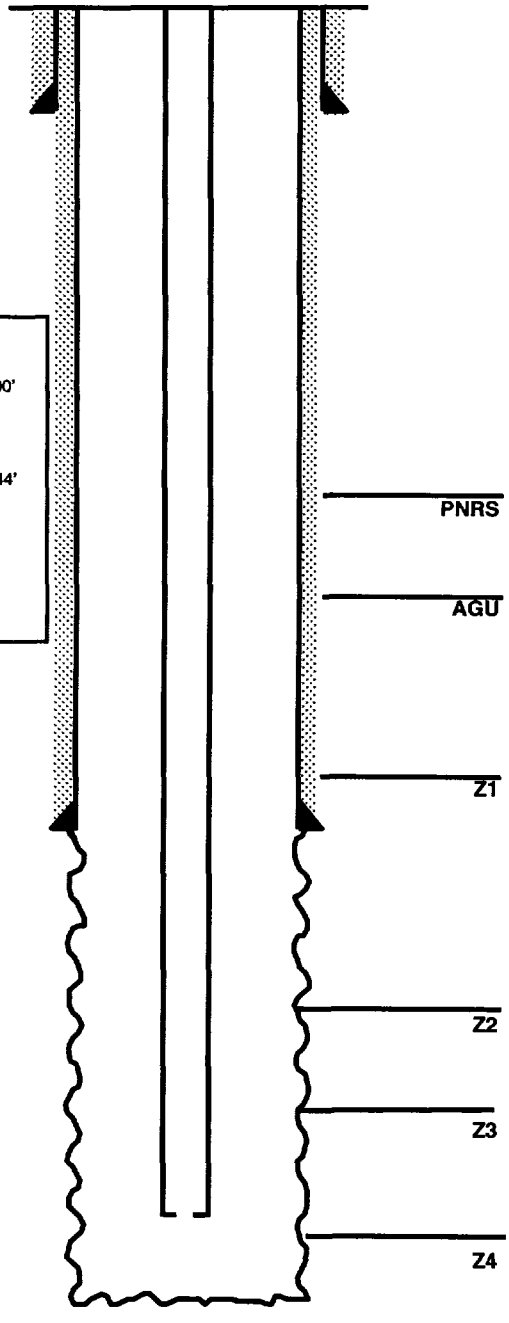
TD @ 3830'

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME: AGU No. 390** **FORMATION: Grayburg**

LOC: 1130' FSL & 1070' FEL **SEC: 12** **GL: 3455'** **CURRENT STATUS: Producer**
TOWNSHIP: 22S **COUNTY: Lea** **KB to GL: 6'** **API NO: 30-025-34299**
RANGE: 36E **STATE: NM** **DF to GL: 5'** **CHEVNO: BQ5151**

9-5/8", 36#/ft, Surf. Pipe set @ 525' w/ 300 sxs cmt. TOC @ Surf' by circ. 12-1/4" hole.



Tubing Detail: 08/07/98

KBTH:	6.00'
109 Jts. 2-7/8" 6.5#:	3368.21'
2-7/8" X 7 TAC:	2.72'
2-7/8" Tbg w/ 2-7/8 X 3-1/2 XO	31.44'
3-1/2" 9.3# J-55 8 RD Tbg	316.10'
2.25" Tbg Pmp w/ Centrlzr	31.00'
2-7/8" Perf Sub	4.10'
3-1/2" BPMAJ	31.23'
Landed @	3790.80

7", 23#/ft, csg set @ 3685' w/ 300 sxs cmt. TOC @ Surf' by circ. 8-3/4" hole.

Date Completed: 5-8-98
Initial Production: 36 BOPD/ 250 BWPD/ NMOG
Initial Formation: Pnrs/Grayburg **From:** 3540' **To:** 3715'
Completion Data:
Drill to 3685, circ & clean hole. Run 7" csg to 3785'. DO cmt to 3800'.

Workover History:
08-03-98 Acid wash w/ 2,000 gal Acid 3690'-3720' Foam down backside. Acid wash w/ 3,000 gal Acid 3737'-3787' Foam down backside.

Additional Data:
T/Queen @ 3327'
T/Penrose @ 3434'
T/AGU @ N/A
T/Grayburg Zone 1 @ 3617'
T/Grayburg Zone 2 @ 3667'
T/Grayburg Zone 3 @ 3714'
T/Grayburg Zone 4 @ 3750'

Rod Detail: 08-07-98

1 1-1/2" x 26' Polish Rod
4 7/8" N97 4' Sub
139 7/8 " N-97 Rods
10 1-1/2" Wt Bars
2.250" Plgr

TD @ 3800'

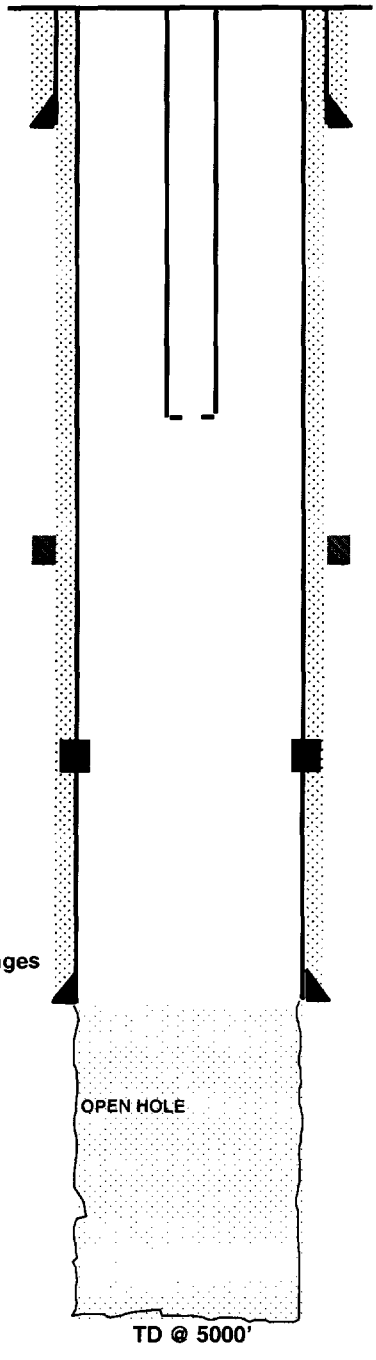
FILE: WBS390.XLS
CJA: 8/10/98

WELL DATA SHEET

FIELD: Arrowhead **WELL NAME: AGU No. 600** **FORMATION: Grayburg**

LOC: 1220' FSL & 1220' FEL	**SEC: 35**	**GL: 3559.1'**	**CURRENT STATUS: Water Supply Well**
TOWNSHIP: 21-S	**COUNTY: Lea**	**KB to GL: 11'**	**API NO: 30-025-31234**
RANGE: 36-E	**STATE: NM**	**DF to GL: 10'**	**CHEVNO: KX3277**

11-3/4", 42 #/ft, H-40 set @ 1315' w/ 1000 sxs cmt. TOC Circ cmt.



DV Tool @ 3492'

FC @ 4047'

8 5/8", K-55, 32#, set @ 4132', w/1300 sx cmt in 2 stages Circ to surf both stages

TD @ 5000'

Date Completed: 07-15-94
Initial Formation: Grayburg
Completion Data:
Drill to 5000, circ & clean hole. Run 8-5/8" csg.
1-7-93 Acdz w/2200 gasl15% NEFE HCL. RIH w/5 1/2" csg to 3068. SI
wover History:
7-15-94 Put well on production.

6-9-97 Acdz w/1000 gals15% NEFE HCL.

Additional Data:
T/Queen @ 3432'
T/Penrose @ 3540'
T/Grayburg Zone 1 @ 3725'
T/Grayburg Zone 2 @ 3764'
T/Grayburg Zone 3 @ 3821'
T/Grayburg Zone 4 @ 3858'
T/Grayburg Zone 5 @ 3912'
T/Grayburg Zone 6 @ 3960'

FILE: WBS600.XLS
MRV: 12/29/97

WELL DATA SHEET

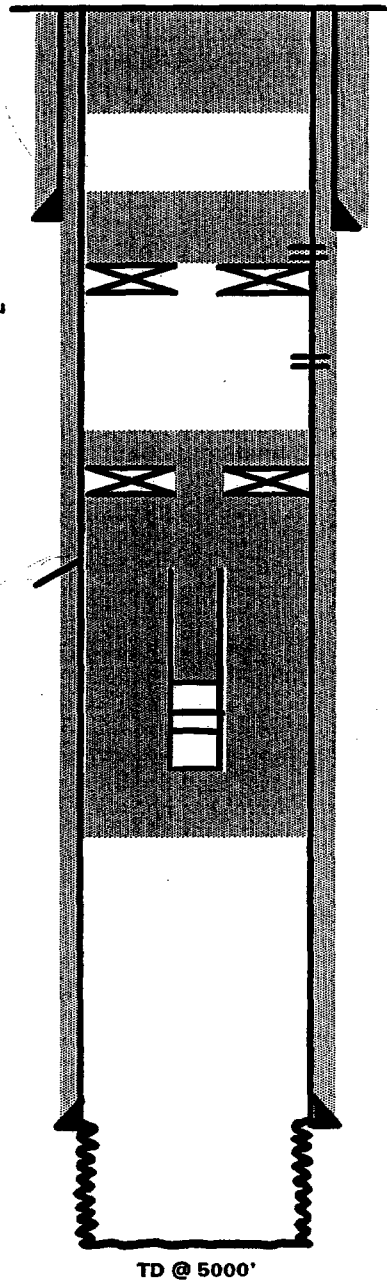
FIELD: Arrowhead | **WELL NAME:** AGU No. 601 | **FORMATION:** Grayburg

LOC: 2540' FNL & 1220' FWL
TOWNSHIP: 22-S
RANGE: 36-E

SEC: 1
COUNTY: Lea
STATE: NM

GL: 3520'
KB to GL: 11'
DF to GL: 10'

CURRENT STATUS: Water Supply Well
API NO: 30-025-31303
CHEVNO: KZ1468



Date Completed: 01-07-92
Initial Formation: Grayburg
Completion Data:
Drill to 5000, circ & clean hole. Run 8-5/8" csg.
1-3-92 Swb. RIH w/ 5 1/2" tbg, land @ 2005.
3-2-93 Put on production.

Wover History:
10-11-96 Collapsed csg @ 1928 (1 jt tbg & pmp left in hole). Attempt to get back into csg, no success. SI.

2-5-97 Tag @ 1442. Attempt to mill, wash to 1959. Wash and mill to 2000(form). Drill form to 2097. Attempt to cut window above parted csg, no success. Set CICR @ 1791. Pmp 880 sx cmt through CICR. Put 50' cmt plug on top of CICR. Perf @ 1223. Set CICR @ 1150. Unable to pmp through CICR. Perf @ 1140, pmp 25 sx cmt f/1040-1140. Set balanced plug f/0-350 (90sx).
Well status chg to P&A.

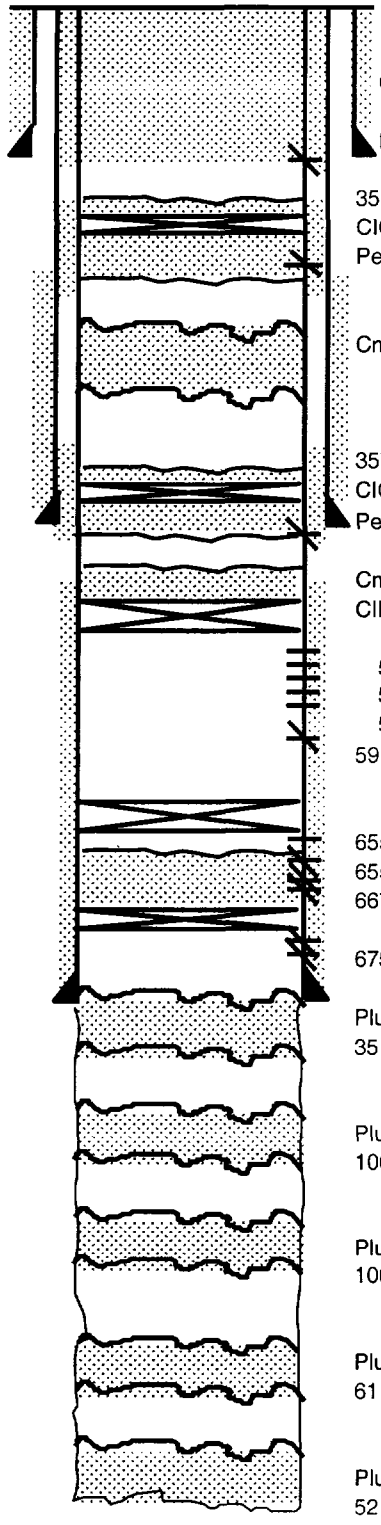
Additional Data:
T/Queen @ 3385'
T/Penrose @ 3494'
T/Grayburg Zone 1 @ 3679'
T/Grayburg Zone 2 @ 3713'
T/Grayburg Zone 3 @ 3779'
T/Grayburg Zone 4 @ 3819'
T/Grayburg Zone 5 @ 3869'
T/Grayburg Zone 6 @ 3909'

FILE: WBS600HIS.XLS
NDM: 10/06/97

WELL DATA SHEET

FIELD: ARROWHEAD **WELL NAME: Harry Leonard C #10** **FORMATION: Arrowhead-Drinkard**

LOC: 760' FSL & 2080' FWL **SEC: 36** **GL: 3511'** **CURRENT STATUS: P & A**
TOWNSHIP: 21-S **COUNTY: Lea** **KB to GL: 14.40'** **API NO: 30-025-04937**
RANGE: 36-E **STATE: NM** **DF to GL: 12.05'** **CHEVNO: FA6076**



Spud Date: 10/13/1956
Date Completed: 6/19/1957
Initial Formation: Arrowhead -Drinkard
Completion Data:
Drilled to 9930'. Spotted cmt plugs f/ 9930-9800', 9600-9445', 8550-8300', 7900-7680', & 6920-6870'. Perf 6804-6762', 6758-6750', 6710-6695', 6680-6670', 6622'-6576', 6570-6555'. Spotted 500 gals mud acid on perfs 6804-6555 & sqzd into form. Swab 13 BO , 14 BW in 8 hrs. Set CICR @ 6720'. Sqz perfs 6750-6804' w/47 sx cmt. Dump 48 gals Hydromite in csg & fill up to 6656'.Treat perfs 6555-6622' w/2500 gals 15% NE acid @ 6.8 bpm. Flushed w/26 BO. PB to 6626' w/27 gals Calseal. PB to 6600' w/ 24 gals Hydromite. Trtd perfs 6555-6600' w/400 gals 15% NE acid @ 4.6 bpm & 3000-2700 psi. Last 72 hr tst pmp 108 BO & 18 BW.
D/O cmt f/6600-6710'. Set CICR @ 6538' & sqz perfs 6555-6710' w/250 sx cmt. D/O CICR @ 6538' & cmt to 6600'.Perf 6555-70' & 6576-94'. Trt w/1000 gals 15% NE acid & flushed w/26 BO. Trtd w/15,000 gals ref oil w/1# SPG. AIR 12.2 BPM. Flushed w/165 BO.

6/19/1957 OCD 24 hr potential tst. Ppd 84 BO, 33 BW, & 206 MCF thru 2-3/8" tbg. Classified as Arrowhead - Drinkard.

Workover History:
4/17/1972 T/A Drinkard. Recomplete in Blinebry. Set CIBP @6480'. Perf 5910-11. RTTS pkr set @ 5844'. Pmp 1000 gals mud flush fol by 300 sx Cl C cmt. TOC @ 4985' by TS. D/O cmt & retnr f/5833-5913'. Ran bit to 6475'.Perf 5509-11',5546-48',5577-79', 5658-60', & 5759-61'.Trtd 60,000 gals gel wtr w/0-3 ppg sd &15 gals 15% NE acid. Flushed w/45 bbls gel wtr.
5/17/1972 OCD 24 hr pot. tst Ppg 87 BO, 208 BW, & 163 MCF.
7/12/1983 T/A Well. Set CIBP @ 5480'. Circ w/140 bbl pkr fluid.
10/9/1992 P&A well. Mix 75 sx cmt plug. Spot f/5840-4760'. Tag plug@4822'. Perf 4 shts @ 3956'. Set CICR@3300' & pmp 350 sx cmt leaving 35' on top of CICR. Pmp 25 sx cmt plug f/2820-2580'. Perf 4 shts @ 1300'. Set CICR @ 1050'. Pmp 150 sk plug leaving 35' cmt on plug. Perf @ 370'. Pmp 240 sx cmt. 5-1/2" csg left full of cmt.Cut off wellhd & anchors. Install Marker. P&A 10-15-1992.

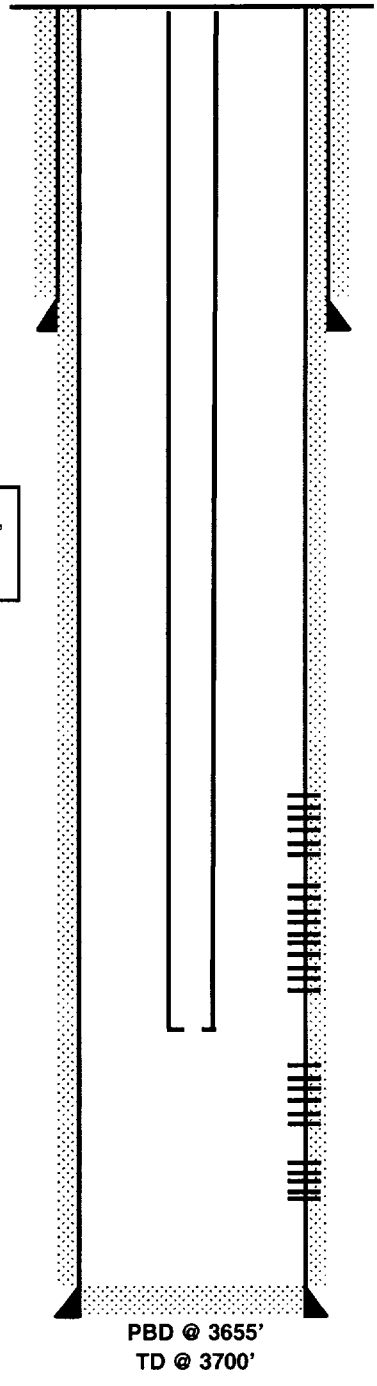
Additional Data:
DST's #1: 5165-5231'; #2: 5175-5231'; #3: 5510-64'; #4: 5885-5920'; #5: 6535-69'; #6: 6559-6600'; #7: 6605-63'; #8: 6675-6770'; #9: 6897-6950'; #10: 8189-8235; #11: 8275-8397'; #12: 8396-8435'; #13: 8434-8526'; #14: 9045-9093'; #15: 9496-9541': #16 9805-30'; #17: 9840-80'; #18:9880-9930.

FILE: H_L_C_10.xls
DLMc: 4/11/2000

WELL DATA SHEET

FIELD: EUMONT **WELL NAME:Conoco: Lockhart 'B-1' #10** **FORMATION: Yates-Seven Rivers-Queen**

LOC: 1980' FNL & 1550' FWL **SEC: 1** **GL: 3525'** **CURRENT STATUS: GAS**
TOWNSHIP: 22-S **COUNTY: Lea** **Rig Ht:** **API NO: 30-025-34099**
RANGE: 36-E **STATE: NM** **CHEVNO: BR1388**



8-5/8" Csg
set@455' w/325 sx

Tubing Detail:
2-3/8" "N" 3389'

2858'-2932'

2992'-3262'

3401'-3490'

3497'-3551'

4-1/2" Csg
set@3700' w/832 sx.

PBD @ 3655'
TD @ 3700'

Spud Date: 10/27/1997
Date Completed: 12/12/1997
Initial Formation: Yates-Seven Rivers-Queen -Penrose
Completion Data:
Drill to 3700'. PerfsYates:
2858',2860',2862',2874',2880',2883',2901',2911',2913',
2920',2928',2930', & 2932'. Perf Seven Rivers : 2992',
2994',2998',3000',3012',3014',3021',3022',3031',3035',
3078',3080',3153',3155',3157',3168',3178',3180',3206',
3214',3220',3239',3241',3243',3260',& 3262'.
Perf Queen: 3401',3405',3409',3417',3431',3434',3437',
3443',3444',3449',3455',3457',3459',3465',3470',3475',
3478',3480', & 3490'. Perf Penrose: 3497',3499',3505',
3507',3513',3516',3519',3523',3526',3528',3530',3535',
3540',3548', & 3551'.
SANDFOAMFRAC 3401-3551' w/857.1 BBL & 83700# sand.
SANDFOAMFRAC 2858-3262' w/1261.9 BBIL & 203,000#
sand. FTP 42#, FCP 200#.

IP 23.99 hr test F1008 MCFD & 3 BWPD.

Workover History:

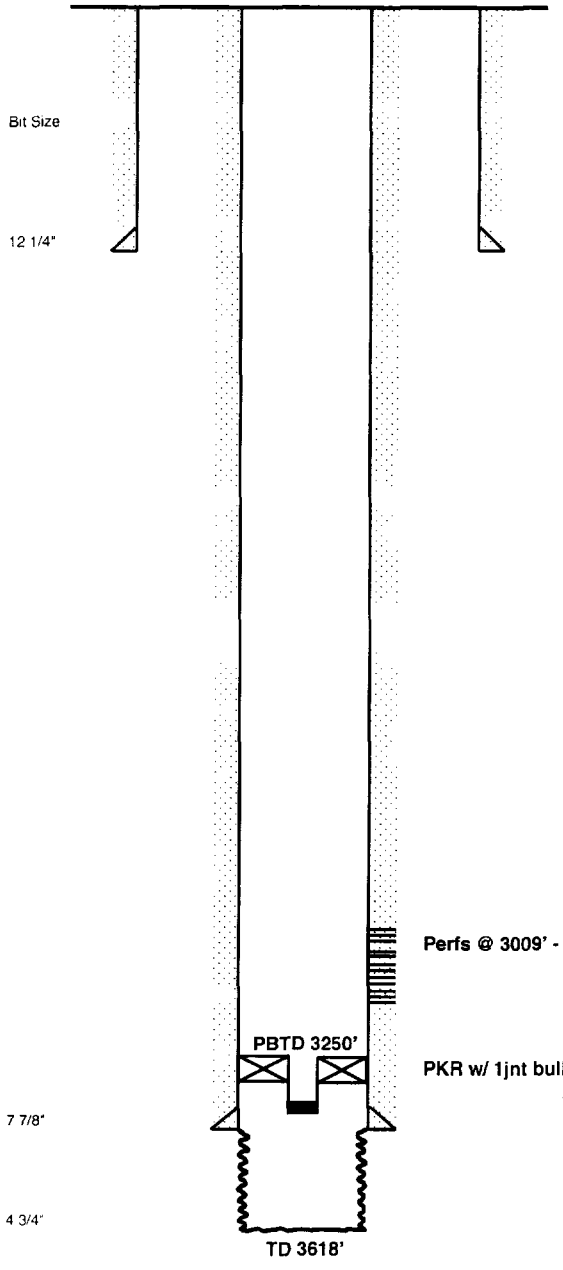
Additional Data:
T/Yates @ 2728'
T/Seven Rivers @ 2939'
T/Queen @ 3392'
T/Penrose @ 3496'

FILE: Lockhart_B1_10.xls
DLMc: 4/12/2000

CURRENT WELL DATA SHEET

FIELD: Eumont **WELL NAME: H. T. Matten (NCT-E) # 16** **FORMATION: YTS 7R Qn**

LOC: 1670' FSL & 685' FWL	SEC: 1	GL: 3518'	CURRENT STATUS:
TOWNSHIP: 22S	COUNTY: Lea	KB to GL: 6'	API NO: 30-025-34241
RANGE: 36E	STATE: NM	DF to GL:	REFNO: BQ 3303



8 5/8", 23# , WC-50 Csg
Set @ 521', w/ 300 sx. cmt.
cmt. circulated

Initial Completion: 1998

Spud Date: Feb 8, 1998

3-5-98 Drilled OH 3360'-3618' w/ N2 and log.

3-12-98 Perfed OH @ 3458'-3463'. Frac OH w/ 75Q foam & 1875,000# 12-20 Brady. Perf csg w/ 3 JHPF from 3009'-3053' 24 holes. Frac w/ 75 Q & 213,000# 12-20 Brady. CO to 3618'.

CSG Perfs
3009' - 3011'
3014' - 3016'
3021' - 3023'
3051' - 3053'

Perfs @ 3009' - 3053'

PKR w/ 1jnt bullpluged @ 3249'

5 1/2", 15.5#, K-55, 8-Rnd Csg
Set @ 3357', w/ 1000 sx. cmt.
cmt. circulated

Subsequent Well Work:

4/98 After swabbing w/ no success pulled tbg and set pkr w/ 1joint tbg w/ bullplug @ 3249' to isolate two zones. Ran rods for test pump.

WELL DATA SHEET

FIELD: EUMONT **WELL NAME: W. A. Ramsay NCT-A #3** **FORMATION: Arrowhead**

LOC: 660' FSL & 1980' FEL
TOWNSHIP: 21-S
RANGE: 36-E

SEC: 35
COUNTY: Lea
STATE: NM

GL: 3568'
KB to GL: 8'
DF to GL: 7'

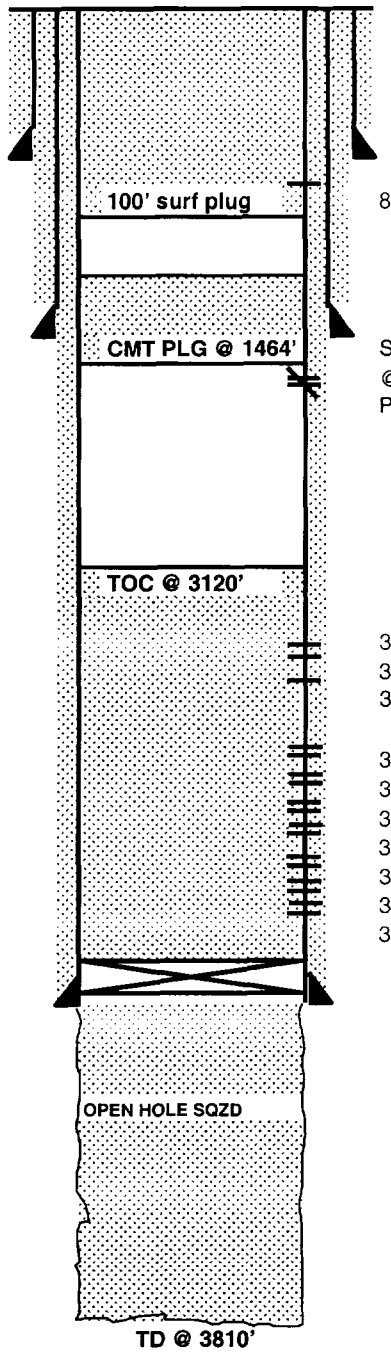
CURRENT STATUS: P & A
API NO: 30-025-04922
CHEVNO: FA6061

13-3/8" OD 55# Csg set @34' w/60 sx Circ cmt.

8-5/8" OD 32# 8 Thd Gr. C, 55 Csg set@1414' w/600 sx Cmt Circ.? No TOC @ 435'

CICR @ 3730' on 10/19/78
Sqzd OH w/100 sx

6" OD 16# 10 Thd Gr. D, 55 Csg. set@3749' w/250 sx. TOC @ 2650' by TS



Spud Date: 6/19/1938
Date Completed: 7/26/1938
Initial Formation: Arrowhead
Completion Data:
Open hole completion from 3749'-3810'.
IP 7/26/38 F528 BOPD, 0 BWPD
Workover History:
10/16/1947 Pull tbg.; run pkr to 3700'.
2/22/1955 Installed ppg equip.
11/1/1955 Sqz csg leak @ 1400'. Perf csg @ 1500' w/2, 1/2" jet holes. Cmt dn tbg w/350 sx. Pulled 2-3/8" tbg - Bradenhead sqz w/ 18 sx cmt @ 500#.
4/25/1974 Pull tbg. TA well.
10/17/1978 P&A Arrowhead. Set cmt rtnr @ 3730'. Sqz OH f/3750'-80' w/100 sx Class C cmt w/3# salt.
10/20/1978 Recomplete in Queen. Perf 6" csg w/2, 1/2" JHPF, Zero phase @ 3465-67',3523-25',3577-79',3614-16',3656-58', 3668-70', & 3708-10', total of 28 holes. Straddle acdz ea set of perfs w/250 gals 15% NE inhib iron-stblzd slick HCl acid. Well fld 3 BO & 0 BW & approx 1383 MCFGPD on 24/64" chk @ 180# TP in 24 hrs.
9/1994 Add Seven Rivers Pay. Perf 3329', 3278', & 3224' 2 JHPF @ 120 deg phz. Brought only 250 gals HCl. Break down each perf. FRAC treat perfs 3224'-3710' w/94,500 gals of 70Q-55Q CO2 X-Linked 35# gel...319,000# of 12/20 Brady sand... @40bpm max psi 7000#. Well screened off & experienced tbg or pkr failure. 3-1/2 jts were pushed out of well. BOPE & FRAC valve pushed off well head. Total sd pmpd 250,000#.
2/2/95 P&A well. TOH w/ tbg. TIH to 3700'. Mix & pmp 150 sx cl. "C" cmt w/ 3% CALC2 disp w/ 2 bbls wtr. TAG cmt @ 3120'. Load hole w/ P&A mud set 40 sx cmt plug @ 1464'. Lay dn all tbg. Perf @ 84'. Attempt to pmp dn 6" & up 8-5/8" 700#... No go...Dig out valves... Found cmt in 8-5/8" valves...Cmt had already been circ. Set 100' surf plug. Cut off wellhead and anchors and install P&A marker

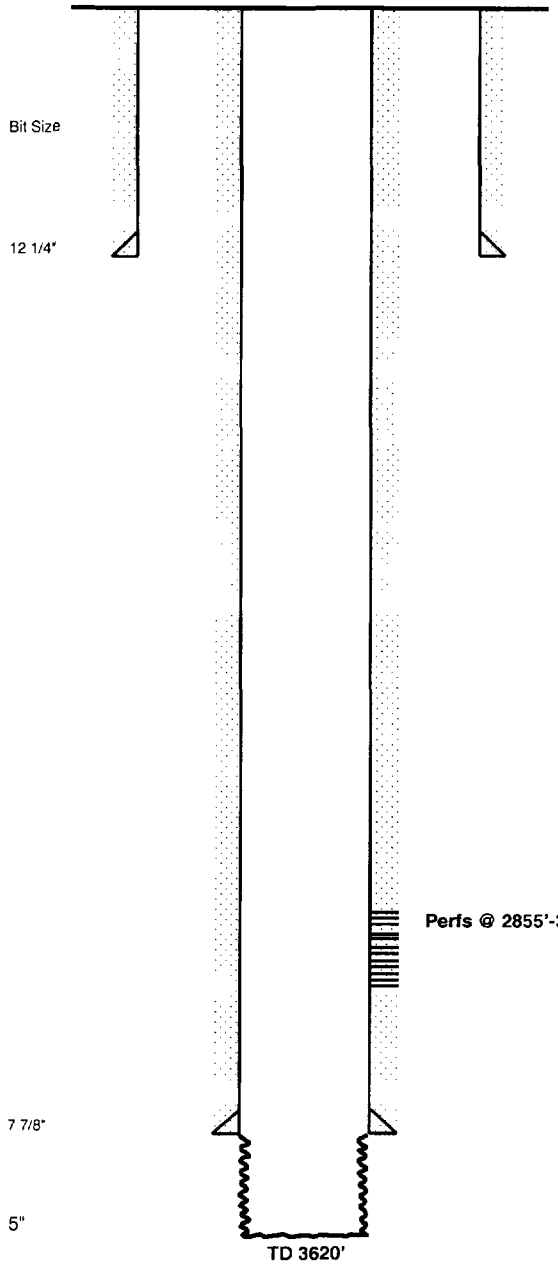
Additional Data:
T/Rustler @ 2138'
T/Salt @ 2153'
B/Salt @ 2580'
T/Yates @ 2730'
T/Queen @ 3454'

FILE: WA_Ram_A3.xls
DLMc: 4/5/2000

PROPOSED WELL DATA SHEET

FIELD: Eumont **WELL NAME: W. A. Ramsay (NCT-A) # 52** **FORMATION: YTS 7R Qn**

LOC: 910' FSL & 990' FEL	SEC: 35	GL: 3560'	CURRENT STATUS: Flowing
TOWNSHIP: 21S	COUNTY: Lea	KB to GL:	API NO: 30-025-34242
RANGE: 36E	STATE: NM	DF to GL:	REFNO:



8 5/8", 23# , WC-50 Csg
Set @ 512', w/ 300 sx. cmt.
cmt. circulated

Perfs @ 2855'-3063'

5 1/2", 15.5#, 8-Rnd Csg
Set @ 3420', w/ 750 sx. cmt.
CMT circulated

Spud Date: Jan 19, 1998

2/11/98 - Drilled 5" OH from 3420' - 3620'. Logged.

--
3/6/98 - Acid treated OH w/ 2000 gals 15% HCL & 4000 # sand. Cleaned out to TD.

--
3-11-98 Perfed OH @ 3478'-3483'. Frac OH w/ 75Q foam & 200,000# 12-20 Brady, screened out. Perfed Csg w/ 2 jhpf @ 2855' to 3063' total 20 holes. Frac w/ 75 Q foam & 250,000# 12-20 Brady. CO to 3620'.

CSG PERFS.
2855'
2899'
2909'
2930'
2968'
2984'
3009'
3052'
3058'
3063'

Subsequent Well Work:

WELL DATA SHEET

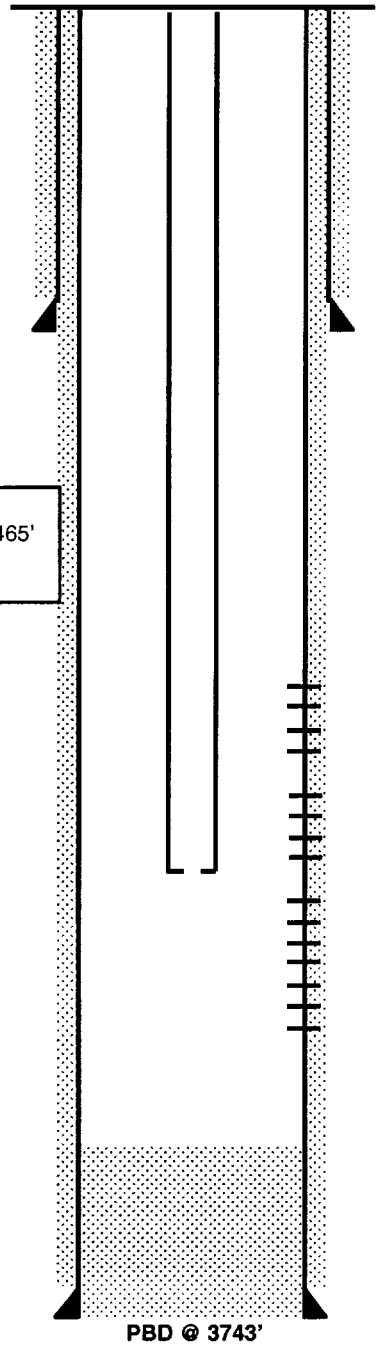
FIELD: EUMONT **WELL NAME: Marathon: Saunders C J #4** **FORMATION: Queen**

LOC: 660' FNL & 960' FWL **SEC: 1** **KB: 3545'** **CURRENT STATUS: GAS**
TOWNSHIP: 22-S **COUNTY: Lea** **Rig Ht: 5'** **API NO: 30-025-32692**
RANGE: 36-E **STATE: NM** **CHEVNO: QX0823**

Spud Date: 10/31/1994
Date Completed: 12/05/1994
Initial Formation: Queen
Completion Data:
Drill to 3810'. Perfs: 3389-92',3394-96',3398-3402',3405-07', 3418-27',3430-32',3434-39',3442-52',3485-89', 3493-96',3500-06',3509-12',3515-20',3522-30', & 3533-41'. Acdz w/23.8 bbls of 7.5% HCl. Sandfoamfrac w/ 2357.1 bbls & 275,000# of sd. & CO2. FTP 50 #, FCP 245#.

IP 23.99 hr test F303 MCFD & 81 BW

Workover History:



7" Csg
set@1206' w/275 sx

Tubing Detail:
2-3/8" "N" 3465'

3389-92'
3394-96'
3398-3402'
3405-07'
3418-27'
3430-32'
3434-39'
3442-52'
3485-89'
3493-96'
3500-06'
3509-12'
3515-20'
3522-30'
3533-41'

Additional Data:
T/Rustler @ 1195'
T/Yates @ 2711'
T/Seven Rivers @ 3004'
T/Queen @ 3384'
T/Grayburg @ 3673'

4-1/2" Csg
set@3800' w/520 sx.

PBD @ 3743'
TD @ 3810'

FILE: Saunders_4.xls
DLMc: 4/6/2000

WELL DATA SHEET

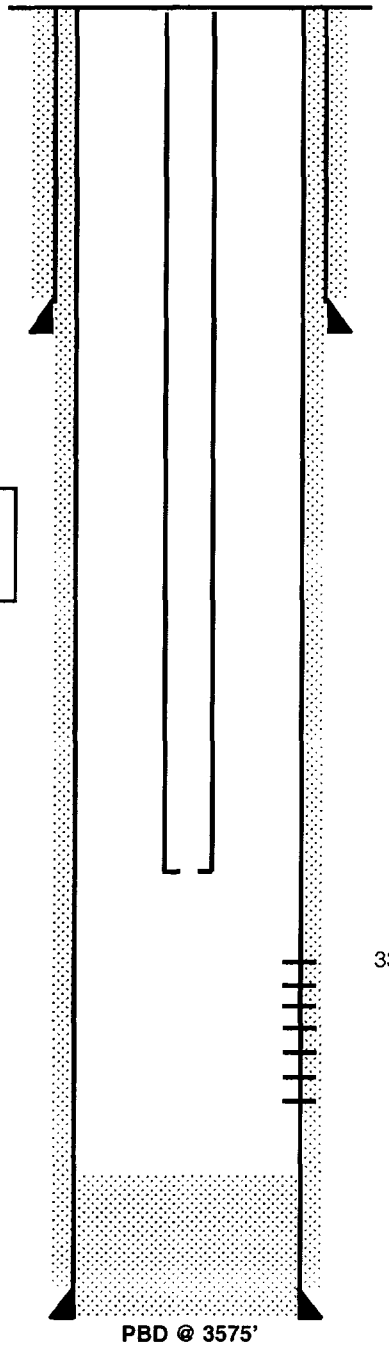
FIELD: EUMONT **WELL NAME: Meridian: Shell State Com D #13** **FORMATION: Queen**

LOC: 1780' FSL & 760' FWL
TOWNSHIP: 21-S
RANGE: 36-E

SEC: 36
COUNTY: Lea
STATE: NM

KB: 3579'
Rig Ht: 9'

CURRENT STATUS: GAS
API NO: 30-025-31684
CHEVNO: QU2591



8-5/8" Csg
set@450' w/325 sx

Tubing Detail:
2-3/8" "N" 3375'

3390'- 3544'

4-1/2" Csg
set@3600' w/930 sx.

PBD @ 3575'
TD @ 3600'

Spud Date: 12/26/1992
Date Completed: 01/18/1993
Initial Formation: Queen
Completion Data:
Drill to 3600'. Perfs: 3390-3544'. Acdz w/23.8 bbls of 7.5% HCl. Sandfoamfrac w/ 980.9 bbls & 155,000# of sd. & Gelling agent. 50 Qual CO2 foam.

IP 1 hr test F646 MCFD . SI Press 282#. 4 pt CAOF 2506 MCFD.

Workover History:

Additional Data:
T/Salt @ 1590'
T/Yates @ 2525'
T/Seven Rivers @ 2805'
T/Queen @ 3370'

FILE: Shell_St_D13.xls
DLMc: 4/6/2000

WELL DATA SHEET

FIELD: EUMONT **WELL NAME: Conoco: State "J-2" #14** **FORMATION: Seven Rivers-Queen**

LOC: 910' FNL & 1980' FEL
TOWNSHIP: 22-S
RANGE: 36-E

SEC: 2
COUNTY: Lea
STATE: NM

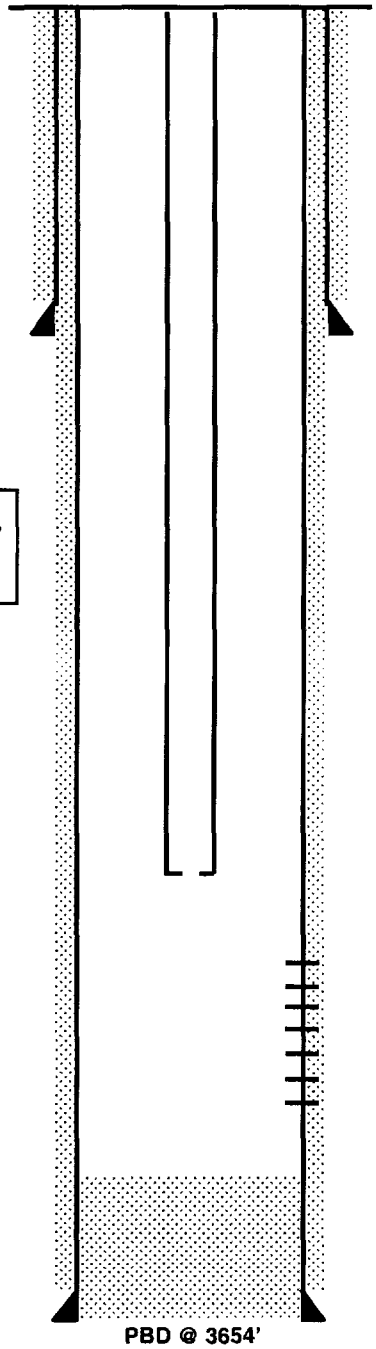
GL: 3556'
Rig Ht:

CURRENT STATUS: GAS
API NO: 30-025-32412
CHEVNO: QU2776

Spud Date: 03/07/1994
Date Completed: 04/07/1994
Initial Formation: Seven Rivers - Queen
Completion Data:
Drill to 3700'. Perfs: 2906'-3597'.

IP 23.99 hr test F3031 MCFD . 35/64" CK. FTP 80#, FCP 170#.

Workover History:



8-5/8" Csg
set@432' w/325 sx

Tubing Detail:
2-7/8" "N" 3512'

2906'-3597'

Additional Data:

5-1/2" Csg
set@3700' w/1400 sx.

PBD @ 3654'
TD @ 3700'

FILE: State_J2_14.xls
DLMc: 4/10/2000

WELL DATA SHEET

FIELD: EUMONT **WELL NAME: Conoco: State "J-2" #15** **FORMATION: Yates-Seven Rivers-Queen**

LOC: 1780' FNL & 2080' FEL
TOWNSHIP: 22-S
RANGE: 36-E

SEC: 2
COUNTY: Lea
STATE: NM

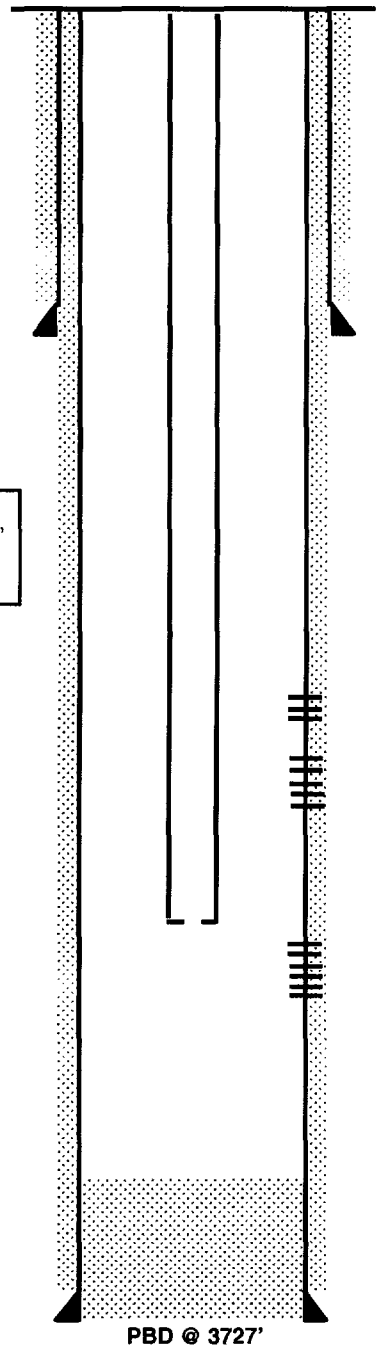
KB: 3558'
Rig Ht: 8'

CURRENT STATUS: GAS
API NO: 30-025-32411
CHEVNO: QU2093

Spud Date: 03/14/1994
Date Completed: 05/29/1994
Initial Formation: Seven Rivers - Queen
Completion Data:
Drill to 3750'. Perfs Yates: 2951'-3005'. Perf Seven Rivers: 3072-3270'. Perf Queen: 3481-3632'. ACDZ 3481-3632' w/14.2 BBL acid. SANDCO2FRAC w/1054.7 BBL wtr & 251,000# sand. SANDCO2FRAC 2951-3270' w/917 BBL wtr & 248,080# sand. FTP 50#, FCP 150#.

IP 23.99 hr test F1141 MCFD .

Workover History:



8-5/8" Csg
set@455' w/325 sx

Tubing Detail:
2-3/8" "N" 3445'

5-1/2" Csg
set@3750' w/950 sx.

PBD @ 3727'
TD @ 3750'

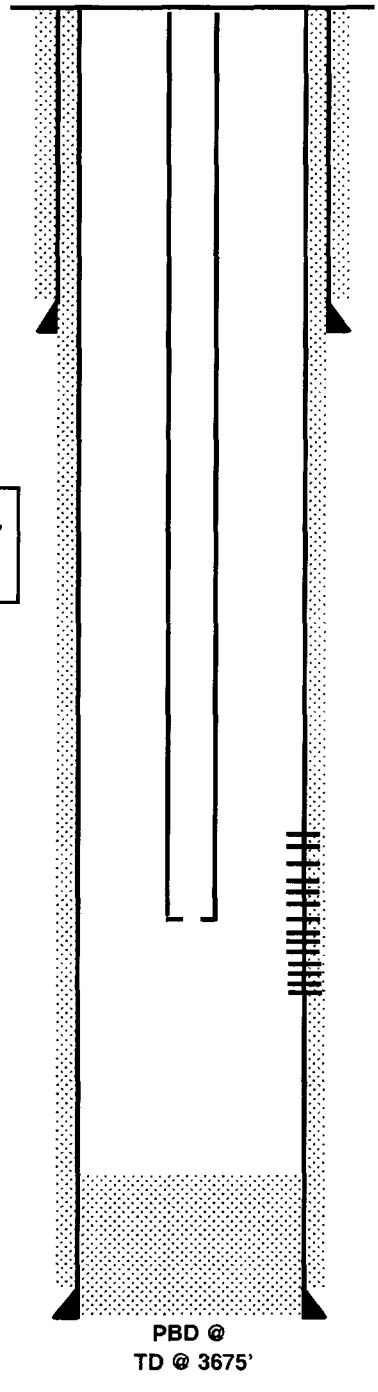
Additional Data:
T/Salt @ 2650'
T/Yates @ 2818'
T/Seven Rivers @ 3017'
T/Queen @ 3478'

FILE: State_J2_15.xls
DLMc: 4/10/2000

WELL DATA SHEET

FIELD: EUMONT **WELL NAME: Conoco: State "J-2" #16** **FORMATION: Yates-Seven Rivers**

LOC: 2200' FNL & 990' FEL **SEC: 2** **GL: 3537'** **CURRENT STATUS: GAS**
TOWNSHIP: 22-S **COUNTY: Lea** **Rig Ht:** **API NO: 30-025-32994**
RANGE: 36-E **STATE: NM** **CHEVNO: BC4553**



8-5/8" Csg
set@415' w/325 sx

Tubing Detail:
2-3/8" "N" 3045'

2877'-3199'

4-1/2" Csg
set@3675' w/940 sx.

PBD @
TD @ 3675'

Spud Date: 06/26/1995
Date Completed: 07/21/1995
Initial Formation: Yates-Seven Rivers
Completion Data:
Drill to 3675'. Perfs Yates-Seven Rivers: 2877-3199'. SANDWTRFRAC w/919.9 BBL wtr & 218,000# sand. FTP 55#, FCP 60#.

IP 23.99 hr test F2513 MCFD & 19 BWPD on 32/64" CK.

Workover History:

Additional Data:
T/Salt @ 2564'
T/Yates @ 2734'
T/Seven Rivers @ 2932'
T/Queen @ 3402'

FILE: State_J2_16.xls
DLMc: 4/10/2000

AGU 133, 151, & 159
Conversion from producer to Injector
Arrowhead Grayburg Unit
Lea County, New Mexico - Proposed Operation

Well	Max Injection Rate (BWIPD)	Average Injection Rate (BWIPD)	Max Injection Pressure (PSIG)	Average Injection Pressure (PSIG)	System Open	System Closed	Injection Water Source
AGU 133	1500	1000	750	730		✓	Grayburg & San Andres
AGU 151	1500	1000	750	730		✓	
AGU 159	1500	800	750	730		✓	

*The source of the injected fluids is from a San Andres AGU water supply well, AGU 600, and produced water from the Arrowhead Grayburg producers.

**The San Andres water used as injection water is compatible with the produced water from the Arrowhead Grayburg Unit producers (see attached water analysis).

Ref: Item VIII of C108

GEOLOGIC DATA
FRESH WATER AQUIFERS
IN THE AREA OF THE
PROPOSED ARROWHEAD GRAYBURG UNIT
LEA COUNTY, NEW MEXICO

The proposed Arrowhead Grayburg Unit is located approximately 2 miles west of Eunice, and is immediately southeast of the Eunice Monument South Unit.

Fresh water zones within the proposed unit boundaries are the Quaternary alluvium, Pliocene Ogallala, and the Triassic Chinle and Santa Rosa formations.

The Quaternary aquifers are in recent sediments and are very localized in extent. They are made up of dune sands and sands filling channels or depressions in the underlying Ogallala. The sands are unconsolidated to semiconsolidated, fine- to medium-grained. They are found from the surface to depths of approximately 100 feet.

The Pliocene Ogallala aquifer underlies the Quaternary alluvium and is present across the entire area, but is not a major water source. The Ogallala is a calcareous, unconsolidated sand containing some silt, clay, and gravel. The Ogallala is found at approximately 60-125 feet.

The Triassic Chinle and Santa Rosa aquifers are the principal, fresh water bearing zones in this area. They are both fine- to medium-grained sandstones interbedded with red clays and siltstones. Within the proposed unit area, the Chinle is at a depth of approximately 50 feet, while the Santa Rosa top is found at depths that range from 825 to 850'.

Below the Santa Rosa are un-differentiated Permian and Triassic red beds. These "red beds" consist of red shales and red silty sandstones, and are not known to produce fresh water.

At the base of the Santa Rosa and the un-differentiated Permian and Triassic "red beds" is the Permian Rustler. At the top of the Rustler is an impermeable anhydrite bed, approximately 60-70 feet thick which provides an excellent barrier against contamination from brine waters in the underlying oil-producing formations. The Rustler anhydrite is at depths of approximately 1250 to 1275 feet. There are no known fresh water horizons below the Rustler anhydrite.

For the protection of all fresh water zones within the unit boundary, cement will be circulated to surface around casing on all new injection wells.

Reference - Ground Water Report 6, NMBM&G, 1961
DLL ENM01029.25jvc

Ref: Item VIII of C108

GEOLOGICAL DATA
INJECTION ZONES
IN THE
PROPOSED ARROWHEAD GRAYBURG UNIT

Queen - Approx. depth 3300' - 3600'*, approx. 300 gross feet.

The Queen Formation overlies the Grayburg and is composed of alternating layers of hard dolomite and sand lenses. Porous sands are the producing intervals in the Queen, and are present over the entire unit area. These sands produce oil or gas, depending on their structural position.

Grayburg - Approx. depth 3650' - 3900'*, approx. 250 feet.

The Grayburg is a massive dolomite interbedded with thin stringers of low permeability sandstone. The majority of oil production comes from intercrystalline porosity in the dolomite.

The range in depths to the top of the Grayburg is due to steep homoclinal dip to the southwest throughout the proposed unit area.

San Andres - Approx. depth 3900' - 4150'*, approx. 1200 gross feet.

The San Andres is a massive dolomite with intercrystalline porosity, which lies directly below the Grayburg. The San Andres does not contribute oil production to the field and will serve as a source of injection water. The base of the unitized interval will be -1500' subsea, near the base of the San Andres section.

There are no known faults cutting through the San Andres and Grayburg which would act as a conduit for gas, oil, or injection water to seep into fresh water horizons above the injection zones in the Grayburg and San Andres.

* Depth depends upon structural position of the well.

DLL ENM01029.25jvc

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 1190152

TO: Mr. Ray Cramer
P. O. Box 670, Hobbs, NM 88240

SAMPLE RECEIVED 11-14-90

RESULTS REPORTED 11-21-90

COMPANY Chevron U.S.A., Inc. LEASE As Listed

FIELD OR POOL Eunice Monument

SECTION ___ BLOCK ___ SURVEY ___ COUNTY Lea STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Produced water - taken from Harry Leonard "C" #6. 11-14-90

NO. 2 Raw water - taken from Eunice Monument South Unit water supply well #461. 11-14-90

NO. 3 Mixture of 10% Grayburg and 90% San Andres.

NO. 4 Mixture of 50% Grayburg and 50% San Andres.

REMARKS: 1. Grayburg 2. San Andres

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0077	1.0174	1.0158	1.0125
pH When Sampled		6.8		
pH When Received	7.45	6.91	7.05	7.16
Bicarbonate as HCO_3	2,379	671	878	1,452
Supersaturation as $CaCO_3$	50	0	20	40
Undersaturation as $CaCO_3$	--	--	--	--
Total Hardness as $CaCO_3$	1,875	4,600	4,250	3,300
Calcium as Ca	488	1,220	1,140	860
Magnesium as Mg	159	377	340	279
Sodium and/or Potassium	2,047	5,903	5,594	4,322
Sulfate as SO_4	451	2,560	2,377	2,011
Chloride as Cl	2,770	10,085	9,375	6,676
Iron as Fe	1.3	0.40	0.88	0.52
Barium as Ba	0	0	0	0
Turbidity, Electric	121	14	19	40
Color as Pt	42	32	32	40
Total Solids, Calculated	8,294	20,815	19,704	15,600
Temperature °F.		70		
Carbon Dioxide, Calculated	157	174	114	160
Dissolved Oxygen,		0.020		
Hydrogen Sulfide	265	318	212	212
Resistivity, ohms/m at 77° F.	0.850	0.410	0.430	0.520
Suspended Oil	--	1	--	--
Filtrable Solids as mg/l	34.0	13.8	8.0	52.0
Volume Filtered, ml	100	1,200	100	100
Calcium Carbonate Scaling Tendency	NONE	NONE	NONE	NONE
Calcium Sulfate Scaling Tendency	NONE	NONE	NONE	NONE

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The objective herein is to evaluate compatibility between the two waters represented. In striving to accomplish the desired mixtures that are represented, we feel that some qualification is warranted. In making these mixtures, we primarily strive to avoid air contamination and loss of gasses at least as much as possible during the mixing. The result is that the mixtures are not precisely accurate but reasonably close to the designated percentage. Also, it was necessary to work under the oil in the produced Grayburg water; therefore, the difficulty with avoiding re-suspension of oil causes the filtrable solids levels to vary significantly and therefore may not be generally representative.

Form No. 3

- CONTINUED ON PAGE 2 -

By ___

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 1190152 (Page 2)

TO: Mr. Ray Cramer
P. O. Box 670, Hobbs, NM 88240

SAMPLE RECEIVED 11-14-90
RESULTS REPORTED 11-21-90

COMPANY Chevron U.S.A., Inc. LEASE As Listed
FIELD OR POOL Eunice Monument
SECTION ___ BLOCK ___ SURVEY ___ COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Mixture of 90% Grayburg and 10% San Andres.
NO. 2
NO. 3
NO. 4
REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0073			
pH When Sampled				
pH When Received	7.36			
Bicarbonate as HCO_3	2,147			
Supersaturation as $CaCO_3$	80			
Undersaturation as $CaCO_3$	--			
Total Hardness as $CaCO_3$	2,100			
Calcium as Ca	560			
Magnesium as Mg	170			
Sodium and/or Potassium	2,329			
Sulfate as SO_4	622			
Chloride as Cl	3,373			
Iron as Fe	0.40			
Barium as Ba	0			
Turbidity, Electric	73			
Color as Pt	48			
Total Solids, Calculated	9,202			
Temperature °F.				
Carbon Dioxide, Calculated	142			
Dissolved Oxygen,				
Hydrogen Sulfide	212			
Resistivity, ohms/m at 77° F.	0.750			
Suspended Oil				
Filtrable Solids as mg/l	7.0			
Volume Filtered, ml	100			
Calcium Carbonate Scaling Tendency	NONE			
Calcium Sulfate Scaling Tendency	NONE			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks Our microscopic study of the suspended material in the mixtures clearly indicated that this is the reason they are so variable in ranging from much lower than would be expected to much higher than would be expected. We identified no evidence in these microscopic studies of any precipitates or particles that would imply any incompatibility. There was no implication of potential precipitation or scaling potential as a result of combining the waters. The results of this study are considered conclusive evidence of no incompatibility between these waters. Therefore, it is concluded that the waters can be mixed in any proportion with no difficulty to be expected from the mixing.

Form No. 3

By _____
Waylan C. Martin, M.A.

Proposed Stimulation Program

Procedure to Convert AGU 133 to Injection

1. TIH w/ 3-1/8" bit & WS. CO to TD. Circ clean & POOH.
2. TIH w/ 4-3/4" bit & csg scraper. Ream csg from 3550 to 3650. POOH.
3. TIH w/ 5-1/2" nickel-plated/plastic-coated Baker LOK-SET pkr w/ 1.81" profile, XL On-Off Tool, & 2-3/8" IPC tbg. Use stabbing guide to run IPC tbg.
4. Set inj pkr @ 3650+/-.
5. ND BOP. NU inj WH. Perform OCD MIT.
6. Clean and clear location.

Procedure to Convert AGU 151 to Injection

1. TIH w/ 3-1/8" bit & WS. CO to TD. Circ clean & POOH.
2. TIH w/ 4-3/4" bit & csg scraper. Ream csg from 3550 to 3650. POOH.
3. TIH w/ 5-1/2" nickel-plated/plastic-coated Baker LOK-SET pkr w/ 1.81" profile, XL On-Off Tool, & 2-3/8" IPC tbg. Use stabbing guide to run IPC tbg.
4. Set inj pkr @ 3720+/-.
5. ND BOP. NU inj WH. Perform OCD MIT.
6. Clean and clear location.

Procedure to Convert AGU 159 to Injection

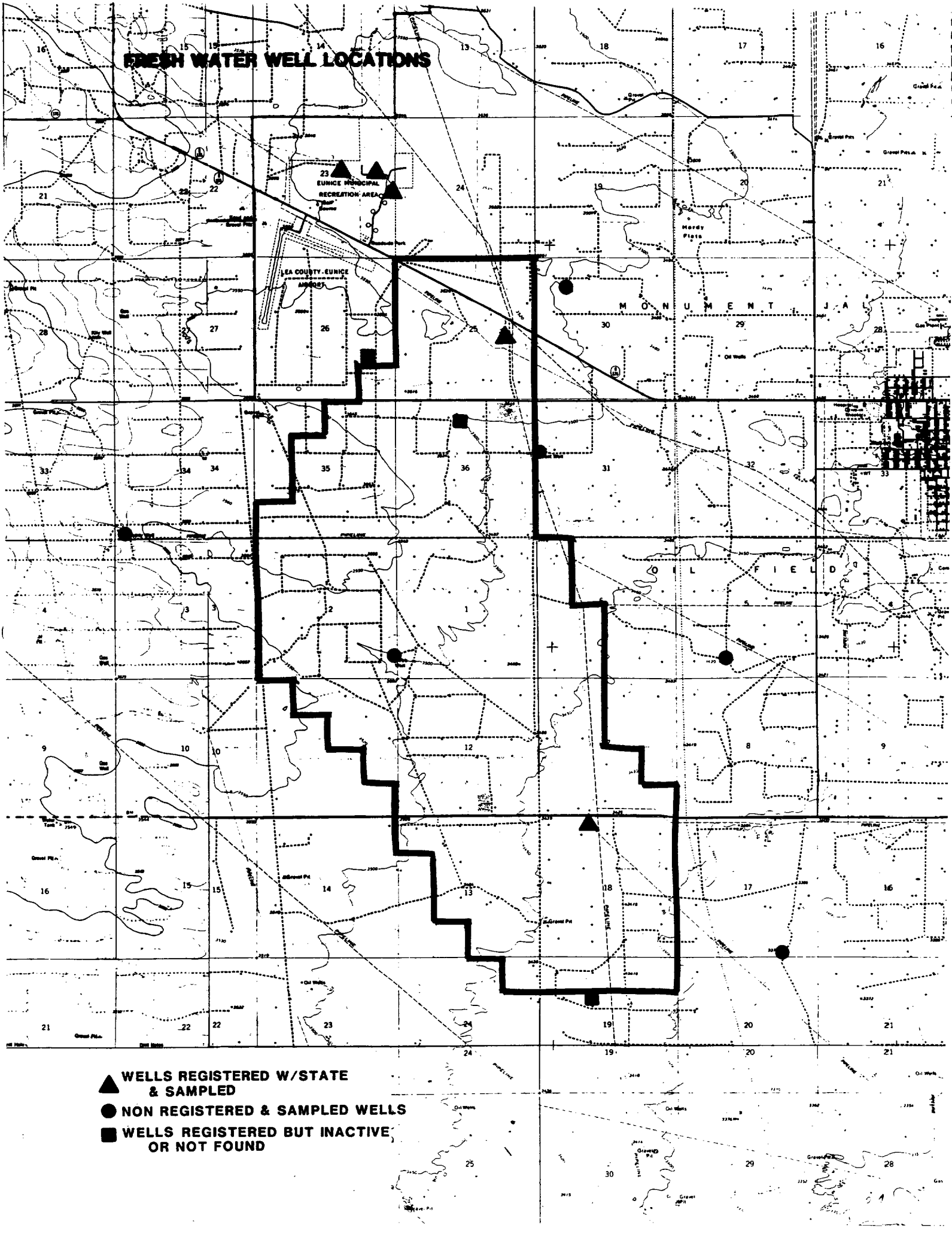
1. TIH w/ 3-1/8" bit & WS. CO to TD. Circ clean & POOH.
2. TIH w/ 4-3/4" bit & csg scraper. Ream csg from 3550 to 3650. POOH.
3. TIH w/ 5-1/2" nickel-plated/plastic-coated Baker LOK-SET pkr w/ 1.81" profile, XL On-Off Tool, & 2-3/8" IPC tbg. Use stabbing guide to run IPC tbg.
4. Set inj pkr @ 3630+/-.
5. ND BOP. NU inj WH. Perform OCD MIT.
6. Clean and clear location.

Ref. Item X of C108

ARROWHEAD GRAYBURG UNIT
PROPOSED WATER INJECTION WELLS WITH NO AVAILABLE
WELL LOGS

Operator	Current Lease Name & Well #	Proposed Well Name & #	Location (UL-Sec.-T-R)
Arco	State "D" DE #1	AGU# 143 WI	O-36-21-36
Chevron	Harry Leonard (NCT-C) #3	AGU# 126 WI	E-36-21-36
Meridian	Mattern #2	AGU# 201 WI	K-7-22-37
Chevron	H. T. Mattern (NCT-D) #2	AGU# 198 WI	E-7-22-37
Chevron	H. T. Mattern (NCT-E) #2	AGU# 167 WI	K-1-22-36
Chevron	H. T. Mattern (NCT-E) #4	AGU# 177 WI	M-1-22-36
Chevron	H. T. Mattern (NCT-E) #9	AGU# 187 WI	C-12-22-36
Chevron	W. A. Ramsay (NCT-A) #5	AGU# 134 WI	I-35-21-36
Conoco	Lockhart B-1 Federal #1	AGU# 158 WI	E-1-22-36
Marathon	McDonald State AC 2 #13	AGU# 222 WI	C-13-22-36
OXY USA	State "N" #2	AGU# 171 WI	K-2-22-36

DLL:mjc
ENM01120.06


FRESH WATER WELL LOCATIONS
EUNICE MUNICIPAL RECREATION AREA
LEA COUNTY-EUNICE AIRPORT
MONUMENT
OIL FIELD
WELLS REGISTERED W/STATE & SAMPLED
NON REGISTERED & SAMPLED WELLS
WELLS REGISTERED BUT INACTIVE OR NOT FOUND

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 1090250

TO: Mr. Stan Chapman
P. O. Box 1150, Midland, TX 79702

SAMPLE RECEIVED 10-25-90
RESULTS REPORTED 11-1-90

COMPANY Chevron U.S.A., Inc. LEASE Arrowhead Grayburg Unit "C"
FIELD OR POOL Arrowhead
SECTION 18 BLOCK ____ SURVEY T-22S & R37E COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Raw water - taken from Northern Natural Gas Water Well.
NO. 2
NO. 3
NO. 4
REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0028			
pH When Sampled				
pH When Received	9.43			
Bicarbonate as HCO_3	124			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	112			
Calcium as Ca	2			
Magnesium as Mg	26			
Sodium and/or Potassium	644			
Sulfate as SO_4	805			
Chloride as Cl	344			
Iron as Fe	0.36			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	1,999			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	3.33			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Carbonate, as CO_3	53			
Nitrate, as N	0.7			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By _____

Waylan C. Martin, M.A.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 1090249

TO: Mr. Stan Chapman
P. O. Box 1150, Midland, TX 79702

SAMPLE RECEIVED 10-25-90

RESULTS REPORTED 11-1-90

COMPANY Chevron U.S.A., Inc. LEASE Arrowhead Grayburg Unit "O"

FIELD OR POOL Arrowhead

SECTION 17 BLOCK ____ SURVEY T-22S & R-37E COUNTY Lea STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Raw water - taken from water well.

NO. 2

NO. 3

NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0024			
pH When Sampled				
pH When Received	7.82			
Bicarbonate as HCO_3	259			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	520			
Calcium as Ca	118			
Magnesium as Mg	54			
Sodium and/or Potassium	269			
Sulfate as SO_4	155			
Chloride as Cl	518			
Iron as Fe	0.14			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	1,373			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	4.55			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Nitrate, as N	1.6			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By _____

Waylan C. Martin, M.A.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 1090248

TO: Mr. Stan Chapman
P. O. Box 1150, Midland, TX 79702

SAMPLE RECEIVED 10-25-90
RESULTS REPORTED 11-1-90

COMPANY Chevron U.S.A., Inc. LEASE Arrowhead Grayburg Unit "N"
FIELD OR POOL Arrowhead
SECTION 5 BLOCK ____ SURVEY T-22S & R-37E COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Raw water - taken from windmill.
NO. 2
NO. 3
NO. 4
REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0015			
pH When Sampled				
pH When Received	7.82			
Bicarbonate as HCO_3	305			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	254			
Calcium as Ca	54			
Magnesium as Mg	29			
Sodium and/or Potassium	115			
Sulfate as SO_4	98			
Chloride as Cl	108			
Iron as Fe	0.32			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	709			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	11.11			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Nitrate, as N	3.0			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By _____

Waylan C. Martin, M.A.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 1090247

TO: Mr. Stan Chapman
P. O. Box 1150, Midland, TX 79702

SAMPLE RECEIVED 10-25-90

RESULTS REPORTED 11-1-90

COMPANY Chevron U.S.A., Inc. LEASE Arrowhead Grayburg Unit "P"

FIELD OR POOL Arrowhead

SECTION 2 BLOCK ____ SURVEY T-22S & R-36E COUNTY Lea STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Raw water - taken from Cobb windmill.

NO. 2

NO. 3

NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0034			
pH When Sampled				
pH When Received	7.35			
Bicarbonate as HCO_3	239			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	775			
Calcium as Ca	172			
Magnesium as Mg	84			
Sodium and/or Potassium	459			
Sulfate as SO_4	303			
Chloride as Cl	895			
Iron as Fe	1.7			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	2,153			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	2.76			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Nitrate, as N	1.8			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By _____

Waylan C. Martin, M.A.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 119029

TO: Mr. Stan Chapman
P. O. Box 1150, Midland, TX 79702

SAMPLE RECEIVED 11-1-90

RESULTS REPORTED 11-9-90

COMPANY Chevron U.S.A., Inc. LEASE Arrowhead Grayburg Unit "E"

FIELD OR POOL Arrowhead

SECTION 31 BLOCK ____ SURVEY T21S-R37E COUNTY Lea STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Raw water - taken from water well by stock pond by Matter "B" #14.

NO. 2

NO. 3

NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0018			
pH When Sampled				
pH When Received	7.51			
Bicarbonate as HCO_3	293			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	148			
Calcium as Ca	38			
Magnesium as Mg	13			
Sodium and/or Potassium	97			
Sulfate as SO_4	45			
Chloride as Cl	51			
Iron as Fe	1.5			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	536			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	16.10			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Nitrate, as N	0.2			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By _____
Waylan C. Martin, M.A.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 1090245

TO: Mr. Stan Chapman
P. O. Box 1150, Midland, TX 79702

SAMPLE RECEIVED 10-25-90
RESULTS REPORTED 11-1-90

COMPANY Chevron U.S.A., Inc. LEASE Arrowhead Grayburg Unit "D"
FIELD OR POOL Arrowhead
SECTION 30 BLOCK ____ SURVEY T-21S & R-37E COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Raw water - taken from windmill.
NO. 2
NO. 3
NO. 4
REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0016			
pH When Sampled				
pH When Received	7.29			
Bicarbonate as HCO_3	239			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	232			
Calcium as Ca	52			
Magnesium as Mg	19			
Sodium and/or Potassium	92			
Sulfate as SO_4	107			
Chloride as Cl	88			
Iron as Fe	26.2			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	607			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	12.65			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Nitrate, as N	2.3			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By _____
Waylan C. Martin, M.A.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 1090246
SAMPLE RECEIVED 10-25-90
RESULTS REPORTED 11-1-90

TO: Mr. Stan Chapman
P. O. Box 1150, Midland, TX 79702

COMPANY Chevron U.S.A., Inc. LEASE Arrowhead Grayburg Unit "M"
FIELD OR POOL Arrowhead
SECTION 34 BLOCK ____ SURVEY T-21S & R-36E COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Raw water - taken from windmill.
NO. 2
NO. 3
NO. 4
REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0020			
pH When Sampled				
pH When Received	8.75			
Bicarbonate as HCO_3	378			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	14			
Calcium as Ca	3			
Magnesium as Mg	1			
Sodium and/or Potassium	256			
Sulfate as SO_4	115			
Chloride as Cl	21			
Iron as Fe	0.58			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	842			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen.				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	9.58			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Carbonate, as CO_3	67			
Nitrate, as N	0.2			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By _____
Waylan C. Martin, M.A.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 1090244

TO: Mr. Stan Chapman
P. O. Box 1150, Midland, TX 79702

SAMPLE RECEIVED 10-25-90

RESULTS REPORTED 11-1-90

COMPANY Chevron U.S.A., Inc. LEASE Arrowhead Grayburg Unit "G"

FIELD OR POOL Arrowhead

SECTION 25 BLOCK ____ SURVEY T-21S & R-36E COUNTY Lea STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Raw water - taken from Northern Natural Gas Water Well.

NO. 2

NO. 3

NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0018			
pH When Sampled				
pH When Received	6.71			
Bicarbonate as HCO_3	307			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	310			
Calcium as Ca	79			
Magnesium as Mg	27			
Sodium and/or Potassium	114			
Sulfate as SO_4	99			
Chloride as Cl	143			
Iron as Fe	0.29			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	771			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	9.70			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Nitrate, as N	0.3			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By _____

Waylan C. Martin, M.A.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 1090251
SAMPLE RECEIVED 10-25-90
RESULTS REPORTED 11-1-90

TO: Mr. Stan Chapman
P. O. Box 1150, Midland, TX 79702

COMPANY Chevron U.S.A., Inc. LEASE Arrowhead Grayburg Unit "H"
FIELD OR POOL Arrowhead
SECTION 23 BLOCK ____ SURVEY T-21S & R-36E COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Raw water - taken from City of Eunice water well (middle).
NO. 2 Raw water - taken from City of Eunice water well (North).
NO. 3 Raw water - taken from City of Eunice water well (South).
NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0015	1.0016	1.0014	
pH When Sampled				
pH When Received	7.35	7.50	7.42	
Bicarbonate as HCO_3	268	268	342	
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	212	200	220	
Calcium as Ca	52	50	67	
Magnesium as Mg	20	18	13	
Sodium and/or Potassium	93	86	96	
Sulfate as SO_4	90	83	41	
Chloride as Cl	70	57	75	
Iron as Fe	0.11	0.11	0.11	
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	594	562	635	
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen.				
Hydrogen Sulfide	0.0	0.0	0.0	
Resistivity, ohms/m at 77° F.	13.50	14.86	13.30	
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Nitrate, as N	2.1	2.8	0.7	

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By _____
Waylan C. Martin, M.A.

Ref: Item XII of C108

PROPOSED ARROWHEAD GRAYBURG UNIT
LEA COUNTY, NEW MEXICO

Chevron U.S.A., Inc. has examined available geological and engineering data and finds no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

DLL ENM01029.25jvc

Offset Operators

Arco Permian
Jo Rich
P.O. Box 1610
Midland
TX
79702

Oxy USA Inc.
Permian Asset Group - Gary Womack
6 Desta Drive
Midland
TX
79705

Conoco, Inc.
Jt Int Billing-Rachel Leights
10 Desta Drive, Suite 100W
Midland
TX
79705-4500

Marathon Oil Company
Joe Madron
P.O. Box 552
Midland
TX
79702

Surface Owners

City of Eunice
Attn: Mayor Don Reese
PO Box 147
Eunice
NM
88231

Burea of Land Management
620 E. Greene St.
PO Box 1778
Carlsbad
NM
88221-1778

Chevron

Chevron U.S.A. Production Company
P.O. Box 1150
Midland, TX 79702

March 20, 2000

AGU #133, #151, & #159
Conversions to Injection
Arrowhead Grayburg Unit
Lea County, New Mexico

Attention: Offset Operator

Ladies and/or Gentlemen,

Chevron U.S.A. Production Co., as operator of the Arrowhead Grayburg Unit, has filed an application with the New Mexico Oil Conservation Division to convert the AGU #133, #151, and #159 to injection. These conversions are designed to improve recovery efficiency of the waterflood patterns and enhance production of the AGU secondary recovery project.

Attached is an OCD Form C-108 with information relative to the water injection conversion of the referenced wells. Also, a copy of the legal notice to be posted in the Hobbs News-Sun is included. If further information is required please contact me at (915) 687-7271

Sincerely,

CJ Affeld
Petroleum Engineer
New Mexico Waterfloods

Attachments

Legal Notice
(3/20/00)

Chevron U.S.A. Production Co. has applied to the Oil Conservation Division of the State of New Mexico for approval to convert the AGU #133, #151, and #159 to injection in the Arrowhead Grayburg Unit. These conversions to injection are designed to improve recovery efficiency of the waterflood patterns and enhance production of the AGU secondary recovery project. The wells are located in the following locations: #133 – Section 36, Unit L, Township 21 South, Range 36 East, NMPM, Lea County, New Mexico; #151 – Section 2, Unit B, Township 22 South, Range 36 East, NMPM, Lea County, New Mexico; #159 – Section 1, Unit F, Township 22 South, Range 36 East, NMPM, Lea County, New Mexico. Water will be injected into the unitized interval of the Arrowhead Grayburg-San Andres Pool which has an upper limit of 150 feet below mean sea level or the top of the Grayburg formation, whichever is higher, to a lower limit being the base of the San Andres formation. Injection will be at an expected maximum rate of 1,500 barrels of water per day and an expected maximum pressure of 750 pounds per square inch. Persons wanting to contact Chevron U.S.A. should direct their inquiries to CJ Affeld, Chevron U.S.A. Production Co., P.O. Box 1150, Midland, TX 79702, phone (915) 687-7271.

Interested Parties must file objections or requests for hearing with the Oil Conservation Division, 2040 South Pacheco, Santa Fe, NM 87505, within 15 days of this notice.

Chevron

Chevron U.S.A. Production Company
P.O. Box 1150
Midland, TX 79702

March 20, 2000

REQUEST TO PUBLISH
LEGAL NOTICE

Hobbs News-Sun
201 N. Thorp
Hobbs, NM 88240

Attention: Classified Department

Chevron U.S.A. Production Company requests that you publish the attached notice in your newspaper, one time only, as soon as possible.

Please mail the invoice to the letterhead address, attention CJ Affeld. Also please attach a copy of the notice as run in your newspaper and an affidavit certifying publication of the attached notice and the date of publication.

Your prompt assistance in this matter will be greatly appreciated. Questions may be directed to CJ Affeld at (915) 687-7271.

Sincerely,

CJ Affeld

Attachment

Legal Notice
(3/20/00)

Chevron U.S.A. Production Co. has applied to the Oil Conservation Division of the State of New Mexico for approval to convert the AGU #133, #151, and #159 to injection in the Arrowhead Grayburg Unit. These conversions to injection are designed to improve recovery efficiency of the waterflood patterns and enhance production of the AGU secondary recovery project. The wells are located in the following locations: #133 – Section 36, Unit L, Township 21 South, Range 36 East, NMPM, Lea County, New Mexico; #151 – Section 2, Unit B, Township 22 South, Range 36 East, NMPM, Lea County, New Mexico; #159 – Section 1, Unit F, Township 22 South, Range 36 East, NMPM, Lea County, New Mexico. Water will be injected into the unitized interval of the Arrowhead Grayburg-San Andres Pool which has an upper limit of 150 feet below mean sea level or the top of the Grayburg formation, whichever is higher, to a lower limit being the base of the San Andres formation. Injection will be at an expected maximum rate of 1,500 barrels of water per day and an expected maximum pressure of 750 pounds per square inch. Persons wanting to contact Chevron U.S.A. should direct their inquiries to CJ Affeld, Chevron U.S.A. Production Co., P.O. Box 1150, Midland, TX 79702, phone (915) 687-7271.

Interested Parties must file objections or requests for hearing with the Oil Conservation Division, 2040 South Pacheco, Santa Fe, NM 87505, within 15 days of this notice.

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, KATHI BEARDEN

Publisher

of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period.

of 1

weeks.

Beginning with the issue dated

March 25 2000

and ending with the issue dated

March 25 2000

Kathi Bearden

Publisher

Sworn and subscribed to before me this 27th day of

March 2000

Jodi Henson

Notary Public.

My Commission expires
October 18, 2000
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE
March 25, 2000

Chevron U.S.A. Production Co. has applied to the Oil Conservation Division of the State of New Mexico for approval to convert the AGU #133, #151, and #159 to injection in the Arrowhead Grayburg Unit. These conversions to injection are designed to improve recovery efficiency of the waterflood patterns and enhance production of the AGU secondary recovery project. The wells are located in the following locations: #133-Section 36, Unit L, Township 21 South, Range 36 East, NMPM, Lea County, New Mexico; #151-Section 2, Unit B, Township 22 South, Range 36 East, NMPM, Lea County, New Mexico; #159 - Section 1, Unit F, Township 22 South, Range 36 East, NMPM, Lea County, New Mexico. Water will be injected into the unitized interval of the Arrowhead Grayburg-San Andres Pool which has an upper limit of 150 feet below mean sea level or the top of the Grayburg formation, whichever is higher, to a lower limit being the base of the San Andres formation. Injection will be at an expected maximum rate of 1,500 barrels of water per day and an expected maximum pressure of 750 pounds per square inch. Persons wanting to contact Chevron U.S.A. should direct their inquiries to CJ Affeld, Chevron U.S.A. Production Co., P.O. Box 1150, Midland, TX 79702, phone (915) 687-7271.

Interested Parties must file objections or requests for hearing with the Oil Conservation Division, 2040 South Pacheco, Santa Fe, NM 87505, within 15 days of this notice.
#17288

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Chevron U.S.A. Production Comp
P.O. Box 1150
MIDLAND, TX 79702

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

5/1/00

GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:
MC
DHC
NSL
NSP
SWD
WFX X
PMX

Gentlemen:

#159-F-1-22s-36e
#151-B-2-22s-36e
#133-L-36-21s-36e

I have examined the application for the:

Chevron USA Inc Arrowhead GB Unit
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

ok

Yours very truly,

Chris Williams
Chris Williams
Supervisor, District 1

/ed