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W. THOMAS KELLAHIN
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CANDACE HAMANN CALLAHAN

JASON KELLAHIN
OF COUNSEL

March 22, 1991

Mr. Jim Morrow
Oil Conservation Division
State Land Office
Santa Fe, New Mexico 87501

HAND DELIVERED

Re: Application of Chevron U.S.A.,
Inc. for Approval of Statutory
Unitization, Waterflood Project
and Pool Nomenclatures for the
Arrowhead Grayburg Unit,
NMOCD Cases 10259, 10260 and 10261

*Received by OCD
3-22-91, 2:45 PM JHM*

Dear Mr. Morrow:

On behalf of Chevron U.S.A., Inc., please find enclosed proposed orders for entry in the three referenced cases. Mr. Pearce has approved the language of the statutory unitization order which deals with the Tract 20 ORRI issue.

Very truly yours,



W. Thomas Kellahin

WTK/tic

cc: Mr. Bryan Cotner
W. Perry Pearce, Esq.
William F. Carr, Esq.

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 10260
ORDER NO. R-9483

APPLICATION OF CHEVRON U.S.A., INC.
FOR A WATERFLOOD PROJECT, LEA COUNTY,
NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on March 7,
1991, at Santa Fe, New Mexico, before Examiner Jim Morrow.

NOW, on this _____ day of April, 1991, the Division
Director, having considered the testimony, the record, and the
recommendations of the Examiner, and being fully advised in the
premises,

CASE NO. 10260
ORDER NO. R-
PAGE NO.

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) At the time of the hearing, this case was consolidated with Division Case Nos. 10259 and 10261 for the purpose of testimony.

(3) The applicant, Chevron U.S.A., Inc., seeks authority to institute a waterflood project on its proposed Arrowhead-Grayburg Unit Area (Division Case No. 10259), Lea County, New Mexico, by the injection of water into the Arrowhead-Grayburg Pool through certain wells as listed in Exhibit "A", attached hereto and made a part hereof, to be either new wells drilled as injection wells or producing oil wells converted to injection wells.

CASE NO. 10260
ORDER NO. R-
PAGE NO.

(4) It is proposed that the waterflood project area coincide with the boundary of the Arrowhead-Grayburg Unit Area in Lea County, New Mexico as further described below, which was the subject of Division Case No. 10259 and was heard in conjunction with this case:

Township 21 South, Range 36 East, NMPM

Section 25: All
Section 26: SE/4 SE/4
Section 35: E/2; E/2 SW/4; SW/4 SW/4; SE/4 NW/4
Section 36: All

Township 22 South, Range 36 East, NMPM

Section 1: All
Section 2: All
Section 11: NE/4 NW/4; NE/4; NE/4 SE/4
Section 12: All
Section 13: E/2; E/2 NW/4; NW/4 NW/4; NE/4 SW/4
Section 24: NE/4 NE/4

Township 22 South, Range 37 East, NMPM

Section 6: W/2 NW/4; SW/4
Section 7: W/2; S/2 SE/4; NW/4 SE/4
Section 18: All
Section 19: N/2 N/2

(5) The wells in the proposed project area are in an advanced state of depletion and should therefore be properly classified for secondary recovery operations.

CASE NO. 10260
ORDER NO. R-
PAGE NO.

(6) The proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(7) The operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape into other formations or onto the surface from injection, production or plugged and abandoned wells.

(8) The applicant's testimony indicates that there are six previously abandoned wells which may not have been adequately plugged and which are located within one-half mile of certain proposed injection wells in the proposed unit all as shown on Exhibit "B" hereto.

(9) Prior to commencement of injection into any injector within one-half mile of a problem well, as described on Exhibit "B", the applicant should consult with the supervisor of the Oil Conservation Division's district office at Hobbs to develop a plan acceptable to the Director of said Division, for the repairing, plugging, or replugging of said wells or for the monitoring for determination of fluid movement from the injected

CASE NO. 10260
ORDER NO. R-
PAGE NO.

interval or for the drilling of producing wells to lower reservoir pressure and fluid levels in the vicinity of said wells in order to protect neighboring properties and to protect other oil or gas zones or fresh water. Any additional problem wells within one-half mile of an injector identified by the supervisor of the Hobbs office should be handled in the manner set out above.

(10) The operator should immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area, and should take such timely steps as may be necessary or required to correct such failure or leakage.

(11) Injection into each well should be accomplished through plastic-lined tubing installed in a packer set at approximately 100 feet above the uppermost perforation; the casing-tubing annulus in each well should be filled with an

CASE NO. 10260
ORDER NO. R-
PAGE NO.

inert fluid; and a pressure gauge or approved leak-detection device should be attached to the annulus in order to determine leaks in the casing, tubing or packer.

(12) The injection wells or pressurization system for each well should be so equipped as to limit surface injection pressure at the wellhead to no more than 734 psi (0.2 psi per foot).

(13) Prior to commencing injection operations, the casing in each of the subject wells should be pressure-tested throughout the interval, from the surface down to the proposed packer-setting depth, to assure integrity of such casing.

(14) There are currently two Eumont gas wells which penetrate into the unitized interval: The Chevron W.A. Ramsay B-2 well, Unit E, Section 25, Township 21 South, Range 36 East, and the Amerada Hess P.A. State No. 5 well, Unit N, Section 18, Township 22 South, Range 37 East, NMPM, for which special procedures should be established to avoid the migration of

CASE NO. 10260
ORDER NO. R-
PAGE NO.

injection fluids into the Eumont Gas Pool without having either gas well recompleted out of the unitized interval at this time.

(15) The applicant identified five wells shown on Exhibit "30", which were completed in the unit but were also completed from one to eight feet above the top of the unit.

(16) The applicant's request that it not be required to isolate the unitized interval from the non-unitized interval in each of these five wells should be granted because none of these wells is productive in the non-unit interval and the expense of a workover to accomplish that separation is not warranted and the risk of damage to the well is not justified.

(17) The Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the unitized formations.

CASE NO. 10260
ORDER NO. R-
PAGE NO.

(18) The operator should give advance notice to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(19) The subject application should be approved and the project should be governed by the provisions of Rules 702 through 708 of the Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Chevron U.S.A., Inc., is hereby authorized to institute a waterflood project on its proposed Arrowhead-Grayburg Unit Area (Division Case No. 10259), Lea County, New Mexico, by the injection of water into the Arrowhead Pool through wells listed in Exhibit "A", attached hereto and made a part hereof, which will be drilled as injection wells or converted from producing oil wells to injection wells.

CASE NO. 10260
ORDER NO. R-
PAGE NO.

(2) The waterflood project, hereby designated the Arrowhead-Grayburg Waterflood Project, shall be comprised of the following described area in Lea County, New Mexico:

Township 21 South, Range 36 East, NMPM

Section 25: All
Section 26: SE/4 SE/4
Section 35: E/2; E/2 SW/4; SW/4 SW/4; SE/4 NW/4
Section 36: All

Township 22 South, Range 36 East, NMPM

Section 1: All
Section 2: All
Section 11: NE/4 NW/4; NE/4; NE/4 SE/4
Section 12: All
Section 13: E/2; E/2 NW/4; NW/4 NW/4; NE/4 SW/4
Section 24: NE/4 NE/4

Township 22 South, Range 37 East, NMPM

Section 6: W/2 NW/4; SW/4
Section 7: W/2; S/2 SE/4; NW/4 SE/4
Section 18: All
Section 19: N/2 N/2

(3) Prior to commencing injection into any injector within one-half mile of a problem well as shown on Exhibit "B" of this order, the applicant shall consult with the supervisor of the Oil Conservation Division's district office at Hobbs to develop a plan acceptable to the Director of said Division, for the

CASE NO. 10260
ORDER NO. R-
PAGE NO.

repairing, plugging, or replugging of said wells or for the monitoring for determination of fluid movement from the injected interval or for the drilling of producing wells to lower reservoir pressure and fluid levels in the vicinity of said wells in order to protect neighboring properties and to protect either oil or gas zones or fresh water. Any additional problem wells within one-half mile of an injector identified by the supervisor of the Hobbs office shall be handled in the manner set out above.

(4) The operator shall immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from ^{or} around any producing wells, or the leakage of water or oil from any plugged and abandoned well within the project area, and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(5) Injection into each well described in Exhibit "A" shall be accomplished through plastic-lined tubing installed in

CASE NO. 10260
ORDER NO. R-
PAGE NO.

a packer set at approximately 100 feet above the uppermost perforation.

(6) The casing-tubing annulus in each well shall be filled with an inert fluid; and a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak-detection device in order to determine leakage in the casing, tubing or packer.

(7) Prior to commencing injection operations, the casing in each of the subject wells shall be pressure-tested to assure the integrity of such casing in a manner that is satisfactory to the supervisor of the Division's Hobbs District Office.

(8) Each injection well or pressurization system for each well shall be equipped with a pressure-limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 734 psi (0.2 psi per foot).

CASE NO. 10260
ORDER NO. R-
PAGE NO.

(9) The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Grayburg-San Andres formation.

(10) The operator shall notify the supervisor of the Hobbs District Office of the Division in advance of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(11) The operator shall immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer, in any of said injection wells or the leakage of water from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(12) The operator shall monitor the pressure annually and the fluid monthly on the following two Eumont gas wells

CASE NO. 10260
ORDER NO. R-
PAGE NO.

with completion intervals extending into the unitization formation. At such time as either the pressure or the fluid composition of either well indicates potential migration of unit fluids into either wellbore, the operator shall cause the affected gas well to be plugged back out of the unitized interval and isolated from the unit:

- (1) Chevron W.A. Ramsay B-2 well,
Unit E, Section 25, T21S, R36E
- (2) Amerada Hess P.A. State No. 5 well,
Unit N. Section 18, T22S, R37E

(13) Unless converted to injectors, the operator shall not be required to isolate the unitized interval in the following wells from the non-unitized interval:

<u>Operator</u>	<u>Lease</u>	<u>Well</u>	<u>Location</u>
Conoco	Lockhart B-1	5	Unit O, Sec. 1, T22S, R36E
Marathon	McDonald State	12	Unit B, Sec. 13, T22S, R36E
Marathon	McDonald State	13	Unit C, Sec. 13, T22S, R36E
Rasmussen	State A "AC" 2	16	Unit I, Sec. 11, T22S, R36E
Rasmussen	State A "AC" 2	17	Unit H, Sec. 11, T22S, R36E

CASE NO. 10260
ORDER NO. R-
PAGE NO.

(14) Said waterflood project shall be governed by the provisions of Rules 702 through 708 of the Division Rules and Regulations.

(15) Monthly progress reports shall be submitted to the Division in accordance with Rules 706 and 1115.

(16) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

S E A L

ARROWHEAD GRAYBURG UNIT
PROPOSED INJECTION WELL CONVERSIONS

Proposed Well Number	Lease Name	Well No	Footage	Unit/Sec./TUS/FNG	Operator	Pool
AGU 106 WIC	W A RAMSAY (NCT-B)	5	2105 FNL & 1650 FEL	G 25 21 5 36 E	Chevron	Arrowhead (formerly Penrose Skelly)
AGU 115 WIC	KINGMOOD	2	660 F5L & 1650 FEL	0 25 21 5 36 E	Chevron	Arrowhead (formerly Penrose Skelly)
AGU 119 WIC	HARRY LEONARD (NCT-C)	5	660 FNL & 1980 FNL	C 36 21 5 36 E	Chevron	Arrowhead
AGU 121 WIC	W A RAMSAY (NCT-A)	11	660 FNL & 660 FEL	A 35 21 5 36 E	Chevron	Arrowhead
AGU 124 WIC	W A RAMSAY (NCT-A)	9	1980 FNL & 1980 FEL	G 35 21 5 36 E	Chevron	Arrowhead (formerly Eumont Oil)
AGU 126 WIC	HARRY LEONARD (NCT-C)	3	1980 FNL & 660 FNL	E 36 21 5 36 E	Chevron	Arrowhead
AGU 132 WIC	HARRY LEONARD (NCT-C)	2	1980 F5L & 1980 FNL	K 36 21 5 36 E	Chevron	Arrowhead
AGU 134 WIC	W A RAMSAY (NCT-A)	5	1980 F5L & 660 FEL	I 35 21 5 36 E	Chevron	Arrowhead
AGU 141 WIC	STATE 'M'	1	660 F5L & 660 FNL	M 36 21 5 36 E	OXY USA	Arrowhead
AGU 143 WIC	STATE 'D' DE	1	330 F5L & 2310 FEL	0 36 21 5 36 E	ARCO	Arrowhead
AGU 146 WIC	H T MATTERN (NCT-F)	2	660 FNL & 660 FEL	A 1 22 5 36 E	Chevron	Arrowhead
AGU 150 WIC	STATE J-2	4	660 FNL & 660 FEL	A 2 22 5 36 E	CONOCO	Arrowhead
AGU 152 WIC	STATE J-2	11	660 FNL & 1980 FNL	C 2 22 5 36 E	CONOCO	Arrowhead
AGU 156 WIC	STATE J-2	9	1980 FNL & 1980 FEL	G 2 22 5 36 E	CONOCO	Arrowhead
AGU 158 WIC	LOCKHART B-1 FED.	1	1980 FNL & 660 FNL	E 1 22 5 36 E	CONOCO	Arrowhead
AGU 160 WIC	LOCKHART B-1 FED.	7	1980 FNL & 1830 FEL	G 1 22 5 36 E	CONOCO	Arrowhead
AGU 167 WIC	H T MATTERN (NCT-E)	2	1980 F5L & 1980 FNL	K 1 22 5 36 E	Chevron	Arrowhead
AGU 169 WIC	STATE J-2	2	1980 F5L & 660 FEL	I 2 22 5 36 E	CONOCO	Arrowhead
AGU 171 WIC	STATE 'N'	2	2310 F5L & 2310 FNL	K 2 22 5 36 E	OXY USA	Arrowhead
AGU 175 WIC	STATE J-2	6	660 F5L & 1980 FEL	0 2 22 5 36 E	CONOCO	Arrowhead
AGU 177 WIC	H T MATTERN (NCT-E)	4	660 F5L & 660 FNL	M 1 22 5 36 E	Chevron	Arrowhead
AGU 179 WIC	LOCKHART B-1 FED.	5	660 F5L & 1980 FEL	0 1 22 5 36 E	CONOCO	Arrowhead
AGU 185 WIC	H T MATTERN (NCT-E)	12	660 FNL & 660 FEL	A 12 22 5 36 E	Chevron	Arrowhead
AGU 187 WIC	H T MATTERN (NCT-E)	9	660 FNL & 1980 FNL	C 12 22 5 36 E	Chevron	Arrowhead
AGU 189 WIC	STATE 'A' AC 2	13	660 FNL & 660 FEL	A 11 22 5 36 E	Rasmussen	Arrowhead
AGU 196 WIC	H T MATTERN (NCT-E)	7	2310 FNL & 2310 FEL	G 12 22 5 36 E	Chevron	Arrowhead
AGU 198 WIC	H T MATTERN (NCT-D)	2	2310 FNL & 330 FNL	E 7 22 5 37 E	Chevron	Arrowhead
AGU 201 WIC	MATTERN	2	1650 F5L & 1650 FNL	K 7 22 5 37 E	Chevron	Arrowhead
AGU 222 WIC	MCDONALD STATE AC 2	13	330 FNL & 2310 FNL	C 13 22 5 37 E	Marathon	Arrowhead
AGU 233 WIC	STATE 'PA'	4	2310 F5L & 1960 FNL	K 10 22 5 37 E	Amerada Hess	Arrowhead

CASE NO. 10260 - Order No. R-9483

Exhibit A

Page 1 Of 2

**PROPOSED ARROWHEAD GRAYBURG UNIT
INJECTION WELLS TO BE DRILLED**

<u>WELL NO.</u>	<u>LOCATION</u>			
	<u>UNIT</u>	<u>SECTION</u>	<u>TWS</u>	<u>RANGE</u>
AGU 110 WI	NE/4 SW/4	25	21-S	36-E
AGU 113 WI	SW/4 SW/4	25	21-S	36-E
AGU 128 WI	SE/4 NE/4	36	21-S	36-E
AGU 139 WI	SW/4 SE/4	35	21-S	36-E
AGU 148 WI	NE/4 NW/4	1	22-S	36-E
AGU 165 WI	NE/4 SE/4	1	22-S	36-E
AGU 181 WI	SW/4 SW/4	6	22-S	37-E
AGU 194 WI	SW/4 NW/4	12	22-S	36-E
AGU 203 WI	NE/4 SE/4	12	22-S	36-E
AGU 205 WI	NE/4 SW/4	12	22-S	36-E
AGU 210 WI	SW/4 SE/4	12	22-S	36-E
AGU 212 WI	SW/4 SW/4	7	22-S	37-E
AGU 214 WI	SW/4 SE/4	7	22-S	37-E
AGU 218 WI	NE/4 NW/4	18	22-S	37-E
AGU 220 WI	NE/4 NE/4	13	22-S	36-E
AGU 225 WI	SW/4 NE/4	13	22-S	36-E
AGU 227 WI	SW/4 NW/4	18	22-S	37-E
AGU 229 WI	SW/4 NE/4	18	22-S	37-E
AGU 235 WI	NE/4 SE/4	13	22-S	36-E
AGU 240 WI	SW/4 SW/4	18	22-S	37-E
AGU 242 WI	SW/4 SE/4	18	22-S	37-E
AGU 246 WI	NE/4 NW/4	19	22-S	37-E

CASE NO. 10260 - ORDER NO. R-9483

CASE NO. 10260 - Order No. R-9483
 Exhibit "B"

Proposed Arrowhead Grayburg Unit
 Potential "Problem Wells"

<u>Operator</u>	<u>Lease</u>	<u>Well No</u>	<u>Location</u>	<u>Comment</u>
Bay Petroleum	Brownlee	1	25 21-S 36-E	Insure DH marker and Surface Plug
Gribble	State	1	36 21-S 36-E	Depths of plugs unknown
Conoco	State J-2	8	2 22-S 36-E	No plugs at pay or salt
Chevron	HT Mattern (NCT-E)	5	12 22-S 36-E	No plug at salt or base of surface string
Chevron	HT Mattern (NCT-D)	5	7 22-S 37-E	No plug at salt or base of surface string
Amerada Hess	State 'PA'	2	18 22-S 37-E	No plugs at pay or salt

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

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

April 9, 1991

KELLAHIN, KELLAHIN & AUBREY
Attorneys at Law
P. O. Drawer 2265
Santa Fe, New Mexico 87504

RE: CASE NO. 10259, CASE NO. 10260, CASE NO. 10261
ORDER NO. R-9482, ORDER NO. R-9483, ORDER NO. R-9484

Dear Sir:

Enclosed herewith are two copies of the each of the above-referenced Division orders recently entered in the subject cases.

Sincerely,

Florene Davidson

Florene Davidson
OC Staff Specialist

FD/sl

cc: W. F. Carr
P. Pearce
BLM - Carlsbad



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



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

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

ADMINISTRATIVE ORDER NO. WFX-634

*APPLICATION OF CHEVRON U.S.A., INC. TO EXPAND ITS WATERFLOOD PROJECT
IN THE ARROWHEAD POOL IN LEA COUNTY, NEW MEXICO*

**ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-9483, Chevron U.S.A., Inc. has made application to the Division on April 10, 1992, for permission to expand its Arrowhead Grayburg Unit Waterflood Project in the Arrowhead Pool in Lea County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection wells are eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed injection wells are in lieu of previously proposed new-drill injection wells approved under the provisions of Division Order No. R-9483, shown on Exhibit "B" attached hereto.
- (6) The proposed expansion of the above referenced Arrowhead Grayburg Unit Waterflood Project will not cause waste nor impair correlative rights.
- (7) The application should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Chevron U.S.A., Inc., be and the same is hereby authorized to inject water into the Grayburg and San Andres formations at approximately 3680 feet to approximately 3900 feet through 2 3/8 inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations or openhole interval in the following wells shown on Exhibit "A" attached hereto for purposes of secondary recovery to wit.

IT IS FURTHER ORDERED THAT:

The proposal to drill the new injection wells, shown on Exhibit "B" attached hereto, and previously approved by Division Order No. R-9483, is hereby placed in abeyance until further notice. All other provisions of Division Order No. 9483 will remain in effect.

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the wells, the casing in each well shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus in each well shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection wells or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no more than .2 psi/ft. of depth to the uppermost perforation or openhole interval.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said wells that such higher pressure will not result in migration of the injected fluid from the Grayburg and San Andres formations. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

Administrative Order WFX-634
Chevron U.S.A., Inc.
June 8, 1992
Page 3

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

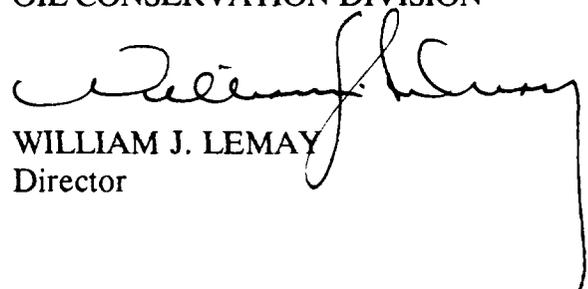
The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject wells shall be governed by all provisions of Division Order No. R-9483, as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

DONE at Santa Fe, New Mexico, on this 8th day of June, 1992.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director

S E A L

jc/

cc: Oil Conservation Division - Hobbs
Case File No. 10260 ✓

EXHIBIT "A"
DIVISION ORDER NO. WFX-634
ARROWHEAD GRAYBURG UNIT
APPROVED INJECTION WELLS

<i>Well Number</i>	<i>Location</i>	<i>Unit</i>	<i>S-T-R</i>	<i>Injection Perforations or Openhole Interval</i>	<i>Packer Depth</i>	<i>Tubing Size</i>	<i>Injection Pressure</i>
AGU No. 128 WIC	1650' FNL & 2013' FEL	G	36-21S-36E	3800' to 3900'	3700'	2 3/8"	760 PSIG
AGU No. 194 WIC	2310' FNL & 330' FWL	E	12-22S-36E	3680' to 3900'	3580'	2 3/8"	736 PSIG

Lea County, New Mexico

EXHIBIT "B"
DIVISION ORDER NO. WFX-634
PROPOSED NEW-DRILL INJECTION WELL LOCATIONS
IN ABEYANCE

<i>Proposed Well Number</i>	<i>Location</i>	<i>Unit</i>	<i>S-T-R</i>
AGU No. 128	SE/4 NE/4	G	36-21S-36E
AGU No. 194	SE/4 NE/4	E	12-22S-36E

Lea County, New Mexico



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

RECEIVED
DIVISION
DEC 8 1992

December 8, 1992

Revised C-108 Locations
Arrowhead Grayburg Unit
Arrowhead Grayburg Oil Pool

New Mexico
Energy Minerals & Natural Resources Dept.
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

Attn: Mr. David Catanach

Chevron U.S.A. respectfully requests approval to revise locations of four permitted injection wells in the Arrowhead Grayburg Unit. In two cases, the original application and approval were for new-drill injection well locations that we now desire to replace by conversion of existing wellbores. In the other two, the reverse is the case, the original application and approval were for conversions of existing wellbores to injection that we now desire to replace with newly drilled wells.

This request is similar to our application dated April 7, 1992 for the revision of two injection locations in the Arrowhead Grayburg Unit, which was approved under Administrative Order No. WFX-634, dated June 8, 1992. These wells could not be included with that request because the status of these wellbores was not known to us at that time.

Attached is a copy of our Application for Authorization to Inject (OCD Form C-108, dated February 7, 1991) and Order R-9483 granting us that authority for the subject Unit including the proposed new-drill AGU Injection Wells No. 205 and No. 210 and the proposed conversion injection Wells AGU No. 171 WIC and AGU No. 201 WIC (shown on Exhibit A). The proposed new-drill injection Well No. 205 was to be located in Unit Letter K, Section 12, T22S, R36E, while the proposed new-drill injection Well No. 210 was to be located in Unit Letter O, Section 12, T22S, R36E.

Now, instead, Chevron would like to convert the ARCO State 157-D Well No. 14 to an injection well and rename it the AGU 205 WIC. This well is located 1,980 ft FSL and 2,210 ft FWL, Unit Letter K, Section 12, T22S, R36E, NMPM, Lea County, New Mexico. Also, we would like to convert ARCO State 157-D Well No. 10 and rename it the AGU 210 WIC. This well is located 660 ft FSL and 1,650 ft FEL, Unit Letter O, Section 12, T22S, R36E, NMPM, Lea County, New Mexico. Both of these conversion locations are standard in the subject Oil Pool and Unit.

Allowing Chevron to replace the originally proposed new-drill injection wells with the above mentioned conversions of existing well bores will prevent waste.

Chevron would also like to replace two wells designated for conversion to water injection with two newly drilled wells. The two conversion wells, the Oxy State "N" Well No. 2, located 2,310 ft FSL and 2,310 ft FWL, Unit Letter K, Section 2, T22S, R36E, NMPM, Lea County, New Mexico, and the Chevron H. T. Mattern Well No. 2, located 1,650 ft FSL and 1,563 ft FWL, Unit Letter K, Section 7, T22S, R37E, NMPM, Lea County, New Mexico, have been plugged because of parted casing. Copies of the approved Form C-103, Subsequent Report of Plug and Abandon, and wellbore schematics for these wells are attached. The well replacing the Oxy State "N" No. 2 will be the AGU 171 WI, located 2,305 ft FSL and 2,215 ft FWL, Unit Letter K, Section 2, T22S, R36E, NMPM, Lea County, New Mexico. The well replacing the Chevron H. T. Mattern No. 2 will be the AGU 201 WI, located 1,650 ft FSL and 1,650 ft. FWL, Unit Letter K, Section 7, T22S, R37E, NMPM, Lea County, New Mexico. Both of the new wells are standard in the subject Oil Pool and Unit.

There have not been any additional wellbores or plugged or abandoned wells, except those mentioned above, generated within these new respective areas of review, subsequent to our original application.

On this basis, Chevron respectfully requests your approval to revise the locations for the subject Unit wells. The offset Operators, shown on the attached list, are being notified by certified mail with a copy of this letter. If any further information is required concerning this request, please contact met at 915/687-7321.

Yours very truly,



S. P. McDonald
Petroleum Engineer

/tmf
8669.1

Attachments

cc: NMOCD - Hobbs, NM

Revised C-108 Locations

Arrowhead Grayburg Unit
Arrowhead Grayburg Oil Pool

OFFSET OPERATORS

Conoco, Inc.
10 Desta Drive
Midland, Texas 79705

Dallas McCasland
Box 206
Eunice, New Mexico 88231

Hal J. Rasmussen
6 Desta Drive, Suite 5850
Midland, Texas 79705

Texaco Producing Company
Box 3109
Midland, Texas 79702

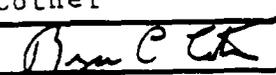
Clayton W. Williams, Jr., Inc.
6 Desta Drive
Midland, Texas 79705

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no
- II. Operator: Chevron U.S.A., Inc.
Address: PO Box 1150 Midland, TX 79702
Contact party: Mr. B. C. Cotner Phone: (915) 687-7314
- 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? yes no
If yes, give the Division order number authorizing the project _____
- 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 geological data on the injection zone including appropriate lithologic detail, geological 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 source 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 source 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: B. C. Cotner Title: Unitization Coordinator

Signature:  Date: 2/7/91

If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

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 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, P. O. Box 2088, Santa Fe, New Mexico 87501 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.

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 10260
ORDER NO. R-9483

APPLICATION OF CHEVRON U.S.A., INC.
FOR A WATERFLOOD PROJECT, LEA COUNTY,
NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on March 7, 1991, at Santa Fe, New Mexico, before Examiner Jim Morrow.

NOW, on this 8th day of April, 1991, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) At the time of the hearing, this case was consolidated with Division Case Nos. 10259 and 10261 for the purpose of testimony.

Case No. 10260
Order No. R-9483
Page 2

(3) The applicant, Chevron U.S.A., Inc., seeks authority to institute a waterflood project on its proposed Arrowhead-Grayburg Unit Area (Division Case No. 10259), Lea County, New Mexico, by the injection of water into the Arrowhead-Grayburg Pool through certain wells as listed in Exhibit "A", attached hereto and made a part hereof, to be either new wells drilled as injection wells or producing oil wells converted to injection wells.

(4) It is proposed that the waterflood project area coincide with the boundary of the Arrowhead-Grayburg Unit Area in Lea County, New Mexico as further described below, which was the subject of Division Case No. 10259 and was heard in conjunction with this case:

Township 21 South, Range 36 East, NMPM

Section 25: All
Section 26: SE/4 SE/4
Section 35: E/2; E/2 SW/4; SW/4 SW/4; SE/4 NW/4
Section 36: All

Township 22 South, Range 36 East, NMPM

Section 1: All
Section 2: All
Section 11: NE/4 NW/4; NE/4; NE/4 SE/4
Section 12: All
Section 13: E/2; E/2 NW/4; NW/4 NW/4; NE/4 SW/4
Section 24: NE/4 NE/4

Township 22 South, Range 37 East, NMPM

Section 6: W/2 NW/4; SW/4
Section 7: W/2; S/2 SE/4; NW/4 SE/4
Section 18: All
Section 19: N/2 N/2

(5) The wells in the proposed project area are in an advanced state of depletion and should therefore be properly classified for secondary recovery operations.

(6) The proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(7) The operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape into other formations or onto the surface from injection, production or plugged and abandoned wells.

(8) The applicant's testimony indicates that there are six previously abandoned wells which may not have been adequately plugged and which are located within one-half mile of certain proposed injection wells in the proposed unit all as shown on Exhibit "B" hereto.

(9) Prior to commencement of injection into any injector within one-half mile of a problem well, as described on Exhibit "B", the applicant should consult with the supervisor of the Oil Conservation Division's district office at Hobbs to develop a plan acceptable to the Director of said Division, for the repairing, plugging, or replugging of said wells or for the monitoring for determination of fluid movement from the injected interval or for the drilling of producing wells to lower reservoir pressure and fluid levels in the vicinity of said wells in order to protect neighboring properties and to protect other oil or gas zones or fresh water. Any additional problem wells within one-half mile of an injector identified by the supervisor of the Hobbs office should be handled in the manner set out above.

(10) The operator should immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area, and should take such timely steps as may be necessary or required to correct such failure or leakage.

(11) Injection into each well should be accomplished through plastic-lined tubing installed in a packer set at approximately 100 feet above the uppermost perforation; the casing-tubing annulus in each well should be filled with an inert fluid; and a pressure gauge or approved leak-detection device should be attached to the annulus in order to determine leaks in the casing, tubing or packer.

(12) The injection wells or pressurization system for each well should be so equipped as to limit surface injection pressure at the wellhead to no more than 734 psi (0.2 psi per foot).

(13) Prior to commencing injection operations, the casing in each of the subject wells should be pressure-tested throughout the interval, from the surface down to the proposed packer-setting depth, to assure integrity of such casing.

(14) There are currently two Eumont gas wells which penetrate into the unitized interval: The Chevron W.A. Ramsay B-2 well, Unit E, Section 25, Township 21 South, Range 36 East, and the Amerada Hess P.A. State No. 5 well, Unit N, Section 18, Township 22 South, Range 37 East, NMPM, for which special procedures should be established to avoid the migration of injection fluids into the Eumont Gas Pool without having either gas well recompleted out of the unitized interval at this time.

(15) The applicant identified five wells shown on Exhibit "30", which were completed in the unit but were also completed from one to eight feet above the top of the unit.

(16) The applicant's request that it not be required to isolate the unitized interval from the non-unitized interval in each of these five wells should be granted because none of these wells is productive in the non-unit interval and the expense of a workover to accomplish that separation is not warranted and the risk of damage to the well is not justified.

(17) The Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the unitized formations.

(18) The operator should give advance notice to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(19) The subject application should be approved and the project should be governed by the provisions of Rules 702 through 708 of the Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Chevron U.S.A., Inc., is hereby authorized to institute a waterflood project on its proposed

Case No. 10260
Order No. R-9483
Page 5

Arrowhead-Grayburg Unit Area (Division Case No. 10259), Lea County, New Mexico, by the injection of water into the Arrowhead Pool through wells listed in Exhibit "A", attached hereto and made a part hereof, which will be drilled as injection wells or converted from producing oil wells to injection wells.

(2) The waterflood project, hereby designated the Arrowhead-Grayburg Waterflood Project, shall be comprised of the following described area in Lea County, New Mexico:

Township 21 South, Range 36 East, NMPM

Section 25: All
Section 26: SE/4 SE/4
Section 35: E/2; E/2 SW/4; SW/4 SW/4; SE/4 NW/4
Section 36: All

Township 22 South, Range 36 East, NMPM

Section 1: All
Section 2: All
Section 11: NE/4 NW/4; NE/4; NE/4 SE/4
Section 12: All
Section 13: E/2; E/2 NW/4; NW/4 NW/4; NE/4 SW/4
Section 24: NE/4 NE/4

Township 22 South, Range 37 East, NMPM

Section 6: W/2 NW/4; SW/4
Section 7: W/2; S/2 SE/4; NW/4 SE/4
Section 18: All
Section 19: N/2 N/2

(3) Prior to commencing injection into any injector within one-half mile of a problem well as shown on Exhibit "B" of this order, the applicant shall consult with the supervisor of the Oil Conservation Division's district office at Hobbs to develop a plan acceptable to the Director of said Division, for the repairing, plugging, or replugging of said wells or for the monitoring for determination of fluid movement from the injected interval or for the drilling of producing wells to lower reservoir pressure and fluid levels in the vicinity of said wells in order to protect neighboring properties and to protect either oil or gas zones or fresh water. Any additional problem wells within one-half mile of an injector identified by the supervisor of the Hobbs office shall be handled in the manner set out above.

(4) The operator shall immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from or around any producing wells, or the leakage of water or oil from any plugged and abandoned well within the project area, and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(5) Injection into each well described in Exhibit "A" shall be accomplished through plastic-lined tubing installed in a packer set at approximately 100 feet above the uppermost perforation.

(6) The casing-tubing annulus in each well shall be filled with an inert fluid; and a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak-detection device in order to determine leakage in the casing, tubing or packer.

(7) Prior to commencing injection operations, the casing in each of the subject wells shall be pressure-tested to assure the integrity of such casing in a manner that is satisfactory to the supervisor of the Division's Hobbs District Office.

(8) Each injection well or pressurization system for each well shall be equipped with a pressure-limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 734 psi (0.2 psi per foot).

(9) The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Grayburg-San Andres formation.

(10) The operator shall notify the supervisor of the Hobbs District Office of the Division in advance of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(11) The operator shall immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer, in any of said injection wells or the leakage of water from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(12) The operator shall monitor the pressure annually and the fluid monthly on the following two Eumont gas wells with completion intervals extending into the unitization formation. At such time as either the pressure or the fluid composition of either well indicates potential migration of unit fluids into either wellbore, the operator shall cause the affected gas well to be plugged back out of the unitized interval and isolated from the unit:

- (1) Chevron W.A. Ramsay B-2 well,
Unit E, Section 25, T21S, R36E
- (2) Amerada Hess P.A. State No. 5 well,
Unit N. Section 18, T22S, R37E

(13) Unless converted to injectors, the operator shall not be required to isolate the unitized interval in the following wells from the non-unitized interval:

<u>Operator</u>	<u>Lease</u>	<u>Well</u>	<u>Location</u>
Conoco	Lockhart B-1	5	Unit O, Sec. 1, T22S, R36E
Marathon	McDonald State	12	Unit B, Sec. 13, T22S, R36E
Marathon	McDonald State	13	Unit C, Sec. 13, T22S, R36E
Rasmussen	State A "AC" 2	16	Unit I, Sec. 11, T22S, R36E
Rasmussen	State A "AC" 2	17	Unit H, Sec. 11, T22S, R36E

(14) Said waterflood project shall be governed by the provisions of Rules 702 through 708 of the Division Rules and Regulations.

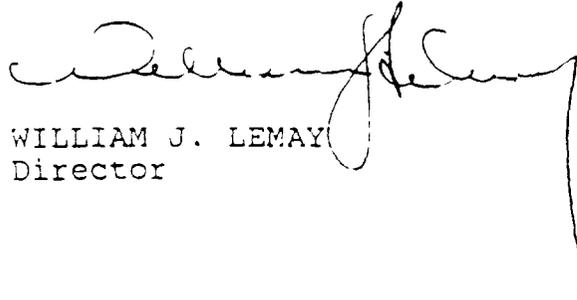
(15) Monthly progress reports shall be submitted to the Division in accordance with Rules 706 and 1115.

(16) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

Case No. 10260
Order No. R-9483
Page 8

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

S E A L

ARROWHEAD GRANDBURG UNIT
PROPOSED INJECTION WELL COMPLECTIONS

Proposed Well Number	Lease Name	Well No	Footage	Unit/Sec/TUS/ENG	Operator	Fuel
AGU 106 WIC	W A RAMSAY (NCT-B)	5	2105 FHL & 1650 FEL	6 25 21 5 36 E	Chevron	Arrowhead (formerly Penrose Skelly)
AGU 115 WIC	KINGWOOD	2	660 FSL & 1650 FEL	0 25 21 5 36 E	Chevron	Arrowhead (formerly Penrose Skelly)
AGU 119 WIC	HARRY LEONARD (NCT-C)	5	660 FHL & 1980 FHL	0 36 21 5 36 E	Chevron	Arrowhead
AGU 121 WIC	W A RAMSAY (NCT-A)	11	660 FHL & 660 FEL	A 35 21 5 36 E	Chevron	Arrowhead
AGU 124 WIC	W A RAMSAY (NCT-A)	9	1980 FHL & 1980 FEL	B 35 21 5 36 E	Chevron	Arrowhead (formerly Eumont Oil)
AGU 126 WIC	HARRY LEONARD (NCT-C)	3	1980 FHL & 660 FHL	E 36 21 5 36 E	Chevron	Arrowhead
AGU 132 WIC	HARRY LEONARD (NCT-C)	2	1980 FSL & 1980 FHL	K 36 21 5 36 E	Chevron	Arrowhead
AGU 134 WIC	W A RAMSAY (NCT-A)	5	1980 FSL & 660 FEL	1 35 21 5 36 E	Chevron	Arrowhead
AGU 141 WIC	STATE 'M'	1	660 FSL & 660 FHL	M 36 21 5 36 E	OXY USA	Arrowhead
AGU 143 WIC	STATE 'D' DE	1	330 FSL & 2310 FEL	0 36 21 5 36 E	AKCO	Arrowhead
AGU 146 WIC	H T MATTERN (NCT-F)	2	660 FNL & 660 FEL	R 1 22 5 36 E	Chevron	Arrowhead
AGU 150 WIC	STATE J-2	4	660 FNL & 660 FEL	R 2 22 5 36 E	CONOCO	Arrowhead
AGU 152 WIC	STATE J-2	11	660 FNL & 1980 FHL	C 2 22 5 36 E	CONOCO	Arrowhead
AGU 156 WIC	STATE J-2	9	1980 FNL & 1980 FEL	6 2 22 5 36 E	CONOCO	Arrowhead
AGU 158 WIC	LOCKHART B-1 FED.	1	1980 FNL & 660 FHL	E 1 22 5 36 E	CONOCO	Arrowhead
AGU 160 WIC	LOCKHART B-1 FED.	7	1980 FHL & 1830 FEL	6 1 22 5 36 E	CONOCO	Arrowhead
AGU 167 WIC	H T MATTERN (NCT-E)	2	1980 FSL & 1980 FHL	K 1 22 5 36 E	Chevron	Arrowhead
AGU 169 WIC	STATE J-2	2	1980 FSL & 660 FEL	1 2 22 5 36 E	CONOCO	Arrowhead
AGU 171 WIC	STATE 'M'	2	2310 FSL & 2310 FHL	K 2 22 5 36 E	OXY USA	Arrowhead
AGU 175 WIC	STATE J-2	6	660 FSL & 1980 FEL	0 2 22 5 36 E	CONOCO	Arrowhead
AGU 177 WIC	H T MATTERN (NCT-E)	4	660 FSL & 660 FHL	N 1 22 5 36 E	Chevron	Arrowhead
AGU 179 WIC	LOCKHART B-1 FED.	5	660 FSL & 1980 FEL	0 1 22 5 36 E	CONOCO	Arrowhead
AGU 185 WIC	H T MATTERN (NCT-E)	12	660 FHL & 660 FEL	A 12 22 5 36 E	Chevron	Arrowhead
AGU 187 WIC	H T MATTERN (NCT-E)	9	660 FNL & 1980 FHL	C 12 22 5 36 E	Chevron	Arrowhead
AGU 189 WIC	STATE 'A' AC 2	13	660 FNL & 660 FEL	R 11 22 5 36 E	Pasausser	Arrowhead
AGU 196 WIC	H T MATTERN (NCT-E)	7	2310 FHL & 2310 FEL	G 12 22 5 36 E	Chevron	Arrowhead
AGU 198 WIC	H T MATTERN (NCT-D)	2	2310 FHL & 330 FHL	E 7 22 5 37 E	Chevron	Arrowhead
AGU 201 WIC	MATTERN	2	1650 FSL & 1650 FHL	K 7 22 5 37 E	Chevron	Arrowhead
AGU 222 WIC	MCDONALD STATE AC 2	13	330 FHL & 2310 FHL	C 13 22 5 37 E	Marathon	Arrowhead
AGU 233 WIC	STATE 'PA'	4	2310 FSL & 1980 FHL	F 10 22 5 37 E	Amerada Hess	Arrowhead

**PROPOSED ARROWHEAD GRAYBURG UNIT
INJECTION WELLS TO BE DRILLED**

			LOCATION			
<u>WELL NO.</u>	<u>UNIT</u>	<u>SECTION</u>	<u>TWS</u>	<u>RANGE</u>		
AGU 110	WI	NE/4 SW/4	25	21-S	36-E	
AGU 113	WI	SW/4 SW/4	25	21-S	36-E	
AGU 128	WI	SE/4 NE/4	36	21-S	36-E	
AGU 139	WI	SW/4 SE/4	35	21-S	36-E	
AGU 148	WI	NE/4 NW/4	1	22-S	36-E	
AGU 165	WI	NE/4 SE/4	1	22-S	36-E	
AGU 181	WI	SW/4 SW/4	6	22-S	37-E	
AGU 194	WI	SW/4 NW/4	12	22-S	36-E	
AGU 203	WI	NE/4 SE/4	12	22-S	36-E	
AGU 205	WI	NE/4 SW/4	12	22-S	36-E	
AGU 210	WI	SW/4 SE/4	12	22-S	36-E	
AGU 212	WI	SW/4 SW/4	7	22-S	37-E	
AGU 214	WI	SW/4 SE/4	7	22-S	37-E	
AGU 218	WI	NE/4 NW/4	18	22-S	37-E	
AGU 220	WI	NE/4 NE/4	13	22-S	36-E	
AGU 225	WI	SW/4 NE/4	13	22-S	36-E	
AGU 227	WI	SW/4 NW/4	18	22-S	37-E	
AGU 229	WI	SW/4 NE/4	18	22-S	37-E	
AGU 235	WI	NE/4 SE/4	13	22-S	36-E	
AGU 240	WI	SW/4 SW/4	18	22-S	37-E	
AGU 242	WI	SW/4 SE/4	18	22-S	37-E	
AGU 246	WI	NE/4 NW/4	19	22-S	37-E	

CASE NO. 10260 - ORDER NO. R-9483

CASE NO. 10260 - Order No. R-9483
 Exhibit "B"

Proposed Arrowhead Grayburg Unit
 Potential "Problem Wells"

<u>Operator</u>	<u>Lease</u>	<u>Well No</u>	<u>Location</u>	<u>Comment</u>
Bay Petroleum	Brownlee	1	25 21-S 36-E	Insure DH marker and Surface Plug
Gribble	State	1	36 21-S 36-E	Depths of plugs unknown
Conoco	State J-2	8	2 22-S 36-E	No plugs at pay or salt
Chevron	HT Mattern (NCT-E)	5	12 22-S 36-E	No plug at salt or base of surface string
Chevron	HT Mattern (NCT-D)	5	7 22-S 37-E	No plug at salt or base of surface string
Amerada Hess	State 'PA'	2	18 22-S 37-E	No plugs at pay or salt

DATE: 16-JAN-91 TIME: 13:28:42

22

23

24

19

20

21
36
S
E

21
37
S
E



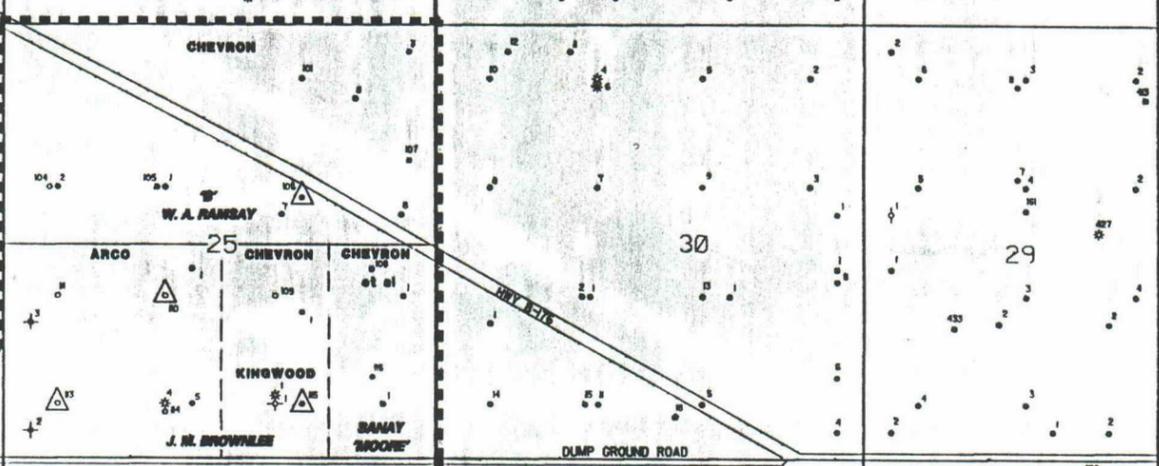
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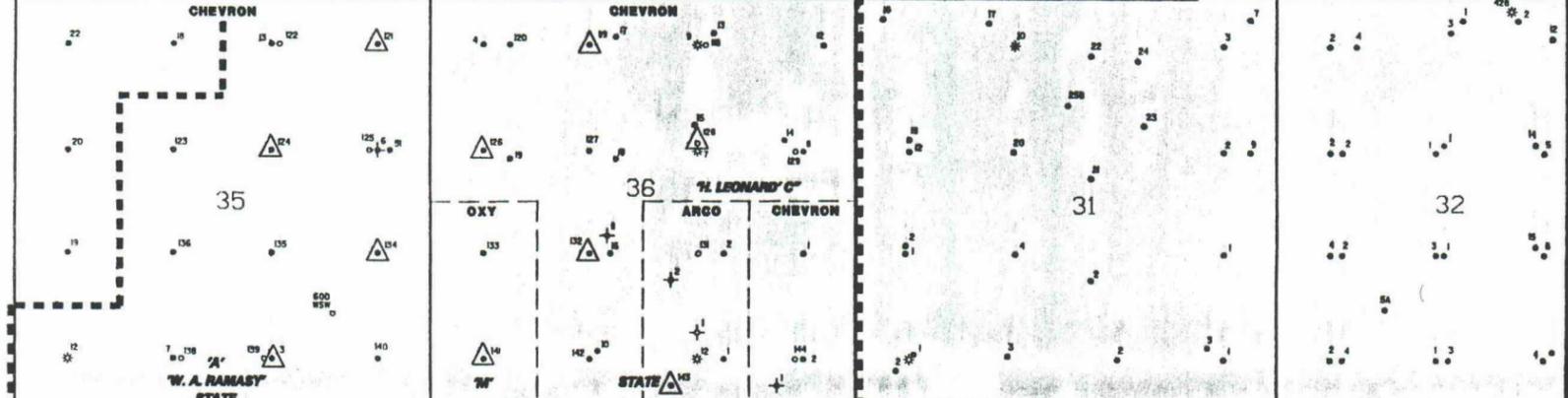
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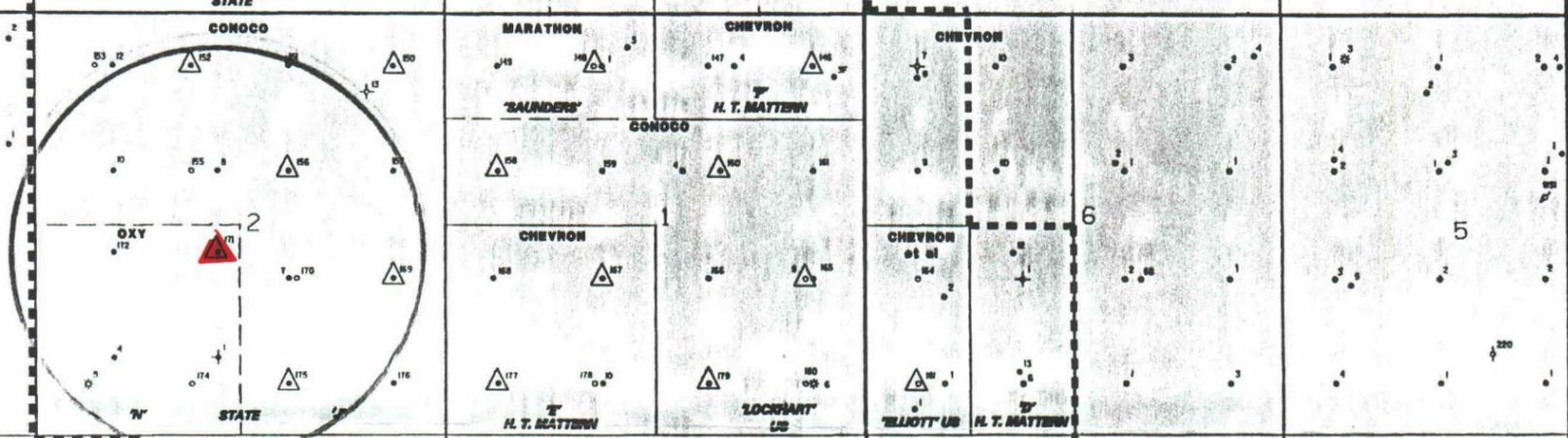
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2

1

6

5



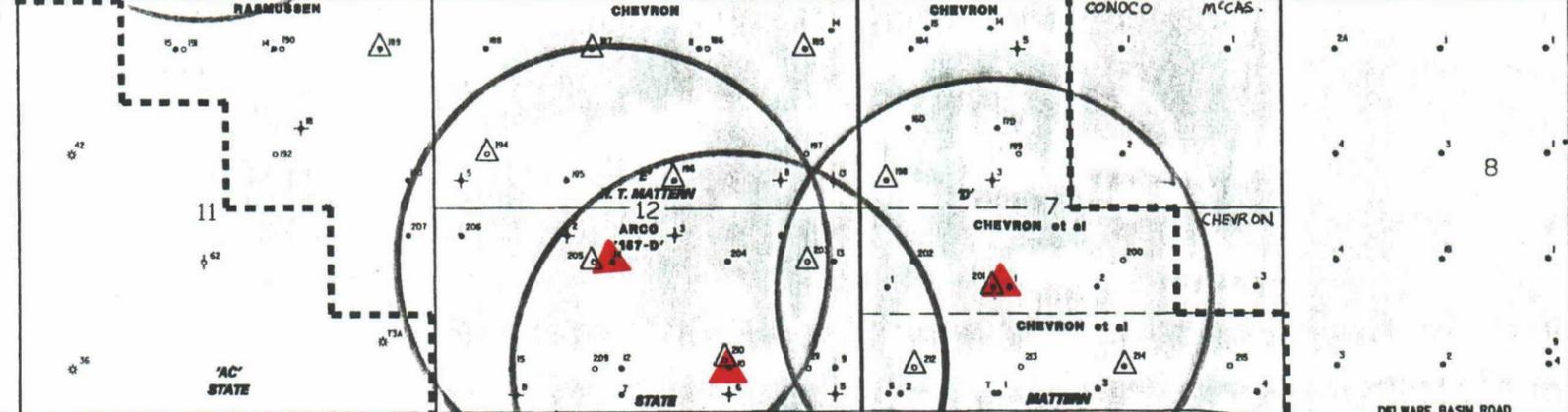
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11

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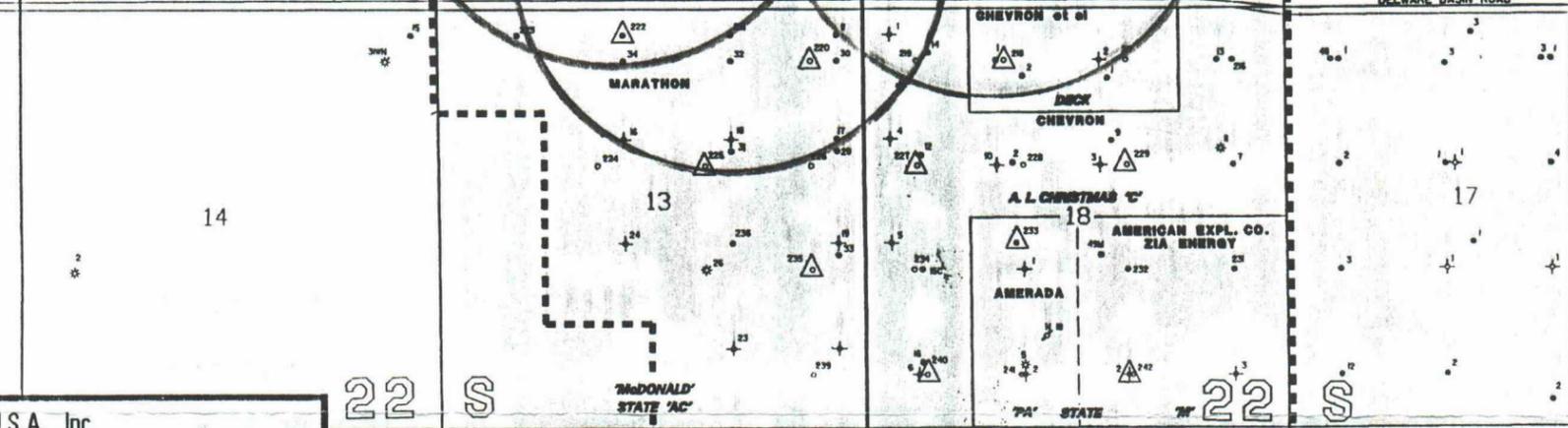


14

13

18

17



LEGEND

- △ UNIT PRODUCING WELL EXISTING
- UNIT INJECTOR CONVERSION
- UNIT PRODUCING WELL NEW DRILL
- △ UNIT INJECTOR NEW DRILL
- NON UNIT WELL

Revisions

Chevron U.S.A. Inc.
Exploration, Land and Production

ARROWHEAD GRAYBURG UNIT
LEA COUNTY, NEW MEXICO

DLL 691 **1"1000'**

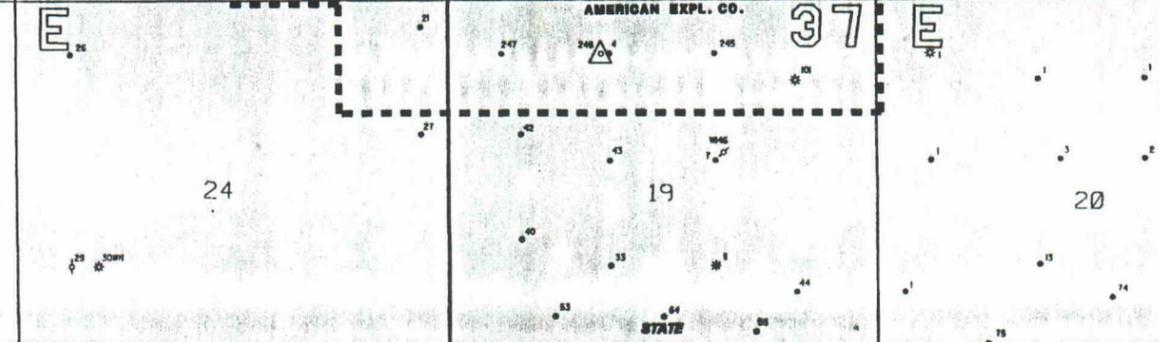
22
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22
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24

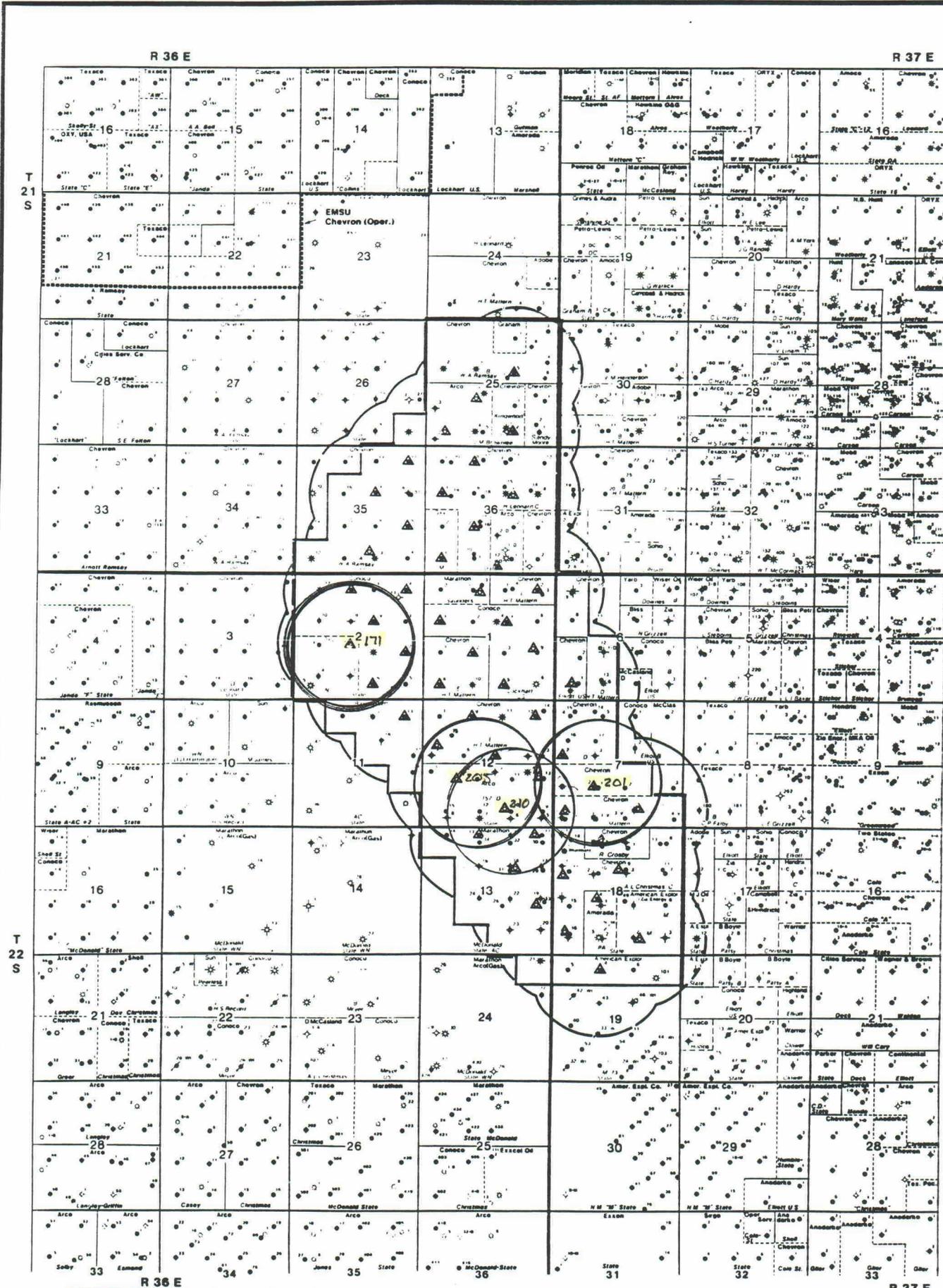
19

20



PLOTTED 27-NOV-1991 13:10

031914GE.DGN



LEGEND

● Location or Drilling	○ Oil & Gas	— Unit Boundary
○ Oil	○ P&A Oil & Gas	
○ P&A Oil	○ Dry & Abs.	
○ TA or CI Oil	M	
○ Gas	▲ Proposed A.G.U. Water Injection Conversion	
○ P&A Gas	▲ Proposed A.G.U. New Drift Injector	
○ TA or CI Gas	○ 1/2 Mile Radius Of Review (Around All Proposed A.G.U. Injectors)	

ORIGINAL APPLICATION
AREA OF REVIEW

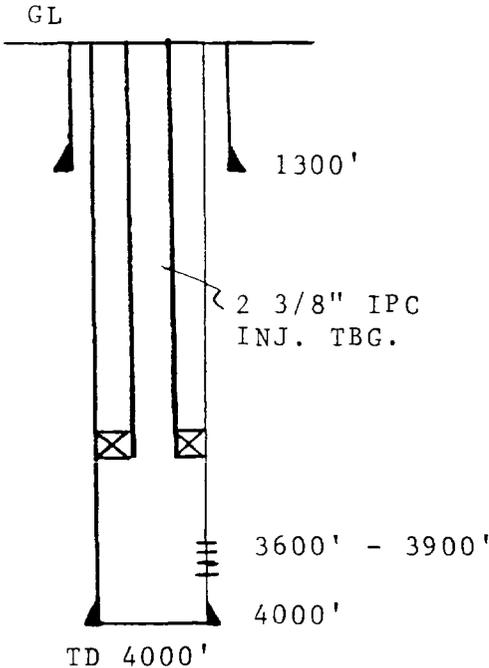
**PROPOSED
ARROWHEAD GRAYBURG
UNIT
AREA OF REVIEW**
Lea County, New Mexico
S.S. Smith, State
S.M. Lambert, 11/1/50

INJECTION WELL DATA SHEET

Chevron U.S.A. Inc. Arrowhead Grayburg Unit
 OPERATOR LEASE

WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE
Proposed new injection well.

SCHEMATICS



TUBULAR DATA

Surface Casing

Size 8-5/8 "
 TOC Surf
 Hole size 12-1/4"
 Cemented with 800 sx
 feet determined by Circ.

Long String

Size 5-1/2 "
 TOC Surf
 Hole size 7-7/8"
 Total Depth 4000'
 Cemented with 800 sx
 feet determined by Circ.

Injection Interval

3600 feet to 3900 feet
 (perforated)

Tubing size 2-3/8" lined with IPC set in a Nickel Plated Baker Model AD-1 Tension
 (Material) (Brand and Model)
3500 packer at 3500 feet (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Grayburg
- Name of Field or Pool (if applicable) Arrowhead
- Is this a new well drilled for injection? Yes No
 If no, for what purpose was the well originally drilled? _____
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No
- Give the depth in and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2400' top of Jalmat, 2600' top of Eumont, 3300' top of Langlie Mattix, 5500' top of Blinebry, 6250' top of Tubb, 6500' top of Drinkard.

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-103
Revised 1-1-89

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer Dd, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, Nm 87410

API NO. (assigned by OCD on New Wells) 30-025-08744
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. B-08744

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Plugged</u>	7. Lease Name or Unit Agreement Name OXY STATE "N"
2. Name of Operator CHEVRON U.S.A. INC.	8. Well No. 2
3. Address of Operator P.O. BOX 1150 MIDLAND, TX 79702 ATTN: P.R. MATTHEWS	9. Pool name or Wildcat ARROWHEAD/GB
4. Well Location Unit Letter <u>K</u> : <u>2310</u> Feet From The <u>SOUTH</u> Line and <u>2310</u> Feet From The <u>WEST</u> Line Section <u>2</u> Township <u>22S</u> Range <u>36E</u> NMPM <u>LEA</u> County	10. Elevation(Show whether DF, RKB, RT, GR, etc.)

11 Check Appropriate Box to Indecate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CMT JOB <input type="checkbox"/>
OTHER: <u>NAME CHANGE</u> <input checked="" type="checkbox"/>	OTHER: <input type="checkbox"/>
PLUG AND ABANDON <input type="checkbox"/>	ALTER CASING <input type="checkbox"/>
CHANGE PLANS <input type="checkbox"/>	PLUG AND ABAN. <input type="checkbox"/>

12. Describe Proposed or Completed Operations(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

CHEVRON WISHES TO CHANGE THE NAME OF THE AGU #171 BACK TO THE FORMER NAME:
FORMER NAME: OXY STATE "N" #2.

REASON: THE OXY STATE "N" # 2 WELLBORE IS UNUSABLE DUE TO PARTED CASING.
IT IS OUR INTENTION TO DRILL A NEW WELL AND CALL IT THE AGU # 171.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE P.R. Matthews TITLE TECH. ASSISTANT DATE: 9-16-92

TYPE OR PRINT NAME P.R. MATTHEWS TELEPHONE NO. (915)687-7812

APPROVED BY JERRY SEXTON TITLE DISTRICT SUPERVISOR DATE SEP 16 '92

CONDITIONS OF APPROVAL, IF ANY:

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

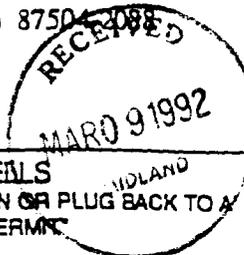
Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088



WELL API NO. 30-025-08744
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. N/a

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE APPLICATION FOR PERMIT
(FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name ARROWHEAD GRAYBURG UNIT
8. Well No. 171
9. Pool name or Wildcat ARROWHEAD/GB

1. Type of Well: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>
2. Name of Operator CHEVRON U.S.A. INC.
3. Address of Operator P.O. BOX 1150 MIDLAND, TX 79702 ATTN: P.R. MATTHEWS
4. Well Location Unit Letter K : 2310 Feet From The SOUTH Line and 2310 Feet From The WEST Line Section 2 Township 22S Range 36E NMPM LEA County
10. Elevation (Show whether DF, RKB, RT, GR, etc.)

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>		CASING TEST AND CEMENT JOB <input type="checkbox"/>	
OTHER: <input type="checkbox"/>		OTHER: <input type="checkbox"/>	

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

TIH TO 3691, PUMP 300 BBL OF BW. PUMP 50 SX. OF CMT. FROM 3475-3700.
 PU TO 2761, WOC. PUMP 100 BBL OF 9.5 PPG BW. TIH ATG AT 3249. PUMP 25 SX. OF CMT AT 3249-3000. WOC TIH TAG UP AT 3004. PUMP 100 BBL OF 9.5 PPG BW. PUMP 25 SX. OF CMT. FROM 3004-2757. PU TO 2332, WOC TIH TAG UP AT 2623. SPOT 12 BBL OF P & A MUD. 2623-2150. POOH TIH WITH CICR AND SET AT 1801. PUMP 85 BBL OF BW. STING INTO CICR AND PUMP 100 SX. OF CMT. 1560-1801 SET A CEMENT PLUG OF 50 SX. SPOT A 25 SX. PLUG FROM 1560-1313. PERF AT 313 AND PUMP 80 SX. OF CEMENT FILLED BOTH 5 1/2" and 8 5/8" CASING WITH CEMENT. INSTALLED P & A MARKER. RDMO ON 2-23-92.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE P.R. Matthews TITLE TECHNICAL ASSISTANT DATE 2-24-92
 TYPE OR PRINT NAME P.R. MATTHEWS TELEPHONE NO. 68707812

(This space for State Use)

APPROVED BY P.R. Sadler TITLE OIL & GAS INSPECTOR DATE MAR 05 '92
 CONDITIONS OF APPROVAL IF ANY:

Submit 3 Copies
to Approvate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
P.O. Drawer 04, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, Nm 87410

API NO. (assigned by OCD on New Wells) 30-025-10098	
6. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>	
8. State Oil & Gas Lease No. N/A	
7. Lease Name or Unit Agreement Name ARROWHEAD GRAYBURG UNIT	
5. Well No. 201	
9. Pool name or Wildcat ARROWHEAD/GB	
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3445 GE	

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:
OIL WELL GAS WELL OTHER INJECTOR

2. Name of Operator
CHEVRON U.S.A. INC.

3. Address of Operator
P.O. BOX 1150 MIDLAND, TX 79702 ATTN: P.R. MATTHEWS

4. Well Location
Unit Letter K : 1650 Feet From The SOUTH Line and 1650 Feet From The WEST Line
Section 7 Township 22S Range 37E NMPM LEA County

11 Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTER CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABAN. <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER: <input type="checkbox"/>	CASING TEST AND CMT JOB <input type="checkbox"/>	OTHER: <input type="checkbox"/>

12 Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including expected date of starting any proposed work) SEE RULE 1103.

MIRU, POOH WITH PRODUCTION EQUIPMENT.
TIH WITH DOWN HOLE VIDEO CAMERA AND DISCOVER CASING PARTED AT 326-329.
TIH WITH CEMENT, SET PLUG AT 2540-3740. 130 SXS. OF CEMENT.
PUMPED 9.5 PPG P & A MUD FROM 2540-200.
PUMPED CEMENT FROM 330'-SURFACE.
CUT OFF WELLHEAD AND WELD ON P & A MARKER.
NOTE: LEFT RBP IN THE HOLE AT 3679'.
WORK FINISHED ON 3-21-92.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.
SIGNATURE P.R. Matthews TITLE TECH. ASSISTANT DATE: 03-23-92

TYPE OR PRINT NAME P.R. MATTHEWS TELEPHONE NO (915)687-7812

APPROVED BY [Signature] TITLE OIL & GAS INSPECTOR DATE APR 03 '92

CONDITIONS OF APPROVAL, IF ANY:

OIL CONSERVATION DIVISION

P.O. Box 2088
 Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Artec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

H.T. Mattern #2

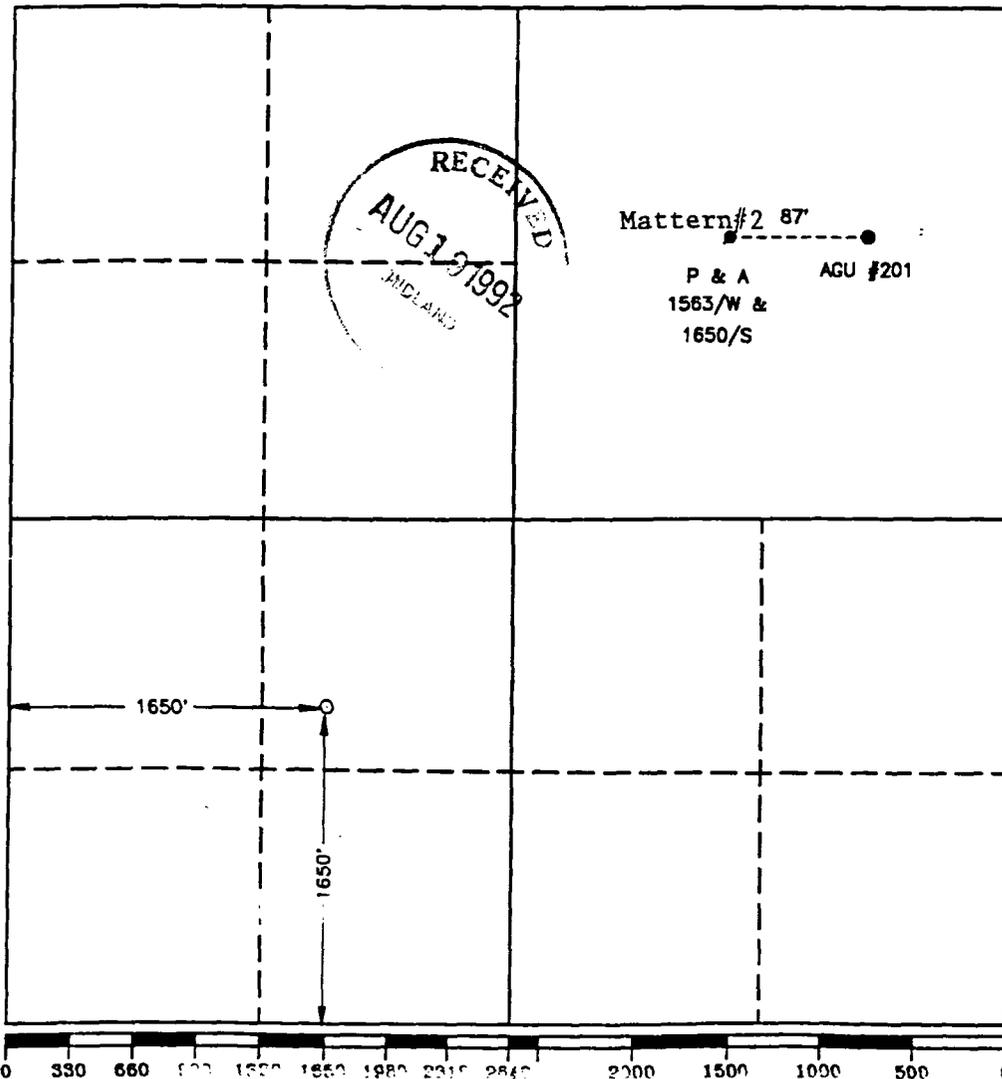
Operator CHEVRON U.S.A. INC.			Lease ARROWHEAD GRAYBURG UNIT		Well No. 201
Unit Letter K	Section 7	Township 22 SOUTH	Range 37 EAST	County LEA	
Actual Footage Location of Well: 1650 feet from the SOUTH line and 1650 1563 feet from the WEST line					
Ground Level Elev. 3447.0'	Producing Formation	Pool		Dedicated Acreage: Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?

Yes No If answer is "yes" type of consolidation _____

If answer is "no" list of owners and tract descriptions which have actually been consolidated. (Use reverse side of this form necessary.)

No allowable will be assigned to the well unit all interests have been consolidated (by communitization, unitization, forced-pooling, otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature _____

Printed Name _____

Position _____

Company _____

Date _____

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
JULY 30, 1992

Signature & Seal of Professional Surveyor

(Signature)

Certificate No. **JOHN W. WISE 676**
RONALD J. EIDSON, 3239
GARRETT JONES, 7977

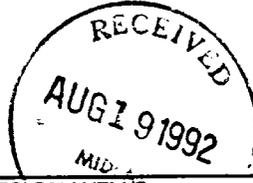
REGISTERED LAND SURVEYOR

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
P.O. Drawer Dd, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, Nm 87410



API NO. (assigned by OCD on New Wells) <u>30-025-10098</u>
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. N/A
7. Lease Name or Unit Agreement Name H.T. MATTERN
8. Well No. 2
9. Pool name or Wildcat ARROWHEAD/GB
10. Elevation(Show whether DF, RKB, RT, GR, etc.)

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Plugged</u>
2. Name of Operator <u>CHEVRON U.S.A. INC.</u>
3. Address of Operator <u>P.O. BOX 1150 MIDLAND, TX 79702 ATTN: P.R. MATTHEWS</u>
4. Well Location Unit Letter <u>K</u> : <u>1563</u> Feet From The <u>WEST</u> Line and <u>1650</u> Feet From The <u>SOUTH</u> Line Section <u>7</u> Township <u>22S</u> Range <u>37E</u> NMPM <u>LEA</u> County
10. Elevation(Show whether DF, RKB, RT, GR, etc.)

11 Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CMT JOB <input type="checkbox"/>
OTHER: <u>NAME CHANGE</u> <input checked="" type="checkbox"/>	OTHER: <input type="checkbox"/>
<u>Show correct surface location</u>	

12. Describe Proposed or Completed Operations(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

CHEVRON U.S.A. INC. WISHES TO CHANGE THE NAME OF SUBJECT WELL:

FROM ARROWHEAD GRAYBURG UNIT #201.
TO: H.T. MATTERN #2

Correct surface location from 1650/S & W
to: 1650/S & 1563/W as indicated on attached plat.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE <u>P.R. Matthews</u>	TITLE <u>TECH. ASSISTANT</u>	DATE: <u>8-13-92</u>
TYPE OR PRINT NAME <u>P.R. MATTHEWS</u>	TELEPHONE NO. <u>(915)687-7812</u>	
APPROVED BY <u>ORIGINAL SIGNED BY JERRY SEXTON</u>	TITLE <u>DISTRICT I SUPERVISOR</u>	DATE <u>AUG 17 '92</u>
CONDITIONS OF APPROVAL, IF ANY:		



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

BRUCE KING
GOVERNOR

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

TO WHOM IT MAY CONCERN:

August 13, 1992

CORRECTION OF SURFACE LOCATION

Chevron USA Inc.
H.T. Mattern #2 (API #30-025-10098)
Section 7, T22S, R37E
from: 1650/S & 1650/W
to: 1650/S & 1563/W



This well had previously been changed to the Chevron USA Inc. Arrowhead Grayburg Unit #201, but wellbore was unsatisfactory for unit well so well was plugged and Chevron drilled a new Unit well #201 at 1650/S & 1650/W of Sec. 7, T22S, R37E

The incorrect location of the H.T. Mattern #2 was due to the fact that the original measurements were referred to as 330' north of South line and 330' East of West line of the SW of NE of SW of Sec. 7, T22S, R37E. When these measurements were transferred to OCD forms which required measurements from the section line instead of the quarter/quarter lines they were recorded incorrectly because Unit letter "L" of Section 7 is not a standard size lot.

The corrected location is taken from measurements furnished by John West Engineering when they surveyed for the new Arrowhead Grayburg Unit #201.

See inset on attached plat.

Jerry Sexton
Supervisor, District I



AGU 201 W1

AGU 201-W1C

WELL DATA SHEET AFE: MMR2PBA2

LEASE Meridian Mattern WELL NO. 2 FIELD Arrowhead TA'd DATE 11/30/8

LOCATION 1650 FEET FROM S LINE AND 1650 FEET FROM W LINE

SECTION 7 TOWNSHIP 22-S RANGE 37-E COUNTY Lea STATE NM

UNIT K

GE: 3445
KDB to GE _____
DP to GE _____

Date Completed 11/15/39
Initial Formation Grayburg
FROM: 3668 TO: 3740
Initial Production 480 BOPD 0 BWPD
nm MCFPD nm GOR

Completion Data:
OH Completion.

8 5/8" OD 28 lbs.
SURF. Pipe set @
326 w/ 128 sx
cmt. Circ? _____

Cement Plug
f/surface to 375'

5 1/2" CSG TOP
@ 330'

Subsequent Workover or Reconditioning:
10/16/51 - Acidized w/500 gals.
9/68 - TA'd.

PRESENT

9.5# Mud Ladden
fluid w/36 vis.

3-20-92) Move in to work-
over well. Found out that
5 1/2" CSG was parted at 326
to 330. 8 5/8" CSG was parted
at 40' of A Well. 3-21-92

Cement Plug
f/2540 to 3740

Present Prod. _____ BOPD _____ SWP
_____ MCFPD _____ GOR

5 1/2" OD
Gr _____
14 # Csg set @
3668 ' w/ 400 sx
CMT. Circ? _____
TOC @ _____ by TS

Remarks or Additional Data:
5 1/2" casing in 6 3/4" h.

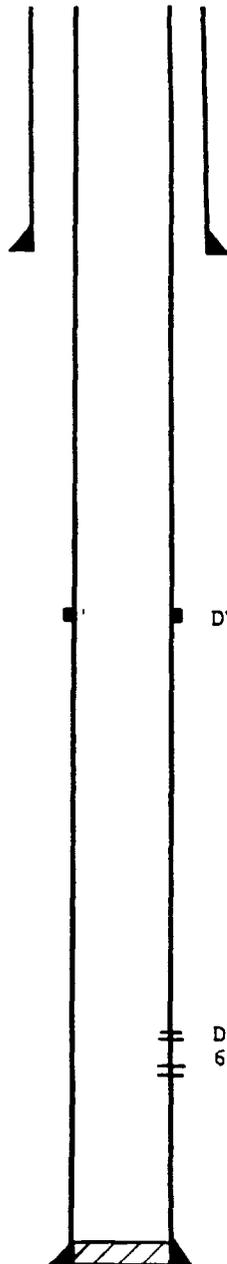
Baker 5 1/2"
C Type RBP

3740

WELL DATA SHEET

LEASE Arco State 157-D WELL NO. 14 FIELD Drinkard DATE 11/28/88
LOCATION 1980 FEET FROM S LINE AND 2210 FEET FROM W LINE
SECTION 12 TOWNSHIP 22-S RANGE 36-E COUNTY Lea STATE NM

UNIT K



GE: 3475 '
KDB to GE 10 '
DF to GE _____ '

9 5/8 " OD _____ lbs.
Surf. Pipe set @ _____
1286 w/ 550 sx
cmt. Circ? Yes

Date Completed 3/3/80
Initial Formation Drinkard
FROM: 6527 TO: 6652
Initial Production 51 BOPD 124 BWPD
142 MCFPD 2784 GOR

Completion Data:
Perf Drinkard 6527 - 6652'. Acidize & frac.

Subsequent Workover or Reconditioning:

DV tool @ 3726'

Drinkard Perfs
6527'-6652'

Present Prod. _____ BOPD _____ BWPD _____
_____ MCFPD _____ GOR _____
Date _____

5 1/2 " OD
Gr _____
Csg set @ _____
6804 ' w/ 2750 sx
Cmt. Circ? Yes
TOC @ _____ by TS

Remarks or Additional Data:
5 1/2" casing in 8 3/4" hole

PBD 6745 '

TD 6804 '

INJECTION WELL DATA SHEET

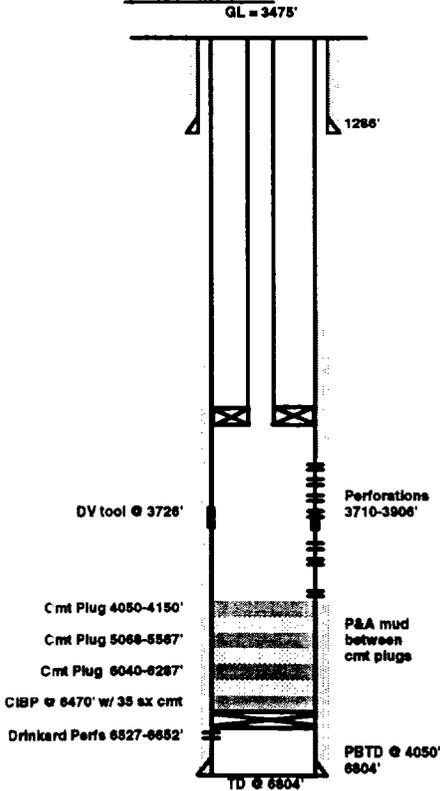
Chevron U.S.A. Inc. Arrowhead Grayburg Unit
 OPERATOR LEASE

205 WIC 1,980' FSL, 2,210' FWL Section 12 T22S - R36E Unit K
 WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE

Proposed New Injection Well

SCHEMATICS

TUBULAR DATA



Surface Casing

Size 9 5/8" Cemented with 550 sx
 TOC Surf feet determined by Circ.
 Hole size Unknown

Long String

Size 5 1/2" Cemented with 2,930 sx
 TOC 2,930' feet determined by CBL.

Hole size 8 3/4"
 Total Depth 6,804'

Injection Interval

3,710 feet to 3,906 feet
 (perforated)

Tubing size 2-3/8" lined with Cement set in a Guberson Unit VI Plastic Coated
 (Material) (Brand and Model)

 packer at 3,664 feet (or describe any other casing-tubing seal).

Other Data

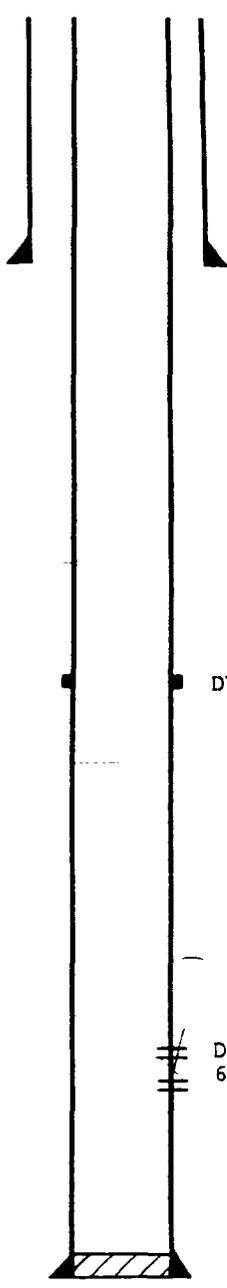
1. Name of the injection formation Grayburg
2. Name of Field or Pool (if applicable) Arrowhead
3. Is this a new well drilled for injection? Yes X No
 If no, for what purpose was the well originally drilled?
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Yes, Drinkard, 6,527'-6,652', Plugged with CIBP at 6,490' with 35 SX CMT on top. CMT Plugs at 6,040'-6,287', 5,068'-5,567', 4,050'-4,150' with mud between plugs.
5. Give the depth in and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2,400' top of Jalmat, 2,600' top of Eumont, 3,300' top of Langlie Mattix, 5,500' top of Blinbry, 6,250' top of Tubb, 6,500' of Drinkard.

[CURRENT]

WELL DATA SHEET

LEASE Arco State 157-D WELL NO. 10 FIELD Drinkard DATE 11/28/88
LOCATION 660 FEET FROM S LINE AND 1650 FEET FROM E LINE
SECTION 12 TOWNSHIP 22-S RANGE 36-E COUNTY Lea STATE NM

UNIT 0



GE: 3469 '
KDB to GE 13 '
DF to GE _____'

9 5/8 " OD 36 lbs.
Surf. Pipe set @
1220 w/ 600 sx
cmt. Circ? Yes

DV tool @ 3773'

Drinkard Perfs
6510'-6656'

5 1/2 " OD
Gr K-55
15.5# Csg set @
6800 ' w/ 1475 sx
Cmt. Circ? No
TOC @ 1050 by TS

Date Completed 9/24/79
Initial Formation Drinkard
FROM: 6510 TO: 6656
Initial Production 168 BOPD 60 BWPD
193 MCFPD 1149 GOR

Completion Data:
Perf Drinkard 6510 - 6656'. Acidize & frac.

Subsequent Workover or Reconditioning:

Present Prod. _____ BOPD _____ BOPD
_____ MCFPD _____ GOR
Date _____

Remarks or Additional Data:
5 1/2" casing in 8 3/4" hole

PBD 6721 '
TD 6800 '

INJECTION WELL DATA SHEET

Chevron U.S.A. Inc.
OPERATOR

Arrowhead Grayburg Unit
LEASE

210 WIC 660' FSL, 1,650' FWL
WELL NO. FOOTAGE LOCATION

Section 12
SECTION

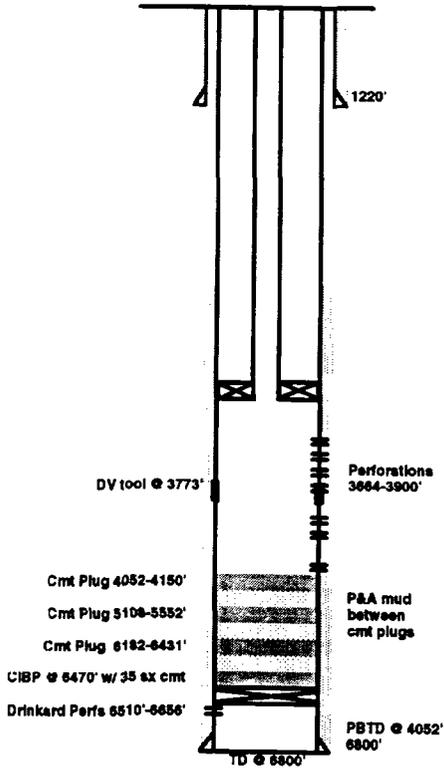
T22S - R36E
TOWNSHIP

Unit O
RANGE

Proposed New Injection Well

SCHEMATICS

GL = 3489'



TUBULAR DATA

Surface Casing

Size 9 5/8"
TOC Surf
Hole size Unknown

Cemented with 600 sx
feet determined by Circ.

Long String

Size 5 1/2"
TOC 1,050'
Hole size 8 3/4"
Total Depth 6,800'

Cemented with 1,475 sx
feet determined by TS

Injection Interval

3,664 feet to 3,900 feet
(perforated)

Tubing size 2-3/8" lined with Fiberglass set in a Guberson Unit VI Plastic Coated
(Material) (Brand and Model)
packer at 3,622 feet (or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Grayburg
2. Name of Field or Pool (if applicable) Arrowhead
3. Is this a new well drilled for injection? Yes No
If no, for what purpose was the well originally drilled? _____
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Yes, Drinkard, 6,510'-6,656', Plugged with CIBP at 6,470' with 35 SX CMT. CMT Plugs at 6,431'-6,182', 5,552'-5,108', 4,150'-4,052' with mud between plugs.
5. Give the depth in and name of any overlying and/or underlying oil or gas zones (pools) in this area. 2,400' Top of Jalmat, 2,600' top of Eumont, 3,300' top of Langlie Mattix, 5,500 top of Blinebry, 6,250' top of Tubb, 6,500' top of Drinkard.



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

12-15-92

BRUCE KING
GOVERNOR

CONSERVATION DIVISION
RECEIVED
92 DE 21 AM 10 06

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 _____
PMX _____

Handwritten notes:
2000 15 72 #14-K 12-22-92 (20)
2000 15 72 #10-K 12-22-92 (20)
Chesman HT #2-K 2-22-92 (12)
OK of SFN #2-K 2-22-92 (17)

Gentlemen:

I have examined the application for the:

Chesman USA Inc Arroyo Nuevo AB Unit
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
Jerry Sexton
Supervisor, District 1

/ed



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



BRUCE KING
 GOVERNOR

ANITA LOCKWOOD
 CABINET SECRETARY

December 30, 1992

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

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

Attention: S.P. McDonald

AMENDMENT TO DIVISION ORDER R-9483

Dear Mr. McDonald,

Reference is made to your request dated December 8, 1992, to revise four (4) injection wells approved by Division Order R-9483. My staff has reviewed the request to amend the order and replace the proposed injection wells shown on Table I, with two (2) well conversions and two (2) new drill wells as shown on Table II.

TABLE I

Previously Approved Arrowhead Grayburg Unit Injection Wells
 by Division Order No.R-9483

<i>Proposed Name & No.</i>	<i>Location</i>	<i>S-T-R</i>
AGU No.171*	2310' FSL , 2210' FWL	2-22S-36E
AGU No.201*	1650' FSL & 1650' FWL	7-22S-37E
AGU No.205**	NE/4 SW/4	12-22S-36E
AGU No.210**	SW/4 SE/4	12-22S-36E

* Proposed Conversions ** Proposed New Drills

TABLE II

Revised Arrowhead Grayburg Unit Injection Wells
to Amend Division Order No.R-9483

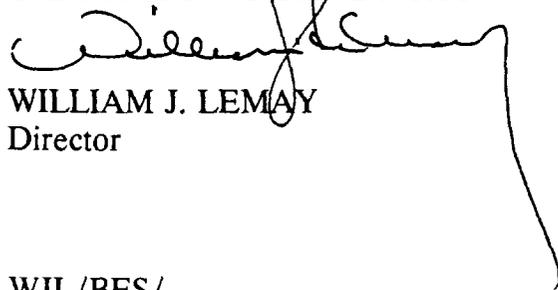
AGU No.	Previous Name & No.	Location	S-T-R
171*	N/A	2305' FSL & 2215' FWL	2-22S-36E
201*	N/A	1650' FSL & 1650' FWL	7-22S-37E
205**	Arco State 157D No.14	1980' FSL & 2210' FWL	12-22S-36E
210**	Arco State 157D No.10	660' FSL & 1650' FEL	12-22S-36E

* New Drills ** Proposed Conversions for Amended Order

Your request for amendment is hereby approved, provided that, the subject wells shall be governed by all provisions of Division Order R-9483, and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

DONE at Santa Fe, New Mexico, on this 30th day of December, 1992.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

WJL/BES/

cc: OCD - Hobbs
 Case File 10260