ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

STATE OF NEW MEXICO

OIL CONSERVATION DIVISION HOBBS DISTRICT OFFICE

12-15-92

BRUCE KING GOVERNOR

POST OFFICE BDX 1980 HOBBS, NEW MEXICO BB241-1980 (505) 393-61151

OIL CONSERVATION DIVISION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501 RE: Proposed:	
MC DHC NSL NSP SWD WFX	
PMX Gentlemen: I have examined the application for the:	arco St 157-12 #14-K 12-22-36(arco St 157-15 # 10.0 12-22-36 (5 Chevron H.T. mattern #2-K 7-22-36 (1 O4 y St N #2-K 2-22-36 (1
Chevron USA Inc. arrowhead ABU Operator Lease & Well No. Unit and my recommendations are as follows:	
<u> </u>	
Yours very truly,	

/ed



j,

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

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 newdrill 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 <u>ARCO State 157-D</u> 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.

Revised C-108 Locations Arrowhead Grayburg Oil Pool -2-

December 9, 1992



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,

Som Dome K

S. P. McDonald Petroleum Engineer

/tana£ 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

EN	STATE OF NEW MELLCO ERGY AND MINERALS DEPARTMENT	CIL CONSERVATION DIVISION FOR OPER SIZE FAT LAND OPER SIZE LANTA R. NEW MEACO \$7201	FORM C-108 Revised 7-1-81
APPL	ICATION FOR AUTHORIZATION TO INJECT		
Ι.	—	v Pressure Maintenance	Dienosal Storage
II.	Sperator: <u>Ghevron</u> U.S.A.		XIna
	Address: PO Box 1150	Midland, TX 79702	
	Contact party: Mr. 3. C. Cot		(915) 687-7314
		equired on the reverse side of the sets may be a	
IV.	If yes, give the Division order	number authorizing the project	10
۷.	Attach a map that identifies all injection well with a one-half m well. This circle identifies th	wells and lesses within two my	les of any proposed each proposed injection
• vI.		Il wells of public record with zone. Such data shall include	n the area of review wn
VII.	Attach data on the proposed oper	stion, including:	▲ •
•vIII.	 Froposed average and maximum Sources and an appropriation the receiving formation If injection is for disconstruction of the disposal zone formation is the disposal zone formation at the disposal zone formation appropriate conjugate disposal di disposal disposal disposal disposal disposal disposal disposa	imum injection pressure; te analysis of injection fluid ; n if other than reinjected produces osal purposes into a zone not pi of the proposed well, attach a (ation water (may be measured or earby wells, etc.).	and compatibility with used water: and roductive of oil or gas chemical analysis of inferred from existing
	detail, geological name, thickness bottom of all underground sources total dissolved solids concentrat injection zone as well as any suc injection interval.	of drinking water (aquifers co	C name, and depth to
IX.	Describe the proposed stimulation	program, if any.	
• X.	Attach appropriate logging and ta with the Division they need not b	st data on the well. (If well @ resubmitted.)	logs have been filed
· XI.	Attach a chemical analysis of fre available and producing) within or location of wells and dates sample	sh water from two or more fresh ne mile of any injection or dis as were taken.	water wells (if posal well showing
×11.	Applicants for disposal wells must exemined available geologic and er or any other hydrologic connectior source of drinking water.	t make an affirmative statement ngineering data and find no evi n between the disposal zone and	that they have dence of open faults any underground
XIII.	Applicants must complete the "Proc	of of Notice" section on the re-	verse side of this form
XIY.	Certification		
	I hereby certify that the informat to the best of my knowledge and be Name: B. C. Cotner	•••••	
	Signature:	Title Uniti	
		Date:/	

:

TIL SELL DATA

- A. The following well data must be submitted for each injection well covered by this applic 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, male 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 parker used or a description of any other seal system or assembly used.

Division District offices have subplies of Well Data Sheets which may be used or which may be used as models for this purnose. 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 show only when different. Information shown on schematics need not be repeated.
 - (1) The name of the injection formation and, if applicable, the field or nool 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 we
 - (4) Give the depths of any other perforated intervals and detail on the sacks of cement of bridge plugs used to seal off such perforations.
 - (5) Give the depth to and mame 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. C. 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.

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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 <u>8th</u> 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.

(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: A11 Section 26: SE/4 SE/4 E/2; E/2 SW/4; SW/4 SW/4; SE/4 NW/4 Section 35: A11 Section 36: Township 22 South, Range 36 East, NMPM A11 Section 1: A11 Section 2: NE/4 NW/4; NE/4; NE/4 SE/4 Section 11: Section 12: A11 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, the proposed waste.

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

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

(9) Prior to commencement of injection into any inject within one-half mile of a problem well, as described on Exhib. "B", the applicant should consult with the supervisor of the O Conservation Division's district office at Hobbs to develop plan acceptable to the Director of said Division, for t repairing, plugging, or replugging of said wells or for t monitoring for determination of fluid movement from the inject interval or for the drilling of producing wells to low reservoir pressure and fluid levels in the vicinity cf sa wells in order to protect neighboring properties and to prote other oil or gas zones or fresh water. Any additional problwells within one-half mile of an injector identified by t supervisor of the Hobbs office should be handled in the mann' set out above.

(10) The operator should immediately notify the supervise of the Division's Hobbs District Office of the failure of t tubing or packer in any of said injection wells, the leakage water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within t project area, and should take such timely steps as may 1 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 approximately 100 feet above the uppermost perforation; the casing-tubing annulus in each well should be filled with a inert fluid; and a pressure gauge or approved leak-detection device should be attached to the annulus in order to determinate leaks in the casing, tubing or packer.

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

(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 specia. 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 Exhibi-"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 t isolate the unitized interval from the non-unitized interval i each of these five wells should be granted because none of these wells is productive in the non-unit interval and the expense o 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 t administratively approve an increase in the injection pressur upon a proper showing by the operator that such higher pressur will not result in migration of the injected waters from th unitized formations.

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

(19) The subject application should be approved and th project should be governed by the provisions of Eules 70 through 708 of the Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Chevron U.S.A., InC., is heret authorized to institute a waterflood project [C1 1495] propose

Section 19: N/2 N/2

Arrowhead-Grayburg Unit Area (Division Case No. 10259), Lea County, New Mexico, by the injection of water into the Arrowheac Pool through wells listed in Exhibit "A", attached hereto and made a part hereof, which will be drilled as injection wells of 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, MMPM Section 25: A11 Section 26: SE/4 SE/4Section 35: E/2; E/2 SW/4; SW/4 SW/4; SE/4 NW/4 Section 36: A11 Township 22 South, Range 36 East, NMPM Section 1: A11 Section 2: A11 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/4Township 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: A11

(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 ECEVED or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely stars as may be necessary or required to correct such failure or leakage.

(12) The operator shall monitor the pressure annually an the fluid monthly on the following two Eumont gas wells wit. completion intervals extending into the unitization formation At such time as either the pressure or the fluid composition o either well indicates potential migration of unit fluids intereither wellbore, the operator shall cause the affected gas welto 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:

Operator	Lease	<u>Well</u>	Location
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, R35E
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.

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

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

WILLIAM J. LEMAY Director

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AROPOSED TRUECTION NELL CONVERSIONS

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CASE NO. 10260 - Order No. R-9483

PROPOSED ARROWHEAD GRAYBURG UNIT INJECTION WELLS TO BE DRILLED

LOCATION

WELL NO.	UNIT	SECTION	TWS	RANGE
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 - 5	36-E
AGU 139 WI	SW/4 SE/4	35	21-5	36-E
AGU 148 WI	NE/4 NW/4	1	22 - 5	36-E
AGU 165 WI	NE/4 SE/4	1	22-5	36-E
AGU 181 WI	SW/4 SW/4	6	22-5	37-E
- AGU 194 WI	SW/4 NW/4	12	22-S	36-E
AGU 203 WI	NE/4 SE/4	12	22-5	36-E
AGU 205 WI	NE/4 SW/4	12	22-5	36-E
AGU 210 WI	SW/4 SE/4	12	22-5	36-E
AGU 212 WI	SW/4 SW/4	7	22-S	37-E
AGU 214 WI	SW/4 SE/4	7	22-5	37-E
AGU 218 WI	NE/4 NW/4	18	22-5	37-E
AGU 220 WI	NE/4 NE/4	13	22-5	36-E
AGU 225 WI	SW/4 NE/4	13	22-5	36-E
AGU 227 WI	SW/4 NW/4	18	22-5	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	22-5	37-E
AGU 242 WI	SW/4 SE/4	18	22-5	37-E
AGU 246 WI	NE/4 NW/4	19	2 2 -5	37-E

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CASE NO. 10260 - ORDER NO. R-9483

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Exhibit A

Page 2 of 2

PSP10125.01

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CASE NO. 10260 - Order No. R-9483

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Exhibit "B"

Proposed Arrowhead Grayburg Unit Potential "Problem Wells"

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

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	J ALA Gan Contraction Addit Biller Statistics Contraction (

INJECTION WELL DATA SHEET

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Chevron U.S.A	A. Inc.	Arrownead Gravburg Unit	
)PERATOR		LEASE	
WELL NO.	FOOTAGE LOCATION	SECTION TOWNSHIP	RANGE
Proposed new	injection weil.		
SCH	<u>IEMATICS</u>	TUBULA	ARDATA
GL		Surface Casing	
		Size 3-5/8 " TOC	Cemented with <u>800</u> feet determined by <u>Circ</u> .
-	▲ 1300'	Long String Size 5-1/2	Company design and the sol
Z 3/8" IPC INJ. TBG.		Size 2-1/2 TOC Surf Hole size 7-7/8" Total Depth 4000'	Cemented with <u>800</u> s feet determined by <u>Circ.</u>
		Injection Interval	
	Ξ 3600' - 3900'	feet to (perforated)	_3900fcet
TD	4000'		
Tubing size		IPC set in a	(Brand and Model)
<u>Other Data</u>			
		·····	
	ield or Pool (if applicable) <u>Arrowhea</u>		
3. Is this a no If no, for	ew well drilled for injection? X Ye: what purpose was the well originally dr	s No illed?	
4. Has the we plug(s) use	eil ever been perforated in any other zon ad) <u>No</u>	ne(s)? List all such perforated intervals and give	plugging detail (sacks of cement or bridg
5. Give the d Eumont, 3	epth in and name of any overlying and 300' top of Langlie Mattix, 5500' top of	for underlying oil or gas zones (pools) in this a of Blinebry, 6250' top of Tubb, 6500' top of Dri	nrea. <u>2400' top of Jalmat, 2600' top c</u>

Submit 3 Capies		of New Mexico	Form C-103
o Appropriate	477	Natural Resources Departme	nt Revision 1-1-89
District Office	OIL CONSERV	ATION DIVISION	
	P.O. 1	Box 2088	· · · · · · · · · · · · · · · · · · ·
DISTRICT I	Santa Fe. N	ew Mexico 87504-2088	ت ورجعه ا
P.O. Box 1980, Hobos, NM 8824	0		
DISTRICT II			API NO. (assigned by OCD on New Wals)
P.O. Drawer Od, Artesia, NM 882	10		30-025-08744
DISTRICT III			5. Indicate Type of Losse
1000 Rio Brazos Rd., Aztec, Nm 8	17410		STATE X FEE
			6. State Oil & Gas Lesse No.
			B-08744
	SUNDRY NOTICES AND REPO	ORTS ON WELLS	We shipped a thing is shipped all the the the terror of the second second second second second second second se
DO NOT USE T	HIS FORM FOR PROPOSALS TO DRI	LL OR TO DEEPEN OR PLUG BACK	7. Losse Name or Unit Agreement Name
	DIFFERENT RESERVOIR. USE "APPLI		OXY STATE "N"
	(FORM C-101) FOR SUCH PROPO	DSALS.)	
1. Type of Well:			
OIL WELL TEST	GAS WELL OTHER PLU	· · · · · ·	
	WELL OTHER T : U	ччед	
2. Name of Operator / CHEVRON U.	S.A. INC		8. Weil No.
3. Address of Operator	.5.A. INC.		2
	ND, TX 79702 ATTN: P.R. I	AATTUENE	9. Pool name or Wildcat
4. Well Location	und, 1X 79702 ATTN: P.R. 1	VIATTHEVVS	ARROWHEAD/GB
Unit Letter K	: 2310 Feet From Ti	ne SOUTH Line and	2310 Feet From The WEST Line
Section 2	Township	22S Range	36E NMPM LEA County
III - 18 UNIUN UNIVERSI STANDARD AND AND AND AND AND AND AND AND AND AN	10. Elevation	on Show whether DF, PKB, RT, GR, etc.	the second static second s
n - Milling street - to have a second			in a strategy to a
11	Check Appropriate Box to indecate	Nature of Notice, Report, or Othe	er Data
NOTICE OF I	NTENTION TO:	SUBSEQUENT F	REPORT OF:
PERFORM REMEDIAL WORK	PLUG AND ABANDON		ALTER CASING
		COMMENCE DRILLING OPNS.	PLUG AND ABAN.
PULL OR ALTER CASING]	CASING TEST AND CMT JOB	
OTHER: NAME CHAN		OTHER:	• •
	<u> </u>		
12. Describe Proposes or Complet	ted OperationalClearly state all partment det	alls, and give pertinent dates, including	

esticated 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.

ï

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 to true and complete TSIGNITURE	o the best of my knowledge and belief. TITLE TECH. ASSISTANT	DATE:	9-16-92
TYPE OR PRINT NAME P.R. MATTHEWS	TELEPHONE NO	p. (915)687-7812	
ORIGINAL SIGNED BY JERRY SEXTON APPROVED BY PISTEIGT I SUPERVISOR		DATE	SEP 1 6 '92

Submit 3 Codies 10 Approvide District Office <u>DISTRICT 1</u> P.O. Box 1980, Hobbs, NM 88240	State of New Mexico Energy, Minerals and Natural Resources Department OIL CONSERVATION DIVISION	Form C-103 Revised 1-1-89
DISTRICT II P.O. Drawer DD. Aneua. NM 88210 DISTRICT III 1000 Rio Brazos Rd. Aztec. NM 87410	P.O. Box 2088 Santa Fe, New Mexico 3750 2098 CEE AND DEFENSION	WELL API NO. 30-025-08744 5. Indicate Type of Lease STATE ^{TA} FEE 6. State Oil & Gas Lease No. N/a
DIFFERENT RESER	CES AND REPORTS ON WEBLS POSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A VOR. USE "APPLICATION FOR PERMIX"	7. Lesse Name or Unit Agreement Name ARROWHEAD GRAYBURG UNIT
3. Address of Operator F. O. BOX 1150 MIDLANI 4. Well Location Unit Letter 2 Section 2	Propriate Box to Indicate Nature of Notice, Reg NTION TO: SUBS PLUG AND ABANDON REMEDIAL WORK CHANGE PLANS COMMENCE DRILLING O CASING TEST AND CEMI	DOT, or Other Data EQUENT REPORT OF: ALTERING CASING
FU TO 2761, WOC. FUMP 1 3000. WOC TIH TAG UP FROM 3004-2757. PU TO 2623-2150. FOOH TIH W CICR AND FUMP100 SX. O PLUG FROM 1560-1313. F	OTHER: Clearly state ad periversi details, and give periversi dates, including BBL OF BW. FUMP 50 SX. OF CMT. FROM 34 00 BBLS OF 9.5 PPG BW. TIH ATG AT 3244 AT 3004. FUMP 100 BBLS OF 9.5 PPG BW. 2332, WOC TIH TAG UP AT 2623. SPOT 12 ITH CICR AND SET AT 1801. FUMP 85 BBLS F CMT.1560-1801 SET A CEMENT FLUG OF 5 ERF AT 313 AND FUMP 80 SX. OF CEMENT F CEMENT . INSTALLED P & A MARKER. RDM	+75-3700. 9. PUMP 25 SX. OF CMT AT 3249 PUMP 25 SX. OF CMT. 2 BBLS OF P & A MUD. 3 OF BW. STING INTO 50 SX. SPOT A 25 SX.

I hereby construction that the set	Mathew TECHNICAL AS		
TYPE OR PRINT NAME	P.R. MATTHEWS	DATE	
(This space for State Use)		телетноме но. 68707812	:
	R. C. Ladle The OIL GAS	DISPECTOR MAR 0 5 '92	

WELL DATA SHEET LEASE AGU WELL NO. 171-WICFIELD Harowhend DATE 3-LOCATION 23/6 FEET FROM _____ LINE AND 23/0 FEET FROM _____ LINE SECTION 2 TOWNSHIP 22-5 RANGE 36-E COUNTY LEA STATE NM P/A Well Date Completed 4-40 GE: Initial Formation RAY BURA KDB to GE FROM: TOP DF to GE Initial Production BOPD BWPD MCFPD GOR Completion Data: x وہ 8% OD - 1bs. Surf. Pipe set & 243 w/ 80 sx cmt. Circ? ent (Circ. Cmt dw 51/2 + Out BSA Surface Pipe 80 sxs CMt. Circ. Left S1/2 CS9 Fuil of Cmt. 3131 r) A. P/A mud nint Subsequent Workover or Reconditioning: 1313' Cm^{\dagger}] 25 sxs Cl-c Nent cmt Plug 1560' 50 5×1 C1-C 4/2% CAc/2 Cmi Plug →1801' 5½ CICR cmt Soz 100 SKS C/-C NEAT Cmt REC 2150' - Dog log in CS9. AP mult P/A mud 2623 Cm+. 25 5x3 CI-C W/2 1/2 cnc/2 Plug + 3004' Crit. as sks. Cl.C Neut Cmt Plug + 3249' 505rs CI.C W/,5%. CF18 A. 25 % CAclz+, 4% TF4 Present Prod. cm^t BOPD 51/2 OD Plug BWPD MCFPD GOR Gr F Csg set 0 3700 ' W/ 300 sx Cmt. Circ? Date Remarks or Additional Data: TOC @ ____ by TS OH fill from 3700 to 3810 could not 3810 Clean out

Cubma 8 Genes		or New Mexico		Form C-103		
to Appropriate	Energy, Minerais and	i Natural Resources Depar	tment	Reviewed 1-1-89		
Clarnet Office	OIL CONSERV	ATION DIVISION				
		lox 2088				
		w Mexico 87504-2088				
CISTRICT P. C. Ben 1980, Hobes, NM 88249		W MCXICO 01304 2000				
DISTRICT II			API NO. (assigned by OCD on I	New Welles		
P.O. Drawer Od. Artema. NM 98210	0		30-025-10098	30-025-10098		
DISTRICT III	-		5. Indicate Type of Lease			
1900 Rie Brazes Rd., Aztes, Nm 67	410		STATE	FEE X		
			8. State Oil & Gas Lasse No.			
			N/A			
<u></u>	INDRY NOTICES AND REP	OBTS ON WELLS	17. 1. 3. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	and the second state		
	S FORM FOR PROPOSALS TO D	B 7. Lasse Nome or Unit Agroom	nent Name			
	ARROWHEAD GRAY					
••	FERENT RESERVOIR. USE *APP (FORM C-101) FOR SUCH PROF					
. Type of Well:			-			
01L	GAS					
WELL	WELL OTHER INJEC	CTOR				
2. Nerne er Operater			S. Well No.			
CHEVRON U.S	3.A. INC.		201			
3. Address of Operator		8. Pool name or Wildot				
P.O. BOX 1150 MIDLA	ND, TX 79702 ATTN:	P.R. MATTHEWS	ARROWHEAD/GB			
4 Well Location	: 1650 Feet From T		na 1650 Feet From Tr	WEST Une		
	7 Tewnship	22S Rense		LEA Courty		
Section Company and a section of the	•	enishew written DF, RKB, RT, GR		2010 - E		
		3445 GE	A Contraction of the Contraction	r Herrier Verster (Constants) Richtererer		
11 (Check Appropriate Box to indeca	te Nature of Notice, Report, c	or Other Date			
NOTICE OF IN	TENTION TO:	SUBSEQUEN	T REPORT OF:	_		
		REMEDIAL WORK	ALTER CASI	NG 🗌 DN		
	CHANGE PLANS	COMMENCE DRILLING OPNS.	PLUG AND A	JAN. X		
PULL OR ALTER CASING	فسينا	CASING TEST AND CMT JOB		_		
OTHER:		OTHER:				

Letter succession and services and

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12 Describe Processes or Completes Operational Clearly state all pertinent details, and give pertinent dates, including assessed date of starting any proposed work! SEE RULE 1103.

지정법 : 성 수중요지수원지요된

MIRU, POOH WITH PRODUCTION EQUIPMENT.

TH WITH DOWN HOLE VIDEO CAMERA AND DISCOVER CASING PARTED AT 326-329. TH 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.

' nereev ceruit	P.K.	Matta an		ECH. ASSIS		DATE:	03-23-92	
TYPE OR PRIN		P.R. MATTHEWS			_	TELEPHONE NO	(915)687-7812	
4 000 OVED 81	. 21	hulle	mie OIL	& GAS	INSPE	CTOR	APR 03'92	
CONDITIONS	OF APPROVAL							

Submit to Appropriate District Office State Lease - 4 copies Fee Lease - 3 copies

DISTRICT III

State of New Mexico

Ene. , Minerals and Natural Resources partment

Form C-1(Revised 1-

DISTRICT I P.O. Box 1980, Hobbs, NM 88240 OIL CONSERVATION DIVISION

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

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

1000 Rio Brazos Rd., Astec, NM 57410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer houndaries of the section

Anerator				outer boundaries of th	e section	I	I.T. Mattern #2
Operator	CHEVRON U	I.S.A. INC.	Lease	ARROWHEAD GRAY	YBURG U	NIT	Well No. 201
Unit Letter	Section	Township	Range			County	
K	7	22 SOUTH	1	37 EAST	NMPM		LEA
	ocation of Well:					<u> </u>	
		OUTH Hane and	_ -1-65	0 1563	feet from	the WES	ST line
round Level Lie	Preducing I	Formatuca	Fuel				Dedicate: Acresge:
3447.0'							Ac
1. Outline the	acreage dedicated t	to the subject well by co	lored pencil or h	churs marks on the	plat below.		
		icated to the well, outlin				us to worki	DE interest and reveity
3. If more than		ETERL ownership in dedic					
Yes	□ No	If answer is "yes"					
f answer is "n	o' list of owners a	and tract descriptions v			·····		
to allowable w	vill be assigned t	to the weil unit all in ard unit, eliminating a	terests have be	m consolidated (by	communi	ization. w	Diffration formed and
Unerwise) or u	intil a non-stand	ard unit, eliminating s	uch interest, has	been approved by	the Division	1	meradon, forced-poc
				······································		OPERAT	OR CERTIFICATIO
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	i						by certify the the inferm
	1						rin is true and complete . rolodge and ballof.
	1						
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		A. 14			IL		
	/	-700 EN	Mattern#	2 87	P	rinted Nam	
	+			AGU #201			· · · · · · · · · · · · · · · · · · ·
		RECE AUG MIG MIG ANDIANO	P & A	-	P	osition	
	i \	~40 5	15 63/W 1650/S				
	1		1030/3			ompany	
	5 7					ite	
	ļ						
	[SURVEYO	R CERTIFICATION
	—— <u> </u>						
	1			1		iereby certify	, that the well location sh
	1			1		this plat to	28 plotted from field note made by me or under
	1			1	-	pervises, an	d that the same is true
	1			1		rest to th	best of my inevolodge
	I			1		ief.	
165	o <u> </u>			1	De	te Surveye	d
	<u> </u>			1		JUI	Y 30, 1992
		+				mature &	Seal of
	.					ofessional	SUFVEYOR
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	!					FOR IN	SA 320, HARE
						ficate Ne	JOHN W WEST
		<u> </u>	l		_17	-	RONALD LEIDSON, 3
					<u> </u>	·	
330 660	1000 1860	1980 2010 2840	2000 1500	1000 500			TANK GARYLL JONES. 7

Submit 3 Copies to Appropriate	Energy, Mine	State of New Mexi rais and Natural Resou				Form C-103 Revisied 1-1-89
District Office	OIL CON	SERVATION D	IVISION			
		P.O. Box 2088				
DISTRICT I	Sant	a Fe, New Mexico	87504-2088			
P.O. Box 1980, Hobbs, NM 88240						
DISTRICT II			CE	API NO. (assigned	by OCD on New Well	TIME V
P.O. Drawer Dd, Artesia, NM 88210		K.	EIV	E. Indiana Tara	30-625	-700-5
DISTRICT III 1000 Rio Brazos Rd., Aztec, Nm 87410		(Allo	91000	5. Indicate Type	STATE	FEE
		(- · · · · · · · · · · · · · · · · · ·	91992	6. State Oil & Gas Lasse No.		
		MID	····	N/A		:
	JNDRY NOTICES AND	`	2			
IDO 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:						
	GAS	DI.				
	WELL OTHER	Plucing of				
2. Name of Operator CHEVRON U.S.A	A. INC.	~ "		8. Well No.	2	
					Wildcet	
P.O. BOX 1150 MIDLAND,	TX 79702 ATTN: P.F	R. MATTHEWS		ARROWHEA	D/GB	
4. Well Location Unit Letter K	. 1563 .	Feet From The	WEST Line and	1650	Feet From The	
Section 7		Township 22S	Range	37E		
		10. Elevation(Show whether				
11	Check Appropriate Box to k	ndecate Nature of Notice	Beport or Other Data		nice William Minister	9000: Himitadahahahahahahahahahahahahahahahahahaha
NOTICE OF INTE			SUBSEQUENT RE	PORT OF		
				ייי פווי פווי ר	ALTER CASING	
	CHANGE PLANS		RILLING OPNS.		PLUG AND ABAN.	
PULL OR ALTER CASING	-	CASING TEST	AND CMT JOB	7		
OTHER: NAME CHAN	GE []	X OTHER:	L			
Show CARPECT	+ Surface la	esti-				<u>_</u>
12. Describe Proposed or Completed Op	erations(Clearly state all pertinent	details, and give pertinent dat	es, including	······	•	

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esticated 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.

	R. Master	TITLE	TECH. ASSISTANT	DATE:	8-13-92
	P.R. MATTHEW	S		TELEPHONE NO.	(915)687-7812
•••••	SIGNED BY JERRY SEX	TON			BUC 1 7 '02
BIS	RIGT I SUPERVISOR	TITLE		DATE	AUG 17'92

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





CURRENT



205

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		
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE	
Proposed New	v Injection Well			·····	
<u>SC</u>	CHEMATICS		<u>TUBULAR DATA</u>		
_		Surface Casing	2		
	A 1236'	Size <u>9%</u> * TOC <u>Surf</u> Hole size <u>Unl</u>		Cemented with <u>550</u> sx feet determined by <u>Circ.</u>	
		Long String			
		Size <u>51/4</u> " TOC <u>2.930</u> '		Cemented with <u>2.930</u> sx fect determined by <u>CBL.</u>	
		Hole size <u>8%</u> Total Depth			
DV tool @ 31	72e' Performtions 3710-390e'	Injection Interv	ai		
Cmt Plug 4060-41 Cmt Plug 6068-51 Cmt Plug 6040-62 Cmt Plug 6040-62 Cmt Plug 6040-63	1477 E PåA mud between 2677 E Cont pluge	<u>3,710</u> (perforated)	feet to3.9	1 <u>06</u> feet	
Drinkard Ports 6827-66					
Tubing size	2-3/8" lined with	Cement (Materiai)	set in aG	uberson Unit VI Plastic Coated (Brand and Model)	
	packer at 3		e any other casing-tubing	· · · · ·	
Other Data					
1. Name of	the injection formation <u>Grayburg</u>				
2. Name of	Field or Pool (if applicable)	vhcad			
3. Is this a n If no, for	what purpose was the well originally	Yes <u>X</u> No y drilled?			
plug(s) us	rell ever been perforated in any other red) <u>Yes. Drinkard. 6,527'-6,652'.</u> 050'-4,150' with mud between plugs	Plugged with CIBP at 6,490' wi	d intervals and give plugg th 35 SX CMT on top.	CMT Plugs at 6,040'-6,287'. 5,068'-	
5 Give the	denth in and name of any overlying				

CURRENT

WELL DATA SHEET

WELL D.	ATA SHEET
LEASE Arco State 157-D WELL NO. 10	FIELD Drinkard DATE 11/28,
LOCATION 660 FEET FROM S LIN	E AND 1650 FEET FROM E LINE
SECTION 12 TOWNSHIP 22-S RANGE	36-E COUNTY Lea STATE NM
KDB to GE 13 DF to GE	Date Completed 9/24/79 Initial Formation Drinkard FROM: 6510 TO: 6656 Initial Production 168 BOPD 60 3W 193 MCPPD 1149 G Completion Data:
<u>9 5/8</u> " OD <u>36</u> lbs. Surf. Pipe set e <u>1220</u> w/ <u>600</u> sx Cmt. Circ? Yes	Perf Drinkard 6510 - 6656', Acidiz & frac.
-	Subsequent Workover or Reconditionin
DV tool @ 3773'	
DA 5001 6 3112	
~	
Drinkard Perfs	
6510'-6656'	
<u>5 1/2</u> " OD Gr K-55 15.5# Csg set @	Present ProdBOPD BW MCFPD C Date
6800 w/ 1475 sx Cmt. Circ? No TOC % 1050 by TS	Remarks or Additional Data: 5 1/2" casing in 8 3/4" hole

PBD <u>6721</u>' TD <u>6800</u>' 210

-

Chevron U.S.A. Inc. Arrowhead Grayburg Unit OPERATOR LEASE 210 WIC 660' FSL. 1.650' FWL Section 12 T22S - R36E Unit O WELL NO. **FOOTAGE LOCATION** SECTION TOWNSHIP RANGE Proposed New Injection Well **SCHEMATICS** TUBULAR DATA Surface Casing 9%* Size Cemented with 600 SX 1220 TOC Surf feet determined by Circ. Hole size Unknown Long String Size 51/2" Cemented with 1,475 SX TOC 1.050' feet determined by TS Hole size 8%" Total Depth 6,800' Perfore 3884-36 DV tool @ 3773* Injection Interval 3,664 feet to _____ 3,900 feet Citit Plug 4052-4150" (perforated) Cast Place \$108-5582 ng 6182-6431' 6470" W/ 35 ax cmt d Perfs 6510'-6656 PETD @ 4052 Tubing size 2-3/8" lined with Fiberglass _____ set in a _____ Guberson Unit VI Plastic Coated (Material) (Brand and Model) packer at ______ feet (or describe any other casing-tubing seal). Other Data

INJECTION WELL DATA SHEET

- 1. Name of the injection formation _ Gravburg
- 2. Name of Field or Pool (if applicable) _____ Arrowhead
- 3. Is this a new well drilled for injection? Yea 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, 6,510'-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.
- Eumont, 3,300' top of Langlie Mattix, 5,500 top of Blinebry, 6,250' top of Tubb, 6,500' top of Drinkard.