

NEW MEXICO RECORD RESEARCH

(505) 392-3319 P.O. BOX 1437
HOBBS, N.M. 88241-1437

April 2, 1989

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P.O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

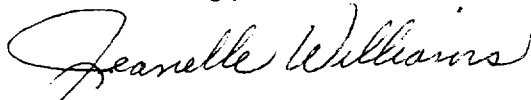
Oil Conservation Division
District 1
P.O. Box 1980
Hobbs, New Mexico 88240

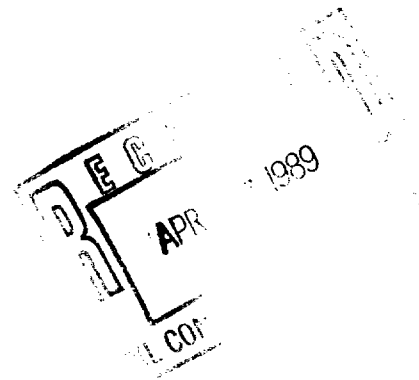
Gentlemen:

Attached is Form C-108 "Application for Authorization to Inject" with all required attachments. Armstrong Energy Corporation is requesting permission to convert West Pearl Queen Unit #169 to an injection well.

If you have any questions, or need additional information, please call me at (505) 392-3319.

Sincerely,


Jeanelle Williams



APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no
- II. Operator: Armstrong Energy Corporation
Address: P.O. Box 1973, Roswell, NM 88201
Contact party: Jeanelle Williams Phone: (505) 392-3319
- 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 R-2729.
- 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: Jeanelle Williams Title Agent
Signature: Jeanelle Williams Date: 3/28/89
- * 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.

INJECTION WELL DATA SHEET

Armstrong Energy Corporation West Pearl Queen Unit
 OPERATOR LEASE
 #169 1305' FSL & 2565' FWL 28 19-S 35-E
 WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE
Lea County, New Mexico

Schematic

8-5/8" @ 1800'
cement circulated
600 sx

DV tool @ 3192'

5 1/2" @ 5000' 1800 sx
cement circulated

Tabular DataSurface Casing

Size 8-5/8" " Cemented with 600 sx.

TOC surface feet determined by circulation

Hole size 12 1/4"

Intermediate Casing

Size _____ " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 5 1/2" " Cemented with 1800 sx.

TOC _____ feet determined by _____

Hole size 7-7/8"

Total depth 5000'

Injection interval

4721 feet to 4926 feet Perforated
(perforated or open-hole, indicate which)

Tubing size 2-7/8" lined with 2-1/6 IJ plastic coated set in a
(material)

5 1/2" Baker AD-1 Tension packer at 4650' feet
(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Queen

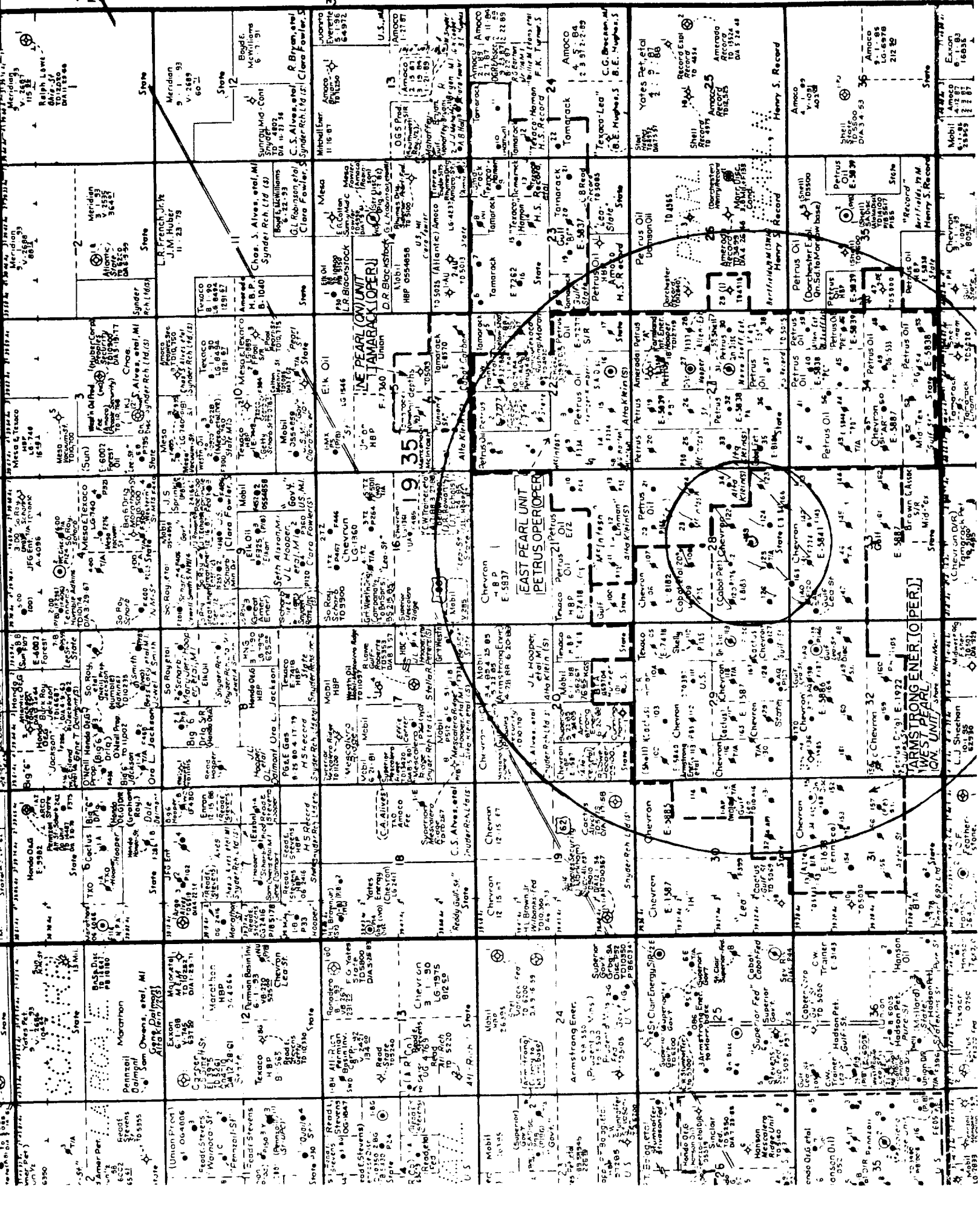
2. Name of Field or Pool (if applicable) Pearl Queen West

3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? As an oil producer

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) No

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. No known overlying zones. San Andres 5630' to 5920'.



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.A.	
LAND OFFICE	
TRANSPORTER	
OIL	
GAS	
OPERATOR	
PRODUCTION OFFICE	

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-104
Revised 10-01-78
Format 06-01-83
Page 1

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Operator
Armstrong Energy Corporation

Address
P.O. Box 1973 Roswell, NM 88201

Reason(s) for filing (Check proper box)		Other (Please explain)
<input type="checkbox"/> New Well	Change in Transporter of:	Name Change effective 5/1/87
<input type="checkbox"/> Recompletion	<input type="checkbox"/> Oil <input type="checkbox"/> Dry Gas	
<input checked="" type="checkbox"/> Change in Ownership	<input type="checkbox"/> Casinghead Gas <input type="checkbox"/> Condensate	

If change of ownership give name and address of previous owner Chevron U.S.A. Inc., P.O. Box 670, Hobbs, NM 88240

I. DESCRIPTION OF WELL AND LEASE

Lease Name <u>West Pearl Queen Unit</u>	Well No. <u>1169</u>	Pool Name, including Formation <u>Pearl (Queen)</u>	Kind of Lease State, Federal or Fee <u>State</u>	Lease No. <u>E-8183</u> <u>E-8184</u>
Location Unit Letter <u>N</u> : <u>1305</u> Feet From The <u>South</u> Line and <u>2565</u> Feet From The <u>West</u> Line of Section <u>28</u> Township <u>19S</u> Range <u>35E</u> , NMPM, <u>Lea</u> County				

II. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

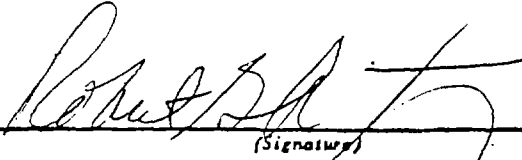
Name of Authorized Transporter of Oil <input checked="" type="checkbox"/> or Condensate <input type="checkbox"/> <u>Shell Pipeline Corporation</u>	Address (Give address to which approved copy of this form is to be sent) <u>P.O. Box 1910, Midland, Texas 79702</u>
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
If well produces oil or liquids, give location of tanks.	Unit Sec. Twp. Rge. Is gas actually connected? When
	<u>B 32 19 35</u>

If this production is commingled with that from any other lease or pool, give commingling order number: _____

NOTE: Complete Parts IV and V on reverse side if necessary.

I. CERTIFICATE OF COMPLIANCE

hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given is true and complete to the best of my knowledge and belief.


(Signature)
President
(Title)
May 1, 1987
(Date)

OIL CONSERVATION DIVISION

APPROVED MAY 11 1987, 19____
BY ORIGINAL SIGNED BY JERRY SEXTON
TITLE DISTRICT I SUPERVISOR

This form is to be filed in compliance with RULE 1104.
If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.
All sections of this form must be filled out completely for allowable on new and recompleted wells.
Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.
Separate Forms C-104 must be filled for each pool in multiply completed wells.

MEXICO
LANDS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-79

RECEIVED	
DISTRIBUTION	
DATE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

5a. Indicate Type of Lease	
State <input checked="" type="checkbox"/>	Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.	
E-8183 & E-8184	

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

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		7. Unit Agreement Name West Pearl Queen Unit
2. Name of Operator Gulf Oil Corporation		8. Farm or Lease Name
3. Address of Operator P. O. Box 670, Hobbs, NM 88240		9. Well No. 169
4. Location of Well UNIT LETTER <u>N</u> , <u>1305</u> FEET FROM THE <u>South</u> LINE AND <u>2565</u> FEET FROM THE <u>West</u> LINE, SECTION <u>28</u> TOWNSHIP <u>19S</u> RANGE <u>35E</u> NMPM.		10. Field and Pool, or Wildcat Pearl Queen
15. Elevation (Show whether DF, RT, GR, etc.) 3707' GL		12. County Lea

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 type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	OTHER <u>Add Perfs In Queen</u> <input checked="" type="checkbox"/>

17. 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.

POH with production equipment. Perf 4846-50' with (2) ½" JHPF. Break down perfs with 8.6# GKF at 400# at 1.5 BPM. Spot 1000 gals 15% NE double inhibited acid. ISIP 1900#, AIR 3 BPM. Swab and test. GIH with tubing, MA, perf nipple, SN; tubing at 4958'. Ran pump and rods, hung on. Complete after adding 1 zone of perforation 9-16-82.

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

SIGNED <u>Tamara A. Luwail</u>	TITLE <u>Area Engineer</u>	DATE <u>9-30-82</u>
APPROVED BY <u>Ellen W. Lee</u>	TITLE <u>OIL & GAS INSPECTOR</u>	DATE <u>OCT 5 1982</u>
CONDITIONS OF APPROVAL, IF ANY:		

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG6. Indicate Type of Lease
State ☒ Fee ☐

7. State Oil & Gas Lease No.

E-8183 & 8184

7. Unit Agreement Name

West Pearl Queen Unit

8. Farm or Lease Name

9. Well No.

169

10. Field and Pool, or Wildcat

Pearl Queen

12. County

Lea

19. Elev. Casinghead

23. Intervals Drilled By

0 to 5000

25. Was Directional Survey Made

No

27. Was Well Cored

No

CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24#	1800'	12 1/4"	600 sacks-circulated	
5 1/2"	15.50#	5000' *	7 7/8"	1800 sacks-circulated	
* DV tool at 3192'					

LINER RECORD					TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2 7/8"	4959'	

1. Perforation Record (Interval, size and number)				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
Perforated 5 1/2" casing with 2--.45" JHPF at 4721-27, 4910-13 and 4922-26.							
				DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED		
				4721-27	1000 gallons 15% NEA acid and frac with 15,000 gallons gel water containing 1/2 to 2" SPG.		
				4910-13, 4922-26	1000 gallons 15% NEA acid and*		

* frac with 18,000 PRODUCTION gallons gel water containing 1/2 to 2" SPG							
Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)	
3-27-77		Pump				Producing	
Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
4-24-77	24	2"		99	--	130	--
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)	
--	--		99	--	130	35.1	

4. Disposition of Gas (Sold, used for fuel, vented, etc.)						Test Witnessed By	
Vented--Waiting on flow line connection						R. M. Magee	

5. List of Attachments
6. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED

D. F. Berlin

TITLE

Area Engineer

DATE

4-25-77

INSTRUCTIONS

to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled well. It shall be accompanied by one copy of all electrical and radio-activity run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on oil land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

Northwestern New Mexico

T. Anhy	1740	T. Canyon	T. Ojo Alamo	T. Penn. "B"
T. Salt	1866	T. Strawn	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	3220	T. Atoka	T. Pictured Cliffs	T. Penn. "D"
T. Yates	3484	T. Miss	T. Cliff House	T. Leadville
T. 7 Rivers	4010	T. Devonian	T. Menefee	T. Madison
T. Queen	4719	T. Silurian	T. Point Lookout	T. Elbert
T. Grayburg		T. Montoya	T. Mancos	T. McCracken
T. San Andres		T. Simpson	T. Gallup	T. Ignacio Qtzite
T. Glorieta		T. McKee	Base Greenhorn	T. Granite
T. Paddock		T. Ellenburger	T. Dakota	T.
T. Blinberry		T. Gr. Wash	T. Morrison	T.
T. Tubb		T. Granite	T. Todillo	T.
T. Drinkard		T. Delaware Sand	T. Entrada	T.
T. Abo		T. Bone Springs	T. Wingate	T.
T. Wolfcamp		T.	T. Chinle	T.
T. Penn.		T.	T. Permian	T.
T. Cisco (Bough C)		T.	T. Penn. "A"	T.

OIL OR GAS SANDS OR ZONES

No. 1, from	4910	to	4926	No. 4, from		to	
No. 2, from		to		No. 5, from		to	
No. 3, from		to		No. 6, from		to	

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from		to		feet.	
No. 2, from		to		feet.	
No. 3, from		to		feet.	
No. 4, from		to		feet.	

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	1740		Red Beds				
1740	3484		Salt & Anhydrite				
3484	5000		Dolomite, Sandstone and Shale.				

RECEIVED

APR 21 1954

COMMISSIONER OF MINES
STATE OF NEW MEXICO

DATA ON THE PROPOSED OPERATION

Proposed Injection Volume: Average - 400 Bbl/Day
Maximum - 500 Bbl/Day

Proposed Injection Pressure: Average 1700# surface pressure.
Maximum 2150# surface pressure.

Injection system is closed.

Sources of injection fluid are produced saltwater and freshwater. The appropriate chemical analysis is included.

Injection is into a zone productive of oil and/or gas.

No stimulation program is proposed on the well to be converted.

GEOLOGICAL DATA ON THE INJECTION ZONE

Lithologic Detail: Dolomite, sandstone and shale.

Geological Name: Queen

Thickness: 3484' to 5000'.

Average Depth:

Underground source of drinking water overlying the injection zoned in the proposed area is the Ogallala at an average depth of 50'.

Armstrong
ENERGY CORPORATION

1000 SUNWEST CENTRE

P. O. Box 1973
ROSWELL, NEW MEXICO 88201
505/623-8726

February 7, 1989

Ref: Application for conversion
of the WPQU #169 from producing
oil well to water injection well,
NMOCD Form C-108 Section XII.

I hereby state that I have evaluated information derived from logs, well files and other available geologic and engineering data, concerning this wellbore and other wellbores in the area of interest. I have found no evidence of open faults or any other hydrologic connection between the water injection zones in the Queen formation and any underground source of drinking water.

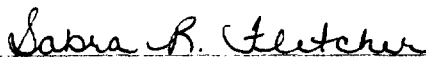
ARMSTRONG ENERGY CORPORATION



Thomas K. Scroggin
Production Supervisor

STATE OF NEW MEXICO)
) ss.
COUNTY OF EDDY)

The foregoing instrument was acknowledged before me this
7th day of February, 1989, by Thomas K.
Scroggin.



Notary Public

My Commission Expires:

Oct 31, 1992

WATER ANALYSIS REPORT
furnished by TRETOLITE CHEMICALS

COMPANY: ARMSTRONG ENERGY
LEASE: WEST PEARL QUEEN UNIT
SAMPLE POINT: INJECTION PLANT
SAMPLE DATE: 01-20-89
SAMPLE TEMP.:

pH: 6.4
H₂S: 60
SPECIFIC GRAVITY: 1.105

TITRATED AND CALCULATED IONS

	MILLIGRAMS PER LITER	MILLIEQUIVALENTS PER LITER
HCO ₃	244.00	4.00
Cl	106984.00	3013.63
SO ₄	1800.00	37.50
Ca	10480.00	524.00
Mg	4874.34	399.54
Na	49026.75	2131.60

IONIC STRENGTH = 3.54
TOTAL HARDNESS = 46259.0 mg/ltr.
TOTAL DISSOLVED SOLIDS = 173294.6 mg/ltr.
TOTAL IRON (Fe) = 1.0 ppm

PROBABLE MINERAL COMPOSITION AND ION PAIRING

	MILLIEQUIVALENTS PER LITER	MILLIGRAMS PER LITER
Ca(HCO ₃) ₂	4.00	324.16
CaSO ₄	37.50	2552.63
CaCl ₂	482.50	26778.75
Mg(HCO ₃) ₂	0.00	0.00
MgSO ₄	0.00	0.00
MgCl ₂	399.54	19025.90
NaHCO ₃	0.00	0.00
Na ₂ SO ₄	0.00	0.00
NaCl	2131.60	124613.20

CALCULATED SCALING TENDENCIES

SCALING INDEX

CaCO₃ @ 80 DEG F. = 0.6
CaCO₃ @ 120 DEG F. = 1.1

SATURATION POINT

CaSO₄ @ 70 DEG F. = 1592.4 MG/LTR.
CaSO₄ @ 110 DEG F. = 1591.7 MG/LTR.

(THIS SAMPLE CONTAINED 2552.6 MG/LTR CaSO₄)

TABULATION OF DATA ON WELLS
WITHIN AREA OF REVIEW

Armstrong Energy Corporation

West Pearl Queen Unit-Injection well #108

Location: Sec. 28, T-19S, R-35E
Casing: 8-5/8" to 326' w/300sx.
4½" to 4961' w/350 sx. cement
Perforations: 4884-4895', 4815-4845', 4700-4710' (Pearl Queen)
TD: 4975'

West Pearl Queen Unit-Well #121

Location: Sec. 28, T-19S, R-35E
Casing: 8-5/8" to 306' w/300sx. cement
5½" to 4908' w/200 sx. cement
Perforation: 4718-4726, Open hole 4908-4924
TD: 4921'

West Pearl Queen Unit-Injection well #122

Location: Sec. 28, T-19S, R-35E
Casing: 8-5/8" to 314' w/300 sx. cement
5½" to 4931' w/200 sx. cement
Perforations: 4826-4836', 4886-4888', 4897-4899',
4906-4908' (Pearl Queen)
TD: 4945'

West Pearl Queen Unit-Injection well #120

Location: Sec. 28, T-19S, R-35E
Casing: 8-5/8" to 316' w/300 sx. cement
5½" to 4904' w/350 sx. cement
Perforations: Open hole 4915-4946' (Pearl Queen)
TD: 4946'

West Pearl Queen Unit-Well #109

Location: Sec. 28, T-19S, R-35E
Casing: 8-5/8" to 326' w/300 sx. cement
4½" to 5002' w/350 sx. cement
Perforations: 4734-4754' (Pearl Queen)
TD: 5020'

West Pearl Queen Unit-Well #124

Location: Sec. 28, T-19S, R-35E
Casing: 8-5/8" to 301' w/300 sx. cement
5½" to 4911' w/200 sx. cement
Perforations: 4911-4939', 4853-4863', 4854-4864',
4730-4736' Open hole 4911-4939' (Pearl Queen)
TD: 4939'

West Pearl Queen Unit-Injection well #125

Location: Sec. 28, T-19S, R-35E
Casing: 8-5/8" to 302' w/300 sx. cement
5 1/2" to 4919' w/200 sx. cement
Perforations: Open hole 4919-4949'
TD: 4949' Well is TA'd.

West Pearl Queen Unit-Well #126

Location: Sec. 28, T-19S, R-35E
Casing: 8-5/8" to 326' w/300 sx. cement
5 1/2" to 4930' w/300 sx. cement
Perforations: 4728-4738', 4865-4876', 4864-4875'
Open hole 4930-4957 (Pearl Queen)
TD: 4957'

West Pearl Queen Unit-Injection well #140

Location: Sec. 33, T-19S, R-35E
Casing: 8-5/8" to 333' w/300 sx. cement
4 1/2" to 4956' w/1800 sx. cement
Perforations: 4773-4785', 4920-4926' (Pearl Queen)
TD: 5010' PBTD: 4954'

West Pearl Queen Unit-Injection well #142

Location: Sec. 33, T-19S, R-35E
Casing: 8-5/8" to 314' w/300 sx. cement
4 1/2" to 4921' w/1850 sx. cement
Perforations: 4737-4741', 4881-4885' Open hole 4933-
4981' (Pearl Queen)
TD: 4981' PBTD: 4900'

West Pearl Queen Unit-Well #143

Location: Sec. 33, T-19S, R-35E
Casing: 8-5/8" to 291' w/300 sx. cement
4 1/2" to 4894' w/2800 sx. cement
Perforations: 4735-4870' Open hole 4905-4960'
TD: 4960'

Petrus Oil Company, L.P.

East Pearl Queen Unit-Well #34

Location: Sec. 28, T-19S, R-35E
Casing: 8-5/8" to 100' w/100 sx. cement
5 1/2" to 5057' w/200 sx. cement
Perforations: 4711-4716', 4830-4833', 4884-4888',
4896-4899', 4917-4919'
TD: 5075' PBTD: 5033'

East Pearl Queen Unit-Injection well #24

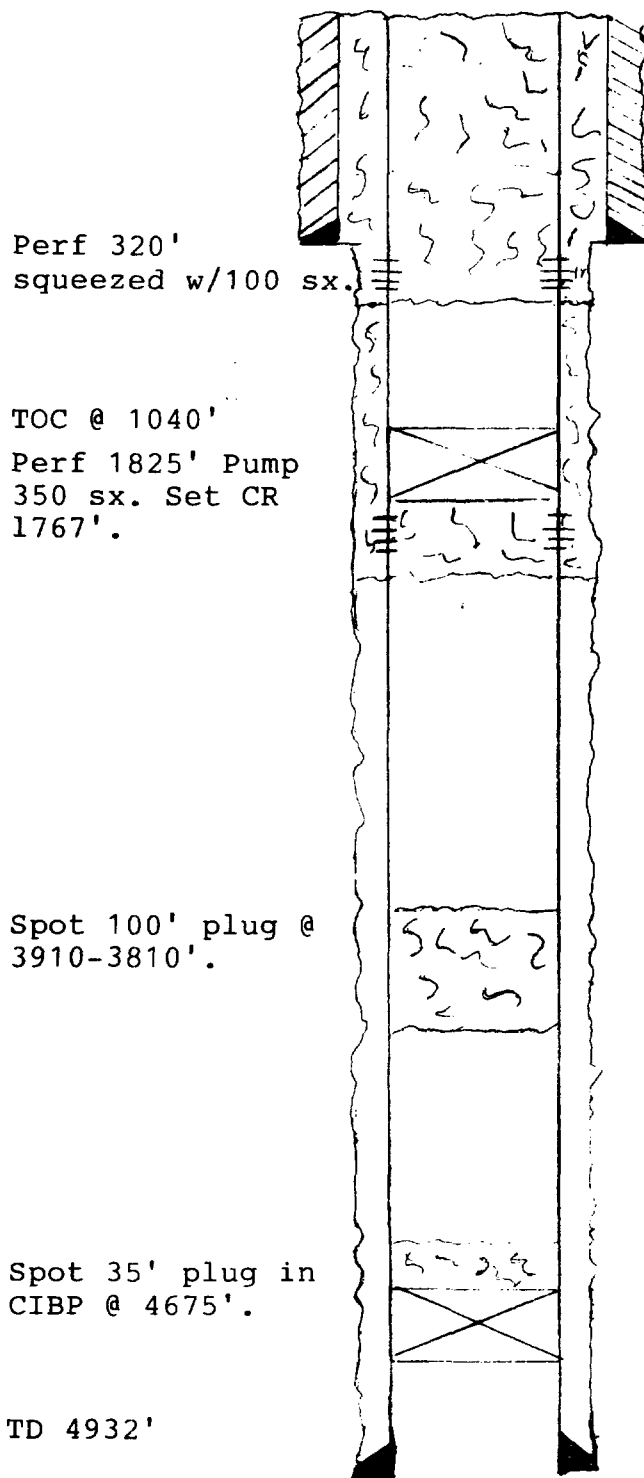
Location: Sec. 28, T-19S, R-35E
Casing: 8-5/8" to 159' w/150 sx. cement
5 1/2" to 4947' w/200 sx. cement
Perforations: 4691-4703', 4804-4806', 4808-4810'
4856-4859', 4868-4870', 4887-4889'
(Pearl Queen)
TD: 4960' Well is TA'd.

East Pearl Queen Unit-Well #23

Location: Sec. 28, T-19S, R-35E
Casing: 9-5/7 to 132' w/150 sx. cement
7-7/8", 7-5/8" & 5 1/2" to 4955' w/200 sx. cement
Perforations: 4698-4704', 4810-4816', 4878-4881',
4887-4889', 4896-4899' (Pearl Queen)
TD: 4955' PBTD: 4929'

Spud: 1/12/59
Plugged: 2/24/81

Casing: 8-5/8" to 378' w/250 sx.
5 1/2" to 5019' w/400 sx.
TOC 2940'
Tubing: 2-7/7" to 4971'



Gulf Oil Corporation
West Pearl Queen Unit #166
Lea County, NM
105' FSL & 1325' FEL
Sec. 28, T-19S, R-35E

Casing: 8-5/8" to 378' w/250 sx.
5 1/2" to 5019' w/400 sx.
TOC 2940'
Tubing: 2-7/8" to 4971

Spud: 10/10/69
Plugged: 2/23/81

Perf 381' w/125
sx circ to
surface.

TOC 1809'
Set CR @ 1822'

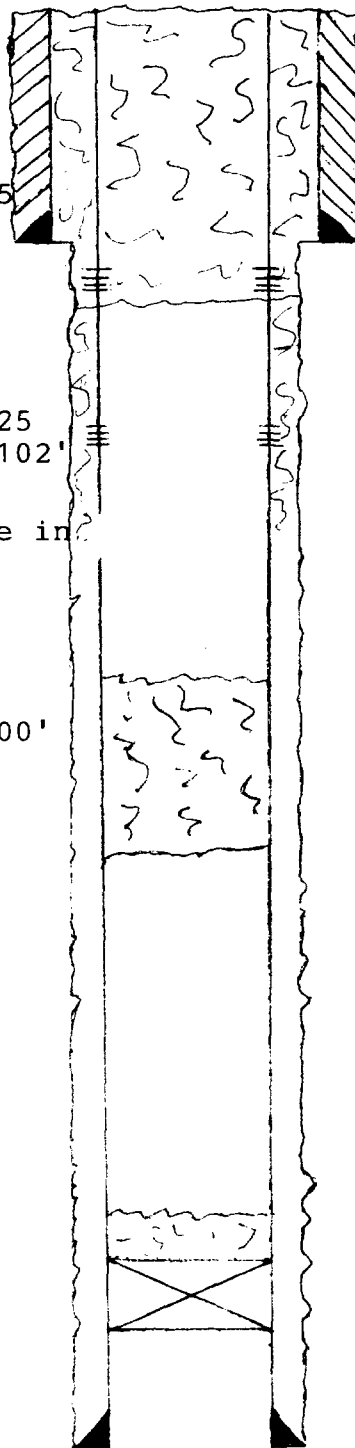
Perf 1875' w/525
sx. Set CR @ 2102'

35 sx into hole in
csg. @ 2171'

100' plug @ 2900'
3000'

35' cement
CIBP @ 4615'

PBTD: 4987'
TD: 5020'



Gulf Oil Corporation
West Pearl Queen Unit #163
Lea County, NM
5' FNL & 1315' FWL
Sec. 33, T-19S, R-35E

Casing: 8-5/8" to 382' w/200 sx
5 1/2" to 5019' w/350 sx
TOC 3125'
Tubing: 2-7/8" to 4960'

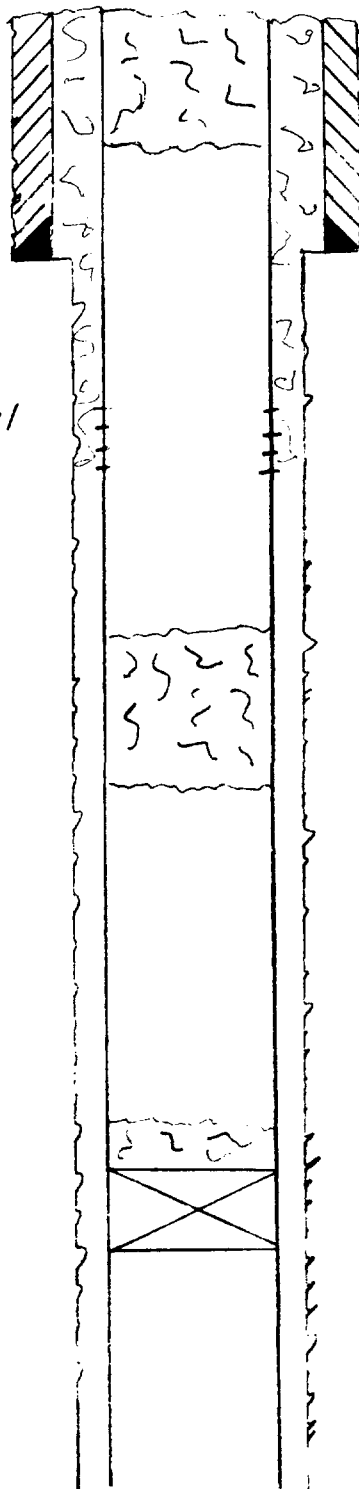
Spud: 12/9/68
Plugged: 2/12/81

50' surface
plug

CR @ 1769'
Perf @ 1840' w/
480 sx

100' cement @
3175-3075'

35' cement
CIBP @ 4480'



Gulf Oil Corporation
West Pearl Queen Unit #141
Lea County, NM
660' FNL & 1980' FWL
Sec. 33, T-19S, R-35E

Casing: 8-5/8" to 608' w/400 sx
4 1/2" to 4950' w/1790 sx

Spud: 11/6/58
Plugged: 8/3/83

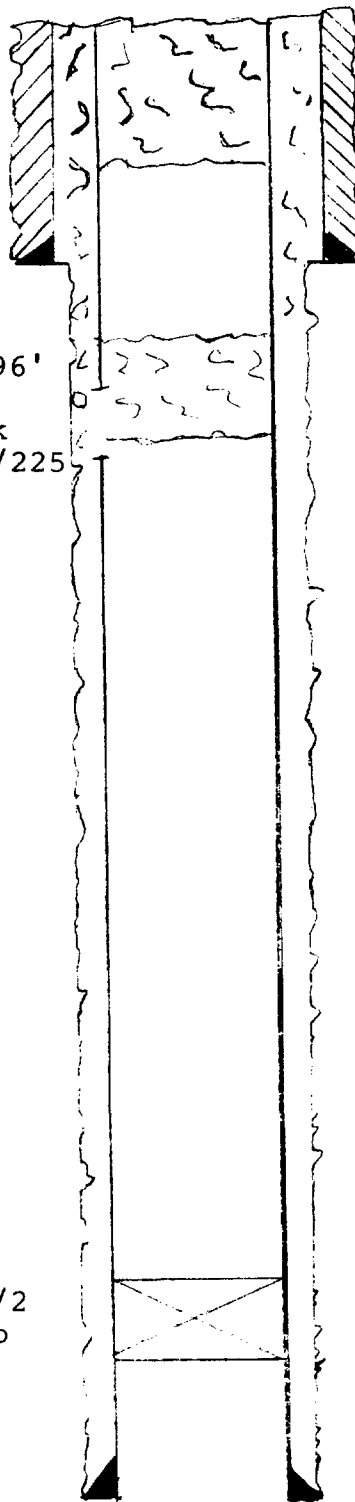
100' surface
plug

Cement plug 796'
to 470'
Sqz'd csg leak
@ 689'-470' w/225
sx.

Please see attached C-103's for
more information.

RBP @ 4700' w/2
sx sand on top

TD 4996'



1. BY COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

P & A

3a. Indicate Type of Lease
State ☒ For ☐
3. State Oil & Gas Lease No.
E-5841

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO OPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE APPLICATION FOR PERMIT - (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL ☐ GAS ☐ OTHER ☐
2. Name of Operator
Gulf Oil Corporation CHURCH USA
3. Address of Operator
P.O. Box 670, Hobbs, NM 88240
4. Location of Well
UNIT LETTER C 660 FEET FROM THE North LINE AND 1980 FEET FROM
THE West LINE, SECTION 33 TOWNSHIP 19S RANGE 35E NMPM.
5. Elevation (Show whether DF, RT, CR, etc.)
3714' GL
6. 7. Unit Agreement Name
W. Pearl Queen Unit
8. Farm or Lease Name
Pearl Queen
9. Well No.
141
10. Field and Pool, or Wildcat
Pearl Queen
11. County
Lea

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 OPS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	OTHER <input type="checkbox"/>

17. 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.

POH of the. Attempts to enter CSG unsuccessful. Circ hole w/ abandonment
made. Spot Cmt plug 796'-470'. Spot surf plug @ 100'. Operations
witnessed by OGD Representative. Install dry hole marker. Clean
& clear location. Well P & A 7-26-83.

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

SIGNED R.D. Pate TITLE AREA ENGINEER DATE 8-3-83
APPROVED BY R. A. Miller TITLE OUT-GAS INSPECTOR DATE JUN 30 1983
CONDITIONS OF APPROVAL, IF ANY:

COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

3a. Indicate Type of Lease
 State ☒ Fee ☐
 5. State Oil & Gas Lease No.
 E-5841

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

OIL WELL ☒ GAS WELL ☐ OTHER ☐

7. Unit Agreement Name
 West Pearl Queen Unit

8. Farm or Lease Name

9. Well No.
 141

10. Field and Pool, or Wildcat
 Pearl Queen

Name of Operator
 Gulf Oil Corporation

Address of Operator
 P. O. Box 670, Hobbs, NM 88240

Location of Well
 UNIT LETTER C, 660 FEET FROM THE North LINE AND 1980 FEET FROM
 THE West LINE, SECTION 33 TOWNSHIP 19S RANGE 35E NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)
 3714' GL

12. County
 Lea

6. 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 type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	OTHER <u>Repair Casing Leak - Unsuccessful</u> <input checked="" type="checkbox"/>

17. 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.

POH with production equipment. Set RBP at 4700'. Attempt to load hole, would not load. Set RTTS at 4649', test RBP 500#, ok. Set RTTS at 4030', 3410', 2790', 2170', 1550', 1488', 930', 870', 806', 837', 775', 744', 713', 689', 704'. Found holes 689'-837'. Spot 2 sacks sand on RBP. Set cement retainer at 652', pressure casing 400#. Establish injection rate through leak. Squeeze with 225 sacks Class "C" with CaCl₂. Reverse cement. WOC 21½ hours. Drill cement retainer and cement. Casing parted. LD rods and tubing. Casing repair unsuccessful. Well will be P&A.

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

SIGNED RDDPite TITLE Area Engineer DATE 4-26-83

ORIGINAL SIGNED BY JERRY SEXTON
 DISTRICT 1 SUPERVISOR

APPROVED BY _____ TITLE _____ DATE APR 28 1983

CONDITIONS OF APPROVAL, IF ANY:

See B-1-83

NO. OF COPIES RECEIVED	
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FILE	
U.S.S.	
LAY OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-4-65

<p align="center">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 - II" (FORM C-101) FOR SUCH PROPOSALS.)</p>		<p>5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/></p>
<p>Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/></p>		<p>5. State Oil & Gas Lease No. E-5841</p>
<p>Name of Operator Gulf Oil Corporation</p>		<p>7. Unit Agreement Name West Pearl Queen Unit</p>
<p>Address of Operator Box 670, Hobbs, New Mexico</p>		<p>8. Farm or Lease Name</p>
<p>4. Location of Well UNIT LETTER C 660 FEET FROM THE North LINE AND 1980 FEET FROM THE West LINE, SECTION 33 TOWNSHIP 19-S RANGE 35-E NMPM.</p>		<p>9. Well No. 33-3</p>
<p>15. Elevation (Show whether DF, RT, GR, etc.) 3714 GL</p>		<p>10. Field and Pool, or Wildcat Pearl Queen</p>
<p>12. County Lea</p>		

<p align="center">Check Appropriate Box To Indicate Nature of Notice, Report or Other Data</p>			
<p>NOTICE OF INTENTION TO:</p>		<p>SUBSEQUENT REPORT OF:</p>	
<p>PERFORM REMEDIAL WORK <input type="checkbox"/></p>	<p>PLUS AND ABANDON <input type="checkbox"/></p>	<p>REMEDIAL WORK <input checked="" type="checkbox"/></p>	<p>ALTERING CASING <input type="checkbox"/></p>
<p>TEMPORARILY ABANDON <input type="checkbox"/></p>	<p>CHANGE PLANS <input type="checkbox"/></p>	<p>COMMENCE DRILLING OPNS. <input type="checkbox"/></p>	<p>PLUS AND ABANDONMENT <input type="checkbox"/></p>
<p>PULL OR ALTER CASING <input type="checkbox"/></p>	<p>OTHER <input type="checkbox"/></p>	<p>CASING TEST AND CEMENT JOB <input type="checkbox"/></p>	<p>OTHER <input type="checkbox"/></p>
<p>Drilled deeper, acidized & frac treated.</p>			

17. 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.

4996' TD.
 Drilled deeper with 3-7/8" bit to 4996'. Spotted 250 gallons of 15% HCl acid on bottom. Frac treated with 5500 gallons of gelled water containing 1/2 to 1# SPG. Flushed with 20 barrels of water. Treating pressure 2300 to 2800#. ISIP 800#, after 5 min 600#. AIR 8.1 bpm. Ran tubing rods and pump and returned well to production.

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

<p>ORIGINAL SIGNED BY G. D. BOPLAND</p>	<p>TITLE Area Production Manager</p>	<p>DATE April 6, 1965</p>
<p>SIGNED _____</p>	<p>TITLE _____</p>	<p>DATE _____</p>
<p>APPROVED BY _____</p>	<p>TITLE _____</p>	<p>DATE _____</p>
<p>CONDITIONS OF APPROVAL, IF ANY:</p>		

WEST PEARL QUEEN UNIT #169

Surface Owner

Alta Faye Klein
P.O. Box 1503
Hobbs, New Mexico 88241

Offset Owner

Petrus Oil Company, L.P.
12201 Merit Drive, Suite 900
Dallas, Texas 75251-2293

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, George W. Moore

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

of _____

One weeks.
Beginning with the issue dated

February 6, 19 89
and ending with the issue dated

February 6, 19 89

George W. Moore
Publisher.

Sworn and subscribed to before

me this 8 day of

February, 19 89

Wesley Murphy
Notary Public.

My Commission expires _____

November 14, 19 92
(Seal)

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

42
LEGAL NOTICE
February 6, 1989
NOTICE OF
APPLICATION
FOR FLUID
INJECTION
WELL PERMIT

Armstrong Energy Corporation, P.O. Box 1973, Roswell New Mexico 88201 has applied to the New Mexico Oil Conservation Commission for a permit to inject fluid into a formation which is productive of oil or gas.

The applicant proposes to inject fluid into the Queen formation, West Pearl Queen Unit Well No. 169, Section 28, T-19S, R-35E. This well will be an expansion of an existing waterflood and will inject a maximum of 500 barrels of water per day at an approximate injection pressure of 1700#.

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.

Contact party for the applicant is Jeanelle Williams, Agent, (505) 392-3319.

Published in the Hobbs News-Sun February 6, 1989.



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

GARREY CARRUTHERS
GOVERNOR

4-7-89

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 _____

Gentlemen:

I have examined the application for the:

Armstrong Energy Corp. West Pearl Queen #169-N 284435
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK JS

Yours very truly,

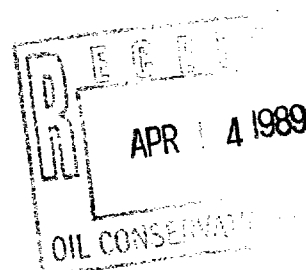
Jerry Sexton
Jerry Sexton
Supervisor, District 1

/ed

NEW MEXICO RECORD RESEARCH

(505) 392-3319 P.O. BOX 1437
HOBBS, N.M. 88241-1437

April 12, 1989



Mr. David Catanach
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Catanach:

Please add the enclosed copies to my Application for Authorization to Inject filed for Armstrong Energy Corporation.

If you have any questions, or need more information, please call me at the above number.

Sincerely,

Jeanelle Williams

NEW MEXICO RECORD RESEARCH

(505) 392-3319 P.O. BOX 1437
HOBBS, N.M. 88241-1437

April 10, 1989

Ms. Alta Faye Klein
P.O. Box 1503
Hobbs, New Mexico 88241

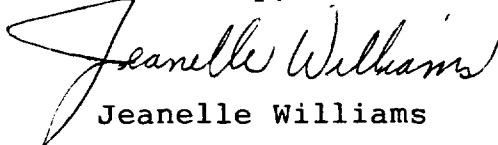
Dear Ms. Klein:

I have submitted Form C-108 "Application for Authorization to Inject" to the Oil Conservation Division for Armstrong Energy Corporation. Copies of the application are enclosed.

Armstrong Energy is seeking permission to convert West Pearl Queen Unit #169, located in Section 28, T-19S, R-35E, Lea County, New Mexico, to an injection well.

You have 15 days to file an objection, or request a hearing, with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501.

Sincerely,



Jeanelle Williams

NEW MEXICO RECORD RESEARCH

(505) 392-3319 P.O. BOX 1437
HOBBS, N.M. 88241-1437

April 10, 1989

Petrus Oil Company, L.P.
12201 Merit Drive, Suite 900
Dallas, Texas 75251-2293

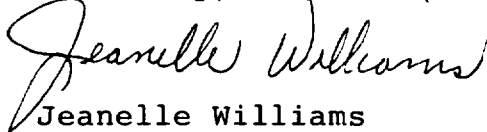
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You have 15 days to file an objection, or request a hearing, with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501.

Sincerely,



Jeanelle Williams

P 691 997 383

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to	Ms. Alta Faye Klein
Street and No.	P.O. Box 1503
P.O. State and ZIP Code	Hobbs, NM 88241
Postage	\$ 85
Certified Fee	85
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	90
Return Receipt showing to whom Date, and Address of Delivery	90
TOTAL Postage and Fees	170
Postmark or Date	1989

PS Form 3800, June 1985

P 691 997 382

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to	Petrus Oil Co.
Street and No.	12201 Merit Dr. Ste. 900
P.O. State and ZIP Code	Dallas, TX 75251-2293
Postage	\$ 85
Certified Fee	85
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	90
Return Receipt showing to whom Date, and Address of Delivery	90
TOTAL Postage and Fees	170
Postmark or Date	1989

PS Form 3800, June 1985