DATE IN 12.1.11	SUSPENSE	ENGINEER WVJ	LOGGED IN 12.1.11	TYPE SWD 1158-B	APP NO. pTGW 1133549488

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST 30-005-01210

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ■ SWD ☐ IPI ☐ EOR ☐ PPR

Amend 2200 SWD-1158A

[D] Other: Specify **Amend Order No. SWD-1158-A**

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ■ Offset Operators, Leaseholders or Surface Owner

[C] ■ Application is One Which Requires Published Legal Notice

[D] ■ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ■ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

David Catanach	David Catanach	Agent-Crain's Hot Oil Service, Inc.
Print or Type Name	Signature	Title
12/1/11	drcatanach@netscape.com	
Date	E-Mail Address	

December 1, 2011

Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Attention: Ms. Jami Bailey, CPG
Division Director

HAND DELIVERED

Re: Form C-108
Crain's Hot Oil Service, Inc.
Gulf Deep Well No. 1
API No. 30-005-01210
660' FNL & 1980' FWL (Unit C)
Section 34, T-14 South, R-31 East, NMPM,
Chaves County, New Mexico

Dear Ms. Bailey,

Enclosed please find a Division Form C-108 (Application for Authorization to Inject) to amend Division Order No. SWD-1158, as amended. This order authorized Penroc Oil Corporation to utilize the Gulf Deep Well No. 1 as a produced water disposal well, injection to occur into the San Andres formation through the open-hole interval from 3,817 feet to 4,750 feet. Crain's Hot Oil Service, Inc., the current operator of the well, now proposes to abandon the San Andres as an injection zone, drill out cement plugs down to total depth of 13,230 feet, and utilize the Devonian formation as a the new injection interval from a depth of approximately 12,920 feet to 13,230 feet.

All the required information is enclosed. If additional information is needed, please contact me at (505) 690-9453.

Sincerely,

David Catanach

David Catanach
Agent for Crain's Hot Oil Service, Inc.
P.O. Box 613
Lovington, New Mexico 88260

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance __X__Disposal _____Storage
Application qualifies for administrative approval? __X__Yes _____No

II. OPERATOR: Crain's Hot Oil Service, Inc.

ADDRESS: P.O. Box 613 Lovington, New Mexico 88260

CONTACT PARTY: Mr. David Catanach PHONE: (505) 690-9453

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 __X__No*
If yes, give the Division order number authorizing the project: *Application to Amend Order No. SWD-1158-A

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

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

VII. Attach data on the proposed operation, including:

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

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

IX. Describe the proposed stimulation program, if any.

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

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

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

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

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

NAME: David Catanach TITLE: Agent for Crain's Hot Oil Service, Inc.

SIGNATURE: David Catanach DATE: 12/1/11

E-MAIL ADDRESS: drcatanach@netscape.com

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

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

III. WELL DATA

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

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

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

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

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

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

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

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

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

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

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

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

XIV. PROOF OF NOTICE

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

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

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

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

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

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

C-108 Application
Crain's Hot Oil Service, Inc.
Gulf Deep Well No. 1
660' FNL & 1980' FWL, Unit C, Section 34, T-14S, R-31E, NMPM
Chaves County, New Mexico

I. The purpose of the application is to request an amendment to Division Order No. SWD-1158-A, to change the injection formation and injection interval from the San Andres (3,817'-4,750' Open-Hole) to the Devonian formation at a depth of approximately 12,900-13,230 feet.

II. Crain's Hot Oil Service Company, Inc.
P.O. Box 613
Lovington, New Mexico 88260
Contact Party: Mr. David Catanach (505) 690-9453

III. Injection well data sheet and wellbore diagrams for the Gulf Deep No. 1 are attached showing the current and proposed wellbore configurations.

IV. This is not an expansion of an existing project, however, the Gulf Deep No. 1 was permitted as a San Andres disposal well by Division Order No. SWD-1158 dated 1/29/2009 and SWD-1158-A dated 8/19/2010.

V. Enclosed is a map that identifies all wells/leases within a 2-mile radius of the Gulf Deep No. 1 and a map that identifies the ½ mile "Area of Review" ("AOR").

VI. AOR well data is attached. There are fourteen (14) wells located within the AOR of the Gulf Deep No. 1, however none of the wells penetrate the proposed Devonian injection interval. All of the AOR wells were either producing or injection wells in the Caprock-Queen Pool, and were all drilled to a total depth of approximately 3,120 feet. All AOR wells are currently plugged and abandoned.

VII. 1. The average injection rate is anticipated to be approximately 3,000 BWPD. The maximum rate will be approximately 6,000 BWPD. If the average or maximum rates increase in the future, the Division will be notified.

2. This will be a closed system.

3. Crain's Hot Oil Service, Inc. will initially inject water into the proposed disposal well at a surface pressure that is in compliance with the Division's limit of 0.2 psi/ft. If additional pressure is necessary, a step rate injection test will be conducted on the well in order to obtain a higher surface injection pressure.

4. Produced water from various producing formations in Southeast New Mexico will be injected into the subject well. Attached are produced water analysis from various water sources. These water sources were presented in the Form C-108 application that resulted in the issuance of Order No. SWD-1158 and SWD-1158-A.

5. Injection is to occur into a formation that is not productive.

VIII.

Geologic Age:	Devonian
Geologic Name:	Devonian
Average Thickness:	Unknown
Lithology:	Dolomite & Limestone
Measured Depth:	Top-12,900' (Estimated)
USDW's:	Ogallala is present at a depth of approximately 260'

IX. No stimulation is planned unless disposal rates and pressures dictate.

X. Logs were filed at the time of drilling.

XI. According to data obtained from the New Mexico Office of the State Engineer there is one fresh water well located within one mile of the Gulf Deep No. 1. This well is located in the NE/4 of Section 34, Township 14 South, Range 31 East, NMPM. This well is 290 feet deep and water is present at a depth of 260 feet. Water samples were pulled and analyzed for a windmill well located in the NW/4 of Section 12, Township 15 South, Range 31 East, NMPM, Chaves County, New Mexico. Water analysis for this well is shown on Exhibit E. Exhibit E also shows water analysis for two additional water wells located in Sections 23 and 30, Township 14 South, Range 31 East, NMPM.

XII. Affirmative statement is enclosed.

XIII. Proof of Notice is enclosed.

INJECTION WELL DATA SHEET

OPERATOR: Crain's Hot Oil Service, Inc.

WELL NAME & NUMBER: Gulf Deep No. 1 **(API No. 30-005-01210)**

WELL LOCATION:	660' FNL & 1980' FWL	C	34	14 South	31 East
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

See Attached Wellbore Schematic

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17 ½" Casing Size: 13 3/8" @ 428'

Cemented with: 550 Sx. or _____ ft^3

Top of Cement: Surface Method Determined: Circulated

Intermediate Casing

Hole Size: 12 ¼" Casing Size: 9 5/8" @ 3,817'

Cemented with: 1950 Sx. or _____ ft^3

Top of Cement: Surface Method Determined: Circulated

Production Casing (Proposed)

Hole Size: 8 ½" Casing Size: 5 1/2" @ 13,230'

Cemented with: 1st-900 Sx. DV Tool @ 7,000' 2nd-500 Sx. or _____ ft^3

Top of Cement: 3,600' Method Determined: _____

Total Depth: 13,230' PBTD: _____

Injection Interval

Devonian Formation: 12,920'-13,230'- Perforated

INJECTION WELL DATA SHEET

Tubing Size: 3 ½" & 2 3/8" split string Lining Material: Internally Plastic Coated

Type of Packer: Arrowset

Packer Setting Depth: 12,820' or within 100' of the uppermost injection perforations

Other Type of Tubing/Casing Seal (if applicable): None

Additional Data

1. Is this a new well drilled for injection: ____ Yes ____X____ No

   If no, for what purpose was the well originally drilled: Well was originally drilled in 1958 as a Morrow test. Well was plugged in 1959. Well was re-entered in 2008 to test the San Andres formation. Well was re-plugged in 2008. Well was again re-entered in 2009 and completed as a water disposal well in the San Andres formation.

2. Name of the Injection Formation: Devonian

3. Name of Field or Pool (if applicable): N/A

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

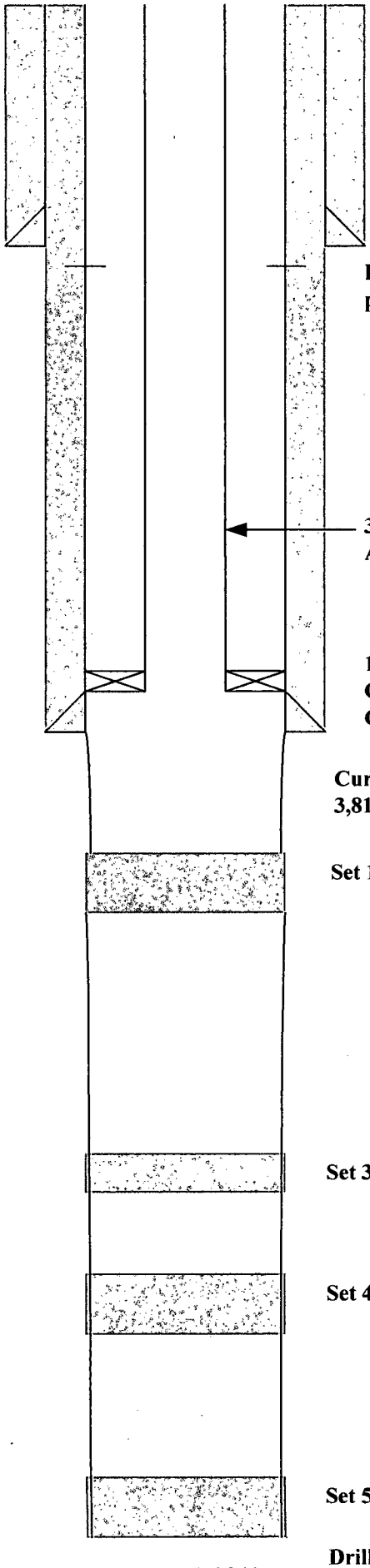
   None

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

   Caprock-Queen Pool (3,100')

Current Completion

Crain's Hot Oil Service, Inc.
Gulf Deep No. 1
API No. 30-005-01210
660' FNL & 1980' FWL (Unit C)
Section 34, T-14 South, R-31 East, NMPM



17 ½" Hole; Set 13 3/8" Csg @ 428'
Cemented w/550 Sx.
Cement circulated to Surface

Perf. 2 Holes @ 457' & squeeze perfs w/65 Sx.

3 ½" IPC Tubing Set @ 3,769'
Arrowset Packer @ 3,775'

12 ¼" Hole; Set 9 5/8" Csg @ 3,817'
Cemented w/1950 Sx.
Cement circulated to surface

Current Open-Hole Injection Interval:
3,817'-4,750' San Andres Formation

Set 118 Sx. cement plug 4,750'-5,200'

Set 37 Sx. cement plug 8,700'-8,800'

Set 44 Sx. cement plug 9,700'-9,800'

Set 59 Sx. cement plug 13,030'-13,230'

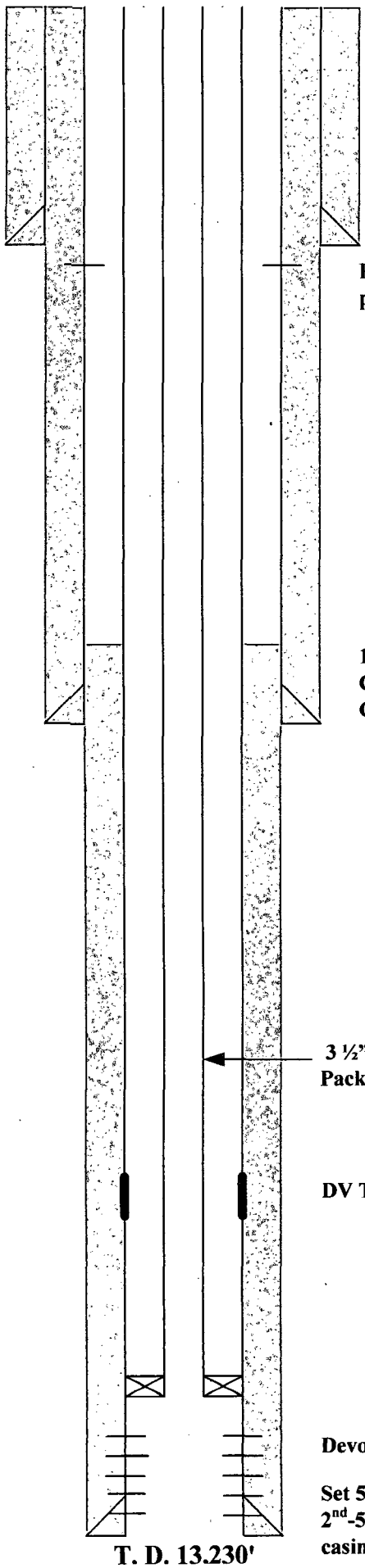
Drilled 8 ½" Hole to T.D. of 13,230'

T. D. 13,230'

Drilled: 11/1958
Plugged: 4/1959
Re-Entered: 3/2008
Re-plugged: 7/2008
Re-entered: 10/2009

Proposed Completion

Crain's Hot Oil Service, Inc.
Gulf Deep No. 1
API No. 30-005-01210
660' FNL & 1980' FWL (Unit C)
Section 34, T-14 South, R-31 East, NMPM



17 ½" Hole; Set 13 3/8" Csg @ 428'
Cemented w/550 Sx.
Cement circulated to Surface

Perf. 2 Holes @ 457' & squeeze perfs w/65 Sx.

Drilled: 11/1958
Plugged: 4/1959
Re-Entered: 3/2008
Re-plugged: 7/2008
Re-entered: 10/2009

12 ¼" Hole; Set 9 5/8" Csg @ 3,817'
Cemented w/1950 Sx.
Cement circulated to surface

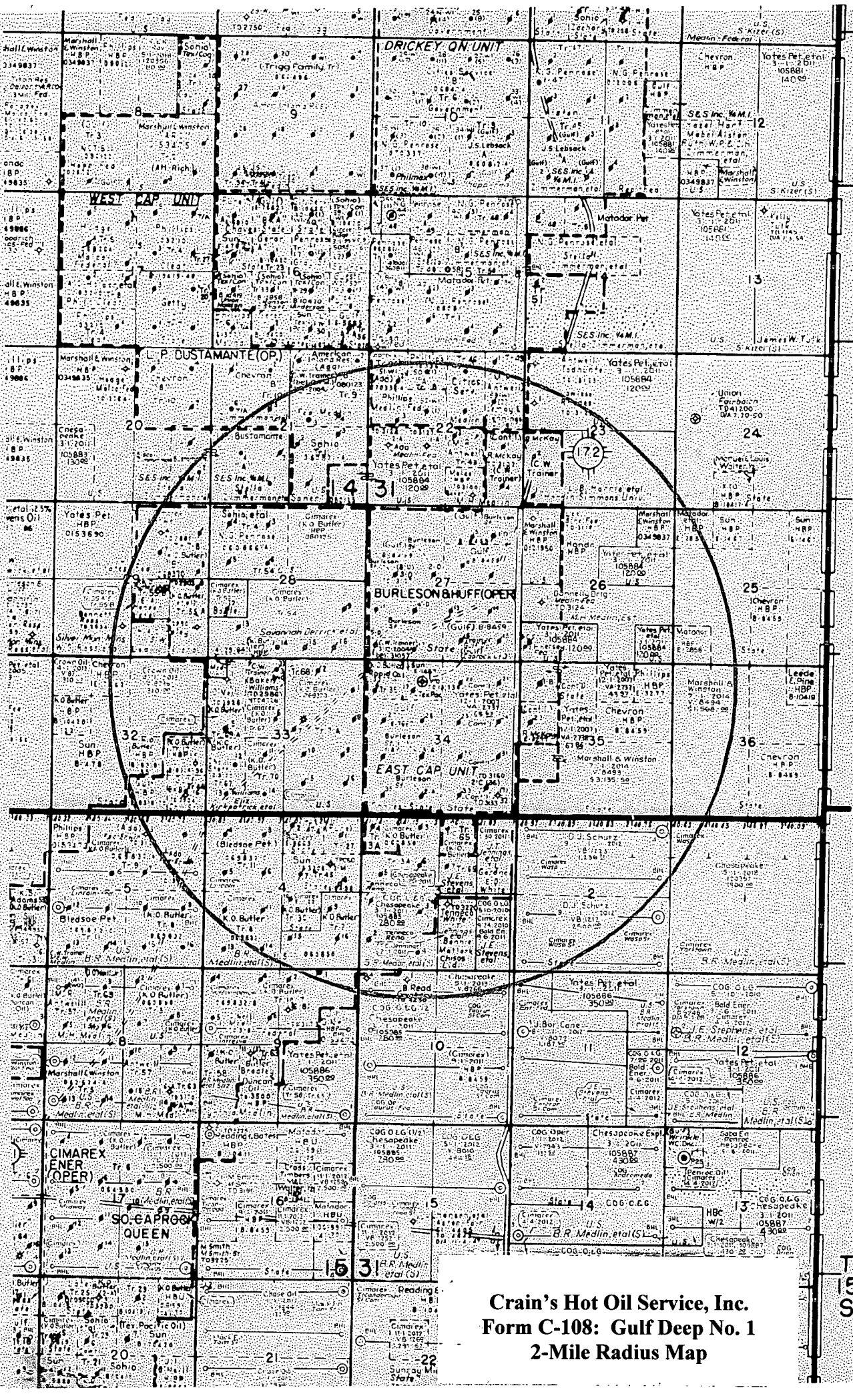
3 ½" & 2 7/8" IPC split tubing string set in Arrowset Packer @ 12,820'

DV Tool @ 7,000'

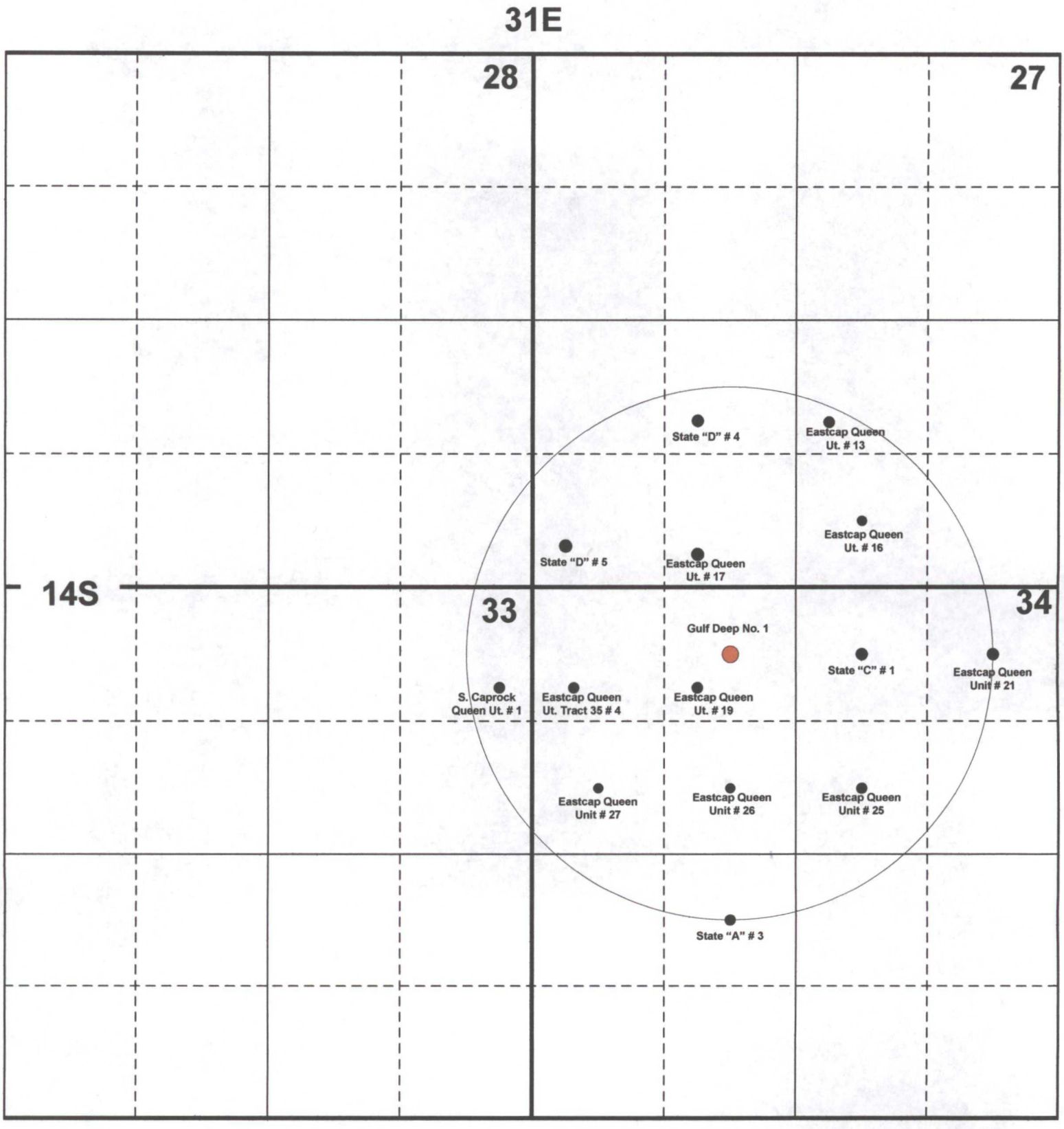
Devonian Perforations: 12,920'-13,230' (Estimated)

Set 5 ½" 17# & 20# N-80 Csg. @ 13,230'. Stage cement: 1st-900 sx. 2nd-500 Sx. DV Tool @ 7,000'. Cement 200' into the 9 5/8" Intermediate casing. Proposed TOC @ approximately 3,600'

T. D. 13.230'



Crain's Hot Oil Service, Inc.
Form C-108: Gulf Deep No. 1
2-Mile Radius Map



Form C-108 Application
Crain's Hot Oil Service, Inc.
Gulf Deep Well No. 1
½ Mile Area of Review Map

CRAIN'S HOT OIL SERVICE COMPANY
AREA OF REVIEW WELL DATA
GULF DEEP WELL NO. 1

API NUMBER	OPERATOR	LEASE NAME	WELL NO.	WELL TYPE	STATUS	FTG. N/S	N/S	FTG. E/W	E/W	UNIT	SEC.	TSHP.	RNG.	DATE DRILLED	TOTAL DEPTH	COMPLETION	REMARKS
30-005-01187	Union Oil Company of California	S. Caprock Queen Ut. Tr. 7A	1	I	PA	990'	N	330'	E	A	33	14S	31E	Aug-55	3,120'	3,097'-3,102' Perf.	Caprock-Queeen Pool. Well PA'd 8/1971
30-005-01194	Rapid Company, Inc.	Eastcap Queen Ut. Tract 35	4	P	PA	990'	N	330'	W	D	34	14S	31E	Mar-56	3,112'	3,092'-3,107' Perf.	Caprock-Queen Pool. Well PA'd 2/1975
30-005-01195	Miller & Miller Auctioneers, Inc.	Eastcap Queen Ut.	25	I	PA	1980'	N	1980'	E	G	34	14S	31E	May-56	3,108'	3,090'-3,108' O.H.	Caprock-Queen Pool. Well PA'd 2/1975
30-005-01198	Rapid Company, Inc.	State "C"	1	P	PA	660'	N	1980'	E	B	34	14S	31E	Jun-56	3,110'	3,084'-3,110' O.H.	Caprock-Queen Pool. Well PA'd 7/1975
30-005-01202	Miller & Miller Auctioneers, Inc.	Eastcap Queen Ut.	21	I	PA	660'	N	660'	E	A	34	14S	31E	Jul-56	3,115'	3,087'-3,115' O.H.	Caprock-Queen Pool. Well PA'd 2/1975
30-005-01205	Miller & Miller Auctioneers, Inc.	Eastcap Queen Ut.	27	I	PA	1980'	N	660'	W	E	34	14S	31E	Nov-55	3,113'	3,092'-3,113' O.H.	Caprock-Queen Pool. Well PA'd 2/1975
30-005-01206	Miller & Miller Auctioneers, Inc.	Eastcap Queen Ut.	26	I	PA	1980'	N	1980'	W	F	34	14S	31E	Feb-56	3,103'	3,082'-3,103' O.H.	Caprock-Queen Pool. Well PA'd 2/1975
30-005-01207	Lewis B. Burleson, Inc.	State "A"	3	I	PA	1980'	S	1980'	E	K	34	14S	31E	Mar-56	3,101'	3,084'-3,101' O.H.	Caprock-Queen Pool. Well PA'd 9/1987
30-005-01209	Miller & Miller Auctioneers, Inc.	Eastcap Queen Ut.	19	I	PA	990'	N	1650'	W	C	34	14S	31E	May-56	3,089'	3,077'-3,089' O.H.	Caprock-Queen Pool. Well PA'd 2/1975
30-005-01145	Lewis B. Burleson, Inc.	State "D"	5	I	PA	460'	S	330'	W	M	27	14S	31E	Aug-56	3,108'	3,085'-3,092' Perf.	Caprock-Queen Pool. Well PA'd 5/1986
30-005-01146	Miller & Miller Auctioneers, Inc.	Eastcap Queen Ut.	17	I	PA	330'	S	1650'	W	N	27	14S	31E	Aug-56	3,108'	3,080'-3,108' O.H.	Caprock-Queen Pool. Well PA'd 2/1975
30-005-01147	Miller & Miller Auctioneers, Inc.	Eastcap Queen Ut.	13	I	PA	1650'	S	2310'	E	J	27	14S	31E	Oct-56	3,110'	3,094'-3,110' O.H.	Caprock-Queen Pool. Well PA'd 1/1974
30-005-01148	Lewis B. Burleson, Inc.	State "D"	4	I	PA	1650'	S	1650'	W	K	27	14S	31E	Dec-56	3,120'	3,106'-3,113' Perf.	Caprock-Queen Pool. Well PA'd 5/1986
30-005-01155	Miller & Miller Auctioneers, Inc.	Eastcap Queen Ut.	16	I	PA	660'	S	1980'	E	O	27	14S	31E	Jun-56	3,120'	3,096'-3,101' Perf.	Caprock-Queen Pool. Well PA'd 2/1975

Crain's Hot Oil Service, Inc.
Form C-108: Gulf Deep No. 1
AOR Well Identification

Form C-108
Affirmative Statement
Crain's Hot Oil Service, Inc.
Gulf Deep No. 1
Section 34, T-14 South, R-31 East, NMPM,
Chaves County, New Mexico

Available geologic and engineering data has been examined and no evidence of open faults or hydrological connection between the injection zone and any underground sources of drinking water has been found.

David Catanach
Agent for Crain's Hot Oil Service, Inc.

12/1/11
Date

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 03204	L		LE	3	2	34	14S	31E		611333	3652772	290	260	30

Average Depth to Water: **260 feet**

Minimum Depth: **260 feet**

Maximum Depth: **260 feet**

Record Count: 1

PLSS Search:

Section(s): 33, 34, 35 **Township:** 14S **Range:** 31E

Crain's Hot Oil Service, Inc.
Form C-108: Gulf Deep No. 1
Fresh Water Data

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
RA 09984			CH	4	2	2	28	14S	31E	610201	3660615*	350		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 1

PLSS Search:

Section(s): 26, 26, 28 **Township:** 14S **Range:** 31E

Crain's Hot Oil Service, Inc.
Form C-108: Gulf Deep No. 1
Fresh Water Data

***UTM location was derived from PLSS - see Help**

Schlumberger

QA/QC Report
Water Analysis

Client:	Penroc
Well:	
Field:	
Formation:	
BHST:	
MD:	(ft)
TVD:	(ft)
Perforation Start:	(ft)
Perforation End:	(ft)

Well Location:
State:
Country: United States

Service Order #: [redacted] **Lab Request #:** [redacted]

Date Prepared: 12-12-2008

District:	HOBBS
Phone:	575 393 6186
Fax:	

Lab Technician:	A. Galindo	Well Site Technician:	
Phone:		Phone:	
Email Address:		Email Address:	

This information is presente ...erger assumes no liability for advice or recomm... the use of any product or service.

Exhibit D

Crain's Hot Oil Service, Inc.
Form C-108: Gulf Deep No. 1
Water Analysis

Client : Penroc
Well :
Report # :
Date : 12-12-2008

Schlumberger

Section 1: District Lab Water Analysis

Water Analysis Results (1)															
Tank #	Tank ID	Sample #	Temp (degF)	pH ( )	Sp Gravity ( )	Iron (mg/l)	Chloride Percent As KCl (%)	Chloride (mg/l)	Carbo-nate (mg/l)	BiCarbo-nate (mg/l)	Hydro-xide (mg/l)	Magne-sium (mg/l)	Cal-cium (mg/l)	Hard-ness (mg/l)	Sul-phate (mg/L)
1	Production Water	1	65	6.65	1.15	0	14.14	67355	240	488	0	0	4010	18	200
2	Windmill Water	1	65	7.68	1.00	0	0.19	886	240	488	0	122	201	2	90

Exhibit D

Production water is from
Penroc Oil Corporation
API #: 3000521028 Well_Name: L WRINKLE # 001
Location: D-13-15.0S-31E , 990 FNL, 660 FWL Lat:33.0206201945 Long:-103.781516655
Operator Name: PENROC OIL CORP [Operator and Lessee Info] County: Chaves
Land Type: Private Well Type: Oil Spud Date: Plug Date:
Elevation GL: Depth TVD: 11500
Tulk; Wolfcamp, Southwest

NM WAIDS

DATA MAPS HOME SCALE CO

General Information About: Sample 2284			
STATE JO 001			
API	3002500354	Sample Number	
Unit/Section/ Township/Range	O / 33 / 15 S / 32 E	Field	
County	Lea	Formation	
State	NM	Depth	
Lat/Long	32.96851 / -103.71999	Sample Source	WELLHEAD
TDS (mg/L)	117536	Water Type	
Sample Date(MM/DD /YYYY)		Analysis Date(MM/DD /YYYY)	
Remarks/Description			
Cation Information (mg/L)		**Anion Information (mg/L)**	
Potassium (K)		Sulfate (SO)	1300
Sodium (Na)		Chloride (Cl)	71040
Calcium (Ca)		Carbonate (CO_3)	
Magnesium (Mg)		Bicarbonate (HCO_3)	606
Barium (Ba)		Hydroxide (OH)	
Manganese (Mn)		Hydrogen Sulfide (H_2S)	
Strontium (Sr)		Carbon Dioxide (CO_2)	
Iron (Fe)		Oxygen (O)	

New Mexico Tech PRRC

Exhibit D

Crain's Hot Oil Service, Inc.
Form C-108: Gulf Deep No. 1
Water Analysis

NM WAIDS

DATA MAPS HOME SCALE CO

General Information About: Sample 2354			
LEA GE STATE 001			
API	3002500351	Sample Number	
Unit/Section/ Township/Range	B / 32 / 15 S / 32 E	Field	
County	Lea	Formation	
State	NM	Depth	
Lat/Long	32.97835 / -103.73712	Sample Source	UNKNOWN
TDS (mg/L)	77222	Water Type	
Sample Date(MM/DD /YYYY)		Analysis Date(MM/DD /YYYY)	
Remarks/Description			

Cation Information (mg/L)		Anion Information (mg/L)	
Potassium (K)		Sulfate (SO)	1970
Sodium (Na)		Chloride (Cl)	44700
Calcium (Ca)		Carbonate (CO_3)	
Magnesium (Mg)		Bicarbonate (HCO_3)	870
Barium (Ba)		Hydroxide (OH)	
Manganese (Mn)		Hydrogen Sulfide (H_2S)	
Strontium (Sr)		Carbon Dioxide (CO_2)	
Iron (Fe)		Oxygen (O)	

New Mexico Tech PRRC

Exhibit D

Crain's Hot Oil Service, Inc.
Form C-108: Gulf Deep No. 1
Water Analysis

NM WAIDS

DATA MAPS HOME SCALE CO

General Information About: Sample 1243			
TULK001			
API	3000501050	Sample Number	
Unit/Section/ Township/Range	B / 13 / 14 S / 31 E	Field	
County	Chaves	Formation	
State	NM	Depth	
Lat/Long	33.10926 / -103.77335	Sample Source	heater treater
TDS (mg/L)	66509	Water Type	Produced Water
Sample Date(MM/DD /YYYY)	7/14/1983	Analysis Date(MM/DD /YYYY)	
Remarks/Description			
Cation Information (mg/L)		**Anion Information (mg/L)**	
Potassium (K)		Sulfate (SO)	325
Sodium (Na)	31901	Chloride (Cl)	61000
Calcium (Ca)	2160	Carbonate (CO_3)	
Magnesium (Mg)	2840	Bicarbonate (HCO_3)	184
Barium (Ba)		Hydroxide (OH)	
Manganese (Mn)		Hydrogen Sulfide (H_2S)	0
Strontium (Sr)		Carbon Dioxide (CO_2)	
Iron (Fe)	10	Oxygen (O)	2

New Mexico Tech PRRC

Exhibit D

Crain's Hot Oil Service, Inc.
Form C-108: Gulf Deep No. 1
Water Analysis

NM WAIDS

DATA MAPS HOME SCALE CO

General Information About: Sample 5906			
TRIGG FEDERAL 001			
API	3000501006	Sample Number	
Unit/Section/ Township/Range	I / 09 / 14 S / 31 E	Field	CAPROCK
County	Chaves	Formation	ARTESIA
State	NM	Depth	
Lat/Long	33.11559 / -103.81959	Sample Source	
TDS (mg/L)	203550	Water Type	
Sample Date(MM/DD /YYYY)	7/19/2000	Analysis Date(MM/DD /YYYY)	8/2/2000
Remarks/Description			
Cation Information (mg/L)		**Anion Information (mg/L)**	
Potassium (K)	682.52	Sulfate (SO)	3986.64
Sodium (Na)	83464.1	Chloride (Cl)	136251
Calcium (Ca)	4144.84	Carbonate (CO_3)	0
Magnesium (Mg)	940.16	Bicarbonate (HCO_3)	468.95
Barium (Ba)	0.113	Hydroxide (OH)	
Manganese (Mn)		Hydrogen Sulfide (H_2S)	33.9
Strontium (Sr)	68.93	Carbon Dioxide (CO_2)	
Iron (Fe)	3.955	Oxygen (O)	

New Mexico Tech PRRC

Crain's Hot Oil Service, Inc.
Form C-108: Gulf Deep No. 1
Water Analysis

Client : Penroc
Well :
Report # :
Date : 12-12-2008

Schlumberger

Section 1: District Lab Water Analysis

Water Analysis Results (1)															
Tank #	Tank ID	Sample #	Temp (degF)	pH ( )	Sp Gravity ( )	Iron (mg/l)	Chloride Percent As KCl (%)	Chloride (mg/l)	Carbo-nate (mg/l)	BiCarbo-nate (mg/l)	Hydro-xide (mg/l)	Magne-sium (mg/l)	Cal-cium (mg/l)	Hard-ness (mg/l)	Sul-phate (mg/L)
1	Production Water	1	65	6.65	1.15	0	14.14	67355	240	488	0	0	4010	18	200
2	Windmill Water	1	65	7.68	1.00	0	0.19	886	240	488	0	122	201	2	90

Exhibit E
Windmill Water

NM WAIDS

DATA MAPS HOME SCALE CO

General Information About: Sample 3629			
Section/ Township/Range	30 / 14 S / 31 E	Lat/Long	33.0744 / -103.861
Elevation	4052	Depth	0
Date Collected	5/2/1961	Chlorides	450
Collector / Point of Collection	SEO / DP	Use	Stock
Formation	CHINLE	TDS	0

New Mexico Tech

APPRC

Exhibit E

Crain's Hot Oil Service, Inc.
Form C-108: Gulf Deep No. 1
Water Analysis

NM WAIDS

DATA MAPS HOME SCALE CO

General Information About: Sample 4803			
Section/ Township/Range	23 / 14 S / 31 E	Lat/Long	33.0889 / -103.7917
Elevation	4395	Depth	292
Date Collected	7/17/1990	Chlorides	35
Collector / Point of Collection	SEO / DP	Use	Commercial
Formation	OGALLALA	TDS	0

New Mexico Tech

APRC

Exhibit E

Crain's Hot Oil Service, Inc.
Form C-108: Gulf Deep No. 1
Water Analysis

December 1, 2011

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

TO: Offset Leasehold Owners/Surface Owner

Re: Crain's Hot Oil Service, Inc.
NMOCD Form C-108 (Application to Amend SWD-1158-A)
Gulf Deep Well No. 1
660' FNL & 1980' FWL (Unit C) Section 34, T-14 South, R-31 East, NMPM,
Chaves County, New Mexico

Dear Sir:

Enclosed please find a copy of Oil Conservation Division Form C-108 (Application for Authorization to Inject) to amend Division Order No. SWD-1158-A dated August 19, 2010. Order No. SWD-1158-A authorized the use of the Gulf Deep Well No. 1 as a produced water disposal well, injection to occur into the San Andres formation through the open-hole interval from 3,817 feet to 4,750 feet. Crain's Hot Oil Service, Inc., the current operator of the well, now seeks to discontinue injection into the San Andres formation and deepen and complete the well as a disposal well in the Devonian formation at a depth of approximately 12,900-13,230 feet. You are being provided a copy of the application as an offset leasehold owner or surface owner of the land on which the existing disposal well is located.

Objections must be filed with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days.

If you should have any questions, please contact me at (505) 690-9453.

Sincerely,

David Catanach

David Catanach
Agent for Crain's Hot Oil Service, Inc.
P.O. Box 613
Lovington, New Mexico 88260

Enclosure

Crain's Hot Oil Service, Inc.
Form C-108: Gulf Deep Well No. 1
Section 34, T-14 South, R-31 East, NMPM
Chaves County, New Mexico

Notice List

Offset Leasehold Owners (See Attached Map)

Chevron USA, Inc.
15 Smith Road
Midland, Texas 79705

Marshall & Winston, Inc.
P.O. Box 50880
Midland, Texas 79710

Kerr-McGee O/G Onshore, LP
Land Department
5735 Pineland Drive, Suite 300
Dallas, Texas 75231

Kevin O. Butler & Associates, Inc.
550 W. Texas, Suite 660
Midland, Texas 79701

Yates Petroleum Corporation
Yates Drilling Company
Abo Petroleum, Inc.
Myco Industries, Inc.
105 S. Fourth Street
Artesia, New Mexico 88210

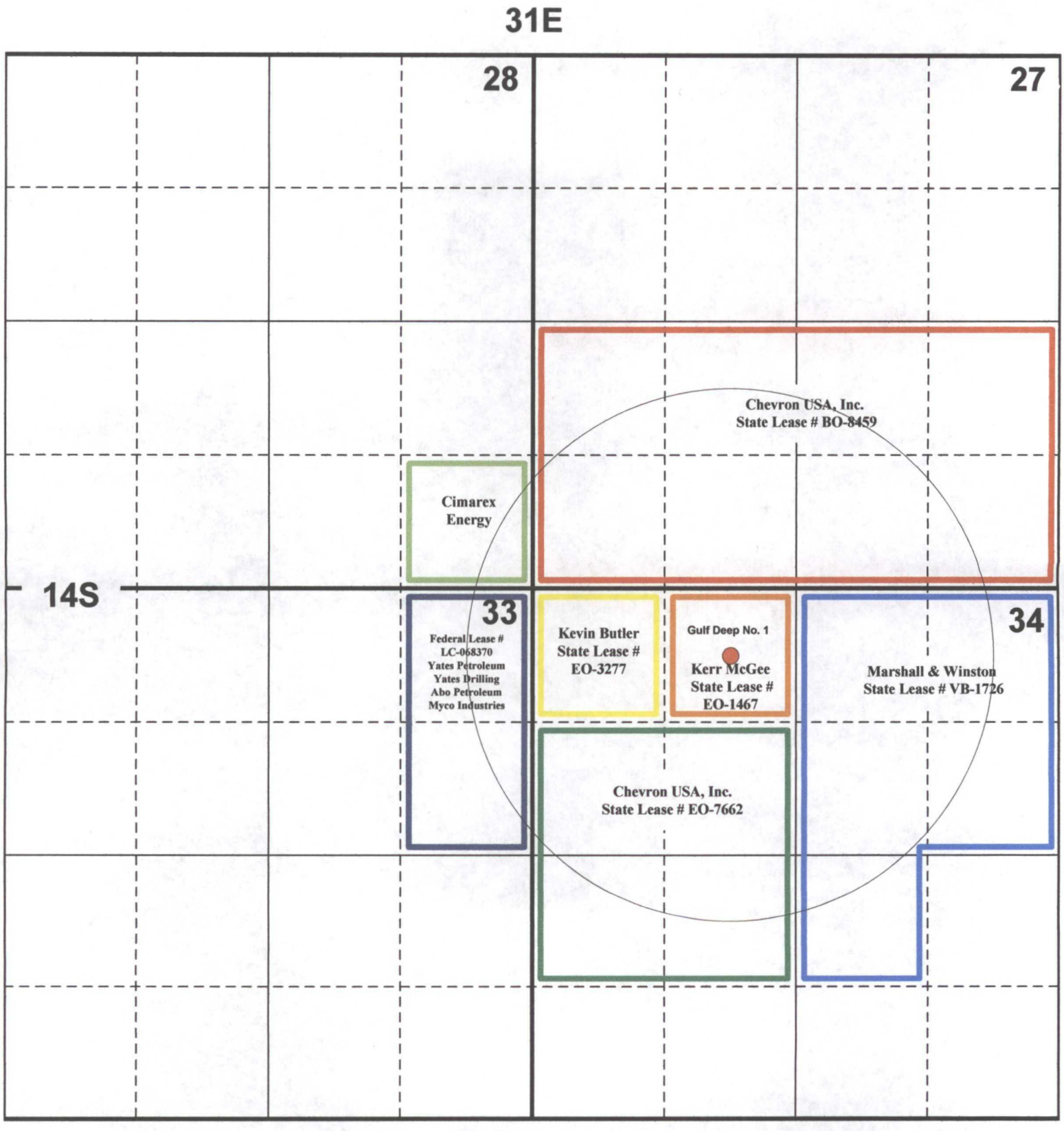
Cimarex Energy, Inc.
600 N. Marienfeld, Suite 600
Midland, Texas 79701

Surface Owner

Commissioner of Public Lands
Attn: Oil & Gas Dept.
P.O. Box 1148
Santa Fe, New Mexico 87504

Additional Notice

Oil Conservation Division (Hobbs Office)
1625 N. French Drive
Hobbs, New Mexico 88240



Form C-108 Application
Crain's Hot Oil Service, Inc.
Gulf Deep Well No. 1
½ Mile Notice Area
Lessee Identification

Form C-108
Crain's Hot Oil Service, Inc.
Gulf Deep Well No. 1
Section 34, T-14 South, R-31 East, NMPM,
Chaves County, New Mexico

Legal notice will be published in the:

Roswell Daily Record
2301 N. Main
Roswell, New Mexico 88201

A copy of the Affidavit of Publication will be provided to NMOCD upon receipt by Crain's Hot Oil Service, Inc.

Crain's Hot Oil Service, Inc., P.O. Box 613, Lovington, New Mexico 88260 has filed a Form C-108 (Application for Authorization to Inject) with the Oil Conservation Division seeking administrative approval to amend Division Order No. SWD-1158, as amended, to abandon the open-hole San Andres interval from 3,817 feet to 4,750 feet as the disposal zone, and to utilize the Devonian formation as the new injection interval in the following-described well located in Chaves County, New Mexico:

Gulf Deep Well No. 1 API No. 30-005-01210 660' FNL & 1980' FWL (Unit C)
Section 34, T-14S, R-31E
Injection Interval (Estimated): 12,920'-13,230' Perforated

Produced water various sources in Southeast New Mexico will be injected into the well at average and maximum rates of 3,000 and 6,000 barrels of water per day, respectively. The average and maximum surface injection pressure for the well is anticipated to be 2,584 psi and 3,000 psi, respectively.

Interested parties must file objections with the New Mexico Oil Conservation Division, 1220 S. St Francis Drive, Santa Fe, New Mexico 87505, within 15 days of the date of this publication.

Additional information can be obtained by contacting Mr. David Catanach, Agent for Crain's Hot Oil Service, Inc. at (505) 690-9453.

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division

Administrative Order SWD-1158

January 29, 2009

Billy Prichard, Agent
Penroc Oil Corporation
P.O. Box 2769
Hobbs, NM 88241

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Rule 26.8B., Penroc Oil Corporation seeks administrative order to utilize its Gulf Deep Well No. 1 **(API 30-005-01210)** located 660 feet from the North line and 1980 feet from the West line, Unit C of Section 34, Township 14 South, Range 31 East, NMPM, Chaves County, New Mexico, for produced water disposal purposes.

THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of Division Rule 26.8B. Satisfactory information has been provided that affected parties as defined in Rule 26.8B.(2) have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in Rule 26.8 will be met and the operator is in compliance with Division Rule 5.9.

IT IS THEREFORE ORDERED THAT:

The applicant Penroc Oil Corporation, is hereby authorized to utilize its Gulf Deep Well No. 1 **(API 30-005-01210)** located 660 feet from the North line and 1980 feet from the West line, Unit C of Section 34, Township 14 South, Range 31 East, NMPM, Lea County, New Mexico, for injection of produced water for disposal purposes into the San Andres formation from 3810 feet to 4700 feet through 3-1/2 inch plastic-lined tubing set at 3775 feet.

Before commencing injection operations into the injection well, the operator shall place a 50-foot cement plug from 4750 feet to 4700 feet to isolate the Glorieta formation from the injection interval in the San Andres Formation

IT IS FURTHER ORDERED THAT:

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.

After installing injection tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The wellhead injection pressure on the well shall be limited to **no more than 762 psi.** In addition, the injection well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface injection pressure to the maximum allowable pressure for this well.

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 injection formation. Such proper showing shall be demonstrated by an acceptable Step-Rate-Test.

The operator shall notify the supervisor of the Division's district II office in Artesia of the date and time of the installation of disposal equipment and of any mechanical integrity test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of injection to the Division's district II office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 26.13 and 7.24.

Without limitation on the duties of the operator as provided in Division Rules 30 and 29, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

In accordance with Division Rule No 26.12.C., the injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request, mailed by the operator prior to the termination date, may grant an extension thereof for good cause. The injection authority shall terminate *ipso facto* one year after injection operations into the well has ceased

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

MARK E. FESMIRE, P.E.
Director

MEF/re

cc: Oil Conservation Division – Artesia
State Land Office – Oil, Gas, and Minerals Division
Bureau of Land Management (BLM)-Roswell

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Jim Noel
Cabinet Secretary

Karen W. Garcia
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division

Administrative Order SWD-1158-A
August 19, 2010

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Rule 26.8B., Penroc Oil Corporation seeks an administrative order to utilize its Gulf Deep Well No. 1 (API 30-005-01210) located 660 feet from the North line and 1980 feet from the West line, Unit Letter C of Section 34, Township 14 South, Range 31 East, NMPM, Chaves County, New Mexico, for produced water disposal purposes.

THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of Division Rule 26.8B. Satisfactory information has been provided that affected parties as defined in Rule 26.8B.(2) have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in Rule 26.8 will be met and the operator is in compliance with Division Rule 5.9.

IT IS THEREFORE ORDERED THAT:

The applicant, Penroc Oil Corporation, is hereby authorized to utilize its Gulf Deep Well No. 1 (API 30-005-01210) located 660 feet from the North line and 1980 feet from the West line, Unit Letter C of Section 34, Township 14 South, Range 31 East, NMPM, Chaves County, New Mexico, for disposal of oil field produced water (UIC Class II only) into the San Andres formation through an open hole completion from approximately 3817 feet to 4750 feet through lined tubing and a packer set within 100 feet of the disposal interval.

IT IS FURTHER ORDERED THAT:

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

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine

leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The wellhead injection pressure on the well shall be limited to **no more than 764 psi.** In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate-Test.

The operator shall notify the supervisor of the Division's district office of the date and time of the installation of disposal equipment and of any mechanical integrity test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 26.13 and 7.24.

Without limitation on the duties of the operator as provided in Division Rules 30 and 29, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

In accordance with Division Rule No 26.12.C., the disposal authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request, mailed by the operator prior to the termination date, may grant an extension thereof for good cause. One year after disposal into the well has ceased, the authority to dispose will terminate *ipso facto.*

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the

operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.

MARK E. FESMIRE, P.E.
Acting Director

MEF/wvjj

cc: Oil Conservation Division – Hobbs
State Land Office – Oil, Gas, and Minerals Division
Bureau of Land Management – Carlsbad

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Sent To: Marshall & Winston, Inc.
Street, Apt. No. or PO Box No.: P.O. Box 50880
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PS Form 3800, August 2006 See Reverse for Instructions

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Total Postage & Fees	$ $7.03

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Sent To: Chevron USA, Inc.
Street, Apt. No. or PO Box No.: 15 Smith Road
City, State, ZIP+4: Midland, Texas 79705

PS Form 3800, August 2006 See Reverse for Instructions

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Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$ $7.03

0500 05 DEC 1 2011 SANTA FE NM 87501 USPS Postmark Here 12/01/2011

Sent To: Kevin O. Butler & Associates, Inc.
Street, Apt. No. or PO Box No.: 550 W. Texas, Suite 660
City, State, ZIP+4: Midland, Texas 79701

PS Form 3800, August 2006 See Reverse for Instructions

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Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$ $7.03

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Sent To: Kerr-McGee O/G Onshore, LP
Street, Apt. No. or PO Box No.: Land Department, 5735 Pineland Drive, Suite 300
City, State, ZIP+4: Dallas, Texas 75231

PS Form 3800, August 2006 See Reverse for Instructions

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Return Receipt Fee (Endorsement Required)	$2.30
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$ $7.03

0500 05 DEC 1 2011 SANTA FE NM 87501 USPS Postmark Here 12/01/2011

Sent To: Cimarex Energy, Inc.
Street, Apt. No. or PO Box No.: 600 N. Marienfeld, Suite 600
City, State, ZIP+4: Midland, Texas 79701

PS Form 3800, August 2006 See Reverse for Instructions

7011 0110 0001 2606 3577

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Postage	$ $1.88
Certified Fee	$2.85
Return Receipt Fee (Endorsement Required)	$2.30
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$ $7.03

0500 05 DEC 1 2011 SANTA FE NM 87501 USPS Postmark Here 12/01/2011

Sent To: Yates Petroleum Corporation, Yates Drilling Company, Abo Petroleum, Inc., Myco Industries, Inc.
Street, Apt. No. or PO Box No.: 105 S. Fourth Street
City, State, ZIP+4: Artesia, New Mexico 88210

PS Form 3800, August 2006 See Reverse for Instructions

7011 0110 0001 2606 3584

7011 0110 0001 2606 3560

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Return Receipt Fee (Endorsement Required)	$2.30	Postmark Here
Restricted Delivery Fee (Endorsement Required)	$0.00	
Total Postage & Fees	$ $7.03	12/01/2011

SANTA FE NM 87501 DEC 1 2011 USPS

Sent To Commissioner of Public Lands

Attn: Oil & Gas Dept.

Street, Apt. No.; or PO Box No. P.O. Box 1148

City, State, ZIP+4 Santa Fe, New Mexico 87504

PS Form 3800, August 2006 See Reverse for Instructions

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Wednesday, December 07, 2011 11:50 AM
To: 'drcatanach@netscape.com'
Cc: Dade, Randy, EMNRD; Shapard, Craig, EMNRD
Subject: Disposal application from Crain's Hot Oil Service, Inc.: Gulf Deep #1 30-005-01210 Devonian from 12920 to 13230 feet

Hey Mr. Catanach,
I am preparing this as SWD-1158-B to be released 12/16 or 15 days after the newspaper notice is posted.

Please send a copy of the newspaper notice when you can.
Do they plan on running any more logs on this well after drilling out the plugs?
Do you know why we sent a copy of previous SWD permits on this well to the BLM?

I talked to the owner of Crain's Hot Oil Service a few months ago and forgot the reason the San Andres was being abandoned. The lower part of this well was originally plugged a LONG time ago, so re-entering is never a sure thing.
I noticed from the DST's in the well file, that the interval (Wolfcamp or Cisco) from 9720 to 9818 was tested at a high water recovery – just in case the Devonian did not work out for some reason. The existing logs may not be good enough to pick any upper intervals if they are needed in the future.

Thank You,

Will Jones
New Mexico
Oil Conservation Division
Images Contacts

Injection Permit Checklist (11/15/2010)

WFX______ PMX______ SWD 1158-B Permit Date 12/18/11 UIC Qtr (O / N / D)

Wells 1 Well Name(s): GULF DEEP #1

API Num: 30-005-01210 Spud Date: 1958 New/Old: O (UIC primacy March 7, 1982)

Footages 660FNL/1980FWL Unit C Sec 34 Tsp 14S Rge 31E County CHAVES

General Location:

Operator: CRAIN'S HOT OIL SERVICE, INC Contact D. Catanach

OGRID: 189886 RULE 5.9 Compliance (Wells) 0/1 (Finan Assur) OK IS 5.9 OK? OK

Well File Reviewed ✓ Current Status: (S.A. Disp. well)

Planned Work to Well: Drill OUT TO TD, RUN PIPE, CMT, Perf, TBG, DISP

Diagrams: Before Conversion ✓ After Conversion ✓ Elogs in Imaging File: ✓

Well Details:

	Sizes Hole	Pipe	Setting Depths	Stage Tool	Cement Sx or Cf	Determination Method
New __Existing ✓ Surface	17 1/2	13 3/8	425		550	CIRC
New__Existing ✓ Interm	12 1/4	9 5/8	3817'		1950	CIRC
(New) Existing __ LongSt	8 1/2	5 1/2	13230' TD	7000	900/500	≈3600'
New__Existing __ Liner						
New__Existing __ OpenHole						

Depths/Formations: (Cap Rock Queen Area)

	Depths, Ft.	Formation	Tops?
Formation(s) Above	12900	DEV	EST.
Injection TOP:	12920'	DEV	Max. PSI 2584 OpenHole___ Perfs ✓
Injection BOTTOM:	13230'	DEV	Tubing Size 2 7/8 Packer Depth ±12820
Formation(s) Below			

~~Capitan Reef? ___ (Potash? ___ Noticed? ___) [WIPP? ___ Noticed? ___]~~ Salado Top/Bot 1455-2150 ~~Cliff House?~~

12920 / 2584.0

Fresh Water: Depths: ≈260' Formation OGallala Wells? yes Analysis? ✓ Affirmative Statement ✓

Disposal Fluid Analysis? Sources: COMMERCIAL?

Disposal Interval: Analysis? ✓ Production Potential/Testing: (OLD DST 1 = NO SHOW) (12/1/11)

? **Notice:** Newspaper Date Surface Owner S.L.O. Mineral Owner(s)

RULE 26.7(A) Affected Persons: Cimarex / XPC et al / Ko Butler / Ken McF... / Marshall Winston / Others (12/1/11)

AOR: Maps? Well List? Producing in Interval? NO Wellbore Diagrams? —

.......Active Wells O Repairs? — WhichWells? —

.........P&A Wells O Repairs? — Which Wells? —

DST 9720-9818 Good FLUID REC.

Issues: Request Sent ________ Reply: ______