06/2	SUSP	ENSE UDILES, W 06/22/12 SWD PJD01217452229 LOGGED IN TYPE
100	12	( 1158-C)
160	1.	ABOVE THIS LINE FOR DIVISION USE ONLY
10		NEW MEXICO OIL CONSERVATION DIVISION
North	É	- Engineering Bureau - 1220 South St. Francis Drive, Santa Fe, NM 87505
Hor		
		ADMINISTRATIVE APPLICATION CHECKLIST
TI	HIS CHECKLIST IS	MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS
Applic	ation Acrony	WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE
		andard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
	-	wnhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling] Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
	<b>1</b> . • ·	[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
		[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
	[EOR-Qu	alified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]
[1]	TYPE OF A	PPLICATION - Check Those Which Apply for [A]
	[A]	Location - Spacing Unit - Simultaneous Dedication
		Location - Spacing Unit - Simultaneous DedicationAPI30-005-01210-00-0NSLNSPSDNo.601fLocatedC-34-145-31E
	Che	ck 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
	[D]	Other: Specify Amend Order No. SWD-1158-B
		Curch Speenly Mineria Order Not Stree 2
[2]	NOTIFICA	TION 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.

Note: Statement must be completed by an individual with managenal and/or supervisory capacity.						
David Catanach	Douid Latan	Agent-Crain's Hot Oil Service, Inc				
Print or Type Name	Signature	Title				
6/20/12	drcata	nach@netscape.com				

.

drcatanach@netscape.com E-Mail Address

Date

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

#### **APPLICATION FOR AUTHORIZATION TO INJECT**

I.	PURPOSE:      Secondary Recovery      Pressure Maintenance       XDisposal      Storage         Application qualifies for administrative approval?      Yes      No								
II.	OPERATOR: Crain's Hot Oil Service, Inc.								
	ADDRESS: P.O. Box 613 Lovington, New Mexico 88260								
	CONTACT PARTY:Mr. David CatanachPHONE:								
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? <u>Yes</u> <u>X</u> o <sup>*</sup> If yes, give the Division order number authorizing the project: <u>*Application to Amend Order No. SWD-1158-B</u>								
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:								
	<ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,</li> <li>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.).</li> </ol>								
*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:								
	SIGNATURE: DATE: DATE: DATE:								
	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.

June 20, 2012

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: Application to Amend Order No. SWD-1158-B 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,

By Order No. SWD-1158-B dated 12/18/2011, the Division authorized Crain's Hot Oil Service, Inc. ("Crain") to re-enter and utilize its Gulf Deep Well No. 1 (API No. 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, as a produced water disposal well, injection to occur into the Devonian formation the perforated interval from 12,920 feet to 13,230 feet.

Crain has recently completed re-entry operations on the subject well. Upon reentry of the Gulf Deep No. 1, Crain found the well to be deeper than originally thought, and as a result, the well was perforated in the interval from 13,221 feet to 13,246 feet, or approximately 16 feet deeper than Order No. SWD-1158-B authorized. In addition, log data shows that the top of the **Devonian** formation, which was originally estimated to be at a depth of 12,900 feet is actually at a depth of 12,206 feet. As a result, Crain would like to perforate an additional **Devonian** section from 12,206 feet to 12,234 feet.

Consequently, Crain hereby requests an amendment to Division Order No. SWD-1158-B to authorize a change in the injection interval as follows:

#### Currently Authorized Injection Interval: 12,920'-13,230'

Requested Injection Interval: 12,206'-13,246'

South to 12

Attached please find a Compensated Neutron Gamma Ray/CCL Log section that was run on this well on May 24, 2012. This log shows the top of the <del>Devonian</del> formation at a depth of 12,206 feet, and also shows the proposed new injection zone from 12,206'-12,234 feet.

MISS

The requested amendment of Order No. SWD-1158-B has no affect on "Area of Review" or any other data provided in the C-108 application filed by Crain on 12/1/2011.

Attached to this application are the following documents:

Form C-108 Amended Injection Well Data Sheet Revised Wellbore Schematic Diagram Devonian Top & Bottom Log Section Copy of Order No. SWD-1158-B

Notice of this requested amendment is being provided to all offset operators/leasehold owners (see attached map & notice list). Also, notice by publication will be run in the Roswell Daily Record.

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

Sincerely, auid atan

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

Xc: OCD-Hobbs

# **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 FOOTAGE LOCATION	C UNIT LETTER	34 SECTION	14 South TOWNSHIP	<u>31 East</u> RANGE
<u>WELLBORE</u>	<u>SCHEMATIC</u>	<u>WEL</u>	<u>L CONSTRUC</u> Surface Ca		
See Attached	Wellbore Schematic	Hole Size: $17 \frac{1}{2}$		Casing Size: <u>13_3/8</u>	<u>8" @ 428'</u>
		Cemented with: 550	<u>Sx.</u>	or	ft <sup>3</sup>
		Top of Cement:	Surface	Method Determined	d: Circulated
		Hole Size: <u>12 ¼"</u>	Intermediate (	Casing Casing Size: <u>95/8</u>	<u>" @ 3,817'</u>
		Cemented with:	<u>1950 Sx.</u>	or	ft <sup>3</sup>
		Top of Cement:	Surface	Method Determined	d: Circulated
			Production Cas	sing	
		Hole Size: $8\frac{1}{2}$ $1^{st}$ -80 Cemented with: $2^{nd}$ -90	00 Sx. DV Too 00 Sx.	Casing Size: <u>5 1/2</u> ol @ 8,560' or	2" <u>@ 13,258</u> ' ft <sup>3</sup>
		Top of Cement: <u>4,350</u>	)'	Method Determined	d: <u>CBL</u>
		Total Depth: <u>13,258</u>	, 	PBTD:	
			Injection Interv	zal	

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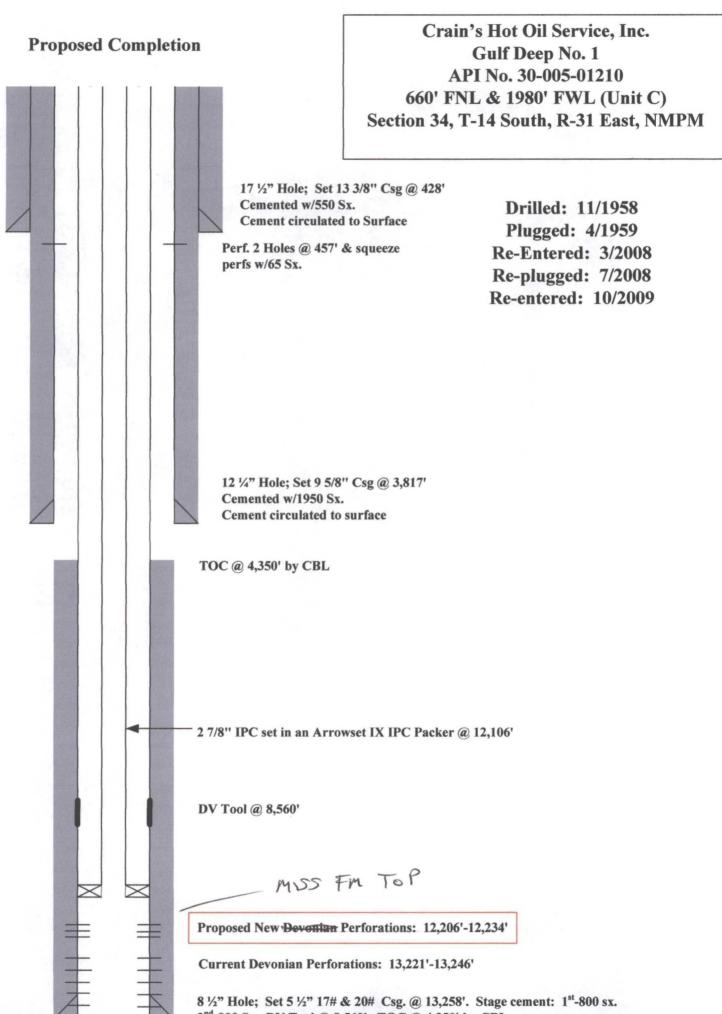
Devonian Formation: 12,206'-13,246'- Perforated

# **INJECTION WELL DATA SHEET**

Tubin	g Size: 2 7/8" Lining Material: Internally Plastic Coated
Туре	of Packer: Arrowset IX IPC
Packe	er Setting Depth: <u>12,106' or within 100' of the uppermost injection perforations</u>
Other	Type of Tubing/Casing Seal (if applicable): None
	Additional Data
1.	Is this a new well drilled for injection:YesYesNo
	If no, for what purpose was the well originally drilled: <u>Well was originally drilled in 1958 as a Morrow test.</u> <u>Well was plugged in 1959. Well was re-entered in 2008 to test the San Andres formation. Well was re-plugged in 2008.</u> <u>Well was again re-entered in 2009 and completed as a water disposal well in the San Andres formation.</u>
2.	Name of Field or Pool (if applicable): N/A
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')

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T. D. 13,258

2nd-900 Sx. DV Tool @ 8,560'. TOC @ 4,350' by CBL

# WELL LOGS

	κ <sub>z</sub>				00			
	API number:	30-005-01	210	· · · · · ·			<u> </u>	
<u> </u>	OGRID:		Operator:	CRAINS H	OT OIL SEP			
	OOMD.		Property:	GULF DE				# 1
		L	Flopeny.		<u>аГ</u>			# 1
a	LU CTD	C	24	<del>-</del>	14S		245	ı
surface	ULSTR:	<u> </u>	34	FNL		FWL	31E	J
			000		1900			
BH Loc	ULSTR:	C	34		14S	D	31E	1
DITLUC	ULSTR.						516	J
			660	FNL	1980	FWL	-	
G	ound Level:	4412	DF:	4429	KB:	4431		
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L	Datum.		1	<u>.</u>		15250		
					0		<u> </u>	1
						on Date: (1)	6/4/2012	
	1		1			s Received:	6/22/2012	
	Land:	STATE	1	<b>~</b> /		5 Received:	6/22/2012	
·				Date	Logs/C105		6/24/2012	
Co	nfidential:	NO	l			Date out:		
		period: 90 Da	-					
r		: (1) is equal			days	- <u></u>	·	
	Logs		Depth in					
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CNL/GR			12000					
CBL/GR	/CCL		4350	13220	Cement Bo	nd Gama Ra	ay CCL LOC	i
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	ĸz	OCD TOP						
Rustler		1361	Strawn					
Tansill		2157	Atoka					
Yates			Morrow		_			
7 rvrs		2547						
			Austin				<u>,</u>	
			Chester		11843		r	
Queen		3082	Miss Lime		12233			
Penrose		l	Woodford		ABS	$ \langle \rangle$	$\bigvee \not$	
Grayburg			Devonian		-12820	V/	/	
San And	res	3780				-/	/	
Glorieta		5302						
Yeso		5353						
Blinebry								
Tubb		6616						
Drinkard								
Abo		7392						
Wolfcam	p							
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Submit 1 Copy To Appropriate District Office	State of New Mexico	Form C-103 Revised August 1, 2011
<u>District 1</u> – (575) 393-6161 1625 N. French Dr., Hobbs, NM 88240° <u>District II</u> – (575) 748-1283	Energy, Minerals and Natural Resources	WELL API NO. 30-005-01210
811 S First St, Artesia, NM 88210 <u>District III</u> – (505) 334-6178 1000 R io Brazos Rd, Aztee, NM 87410	OIL CONSERVATION DIVISION 1220 South St. Francis Dr.	5. Indicate Type of Lease STATE FEE
<u>District IV</u> - (505) 476-3460 1220 S. St. Francis Dr., Santa Fc, NM 87505	Santa Fe, NM 87505	6. State Oil & Gas Lease No.
SUNDRY NOTICE (DO NOT USE THIS FORM FOR PROPOSAL DIFFERENT RESERVOIR USE "APPLICAT	S AND REPORTS ON WELLS IS TO DRILL OR TO DEEPEN OR PLUG BACK TO A TON FOR PERMIT" (FORM C-101) FOR SUCH	7. Lease Name or Unit Agreement Name
PROPOSALS) 1. Type of Well: Oil Well Ga	is Well 🛛 Other SWD	8. Well Number 1
2. Name of Operator Crain's Hot Oil Service, Inc.		9. OGRID Number
3. Address of Operator P.O. Box 613 Lovington, New Mex	ico 88260	10. Pool name or Wildcat SWD-Devonian
4. Well Location		
Unit Letter <u>C:61</u> Section 34	50' feet from the <u>North</u> line and <u>19</u> Township 14 South Range 31 East	
	1. Elevation (Show whether DR, RKB, RT, GR, etc. ,415'	

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

NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK D PLUG AND ABANDOD TEMPORARILY ABANDON CHANGE PLANS PULL OR ALTER CASING MULTIPLE COMPL DOWNHOLE COMMINGLE		SUBSEQUENT REPORT OF: REMEDIAL WORK	
		OTHER: Complete for Use as Disposal Well	3
	1		

 Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

4/24/12- 6/4/12: MIRU service rig. Pulled injection tubing and packer. Squeeze hole in casing at 455' with 150 sx. Class C cement. Drilled cement plugs at 4,750', 8,700', and 9,700'. Rig down pulling unit. Rigged up drilling rig and drilled cement plug at 13,030'. Cleaned out old hole to 13,258'. Ran 5-1/2" 17# and 20# casing from 13,258' to surface. Rig up Schlumberger, pumped 800 sx. Class H cement. Opened DV tool at 8,560' and circulated 40 sx. cement to pit. Pumped 900 sx. Class H cement. Rigged down drilling rig.

MIRU pulling unit. Drilled out cement and DV tool at 8,670 to 8,671'. Drilled float shoe at 13,218'. Cleaned out to 13,258'. RU Gray wire line. Ran compensated neutron log. Ran cement bond log from 13,250' to top of cement at 4,350'. Perforated from 13,221' to 13,246' w/ 6 spf, total of 150 shots. RU Crain acidizing, pumped 3000 gal 15% acid. TIH/W 2-7/8" X 5-1/2" AS 1X IPC packer, 434 jts 2-7/8" IPC tubing. Set packer at 13,152' (69' above top perf.) Notified OCD that MIT test would be run. OCD authorized MIT to be run, but did not witness test. Pressure tested casing to 540 psi. for 30 min. Tested good.

Put well to inj	ection.				
,	Non-well	Pod # 28369	196		
Spud Date:		Rig Release Date:			
				SWD-1	158-B
I hereby certif	y that the information above i	s true and complete to the best of my	y knowledge and belief.		
SIGNATURE	Douid atama	<u>TITLE Agent-Crain's</u>	Hot Oil Service, Inc.	DATE 6/20/	112
Type or print	name <u>David Catanach</u>	_ E-mail address:dicatanach@n	elseupe.comPHC	ONE: (505) 690-9453	
For State Use	+ Chan	TITLE STA	ATINGZ_	DATE6-26	2012
Conditions of	Approval (if any): PA Su	D: San Andres		JUN 2.E	5 2012

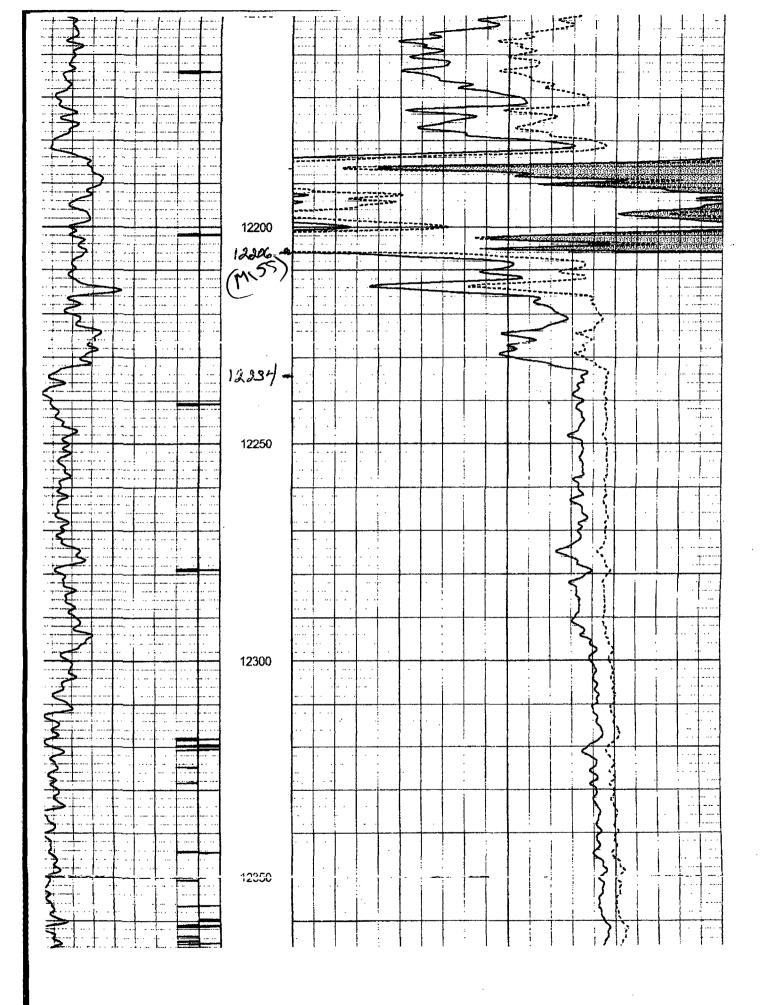
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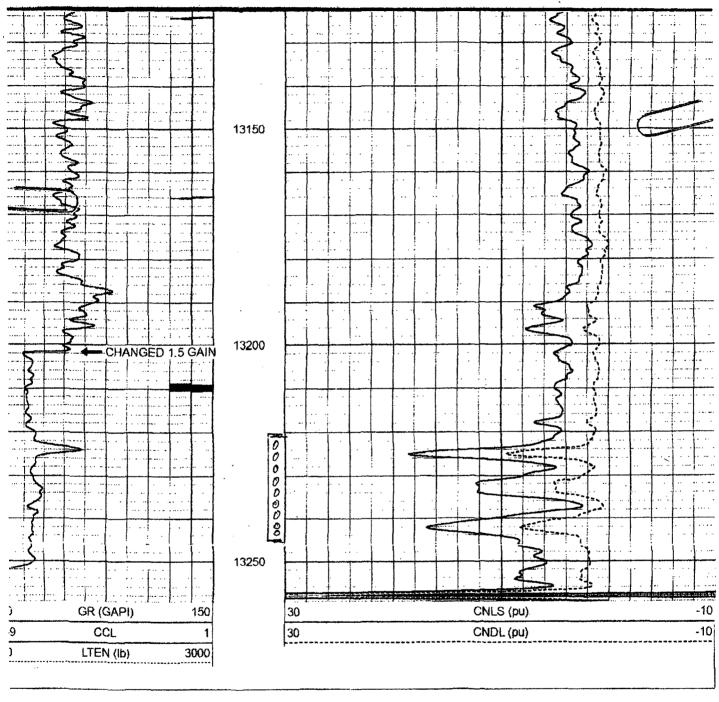
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		<b>PA</b> RELINE Archer			SATED MA RAY LOG		
	service 1	Company Well Field County	CRANE HO GULF DEE WILDCAT CHAVES		RVICE		1EXICO
	CRANE HOT OIL GULF DEEP NO. WILDCAT CHAVES NEW MEXICO	Location:	660' FN	API#: 3 L& 1980'F\ P 14S RG	80-005-01210 ML		Other Services
		Permanent Da Log Measured Drilling Measu	tum GR From K.B rred From KEI	OUND LEVE . 15.5' LLY BUSHIN	EL Elevation	4412'	K.B. 4430.5' D.F. 4429' G.L. 4412'
	Date		24 MAY 201	12			
	Run Number		ONE				
	Depth Driller		13.229'				······
	Depth Logger	r	13250'			i	
	Bottom Logged Inte	rval	13250'			,	
	Top Log Interval		12000'				
	Open Hole Size		7.875"				
	Type Fluid	· · · · · · · · · · · · · · · · · · ·	WATER			i	
	Density / Viscosity		N/A				
	Max. Recorded Ten	np.	N/A				
	Estimated Cement	Тор	N/A				
	Time Well Ready		ROA			ļ	
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	Witnessed By		MR. M. HOP				
· · ·	and the second se	orehole Record	· · · ·	<u> </u>	Casing	Record	
· ·		Bit From	То	Size	Weight	From	To
				5.5"	17/20#	0'	T.D.
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	l!		<u> </u>		· · ·	ļ	

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Database:C:\Warrior\Data\cranehosgulf152412cnl.db .og Variables Dataset: field/well/run1/pass4 **Top - Bottom** CMTTKCOR CASETHCK CSTKCOR SZCOR CMNTTHCK CASEOD CASED? NPORSEL in in in On 1.188 0.304 5.5 On On Yes Limestone PERFS TDEPTH BOTTEMP BOREID ft degF in 0 0 100 7.875

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## <u>CERTIFIED MAIL RETURN RECEIPT REQUESTED</u>

TO: Offset Leasehold Owners/Surface Owner

Re: Crain's Hot Oil Service, Inc.
NMOCD Form C-108 (Application to Amend SWD-1158-B)
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-B dated December 18, 2011. Order No. SWD-1158-B authorized the use of the Gulf Deep Well No. 1 as a produced water disposal well, injection to occur into the Devonian formation through the perforated interval from 12,920 feet to 13,230 feet. Crain's Hot Oil Service, Inc., the current operator of the well, now seeks to expand the Devonian injection interval so as to comprise the perforated interval from 12,206 feet to 13,246 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 Agent for Crain's Hot Oil Service, Inc. P.O. Box 613 Lovington, New Mexico 88260

Enclosure

Crain's Hot Oil Service, Inc. Application to Amend Order No. SWD-1158-B 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

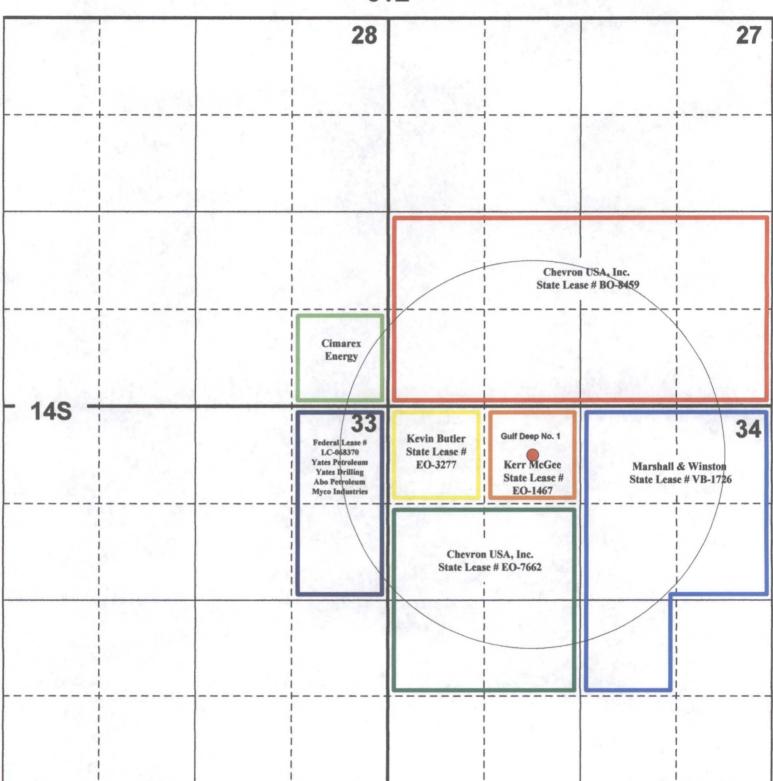
Cimarex Energy, Inc. 600 N. Marienfeld, Suite 600 Midland, Texas 79701

#### 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



Application to Amend SWD-1158-B Crain's Hot Oil Service, Inc. Gulf Deep Well No. 1 1/2 Mile Notice Area Lessee Identification

31E

Form C-108 (Application to Amend Order No. SWD-1158-B) 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

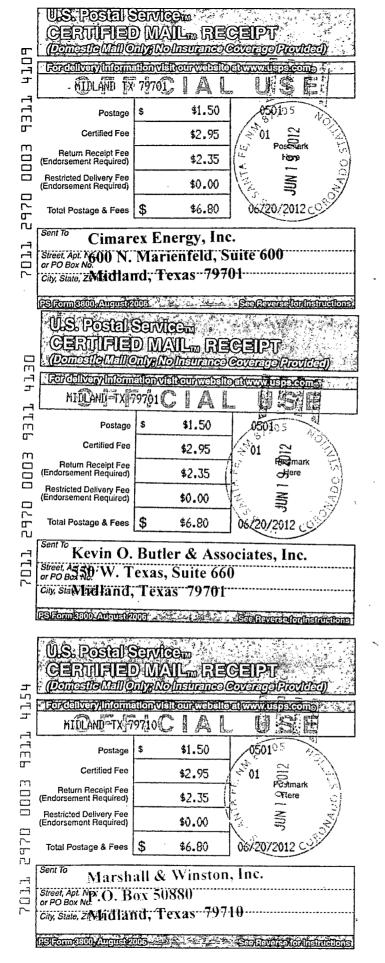
A copy of the Affidavit of Publication will be provided to NMOCD upon receipt by Crain's Hot Oil Service, Inc.

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 to amend Division Order No. SWD-1158-B dated 12/18/2011, which order authorized the use of the Gulf Deep Well No. 1 (API No. 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, as a produced water disposal well, injection to occur into the Devonian formation through the perforated interval from 12,920 feet to 13,230 feet. Applicant now seeks to expand the injection interval to comprise the Devonian formation from 12,206 feet to 13,246 feet.

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.



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## Jones, William V., EMNRD

From:David Catanach [drcatanach@netscape.com]Sent:Monday, July 02, 2012 8:45 AMTo:Jones, William V., EMNRDSubject:Crain-Publication NoticeAttachments:Publication Notice.pdf

Will,

Attached is the publication notice for the Crain's Hot Oil Service's application to amend SWD-1158-B for the Gulf Deep No. 1

The ad ran on June 22, 2012

If anything else is needed, let me know.

David

Netscape. Just the Net You Need.

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#### AFFIDAVIT OF PUBLICATION STATE OF NEW MEXICO

I, Corinna Martinez Legals Clerk

Of the Roswell Daily Record, a daily newspaper published at Roswell, New Mexico do solemnly swear that the clipping hereto attached was published in the regular and entire issue of said paper and not in a supplement thereof for a period of:

one time with the issue dated

June 22, 2012

Clerk

Sworn and subscribed to before me

this 27th June 2012 Notary Public

My Commission expires June 13, 2014

(SEAL)

Publish June 22, 2012

Crain's Hot Oil Services, 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 to amend Division Order No. SWD-1158-B dated 12/18/2011, which order authorized the use of the Gulf Deep Well No. 1 (API No. 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, as a produced water disposal well, injection to occur into the Devonlan formation through the perforated interval from 12,920 feet to 13,230 feet. Applicant now seeks to expand the injection interval to comprise the Devonlan formation from 12,206 feet to 13,246 feet.

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.

Inspected 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

#### Jones, William V., EMNRD

From:Jones, William V., EMNRDSent:Tuesday, May 01, 2012 9:10 AMTo:Gonzales, Elidio L, EMNRDCc:Warnell, Terry G, EMNRDSubject:SWD-1158-B Gulf State well (Crain's Hot Oil Service)

Hello EL,

The Crain people called this AM about not getting the 5-1/2 inch all the way to TD. They say they got to 13150 feet instead of 13230 feet.

Looks like this was to be a perforated disposal interval in the Devonian formation.

Looks fine to me if they want to perforate the top part of the interval and, because the casing did not go all the way to TD, inject open hole in the lower part of the interval – drill out the shoe.

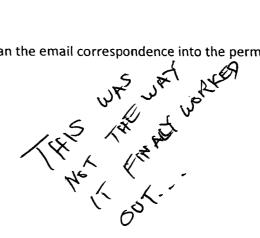
The permitted interval would remain the same as in the SWD-1158-B: (approx) 12920 to 13230 feet.

If you agree, please let they know all is well and, in lieu of amending the permit, I will scan the email correspondence into the permit file.

If you want to go another route, and it involves a permit change, let me know.

I am deferring any correspondence with them to yourself.

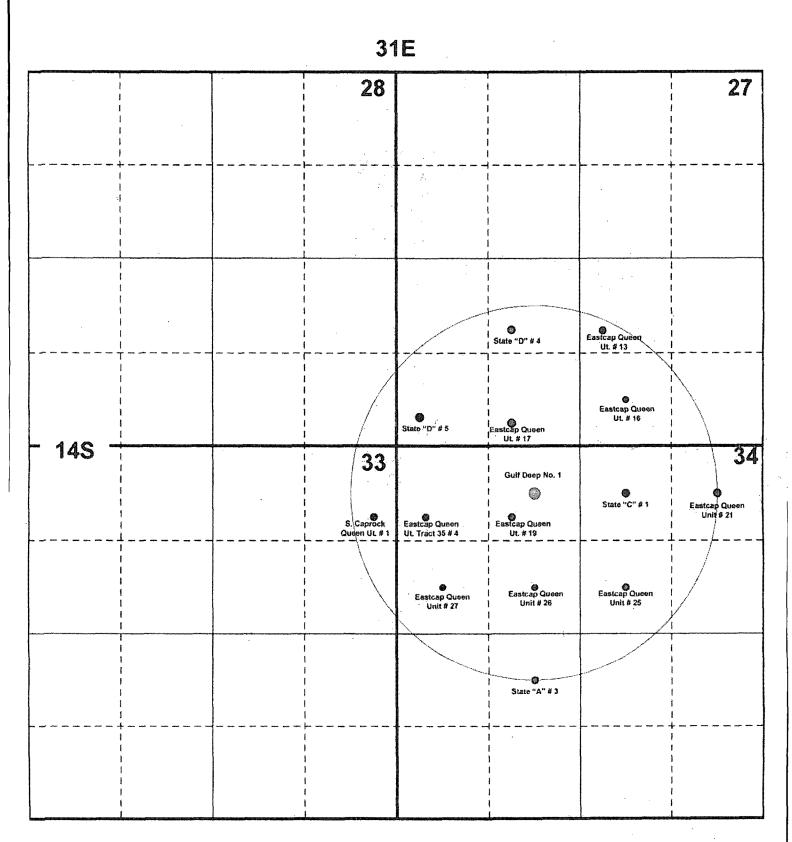
Will



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

API NUMBER	OPERATOR	LEASE	WELL	WELL	STATUS	FTG.	N/S	FTG.	E/W	UNIT	SEC.	TSHP	RNG:	DATE	TOTAL	COMPLETION	REMARKS
		NAME	NO.	TYPE		N/S		E/W						DRILLED	DEPTH		
30-005-01187	Union Oil Company of California	S. Caprock Queen Ut. Tr. 7A	1	1	_ 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	Р	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	1	PA	1980'	Ν	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	Р	PA	660'	N	1980'	E	В	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	1	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		PA	1980'	N	660'	w	E	34	145	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		PA	1980'	N	1980'	w	F	34	145	31E	Feb-56	3,103'	3,082'-3,103' O.H.	Caprock-Queen Poot. Well PA'd 2/1975
30-005-01207	Lewis B. Burleson, Inc.	State "A"	3	1	PA	1980'	S	1980'	E	к	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		PA	990'	N	1650'	w	č	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	ł	.PA	460'	S	330'	w	м	27	14S	31E	Aug-56	3,108'	3,085'-3,092' Perf.	Caprock-Queen Pool. Weil PA'd 5/1986
30-005-01146	Miller & Miller Auctioneers, Inc.	Eastcap Queen Ut.	17	1	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	1	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		PA	1650'	S	1650'	w	к	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		PA	660'	S	1980'	E	0	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 Application Crain's Hot Oil Service, Inc. Gulf Deep Well No. 1 ½ Mile Area of Review Map

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July 30, 2012

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

Attention: Mr. William Jones

Re: Application to Amend Order No. SWD-1158-B 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 Mr. Jones,

Pursuant to your E-mail directive dated 7/26/2012, Crain's Hot Oil Service, Inc. has provided additional notice by certified mail to all offset leasehold owners and surface owner of the change in injection formations within the Gulf Deep Well No. 1. All parties have been notified that injection will occur into the Chester, Mississippian and Devonian formations through the perforated interval from 12,206'-12,234' and 13,221'-13,246'. We also request that the injection interval comprise the Chester, Mississippian, Woodford and Devonian formations throughout the interval from 12,206'-13,246 feet in the event additional intervals are perforated in the well in the future.

Attached is a copy of the notice letter, and a notice list.

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

Sincerely, la L Suid

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

#### July 30, 2012

#### <u>CERTIFIED MAIL</u> <u>RETURN RECEIPT REQUESTED</u>

TO: Offset Leasehold Owners/Surface Owner

Re: Crain's Hot Oil Service, Inc.
NMOCD Form C-108 (Application to Amend SWD-1158-B)
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 Sir:

By Order No. SWD-1158-B dated December 18, 2011 Crain's Hot Oil Service, Inc. ("Crain"), was authorized to complete its Gulf Deep Well No. 1 as a produced water disposal well, injection to occur into the Devonian formation from 12,920 feet to 13,230 feet.

On June 20, 2012 Crain filed an application to amend Order No. SWD-1158-B to authorize the addition of injection perforations in the Devonian formation from 12,206 feet to 12,234 feet, and from 13,230 feet to 13,246 feet. Crain previously provided you a copy of that application.

OCD recently informed Crain that according to its geologic interpretation, the proposed additional perforations from 12,206 feet to 12,234 feet are actually within the Chester and Mississippian formations, and not the Devonian formation. OCD also requested that Crain provide additional notice to offset leasehold and surface owners of the change in injection formations prior to approval of the application.

In summary, Crain requests approval to amend Order No. SWD-1158-B to authorize injection within the following intervals:

Chester/Mississippian Formations	12,206'-12,234'
Devonian Formation	13,221'-13,246'

In the event additional Chester/Mississippian/Woodford/Devonian intervals are perforated in the future, Crain requests that the injection interval within the Gulf Deep Well No. 1 comprise the entire interval from 12,206 feet to 13,246 feet.

Crain's Hot Oil Service, Inc. Application to Amend SWD-1158-B Gulf Deep Well No. 1 July 30, 2012 Page 2

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, build atan

David Catanach Agent for Crain's Hot Oil Service, Inc. P.O. Box 613 Lovington, New Mexico 88260 Crain's Hot Oil Service, Inc. Application to Amend Order No. SWD-1158-B Notice of Change of Formation 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

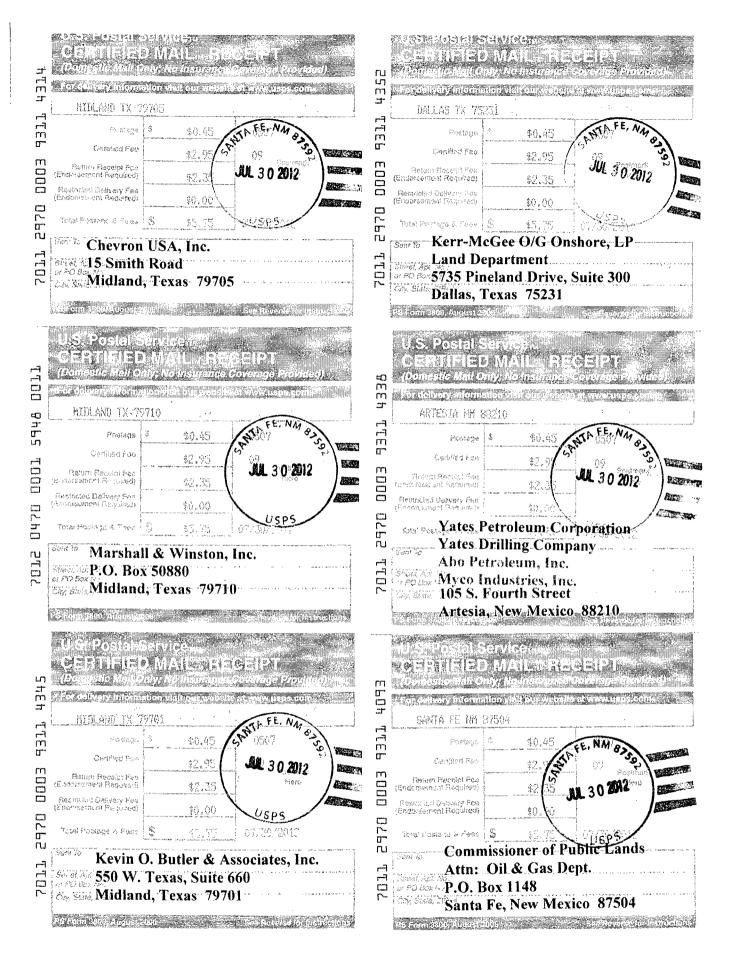
Cimarex Energy, Inc. 600 N. Marienfeld, Suite 600 Midland, Texas 79701

#### 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



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Injection Permit Checklist (11/15/2010) SWD 1158 ermit Date WFX PMX IIC Of # Wells Well Name(s): JULF 01210 1958 (UIC primacy March 7, 1982) API Num: 30-005-Spud Date: New/Old: C Sec 34 TSp 14-S Rge 315 KOFN 801 HAVES Footages County ( Unit General Location: S SERVICE KrA. Hor Oil Operator: LNC Contact GE 1S 5.9 OK? OGRID: 2RULE 5.9 Compliance (Wells (Finan Assur) DUSING Well File Reviewed Current Status 1.00 DEVONIAN Planned Work to Well: After Conversion Diagrams: Before Conversion Elogs in Imaging File Determination Sizes Setting Stage Cement Well Details: Hole,.....Pipe Depths Tool Sx or Cf Method 2/8 New \_\_\_\_\_Existing \_\_\_\_\_Surface 7 550 /z 675 950 q New\_Existing 12 E 500 2 600 Existing LongSt New\_Existing l ine New\_Existing VOpenHole 6 150 Ore ROCK **Depths/Formations:** Depths, Ft. Formation Tops? EST. DEV 200 Formation(s) Above 96 Injection TOP 220 OpenHole Perfs Max. PSI 2820 **CHICK BOTTOM** Tubing 🚮 Packer Dept Formation(s) Below 55 Salado Top/Bot <del>Gliff Honse</del> Capitan Reef olash toticed? **loticed** Fresh Water: Depths: R 26 DGLU \_Formation Wells? nalysis? Affirmative Statement CONFERCIP **Disposal Fluid Analysis?** Sources: SHE No Production Potential/Testing **Disposal Interval: Analysis?** Surface Owner ineral Owner(s Notice: Newspaper Da Cit RULE 26.7(A) Affected Persons: More Producing in Interval? Wellbore Diagrams? AOR: Maps? Well List? WhichWells? .....Active Wells **Repairs?** -9818 GED FLUID KECK Which Wells? .P&A Wells Repairs? Reply: Issues: **Request Sent** SWD\_Checklist.xls/ReviewersList 12/6/2011/3:57 PM Page 1 of 1