# CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS

Operator: HEADINGTON OIL COMPANY Well: STATE LA	
Contact: ALFRED POWELL Title: DIVISION MOR.	Phone: <u>303-369-8780</u>
DATE IN 8.10.95 RELEASE DATE 8.24.95	
Proposed Injection Application is for:WATERFLOODExp.  Original Order: RSecondary Recovery  SENSITIVE AREASSALT WATER DISPOSAL  WIPPCapitan ReefCommercial Operation	
Capitan Reef Commercial Operation	
Data is complete for proposed well(s)? Additional Data	
AREA of REVIEW WELLS	
<u>S</u> Total # of AOR <u>O</u> # of Plugge	d Wells
Tabulation Complete Schematics	of P & A's
(KS) Cement Tops Adequate NOAOR Repair	Required
INJECTION INFORMATION	
Injection Formation(s) WocfCamp	
Source of Water AREA WOLFGAMP PRODUCTION	Compatible 11 Es
PROOF OF NOTICE	
Copy of Legal Notice (K) Information	Printed Correctly
Correct Operators 45 Copies of C	ertified Mail Receipts
Objection Received Set to Hear	ing Date
NOTES:	
APPLICATION QUALIFIES FOR ADMINISTRATIVE AS COMMUNICATION WITH CONTACT PERSON:  1st Contact:TelephonedLetter Date	

sue 8-24-95

# **HEADINGTON OIL COMPANY**

7114 W. JEFFERSON AVENUE, SUITE 213 DENVER, CO 80235 PHONE (303) 969-8280 FAX (303) 969-8201

9 52

August 8, 1995

Oil & Gas Conservation Division P.O. Box 2088 Santa Fe, New Mexico 87504-2088

Re: Application for SWD - State Land 76 Lease Lea County, NM

## Gentlemen:

Enclosed in the information required for a salt water disposal application for the State Land 76 lease, N. Anderson Ranch Field. Lea County, New Mexico.

The proposed SWD well is to be used only be our own producing wells on the same lease. Currently, these wells produce 80-100 BWPD. The water is to be re-injected in the Wolfcamp formation being produced in the State Land #5 and #1 wells. We have notified all land owners and operators within 1/2 mile radius and published the proposal in the Lovington newspaper. We have had no negative response. It is our belief the well will take the water with 0 surface pressure, but at maximum of 500 psi.

I believe all the information required for administrative approval is included herein.

Sincerely,

Affred R. Powell Division Manager

# OIL CONSERVATION DIVISION PO BOX 2088 SANTA FE, NM 87504-2088

FORM C-108 Revised 7-1-81

# **APPLICATION FOR AUTHORIZATION TO INJECT**

I.	PURPOSE: Secondary Recovery X Pressure Maintenance X Disposal Storage Application qualifies for administrative approval? XYes No
II.	OPERATOR: Headington Oil Company
	ADDRESS: 7114 W. Jefferson Ave., Suite 213 - Denver, CO 80235
	CONTACT PARTY: Alfred R. Powell PHONE:303-969-8280
III.	WELL DATA: Complete the data required on the reverse side of this form for each well processed 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
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 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/1 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. (none)
* 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. (None)
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: Alfred R. Powell TITLE: Division Manager
	SIGNATURE: DATE: 8/8/95
*	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 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:

- 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, PO Box 2088, Santa Fe, NM 87504-2088 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.

	WELL NO.	OPERATOR
	ω	He
FOOTAGE LOCATION	660' FEL & 4720' FSL	Headington Oil Company
		LEASE
SECTION	2	S
TOWNSHIP	168	State Land 76
RANGE	32E	

Schematic

# Well Construction Data

9814 feet to 9872 (p.f.) (perforated or open-hole; indicate which)	Injection Interval	Total Depth 10,626	Hole Size7 7	<b>TOC</b> 7550	Size 5 1/2	Long String	Hole Size 12 1/4	TOC surface	Size 8 5/8"	Intermediate Casing	Hole Size 17 1/2"	TOC surface	Size 13 3/8 *	Surface Casing
			7/8	feet determined by _	Cemented with			feet determined by <u>circulated</u>	Cemented with			feet determined by circ	Cemented with	
feet				temp survev	850 sx.	•		circulated	2450 sx.			circ to surface	400 sx.	

# **INJECTION WELL DATA SHEET**

Tubing Size	g Size $2 \ 3/8$ Ined with	none	set in a
Be	Baker Model R inj packerat	(type of internal coating) at 8250'	feet
Other	Other type of tubing / casing seal if applicable annulus	annulus filled w/fresh water w/corrosion	ater w/corrosion
Other Data			
<del>. *</del>	Is this a new well drilled for injection? Yes	Yes X No	
	If no, for what purpose was the well originally drilled?	? production	
ю	Name of the injection formationWolfcamp		
ယ	Name of Field or Pool (if applicable) Anderson Ranch	n Ranch	
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. no; Wolfcamp	(s)? List all such perforated in used. no; Wolfcamp	itervals and
	9814-21', 9836-40', 9862-66', 9868-72'	68-72'	
Ċħ	Give the names and depths of any over or underlying oil of gas zones (pools) in this area.	g oil of gas zones (pools) in the	ils area.
	Canyon 10,460'		
	Devonian 13,330'		

# INJECTION WELL DATA SHEET

	32E	RANGE
State Land 76	168	TOWNSHIP
Sta	2	SECTION
LEASE		
Headington Oil Company	660' FEL & 4720' FSL	FOOTAGE LOCATION
Неа	ന	
OPERATOR	WELL NO.	

Schematic

# Well Construction Data

# Surface Casing

Size	13 3/8	Cemented with	400 sx.
10C	surface	feet determined by_	feet determined by circ to surface
Hole Size	17 1/2"		
Interme	Intermediate Casing		
Size	8 5/8"	Cemented with	2450 sx.
100	surface	feet determined by <u>circulated</u>	circulated
Hole Size	la 1/4		dissertion in different or
Long String	ing		•
Size	5 1/2	Cemented with	850 sx.

 Size
 5 1/2
 \*\* Cemented with
 850
 sixe

 TOC
 7550
 feet determined by temp survey

 Hole Size
 7 7/8

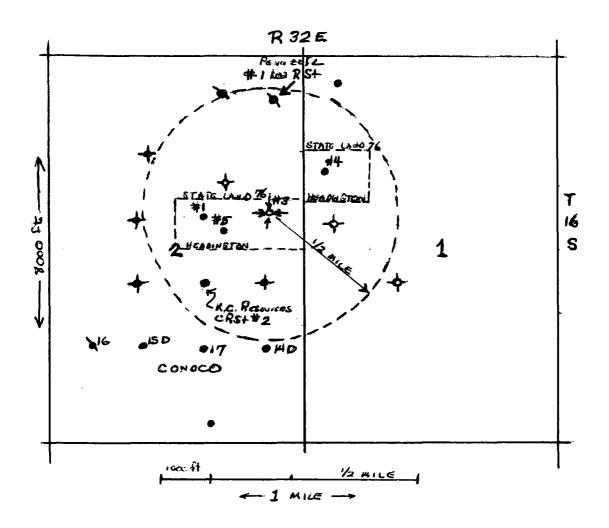
 Total Depth
 10,626

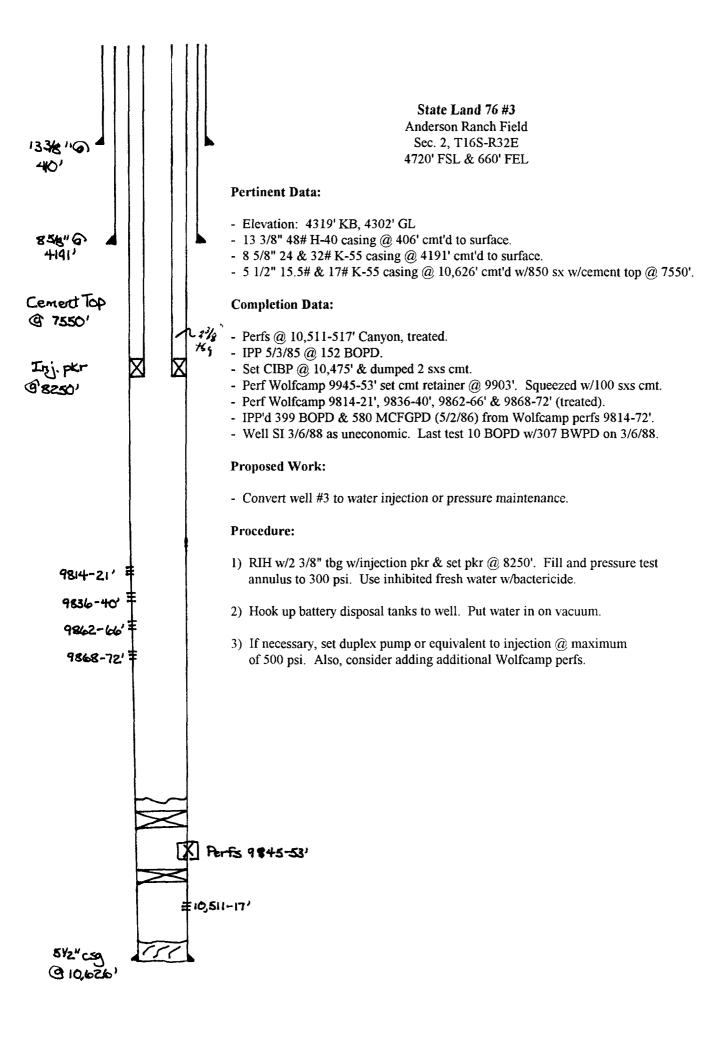
Injection Interval

 $\frac{9814}{\text{(perforated or open-hole; indicate which)}} \frac{9872 \, (\mathrm{nf})}{\text{feet}}$ 

# Attachment Application for Authority to Inject State Land 76 Well #3

- III Well Data attached.
- V Map of wells within 1/2 mile attached.
- VI Schematic of nearby wells attached.
- VII 1) Inject 100 BWPD @ 0-50 psi
  - 2) Closed system
  - 3) Average = 50 psi, maximum = 500 psi
  - 4) Injected water going into same zone being produced
  - 5) Same zone no analysis required.
- VIII Included in previous submittals. No nearby aquifers immediately underlying or overlying injection zone. 8 5/8" surface casing cemented to surface at 2450' to protect all potential fresh water aquifers.
- IX None
- X Logs filed previously.
- XI No fresh water wells nearby.
- XII No connection is evident between producing and disposal zone with any other formations or fresh water sources. No open faults are evident.
- XIII Proof of Notice attached letters and legal ad.





CR STATE #2 3300 FSL & 1980 FGL Comp 1985 133/8" 584 @ 628 84 cutil w/GSOSX 95/8" csy@ 4190 ft cat'd w/32005x Calc TOC. @ < 8955 pf's 9718 -9804' 51/2" cs 4 @ 13362 cutil W/102554

K.C. RESCURCES

PENN ZOIL OIL COMPANY #1 LEAR State (TAO) 990' FNL & 660' FEL Comp 1958 133/8 C 611ft cut'd w/7258x 4518 coye 4174 Ft cat il w/2770x CALC TO.C. C 6603 ft 2 WOLFCAMP 8950' E Welfersp 9828-62

13391-420

cutil w/1250 SX

7"@

13341

HEADINGTON PRODUCING WELLS State Load 76 \*5 STATE LAND 76 # 4 STATE LAND 16#1 SEC 2 TI65 R32G SECT TIES 7326 560 2 TIGS R32E Comp 2/8/85 4820 FSL - 1980 FEL 133/8" 133/8" 133/8 " 255 cost & 415 contid to ste ujuosia 0040 405 0012 w/ 2 513 Cate sfe w/ secon 85/8"cs4 848 € € 45 8 exacs @ 4200' cut'd 4202 cutd 1-1-1 w/2500 WIZLOOSK to stechtowar ex to sfc cale T.O.C. @ 65cc' I T.S. TOC @ sq 2'L R 6400 st 6735 4/ Wolfen inf withenp Cake 8520' T.O.C. @ 8900'z. 8913+ 9673-STEEL W/NO IX 9749 9470-458 Wolfrup 8910 9810-82 6920 W/1255A CIBPE 9742-9852 16460 ' CANGON 10478 CANYGA 50 sk 闺 10460' 10484-94 = 10462 -10476' PBTO ( 51/2" 25 g 10580 51/2 "csq 51/2" cr 4 @ 10629' cut'd @10200'cut'd plus @13395 cutidu/3004 W/350sx

w/10505x

500 sx Rem DV@ 4296 H

# Affidavit of Publication

STATE	OF	NEW	MEXICO	)	
				)	SS.
COUNT	v o	E LEA	Δ	)	

being first duly sworn on oath deposes and says that he is **Adv. Director** of THE LOVINGTON DAILY LEADER, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled Notice
**************************************
CONTRACTOR Was published in a regular and
entire issue of THE LOVINGTON DAILY LEADER and
not in any supplement thereof, once weath week with the
sakkaxakaxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
consecurity was beginning with the issue of
June 8 , 19 95
and ending with the issue of
June 8 19 95
And that the cost of publishing said notice is the 8.02 sum of \$
which sum has been (Paid) (Assessed) as Court Costs
Subscribed and sworn to before me this 11th
day of
Notary Public, Lea County, New Mexico

Sept. 28

## **LEGAL NOTICE** NOTICE Headington Oil Company 7114 W. Jefferson Ave. Denver, CO 80235 Attn: Al Powell (303) 969-8280 Headington is proposing to install a disposal well in it's State Land 76 Lease #3 (SE/NE Sec. 2, T16S-R32E in the Wolfcamp formation at 100-150 BWPD @ 50-500 psi. Any objections or requests for hearing should be filed with the Oil Conservation Div.; 2040 S. Pacheco, Santa Fe, NM 87505, within 15 days. Published in the Lovington Daily Leader June 8, 1995.

# HEADINGTON OIL COMPANY

7114 W. JEFFERSON • SUITE 213 DENVER, COLORADO 80235 (303) 969-8280 • FAX (303) 969-8201

June 13, 1995

Bob Eidson Eidson Ranch Inc. P.O. Box 1286 Lovington, NM 88260

Dear Mr. Eidson:

Headington Oil Company is proposing to utilize it's well #3 to dispose it's produced water from well #1, #4 & #5 on the State Land 76 lease back into the Wolfcamp zone at the same depth. There will be no changes at the surface and the produced water will go through a closed system. This will actually decrease the truck traffic on the property, which will be to everyone's benefit. It also will help the wells to remain economic by eliminating the hauling costs.

If you have any questions or objections, please notify us.

Sincerely,

(Alfred R. Powell Division Manager

505-396-4137

# HEADINGTON OIL COMPANY

7114 W. JEFFERSON • SUITE 213 DENVER, COLORADO 80235 (303) 969-8280 • FAX (303) 969-8201

June 13, 1995

K.C. Resources, Inc. 2533 S. Highway 101 Suite 260 Cardiff, California 92007

### Gentlemen:

Headington proposes to dispose of it's produced water (100 BWPD) in the Wolfcamp formation in it's State Land 76 #3 well. The produced waters are primarily from the Wolfcamp in it's #1 and #5 (see map) wells. The zone will take the water at little, if any pressure.

K.C. Resources has a producing well 3/8 of a mile from the disposal site. Headington's own wells are within 1/4 mile or less in the same general direction, so the minor amount of disposal should be positive pressure maintenance for Headington's wells. We do not believe K.C. Resources' well will be affected, but if so, it will be positive for the oil production.

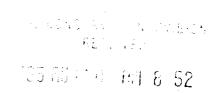
If you do not object, there is no need to reply. If you do have questions, please call me at (303) 969-8280.

Sincerely,

Akred R. Powell Division Manager

# **HEADINGTON OIL COMPANY**

7114 W. JEFFERSON AVENUE, SUITE 213 DENVER, CO 80235 PHONE (303) 969-8280 FAX (303) 969-8201



August 8, 1995

Oil & Gas Conservation Division P.O. Box 2088 Santa Fe, New Mexico 87504-2088

Re: Application for SWD - State Land 76 Lease Lea County, NM

### Gentlemen:

Enclosed in the information required for a salt water disposal application for the State Land 76 lease, N. Anderson Ranch Field, Lea County, New Mexico.

The proposed SWD well is to be used only be our own producing wells on the same lease. Currently, these wells produce 80-100 BWPD. The water is to be re-injected in the Wolfcamp formation being produced in the State Land #5 and #1 wells. We have notified all land owners and operators within 1/2 mile radius and published the proposal in the Lovington newspaper. We have had no negative response. It is our belief the well will take the water with 0 surface pressure, but at maximum of 500 psi.

I believe all the information required for administrative approval is included herein.

Sincerely,

Affred R. Powell Division Manager



GOVERNOR

# STATE OF NEW MEXICO

# ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

# OIL CONSERVATION DIVISION HOBBS DISTRICT OFFICE

8/21/95

14 8 52

JA DIVISION

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: and my recommendations are as follows: dars on PiA well W156 Yours/very truly,

Zerry Sexton

Supervisor, District 1