

APPLICATION FOR AUTHORIZATION TO INJECT

10 JAN 25 AM 9 52

- I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no
- II. Operator: Kelt Oil & Gas, Inc.
Address: P. O. Box 1493, Roswell, New Mexico 88202
Contact party: Mark A. Degenhart Phone: (505) 398-6166 or 622-5324
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☒ yes ☐ no
If yes, give the Division order number authorizing the project R-9029.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
- I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- Name: Mark A. Degenhart Title: Petroleum Engineer
Signature: Mark A. Degenhart Date: January 18, 1990
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

III. WELL DATA

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

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

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

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

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

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

SUPPLEMENTAL DATA REQUIRED BY FORM C-108

- I. See Form C-108.
- II. See Form C-108.
- III. Attached hereto is data required for the well proposed for injection.
- IV. See Form C-108.
- V. Attached hereto is a map that identifies all wells and leases within two miles of the proposed injection well with a one-half mile radius circle drawn around the proposed injection well. The injection well is colored in blue.
- VI. Attached hereto is tabulation of data on all wells within the area of review.
- VII. Data on the proposed operation:
 - 1. The average injection rate is estimated to be 350 barrels of water per day; the maximum is projected to be 700 barrels of water per day.
 - 2. The proposed waterflood system shall be a closed system.
 - 3. It is proposed that water will be injected at an average surface pressure of 300 psig or 0.09 psi per foot of depth. Maximum surface pressure is not expected to exceed 0.2 psi per foot of depth.
 - 4. The water to be used for injection will be re-injected produced water from surrounding wells.
 - 5. Not applicable.
- VIII. Geological data on the injection zone including appropriate lithologic detail, geological name, thickness and depth was previously submitted in June 1989. The engineering and geological report submittal is titled, "Waterflood Feasibility and Unitization Study--Proposed Cato San Andres Unit."

- IX. The proposed stimulation program, if any, will consist of acid treatments to remove both scale and paraffinic deposits. The treatments will be low rate and low pressure to assure effective clean up.
- X. Well logs for the proposed injection well have been filed with the Division.
- XI. There are no fresh water wells within one mile of the proposed injection well. Attached hereto is a letter dated June 6, 1989 from S. E. Reynolds, State Engineer, advising that the Cato Unit is not within a declared underground water basin.
- XII. Not applicable.
- XIII. Attached hereto are items which show proper completion of the "Proof of Notice" section.
- XIV. See Form C-108.

In case file for original certificate project

Kelt Oil & Gas, Inc.

State "H"

OPERATOR

LEASE

17

1328' FNL & 1336' FEL

16

8 South

30 East

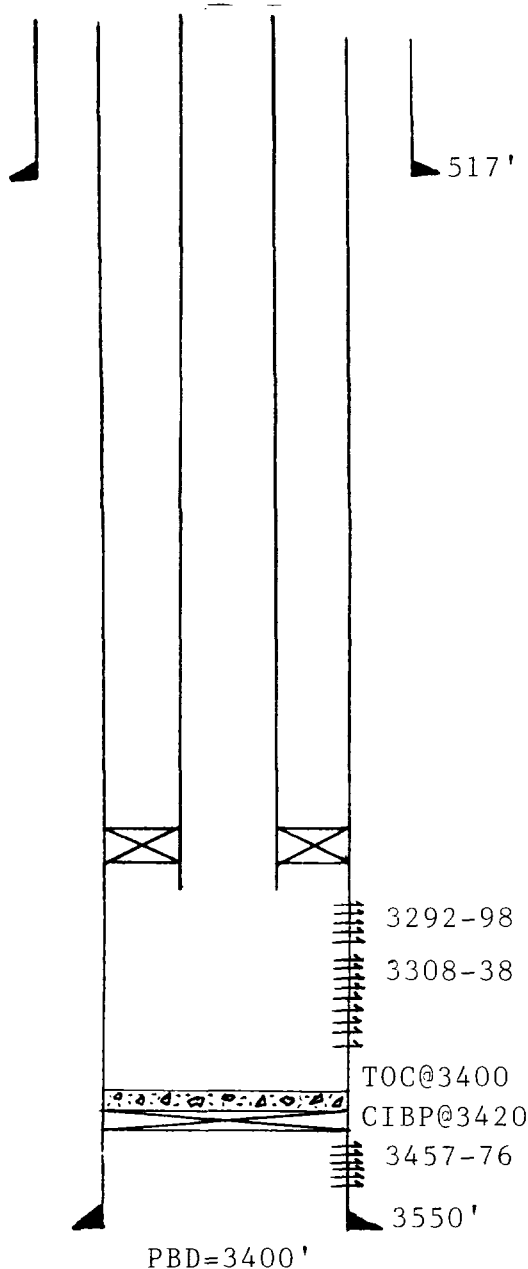
WELL NO.

FOOTAGE LOCATION

SECTION

TOWNSHIP

RANGE

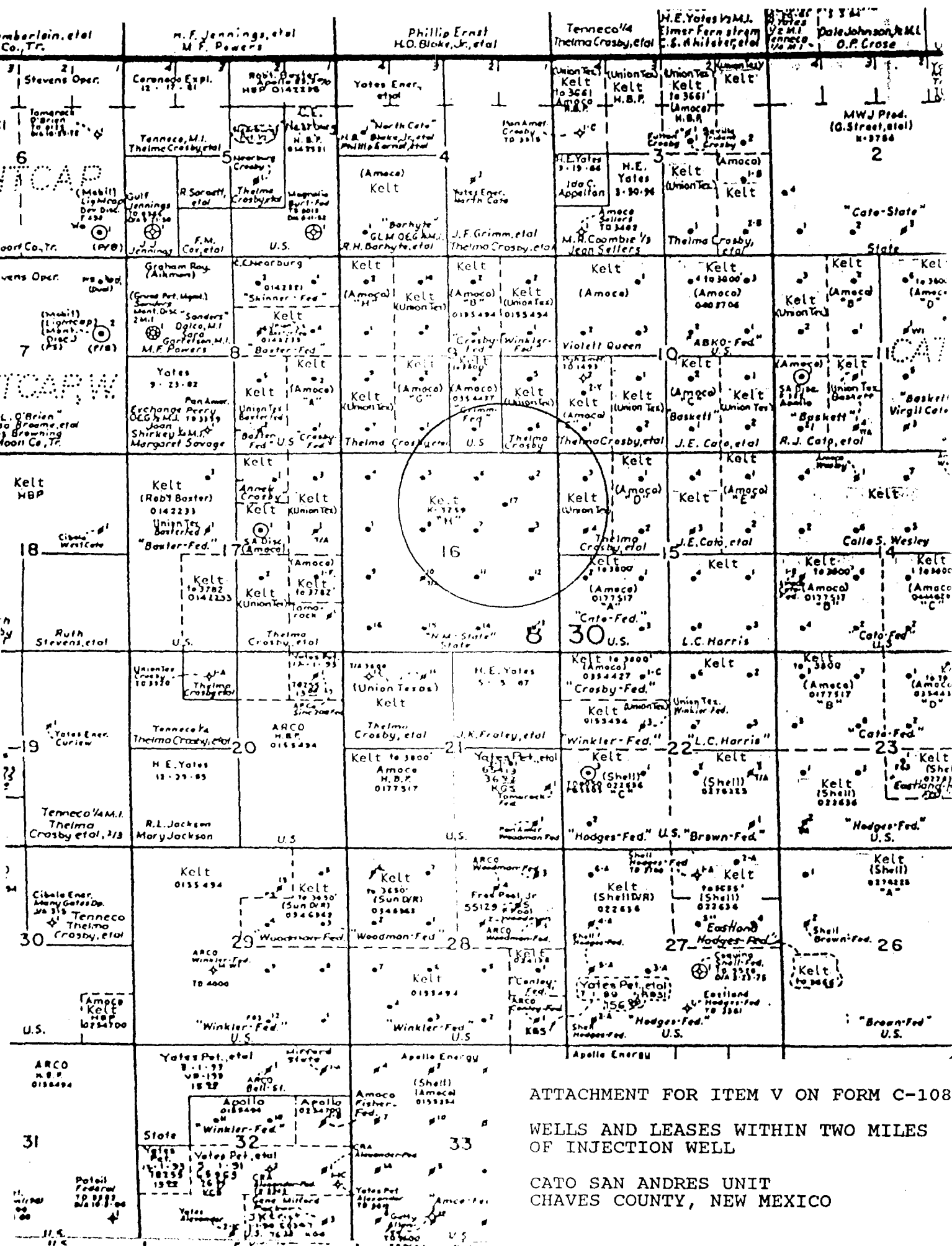
SchematicTabular DataSurface CasingSize 8 5/8 " Cemented with 300 sx.TOC Surface feet determined by CirculatedHole size 11"Intermediate Casing N. A.Size " Cemented with sx.TOC feet determined by Hole size Long stringSize 5 1/2 " Cemented with 950 sx.TOC 220 feet determined by Temp. SurveyHole size 7 7/8"Total depth 3550 feet

Injection interval: Perforated

3292 feet to 3338 feet
(perforated or open-hole, indicate which)Tubing size 2 3/8" J-55 lined with Plastic set in a
(material)Baker Model AD-1 packer at approx. 3250 feet
(brand and model)

(or describe any other casing-tubing seal).

Other Data1. Name of the injection formation San Andres2. Name of Field or Pool (if applicable) Cato San Andres Unit3. Is this a new well drilled for injection? ☐ Yes ☒ NoIf no, for what purpose was the well originally drilled? Oil & gas production4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Yes. Lowestproducing interval of San Andres--P3 zone--from 3457-76 feet.Closed-off from production with CIBP set at 3420 and dumped cmt. to 3400.5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Lightcap Field (Devonian) occurring at depth of 7900 feet.



ATTACHMENT FOR ITEM VI ON FORM C-108 -- TABULATION OF DATA ON WELLS WITHIN AREA OF REVIEW

FORMER WELL NAME/ UNIT WELL NO.	LOCATION		SURFACE CASING			PRODUCTION CASING			PERFORATION DEPTHS and STIMULATION	INITIAL POTENTIAL TEST DATA and REMARKS
	FOOTAGE (QTR-QTR)		HOLE SIZE	CSG / SIZE	DEPTH / SET	CEMENT	HOLE SIZE	CSG / SIZE	DEPTH / SET	
CROSBY "G" #1 09N8	660' FSL & 1980' FWL (SE/4 SW/4)	9-3S-30E	3-26-67	3490	12-1/4 / 8-5/8 / 448	300 sx-circ	7-7/8	4-1/2 / 3490 / 800 sx TOC @ 931 (calc)	3326-48, 51-55, 58-63 A/ 3326-63 w/3000 gals 28% 3177, 88, 94, 99, 3203-19, 3255-69, 77-95 Select. A/ 3177-3295 w/4000 gals 28%	4-10-67: Subd & Flwd 85 BO + 22 BLW + 81 MCFG in 24 hrs, gr. 26, GOR 950
GRIMM FEDERAL #1 09O8	660' FSL & 1980' FEL (SW/4 SE/4)	9-8S-30E	3-4-67	3467	12-1/4 / 8-5/8 / 482	300 sx-circ	7-7/8	4-1/2 / 3467 / 800 sx TOC @ 908 (calc)	3232-72, 3302-46 A/ 3232-3346 w/5000 gals 28%	3-16-67: Flwd 153 BO + 0 BW + 103 MCFG in 12 hrs on 17/64 Ch., gr. 25.2, GOR 672, TPF 220, CPF 50
UT CROSBY "I" #6 09P8	660' FSL & 660' FEL (SE/4 SE/4)	9-8S-30E	1-28-67	3450	12-1/4 / 8-5/8 / 507	300 sx-circ	7-7/8	4-1/2 / 3448 / 300 sx TOC @ 2530 (temp. survey)	3283-3310, 3342-84 A/ 3283-3310 w/3000 gals 15% A/ 3342-84 w/4000 gals 15%	2-9-67: Flwd 170 BO + 3 BAW Gas TSTM in 12 hrs on 16/64 Ch., TPF 250
CROSBY "E" #1 10M8	660' FSL & 660' FWL (SW/4 SW/4)	10-8S-30E	12-24-66	3492	12-1/4 / 8-5/8 / 450	300 sx-circ	7-7/8	4-1/2 / 3492 / 800 sx TOC @ 933 (calc)	3388-3430 A/3000 gals 28% Sqzd/ 3388-3430 w/150 sx cmt 3303-52 A/3000 gals 28%	1-8-67: Subd & Flwd 175 BO + 1 BLW + 91 MCFG in 24 hrs on 10/64 Ch, GOR 520, gr. 26.8, TPF 200, CPF 250
CATO FED "A" #2 15L8	1980' FSL & 660' FWL (NW/4 SW/4)	15-8S-30E	4-2-67	3555	11 / 8-5/8 / 455	300 sx-circ	7-7/8	4-1/2 / 3555 / 600 sx TOC @ 1636 (calc)	3480-3515 A/3000 gals 28% 3386-3446 A/5000 gals 28%	4-15-67: Subd 110 BO + 23 BLW + 49 BNW in 24 hrs. Gas NA, gr. 24
UT CROSBY "I" #3 15D8	660' FNL & 660' FWL (NW/4 NW/4)	15-8S-30E	12-16-66	3541	12-1/4 / 8-5/8 / 517	300 sx-circ	7-7/8	4-1/2 / 3536 / 500 sx TOC @ 2400 (temp. survey)	3440-46 A/1500 gals 15% Sqzd/ 3440-46 w/150 sx cmt 3402-24 A/2000 gals 15% 3343-74 A/2500 gals 15%	1-8-67: Flwd 168 BO + 3 BW Gas TSTM in 14 hrs on 20/64 Ch., TPF 110
UT CROSBY "I" #4 15E8	1980' FNL & 660' FWL (SW/4 NW/4)	15-8S-30E	12-18-66	3541	12-1/4 / 8-5/8 / 523	300 sx-circ	7-7/8	4-1/2 / 3541 / 500 sx TOC @ 2480 (temp. survey)	3413-33 A/2000 gals 15% 3360-88 A/2500 gals 15%	1-13-67: Flwd 102 BO + 7 BW Gas TSTM in 24 hrs on 17/64 Ch., TPF 150, gr. 27

FORMER WELL NAME/ UNIT WELL NO.	LOCATION		SURFACE CASING			PRODUCTION CASING			PERFORATION DEPTHS and STIMULATION	INITIAL POTENTIAL TEST DATA and REMARKS
	FOOTAGE (QTR-QTR)	DATE SPUDD	HOLE SIZE	CSG / SIZE	DEPTH / SET	CEMENT	HOLE SIZE	CSG / SIZE	DEPTH / SET	
STATE "H" #2 16A8	660' FNL & 660' FEL (NE/4 NE/4)	2-2-67	12-1/4	8-5/8	450	300 sx-circ	7-7/8	4-1/2	3450 / 360 sx TOC @ 2078 (temp. survey)	2-13-67: FLwd 140 BO + 14 BW Gas TSTM in 3 hrs on 48/64 Ch., gr. 26.4, TPF 160
STATE "H" #3 16H8	1980' FNL & 660' FEL (SE/4 NE/4)	3-19-67	12-1/4	8-5/8	441	300 sx-circ	7-7/8	4-1/2	3510 / 300 sx TOC @ 2497 (temp. survey)	3-30-67: SWbd 75 BO + 20 BLW in 10 hrs gr. & GOR NR
STATE "H" #5 16C8	660' FNL & 1980' FWL (NE/4 NW/4)	2-18-67	12-1/4	8-5/8	451	300 sx-circ	7-7/8	4-1/2	3480 / 300 sx TOC @ 2386 (temp. survey)	3-5-67: FLwd 62 BO + 3.5 BW Gas TSTM in 16 hrs on 12/64 Ch., gr. 26, TPF 200
STATE "H" #6 16B8	660' FNL & 1980' FEL (NW/4 NE/4)	4-2-67	12-1/4	8-5/8	453	300 sx-circ	7-7/8	4-1/2	3444 / 300 sx TOC @ 2444 (temp. survey)	4-14-67: FLwd 87.5 BO + 14 BAW Gas TSTM in 14 hrs on 24/64 Ch., gr. 26.8, TPF 150
STATE "H" #7 16G8	1980' FNL & 1980' FEL (SW/4 NE/4)	2-9-67	12-1/4	8-5/8	462	300 sx-circ	7-7/8	4-1/2	3540 / 300 sx TOC @ 2498 (temp. survey)	2-22-67: FLwd 81 BO + 20 BLW Gas TSTM in 14 hrs on 44/64 Ch., gr. 26.5, TPF 20/60
STATE "H" #8 16F8	1980' FNL & 1980' FWL (SE/4 NW/4)	4-13-67	12-1/4	8-5/8	455	300 sx-circ	7-7/8	4-1/2	3506 / 300 sx TOC @ 2507 (temp. survey)	5-4-67: Pmpd 74 BO + 42 BAW Gas TSTM in 24 hrs, gr. 26.7
STATE "H" #10 16K8	1980' FSL & 1980' FWL (NE/4 SW/4)	2-24-67	12-1/4	8-5/8	451	300 sx-circ	7-7/8	4-1/2	3497 / 300 sx TOC @ 2497 (temp. survey)	3-8-67: FLwd 112 BO + 30 BW Gas TSTM in 13 hrs on 48/64 Ch., gr. 26.4, TPF 20
STATE "H" #11 16J8	1980' FSL & 1980' FEL (NW/4 SE/4)	4-18-67	12-1/4	8-5/8	452	300 sx-circ	7-7/8	4-1/2	3540 / 300 sx TOC @ 2567 (temp. survey)	5-9-67: SWbd 80 BO + 1 BAW Gas TSTM in 9 hrs, gr. 26.8
STATE "H" #12 16I8	1980' FSL & 660' FEL (NE/4 SE/4)	3-1-67	12-1/4	8-5/8	453	300 sx-circ	7-7/8	4-1/2	3560 / 300 sx TOC @ 2622 (temp. survey)	3-10-67: FLwd 119 BO + 40 BW Gas TSTM in 14 hrs on 1/2 Ch., gr. 26.8, TPF 100



ATTACHMENT FOR ITEM XI

ON FORM C-108

JUN 8 1989

STATE OF NEW MEXICO

CHRISTY LAW OFFICES

STATE ENGINEER OFFICE

SANTA FE

E. REYNOLDS
STATE ENGINEER

BATAAN MEMORIAL BUILDING
STATE CAPITOL
SANTA FE, NEW MEXICO 87503

June 6, 1989

S.B. Christy IV, Esq.
Christy Law Offices
P.O. Box 569
Roswell, New Mexico 88202-0569

Re: Proposed Gato Unit, Chavez County, New Mexico

Dear Mr. Christy:

The State Engineer has asked me to respond to your May 30, 1989 letter regarding the proposed waterflood project in the Gato Unit, encompassing 15,321.83 acres, per the exhibit "A" you attached.

Please be advised, that the Gato Unit is not within a declared underground water basin administered by the State Engineer, and as such, no permit is required from this office to drill a well and appropriate groundwater for beneficial use. The ground water also belongs to the public and is subject to the doctrine of prior appropriation and as such owners of prior water rights have recourse to the courts if they believe that their water rights would be impaired by a new or later use. In seeking an injunction or damages, the owners of the prior right would have the burden of proof.

I am not able to furnish any specific information on wells within or near the Gato Unit other than 1981 water levels measured in six wells located approximately six to ten miles east of the Gato Unit as follows:

<u>Location</u>	<u>Owner</u>	<u>Water Level (in feet) Below Land Surface</u>
95.32E.11.244	Lewis Cooper Estate	105.55
95.32E.21.212	Lewis Cooper Estate	70.13
95.32E.25.113	J. McGuffin	153.94
95.32E.31.412	Caprock Ranch	208.43
95.32E.32.412	Caprock Ranch	183.56

All of the above referenced wells are producing water from the Chinle Formation according to the USGS/SEO Basic Data Report -- "Ground-Water Levels in the New Mexico, 1978-1980."

Page 2 of 2

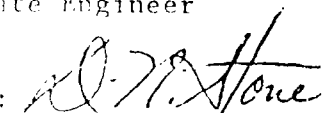
S.E. Christy IV, Esq.

Please let me know if further discussion of this matter would be helpful.

Sincerely,

S.E. Reynolds
State Engineer

By:

A handwritten signature in dark ink, appearing to read "D.M. Stone", written over a horizontal line.

D.M. Stone, Chief
Water Rights Division

DNS/sb

encl

cc: Glenn Brim, Roswell Office

AFFIDAVIT OF PUBLICATION

County of Chaves

State of New Mexico,

I, _____

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

of _____

_____ weeks

beginning with the issue dated _____

_____ 19____

and ending with the issue dated _____

_____ 19____

Manager

Sworn and subscribed to before me

this _____ day of _____

_____ 19____

Notary Public

My commission expires _____

_____ 19____

(Seal) _____

Publish January 22, 1990

1. Operator: Kelt Oil & Gas, Inc.
Address: P.O. Box 1493
Roswell, New Mexico 88202
Phone: (505) 398-61166 or
622-5324
Contact Party: M. A.
Degenhart

2. Intended Purpose of Injection
Well: To be included with
initial injection wells
for secondary recovery.
Location: 1328' FNL & 1336'
FEL
Sec. 16 T8S-R30E

3. Formation: San Andres Depth:
3300'
Expected Maximum Injection
Rate: 700 BWPD
Expected Maximum Injection
Pressure: 500 psig

4. Interested parties must file
objections or requests for
hearing with the Oil
Conservation Division, P.O.
Box 2088, Santa Fe, New
Mexico 87501 within 15 days.

PROOF OF NOTICE

Kelt Oil & Gas, Inc. does hereby certify that a true and correct copy of the Application and its attachments was sent by certified mail to the State of New Mexico, owner of the surface of the land on which the injection well is to be located. Certified mail receipt is attached below.

It should be noted that Kelt is the only leasehold operator within one-half mile of the well location.

P 567 645 500

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

U.S.G.P.O. 1989-234-555

PS Form 3800, June 1985

Sent to: COMMISSIONER OF PUBLIC LANDS	
Street and No. P. O. BOX 1148	
P.O. State and ZIP Code SANTA FE, NM 87504	
Postage	\$.65
Certified Fee	.85
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and how Delivered	.90
Return Receipt showing to whom and Address of Delivery	
TOTAL Postage and Fees	\$ 2.40
Postmark Date JAN 24 1990 88201	



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

1-26-90

GABRIEL CARPENTERS
HOBBS

POST OFFICE BOX 1680
HOBBS, NEW MEXICO 88241-1680
(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:

Kelt Oil & Gas Inc. New Mexico H St. #17-G 16-8-30
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
Supervisor, District 1

/ed