

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



Delaware
 Water Company
 LLC
 Tophat ASQ #1

RECEIVED OGD

ABOVE THIS LINE FOR DIVISION USE ONLY

2012 JUL 30 P 12:55

ADMINISTRATIVE APPLICATION CHECKLIST

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
- [D] Other: Specify _____

*Noted by Devon
 8/1/12
 WFFD/Don-9/19/12*

- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply
- [A] Working, Royalty or Overriding Royalty Interest Owners
- [B] X Offset Operators, Leaseholders or Surface Owner
- [C] X Application is One Which Requires Published Legal Notice
- [D] X 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.

Kay Havenor	<i>Kay C Havenor</i>	Agent	7/18/2012
_____	_____	_____	_____
Print or Type Name	Signature	Title	Date

KHavenor@georesources.com
 e-mail Address

Miss	Row	C-108	C-108 disposal application submittals... CHECKLIST to ensure all items are supplied or considered.
	1		<u>Operator, Well, and Contact info:</u>
	2	II	Name of person submitting the application: <u>Kay Havenor</u> Other Contact? _____
	3	II	Did you Include a contact Email in the application? <u>Yes</u> and Mailing Address? <u>Yes</u> and Phone? <u>Yes</u>
	4	II	Operator Name: <u>Delaware Water Company, LLC</u> OGRID Num: <u>290484</u>
	5		RULE 5.9 Compliance...Number of Inactive Wells _____ vs Total Wells Operated <u>0</u> Is financial assurance required on any well? <u>No</u> 0 wells in violation
	6		Is there any hearing order finding this operator out of compliance with Division Rule 19.15.5.9 NMAC? <u>No</u>
	7		Are all Rule 5.9 issues OK to allow the Division to issue Disposal Permits? <u>Yes</u>
	8	III	Well Name: <u>Tophat AJQ #1</u>
	9	III	API Num: <u>30-025-27684</u> Spud Date: <u>2/13/1982</u>
	10		Have you included API numbers on all wellbore diagrams and well list(s) in this application? <u>Yes</u>
	11	III	Proposed well...Footages <u>1980' FNL & 660' FEL</u> Unit <u>H</u> Sec <u>35</u> Tsp <u>23S</u> Rge <u>33E</u> County <u>Lea</u>
	12		General Location (i.e. Y miles NW of Z): <u>Located 25 miles southwest of Eunice, NM.</u>
	13		Current Well Status: <u>P&A</u>
	14	I	General Summary of Planned Work to Well: <u>Re-enter to approx 7650', set CIBP +100' cmt, tag, perforate 5333'-7458' OA, acidize.</u>
	15		<u>INTERVAL TOP and BOTTOM:</u>
	16	IIIB.(2)	Proposed disposal Top Depth: <u>5333'</u> Formation Name: <u>Bell Canyon</u>
	17	IIIB.(2)	Proposed disposal Bottom Depth: <u>7,458'</u> Formation Name: <u>Cherry Canyon</u>
	18	IIIB.(2)	Is the disposal interval OpenHole? _____ or Perfed? <u>X</u> or Both? _____
*	19	IIIB.(2)	What will be the disposal tubing size OD? <u>3-1/2"</u> Packer Seat, Feet: <u>approx 5,303'</u>

Miss	Row	C-108	C-108 disposal application submittals... CHECKLIST to ensure all items are supplied or considered.
	20	VII	What max surf inj. psi are you proposing? <u>1,067</u> If differing from 0.2 psi/ft surf. Grad., is supporting data attached such as a Step Rate Test? _____
	21		<u>FRESH WATERS:</u>
	22	VIII	Depth to bottom of Fresh Waters: <u>est less than 150'</u> Formation Name(s)? <u>Quaternary alluvium</u> If present _____
	23	XI	Any Fresh Water Wells Within 1 Mile? <u>None reported</u> If so, did you attach an analysis from these Wells? <u>None available</u>
	24		Are all "Fresh" waters isolated with Casing and Cement? <u>Yes</u> ("Fresh" water is defined as less than 10,000 mg/l of TDS)
	25	XII	Included "Affirmative Statement" concerning any Connection from Disposal Depths to existing Fresh Waters? <u>Yes Item XII</u>
	26		<u>WASTE WATERS:</u>
	27	XIV	Will this be a Lease Only disposal well? _____ or only used for the Operator's own waste needs? _____ or Commercial Disposal? <u>X</u>
	28	VII	Which formations will supply the waste waters to be disposed into this well... List most common... <u>Brushy Canyon/Bone Springs</u>
	29	VII	Are Waste waters compatible with proposed disposal interval waters? <u>Yes</u> Did you include waste water analysis? <u>Yes</u>
	30		<u>AT PROPOSED WELL...INSITU WATERS AND HYDROCARBON POTENTIAL:</u>
	31		Is a discussion included of the potential for future OIL/GAS recovery from the proposed disposal interval? <u>Yes</u>
	32		If your proposed well for disposal is a depleted producer (within the proposed interval); do you know what was the cumulative oil/gas/water? _____ and did you include a Rate-Time plot of this depleted interval? _____
	33	VII	Insitu water analysis Included? <u>No</u> Is the salinity within the disposal interval more than 10,000 mg/l of TDS? <u>Yes</u> or how will you determine this insitu water salinity? Upon completion of perforations the proposed disposal interval will be swabbed to 1) confirm the absence of commercial hydrocarbons and 2) obtain analysis of formation water.
	34	VIII	Does the application include a list of Formation tops down to and including the bottom of the target formation? <u>Yes</u>
	35		What is the top Anhydrite <u>1,333"</u> and bottom <u>5,014'</u> of the Salado Salt reported in one nearby cable tool well. Most wells report redbeds and anhydrite.
	36	X	Are all existing Logs (including any CBL over the disposal interval) are on the OCD Web Site? <u>Yes</u> If logs not there, please send _____
	37	IIIA.	Are the wellbore diagrams for this well included in the Application.....Before Conversion? <u>Yes</u> and After Conversion? <u>Yes</u>

Miss	Row	C-108	C-108 disposal application submittals... CHECKLIST to ensure all items are supplied or considered.
	57		<u>Administrative or Hearing:</u>
	58	VI	How many wells within the 1/2 mile AOR currently are producing (or still have open perforations) within the disposal interval? 0 is it "gas" or "oil"?
	59	 NOTE: If the proposed disposal interval is a "Gas" interval or if any AOR wells are producing or have open perforations within this interval then this application may not be properly classified as a "disposal". These types of applications must be processed at an examiner hearing.
	60		Any other Issues..?

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance _____ Disposal _____ Storage
Application qualifies for administrative approval? _____ Yes _____ No

II. OPERATOR: Delaware Water Co., LLC OGRID 290484

ADDRESS: P.O. Box 1224 Jal, NM 88252

CONTACT PARTY: Kay Havenor PHONE: 575-626-4518

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: _____

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: Kay Havenor TITLE: Agent

SIGNATURE: Kay Havenor DATE: 7/18/2012

E-MAIL ADDRESS: KHavenor@georesources.com 575-626-4518

* 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: _____

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.

INJECTION WELL DATA SHEET

OPERATOR: Delaware Water Co., LLC OGRID: 290484 API 30-025-27684

WELL NAME & NUMBER: Tophat AJQ State #1

WELL LOCATION: 1980' FNL & 660' FEL H 35 23S 33E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing PRESENTLY IN HOLE

Hole Size: 26" Casing Size: 20"

Cemented with: 1650 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Circulated

See attached well diagram

Intermediate Casing PRESENTLY IN HOLE

Hole Size: 17-1/2" Casing Size: 13-3/8" 61/68#

Cemented with: 8400 sx. *or* _____ ft³

Top of Cement: Surf Method Determined: Circulated

Production Casing PRESENTLY IN HOLE

Hole Size: 12-1/4" Casing Size: 9-5/8" 47/53.5#

Cemented with: 3500 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Circulated

Total Depth: 15,275'

Injection Interval

Perforations 5,337' - 7,458'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 3-1/2" N-80 9.2# Lining Material: Fiberglass lined

Type of Packer: Lok-Set or equivalent

Packer Setting Depth: Approx 5,303 ft

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? _____ Yes No

If no, for what purpose was the well originally drilled? Oil/gas

2. Name of the Injection Formation: Bell Canyon - Cherry Canyon

3. Name of Field or Pool (if applicable): _____

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. Yes
Plugging details listed below in Item VI.

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Brushy Canyon below 7,500'

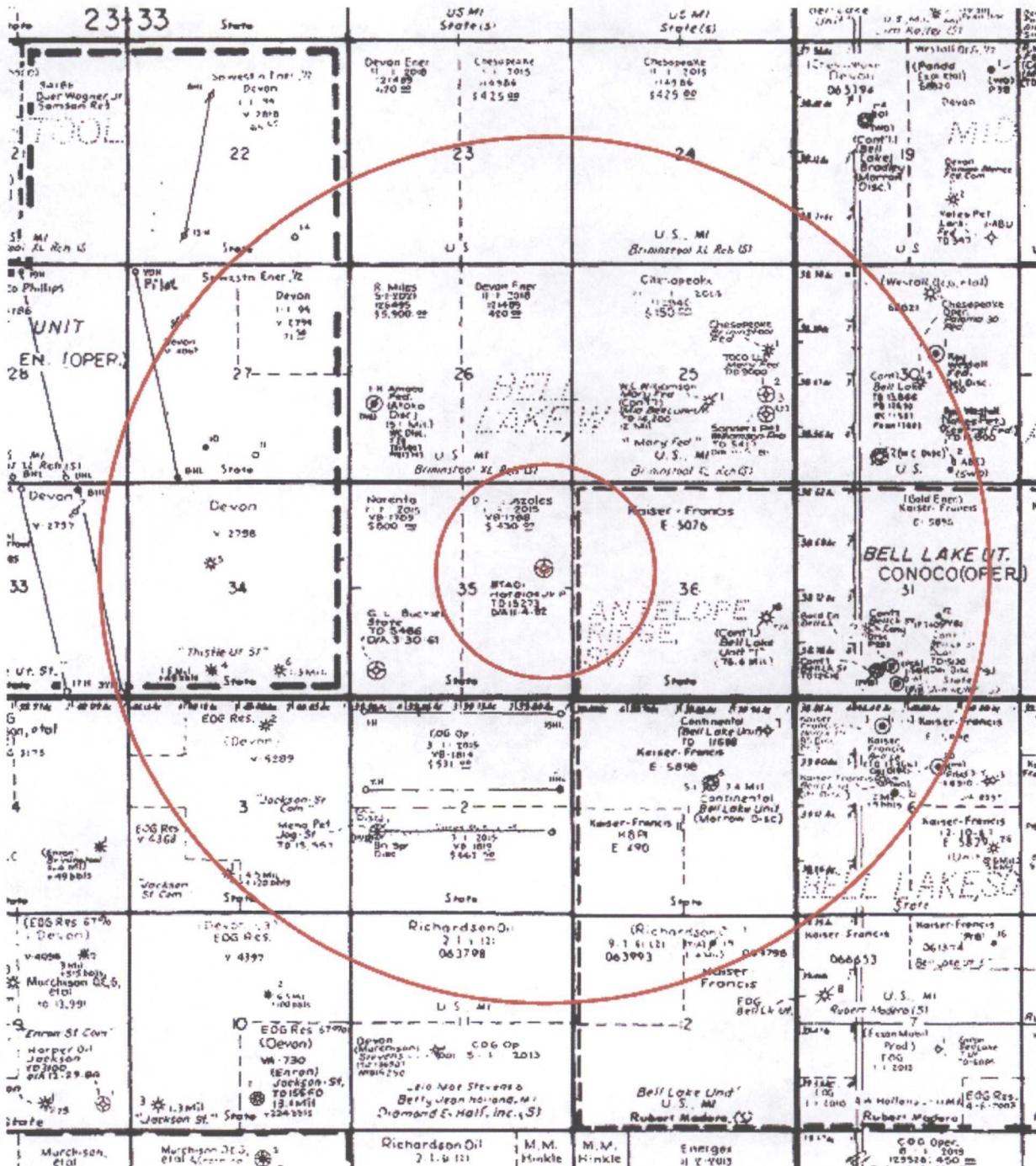
Tophat AJQ State #1

1980' FNL & 660' FEL

Sec. 35, T23S-R33E Lea County, NM

Item V:

Area of Review
1/2 Mile AOR and 2 Mile Radius



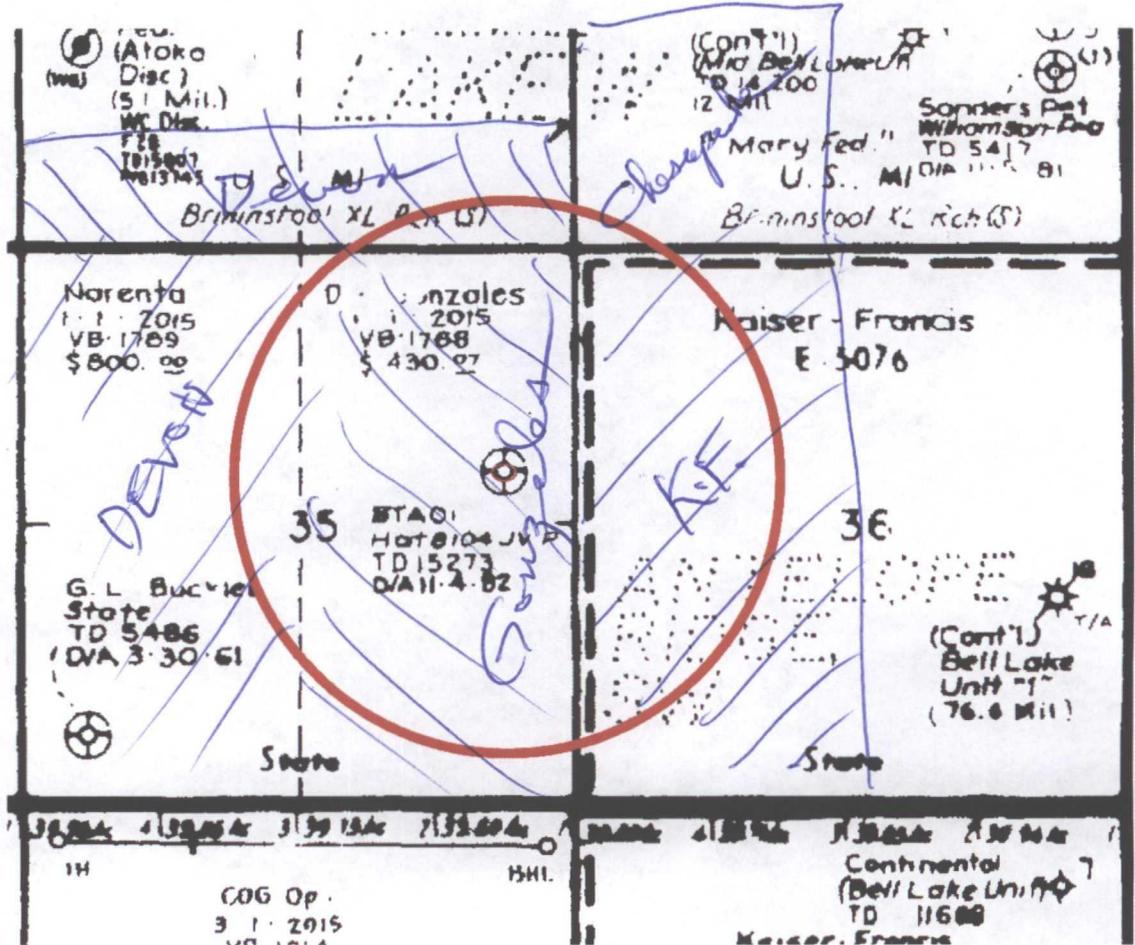
Tophat AJQ State #1

1980' FNL & 660' FEL

Sec. 35, T23S-R33E Lea County, NM

Enlarged View of AOR
Centered in Unit H, Sec. 35, T23S-R33E
Lea Co., NM

Item V(a):



Delaware Water Company, LLC
 Tophat AJQ State #1
 1980' FNL & 660' FEL
 Sec. 35, T23S-R33E Lea County, NM

API 30-025-27684

Item VI: Data on wells in AOR that penetrate the proposed injection interval:

API	WELL_NAME	STATUS	SDIV	SEC	TWN	RANGE	FTG	NS	FTG	EW	OCD	OPERATOR	LAND	WELL	PLUG_DATE	SPUD_DATE	ELEVGL	TVD
3002527684	TOPHAT AJQ STATE 001	Plugged	H	35	23S	33E	1980	N	660	E	H	YATES PETROLEUM	S	O	12-Jan-07	13-Feb-82	.3639	15273

1. 3002527684 Yates Petroleum Corp., Tophat AJQ State #1, OCD Unit H, Sec. 35, T23S-R323, 1980' FNL & 660' FEL. Spud 2/13/1982. 26" hole set 20" 94# K-55 @750' w/1650 sx. 17-1/2" hole set 13-3/8" 61/68# K-55/S-80 @~~600~~^{5,255}' w/8400 sx cmt, circ to surface. 12-1/4" hole set 9-5/8" 53.5# S-95 & P110 LTC, 47# S0095 & D95 LTC @12,500' w/3500 sx DV @ 5,470', reported circulated. 7" liner @12,106'-15,272' w/550 sx, TOC NR.. TD 15,275'. Perf 15,026'-15,034' - No shows, set BP @14,950' w/35 sx. Perf 14,839'-14,882', set BP @14,698 +35 sx cmt. Perf 14,580'-14,622'. 25 sx cmt plug 14,400'-14,120'. Perf 13,043'-13,163'. Set BP 12,875' w/25 sx cmt plug 14,400'-14,120'. Perf 13,043'-13,163'. BP @12,875' +25 sx cmt. Perf 12,526'-12,626'. Sqzd w/50 sx cmt. Perf 8,993'-9,063'. Sqzd w/300 sx cmt. Perf 5,744-5,758', 100% wtr. Sqzd w/100 sx, Perf 5,695-5,716', 100% wtr, sqzd w/100 sx @5,640. BTA (original opr) P&A 11/4/1982. Yates Petroleum re-entered 8/26/1991. Tested sqzd perfs 5,695-5,716, OK. Tagged BTA cmt @8,890". CO and perf lower Brushy Canyon 8,706'-8,721', acid & frac. Set 40 sx cmt @ 8,720', tagged @ 8,612'. On 7/26/2000 filed NOI to plug. Filed P&A plan 10/19/2006. CIBP 9,500' +35' cmt, 40 sx plug @6,597', 40 sx @ 5,290' tagged @-5,125, 40 sx plug 2,057', 10 sx plug 65' to surf. OCD reports P&A as 1/12/2007, no C-103 P&A in file.

No other wells known in the AOR.

Item VII:

1. The maximum injected volume anticipated is 6,000 BWPD. Average anticipated is 4,500 BWPD.
2. Injection will be through a closed system.
3. Maximum injection pressure is expected to be 1,067 psi, or as adjusted for depth.
4. Sources will be produced water. These will be compatible with waters in the disposal zone.
5. Water sample analyses from the Kaiser-Francis Oil Bell Lake Unit #7, Lot 1, Sec.1, T24S- R33E, Lea Co., shown below, from the Delaware (Source: NM WAIDS):

Water Samples for Well BELL LAKE UNIT Field SWD

SampleID	API	Well Name	Township	Range	Section	Formation	Field	Well Id
4347	3002508367	BELL LAKE UNIT	24S	33E	01	DEL	SWD	007
HCO ₃ ⁻	391	SO ₄ ⁼	749	CF	53920			

Item VIII:

Disposal will be into the Delaware Mountain Group Bell Canyon and Cherry Canyon Formations. The Delaware is composed predominately of sandstones, and shales. All the Delaware members are interbedded sandstones and shales with occasional dense dolomite horizons. The lateral transmissivities of the sandstone beds are highly variable and often form selective barriers to the movement of hydrocarbons while allowing down-gradient movement of water. The transmissivity variations are fundamentally due to 1) the very-fine grained nature of the sands and 2) the local percentage of silt and clay. The Delaware sandstone members are typically overlain and underlain by bounding shale, dolomite, and/or silty shale horizons. The depth to the Delaware Mountain Group (top of Lamar) in this well is 5,287'. The top of Brushy Canyon Formation is 7,515'. The base of the Delaware (top of Bone Springs Formation) is at 8,812'.

No reported fresh, potable or stock water is within a 2-mile radius. Records from the New Mexico Office of the State Engineer on 6/16/2012 show no known water wells within a 5-mile radius of the proposed Delaware Water Company SWD well. Any unreported stock water wells, if present, are estimated to be less than 150' deep.

There are no known domestic water wells within a 2-mile radius.



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

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

No records found.

Basin/County Search:

Basin: Lea County

UTMNAD83 Radius Search (in meters):

Easting (X): 667330

Northing (Y): 3551010

Radius: 3200

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

6/25/12 4:16 PM

WATER COLUMN/ AVERAGE
DEPTH TO WATER

The surface geology of the greater area, including the 2-mile radius as shown in Item V above, is Quaternary eolian and piedmont deposits of Holocene to middle Pleistocene age. These are underlain by the Permian Rustler Formation and Permian evaporites. Formation tops are listed below in Adendum information.

Item IX:

Acidize casing perforations in the Delaware between 5,337' and 7,458' (OA) with 15% HCl.

Item X:

Logs are on file with the OCD.

Item XI:

No domestic or reported livestock water wells are known in a 2-mile area surrounding the proposed disposal. Please note Item VIII above.

Item XII:

There is no geological evidence of open faults nor hydrologic connection between the disposal zone and any possible underground sources of protectable water.

Addendum:

E-log evaluation of the Bell Canyon/Cherry Canyon Formations in the target re-entry well and production testing of perforations in this well demonstrate the proposed disposal zone is water-wet throughout the greater local area and contains waters greater than 10,000 mg/l TDS.

Formation tops:	Rustler	756'
	Anhydrite	1,333'
	T/main Salt	3,910'
	B/Salt	5,014'
	Lamar	5,287'
	Bell Canyon	5,337'
	Cherry Canyon	6,560'
	Brushy Canyon	7,515'
	Bone Springs	8,812'
	Wolfcamp lime	11,262'
	Strawn	13,322'
	Atoka	13,786'

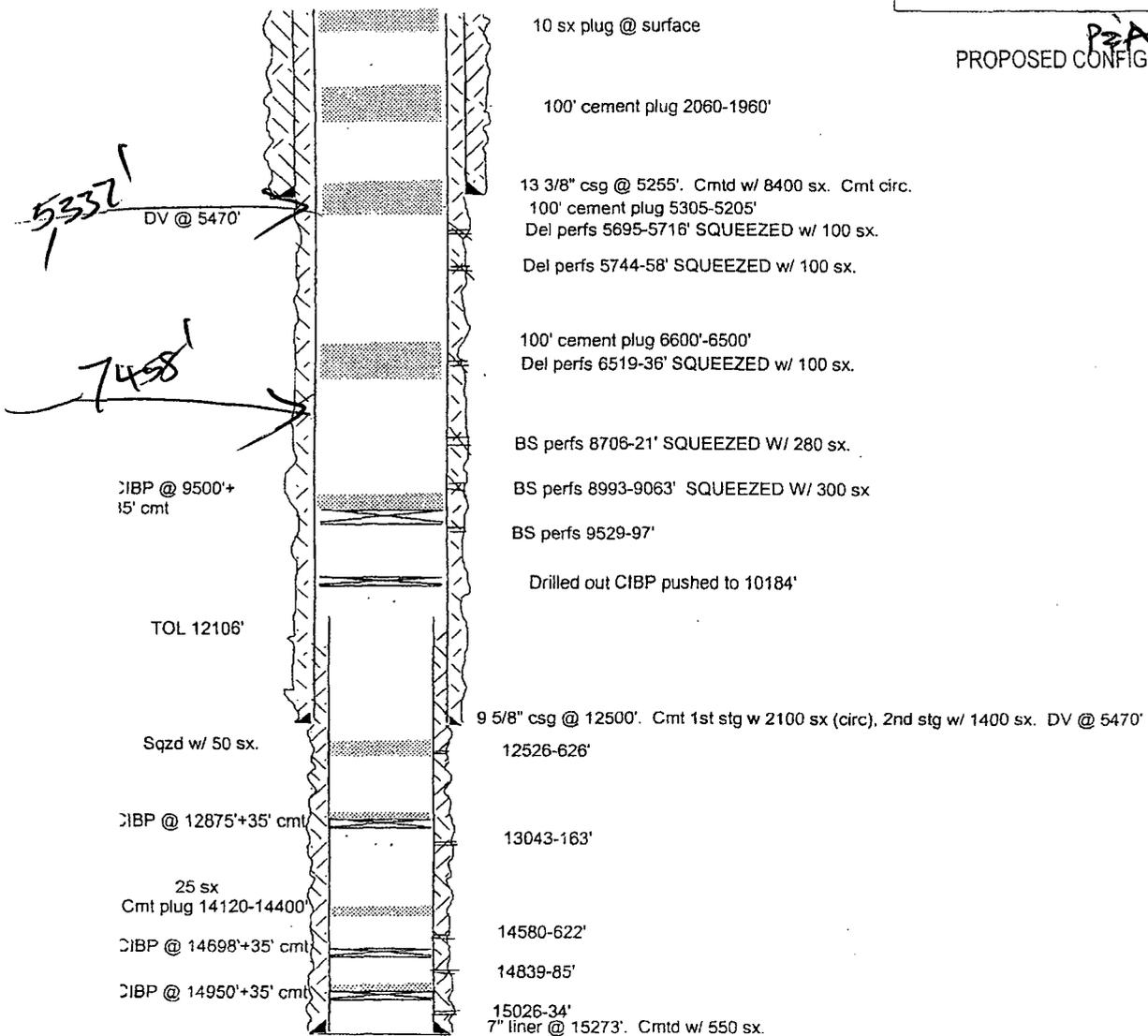
Delaware Water Company, LLC
 Tophat AJQ State #1
 1980' FNL & 660' FEL
 Sec. 35, T23S-R33E Lea County, NM

API 30-025-27684

C-103 Notice of Intention to P&A dated 7/26/2000. Proposed P&A diagram dated 10/19/2006 . OCD lists P&A 1/12/2007. No final P&A C-103 on record.

Well Name: Tophat AJQ State #1 Field: _____
 Location: 1980' FNL & 660' FEL Sec. 35-23S-33E Lea Co. NM
 GL: 3639' Zero: _____ AGL: _____ KB: 3671'
 Spud Date: _____ Completion Date: _____
 Comments: Well D&A by BTA in 1982. YPC re-entered in 1991. Last activity at well in 1996.

Casing Program	
Size/Wt/Grade/Conn	Depth Set
13 3/8" 61 & 68# K55 & S80	5255'
9 5/8" 47 & 53.5# S95 & P110	12500'
7" liner top @ 12106'	15273'



P&A
 PROPOSED CONFIGURATION

SKETCH NOT TO SCALE

DATE: 10/19/06 TOPHAT1A

PROPOSED SWD WELL RECOMPLETION

API: 3002527864
 Operator: Delaware Water Company, LLC
 Lease: Tophat AJQ State
 Location: Sec 22, T25S-R32E Lea Co., NM
 Footage: 1980 FNL, 660 FEL

Well No: 1

KB: 3368
 GL: 3339
 Spud date: February 13, 1982
 Plugged date: January 12, 2007
 MSL of TD: -11907

Surface Csg

Size: 20" 94# K-55
 Set @: 650
 Sxs cmt: 750
 Circ: Yes
 TOC: Surface
 Hole Size: 26"

Intermediate Csg

Size: 13-3/8" 40#
 Set @: 5255
 Sxs cmt: 8400
 Circ: Yes
 TOC: Surface
 Hole Size: 17-1/2"

Production Csg

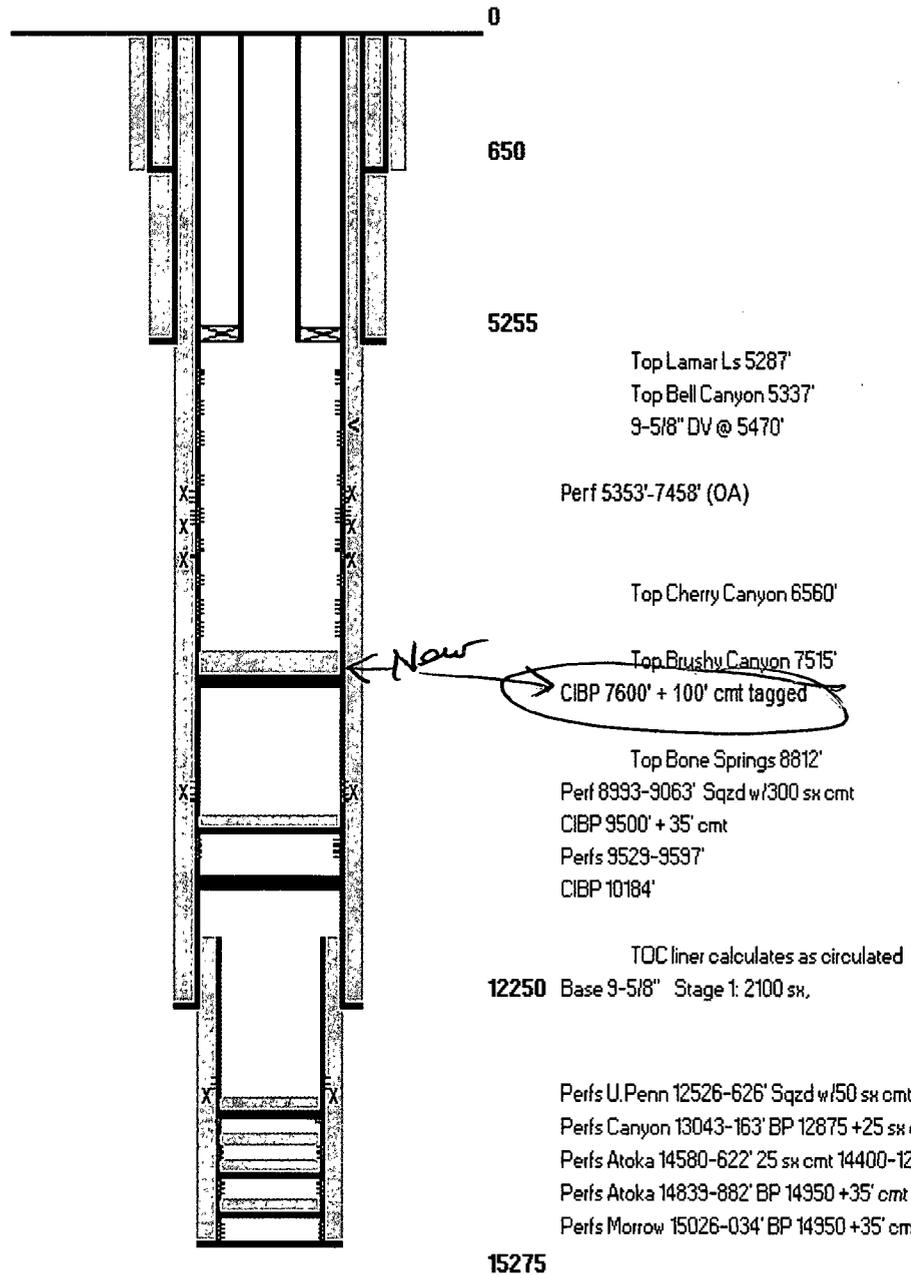
Size: 9-5/8" 47/53.5# S-95
 Set @: 12,250
 Sxs cmt: 3500
 Circ: Yes
 TOC: Surface
 Hole Size: 12-1/4"

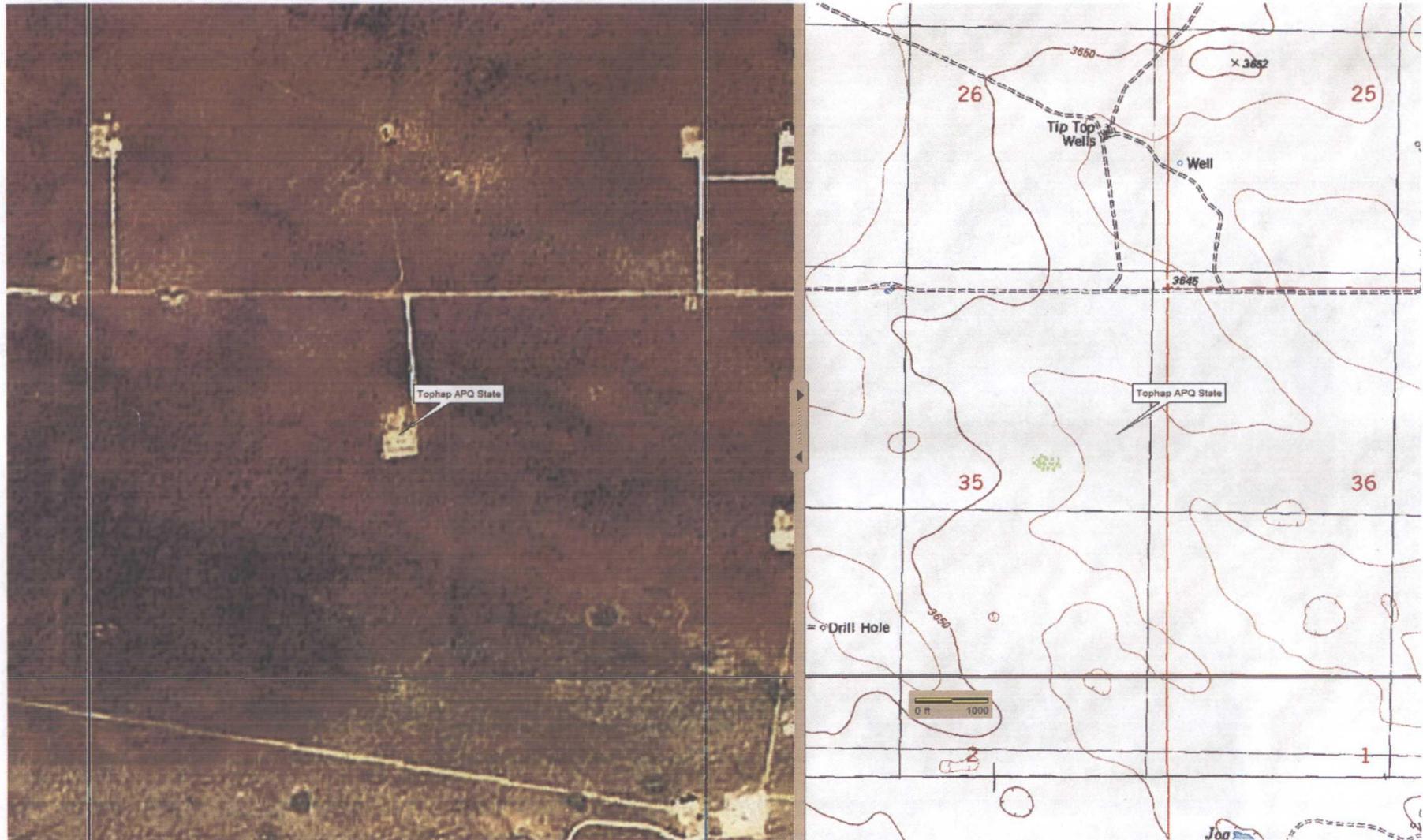
Production Liner

Size: 7" 18#
 Set @: 12106-15272'
 Sxs cmt: 550
 Circ: NR
 TOC: NR
 Hole Size: NR

Tubular requirements (made-up):
 5303' 3-1/2" N80 9.3# upset Fiberglass coated
 Lok-Set packer or equivalent approx 5303'

Perf and acidized 5337' - 7458' (OA)
 Load tubing annulus w/corrosion inhibitor
 Complete surface head for disposal





Delorme XMap-6

From the junction of NM-128 and Lea Co. CR-2 (Delaware Basin Rd) north 4 miles, west 1.5 miles, south 0.4 miles.

Delaware Water Company, LLC
Tophat AJQ State #1
1980' FNL & 660' FEL
Sec. 35, T23S-R33E Lea County, NM

API 30-025-27684

Item XIII:

Surface and Minerals Owner:

Commissioner of Public Lands
State of New Mexico
310 Old Santa Fe Trail
Santa Fe, NM 87501

Surface Grazing Lessee

Brininstool XL Ranch, LLC
P.O. Box 940
Jal, NM 88252

Operators:

Daniel E. Gonzales
P.O. Box 2475
Santa Fe, NM 87504-2475

E/2 Sec. 35

Chesapeake Operating, Inc.
P.O. Box 18496
Oklahoma City, OK 73154

SW/4 SW/4 Sec.25

Devon Energy Production Company, LP
20 N. Broadway
Oklahoma City, OK 73102

S/2 S/2 Sec. 26
W/2 Sec. 35

Kaiser-Francis Oil Company
P.O. Box 21468
Tulsa, OK 74121

W/2 Sec. 36



Kay C. Havenor, Ph.D.

Office: 575-626-4518
e-mail: KHavenor@GeoResources.com
904 Moore Ave
Roswell, New Mexico 88201-1144

July 19, 2012

Devon Energy Production Company, LP
20 N. Broadway
Oklahoma City, OK 73102

Re: Delaware Water Co. Tophat AJQ State #1
Sec 35, T23S-R33E, Lea Co., NM
API 30-025-27684

Delaware Water Company, LLC. is filing with NM OCD to re-enter the subject well for salt water disposal. The Legal Notice is to be published July 19, 2012 in the Lovington, NM Lovington Daily Leader. Produced water will be disposed from perforations 5,337 feet to 7,458 feet (over-all) into the Delaware Bell Canyon/Cherry Canyon Formations.

As per OCD requirements a copy of the C-108 application is attached.

Should you have questions or concerns regarding this application please contact the undersigned by telephone at the above number, or by e-mail to KHavenor@georesources.com.

Respectfully submitted,

A handwritten signature in cursive script that reads "Kay Havenor".

Kay Havenor, PG
Agent on behalf of Delaware Water Company, LLC

Encl: C-108 application

RECEIVED
JUL 26 2012
DIVISION ORDERS

Delaware Water Company, LLC
 Tophat AJQ State #1
 1980' FNL & 660' FEL
 Sec. 35, T23S-R33E Lea County, NM

API 30-025-27684

Item XIII:

Certified Mail Receipts

7011 1570 0003 3481 5956

U.S. Postal Service
CERTIFIED MAIL RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

SANTA FE NM 87501
OFFICIAL USE

Postage	\$ 1.30	0602
Certified Fee	\$2.95	
Return Receipt Fee (Endorsement Required)	\$2.35	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.60	

Sent To: Commissioner of Public Lands
 Street, Apt. No., or PO Box No.: 310 Old Santa Fe Trail
 City, State, ZIP+4: Santa Fe, NM 87501

PS Form 3800, August 2006 See Reverse for Instructions

7011 1570 0003 3481 6002

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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OKLAHOMA CITY OK 73154
OFFICIAL USE

Postage	\$ 1.30	0602
Certified Fee	\$2.95	
Return Receipt Fee (Endorsement Required)	\$2.35	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.60	

Sent To: Chesapeake Operating, Inc.
 Street, Apt. No., or PO Box No.: P.O. Box 18496
 City, State, ZIP+4: Oklahoma City, OK 73154

PS Form 3800, August 2006 See Reverse for Instructions

7011 1570 0003 3481 5949

U.S. Postal Service
CERTIFIED MAIL RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

OKLAHOMA CITY OK 73102
OFFICIAL USE

Postage	\$ 1.30	0602
Certified Fee	\$2.95	
Return Receipt Fee (Endorsement Required)	\$2.35	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.60	

Sent To: Devon Energy Production Co. LP
 Street, Apt. No., or PO Box No.: 20 N. Broadway
 City, State, ZIP+4: Oklahoma City, OK 73102

PS Form 3800, August 2006 See Reverse for Instructions

7011 1570 0003 3481 5970

U.S. Postal Service
CERTIFIED MAIL RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

JAIL NM 88252
OFFICIAL USE

Postage	\$ 1.30	0602
Certified Fee	\$2.95	
Return Receipt Fee (Endorsement Required)	\$2.35	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.60	

Sent To: Brithmstool XL Ranch, LLC
 Street, Apt. No., or PO Box No.: P.O. Box 940
 City, State, ZIP+4: Jail, NM 88252

PS Form 3800, August 2006 See Reverse for Instructions

7011 1570 0003 3481 5956

U.S. Postal Service
CERTIFIED MAIL RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

SANTA FE NM 87504
OFFICIAL USE

Postage	\$ 1.30	0602
Certified Fee	\$2.95	
Return Receipt Fee (Endorsement Required)	\$2.35	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.60	

Sent To: Daniel E. Gonzales
 Street, Apt. No., or PO Box No.: P.O. Box 2475
 City, State, ZIP+4: Santa Fe, NM 87504-2475

PS Form 3800, August 2006 See Reverse for Instructions

7011 1570 0003 3481 5935

U.S. Postal Service
CERTIFIED MAIL RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

TULSA OK 74121
OFFICIAL USE

Postage	\$ 1.30	0602
Certified Fee	\$2.95	
Return Receipt Fee (Endorsement Required)	\$2.35	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.60	

Sent To: Kaiser-Francis Oil Company
 Street, Apt. No., or PO Box No.: P.O. Box 2146R
 City, State, ZIP+4: Tulsa, OK 74121

PS Form 3800, August 2006 See Reverse for Instructions

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Wednesday, August 29, 2012 1:11 PM
To: Phillips, Dorothy, EMNRD
Cc: khavenor@georesources.com
Subject: Disposal application from Delaware Water Company, LLC: Tophat AJQ State #1 30-025-27684

Thanks Dorothy,
That SWD application was protested by Devon, so it is in limbo.

Sounds like Delaware Water Company intends to proceed to hearing or is confident of its negotiations.

Will

From: Phillips, Dorothy, EMNRD
Sent: Wednesday, August 29, 2012 1:00 PM
To: Jones, William V., EMNRD
Subject: RE: Disposal application from Delaware Water Company, LLC:

Will, I just received and approved a one well bond for the Tophat AJQ State No. 1 – 30-025-27684 in the amount of \$20,273 for Delaware Water Company, LLC – OGRID 290484. Thanks

At 04:06 PM 8/29/2012, you wrote:

Just forwarded it to you... hope the email works. Let me know if you do NOT receive that protest email.

From: Kay Havenor [<mailto:khavenor@georesources.com>]

Sent: Wednesday, August 29, 2012 2:38 PM

To: Jones, William V., EMNRD

Subject: Re: Disposal application from Delaware Water Company, LLC: Tophat AJQ State #1 30-025-27684

Will,

I was not aware that Devon has protested the Tophat. When did that occur?

Kay

At 01:10 PM 8/29/2012, you wrote:

Thanks Dorothy,

That SWD application was protested by Devon, so it is in limbo.

Sounds like Delaware Water Company intends to proceed to hearing or is confident of its negotiations.

Will

From: Phillips, Dorothy, EMNRD

Sent: Wednesday, August 29, 2012 1:00 PM

To: Jones, William V., EMNRD

Subject: RE: Disposal application from Delaware Water Company, LLC:

Will, I just received and approved a one well bond for the Tophat AJQ State No. 1 – 30-025-27684 in the amount of \$20,273 for Delaware Water Company, LLC – OGRID 290484. Thanks

Kay C. Havenor, Ph.D., PG. CPG
GeoScience Technologies
904 Moore Ave
Roswell, NM 88201-1144
(575) 626-4518

Kay C. Havenor, Ph.D., PG. CPG
GeoScience Technologies
904 Moore Ave
Roswell, NM 88201-1144
(575) 626-4518

Jones, William V., EMNRD

From: Strickler, Jon [Jon.Strickler@dvn.com]
Sent: Wednesday, August 01, 2012 9:36 AM
To: Jones, William V., EMNRD
Cc: khavenor@georesources.com; Stirling, Andrew
Subject: Objection to the Tophat AJQ State #1 SWD, located in Section 35-23S-33E, Lea County, NM
Attachments: SWD-Tophat AJQ St#1 (sec.35-23S-33E).pdf

William,

By way of that certain letter dated July 19, 2012, received by Devon Energy Production Company, L.P. ("Devon") on July 26th, 2012, Delaware Water Company, L.L.C., provided notice of its plan to convert the Tophat AJQ State #1 well into a salt water disposal well. Devon hereby formally **objects** to this proposal. The proposed well is located within section 35-23S-33E, Lea County, NM. Devon is the owner of oil and gas leasehold within the W ½ of section 35-23S-33E. I've attached the associated proposal letter for easy reference.

Devon has recently relocated its corporate headquarters in Oklahoma City. Our address changed from 20 North Broadway, Oklahoma City, Oklahoma 73102, to our current address of 333 W. Sheridan, Oklahoma City, Oklahoma. The old address is now the corporate office of Continental Resources. As a result of this address change, it appears we have not yet received notice of an additional salt water disposal application for the Brininstool 25 Federal #1 well, located within section 25-23S-33E, Lea County, NM. Devon hereby objects to this proposed salt water disposal, as well. Please forward whatever information you can related to this application.

I'm hopeful that we will be able to work through our concerns with Delaware Water Company, LLC, to resolve our objections.

Sincerely,

Jon Strickler, Sr. Landman
Central Division Land; SE NM Permian
Devon Energy Production Company, L.P.
Devon Tower, Rm. 30.324
333 W. Sheridan
Oklahoma City, OK 73102
Direct Line: (405)552-3608
Facsimile: (405)552-8113

Confidentiality Warning: This message and any attachments are intended only for the use of the intended recipient(s), are confidential, and may be privileged. If you are not the intended recipient, you are hereby notified that any review, retransmission, conversion to hard copy, copying, circulation or other use of all or

JAMES BRUCE
ATTORNEY AT LAW

POST OFFICE BOX 1056
SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213
SANTA FE, NEW MEXICO 87501

(505) 982-2043 (Phone)
(505) 660-6612 (Cell)
(505) 982-2151 (Fax)

jamesbruce@aol.com

RECEIVED OCD
2012 SEP 19 A 9:01

September 19, 2012

Via fax

Jami Bailey, Director
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

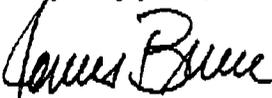
Re: Delaware Water Company, LLC

Administrative applications to convert the Tophat AJQ State Well No. 1 and the Brinninstool 25 Fed. Well No. 1 to salt water disposal, Lea County, New Mexico

Dear Ms. Bailey:

Devon Energy Production Company, L.P. ("Devon") previously filed objections to the above applications. Devon now withdraws its objections, and consents to the applications being approved administratively.

Very truly yours,


James Bruce

Attorney for Devon Energy Production Company, L.P.

CMD :
OG6CWBD

ONGARD
CAPTURE SINGLE WELL BOND

09/28/12 10:40:47
OGODLP -TP7R

OGRID Identifier : 290484 API Well No : 30-25-27684
Operator Name, Address : DELAWARE WATER COMPANY, LLC
P.O. BOX 1224
JAL,NM 88252

Bond Idn : 254243 Bond Status : A Prop Idn : 13552
Prop Name : TOPHAT AJO STATE Well No : 001
U/L Sec Township Range North/South East/West Lot Idn

Surface Locn : H 35 23S 33E FTG 1980 F N FTG 660 F E
API County : 25
Bond Details : Type (Cash/Surety - C/S) : S Bond Co Idn : 12 Amt : 20273
Company OGRID Identifier : 178793
Company Name, Address : RLI INSURANCE COMPANY
8 GREENWAY PLAZA, STE 400
HOUSTON, TX 77046

Effective Date : 01-01-1900 Cancellation Date : 12-31-9999
Issuer Bond No : RLB0014762

E0005: Enter data to modify or PF keys to scroll

PF01 HELP PF02 PF03 EXIT PF04 GoTo PF05 PF06 CONFIRM
PF07 PF08 PF09 COMMENT PF10 NXTBOND PF11 PF12

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Tuesday, September 25, 2012 4:58 PM
To: Wesley_Ingram@blm.gov; Dawson, Scott
Subject: Disposal application from Delaware Water Company, LLC near the Intercontinental Potash Prospect

Hello Scott and Wesley,

I received this application to re-enter this P&Aed well 30-025-27684 for commercial disposal into the Delaware (Bell Canyon/Cherry Canyon).

Apparently it is on State minerals formerly controlled by Yates Petroleum Corporation.

The location is Unit letter H of Section 35, T23S, R33E, Lea County.

This is not in our R-111-P area, but the first well I have seen proposed within the area Intercontinental is looking at. If it were in the Potash area, we usually require the applicant to notify the nearest potash lessee.

Are you folks aware of any Potash lessee over these lands or otherwise anyone else for Delaware Water Company to provide notice to?

Thank You,

William V. Jones, P.E.

505-476-3448W 505-476-3462F
Engineering Bureau, Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Friday, September 28, 2012 11:53 AM
To: khavenor@georesources.com
Cc: Ezeanyim, Richard, EMNRD; Kautz, Paul, EMNRD; Phillips, Dorothy, EMNRD
Subject: Disposal application from Delaware Water Company, LLC: Tophat AJQ State #1 30-025-27684, Section 35-23S-33E Bell and Cherry Canyon perms 5333 to 7458

Hello Kay,

Devon has dropped its protest and Delaware seems to have a single well bond for this well.

- a. Delaware apparently is registered with the OCD as an operator in good standing, but there is another step in order to have the OGRID and name appear in our system. You could work that out with Dorothy Phillips?
- b. We have no logs on the Division's web site for this well, if you have logs would you send a copy to Hobbs for our files and let me know?
- c. This well seems to be in the area of a planned Potash mine. Do you know anything about this? Is there any communication with the Potash mineral owners? I have an inquiry in with the BLM and SLO about this.
- d. Due to the 2100 feet of disposal interval, the permit will require an injection survey within 1 year of startup.

I will prepare this permit pending your responses.

Thank you for the application,

Will Jones

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Tuesday, October 02, 2012 8:44 AM
To: 'Kay Havenor'
Subject: RE: Disposal application from Delaware Water Company, LLC: Tophat AJQ State #1 30-025-27684, Section 35-23S-33E Bell and Cherry Canyon perfs 5333 to 7458

Kay,
Thanks for this.
Apparently item (a.) below is OK, don't worry about it.

Releasing this permit today as SWD-1357.

Regards,

Will Jones

From: Kay Havenor [<mailto:khavenor@georesources.com>]
Sent: Saturday, September 29, 2012 5:42 PM
To: Jones, William V., EMNRD
Subject: Re: Disposal application from Delaware Water Company, LLC: Tophat AJQ State #1 30-025-27684, Section 35-23S-33E Bell and Cherry Canyon perfs 5333 to 7458

Will,

Thank you for your information. I was advised that the Devon protests on the Brinninstool as well as the Tophat were in the process of being withdrawn.

In regard to your comments/questions, please accept the following information:

- a. I will contact Dorothy Phillips ASAP re: OGRID etc.
- b. I do not have logs on the Tophat. I obtained a loaner set that have been returned. Only copied/pasted the 5" Neutron-Density interval of intended perfs for correlation at perf time.
- c. Mrs. Brinninstool owns the surface on the Brinninstool Fed re-entry and leases the surface (SLO) on the Tophat. In phone conversation with her today she indicated that in the past (5 years+/-) IPC drill tested from west to east on her ranch. but advised her that prospective polyhalite was absent beyond more than one-mile west of either of these wells. From talking with her it is obvious that she bird-dogged the prospecting, drilling, and management of the activities. She stated they advised her that economic grade ore, found to the west, did not extend eastward to the extent of their drill-testing.
- d. Delaware Water Company, LLC will run an injection survey within one-year of commencing disposal. The survey data and results will be provided to the OCD Hobbs office.

If I can provide additional info please let me know.

Kay Havenor

At 11:52 AM 9/28/2012, you wrote:

Hello Kay,

Devon has dropped its protest and Delaware seems to have a single well bond for this well.

- a. Delaware apparently is registered with the OCD as an operator in good standing, but there is another step in order to have the OGRID and name appear in our system. You could work that out with Dorothy Phillips?
- b. We have no logs on the Division's web site for this well, if you have logs would you send a copy to Hobbs for our files and let me know?
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- d. Due to the 2100 feet of disposal interval, the permit will require an injection survey within 1 year of startup.

I will prepare this permit pending your responses.

Thank you for the application,

Will Jones

Kay C. Havenor, Ph.D., PG. CPG
GeoScience Technologies
904 Moore Ave
Roswell, NM 88201-1144
(575) 626-4518

Injection Permit Checklist (11/15/2010)

WFX: PMX SWD 1357 Permit Date 9/28/12 UIC Qtr (J/A/S)

Wells 1 Well Name(s): TOP HAT AJO-STATE #1

API Num: 30-025-27684 Spud Date: 2/13/82 New/Old: 0 (UIC primacy March 7, 1982)

Footages 1980 FNL/660 FEL Un HQ Sec 35 Tsp 235 Rge 33E County LEA

General Location: 25 ME SW of EUNICE (Bell LAKE AREA)

Operator: DELAWARE WATER COMPANY, LLC Contact Kay HAVENOR

OGRID: 290484 RULE 5.9 Compliance (Wells) (Finan Assur) IS 5.9 OK? OK/POST/STAY

Well File Reviewed Current Status: PEA (1/12/07)

Planned Work to Well: RE-ENTER TO 7650' Set CIBP, Perf, ACID FEE

Diagrams: Before Conversion After Conversion Elogs in Imaging File: NO LOGS

(3639' EL)

Well Details:	Hole.....Pipe	Sizes	Setting Depths	Stage Tool	Cement Sx or Cf	Determination Method
New <input type="checkbox"/> Existing <input checked="" type="checkbox"/> Surface	26 20		750'		1650 SX	CIRC
New <input type="checkbox"/> Existing <input checked="" type="checkbox"/> Interm	17 1/2 13 3/8		5250'		8400 SX	CIRC
New <input type="checkbox"/> Existing <input checked="" type="checkbox"/> LongSt	12 1/4 9 7/8		12500' (5,470')		3,500 SX	CIRC
New <input type="checkbox"/> Existing <input checked="" type="checkbox"/> Liner		7"	(15215' TD)			
New <input type="checkbox"/> Existing <input type="checkbox"/> OpenHole			312106 - FETC		550 SX	

Depths/Formations:	Depths, Ft.	Formation	Tops?
Formation(s) Above	6560	Cherry C.	<input checked="" type="checkbox"/>
	5287	Loma	<input checked="" type="checkbox"/>
	5337	Bell C.	<input checked="" type="checkbox"/>
Injection TOP:	5333	Bell C.	Max. PSI 1067 OpenHole Perfs <input checked="" type="checkbox"/>
Injection BOTTOM:	7458	Cherry C.	Tubing Size 3 1/2 Packer Depth 5303'
Formation(s) Below	7515'	Brushy C.	<input checked="" type="checkbox"/>
	8812'	B.S.	<input checked="" type="checkbox"/>

intercontinental

Capitan Reef? (Potash? yes Noticed?) (WPP? Noticed?) Salado Top/Bot 1353 50ft Cliff House?

Fresh Water: Depths: <150' Formation QAL Wells? None Analysis? Affirmative Statement

Disposal Fluid Analysis? Sources: COMMERCIAL DISPOSAL (Brushy C./B.S.)

Disposal Interval: Analysis? Production Potential/Testing: ELG Eval + Perf Test = water zone

Notice: Newspaper Date 7/19/12 Surface Owner SLO Mineral Owner(s) SLO

RULE 26.7(A) Affected Persons: CF/rough / Devon / Brummond / KF / Daniel Gonzalez

AOR: Maps? Well List? Producing in Interval? Wellbore Diagrams?

.....Active Wells 0 Repairs? Which Wells?

.....P&A Wells 0 Repairs? Which Wells?

Issues: Run in Survey Request Sent Reply:

[Handwritten scribbles]