DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.
06/01/09		W Jones D. Brooks	06/01/09	NSL SWD	PKAA0915260913

ABOVE THIS LINE FOR DIVISION USE ONLY

30-015-29104
S. Loco Hills
Fed. Disposal #1
Havenor Op.
120216

RECEIVED
2009 JUN 1 PM 4 19

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

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 _____

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

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

[B] ☒ Offset Operators, Leaseholders or Surface Owner

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

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

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

[F] ☐ Waivers are Attached

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

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

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

Kay Havenor	Kay Havenor	President	5/27/09
Print or Type Name	Signature	Title	Date

KHavenor@georesources.com
e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. OPERATOR: Havenor Operating Company

ADDRESS: 904 Moore Ave, Roswell, NM 88201

CONTACT PARTY: Kay Havenor PHONE: 575-622-0283

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes ___X___No
If yes, give the Division order number authorizing the project: _____

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: President
SIGNATURE: Kay Havenor DATE: 5/26/2009

E-MAIL ADDRESS: KHavenor@georesources.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.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Havenor Operating Company

WELL NAME & NUMBER: South Loco Hills Federal Disposal No. 1

WELL LOCATION: 660' FSL & 2220 FEL | O | 31 | 17S | 30E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

See attached detail bore hole diagram

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 14-3/4" Casing Size: 11-3/4"

Cemented with: 225 sx + 3 yds gravel ***or*** _____ ft^3

Top of Cement: Surface Method Determined: Visual

Intermediate Casing

Hole Size: 11" Casing Size: 8-5/8"

Cemented with: 475 sx. ***or*** _____ ft^3

Top of Cement: Surface Method Determined: Circulated

Production Casing

Hole Size: 7-7/8" Casing Size: 5-1/2" L 17#

Cemented with: DV tool 1,323 sx. ***or*** _____ ft^3

Top of Cement: Surface - Attached diagram Method Determined: Circulated

Total Depth: 13,600' PB to 12,957'

Injection Interval

Perforations 12,306 feet to 12,542

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 3-1/2" L-80 Lining Material: IPC coated

Type of Packer: Baker Lockset

Packer Setting Depth: approx 12,100'

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

Additional Data

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

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

2. Name of the Injection Formation: Siluro-Devonian

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.

   See attached detailed well diagram

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: All Overlying: Queen, Grayburg, San Andres, Yeso, Bone Spring,

   Morrow to a depth of about 11,500 ft.

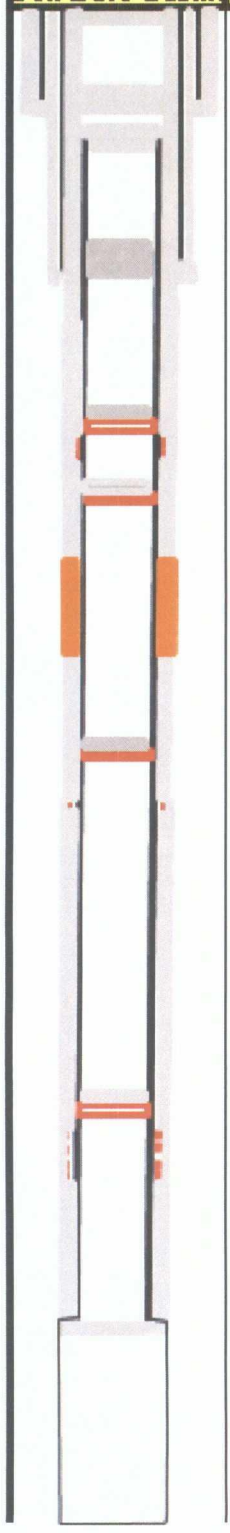
South Loco Hills Federal Disposal No. 1
660' FSL & 2220' FEL
Sec. 31, T17S-R30E
Eddy County, NM

Enron Oil & Gas Company #1 Sand Tank 31 Federal Com

30-015-29104

Unit O, Sec 31, T17S-R30E
Eddy Co., New Mexico
DATE **Foreman**

Casing Installation



Well Bore Casing	Length	Depth	Description	OD	ID
			P&A 50' to surface 20 sxs		
	650'	650'	15 Joints 42# H-40 225 sx topped w/100 sx + 3 yds pea gravel1" P&A 704-544 50 sxs P&A cut/pulled 5-12" 1909 25 sxs 1959-1841 tagged	11-3/4"	
	3,981'	3,981'	32# J-55 ST&C (cement circulated) P&A 25 sxs 4031-3931	8-5/8"	
		7,700'	CIBP + 15 sxs cement		
		7,766-7834	Perf Bone Spring .35" 46 shots. Acid 4800 gal		
		8,000'	CIBP + 4 sxs cement		
		8,443'	Multi-Stage cementer circulated 5-1/2" to surface filled 5-1/2" annulus w/ 9.5 ppg mud		
		10,000'	Top 1st stage 5-1/2" cement job (CBL)		
		10,950'	CIBP 10950' + 2 sxs cement		
		11,011-16'	Perf upper Morrow .34" 31 shots		
		12,290'	Top Devonian		
		12,720-12,751'	CIBP 12615 w/20' cement Perf Siluro-Devonian 187 holes		
		12,957'	5-1/2" set 12,957 w/DV tool @ 8,443' w/1423 sx	5-1/2"	
		13,600'	TD		

NOT TO SCALE

Filename:
EOG Well diagram

Havenor Operating Company
904 North Moore Avenue
Roswell, New Mexico 88201-1144 **(575) 622-0283**

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2009 JUN 15 PM 1 27

June 12, 2009

New Mexico Oil Conservation Division
Engineering Bureau
1220 South St. Francis Drive
Santa Fe, NM 87505

~~NSL~~ pKAA0915260913

Re: Completion plan C-108 Application 5/26/2009
API 30-015-29104
Havenor Operating Company
South Loco Hill Federal Disposal No. 1
O-31-T17S-30E, Eddy Co., NM

Mr. Westley Ingram, BLM Carlsbad Field Office, noted that our application did not contain a re-enty and completion plan. My apology. Enclosed are two (2) copies of our anticipated program.

Thank you for your assistance on our application.

Respectfully yours,

Kay C Havenor

Kay Havenor

PROPOSED RE-ENTRY AND COMPLETION PLAN

API: 3001529104
Operator: Havenor Operating Company
Lease: South Loco Hills Federal Disposal Well No: 1
Location: Sec 31, T17S-R30E Eddy Co., NM
Footage: 660 FSL, 2310 FEL

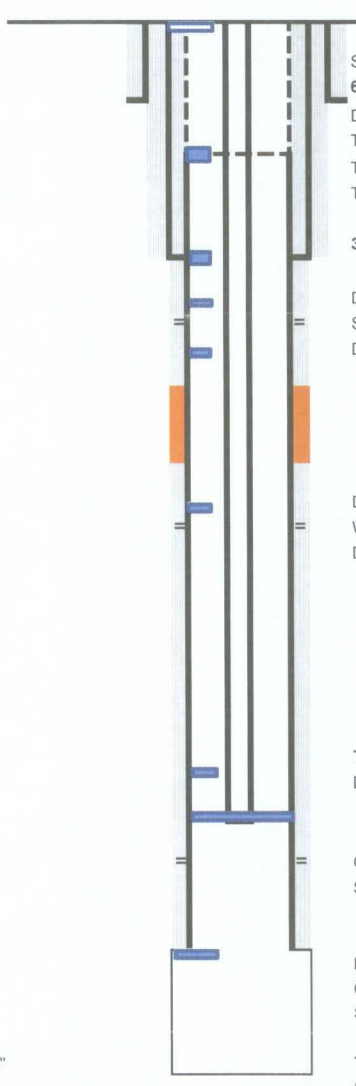
Originally: EOG Sand Tank 31 Federal Com No. 1

GL: 3494

Original Surface Csg
Size: 11-3/4"
Set @: 650
Sxs cmt: 225 sx + 3 yds gravel
Circ: Topped from surface
TOC:
Hole Size: 14-3/4"

Original Intermediate Csg
Size: 8-5/8"
Set @: 3981
Sxs cmt: 475
Circ: Circulated
TOC:
Hole Size: 11"

Original Production Csg
Size: 5-1/2" L80 17#
Set @: 12957
Sxs cmt: 2-Stage 12957
Circ: Yes
TOC:
Hole Size: 7-7/8"



0
Reenter w/7-7/8" bit
Surface cement plug to 20 ft
650
Drill cement plug 544-704'
Tag & dress pulled 5-1/2" @ 1909'
Tie-in 5-1/2" and re-cement to surface
TIH w/4-3/8" bit

3981 Drill cement plug 3931-4031'

Drill CIBP + 20' cement @7700' tag CIBP 8000'
Sqz Bone Springs perfs 7766-7834
Drill cement + CIBP @ 8000'
Originally 5-1/2" was set and multi-stage cemented w/DV tool @ 8443' w/cement to surface. 9.5# mud fills annulus of 5-1/2" from 10000 to 8443'

Drill CIBP + 2 sxs cement 10950'
W/retainer sqz Morrow perfs 11016-16'
Drill-out to next CIBP

Top Siluro-Devonian 12290
Drill CIBP 12615' w/20' cement on top
Lok-Set packer on 2-7/8" approx 12680' after complete clean-out and acid
Original perfs 12720-751 (187 holes)
Spot 5000 gal 15% HCl @ 12700

Drill-out cement at base 5-1/2" @ 12957 into open hole
Clean-out to 13150' and circulate hole for tubing
Spot 7500 gal 15% HCl @ 13000'

TD 13600
Set IPC coated tubing w/Lok-Set 12680'
Load 2-7/8" annulus w/corrosion inhibitor
Complete surface head for injection

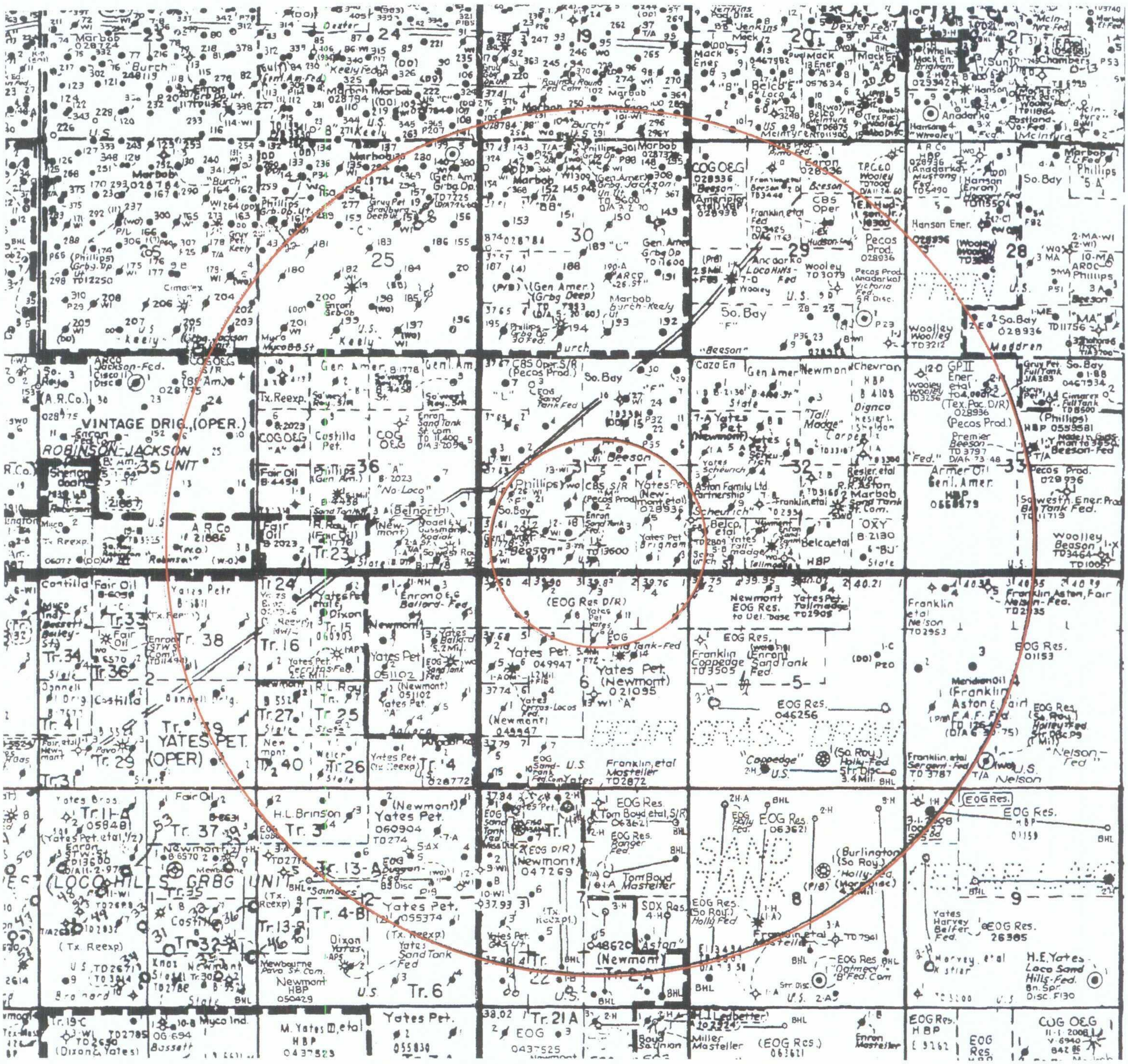
Hole Size to TD: 7-7/8", clean-out to 13150' w/4-3/8"
Tubular requirements (made-up):
5-1/2" L80 17# 2100'
2-7/8" L80 8.7# IPC 1810 coated 12700'

Not to Scale

South Loco Hills Federal Disposal No. 1
660' FSL & 2220' FEL
Sec. 31, T17S-R30E
Eddy County, NM

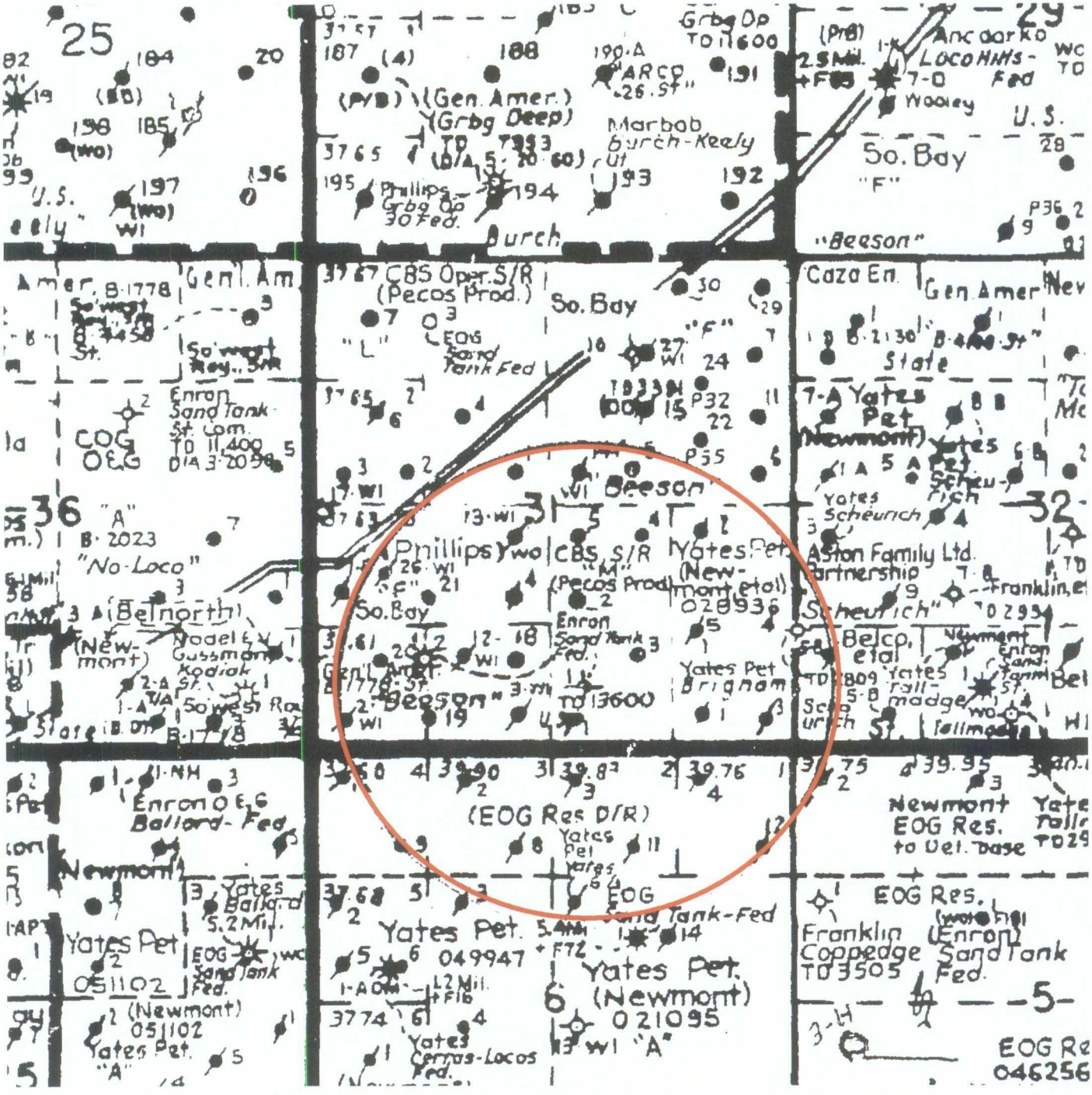
Item V:

Area of Review
½ Mile AOR and 2 mile Radii



South Loco Hills Federal Disposal No. 1
660' FSL & 2220' FEL
Sec. 31, T17S-R30E
Eddy County, NM

Enlarged View of AOR
Centered in Unit O Sec. 31-T17S-R30E
Eddy Co., NM



South Loco Hills Federal Disposal No. 1
660' FSL & 2220' FEL
Sec. 31, T17S-R30E
Eddy County, NM

Wells within 1/2 mile Area of Review

Proposed SWD 0-31-T17S-31E Eddy Co., NM

API	UNIT	SEC	TWN	RGE	FOOTAGE	NS	FOOTAGE	EW	OPERATOR	LEASE	WELL NO	STATUS	SPUDD	PLUGGED	TYPE	TVD	ELEV	Comments
3001504412	G	31	17S	30E	2310	N	2310	E	Southern Bay Operating, LLC	Beeson F Federal	14	Active	5/10/1962		I	3136	3574	Active injection 2007
3001504410	J	31	17S	30E	2310	S	2310	E	CBS	Federal M	5	Active	8/15/1951		O	3120	NR	
3001504402	K	31	17S	30E	2310	S	2232	W	Southern Bay Operating, LLC	Beeson F Federal	13	Active	2/15/1962		O	2827	3560	
3001504416	K	31	17S	30E	1650	S	2310	W	Southern Bay Operating, LLC	Beeson F Federal	4	Active	1/18/1940		O	3083	3566	
3001529839	K	31	17S	30E	1653	S	1287	W	Southern Bay Operating, LLC	Beeson F Federal	21	Active	12/29/1997		O	3350	3568	
3001530015	L	31	17S	30E	1976	S	820	W	Southern Bay Operating, LLC	Beeson F Federal	26	Active	4/11/1998		I	3300	3567	Active injection 2008
3001530033	M	31	17S	30E	990	S	1200	W	EOG Resources Inc	Sand Tank 31 Federal Com	2	Active	3/28/1998		G	11460	3561	
3001504414	M	31	17S	30E	330	S	330	W	Southern Bay Operating, LLC	Beeson F Federal	2	Active	8/18/1939		I	3070	3570	Active injection 2009
3001529838	M	31	17S	30E	985	S	770	W	Southern Bay Operating, LLC	Beeson F Federal	20	Active	11/18/1997		O	3250	3569	
3001504415	N	31	17S	30E	345	S	2310	W	Southern Bay Operating, LLC	Beeson F Federal	3	Active	11/30/1939		O	3650	3572	
3001504419	N	31	17S	30E	990	S	1571	W	Southern Bay Operating, LLC	Beeson F Federal	12	Active	10/1/1947		O	3082	3566	
3001529829	N	31	17S	30E	337	S	1279	W	Southern Bay Operating, LLC	Beeson F Federal	19	Active	11/24/1997		O	3300	3563	
3001529830	N	31	17S	30E	1000	S	2225	W	Southern Bay Operating, LLC	Beeson F Federal	18	Active	12/4/1997		O	3300	3574	
3001504405	F	31	17S	30E	2310	N	2310	W	Anadarko	Federal L	1	P&A	4/15/1951	2/15/1984	O	3061	3552	
3001505461	G	31	17S	30E	1660	N	1480	E	Southern Bay Operating, LLC	Scheurich	9	P&A	6/13/1962	8/26/1982	I	3136	3574	0 BW 2006-2008
3001504396	I	31	17S	30E	2310	S	990	E	Yates Petroleum Corp	Brigham	2	P&A	<6/16/42	10/10/2007	O	3134	3579	
6001504413	I	31	17S	30E	1320	S	990	E	Yates Petroleum Corp	Brigham	5	P&A	9/12/1961	6/16/2003	O	2883	3561	
3001504460	I	31	17S	30E	1320	S	5	E	Yates Petroleum Corp	Brigham	4	P&A	4/22/1961	4/22/1961	O	2889	3567	
3001504404	J	31	17S	30E	1650	S	2310	E	Anadarko	Federal M	2	P&A	2/5/1954	2/15/1984	O	3098	3571	
3001504408	J	31	17S	30E	2257	S	1703	E	Anadarko	Federal M	4	P&A	7/24/1947	2/15/1984	O	3120	NR	
3001504457	J	31	17S	30E	1650	S	1650	E	Anadarko	Federal M	6	P&A	12/31/1961	9/20/1983	O	3513	3563	
3001504459	L	31	17S	30E	2615	S	25	W	General American Oil Co of Texas	Beeson F	17	P&A	5/8/1962	9/30/1975	O	2765	3555	
3001504398	L	31	17S	30E	1650	S	330	W	Phillips Petroleum Co	Beeson F Federal	1	P&A	4/25/1939	11/14/1993	O	2851	3560	
3001504458	L	31	17S	30E	2310	S	1300	W	Phillips Petroleum Co	Beeson F Federal	16	P&A	4/11/1962	12/19/1984	O	2826	3568	
3001504403	O	31	17S	30E	330	S	2310	E	Anadarko	Federal M	1	P&A	6/30/1982	11/21/1988	O	3650	3571	
3001529104	O	31	17S	30E	660	S	2220	E	EOG Resources Inc	Sand Tank 31 Federal Com	1	P&A	10/19/1996	9/30/2003	G	13596	3576	Application well
3001504395	P	31	17S	30E	330	S	990	E	Yates Petroleum Corp	Brigham	1	P&A	<6/8/42	4/10/1987	O	2850	NR	Inj until 4/30/1976
3001504397	P	31	17S	30E	250	S	250	E	Yates Petroleum Corp	Brigham	3	P&A	1/16/1957	11/1/2002	O	2870	3550	
3001504438	L	32	17S	30E	2310	S	330	W	Yates Petroleum Corp	Scheurich	9	P&A	10/2/1940	7/24/2002	O	2888	3581	
3001504423	M	32	17S	30E	990	S	330	W	Aston & Fair	State	5	P&A	6/19/1940	4/4/1945	O	2869	NR	
3001504424	M	32	17S	30E	330	S	990	W	Yates Petroleum Corp	State BX	5	P&A	2/24/1945	8/3/1995	O	2858	3556	
3001504467	D	5	18S	30E	330	N	330	W	Newmont	Coppedege	2	P&A	12/3/1939	12/2/1971	O	2860	3551	
3001504479	A	6	18S	30E	330	N	990	E	Yates Petroleum Corp	Yates A	4	P&A	10/20/1939	10/31/2001	O	2850	3548	
3001504487	A	6	18S	30E	990	N	330	E	Yates Petroleum Corp	Yates A	12	P&A	1/6/1940	12/27/1982	O	2816	3549	
3001504478	B	6	18S	30E	330	N	2310	E	Yates Petroleum Corp	Yates A	3	P&A	<8/17/49	11/11/2002	O	2845	NR	
3001504486	B	6	18S	30E	990	N	1650	E	Yates Petroleum Corp	Yates A	11	P&A	6/19/550	11/6/1982	O	2841	NR	
3001504477	C	6	18S	30E	330	N	1650	W	Yates Petroleum Corp	Yates A	2	P&A	7/24/1939	10/27/1983	I	2834	NR	Injection P&A
3001504483	C	6	18S	30E	990	N	2231	W	Yates Petroleum Corp	Yates A	8	P&A	<8/17/49	11/15/2002	O	2872	3557	
3001504476	D	6	18S	30E	330	N	330	W	Yates Petroleum Corp	Yates A	1	P&A	7/11/1939	11/11/2002	O	2810	NR	
3001504484	D	6	18S	30E	990	N	911	W	Yates Petroleum Corp	Yates A	9	P&A	<8/17/49	10/26/1987	O	2825	NR	
3001504472	F	6	18S	30E	1650	N	1650	W	Yates Petroleum Corp	Yates A	3	P&A	10/5/1939	9/28/1993	I	2845	3547	Junked - P&A
3001504481	G	6	18S	30E	1650	N	2310	E	Yates Petroleum Corp	Yates A	6	P&A	5/12/1940	10/28/2002	O	2855	3549	

South Loco Hills Federal Disposal No. 1
660' FSL & 2220' FEL
Sec. 31, T17S-R30E
Eddy County, NM

Item VI:

There are no wells within either the ½ mile Area of Review or the 2 mile radius that penetrate the proposed injection formation. A tabulation of all reported wells in the AOR is included below.

Item VII:

1. The maximum injected volume is anticipated to by 20,000 BWPD. The average volume is anticipated to be 15,000 BWPD.
2. Injection will be through a closed system.
3. The maximum injection pressure is expected to be 2,500 psig, with an average pressure of 1,500 psig.
4. Water from the Artesia Group formations, San Andres, Glorieta, Yeso, Drinkard, Tubb, Abo, Bone Spring, Wolfcamp, Upper Pennsylvania, Atoka, and Morrow zones are anticipated to be disposed. Waters from these zones should be compatible with the Siluro-Devonian disposal zone.
5. The analysis of a Devonian water sample from Sec. 16, T16S-R30E from the Go-Tech website is shown below. This sample TDS would approximate greater than 80,000 mg/l.

NM WAIDS

DATA | MAPS | HOME | SCALE | CORROSION

Water Samples for Well HENSHAW DEEP UT 001
API = 3001503917
Formation = DEV
Field = HENSHAW

Instructions:

Click  For general information about this sample.

Click  For scale calculation pages (Stiff-Davis or Oddo Tomson methods).

Click  To select **this water sample** for water mixing. It will lead to the main page, and add the sample ID to the mixing table.

Click 664 Click the hyperlinked sample number to make a .csv for that sample, **or** select several check boxes and click Submit for multiple samples

The ions are in (mg/L) units.

	SampleID	T	R	S	SO4	CL	CO3	HCO3	K	Na	Ca	Mg
☐	5136 	16S	30E	24	2200	35100	null	790	null	null	null	null

☐SELECT/DESELECT ALL

Submit

South Loco Hills Federal Disposal No. 1
660' FSL & 2220' FEL
Sec. 31, T17S-R30E
Eddy County, NM

Item VIII:

The injection zone is typically referred to as the "Devonian." It is more accurately the Siluro-Devonian. The zone is composed of dolomites with scattered thin inter-beds of shale that are in-turn underlain by limestones. These carbonates typically exhibit vuggy porosity especially where the zones are water-wet. The Siluro-Devonian in the well extends from 12,290' to below the base of the 5-1/2" casing at 12,957' to about 13,050'. The thickness of the Siluro-Devonian is about 760 ft.

There are no potable water sources known in the AOR. USGS topographic maps and SPOT satellite imagery of the greater AOR show no indications windmills or spring/surface water-fed vegetation. Records of the New Mexico Office of the State Engineer do not report any water wells within or nearby the AOR.

Item IX:

Stimulation, if used, will consist of a maximum of 10,000 gals of 15% HCl with appropriate non-emulsifying and corrosion additives.

Item X:

All drilling, casing, testing reports and well logs by EOG, the original operator, are in the OCD files.

Item XI:

As stated in Item VIII, above, no known potable water wells are known in a one-mile radius of the proposed disposal well.

Item XII:

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

South Loco Hills Federal Disposal No. 1
660' FSL & 2220' FEL
Sec. 31, T17S-R30E
Eddy County, NM

Item XIII:

Notification list

Surface Owner:

Bureau of Land Management
c/o Carlsbad Field Office
620 E. Greene Street
Carlsbad, NM 88220

Operators

CBS Operating Corp
P.O. Box 2236
Midland, TX 79702

EOG Resources Inc
P.O. Box 2267
Midland, TX 79702

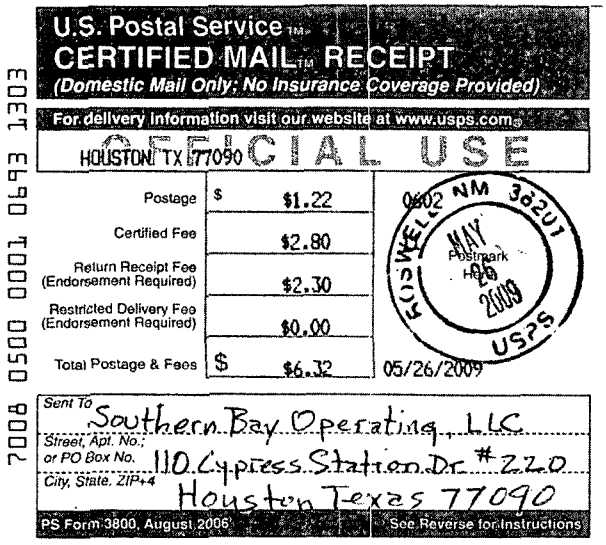
Southern Bay Operating, L.L.C.
110 Cypress Station Dr. #220
Houston, TX 77090

Yates Petroleum Corp
105 S. 4th Street
Artesia, NM 88210

A copy of the disposal application was furnished to the above by CERTIFIED MAIL. Evidence of same is enclosed.

Signed: Kay Havenor Date: 5/26/2009
Kay Havenor, PhD, PG

South Loco Hills Federal Disposal No. 1
660' FSL & 2220' FEL
Sec. 31, T17S-R30E
Eddy County, NM


U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
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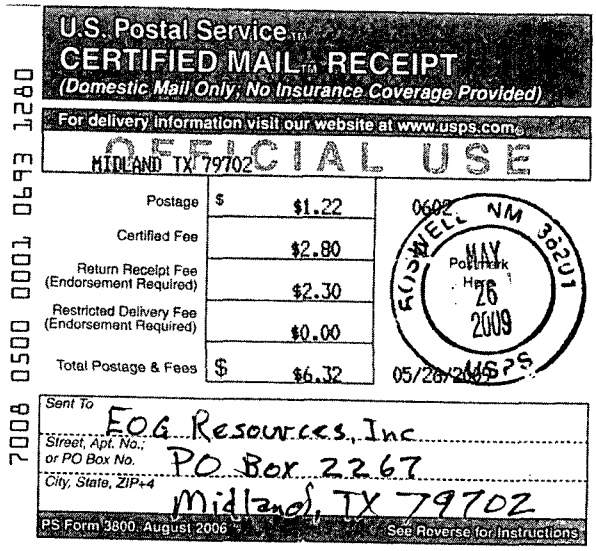
For delivery information visit our website at www.usps.com®
HOUSTON TX 77090 OFFICIAL USE
Postage $1.22
Certified Fee $2.80
Return Receipt Fee (Endorsement Required) $2.30
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.32
0602 NM 38201 ROSWELL MAY 26 2009 USPS
05/26/2009
7008 0500 0001 0693 1303
Sent To Southern Bay Operating, LLC
Street, Apt. No.; or PO Box No. 110 Cypress Station Dr #220
City, State, ZIP+4 Houston Texas 77090
PS Form 3800, August 2006 See Reverse for Instructions


U.S. Postal Service™
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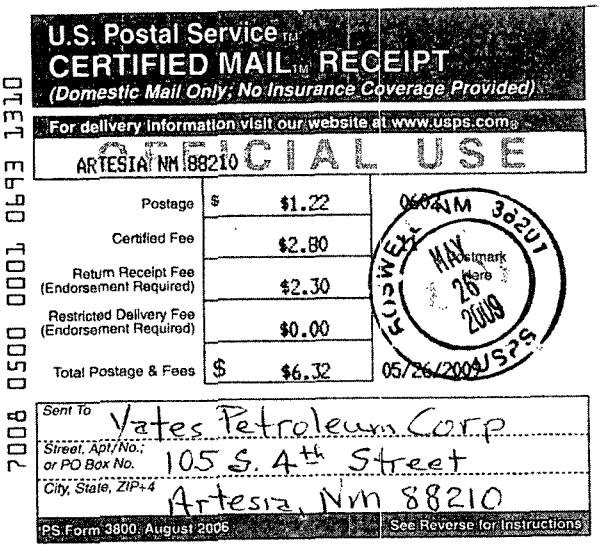
For delivery information visit our website at www.usps.com®
MIDLAND TX 79702 OFFICIAL USE
Postage $1.22
Certified Fee $2.80
Return Receipt Fee (Endorsement Required) $2.30
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.32
0602 ROSWELL NM 38201 MAY 26 2009 USPS
05/26/2009
7008 0500 0001 0693 1280
Sent To EOG Resources, Inc
Street, Apt. No.; or PO Box No. PO Box 2267
City, State, ZIP+4 Midland, TX 79702
PS Form 3800, August 2006 See Reverse for Instructions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CERTIFIED MAIL™ RECEIPT
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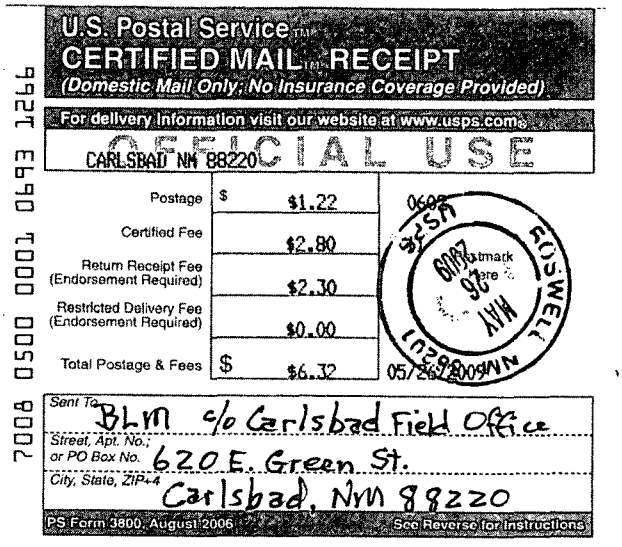
For delivery information visit our website at www.usps.com®
ARTESIA NM 88210 OFFICIAL USE
Postage $1.22
Certified Fee $2.80
Return Receipt Fee (Endorsement Required) $2.30
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.32
0602 NM 38201 ROSWELL MAY 26 2009 USPS
05/26/2009
7008 0500 0001 0693 1310
Sent To Yates Petroleum Corp
Street, Apt. No.; or PO Box No. 105 S. 4th Street
City, State, ZIP+4 Artesia, NM 88210
PS Form 3800, August 2006 See Reverse for Instructions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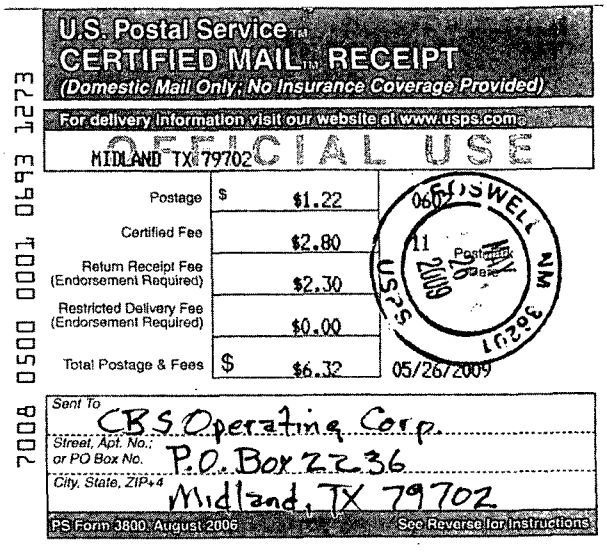
For delivery information visit our website at www.usps.com®
CARLSBAD NM 88220 OFFICIAL USE
Postage $1.22
Certified Fee $2.80
Return Receipt Fee (Endorsement Required) $2.30
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.32
0602 USPS 88220 MAY 26 2009 NM ROSWELL 38201
05/26/2009
7008 0500 0001 0693 1266
Sent To BLM c/o Carlsbad Field Office
Street, Apt. No.; or PO Box No. 620 E. Green St.
City, State, ZIP+4 Carlsbad, NM 88220
PS Form 3800, August 2006 See Reverse for Instructions


U.S. Postal Service™
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MIDLAND TX 79702 OFFICIAL USE
Postage $1.22
Certified Fee $2.80
Return Receipt Fee (Endorsement Required) $2.30
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.32
0602 ROSWELL NM 38201 MAY 26 2009 USPS
05/26/2009
7008 0500 0001 0693 1273
Sent To CBS Operating Corp.
Street, Apt. No.; or PO Box No. P.O. Box 2236
City, State, ZIP+4 Midland, TX 79702
PS Form 3800, August 2006 See Reverse for Instructions

Havenor Operating Company
904 North Moore Avenue
Roswell, New Mexico 88201-1144 **(575) 622-0283**

RECEIVED
2009 JUN 12 AM 11 32

June 11, 2009

New Mexico Oil Conservation Division
Engineering Bureau
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Addendum to C-108 Application 5/26/2009
Havenor Operating Company
South Loco Hill Federal Disposal No. 1
O-31-T17S-30E, Eddy Co., NM

For attachment to the cited application we have enclosed two (2) copies of the acknowledgment receipts for delivery of Certified Mail notifications to Area of Review operators.

Thank you for your attention to our application.

Respectfully yours,

Kay C Havenor

Kay Havenor

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

BLM c/o Carlsbad field Office
620 E. Greene St.
Carlsbad, NM 88220

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X A Ansuez ☐ Agent ☐ Addressee

B. Received by (Printed Name) A Ansuez C. Date of Delivery 5/27

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

CARLSBAD NM 28 MAY 2009 USPS 88220-9998

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service lat) 7008 0500 0001 0693 1266

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

EOG Resources, Inc.
PO Box 2267
Midland, TX 79702

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X B-Bell ☐ Agent ☐ Addressee

B. Received by (Printed Name) B. Bell C. Date of Delivery 5/28/09

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service la 7008 0500 0001 0693 1280

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

CBS Operating Corp
P.O. Box 2236
Midland, TX 79702

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X PA Redman ☒ Agent ☐ Addressee

B. Received by (Printed Name) PA Redman C. Date of Delivery 5-28-09

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service la 7008 0500 0001 0693 1273

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Southern Bay Operating LLC
110 Cypress Station Drive
#220
Houston, TX 77090

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X C. Merrifield ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Merrifield | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7008 0500 0001 0693 1303

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Yate Petroleum Corp
105 S. 4th Street
Artesia, NM 88210

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Melissa Stewart ☐ Agent ☐ Addressee

B. Received by (Printed Name) MELISSA STEWART | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7008 0500 0001 0693 1310

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

c15F

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

5. Lease Designation and Serial No.
LC 028936

6. If Indian, Allottee or Tribe Name

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

7. If Unit or CA, Agreement Designation

Type of Well
☐ Oil Well ☐ Gas Well ☒ Other

8. Well Name and No.
Sand Tank 31 Federal Com. #1

Name of Operator
Enron Oil & Gas Company

9. API Well No.
30 015 29104

Address and Telephone No.
P. O. Box 2267, Midland, Texas 79702 (915) 686-3714

10. Field and Pool, or Exploratory Area
Sand Tank Bone Spring

Location of Well (Footage, Sec., T., R., M., or Survey Description)
660' FSL & 2220' FEL
Sec 31-17S-30E

11. County or Parish, State
Eddy County, NM

RECEIVED
1997 JUN 27 A 10 35
BUREAU OF LAND MGMT.
CARLSBAD RESOURCE AREA

CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Temporarily Abandon	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

12-9-96 - Perforated Devonian 12720-12751 (.34" 187) - Set CIBP at 12615' + 20' cmt.

12-16-97 - Perforated Upper Morrow 11011-11016 (.34" 31) - Set CIBP at 10950 + 2 sx cmt and CIBP at 8000' + 4 sx cement. Estimated top of cement at 7965'.

1-4-97 - Perforated Bone Spring 7766-7834 (.35" 46). Acidized with 4800 gals 20% Ferchek SC acid.

2-7/8" tubing set at 7825'.

1-9-97 - Had slight show of gas in swab runs - no show of oil.

1-11-97 - Shut in - TA to evaluate additional zones of interest.

14. I hereby certify that the foregoing is true and correct
Signed Betty Gildon Title Regulatory Analyst Date 6/25/97

(This space for Federal or State office use)
Approved by (ORIG. SGD.) DAVID R. GLASS Title PETROLEUM ENGINEER Date JUL 02 1997
Conditions of approval, if any:
SEE ATTACHED FOR CONDITIONS OF APPROVAL

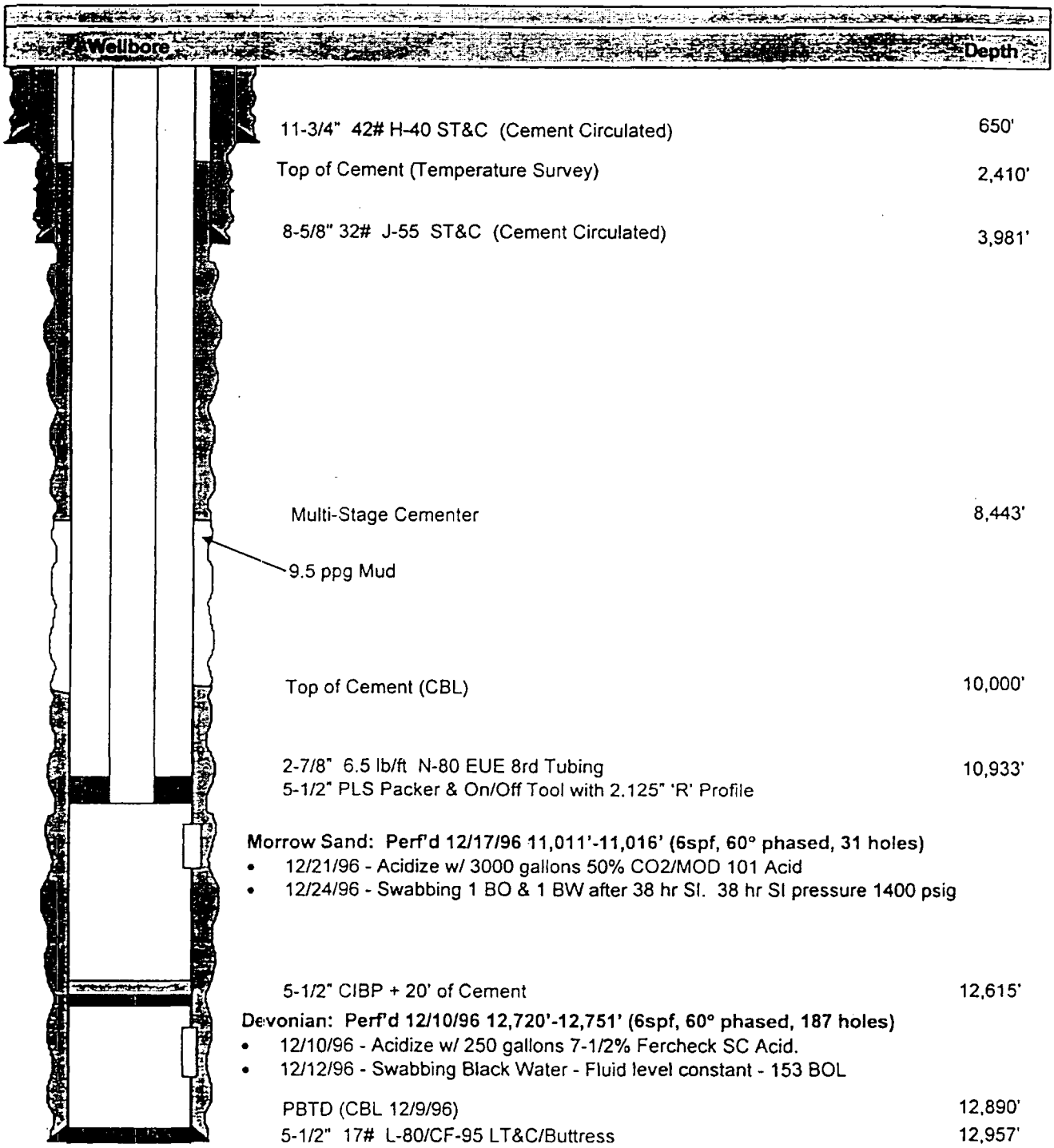
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

ENRON OIL & GAS COMPANY

SANE RANK '31' FED COM NO. 1
EDDY COUNTY, NEW MEXICO
DECEMBER 31, 1996

WELL SCHEMATIC



Affidavit of Publication

NO. 20655

STATE OF NEW MEXICO

County of Eddy:

GARY D. SCOTT being duly

sworn,says: That he is the **PUBLISHER** of The

Artesia Daily Press, a daily newspaper of general

circulation, published in English at Artesia, said county

and county and state, and that the here to attached

Legal Notice

was published in a regular and entire issue of the said

Artesia Daily Press,a daily newspaper duly qualified

for that purpose within the meaning of Chapter 167 of

the 1937 Session Laws of the state of New Mexico for

1 Consecutive week/days on the same

day as follows:

First Publication May 27, 2009

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Subscribed and sworn to before me this

27 Day May 2009

OFFICIAL SEAL
Jo Morgan
NOTARY PUBLIC-STATE OF NEW MEXICO
My commission expires: 6/26/2012

Notary Public, Eddy County, New Mexico

Copy of Publication:

Havenor Operating Company, 904 Moore Ave, Roswell, NM 88201, (575) 622-0283 is seeking approval from the New Mexico Oil Conservation Division to re-enter and complete for commercial produced water disposal the Enron Oil & Gas Company Sand Tank 31 Federal Com #1 well located 660 from the south line and 2,200 feet from the east line of Section 31, T17S, R30E, Eddy County, N.M.

The proposed disposal interval is the Siluro-Devonian through existing and additional perforations below 12,290 to 12,552 ft.

Havenor Operating Company plans to dispose of a maximum of 20,000 BWPD with a maximum pressure of 2,500 psig.

Parties with questions regarding this proposal can contact Kay Havenor with Havenor Operating Company at the address or phone number above.

Interested parties must file objections or requests for hearing within 15 days to the Oil Conservation Division: 1220 S. St. Francis Dr., Santa Fe, NM 87505.

Published in the Artesia Daily Press, Artesia, N.M. May 27, 2009
Legal No. 20655

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Friday, June 26, 2009 11:15 AM
To: 'khavenor@georesources.com'
Cc: Phillips, Dorothy, EMNRD; Ezeanyim, Richard, EMNRD
Subject: Disposal application for Havenor Operating Co: South Loco Hills Disposal #1 30-015-29104 Devonian disposal

Hello Mr. Havenor:
After reviewing this application, we have some routine questions:

a. I only see one well under this operating company name – is the bond in place for this new company?
b. The injection depth is listed in the application as 12306 to 12542 but the well diagram sent to the BLM indicates the well will be deepened into the open hole to 13150. What are the top and bottom of the intended injection depths? Injection permits are specific as to formation and upper and lower disposal depths.
c. This well was drilled out of the casing down to 13,600 feet. What formation is at this total depth?
d. Please ask EOG for the mud log from top of Devonian to Total Depth and send a copy in to this office to be a part of this application.
e. What production potential exists for the interval(s) from 12,290 to 13,600 feet and how was this determined?
f. The well was perforated from 12,720 to 12,751, but we don't have any test or production numbers – please send what you can find.
g. This well seems intended for commercial disposal operations. What will you do if the upper Devonian is found to be temporarily productive?
h. The application says 3-1/2 inch tubing will be used, but the BLM diagram shows 2-7/8 inch which is more reasonable inside 5-1/2 inch casing. Which is correct?
i. Please verify which of the parties you noticed control the minerals in the intended injection interval within ½ mile of this well? We ask that applicants identify affected tracts and owners of each of these tracts. Are all areas within ½ mile leased? If not, is the BLM the only mineral owner – even in Unit M of Section 32 and the N/2N/2 of Section 6?
j. Please send a copy of the actual notice published in the county newspaper.

Thank You,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Havenor Operating Company
904 North Moore Avenue
Roswell, New Mexico 88201-1144 **(505) 622-0283**

June 26, 2009

New Mexico District Geologist
EOG Resources, Inc.
P.O Box 2267
Midland, TX 79702

Re: EOG Sand Tank 31 Fed. Com
Sec 31, T17S-R30E Eddy Co., NM
API 30-015-29104

Dear Sir/Madam:

Havenor Operating Company has filed to utilize the subject well for salt water disposal. EOG has been notified of our intentions and did not file a protest. Our proposed injection interval is from the original perfs 12,720-751 (in 5-1/2") and in the open hole to TD.

The Santa Fe OCD has asked I contact you and request a copy of the mud log for the interval about 12,000' to TD. It would be sincerely appreciated if you would accommodate that request.

The copy of the portion requested should be sent to:

Mr. William Jones
New Mexico Oil Conservation Division
Engineering Bureau
1220 South St. Francis Drive
Santa Fe, NM 87505

Thank you for your consideration.

Respectfully submitted,

Kay Havenor

Kay Havenor, PG

cc: William Jones

Havenor Operating Company, Kay Havenor, response to e–mail of today, June 26, 2009 from Will Jones, NM-OCD re: C-108 application.

a. Havenor Operation Company will provide plugging bond upon application to BLM to reenter.

b. Injection is intended to be in the Siluro-Devonian (more correctly Silurian). The top of the formation is 12,290'. 5-1/2" casing was set and cemented at 12,957'.

It is our intent to set the injection packer on 2-7/8" tubing at approximately 12,680' in the 5-1/2" casing. The perfs in the upper Siluro-Devonian will remain open. As noted below, the perf zone yielded water only. During re-entry it is planned to drill-out the 5-1/2" casing shoe and clean-out to TD.

c. The formation in the open hole from 12,957' to 13,300 is Silurian Fussleman. We would be willing to set a cement plug at 13,300' should that be required.

d. A request for a copy of the mud log from 12,000' to TD is being made to EOG. You will be advised as to any response. EOG will be requested to send it to your office.

e. Throughout this area there is no oil/gas production below the top of the Siluro-Devonian. EOG originally amended its projected TD from 11,800' (Morrow) to 14,000' to test the Ellenburger. With no good drilling evidence of shows in the "Devonian" and an apparently thickened Silurian it appears they abandoned looking beyond 13,600'. All porosity zones below the base of the Woodford appear on logs to be water wet. The closest to possible oil was not in the top of the Siluro-Devonian but well below the typical oil/gas accumulations in the top of the formation where they perforated.

f. The "Devonian" was perforated 12,720' to 12,751' w/187 holes on 12/10/1996. EOG reported on 12/12/1996 they were "Swabbing Black Water - Fluid level constant . . ." They then set a CIBP + 20 sxs cement at 12,615' to move up-hole and test the Morrow 11,011-16'.

g. This well is intended for commercial SWD. Based upon my examination of e-logs and, more importantly, the swab results of the "Devonian" perfs being black water with a constant level, there is little concern of the formation being even temporarily productive.

h. Tubing will be 2-7/8" L80 8.7# IPC 1810 coated.

i. All areas within the ½ mile AOR are leased. The injection depths rights all owned/operated by EOG and Yates, both of which were notified.

j. A copy of the affidavit of publication with a photo-copy of the actual publication was submitted with our application. In case it was omitted a copy is attached herewith.

Kay Havenor

Jones, William V., EMNRD

From: Phillips, Dorothy, EMNRD
Sent: Friday, June 26, 2009 1:03 PM
To: Jones, William V., EMNRD
Subject: RE: Disposal application for Havenor Operating Co: South Loco Hills Disposal #1 30-015-29104 Devonian disposal

Will they have a $7,500 One-well plugging bond with United States Fidelity and Guaranty Company. The bond is for the well below – State BTA No. 1 – 30-005-62670. I show no other bond in place for Havenor Operating Co. OGRID 10216.

Inactive Well Additional Financial Assurance Report

10216 HAVENOR OPERATING CO
Total Well Count: 1
Printed On: Friday, June 26 2009

Property	Well Name	Lease Type	ULSTR	OCD Unit Letter	API	Well Type	Last Prod/Inj	Inactive Additional Bond Due	Measured Depth	Required Bond Amount	Bond Required Now	Bond In Place	In Violati
5086	STATE BTA #001	S	2-31-14S-28E	E	30-005-62670	G	04/2009	05/01/2011	8560	13560		0	

WHERE Ogrid:10216

From: Jones, William V., EMNRD
Sent: Friday, June 26, 2009 11:15 AM
To: khavenor@georesources.com
Cc: Phillips, Dorothy, EMNRD; Ezeanyim, Richard, EMNRD
Subject: Disposal application for Havenor Operating Co: South Loco Hills Disposal #1 30-015-29104 Devonian disposal

Hello Mr. Havenor:
After reviewing this application, we have some routine questions:

a. I only see one well under this operating company name – is the bond in place for this new company?
b. The injection depth is listed in the application as 12306 to 12542 but the well diagram sent to the BLM indicates the well will be deepened into the open hole to 13150. What are the top and bottom of the intended injection depths? Injection permits are specific as to formation and upper and lower disposal depths.
c. This well was drilled out of the casing down to 13,600 feet. What formation is at this total depth?
d. Please ask EOG for the mud log from top of Devonian to Total Depth and send a copy in to this office to be a part of this application.
e. What production potential exists for the interval(s) from 12,290 to 13,600 feet and how was this determined?
f. The well was perforated from 12,720 to 12,751, but we don't have any test or production numbers – please send what you can find.
g. This well seems intended for commercial disposal operations. What will you do if the upper Devonian is found to be temporarily productive?
h. The application says 3-1/2 inch tubing will be used, but the BLM diagram shows 2-7/8 inch which is more reasonable inside 5-1/2 inch casing. Which is correct?
i. Please verify which of the parties you noticed control the minerals in the intended injection interval within ½ mile of this well? We ask that applicants identify affected tracts and owners of each of these tracts. Are all areas within ½ mile leased? If not, is the BLM the only mineral owner – even in Unit M of Section 32 and the N/2N/2 of Section 6?
j. Please send a copy of the actual notice published in the county newspaper.

Thank You,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Jones, William V., EMNRD

From: Kay Havenor [khavenor@georesources.com]
Sent: Saturday, June 27, 2009 4:20 PM
To: Jones, William V., EMNRD
Subject: Loco Hills SWD C-108
Attachments: Re-entry RE-PUBLISH WO diagram-So Loco Hills Fed Disposal-1.pdf

I'm resending this with a PDF attachment. The previous one was an Excel 2007 spreadsheet and I was not sure you would be able to open it.

Mr. Jones,
You are correct in that I screwed-up on depths - especially in the plan for clean-out and publication of perforated interval. The attached diagram should make clear what is to be done. The publication should read depths from 12,444' to 12,751' including original perfs. The 2-7/8" packer would be set about 12,400'. All the new perfs will be above the original perfs @ 12720-751'. We will clean-out to about 12,900'. A copy of the proposed plan is attached.

I will immediately re-run the Legal Notice and advise EOG/Yates and BLM of these modifications. This correction also eliminates any possible exposure to Ellenburger somewhere beneath the 5-1/2" casing @ 12,957'. Also, the Siluro-Devonian zone 12720-751, above the base of the casing, swabbed 117 BW in 6-1/2 hrs.

While EOG appears to have not release all the e-logs, I am confident that the higher Siluro-Devonian perfs will not be oil/gas productive because they do not show as favorable porosity and wall cake characteristics as the 12,700' interval. However, the greatest possibility of some oil/gas show might questionably be possible in the 20' at the very top of the Siluro-Devonian (12.290-12,310). We will not perforate that porosity zone. The regional characteristic of oil/gas in the "Devonian" is from the carbonate at the very top, immediately beneath the Woodford Shale. Historic good completion practices in drilling Devonian is to not penetrate porosity any deeper than possible. If you do, you will probably get water and kill the well.

A question on procedure, if you will. Is it OK to advise EOG/Yates and BLM with a copy of the attached program and a copy of the new Notice (via certified mail) by letter describing the change?

Additionally, would you re-send to me the second e-mail (describing the Notice problem)? Somehow in my self-frustration that email got zapped.

Thank you for pointing out the problems. It is appreciated.

Kay

Kay C. Havenor, Ph.D., PG. CPG
GeoScience Technologies
200 West First Street, Suite 747
Roswell, NM 88203-4678
(575) 622-0283

Injection Permit Checklist (7/8/08)

(J.A.S.)

Case _____ R-_____ (SWD) 1182 WFX_____ PMX_____ IPI_____ Permit Date 7/15/09 UIC Qtr ~~A M J S~~

Wells 1 Well Name: South Loco Hills Fed Disposal #1

API Num: (30-) 015-29104 Spud Date: ?96? New/Old: N (UIC primacy March 7, 1982)

Footages 660 FSL/2220 FEL Unit O Sec 31 Tsp 17S Rge 30E County Eddy

Operator: Havener Operating, Co~~mpany~~ Contact ~~Agent~~ Kay C. Havenor

OGRID: 10216 RULE 40 Compliance (Wells) 0/1 (Finan Assur) _____

Operator Address: 904 North Moore Ave, Roswell, NM 88201-1144

Current Status of Well: P&A'd 2003 (Pulled 1909' 5 1/2" 2/8 @ 12,100'

Planned Work to Well: _____ Planned Tubing Size/Depth: _____

	Sizes Hole.....Pipe	Setting Depths	Cement Sx or Cf	Cement Top and Determination Method
Existing ___ Surface	14 3/4 11 3/4	650	225	CIRC
Existing ___ Intermediate	11 8 5/8	3981	475	CIRC
Existing ___ Long String	7 7/8 5 1/2		1423	10,000' CBL / 24 10TS

DV Tool 8943 Liner _____ Open Hole _____ Total Depth 13600 / 12575 PB

Well File Reviewed ✓

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

OLD Dev Perfs (12720 / 12751)

Commercial SWD.

Intervals:	Depths	Formation	Producing (Yes/No)
Above (Name and Top)	12240	WOODFORD	
Above (Name and Top)	12290	Dev Top	
Injection..... Interval TOP:	12446 SUB	Dev	
Injection..... Interval BOTTOM:	~~12551~~ 12751 SUB	Dev	
Below (Name and Top)	13050	Bot. of DEV	

2489 PSI Max. WHIP

No ~~Open Hole (Y/N)~~

No Deviated Hole?

Sensitive Areas: ~~Capitan Reef~~ _____ ~~Cliff House~~ _____ Salt Depths 700—?

.... ~~Potash Area (R-111-P)~~ _____ ~~Potash Lessee~~ _____ ~~Noticed?~~ _____

12404 / 24883

Fresh Water: Depths: No Wells(Y/N) No Analysis Included (Y/N): ___ Affirmative Statement ✓

Salt Water: Injection Water Types: all Fms above DEV in area Analysis? _____

Injection Interval.....Water Analysis: 80,000 TDS Hydrocarbon Potential _____

Notice: Newspaper(Y/N) ___ Surface Owner BLM Mineral Owner(s) ✓

RULE 701B(2) Affected Parties: BLM / EOG / C&S / Southern Bay / XTC

Area of Review: Adequate Map (Y/N) ✓ and Well List (Y/N) ✓

Active Wells 0 Num Repairs — Producing in Injection Interval in AOR —

..P&A Wells 0 Num Repairs — All Wellbore Diagrams Included? —

Move POD NW Sec 31 Fed Com #1

Questions to be Answered:

~~Geology~~ NOTICE Verified?

Depth?

Tubg?

OPen H-E Test or MVDL results?

Sundry 1/9/09

Wanlyn ?

Required Work on This Well: _____ Request Sent ___ Reply: ___

AOR Repairs Needed: _____ Request Sent ___ Reply: ___

_____ Request Sent ___ Reply: ___