DATE IN 11/17/08	SUSPENSE 12/3/08	ENGINEER W. Jones	LOGGED IN 12-8-08	TYPE SWD	APP NO. pKAA0834331487

ABOVE THIS LINE FOR DIVISION USE ONLY

SWD-1156

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

30-025-33398

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] **OPERATOR/Applicant** Name: _____ OGRD: _____
(If one well) Lease/Well Name: _____
Well API No. 30-_____-_____

Enervest
143199

[2] **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

[3] **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
U.S. Bureau of Land Management

[E] ☐ Notification and/or Concurrent Approval by SLO
Commissioner of Public Lands, State Land Office

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

[G] ☐ Waivers are Attached

1155 - Last

[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.

Print or Type Name	Signature	Title	Date

e-mail Address

LEE ENGINEERING

P.O. BOX 10523, MIDLAND, TX 79702 (432) 682-1251

November 14, 2008

Oil Conservation Division
1220 South Francis Drive
Santa Fe, New Mexico 87505

Attn: Mr. Will Jones

Re: Request for Administrative Approval
For Water Disposal Well.
BITSY FEDERAL # 1
API # 30-015-33398
Section 7 E, T-23-S, and R-32-E
Lea County, New Mexico

30-025-33398
unit H

Dear Mr. Jones:

Please find attached a Form C-108 requesting approval to utilize the BITSY FEDERAL # 1 as a salt-water disposal well. If all attachments are satisfactory and no offset Owners object, Enervest Inc. respectfully requests approval be granted administratively. This is a marginal Bone Spring producer Enervest plans to convert.

Enervest requests permission to inject water into the Delaware Formation from at 4660-4720, 4820-4890, 4905-4925, 4940-4995, 5005-5025, 5070-5100, 5145-5155, 5270-5280, 5305-5350, 5390-5410, 5520-5535, 5570-5600, 5620-5635, 5910-5935, 5950-6030, 6060-6090, 6105-6205, and 6260-6270. The 2 7/8" cement lined injection tubing will be set at 4625' with a plastic coated Lok-Set Packer.

The maximum anticipated injection rate is 2000 BWPD with an injection pressure not to exceed 930 PSI. If injection pressures need to be increased, a State witnessed step-rate test will be performed.

If you have any questions, or if I can be of any assistance please do not hesitate to me at (432)-682-1251. My e-mail address is: robertlee5@att.net.

Sincerely,

Robert Lee

Robert Lee

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: ___Enervest LTD._____

ADDRESS: _____1001 Fannin Street, Suite 800 Houston, Texas 77002-5300_____

CONTACT PARTY: ___Mr. Robert Lee_____PHONE: __432-682-1251_____

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: _____Robert Lee_____TITLE: __Consulting Engineer_____

SIGNATURE: _____DATE: ___November 14, 2008____

E-MAIL ADDRESS: _____robertlee5@att.net_____

* 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.

BITSY FEDERAL # 1
APPLICATION FOR INJECTION
NMOCD Form C-108 Section III

III. Data on injection well(s)

A. Injection well information (see attached schematic)

Tabular data

1. Lease: Bitsy Federal
Well No: 1
Location: 1980' FNL & 660' FEL,
Section 7
T-23-S, R-32-E
Lea County, NM

2. Casing: 13 3/8" surface csg. @ 858', cemented w/650 sx. TOC @ surface, circulated.

8 5/8", intermediate casing @ 4388' cemented w/ 1500 sx. TOC @ surface, circulated

5 ½" J-55, 15.5# /ft. casing to 9442' cemented w/ 1330 sx. Cement. TOC @ surface, circulated

3. Injection tubing: + or - 144 jts 2 7/8", 4.6 lb/ft, J-55 Rice Duoline internally cement lined tubing set @ 4625'.

4. Packer: Plastic coated Lok-Set Packer set at 4625'.

B. Other well information

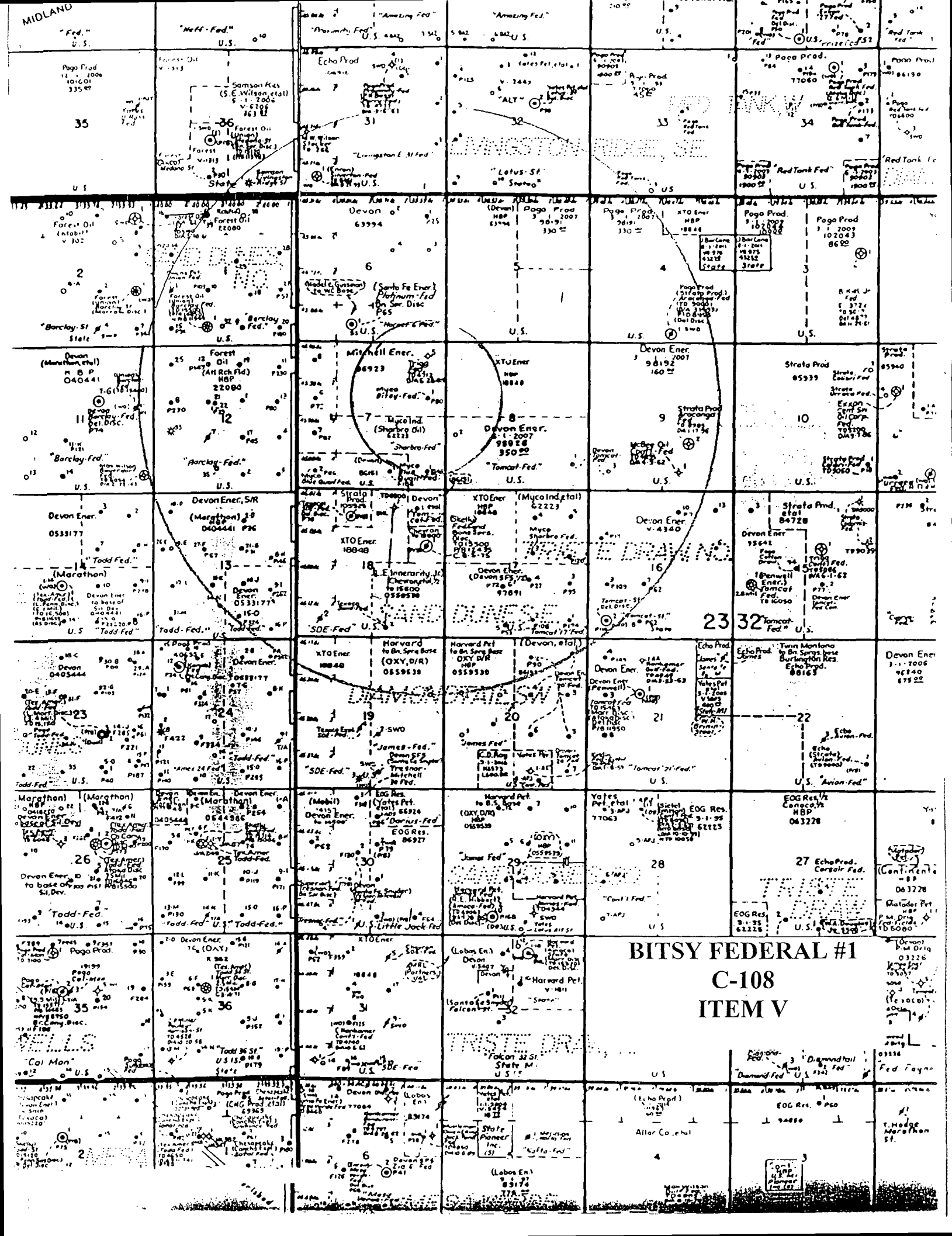
1. Injection formation: Delaware
Field: Sand Dunes

2. The injection intervals will be from 4660 to 6270. The well is currently producing. It is proposed to set a CIBP with cement at 8200' and add perfs in the Delaware formation from 4660-6270 in various intervals with sufficient porosity for water injection.

3. This well was drilled as a Bone Springs producer in 1996.

4. The perfs in the well are 8350-8449 ' which were squeezed with 150 sx, 8679-8691' and 8978-9137'. There are no other perfed or tested intervals in this well. We intend to set a CIBP with 35 sx of cmt @ 8200' and add perfs as listed in item # 2.

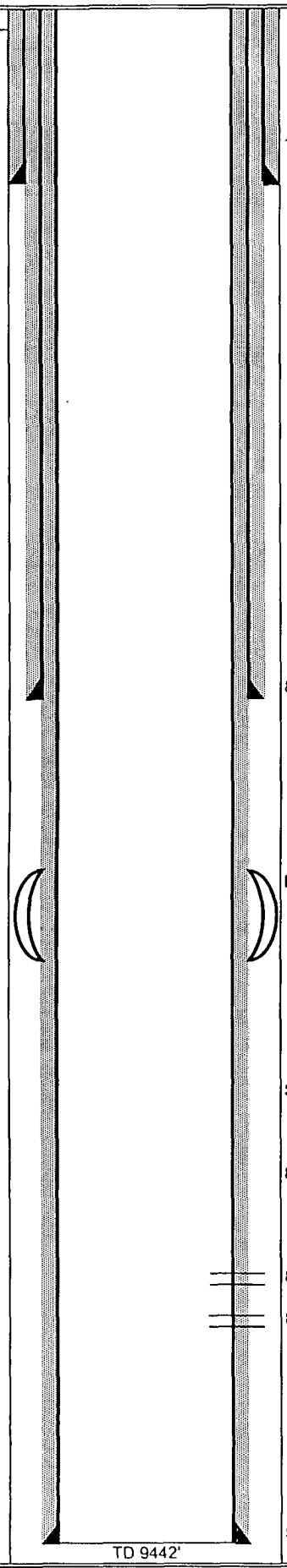
5. There is deeper Bone Springs producing horizons in the area of review. There is no shallower production in the area of review.


BITSY FEDERAL #1
C-108
ITEM V

Envervest - Bitsy Federal # 1 C-108 ITEM VI Tabulation of Wells Within the Area of Review

	OPERATOR	CURRENT WELL NAME	API # 30-025	LOC'N	S-T-R T-23-S R-32-E	STATUS	SPUD DATE	COMP DATE	TD	PBTD	ZONE	CASING PROGRAM	TOC (Calc.)	COMP. INTERVAL	TRTMT.	IP
1	Envervest	Bitsy Federal # 1	33398	1980 FNL 660 FWL	Section 7	Active	5/4/1996	6/16/1996	9442	9386	Bones Springs	13 3/8" @ 858' w/ 650 sx 8 5/8"@ 4388' w/ 1500 sx 5 1/2" @ 9442' w/ 1330 sx	Circ Circ Circ	8978-9137 8679-8691 8350-8499	41500 gals w/ 146,400# sand 1000 gals 7.5% NeFe,40,000 gal w/ 108,000 # sand, 4/97 2000 gal 7.5% Hcl 4/97 20000 gals 7.5% Hcl sqzd 2/2000	80 BOPD, 233 MCFD, 1 BWPD
2	Envervest	Sharbro Federal # 1	33054	660 FSL 660 FEL	Section 7	Active	8/30/1995	12/12/1995	10630	10529	Bones Springs	13 3/8" @ 880' w/ 550 sx 8 5/8"@ 4455' w/ 1500 sx 5 1/2" @ 10630' w/ 2050 sx	Circ Circ Circ	8674-8700 8976-9208	139,000 gal w/ 267,500# sand 65,800 gal w/ 184,000# sand	244 BOPD,465 MCFD, 4 BWPD
3		Trigg Federal # 5 - 7	21436	510 FNL 660 FEL	Section 7	P&A'd	6/15/1965	6/26/1965	4721		Delaware	8 5/8" @ 342' w/ 200 sx	Circ			

FORM	TOP



13 3/8" @ 858'
w/650 sx Cmt, circ

8 5/8" @ 4388' w/1500 sx Cmt, circ

DV Tool @ 6920'

SELECT PERFS:

8350-8449', sqzd w/150 sx 2/16/2000

8679-91'

8978-9137'

5 1/2" @ 9442' w/1330 sx Cmt, circ

BITSY FEDERAL #1

CURRENT WELLBORE DIAGRAM

Enervest Operating LLC

SU-T-R 7H-23S-32E	**API #:** 30-025-33398
LOCATION: 1980' FNL & 660' FEL	
CO, ST: LEA, NEW MEXICO	**LAND TYPE:**
STATUS: ACTIVE	**ACREAGE**

LOG ELEVATION: N/R
GROUND ELEVATION: 3550'

	CASING			TUBING
Hole	17 1/2"	12 1/4"	7 7/8"	
Pipe	13 3/8"	8 5/8"	5 1/2"	
Weight				
Grade				
Thread				
Depth	858'	4388'	9442'	
Mud wt				

5/4/1996 Spud. **6/13/1996** Initial Completion

Perforated 8978-9137'
41,500 Gal & 146,420# sand
Perforated 8679-91'
Perforated 8350-8449'
SQZ Delaware perfs 8350-8449' w/150 sx

BITSY FEDERAL #1

PROPOSED WELLBORE DIAGRAM

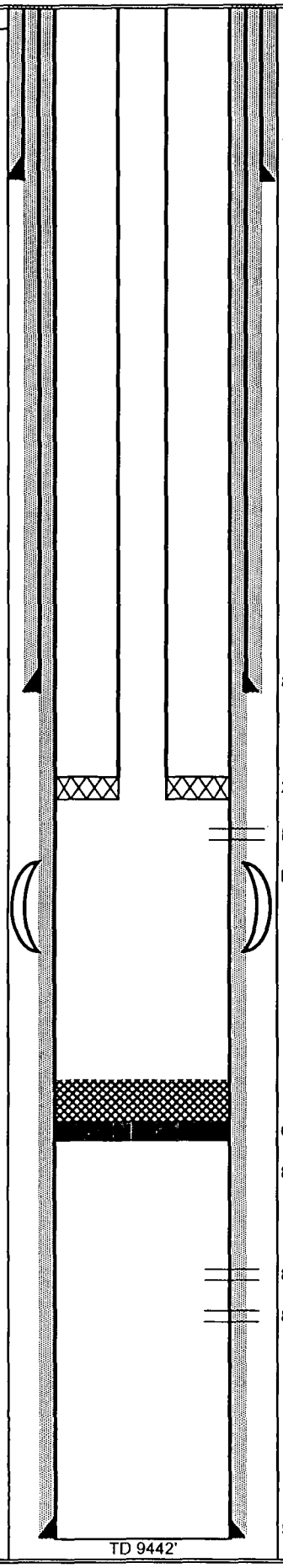
Enervest Operating LLC

SU-T-R 7H-23S-32E	API #: 30-025-33398
LOCATION: 1980' FNL & 660' FEL	
CO, ST: LEA, NEW MEXICO	LAND TYPE:
STATUS: ACTIVE	ACREAGE

LOG ELEVATION: N/R
GROUND ELEVATION: 3550'

	CASING			TUBING
Hole	17 1/2"	12 1/4"	7 7/8"	
Pipe	13 3/8"	8 5/8"	5 1/2"	2 7/8"
Weight				
Grade				
Thread				
Depth	858'	4388'	9442'	4625'
Mud wt				

FORM | TOP



13 3/8" @ 858'
w/650 sx Cmt, circ

8 5/8" @ 4388' w/1500 sx Cmt, circ

2 7/8" lined tbg set @ 4625' w/plastic coated pkr

Perf 4660-6270'

DV Tool @ 6920'

4660 x 2 = 932

CIBP @ 8200' w/35 sx on top

8350-8449', sqzd w/150 sx 2/16/2000

8679-91'

8978-9137'

5 1/2" @ 9442' w/1330 sx Cmt, circ

5/4/1996 Spud. **6/13/1996** Initial Completion

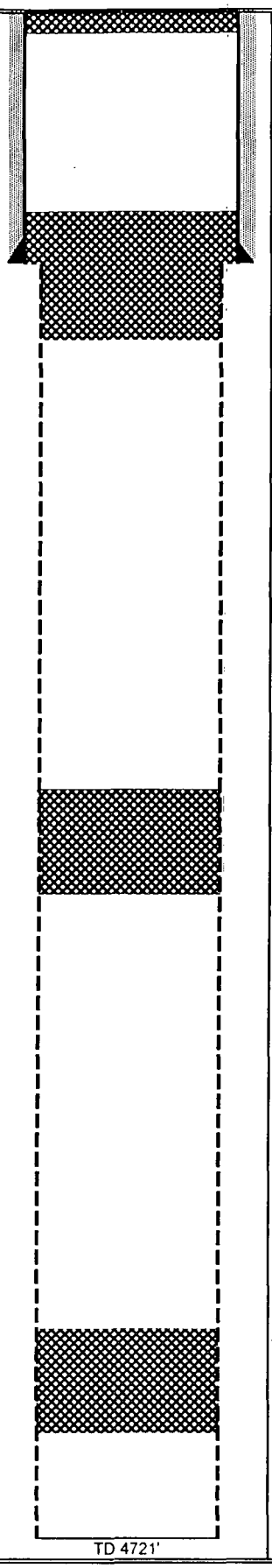
Perforated 8978-9137'
41,500 Gal & 146,420# sand
Perforated 8679-91'
Perforated 8350-8449'
SQZ Delaware perfs 8350-8449' w/150 sx

PROPOSED

CIBP @ 8200' w/35 sx on top of plug
Set 2 7/8" lined tbg @ 4625' w/plastic coated pkr
Perf 4660-6270'

Current

FORM	TOP



0-20' w/20 sx

300-400' w/35 sx
8 5/8 " @ 342 '
w/ 200 sx Cmt, circ

1006-1106' w/35 sx

4576-4676' w/35 sx

FEDERAL "WL" - 7 #5

CURRENT WELLBORE DIAGRAM

John H. Trigg

SU-T-R 7-23S-32E	**API #:** 30-025-21436
LOCATION: 510' FNL & 660' FEL	
CO, ST: LEA, NEW MEXICO	
STATUS: P& A	

LOG ELEVATION: 3553' KM
GROUND ELEVATION:

CASING				
Hole				
Pipe	8 5/8"			
Weight				
Grade				
Thread				
Depth	342'			
Mud wt				

Spud: **6/13/1965**
P&A: **6/26/1965**

Current

BITSY FEDERAL # 1
CONVERT TO INJECTION
NMOCD Form C-108 Sections VII thru XII

VII. Data on proposed operation.

1. Proposed average injection rate: 1000 BWPD per well
   Proposed maximum injection rate: 2000 BWPD per well.

2. The system will be a closed system.

3. Proposed average injection pressure: 900 PSI
   Proposed maximum injection pressure: 930 PSI (This is based on a .2 psi/ft gradient)

4. The proposed injection fluid is produced water from other Enervest leases. Water analysis of these waters is attached.

5. There is production from these intervals within 1 mile of this well and water analyses are attached for these wells.

VIII. The proposed injection interval is located in the Delaware formation. The Delaware is a Permian age reservoir that is 3900' thick in this area. The top of the Delaware is at 4660' and the base is at 8564'. The intervals to be injected into are 4660-4720, 4820-4890, 4905-4925, 4940-4995, 5005-5025, 5070-5100, 5145-5155, 5270-5280, 5305-5350, 5390-5410, 5520-5535, 5570-5600, 5620-5635, 5910-5935, 5950-6030, 6060-6090, 6105-6205, and 6260-6270. There are no fresh water wells within one mile of the proposed salt-water disposal well based on the attached information provided by the State Engineer.

IX. The injection zone will be perforated intervals in the Delaware as shown in Item VIII. The injection string will be 2 7/8" cement lined tubing set at 4625' with a plastic coated Lok-Set packer. No stimulation is planned for the injection interval.

X. Logs have been submitted to the OCD.

XI. There are no fresh water wells within one mile of the proposed conversion. The information for this area as provide by the State Engineer is attached

XII. An examination of this area has determined there are no open faults or other hydrologic connection between the disposal zone and any underground drinking water. These shallow formations are generally not faulted. The casing and cement should isolate the migration of salt water up the borehole. The salt and anhydrite section from 1200' to 4420' will prevent vertical migration in the formation.

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 23S Range: 32E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | iWATERS Menu | Help

POD / SURFACE DATA REPORT 11/14/2008

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest X Y are in Feet

DB File Nbr	Use	(acre ft per annum) Diversion	Owner	POD Number	Source	Tws	Rng	Sec	q	q	q	Zone	X	Y
C 02216	STK	11.3	WILLIAM H. BRININSTOOL REVOCAB	C 02216		23S	32E	21	4	2	2			
C 02337	STK	3	LARRY D. & JANICE K. BEARDEN	C 02337		23S	32E	35	1	4				
C 02349	STK	3	CHARLES F. JAMES	C 02349		23S	32E	03	3	2				
C 02445	STK	3	BUREAU OF LAND MANAGEMENT	C 02445		23S	32E	13	3	3	3			
C 02520	PRO	0	PENWELL ENERGY	C 02520		23S	32E	15	4	1				
C 02695	STK	3	U.S. DEPT. OF ENERGY, WIPP	C 02695		23S	32E	20	4	4	4			
C 02778	STK	3	U.S. DEPT. OF ENERGY - WIPP	C 02778		23S	32E	20	4	4	3			
C 02779	STK	3	U.S. DEPT. OF ENERGY - WIPP	C 02779		23S	32E	20	4	3	3			

Record Count: 8

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 23S Range: 31E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | iWATERS Menu | Help

POD / SURFACE DATA REPORT 11/14/2008

(acre ft per annum) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest X Y are in Feet

DB File Nbr	Use	Diversion	Owner	POD Number	Source	Tws	Rng	Sec	q	q	q	Zone	X	Y
C 02258	PRO	3	DEVON ENERGY CORPORATION	C 02258	Shallow	23S	31E	26	2	3				
C 02348	STK	3	MILLS FAMILY PARTNERSHIP	C 02348		23S	31E	26	3	2				
C 02492	COM	105	J.C & FRANCIS MILLS FAMILY LIM	C 02492	Shallow	23S	31E	06	4	4	4			
C 02602	SAN	0	POGO PRODUCING COMPANY	C 02602		23S	31E	35	2	2				
C 02664	MON	0	SANDIA NATIONAL LABORATORIES	C 02664	Shallow	23S	31E	05	2	3	3			
C 02725	MON	0	U.S. DEPT. OF ENERGY, WIPP	C 02725		23S	31E	05	1	1	1			
C 02773	MON	0	U.S. DEPT. OF ENERGY - WIPP	C 02773		23S	31E	03	3	1	4			
C 02774	MON	0	U.S. DEPT. OF ENERGY - WIPP	C 02774		23S	31E	04	3	1	3			
C 02775	MON	0	U.S. DEPT. OF ENERGY - WIPP	C 02775		23S	31E	05	1	1	1			
C 02776	MON	0	U.S. DEPT. OF ENERGY - WIPP	C 02776		23S	31E	05	1	1	2			
C 02777	MON	0	U.S. DEPT. OF ENERGY - WIPP	C 02777		23S	31E	15	2	2	2			
C 02865	EXP	0	STACY MILLS	C 02865	Shallow	23S	31E	06	4	4	4			
C 02954	EXP	0	U.S. DEPARTMENT OF ENERGY CARL	C 02954 EXPL	Shallow	23S	31E	20	4	1	3			
C 03140	MON	0	US DEPT OF ENERGY	C 03140	Shallow	23S	31E	04	4	2	4			
C 03351	STK	3	US BLM CRLSB FLD OFFICE	C 03351 POD1	Shallow	23S	31E	04	4	1	4			
C 03389	STK	3	FRANCES MILLS	C 03389 POD1		23S	31E	17	3	1	1			
C 03394	PUB	0	JAMES HAMILTON CONSTRUCTION	C 03389		23S	31E	17	3	1	1			

Record Count: 17

NM WAIDS

DATA MAPS HOME SCALE CORROSION

Water Samples for Township 23 South Range 32 East

Instructions:

The number represents the number of water samples of certain well. Click the number if you want to download the data.

8 records are available.

	# of samples	S	T	R	Formation	Date	Chlorides (mg/L)	Location (qtr/qtr)
☐	1 sample	03	23S	32E	SANTA ROSA	7/16/1987	47	23S.32E.03.311114
☐	1 sample	03	23S	32E	SANTA ROSA	8/13/1997	48	23S.32E.03.311114
☐	1 sample	03	23S	32E	SANTA ROSA	4/1/1992	74	23S.32E.03.311114
☐	1 sample	21	23S	32E	SANTA ROSA	9/21/1972	15	23S.32E.21.223444
☐	1 sample	21	23S	32E	SANTA ROSA	7/16/1987	16	23S.32E.21.223444
☐	1 sample	21	23S	32E	SANTA ROSA	8/13/1997	22	23S.32E.21.223444
☐	1 sample	21	23S	32E	SANTA ROSA	4/1/1992	26	23S.32E.21.223444
☐	1 sample	35	23S	32E	null	11/8/1995	123	23S.32E.35.224112

☐ SELECT/DESELECT ALL

Submit

New Mexico Tech PRRC

NM WAIDS

DATA MAPS HOME SCALE CORROSION

Water Samples for Township 23 South Range 31 East

Instructions:

The number represents the number of water samples of certain well. Click the number if you want to download the data.

19 records are available.

	# of samples	S	T	R	Formation	Date	Chlorides (mg/L)	Location (qtr/qtr)
☐	1 sample	06	23S	31E	CHINLE	4/1/1992	340	23S.31E.06.44434
☐	1 sample	06	23S	31E	CHINLE	7/16/1987	466	23S.31E.06.44434
☐	1 sample	06	23S	31E	OAL	4/3/1985	322	23S.31E.06.44434
☐	1 sample	06	23S	31E	OAL	7/24/1997	330	23S.31E.06.44434
☐	1 sample	07	23S	31E	CHINLE	4/1/1992	72	23S.31E.07.21424A
☐	1 sample	07	23S	31E	CHINLE	7/24/1997	92	23S.31E.07.21424A
☐	1 sample	17	23S	31E	RSLR	12/9/1976	263	23S.31E.17.31141
☐	1 sample	17	23S	31E	RSLR	2/6/1985	272	23S.31E.17.31141
☐	1 sample	17	23S	31E	RSLR	12/9/1976	274	23S.31E.17.31141
☐	1 sample	26	23S	31E	DEWEY LAKE	7/16/1987	124	23S.31E.26.34411
☐	1 sample	26	23S	31E	DEWEY LAKE	2/6/1985	130	23S.31E.26.34411
☐	1 sample	26	23S	31E	DEWEY LAKE	10/20/1976	134	23S.31E.26.34411
☐	1 sample	26	23S	31E	DEWEY LAKE	7/24/1997	144	23S.31E.26.34411
☐	1 sample	26	23S	31E	DEWEY LAKE	12/11/1970	150	23S.31E.26.34411
☐	1 sample	26	23S	31E	DEWEY LAKE	4/1/1992	230	23S.31E.26.34411
☐	1 sample	26	23S	31E	SANTA ROSA	12/19/1979	122	23S.31E.26.32230
☐	1 sample	29	23S	31E	DEWEY LAKE	4/3/1985	318	23S.31E.29.11333
☐	1 sample	29	23S	31E	DEWEY LAKE	4/2/1992	340	23S.31E.29.11333

☐	1 sample	29	23S	31E	DEWEY LAKE	7/16/1987	354	23S.31E.29.11333

☐ SELECT/DESELECT ALL

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New Mexico Tech PRRC

Miller Chemicals, Inc.
WATER ANALYSIS REPORT

SAMPLE

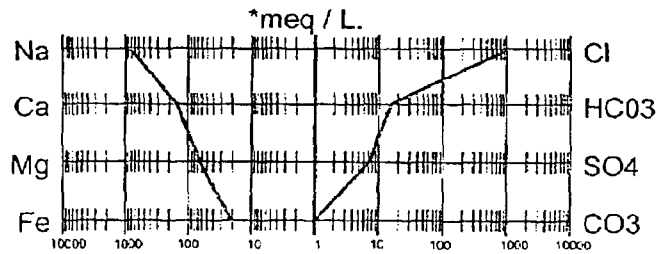
Oil Co. : **Trex**
Lease : **Bitsy Federal**
Well No.: **1**
Location:
Attention:

Date Sampled : **20-August-2007**
Date Analyzed: **22-August-2007**
Lab ID Number: **Aug2307.001- 2**
Salesperson :
File Name : **Aug2307.001**

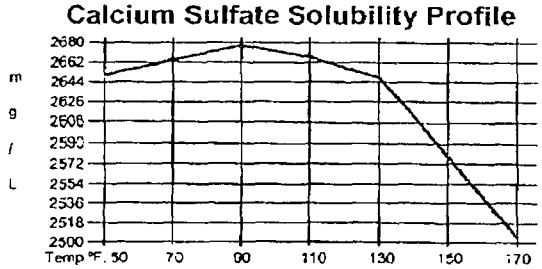
ANALYSIS

1.	Ph			6.150		
2.	Specific Gravity 60/60 F.			1.048		
3.	CACO3 Saturation Index					
			@140F	0.714	Moderate	
	Dissolved Gasses			**MG/L.**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide			Not Present		
5.	Carbon Dioxide			Not Determined		
6.	Dissolved Oxygen			Not Determined		
	Cations					
7.	Calcium	(Ca++)		2,918	/ 20.1 =	145.17
8.	Magnesium	(Mg++)		759	/ 12.2 =	62.21
9.	Sodium	(Na+)	(Calculated)	19,061	/ 23.0 =	828.74
10.	Barium	(Ba++)		Not Determined		
	Anions					
11.	Hydroxyl	(OH-)		0	/ 17.0 =	0.00
12.	Carbonate	(CO3=)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO3-)		908	/ 61.1 =	14.86
14.	Sulfate	(SO4=)		340	/ 48.8 =	6.97
15.	Chloride	(Cl-)		35,992	/ 35.5 =	1,013.86
16.	Total Dissolved Solids			59,978		
17.	Total Iron	(Fe)		368.33	/ 18.2 =	20.24
18.	Manganese	(Mn++)		Not Determined		
19.	Total Hardness as CaCO3			10,409		
20.	Resistivity @ 75 F. (Calculated)			0.160 Ohm · meters		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	14.86		81.04		1,204
CaSO4	6.97		68.07		474
CaCl2	123.35		55.50		6,846
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	62.21		47.62		2,963
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	828.30		58.46		48,422

* milliequivalents per Liter

Kevin Byrne

Kevin Byrne, Analyst

Miller Chemicals, Inc.
WATER ANALYSIS REPORT

SAMPLE

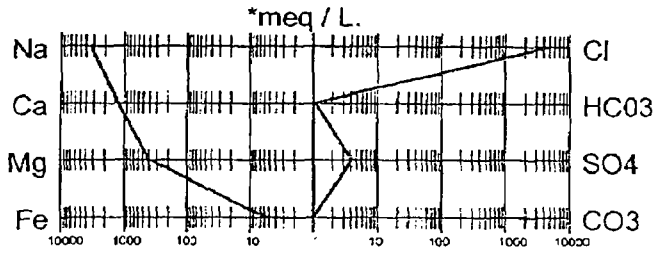
Oil Co. : **Trex**
Lease : **Blue Quail Fed.**
Well No.: **2**
Location:
Attention:

Date Sampled : **20-August-2007**
Date Analyzed: **22-August-2007**
Lab ID Number: **Aug2307.001- 8**
Salesperson :
File Name : **Aug2307.001**

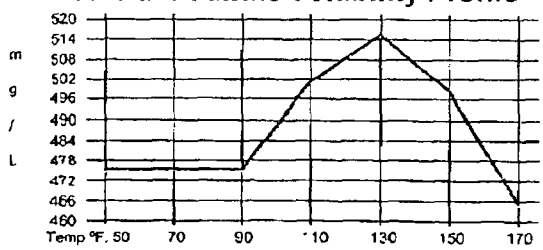
ANALYSIS

1.	Ph			5.340		
2.	Specific Gravity 60/60 F.			1.199		
3.	CACO3 Saturation Index		@ 80F	1.098	Moderate	
			@140F	2.198	Severe	
	Dissolved Gasses			**MG/L.**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide			Not Present		
5.	Carbon Dioxide			Not Determined		
6.	Dissolved Oxygen			Not Determined		
	Cations					
7.	Calcium	(Ca++)		24,280	/ 20.1 =	1,207.96
8.	Magnesium	(Mg++)		4,741	/ 12.2 =	388.61
9.	Sodium	(Na+)	(Calculated)	74,156	/ 23.0 =	3,224.17
10.	Barium	(Ba++)		6	/ 68.7 =	0.09
	Anions					
11.	Hydroxyl	(OH-)		0	/ 17.0 =	0.00
12.	Carbonate	(CO3=)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO3-)		64	/ 61.1 =	1.05
14.	Sulfate	(SO4=)		190	/ 48.8 =	3.89
15.	Chloride	(Cl-)		170,961	/ 35.5 =	4,815.80
16.	Total Dissolved Solids			274,398		
17.	Total Iron	(Fe)		94.00	/ 18.2 =	5.16
18.	Manganese	(Mn++)		Not Determined		
19.	Total Hardness as CaCO3			80,152		
20.	Resistivity @ 75 F. (Calculated)			0.001 Ohm · meters		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	1.05		81.04		85
CaSO4	3.81		68.07		259
CaCl2	1,203.11		55.50		66,772
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	388.61		47.62		18,505
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	3,224.09		58.46		188,480

* milliequivalents per Liter

Kevin Byrne, Analyst

Miller Chemicals, Inc.
WATER ANALYSIS REPORT

SAMPLE

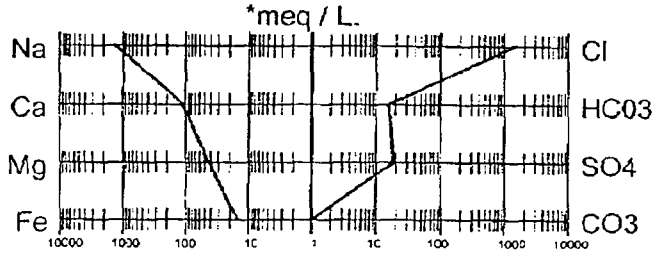
Oil Co. : **Trex**
Lease : **Sharbro Fed.**
Well No.: **1**
Location:
Attention:

Date Sampled : **20-August-2007**
Date Analyzed: **22-August-2007**
Lab ID Number: **Aug2307.001- 9**
Salesperson :
File Name : **Aug2307.001**

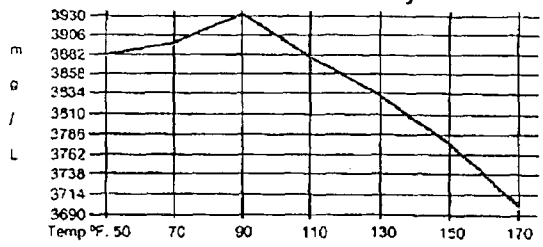
ANALYSIS

1.	Ph			6.680		
2.	Specific Gravity 60/60 F.			1.064		
3.	CACO3 Saturation Index	@ 80F		0.207	Mild	
		@140F		1.132	Moderate	
	Dissolved Gasses			MG/L.	EQ. WT.	*MEQ/L
4.	Hydrogen Sulfide			Not Present		
5.	Carbon Dioxide			Not Determined		
6.	Dissolved Oxygen			Not Determined		
	Cations					
7.	Calcium	(Ca++)		2,188	/ 20.1 =	108.86
8.	Magnesium	(Mg++)		506	/ 12.2 =	41.48
9.	Sodium	(Na+)	(Calculated)	29,063	/ 23.0 =	1,263.61
10.	Barium	(Ba++)		Not Determined		
	Anions					
11.	Hydroxyl	(OH-)		0	/ 17.0 =	0.00
12.	Carbonate	(CO3=)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO3-)		914	/ 61.1 =	14.96
14.	Sulfate	(SO4=)		875	/ 48.8 =	17.93
15.	Chloride	(Cl-)		48,989	/ 35.5 =	1,379.97
16.	Total Dissolved Solids			82,535		
17.	Total Iron	(Fe)		265.00	/ 18.2 =	14.56
18.	Manganese	(Mn++)		Not Determined		
19.	Total Hardness as CaCO3			7,547		
20.	Resistivity @ 75 F. (Calculated)			0.118 Ohm · meters		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	14.96		81.04		1,212
CaSO4	17.93		68.07		1,221
CaCl2	75.97		55.50		4,216
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	41.48		47.62		1,975
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	1,262.53		58.46		73,808

* milliequivalents per Liter

Kevin Byrne, Analyst

Miller Chemicals, Inc.
WATER ANALYSIS REPORT

SAMPLE

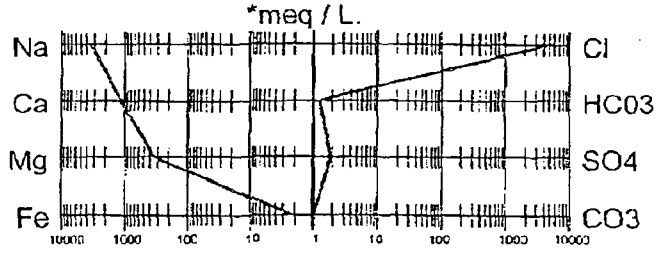
Oil Co. : **Trex**
Lease : **Sharbro Fed.**
Well No.: **2**
Location:
Attention:

Date Sampled : **20-August-2007**
Date Analyzed: **22-August-2007**
Lab ID Number: **Aug2307.001- 6**
Salesperson :
File Name : **Aug2307.001**

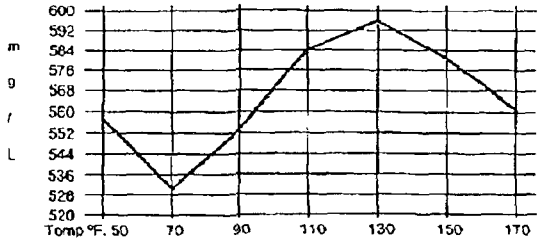
ANALYSIS

1.	Ph			5.910		
2.	Specific Gravity 60/60 F.			1.193		
3.	CACO3 Saturation Index	@ 80F		1.419	Severe	
		@140F		2.799	Severe	
	Dissolved Gasses			**MG/L.**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide			Not Present		
5.	Carbon Dioxide			Not Determined		
6.	Dissolved Oxygen			Not Determined		
	Cations					
7.	Calcium	(Ca++)		21,988	/ 20.1 =	1,093.93
8.	Magnesium	(Mg++)		4,046	/ 12.2 =	331.64
9.	Sodium	(Na+)	(Calculated)	76,112	/ 23.0 =	3,309.22
10.	Barium	(Ba++)		6	/ 68.7 =	0.09
	Anions					
11.	Hydroxyl	(OH-)		0	/ 17.0 =	0.00
12.	Carbonate	(CO3=)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO3-)		76	/ 61.1 =	1.24
14.	Sulfate	(SO4=)		90	/ 48.8 =	1.84
15.	Chloride	(Cl-)		167,962	/ 35.5 =	4,731.32
16.	Total Dissolved Solids			270,280		
17.	Total Iron	(Fe)		38.00	/ 18.2 =	2.09
18.	Manganese	(Mn++)		Not Determined		
19.	Total Hardness as CaCO3			71,564		
20.	Resistivity @ 75 F. (Calculated)			0.001 Ohm · meters		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	1.24		81.04		101
CaSO4	1.76		68.07		120
CaCl2	1,090.93		55.50		60,547
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	331.64		47.62		15,793
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	3,308.76		58.46		193,430

* milliequivalents per Liter

Kevin Byrne

Kevin Byrne, Analyst

Miller Chemicals, Inc.
WATER ANALYSIS REPORT

SAMPLE

Oil Co. : **Trex**
Lease : **Sharbro Fed.**
Well No.: **3**
Location:
Attention:

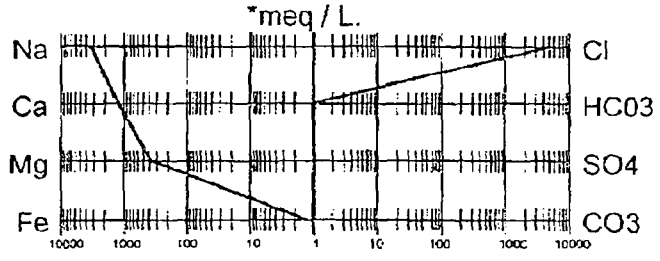
Date Sampled : **20-August-2007**
Date Analyzed: **22-August-2007**
Lab ID Number: **Aug2307.001- 7**
Salesperson :
File Name : **Aug2307.001**

ANALYSIS

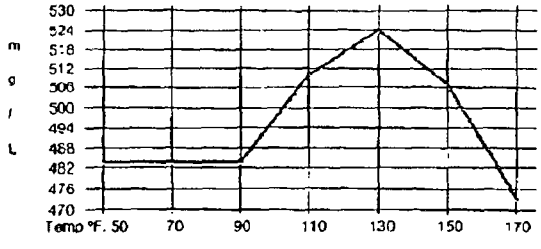
1.	Ph		**5.250**		
2.	Specific Gravity 60/60 F.		**1.199**		
3.	CACO3 Saturation Index	@ 80F	**0.920**	**Moderate**	
		@140F	**2.020**	**Severe**	

	Dissolved Gasses			MG/L.	EQ. WT.	*MEQ/L
4.	Hydrogen Sulfide			**Not Present**		
5.	Carbon Dioxide			**Not Determined**		
6.	Dissolved Oxygen			**Not Determined**		
	Cations					
7.	Calcium	(Ca++)		**23,864**	/ 20.1 =	**1,187.26**
8.	Magnesium	(Mg++)		**4,425**	/ 12.2 =	**362.70**
9.	Sodium	(Na+)	(Calculated)	**75,799**	/ 23.0 =	**3,295.61**
10.	Barium	(Ba++)		**8**	/ 68.7 =	**0.12**
	Anions					
11.	Hydroxyl	(OH-)		**0**	/ 17.0 =	**0.00**
12.	Carbonate	(CO3=)		**0**	/ 30.0 =	**0.00**
13.	Bicarbonate	(HCO3-)		**53**	/ 61.1 =	**0.87**
14.	Sulfate	(SO4=)		**32**	/ 48.8 =	**0.66**
15.	Chloride	(Cl-)		**171,961**	/ 35.5 =	**4,843.97**
16.	Total Dissolved Solids			**276,142**		
17.	Total Iron	(Fe)		**22.50**	/ 18.2 =	**1.24**
18.	Manganese	(Mn++)		**Not Determined**		
19.	Total Hardness as CaCO3			**77,809**		
20.	Resistivity @ 75 F. (Calculated)			**0.001** Ohm · meters		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	**0.87**		81.04		**70**
CaSO4	**0.54**		68.07		**37**
CaCl2	**1,185.86**		55.50		**65,815**
Mg(HCO3)2	**0.00**		73.17		**0**
MgSO4	**0.00**		60.19		**0**
MgCl2	**362.70**		47.62		**17,272**
NaHCO3	**0.00**		84.00		**0**
NaSO4	**0.00**		71.03		**0**
NaCl	**3,295.41**		58.46		**192,650**

* milliequivalents per Liter

Kevin Byrne, Analyst

Miller Chemicals, Inc.
WATER ANALYSIS REPORT

SAMPLE

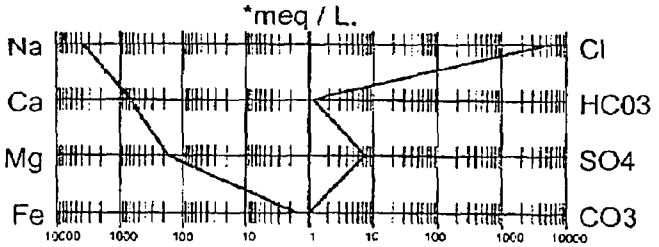
Oil Co. : **Trex**
Lease : **Sharbro Fed.**
Well No.: **4**
Location:
Attention:

Date Sampled : **20-August-2007**
Date Analyzed: **22-August-2007**
Lab ID Number: **Aug2307.001- 10**
Salesperson :
File Name : **Aug2307.001**

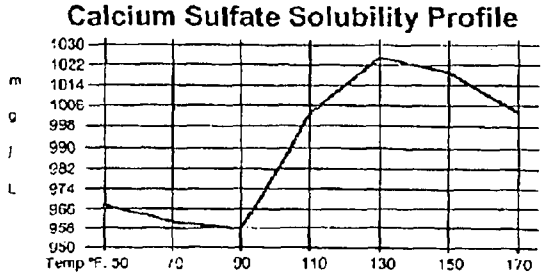
ANALYSIS

1.	Ph			5.860		
2.	Specific Gravity 60/60 F.			1.169		
3.	CACO3 Saturation Index		@ 80F	0.653	Moderate	
			@140F	2.493	Severe	
	Dissolved Gasses			**MG/L.**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide			Not Present		
5.	Carbon Dioxide			Not Determined		
6.	Dissolved Oxygen			Not Determined		
	Cations					
7.	Calcium	(Ca++)		13,234	/ 20.1 =	658.41
8.	Magnesium	(Mg++)		2,086	/ 12.2 =	170.98
9.	Sodium	(Na+)	(Calculated)	86,093	/ 23.0 =	3,743.17
10.	Barium	(Ba++)		Not Determined		
	Anions					
11.	Hydroxyl	(OH-)		0	/ 17.0 =	0.00
12.	Carbonate	(CO3=)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO3-)		70	/ 61.1 =	1.15
14.	Sulfate	(SO4=)		350	/ 48.8 =	7.17
15.	Chloride	(Cl-)		161,963	/ 35.5 =	4,562.34
16.	Total Dissolved Solids			263,796		
17.	Total Iron	(Fe)		27.00	/ 18.2 =	1.48
18.	Manganese	(Mn++)		Not Determined		
19.	Total Hardness as CaCO3			41,637		
20.	Resistivity @ 75 F. (Calculated)			0.001 Ohm · meters		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	1.15		81.04		93
CaSO4	7.17		68.07		488
CaCl2	650.09		55.50		36,080
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	170.98		47.62		8,142
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	3,741.26		58.46		218,714

* milliequivalents per Liter

Kevin Byrne, Analyst

Miller Chemicals, Inc.
WATER ANALYSIS REPORT

SAMPLE

Oil Co. : **Trex**
Lease : **Sharbro Fed.**
Well No.: **5**
Location:
Attention:

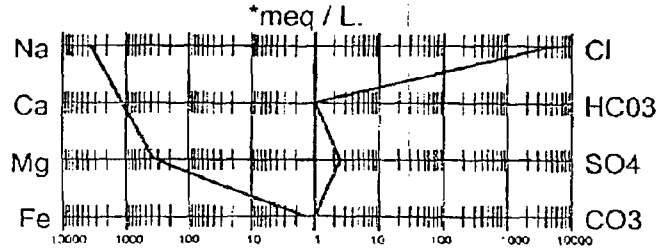
Date Sampled : **20-August-2007**
Date Analyzed: **22-August-2007**
Lab ID Number: **Aug2307.001- 3**
Salesperson :
File Name : **Aug2307.001**

ANALYSIS

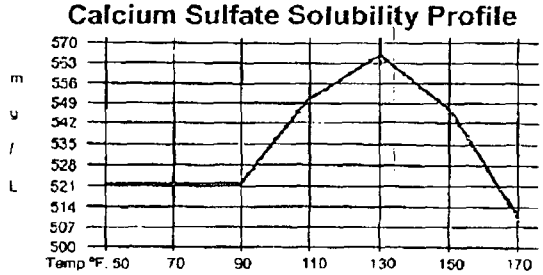
1.	Ph		5.020		
2.	Specific Gravity 60/60 F.		1.193		
3.	CACO3 Saturation Index	@ 80F	0.702	Moderate	
		@140F	1.802	Severe	

	Dissolved Gasses			MG/L.	EQ. WT.	*MEQ/L
4.	Hydrogen Sulfide			Not Present		
5.	Carbon Dioxide			Not Determined		
6.	Dissolved Oxygen			Not Determined		
	Cations					
7.	Calcium	(Ca++)		22,092	/ 20.1 =	1,099.10
8.	Magnesium	(Mg++)		4,172	/ 12.2 =	341.97
9.	Sodium	(Na+)	(Calculated)	79,651	/ 23.0 =	3,463.09
10.	Barium	(Ba++)		9	/ 68.7 =	0.13
	Anions					
11.	Hydroxyl	(OH-)		0	/ 17.0 =	0.00
12.	Carbonate	(CO3=)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO3-)		59	/ 61.1 =	0.97
14.	Sulfate	(SO4=)		118	/ 48.8 =	2.42
15.	Chloride	(Cl-)		173,961	/ 35.5 =	4,900.31
16.	Total Dissolved Solids			280,062		
17.	Total Iron	(Fe)		24.00	/ 18.2 =	1.32
18.	Manganese	(Mn++)		Not Determined		
19.	Total Hardness as CaCO3			72,345		
20.	Resistivity @ 75 F. (Calculated)			0.001 Ohm · meters		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	0.97		81.04		78
CaSO4	2.29		68.07		156
CaCl2	1,095.85		55.50		60,820
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	341.97		47.62		16,284
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	3,462.49		58.46		202,417

* milliequivalents per Liter

Kevin Byrne

Kevin Byrne, Analyst

Miller Chemicals, Inc.
WATER ANALYSIS REPORT

SAMPLE

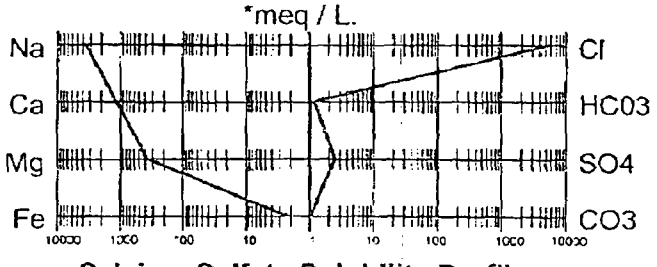
Oil Co. : **Trex**
Lease : **Sharbro Fed.**
Well No.: **6**
Location:
Attention:

Date Sampled : **20-August-2007**
Date Analyzed: **22-August-2007**
Lab ID Number: **Aug2307.001- 4**
Salesperson :
File Name : **Aug2307.001**

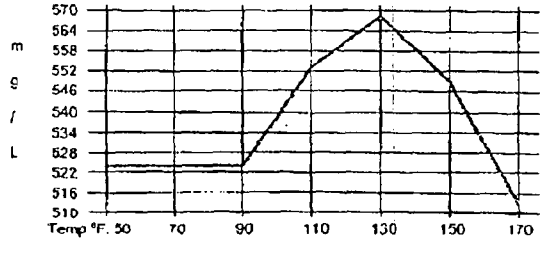
ANALYSIS

1.	Ph			5.200		
2.	Specific Gravity 60/60 F.			1.193		
3.	CACO3 Saturation Index		@ 80F	0.953	Moderate	
			@140F	2.053	Severe	
	Dissolved Gasses			**MG/L.**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide			Not Present		
5.	Carbon Dioxide			Not Determined		
6.	Dissolved Oxygen			Not Determined		
	Cations					
7.	Calcium	(Ca++)		21,988	/ 20.1 =	1,093.93
8.	Magnesium	(Mg++)		4,362	/ 12.2 =	357.54
9.	Sodium	(Na+)	(Calculated)	79,415	/ 23.0 =	3,452.83
10.	Barium	(Ba++)		11	/ 68.7 =	0.16
	Anions					
11.	Hydroxyl	(OH-)		0	/ 17.0 =	0.00
12.	Carbonate	(CO3=)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO3-)		70	/ 61.1 =	1.15
14.	Sulfate	(SO4=)		118	/ 48.8 =	2.42
15.	Chloride	(Cl-)		173,961	/ 35.5 =	4,900.31
16.	Total Dissolved Solids			279,925		
17.	Total Iron	(Fe)		38.00	/ 18.2 =	2.09
18.	Manganese	(Mn++)		Not Determined		
19.	Total Hardness as CaCO3			72,865		
20.	Resistivity @ 75 F. (Calculated)			0.001 Ohm · meters		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	1.15		81.04		93
CaSO4	2.26		68.07		154
CaCl2	1,090.53		55.50		60,524
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	357.54		47.62		17,026
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	3,452.24		58.46		201,818

* milliequivalents per Liter

Kevin Byrne, Analyst

Miller Chemicals, Inc.
WATER ANALYSIS REPORT

SAMPLE

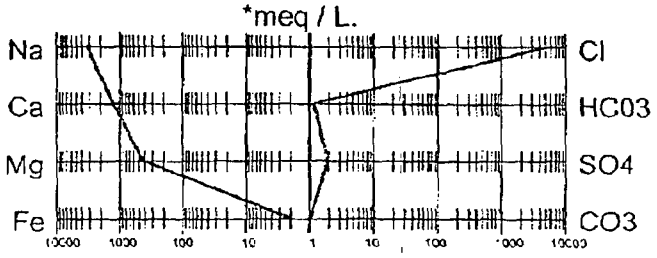
Oil Co. : **Trex**
Lease : **Sharbro Fed.**
Well No.: **7**
Location:
Attention:

Date Sampled : **20-August-2007**
Date Analyzed: **22-August-2007**
Lab ID Number: **Aug2307.001- 5**
Salesperson :
File Name : **Aug2307.001**

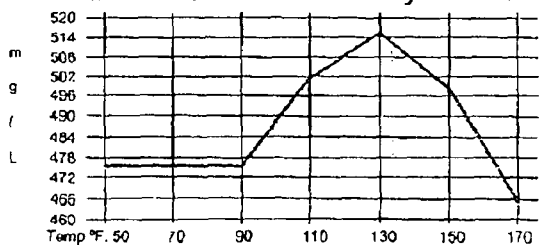
ANALYSIS

1.	Ph			5.280		
2.	Specific Gravity 60/60 F.			1.199		
3.	CACO3 Saturation Index		@ 80F	1.077	Moderate	
			@140F	2.177	Severe	
	Dissolved Gasses			**MG/L.**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide			Not Present		
5.	Carbon Dioxide			Not Determined		
6.	Dissolved Oxygen			Not Determined		
	Cations					
7.	Calcium	(Ca++)		24,280	/ 20.1 =	1,207.96
8.	Magnesium	(Mg++)		4,994	/ 12.2 =	409.34
9.	Sodium	(Na+)	(Calculated)	72,985	/ 23.0 =	3,173.26
10.	Barium	(Ba++)		9	/ 68.7 =	0.13
	Anions					
11.	Hydroxyl	(OH-)		0	/ 17.0 =	0.00
12.	Carbonate	(CO3=)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO3-)		70	/ 61.1 =	1.15
14.	Sulfate	(SO4=)		93	/ 48.8 =	1.91
15.	Chloride	(Cl-)		169,962	/ 35.5 =	4,787.66
16.	Total Dissolved Solids			272,393		
17.	Total Iron	(Fe)		33.00	/ 18.2 =	1.81
18.	Manganese	(Mn++)		Not Determined		
19.	Total Hardness as CaCO3			81,192		
20.	Resistivity @ 75 F. (Calculated)			0.001 Ohm · meters		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	1.15		81.04		93
CaSO4	1.77		68.07		121
CaCl2	1,205.04		55.50		66,880
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	409.34		47.62		19,493
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	3,173.28		58.46		185,510

* milliequivalents per Liter

Kevin Byrne

Kevin Byrne, Analyst

Miller Chemicals, Inc.
WATER ANALYSIS REPORT

SAMPLE

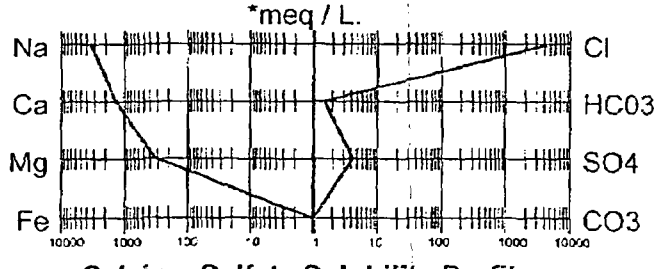
Oil Co. : **Trex**
Lease : **Sharbro Fed.**
Well No.: **8**
Location:
Attention:

Date Sampled : **20-August-2007**
Date Analyzed: **22-August-2007**
Lab ID Number: **Aug2307.001- 11**
Salesperson :
File Name : **Aug2307.001**

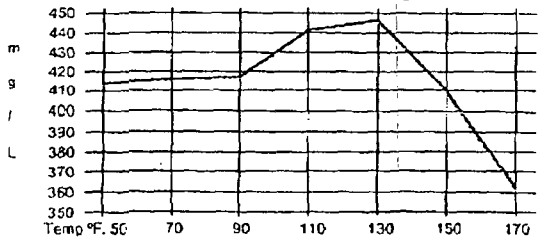
ANALYSIS

1.	Ph			5.320		
2.	Specific Gravity 60/60 F.			1.203		
3.	CACO3 Saturation Index	@ 80F		1.430	Severe	
		@140F		2.350	Severe	
	Dissolved Gasses			**MG/L.**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide			Not Present		
5.	Carbon Dioxide			Not Determined		
6.	Dissolved Oxygen			Not Determined		
	Cations					
7.	Calcium	(Ca++)		26,365	/ 20.1 =	1,311.69
8.	Magnesium	(Mg++)		3,919	/ 12.2 =	321.23
9.	Sodium	(Na+)	(Calculated)	75,924	/ 23.0 =	3,301.04
10.	Barium	(Ba++)		10	/ 68.7 =	0.15
	Anions					
11.	Hydroxyl	(OH-)		0	/ 17.0 =	0.00
12.	Carbonate	(CO3=)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO3-)		88	/ 61.1 =	1.44
14.	Sulfate	(SO4=)		195	/ 48.8 =	4.00
15.	Chloride	(Cl-)		174,961	/ 35.5 =	4,928.48
16.	Total Dissolved Solids			281,462		
17.	Total Iron	(Fe)		15.00	/ 18.2 =	0.82
18.	Manganese	(Mn++)		Not Determined		
19.	Total Hardness as CaCO3			81,973		
20.	Resistivity @ 75 F. (Calculated)			0.001 Ohm · meters		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	1.44		81.04		117
CaSO4	3.85		68.07		262
CaCl2	1,306.40		55.50		72,505
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	321.23		47.62		15,297
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	3,300.85		58.46		192,968

* milliequivalents per Liter

Kevin Byrne, Analyst

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:

Devon Energy Corp
20 N Broadway
Oklahoma City, OK 73105-8260

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) | 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) 7002 3150 0005 0437 8119

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:

New Mexico State Office
Bureau of Land Management
Roswell Field Office
2909 W 2nd Street
Roswell NM 88201-2019

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) | C. Date of Delivery 10/27/8

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) 7002 3150 0005 0437 8089

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:

New Mexico State Office
Bureau of Land Management
1474 E Rodeo Road
Santa Fe, NM 87505

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☒ Addressee

B. Received by (Printed Name) | 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) 7002 3150 0005 0437 8096

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:

XTO Energy Inc.
200 N Loraine, Ste 800
Midland TX 79701

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Pat Cobb ☐ Agent ☐ Addressee

B. Received by (Printed Name) Pat Cobb C. Date of Delivery 10-27-08

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) 7002 3150 0005 0437 8157

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:

Nadel & Gussman
601 N Marienfeld St, Ste 508
Midland TX 79701

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X M Sena ☐ Agent ☐ Addressee

B. Received by (Printed Name) M. SENA C. Date of Delivery 10-27-08

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) 7002 3150 0005 0437 8140

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:

Roff Operating Company
333 Clay St, Ste 4300
Houston TX 77002

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Bessie Grahman ☐ Agent ☐ Addressee

B. Received by (Printed Name) BESSIE GRAHMAN C. Date of Delivery 10/27/08

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) 7002 3150 0005 0437 8133

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:

New Mexico State Office
Bureau of Land Management
Carlsbad Field Office
620 E Greene Street
Carlsbad NM 88220-6296

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) Joe Salcido C. Date of Delivery 10-27

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) 7002 3150 0005 0437 8102

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

JSPS - Track & Confirm http://trkcnfrm1.smi.usps.com/PTSInternetWeb/InterLabelDetail.do

UNITED STATES POSTAL SERVICE

Track & Confirm

Search Results

Label/Receipt Number: **7002 3150 0005 0437 7969**
Detailed Results:

- **Delivered, November 12, 2008, 7:55 am, DENVER, CO 80202**
- **Acceptance, November 07, 2008, 1:04 pm, MIDLAND, TX 79705**

< Back Return to USPS.com Home >

Verification Options

7002 3150 0005 0437 7969

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DENVER CO 80202 OFFICIAL USE

Postage	$	$0.59
Certified Fee		$2.70
Return Reciept Fee (Endorsement Required)		$2.20
Restricted Delivery Fee (Endorsement Required)		$0.00
Total Postage & Fees	$	$5.49

MIDLAND TX 79705 NOV 07 2008 Postmark Here USPS 11/07/2008

Sent To Forest Oil Corp
Street, Apt. No.; or PO Box No. 707 17th St, Ste 3600
City, State, ZIP+4 Denver CO 80202

PS Form 3800, June 2002 See Reverse for Instructions

Affidavit of Publication

State of New Mexico,
County of Lea.

I, KATHI BEARDEN
PUBLISHER
of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period

of 1 issue(s).
Beginning with the issue dated
October 28, 2008
and ending with the issue dated
October 28, 2008

Kathi Bearden
PUBLISHER

Sworn and subscribed to before me
this 28th day of
October, 2008

Notary Public

My commission expires
February 07, 2009
(Seal)

OFFICIAL SEAL
DORA MONTEZ
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires:

This newspaper is duly qualified to publish legal notices or advertisments within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said publication has been made.

LEGAL
OCTOBER 28, 2008

This is to advise all parties concerned, Enervest seeks permission to inject salt water into the following well:

BITSY FEDERAL #1
API # 30-015-33398
Section 7, E, T-23-S, and R-32-E,
Lea County, New Mexico

The formations to be injected into are the Delaware Formation. The Delaware interval will encompass various intervals from:
4660-6270'

The maximum expected injection rate is 2000 BWPD per well at a maximum injection pressure of 930 psi. Questions can be addressed to:
Lee Engineering
P.O. Box 10523
Midland, Tx. 79702
Attn: Robert Lee
(432) 682-1251

Interested parties must file objections or requests for hearing within 15 days of this notice to the:
Oil Conservation Division
1220 South Francis Drive
Santa Fe, New Mexico 87505

#24506

02102084 00020017
ATTN: ROBERT LEE
LEE ENGINEERING
P.O. BOX 10523
MIDLAND, TX 79702

Warnell, Terry G, EMNRD

To: robertlee5@att.net
Subject: RE: Bitsy Fed. #1 SWD Application

No that's okay
It got logged in here at OCD as 30-015-33398
Because that's what the Clerk saw on your Nov 14th cover letter
Everything has been corrected/changed to API # 30-025-33398

Thanks,
Terry

From: robertlee5@att.net [mailto:robertlee5@att.net]
Sent: Thursday, December 11, 2008 8:54 PM
To: Warnell, Terry G, EMNRD
Subject: Re: Bitsy Fed. #1 SWD Application

I do have an idea. I can not tell Lea county from Eddy County. The county code should be 025. Sorry about the confusion. Do you want me to resubmit the application?

Thansk

RObert

---------- Original message from "Warnell, Terry G, EMNRD" <TerryG.Warnell@state.nm.us>: ----------

Hi Robert,

I got your Enervest SWD Application from Will the other day
When I put the API # 30-015-33398 from you application into ONGARD it comes up as a
Mewbourne, Tamano 15 Fed Com Well No. 15 in Sec 15 18S 31E

Any idea why that is?

Thanks,

Terry G. Warnell
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3466