

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: BTA Oil Producers
ADDRESS: 104 S. Pecos; Midland, TX 79701
CONTACT PARTY: Pam Inskeep PHONE: (915) 682-3753
- 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: _____
NOTE: This location is in a potash area.
- 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.
Well will be acidized with 3,000 gallons of 15% HCl acid.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). Well logs were filed with the Division with the original completion.
- *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: Gayle Burleson TITLE: Production Engineer
SIGNATURE: Gayle Burleson DATE: 12/21/00
- * 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, 2040 South Pacheco, 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.

BTA Oil Producers
Gem 8705 JV-P No. 3
660' FSL & 1980' FEL
Section 2, T20S, R33E
Lea County, New Mexico

Attachment A

III. Well Data

Section A:

1. Lease Name: Gem 8705 JV-P No. 3
Location: 660' FSL & 1980' FEL, Sec. 2, T20S, R33E, Lea County, NM
Note: Well is located in a potash area. (Michael Stogner advised to note this on the application.)
2. Casing and Cement

EXISTING

<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Hole Size</u>	<u>Top of Cement</u>
20"	1,385'	2100	26"	Circ to surface
13-3/8"	3,100'	2200	17-1/2"	Circ to surface
9-5/8"	5,426'	1600	12-1/4"	Circ to surface
5-1/2"	13,700'	2900	8-3/4"	Circ to surface

PROPOSED

<u>Casing Size</u>	<u>Setting Depth</u>	<u>Sacks Cement</u>	<u>Hole Size</u>	<u>Top of Cement</u>
20"	1,385'	2100	26"	Circ to surface
13-3/8"	3,100'	2200	17-1/2"	Circ to surface
9-5/8"	5,426'	1600	12-1/4"	Circ to surface
5-1/2"	13,700'	2900	8-3/4"	Circ to surface

3. Tubing: 2-7/8", 6.5# internally plastic coated, set at 7700'.
4. Packer: Arrowset II, set at 7700'.

Section B:

1. Injection Formation: Non-productive Delaware sand (Lower Brushy Canyon, tested wet)

Field or Pool Name: Teas (Delaware)

2. Injection Interval: 7743-8022'
3. Original purpose of well: Drilled to test Morrow Formation
4. Other perforated intervals, bridge plugs, cement plugs:
Morrow Perforations: 13,534-13,588' CIBP @ 13,500' w/20' cement
Morrow Perforations: 13,222-13,393' CIBP @ 13,190' w/40' cement
Atoka Sand Perforations: 12,762-12,781' Squeezed w/25 sacks cement; CIBP @ 12,550' w/40' cement

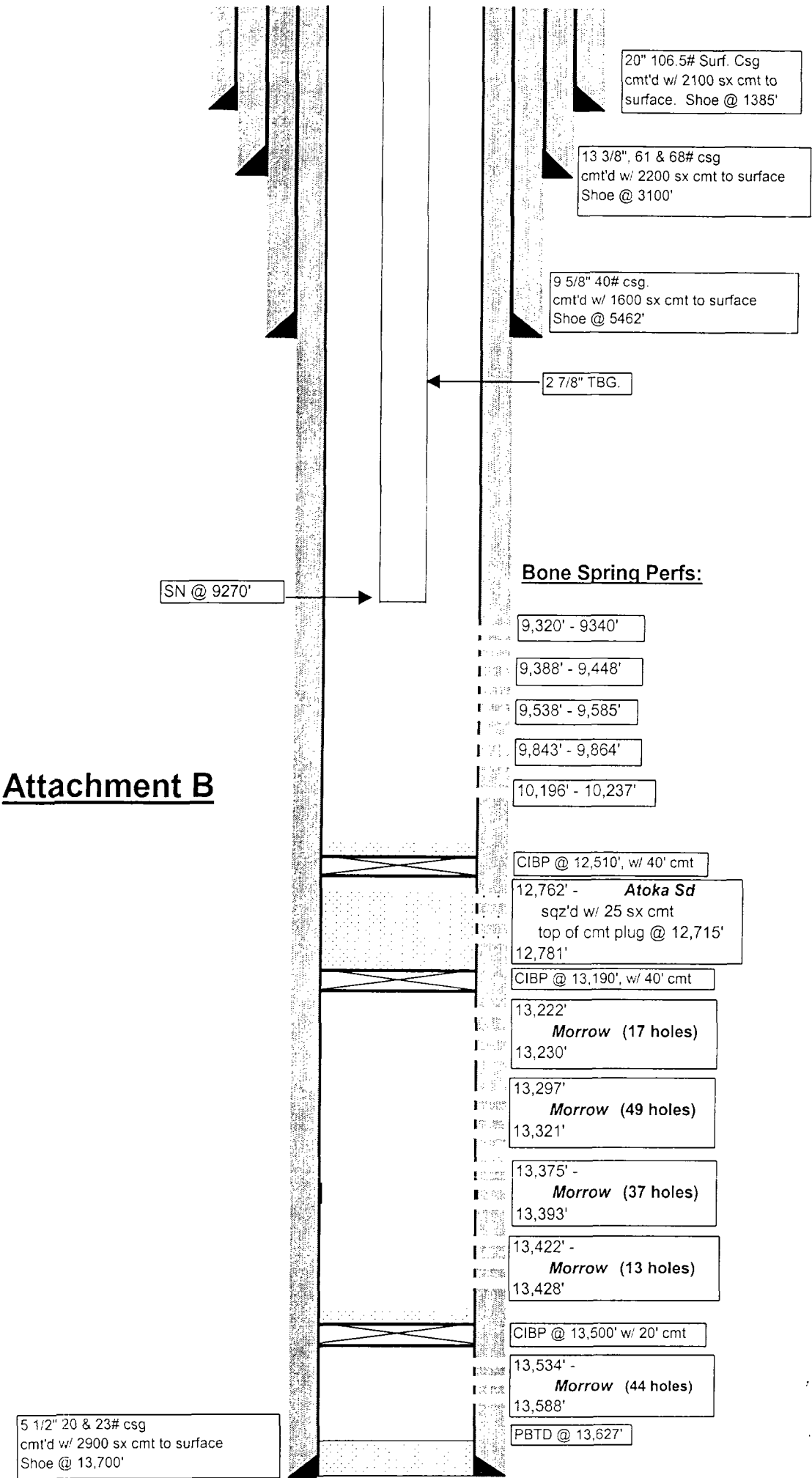
Bone Spring Perforations: 9320-9340' CIBP @ 9250' w/30' cement
9388-9448'
9538-9585'
9843-9864'
10196-10237'
5. Next higher oil & gas zone: Delaware (Price Sand at approximately 6600')
Next lower oil & gas zone: Bone Springs

See current and proposed wellbore schematic (Attachments B and C')

See Structural Cross-section (Attachment E) which identifies the offsetting productive Delaware interval at approximately -2950' subsea compared to the non-productive Delaware interval, the proposed disposal zone, approximately -3975' subsea.

III. CURRENT WELLBORE SCHEMATIC

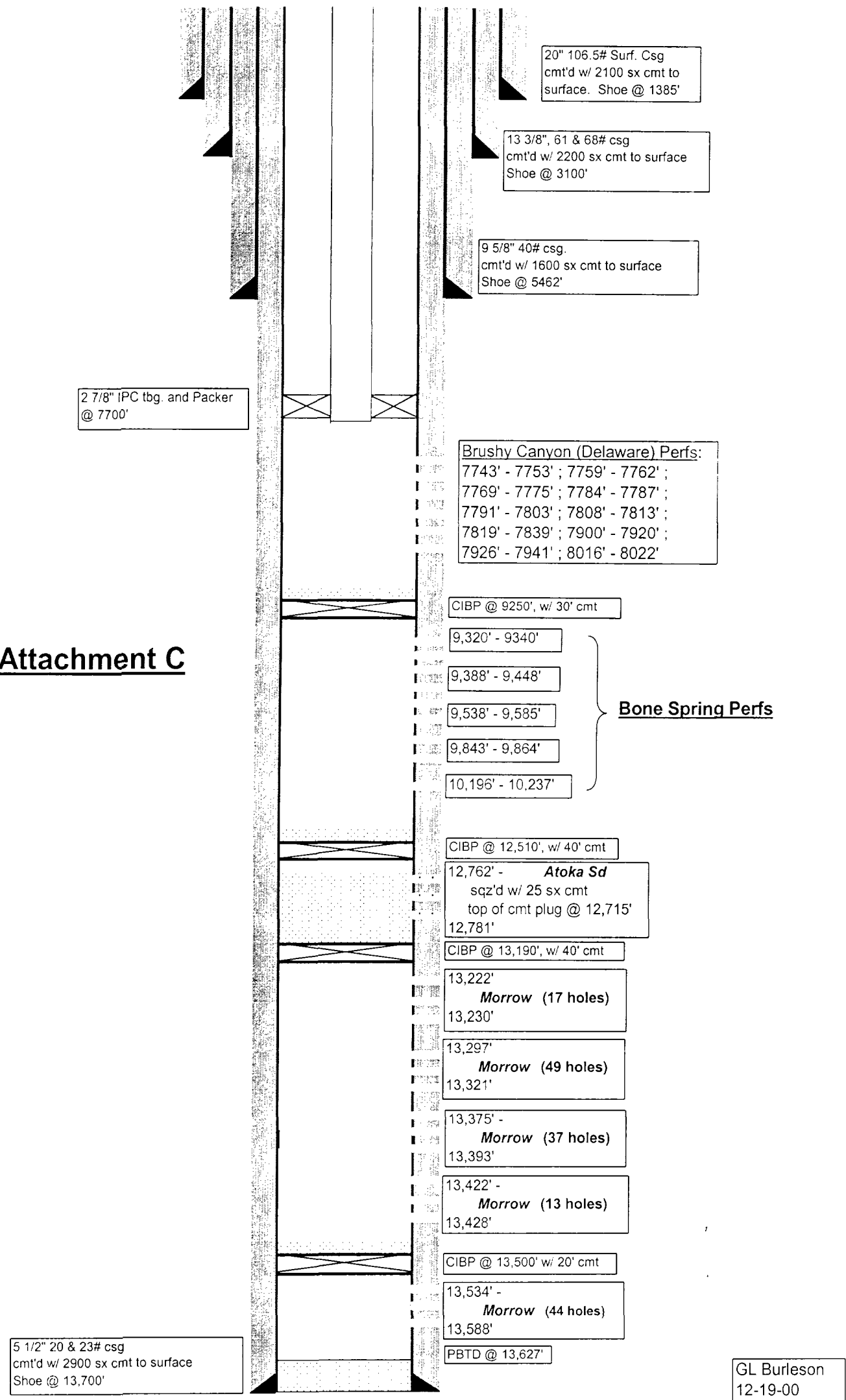
GEM 8705 JV-P, Well No. 3
660' FSL & 1980' FEL, SECTION 2, T20S, R33W
TEAS (BONE SPRINGS) FIELD
LEA COUNTY, NEW MEXICO



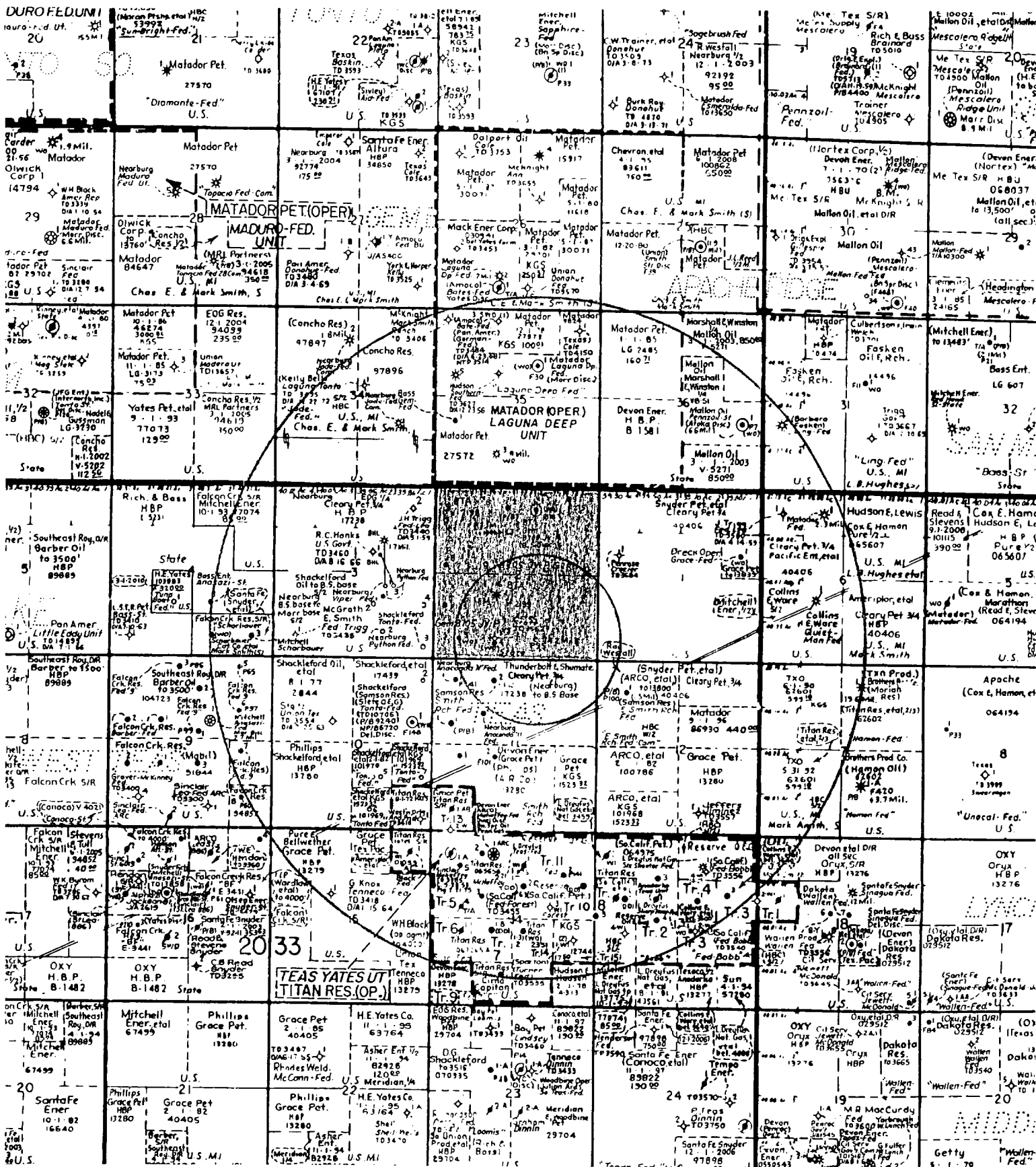
GL Burleson
12-19-00

III. PROPOSED SWD WELLBORE SCHEMATIC

GEM 8705 JV-P, Well No. 3
660' FSL & 1980' FEL, SECTION 2, T20S, R33W
TEAS (DELAWARE) FIELD
LEA COUNTY, NEW MEXICO



Attachment C



Attachment D

BTA Oil Producers – Gem 8705 JV-P No. 3
Wells within ½ mile and 2 mile radius

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N. M. CH. ENG. COMMISSION
P. O. BOX 1880
HOBBS, NEW MEXICO 88240

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

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

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Devon Energy Corporation (Nevada)

3. Address and Telephone No.

20 North Broadway, Suite 1500, OKC, OK 73102-8260 (405) 235-3611

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2250' FSL & 2014' FWL, Section 11-20S-33E

Unit K

5. Lease Designation and Serial No.
NM 13280

6. If Indian, Allotment or Trust Name

NA

7. If Unit or CA, Agreement Designation

NA

8. Well Name and No.

Smith Ranch "11" Fed #2

9. API Well No.

30-025-31683

10. Field and Pool, or Exploratory Area

Teas Bone Springs

11. County or Parish, State

Lea County, NM

12. CHECK APPROPRIATE BOX(es) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ Notice of Intent
☒ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other intermediate casing

- ☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completions 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.)

Drilled 12 1/4" hole to 5077'.

08-18-93 Ran 8 5/8" csg as follows.

23 jts 8 5/8" 32# S80 8rd (1035')

97 jts 8 5/8" 32# J55 8rd (4030')

ECP & DV tool (12')

Float shoe at 5077', float collar at 4983.6', ECP at 3649', DV tool at 3605'.

08-18-93 Cemented 8 5/8" csg as follows.

1st stage: 510 sx Class C 65/35/6 (w/15#/sx salt, 1/4#/sx Celloflakes); mixed at 13.1 ppg= 1.91 yield. Tailed w/200 sx Class C (w/1/4#/sx Celloflakes, 2% CaCl₂); mixed at 14.8 ppg= 1.32 yield. Circ'd 130 sx cement to pit.

2nd stage: 1700 sx Class C 65/35/6 (w/15#/sx salt, 1/4#/sx Celloflakes); mixed at 13.1 ppg= 1.91 yield. Tailed w/200 sx Class C (w/1/4#/sx Celloflakes, 2% CaCl₂); mixed at 14.8 ppg= 1.32 yield. Circ'd 293 sx cement to pit.

Job complete at 2400 hrs 08-18-93.

ACCEPTED FOR RECORD

AR
AUG 13 1993

CARLSBAD, NEW MEXICO

AUG 27 11 46 AM '93

RECEIVED

14. I hereby certify that the foregoing is true and correct

Signed E.L. Buttross, Jr.

Title

E.L. Buttross, Jr.
District Engineer

Date

08/24/93

(This space for Federal or State office use)

Approved by

Comments of approval, if any:

Title

Date

VI. AOR Well Data

Well Name	Operator	Location	Type of Well	Spud Date	Completion Date	TD PBT	Completion Interval	Producing Formation	Casing Depth	Casing Program Amt Cmt	TOC
Gem 8705 #6	BTA Oil Producers	1980' FSL & 1980' FWL 2-20S-33E	Gas	08/05/1991	10/29/1991	13,640 13,400	13,116-13,126 13,246-13,316	Morrow	20" 13-3/8" 8-5/8" 5-1/2"	1385 2200 2200 1700 2600	Circ Circ 4090' Circ
Gem 8705 #5	BTA Oil Producers	660' FSL & 810' FWL 2-20S-33E	Oil	06/05/1991	09/07/1991	10,340 7,962	6,540-6,560	Delaware	20" 13-3/8" 8-5/8" 5-1/2"	1400 2200 2100 1700 1500	Circ Circ 4130' 5310'
Gem 8705 #4	BTA Oil Producers	510' FSL & 1980' FWL 2-20S-33E	Oil	04/12/1991	06/01/1991	10,297 10,206	9,367-9,418 6,583-6,591	Delaware Bone Spring (commingled)	20" 13-3/8" 8-5/8" 5-1/2"	1370 2200 1700 1500	Circ Circ 4160' Circ
Gem 8705 #1	BTA Oil Producers	660' FNL & 1980' FEL 2-20S-33E	Oil	06/07/1987	01/01/1991	13,700 10,230 RBP @ 6875'	6,592-6,599	Delaware	20" 13-3/8" 8-5/8" 5-1/2"	1350 2200 2150 640 3500	Circ Circ 4300' 5800'
Smith Ranch 11 Fed #2	Devon Energy	2250 FSL & 2014 FWL 11-20S-33E	Oil	07/29/1993	11/08/1993	9,520	9,410-9,474	Bone Spring	13-3/8" 8-5/8" 5-1/2"	1400 Not Reported Reported	Not Reported
State YS#1 *	Aztec Oil & Gas	660' FSL & 1980' FWL 2-20S-33E	P&A	10/28/1971	11/12/1971	3,562	3,460-3,562	Seven Rivers	9-5/8" 7"	1396 100	Surf* 2291*

*Note: This wellbore did not penetrate the proposed injection formation.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

FOR APPROVED
OMB NO. 1004-0137
Expires: December 31, 1991

LEASE DESIGNATION AND SERIAL NO.

NM 13430

IF INDIAN, ALLOTTEE OR TRIBE NAME

S4 PERMIT NM 8 35

UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.

Smith Ranch "11" Federal

9. API WELL NO.

30-025-31683

10. FIELD AND POOL, OR WILDCAT

Teas Bone Spring

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec. 11-T20S-R33E

12. COUNTY OR
PARISH
Lea13. STATE
New Mexico

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER ☐

b. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. CENVR ☐ OTHER ☐

2. NAME OF OPERATOR

Devon Energy Corporation (Nevada)

3. ADDRESS AND TELEPHONE NO.

20 N. Broadway, Suite 1500, OKC, OK 73102-8260 405/235-3611

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 2250' FSL & 2014' FWL, Sec. 11-20S-33E, Unit X

At top prod. interval reported below

At total depth

14. PERMIT NO.

DATE ISSUED

15. DATE SPUDDED
07-29-9316. DATE T.D. REACHED
09-05-9317. DATE COMPL. (Ready to prod.)
10-28-9318. ELEVATIONS (DF, RMB, RT, GB, ETC.)*
GL 3582'

19. ELEV. CASING HEAD

20. TOTAL DEPTH, MD & TVD
TD 9520'21. PLUG. BACK T.D., MD & TVD
9501'22. IF MULTIPLE COMPL.,
HOW MANY*23. INTERVALS
DRILLED BY

ROTARY TOOLS

CABLE TOOLS

X

24. PRODUCING INTERVAL(S) OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

Bone Spring 9410-9474'

25. WAS DIRECTIONAL
SURVEY MADE

no

26. TYPE ELECTRIC AND OTHER LOGS RUN

Compensated Neutron, Litho-Density/GR and Dual Laterlog/Micro SFL

27. WAS WELL CORRED

no

28. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13 3/8"	54.5#	1400'	17 1/2"	surface	
8 5/8"	32#	5077'	12 1/4"	surface	
5 1/2"	17#	9520'	7 7/8"	1876'	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 7/8"		9261'

31. PERFORATION RECORD (Interval, size and number)

9410-9474' with 19 holes (.40")

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
9410-9474'	2000 gals 7 1/2% NeFe acid + 38 ball sealers
9410-9474'	50,000 gals 500 CO ₂ foam + 40,000# 20/40 Interprop +

33. PRODUCTION 20,000# 20/40 StrataFlex RC sand

DATE FIRST PRODUCTION 09-20-93 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing WELL STATUS (Producing or Shut-in) Producing

DATE OF TEST 11-08-93 HOURS TESTED 24 CHOKED SIZE 1" PROD'N FOR TEST PERIOD 101 OIL—BSL. 150 GAS—MCF. 33 BLW WATER—BSL. 1485/1 GAS-OIL RATIO

FLOW. TUBING PRESS. 35 CASING PRESSURE 101 CALCULATED 24-HOUR RATE 101 OIL—BSL. 150 GAS—MCF. 33 BLW WATER—BSL. 42° OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

vented pending connection to pipeline

35. LIST OF ATTACHMENTS

Deviation Survey and logs

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

E.L. Butters Jr.

TITLE

E.L. Butters Jr.
District Engineer

DATE 11-10-93 /ca

*(See Instructions and Spaces for Additional Data on Reverse Side)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N. M. OIL & GAS COMMISSION
P. O. BOX 1800
HOBBS, NEW MEXICO 88240

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

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

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Devon Energy Corporation (Nevada)

3. Address and Telephone No.

20 N. Broadway, Suite 1500, OKC, OK 73102-8260 (405) 235-3611

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2250' FSL & 2014' FWL, Section 11-20S-33E

5. Lease Designation and Serial No.

NM 13280

6. If Indian, Allotment or Tribal Name

NA

7. If Unit or CA, Agreement Designation

NA

8. Well Name and No.

Smith Ranch "1" Fed. #2

9. API Well No.

30-025-31683

10. Field and Pool, or Exploratory Area

Teas Bone Springs

11. County or Parish, State

Lea County, NM

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☐ Notice of Intent
☒ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other running production casing

☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

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

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of completion of operations, if well is discontinuously drilled, give subsurface locations and estimated and true vertical depths for all intervals and zones pertinent to the work.)

TD 7 7/8" hole at 9520' on 09-05-93.

Ran 5 1/2" csg on 09-06-93 as follows.

230 jts 5 1/2" 17# N80 8rd LT&C R3 csg (9545')

float shoe at 9520', float collar at 9441', Weatherford ECP at 9359-9368', DV tool at 9027';

Cemented 5 1/2" csg on 09-07-93 as follows.

1st stage: 140 sx Class H (w/1% FL62, 1% BA58, 2% A9, .2% CD32, .2% SMS, 1/4#/sx Celloflakes); mixed at 16.2 ppg (batch mixed)= 1.12 yield

2nd stage: 225 sx Class H (w/22#/sx BA91, 4#/sx Fly ash, 1/4#/sx Celloflakes); mixed at 12.1 ppg= 2.01 yield

tailed: 700 sx Class H (w/10#/sx BA91, .3% CD32, .6% FL-62, .2% SMS) + 2% KCl; mixed at 13.6 ppg= 1.82 yield

ACCEPTED FOR RECORD

L. Lora
OCT 12 1993

CARLSBAD, NEW MEXICO

14. I hereby certify that the foregoing is true and correct

Signed *E.L. Buttross, Jr.*

Title District Engineer

Date 09-13-93 /cg

(This space for Federal or State office use)

Approved by _____
Comments of approval, if any:

Title _____

Date _____

BTA Oil Producers
Gem 8705 JV-P No. 3
660' FSL & 1980' FEL
Section 2, T20S, R33E
Lea County, New Mexico

VII. Operation Data

1. Proposed average daily injection volume: 750 BWPD
Proposed maximum daily injection volume: 2,000 BWPD
2. This will be a closed system.
3. Proposed average daily injection pressure: 1000 psi
Proposed maximum daily injection pressure: 1500 psi
4. Sources of injection water will be produced water from area Delaware and Bone Springs producers that have been drilled on the Gem 8705 JV-P lease (see list of source wells, Attachment G). A water analysis from each Delaware and Bone Springs production (see Attachment H1, H2, & H3) is attached.

BTA Oil Producers
Gem 8705 JV-P No. 3
660' FSL & 1980' FEL
Section 2, T20S, R33E
Lea County, New Mexico

Attachment G

VII. Item 4.

List of Produced Water Source Wells:

Gem 9805 JV-P Lease: Section 2, T20S, R33E, Lea County, New Mexico
Wells No. 1, 2, 4, 5, 6, 7, 8 , 9 and any future wells drilled in this section.

Pro-Kem, Inc.

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : BTA Oil Producers
 Lease : Gem
 Well No. : # 1
 Lab No. : F:\ANALYSES\Nov2900.001

Sample Loc. :
 Date Analyzed: 29-November-2000
 Date Sampled : 15-November-2000

ANALYSIS

1. pH 5.840
2. Specific Gravity 60/60 F. 1.188
3. CaCO₃ Saturation Index @ 80 F. +1.767
 @ 140 F. +3.017

Dissolved Gasses

	MG/L	EQ. WT.	*MEQ/L
4. Hydrogen Sulfide	0		
5. Carbon Dioxide	170		
6. Dissolved Oxygen	Not Determined		

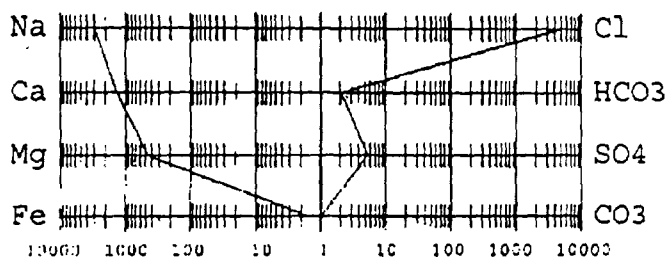
Cations

7. Calcium (Ca ⁺⁺)	26,731	/ 20.1 =	1,329.90
8. Magnesium (Mg ⁺⁺)	5,246	/ 12.2 =	430.00
9. Sodium (Na ⁺) (Calculated)	66,548	/ 23.0 =	2,893.39
10. Barium (Ba ⁺⁺)	Below 10		

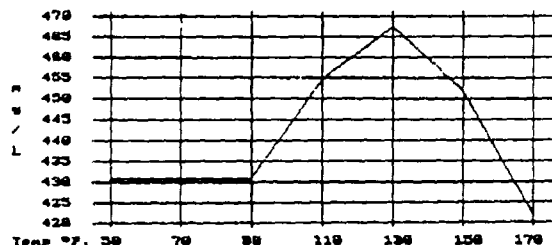
Anions

11. Hydroxyl (OH ⁻)	0	/ 17.0 =	0.00
12. Carbonate (CO ₃ ⁼)	0	/ 30.0 =	0.00
13. Bicarbonate (HCO ₃ ⁻)	122	/ 61.1 =	2.00
14. Sulfate (SO ₄ ⁼)	245	/ 48.8 =	5.02
15. Chloride (Cl ⁻)	164,963	/ 35.5 =	4,646.85
16. Total Dissolved Solids	263,855		
17. Total Iron (Fe)	26	/ 18.2 =	1.43
18. Total Hardness As CaCO ₃	88,351		
19. Resistivity @ 75 F. (Calculated)	0.001 /cm.		

LOGARITHMIC WATER PATTERN *meq/L.



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION COMPOUND EQ. WT. X *meq/L = mg/L.

Ca(HCO ₃) ₂	81.04	2.00	162
CaSO ₄	68.07	5.02	342
CaCl ₂	55.50	1,322.88	73,420
Mg(HCO ₃) ₂	73.17	0.00	0
MgSO ₄	60.19	0.00	0
MgCl ₂	47.62	430.00	20,477
NaHCO ₃	84.00	0.00	0
NaSO ₄	71.03	0.00	0
NaCl	58.46	2,893.96	169,181

*Milli Equivalents per Liter

This water is somewhat corrosive due to the pH observed on analysis. The corrosivity is increased by the content of mineral salts, and the presence of CO₂ in solution.

Pro-Kem, Inc.

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : BTA Oil Producers

Lease : Gem

Well No. : # 2

Lab No. : F:\ANALYSES\Nov2900.001

Sample Loc. :

Date Analyzed: 29-November-2000

Date Sampled : 15-November-2000

ANALYSIS

1. pH 6.370
2. Specific Gravity 60/60 F. 1.101
3. CaCO₃ Saturation Index @ 80 F. -0.152
@ 140 F. +0.738

Dissolved Gasses

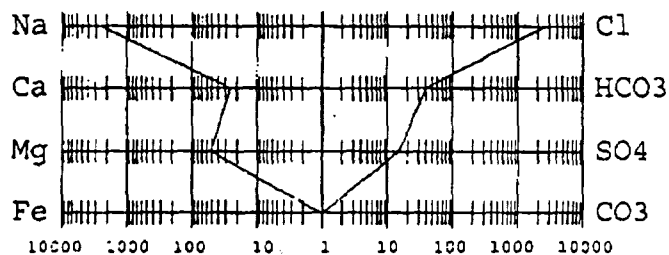
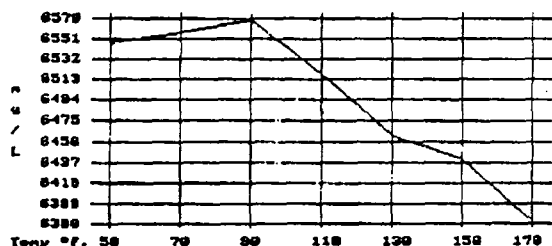
	MG/L	EQ. WT.	*MEQ/L
4. Hydrogen Sulfide	0		
5. Carbon Dioxide	190		
6. Dissolved Oxygen	Not Determined		

Cations

7. Calcium (Ca ⁺⁺)	491	/ 20.1 =	24.43
8. Magnesium (Mg ⁺⁺)	596	/ 12.2 =	48.85
9. Sodium (Na ⁺) (Calculated)	54,607	/ 23.0 =	2,374.22
10. Barium (Ba ⁺⁺)	Not Determined		

Anions

11. Hydroxyl (OH ⁻)	0	/ 17.0 =	0.00
12. Carbonate (CO ₃ ⁼)	0	/ 30.0 =	0.00
13. Bicarbonate (HCO ₃ ⁻)	2,270	/ 61.1 =	37.15
14. Sulfate (SO ₄ ⁼)	700	/ 48.8 =	14.34
15. Chloride (Cl ⁻)	84,981	/ 35.5 =	2,393.83
16. Total Dissolved Solids	143,645		
17. Total Iron (Fe)	19	/ 18.2 =	1.02
18. Total Hardness As CaCO ₃	3,681		
19. Resistivity @ 75 F. (Calculated)	0.045 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.Calcium Sulfate Solubility ProfilePROBABLE MINERAL COMPOSITION
COMPOUND EQ. WT. X *meq/L = mg/L.

Ca (HCO ₃) ₂	81.04	24.43	1,980
CaSO ₄	68.07	0.00	0
CaCl ₂	55.50	0.00	0
Mg (HCO ₃) ₂	73.17	12.72	931
MgSO ₄	60.19	14.34	863
MgCl ₂	47.62	21.78	1,037
NaHCO ₃	84.00	0.00	0
NaSO ₄	71.03	0.00	0
NaCl	58.46	2,372.05	138,670

*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of, CO₂ in solution.

Pro-Kem, Inc.

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : BTA Oil Producers
 Lease : Gem
 Well No. : # 4
 Lab No. : F:\ANALYSES\Nov2900.001

Sample Loc. :
 Date Analyzed: 29-November-2000
 Date Sampled : 15-November-2000

ANALYSIS

1. pH 5.710
 2. Specific Gravity 60/60 F. 1.188
 3. CaCO₃ Saturation Index @ 80 F. +1.681
 @ 140 F. +3.061

Dissolved Gasses

MG/L EQ. WT. *MEQ/L

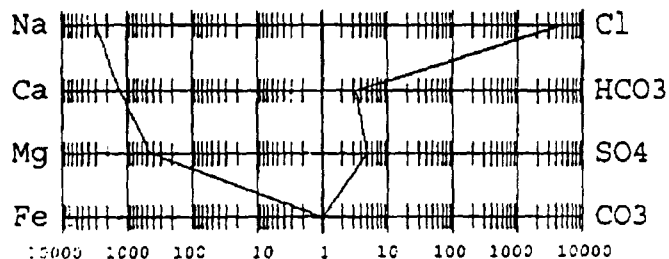
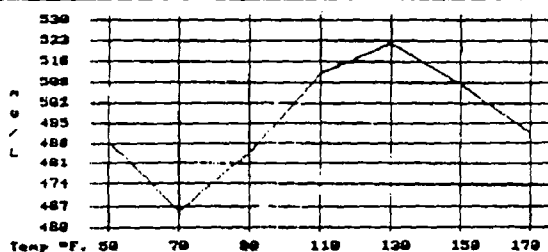
4. Hydrogen Sulfide 0
 5. Carbon Dioxide 280
 6. Dissolved Oxygen Not Determined

Cations

7. Calcium {Ca⁺⁺} 25,060 / 20.0 = 1,245.77
 8. Magnesium {Mg⁺⁺} 5,057 / 12.2 = 415.33
 9. Sodium {Na⁺} (Calculated) 66,876 / 23.0 = 2,907.65
 10. Barium {Ba⁺⁺} Below 10

Anions

11. Hydroxyl {OH⁻} 0 / 17.0 = 0.00
 12. Carbonate {CO₃⁼} 0 / 30.0 = 0.00
 13. Bicarbonate {HCO₃⁻} 195 / 61.1 = 3.19
 14. Sulfate {SO₄⁼} 225 / 48.8 = 4.61
 15. Chloride {Cl⁻} 161,963 / 35.5 = 4,562.34
 16. Total Dissolved Solids 259,386
 17. Total Iron (Fe) 8 / 18.2 = 0.44
 18. Total Hardness As CaCO₃ 83,442
 19. Resistivity @ 75 F. (Calculated) 0.001/cm.

LOGARITHMIC WATER PATTERN
*meq/L.Calcium Sulfate Solubility ProfilePROBABLE MINERAL COMPOSITION
COMPOUND EQ. WT. X *meq/L = mg/L.

Ca (HCO ₃) ₂	81.04	3.19	259
CaSO ₄	68.07	4.61	314
CaCl ₂	55.50	1,238.96	68,763
Mg (HCO ₃) ₂	73.17	0.00	0
MgSO ₄	60.19	0.00	0
MgCl ₂	47.62	415.33	19,778
NaHCO ₃	84.00	0.00	0
NaSO ₄	71.03	0.00	0
NaCl	58.46	2,908.05	170,004

*Milli Equivalents per Liter

This water is somewhat corrosive due to the pH observed on analysis.
 The corrosivity is increased by the content of mineral salts, and the presence
 of, CO₂ in solution.

Pro-Kem, Inc.

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : BTA Oil Producers
 Lease : Gem
 Well No. : # 5
 Lab No. : F:\ANALYSES\Nov2900.001

Sample Loc. :
 Date Analyzed: 29-November-2000
 Date Sampled : 15-November-2000

ANALYSIS

1. pH 6.070
 2. Specific Gravity 60/60 F. 1.193
 3. CaCO₃ Saturation Index @ 80 F. +1.781
 @ 140 F. +3.031

Dissolved Gasses

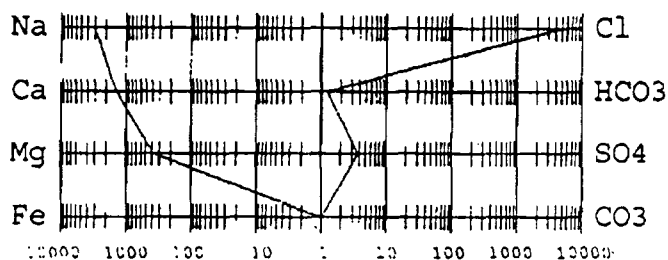
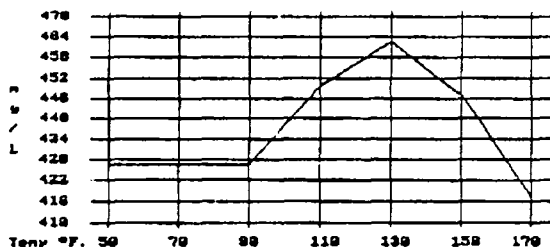
	MG/L	EQ. WT.	*MEQ/L
4. Hydrogen Sulfide	0		
5. Carbon Dioxide	370		
6. Dissolved Oxygen	Not Determined		

Cations

		MG/L	EQ. WT.	*MEQ/L
7. Calcium (Ca ⁺⁺)		27,026	/ 20.1 =	1,344.58
8. Magnesium (Mg ⁺⁺)		4,471	/ 12.2 =	366.48
9. Sodium (Na ⁺)	(Calculated)	67,623	/ 23.0 =	2,940.13
10. Barium (Ba ⁺⁺)		Below 10		

Anions

		MG/L	EQ. WT.	*MEQ/L
11. Hydroxyl (OH ⁻)		0	/ 17.0 =	0.00
12. Carbonate (CO ₃ ⁼)		0	/ 30.0 =	0.00
13. Bicarbonate (HCO ₃ ⁻)		73	/ 61.1 =	1.19
14. Sulfate (SO ₄ ⁼)		175	/ 48.8 =	3.59
15. Chloride (Cl ⁻)		164,963	/ 35.5 =	4,646.85
16. Total Dissolved Solids		264,331		
17. Total Iron (Fe)		17	/ 18.2 =	0.93
18. Total Hardness As CaCO ₃		85,897		
19. Resistivity @ 75 F. (Calculated)		0.001 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.Calcium Sulfate Solubility ProfilePROBABLE MINERAL COMPOSITION
COMPOUND EQ. WT. X *meq/L = mg/L.

COMPOUND	EQ. WT.	X	*meq/L	= mg/L.
Ca(HCO ₃) ₂	81.04	1.19	97	
CaSO ₄	68.07	3.59	244	
CaCl ₂	55.50	1,339.80	74,359	
Mg(HCO ₃) ₂	73.17	0.00	0	
MgSO ₄	60.19	0.00	0	
MgCl ₂	47.62	366.48	17,452	
NaHCO ₃	84.00	0.00	0	
NaSO ₄	71.03	0.00	0	
NaCl	58.46	2,940.57	171,906	

*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.
 The corrosivity is increased by the content of mineral salts, and the presence of, CO₂ in solution.

Pro-Kem, Inc.

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : BTA Oil Producers
 Lease : Gem
 Well No. : # 7
 Lab No. : F:\ANALYSES\Nov2900.002

Sample Loc. :
 Date Analyzed: 29-November-2000
 Date Sampled : 15-November-2000

ANALYSIS

1. pH 6.070
2. Specific Gravity 60/60 F. 1.188
3. CaCO₃ Saturation Index @ 80 F. +1.423
 @ 140 F. +2.673

Dissolved Gasses

	MG/L	EQ. WT.	*MEQ/L
4. Hydrogen Sulfide	0		
5. Carbon Dioxide	140		
6. Dissolved Oxygen	Not Determined		

Cations

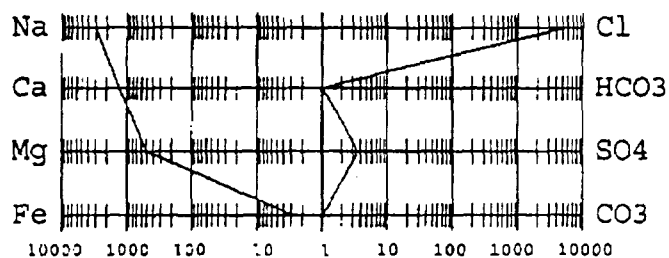
7. Calcium (Ca ⁺⁺)	25,060	/ 20.1 =	1,246.77
8. Magnesium (Mg ⁺⁺)	5,663	/ 12.2 =	464.18
9. Sodium (Na ⁺) (Calculated)	67,605	/ 23.0 =	2,939.35
10. Barium (Ba ⁺⁺)	10	/ 68.7 =	0.15

Anions

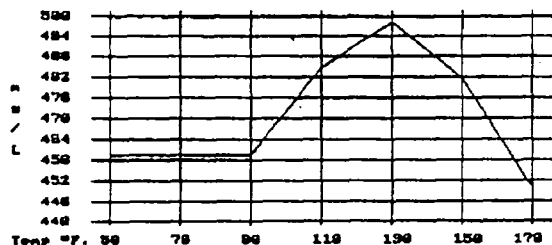
11. Hydroxyl (OH ⁻)	0	/ 17.0 =	0.00
12. Carbonate (CO ₃ ⁼)	0	/ 30.0 =	0.00
13. Bicarbonate (HCO ₃ ⁻)	34	/ 61.1 =	0.56
14. Sulfate (SO ₄ ⁼)	165	/ 48.8 =	3.38
15. Chloride (Cl ⁻)	164,963	/ 35.5 =	4,646.85
16. Total Dissolved Solids	263,500		
17. Total Iron (Fe)	45	/ 18.2 =	2.47
18. Total Hardness As CaCO ₃	85,897		
19. Resistivity @ 75 F. (Calculated)	0.001 /cm.		

LOGARITHMIC WATER PATTERN

*meq/L.



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND EQ. WT. X *meq/L = mg/L.

Ca (HCO ₃) ₂	81.04	0.56	45
CaSO ₄	68.07	3.24	220
CaCl ₂	55.50	1,242.97	68,985
Mg (HCO ₃) ₂	73.17	0.00	0
MgSO ₄	60.19	0.00	0
MgCl ₂	47.62	464.18	22,104
NaHCO ₃	84.00	0.00	0
NaSO ₄	71.03	0.00	0
NaCl	58.46	2,939.69	171,854

*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.
 The corrosivity is increased by the content of mineral salts, and the presence of, CO₂ in solution.

Pro-Kem, Inc.

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : BTA Oil Producers

Lease : Gem

Well No.: # 8

Lab No. : F:\ANALYSES\Nov2900.002

Sample Loc. :

Date Analyzed: 29-November-2000

Date Sampled : 15-November-2000

ANALYSIS

1. pH 6.030
2. Specific Gravity 60/60 F. 1.153
3. CaCO₃ Saturation Index @ 80 F. +1.280
@ 140 F. +2.890

Dissolved Gasses

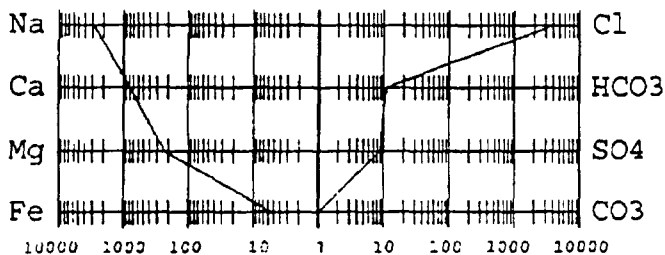
	MG/L	EQ. WT.	*MEQ/L
4. Hydrogen Sulfide	0		
5. Carbon Dioxide	360		
6. Dissolved Oxygen	Not Determined		

Cations

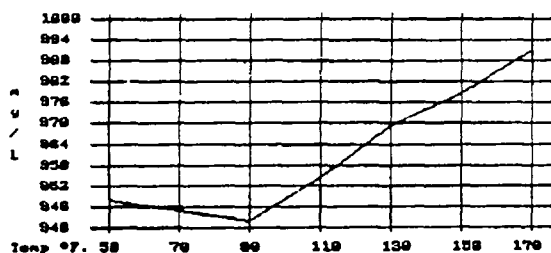
7. Calcium (Ca++)	15,724	/ 20.1 =	782.29
8. Magnesium (Mg++)	2,683	/ 12.2 =	219.92
9. Sodium (Na+) (Calculated)	64,840	/ 23.0 =	2,819.13
10. Barium (Ba++)	Not Determined		

Anions

11. Hydroxyl (OH-)	0	/ 17.0 =	0.00
12. Carbonate (CO ₃ =)	0	/ 30.0 =	0.00
13. Bicarbonate (HCO ₃ -)	635	/ 61.1 =	10.39
14. Sulfate (SO ₄ =)	400	/ 48.8 =	8.20
15. Chloride (Cl ⁻)	134,970	/ 35.5 =	3,801.97
16. Total Dissolved Solids	219,252		
17. Total Iron (Fe)	93	/ 18.2 =	5.11
18. Total Hardness As CaCO ₃	50,311		
19. Resistivity @ 75 F. (Calculated)	0.001 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.

Calcium Sulfate Solubility Profile

PROBABLE MINERAL COMPOSITION
COMPOUND EQ. WT. X *meq/L = mg/L.

Ca(HCO ₃) ₂	81.04	10.39	842
CaSO ₄	68.07	8.20	558
CaCl ₂	55.50	763.70	42,385
Mg(HCO ₃) ₂	73.17	0.00	0
MgSO ₄	60.19	0.00	0
MgCl ₂	47.62	219.92	10,472
NaHCO ₃	84.00	0.00	0
NaSO ₄	71.03	0.00	0
NaCl	58.46	2,818.35	164,761

*Milli Equivalents per Liter

water is slightly corrosive due to the pH observed on analysis.
Corrosivity is increased by the content of mineral salts, and the presence
of CO₂ in solution.

Pro-Kem, Inc.

WATER ANALYSIS REPORT

SAMPLE

Oil Co. : BTA Oil Producers
 Lease : Gam
 Well No.: # 9
 Lab No. : F:\ANALYSES\Nov2900.002

Sample Loc. :
 Date Analyzed: 29-November-2000
 Date Sampled : 15-November-2000

ANALYSIS

1. pH 6.570
2. Specific Gravity 60/60 F. 1.093
3. CaCO₃ Saturation Index @ 80 F. +0.201
 @ 140 F. +1.091

Dissolved Gasses

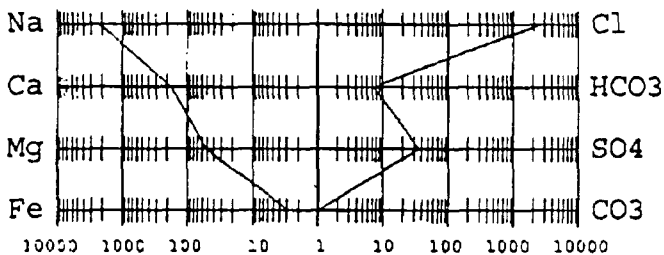
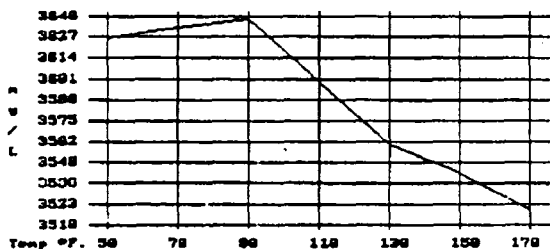
	MG/L	EQ. WT.	*MEQ/L
4. Hydrogen Sulfide	0		
5. Carbon Dioxide	600		
6. Dissolved Oxygen	Not Determined		

Cations

7. Calcium (Ca++)	3,440	/ 20.1 =	171.14
8. Magnesium (Mg++)	596	/ 12.2 =	48.85
9. Sodium (Na+) (Calculated)	50,985	/ 23.0 =	2,216.74
10. Barium (Ba++)	Not Determined		

Anions

11. Hydroxyl (OH-)	0	/ 17.0 =	0.00
12. Carbonate (CO ₃ =)	0	/ 30.0 =	0.00
13. Bicarbonate (HCO ₃ -)	430	/ 61.1 =	7.04
14. Sulfate (SO ₄ ²⁻)	1,650	/ 48.8 =	33.81
15. Chloride (Cl ⁻)	84,981	/ 35.5 =	2,393.83
16. Total Dissolved Solids	142,082		
17. Total Iron (Fe)	50	/ 18.2 =	2.75
18. Total Hardness As CaCO ₃	11,044		
19. Resistivity @ 75 F. (Calculated)	0.046 /cm.		

LOGARITHMIC WATER PATTERN
*meq/L.Calcium Sulfate Solubility ProfilePROBABLE MINERAL COMPOSITION
COMPOUND EQ. WT. X *meq/L = mg/L.

Ca(HCO ₃) ₂	81.04	7.04	570
CaSO ₄	68.07	33.81	2,302
CaCl ₂	55.50	130.30	7,231
Mg(HCO ₃) ₂	73.17	0.00	0
MgSO ₄	60.19	0.00	0
MgCL ₂	47.62	48.85	2,326
NaHCO ₃	84.00	0.00	0
NaSO ₄	71.03	0.00	0
NaCl	58.46	2,214.68	129,470

*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.
 The corrosivity is increased by the content of mineral salts, and the presence of, CO₂ in solution.

Comparison Between Two Waters

19-May-2000

TO: Pro-Kem, Inc.

Company : BTA Oil Producers

Sample # 1

Gem # 3 (Bone Springs Wtr)

Sample # 2

Gem # 4 (Delaware Wtr)

Percent of #1 & #2	pH	TDS mg/L	SpGr	Saturation Index @80°F.	Saturation Index @140°F.	Calcium Sulfate Scaling Potential
100 - 0	6.690	143203	1.100	+0.352	+1.176	Nil
95 - 5	6.654	148865	1.104	+0.704	+1.537	Nil
90 - 10	6.618	154528	1.109	+0.884	+1.727	Nil
85 - 15	6.582	160190	1.113	+1.002	+1.855	Nil
80 - 20	6.546	165852	1.118	+1.087	+1.949	Nil
75 - 25	6.510	171515	1.122	+1.151	+2.023	Nil
70 - 30	6.474	177177	1.126	+1.200	+2.082	Nil
65 - 35	6.438	182839	1.131	+1.237	+2.129	Marginal
60 - 40	6.402	188502	1.135	+1.266	+2.168	Marginal
55 - 45	6.366	194164	1.140	+1.287	+2.198	Marginal
50 - 50	6.330	199827	1.144	+1.300	+2.222	Marginal
45 - 55	6.294	205489	1.148	+1.308	+2.239	Marginal
40 - 60	6.258	211151	1.153	+1.308	+2.249	Marginal
35 - 65	6.222	216814	1.157	+1.302	+2.252	Marginal
30 - 70	6.186	222476	1.162	+1.288	+2.248	Marginal
25 - 75	6.150	228138	1.166	+1.266	+2.236	Nil
20 - 80	6.114	233801	1.170	+1.234	+2.214	Nil
15 - 85	6.078	239463	1.175	+1.189	+2.178	Nil
10 - 90	6.042	245125	1.179	+1.126	+2.126	Nil
5 - 95	6.006	250788	1.184	+1.038	+2.048	Nil
0 - 100	5.970	256450	1.188	+0.907	+1.926	Nil

Proposed Disposal Source Water for the Gem 8705 JV-P No. 3

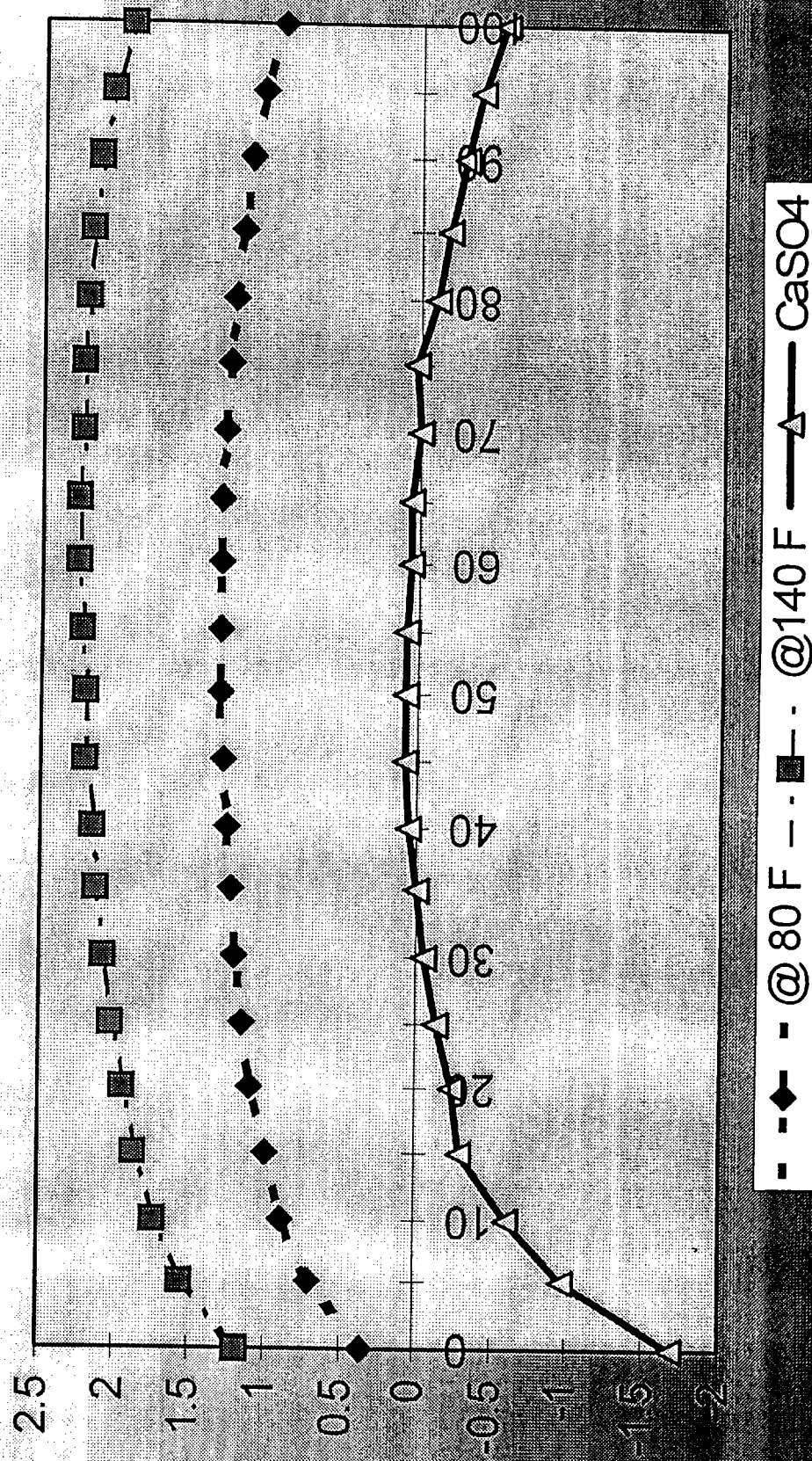
Bone Springs Water - average 100 BWPD, from wells Nos. 2, 8 & 9

Delaware Water - average 300 BWPD, from well Nos. 1, 4, 5 & 7

Morrow Water - average 3 BWPD, from well No. 6

Total - 25% Bone Springs and 75% Delaware ; Scaling tendencies are "Nil"

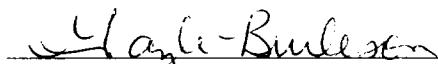
Comparison Between Two Waters



VII. ITEM 5.DISPOSAL ZONE FORMATION WATER

Injection into the Gem No. 3 is for disposal purposes. The zone identified for disposal is not productive of oil or gas in this well or within one mile of the Gem No. 3. Offset producers within 1 mile of the proposed disposal well produce from the Delaware formation, but from a sand over 1000' higher structurally. (See Cross-section, Attachment G.) The proposed disposal interval was perforated and swab tested, 100% water. A detailed chemical analysis was not obtained, however a sample was taken and a chlorides content was determined to be 112,000 ppm, which is very similar to the productive Delaware sand 1000' higher in offset wells.

It is inferred that the disposal zone has very similar water to the Delaware water produced from 1000' higher. (See Water Analysis from offset Delaware producers, example Gem No. 5, Attachment H4, or Gem No. 7, Attachment H6).



Gayle Burleson, Production Engineer for BTA Oil Producers

BTA Oil Producers
Gem 8705 JV-P No. 3
660' FSL & 1980' FEL
Section 2, T20S, R33E
Lea County, New Mexico

VIII. Geologic Data

Gem No. 3 Geological Discussion Regarding Proposed Disposal Interval

A. Disposal Zone

The Delaware Mountain Group has a total thickness in excess of 3,100 feet within this locality. It is comprised of alternating units of siltstone, sandstone and limestone with minor units of shale. Oil production occurs from a sandstone located near the top of the Brushy Canyon Formation within the Delaware Mountain Group. The proposed disposal interval lies with the Lower Brushy Canyon Formation, nearly 1,200 feet below the producing interval.

The Delaware Mountain Group was deposited within a deep marine basin. The cleaner sandstone units represent submarine channel/fan sequences deposited down dip of the shelf margin under turbiditic conditions triggered by tectonic activity, gravity slumping or sea levels changes. The siltstone, limestone and/or shale units represent the normal deposition that occurs within a marine basin between the catastrophic interruptions of turbiditic events.

B. Fresh Water Sources:

Ogallala Aquifer which occurs between 200 and 300 feet from the surface.

XI. FRESH WATER ANALYSIS

To the best of my knowledge, there are no fresh water wells located within one mile of the Gem 8705 JV-P Well No. 3, the proposed disposal well.

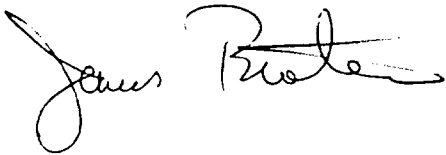


Gayle Burleson, Production Engineer for BTA Oil Producers

XII. Geological Statement

I have examined all geologic and engineering data available for the Teas (Delaware) field and find no evidence of open faults and other hydrologic connection between the disposal zone and any underground drinking water sources.

James Broten, Certified Petroleum Geologist # 5397

A handwritten signature in black ink, appearing to read "James Broten". The signature is fluid and cursive, with the first name "James" written in a smaller, more compact script than the last name "Broten", which features a prominent, sweeping flourish.

Attachment J

XIII NOTICE OF OFFSET OPERATORS WITHIN ¼ MILE

BTA OIL PRODUCERS

**Application for Authorization to Inject
Gem, 8705 JV-P #3
660' FSL & 1980' FEL
Section 2, T20S, R33E
Lea County, NM**

I hereby certify that BTA Oil Producers holds 100% Working Interest in this well.

Surface Owner is The State of New Mexico

OFFSET OPERATOR LIST

Nearburg Exploration Company, L. L. C.
3300 North "A" Street, Bldg. 2, Suite 120
Midland, TX 79705

Gene Shumate, et ux Carol
and Thunderbolt Petroleum
P. O. Box 2473
Midland, TX 79702

Samson Resources Company
Samson Plaza
Two West Second Street
Tulsa, OK 74103

Ray Westall
P. O. Box 4
Loco Hills, NM 88255

Matador Petroleum Corporation
Suite 158, Pecan Creek
8340 Meadow Road
Dallas, TX 75231-3751

Devon Energy Corporation
20 N. Broadway, Suite 1500
Oklahoma City, OK 73102-8260

I hereby certify that notification of BTA's application was mailed via certified mail on this 21st day of December, 2000 to the above listed Offset Operators.

Signed: _____

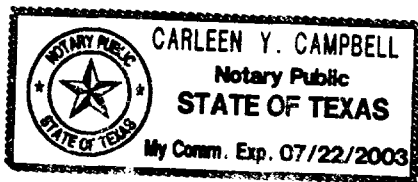
Pam Inskeep

STATE OF TEXAS

COUNTY OF MIDLAND

BEFORE ME, the undersigned authority on this day personally appeared Pam Inskeep, a Regulatory Administrator with BTA Oil Producers, who being by me duly sworn, deposes and states that the persons listed on the foregoing attached list have been sent a copy on December 21, 2000, of the New Mexico Oil Conservation Division Form C-108, "Application for Authorization to Inject" for the 8705 JV-P Gem #3, located in Section 2, T20S, R33E, Lea County, New Mexico.

SUBSCRIBED AND SWORN TO before me on this 21st day of December, 2000, to certify which witness my hand and seal of office.



Carleen Y. Campbell
Carleen Y. Campbell
Notary Public, State of Texas