

HOLLAND & HART LLP



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April 24, 2007

**Via Hand Delivery**

Mark E. Fesmire, P.E., Director  
Oil Conservation Division  
New Mexico Energy, Minerals and  
Natural Resources Department  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

*Case 13923*

2007 APR 24 PM 3:23

**Re: Application of SDX Resources, Inc. for Approval of a Waterflood Project, Eddy  
County, New Mexico.**

Dear Mr. Fesmire:

Enclosed is the application of SDX Resources, Inc. in the above-referenced case as well as a copy of a legal advertisement. SDX requests that this matter be placed on the docket for the May 24, 2007 Examiner hearings.

Sincerely,

*Ocean Munds-Dry*

Ocean Munds-Dry  
for Holland & Hart LLP

cc: Mr. Chuck Morgan

Holland & Hart LLP

Phone [505] 988-4421 Fax [505] 983-6043 [www.hollandhart.com](http://www.hollandhart.com)

110 North Guadalupe Suite 1 Santa Fe, NM 87501 Mailing Address P.O. Box 2208 Santa Fe, NM 87504-2208

Aspen Billings Boise Boulder Cheyenne Colorado Springs Denver Denver Tech Center Jackson Hole Salt Lake City Santa Fe Washington, D.C. ♻

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION  
OF SDX RESOURCES, INC.  
FOR APPROVAL OF A  
WATERFLOOD PROJECT  
EDDY COUNTY, NEW MEXICO.

CASE NO. 13923

2007 APR 24 PM 3 23

APPLICATION

SDX Resources, Inc. ("SDX") through its attorneys, Holland & Hart, LLP, hereby makes application for an order approving a secondary recovery project for the injection of water into the Queen, Grayburg, San Andres formations, Artesia Queen-Grayburg-San Andres Pool, and in support thereof states:

1. SDX seeks approval of a waterflood project and authorization to implement secondary recovery operations in this area by the injection of water into the Queen, Grayburg, San Andres formation, Artesia Queen-Grayburg-San Andres Pool. A copy of SDX's Application for Authorization to Inject (Division Form C-108) through one injection well in the proposed waterflood project area is attached hereto as Exhibit A.

2. The boundaries of the proposed waterflood project area coincide with the boundaries of the leases and include the following acreage in Lea County, New Mexico:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM

Section 32:	NE/ 4, SW/4
Section 29:	SE/4 SE/4
Section 31:	E/2 E/2

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM

Section 6:

NE/4 NE/4

3. Applicant requests that the Division establish a procedure for the administrative approval of additional injection wells within the project area without the necessity for further hearings.

4. Notice of this application has been provided to the owner of the surface of the land on which each proposed injection well is to be located and to each leasehold operator within one-half mile of each injection well location and these owners are identified on the Notice List attached to this application as **Exhibit B**.

6. Approval of this application will afford SDX the opportunity to produce its just and equitable share of the remaining reserves in the Artesia Queen-Grayburg-San Andres Pool and will otherwise be in the best interest of the conservation, the protection of correlative rights and the prevention of waste.

WHEREFORE, SDX Resources, Inc. requests that this matter be set for hearing before a duly appointed Examiner of the Oil Conservation Division on May 24, 2007 and after notice and hearing as required by law, the Division enter its Order granting this application.

Respectfully submitted,

HOLLAND & HART LLP

By: Ocean Munds-Dry  
WILLIAM F. CARR  
OCEAN MUNDS-DRY  
Post Office Box 2208  
Santa Fe, New Mexico 87504  
Telephone: (505) 988-4421

ATTORNEYS FOR SDX RESOURCES, INC.

**EXHIBIT B**

**SDX RESOURCES, INC.**  
**WATERFLOOD PROJECT**  
**EDDY COUNTY, NEW MEXICO**

**SURFACE OWNERS**

Marbob Energy Corporation  
P.O. Box 227  
Artesia, New Mexico 88211

**OFFSET OPERATORS**

BP Amoco (Altura/Arco Permian)  
200 N. Loraine Suite 1220  
Midland, Texas 79701

Marbob Energy Corporation  
P.O. Box 227  
Artesia, New Mexico 88211

Hanson Energy  
P.O. Box 1348  
Artesia, New Mexico 88210

Mewbourne oil Co.  
P.O. Box 5270  
Hobbs, New Mexico 88241

CASE 13923:

**Application of SDX Resources, Inc. for Approval of a Waterflood Project, Eddy County, New Mexico.** Applicant in the above-styled cause, seeks approval of for injection of water into the Queen, Grayburg, San Andres formation, Artesia Queen-Grayburg-San Andres Pool through one injection well located in the following described area:

**TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM**

Section 32: NE/ 4, SW/4

Section 29: SE/4 SE/4

Section 31: E/2 E/2

**TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM**

Section 6: NE/4 NE/4

The applicant requests that the Division establish procedures for the administrative approval of additional injection wells within the project area without the necessity of further hearings and the adoption of such other provisions as are necessary for said waterflood operations. Said unit is located approximately 12 miles east of Artesia, New Mexico.



April 24, 2007

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED****AFFECTED INTEREST OWNERS**

Re: Application of SDX Resources Inc. for Approval of a Waterflood Project, Eddy County, New Mexico.

Ladies and Gentlemen:

This letter is to advise you that SDX Resources, Inc. has filed the enclosed application with the New Mexico Oil Conservation Division seeking authority to implement secondary recovery operations in its proposed project waterflood area. A copy of this application with attached Oil Conservation Division Form C-108 is enclosed for your information.

This application has been set for hearing before a Division Examiner at 8:15 a.m. on May 24, 2007. The hearing will be held in Porter Hall in the Oil Conservation Division's Santa Fe Offices located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date.

Parties appearing in cases are required by Division Rule 1208.B to file a Pre-hearing Statement four days in advance of a scheduled hearing. This statement must be filed at the Division's Santa Fe office at the above specified address and should include: the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to the hearing.

Very truly yours,

*Ocean Munds-Dry*  
Ocean Munds-Dry

ATTORNEY FOR SDX RESOURCES, INC.

Enclosures

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL  
RESOURCES DEPARTMENT

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

Case 13923 FORM C-108  
Revised June 10, 2003

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage  
Application qualifies for administrative approval? ☐ Yes ☐ No
- II. OPERATOR: SDX Resources, Inc.  
ADDRESS: PO Box 5061, Midland, TX 79704  
CONTACT PARTY: Chuck Morgan PHONE: 432-685-1761
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☐ Yes ☒ No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
- Proposed average and maximum daily rate and volume of fluids to be injected;
  - Whether the system is open or closed;
  - Proposed average and maximum injection pressure;
  - Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  - 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: Chuck Morgan TITLE: Engineer  
SIGNATURE: Chuck Morgan DATE: 4/16/07  
E-MAIL ADDRESS: cmorgan@sdresources.com
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

EXHIBIT A

Side 2

**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.



SDX Resources, Inc.  
New Mexico Oil Conservation Division  
Form C-108 "Application for Authorization to Inject"

RE: NW State #8, 1090' FSL, 2126' FWL, Sec 32, T17S, R28E  
Eddy Co., New Mexico

- I. SDX plans to convert the above referenced well to an injection well in the Artesia, Queen/Grayburg/San Andres pool.
- II. Operator: SDX Resources, Inc., PO Box 5061, Midland, TX 79704
- III. Well Data: Please see "Well Data Sheet" attached.
- IV. This is not an expansion of an existing project.
- V. Map attached designating: ½ mile radius of review and 2 mile radius.
- VI. There are twenty-one wells within the area of review which penetrate the proposed injection zone, ½ mile review area "Well Tabulation" attached.
- VII. Proposed average daily injection volume: 500 bbls per day. This will be a closed system. Proposed average injection pressure is estimated @ 300 psi. The proposed maximum injection pressure is 500 psi (to be increased by step rate at a later date). Formation water analysis is attached.
- VIII. The Queen/Grayburg/San Andres formation(s) consist of dolomite and sandstones with alternating beds of silty to sandy dolomite and gray arkosic sandstones. Generally the gross thickness of the Grayburg ranges from 300 to 400' thick and the San Andres ranges from 350 - 400' thick. Both of these zones are actively flooded in the area with positive response. There are no known sources of drinking water underlying the proposed injection interval. Limited fresh water zones overlie the proposed injection zone at approximately 150'.
- IX. The proposed injection interval may be acidized with 15% HCL acid.
- X. Well logs are on file with the Oil Conservation Division.
- XI. No fresh water wells are within a ½ mile radius.
- XII. Geologic and engineering data have been examined and no evidence of open faults or any other hydrological connection between the injection zone and any fresh water aquifer has been found.
- XIII. Copies of the Oil Conservation Division Form C-108, the Well Data Sheet and map have been sent to the offset operators, surface owner(s) as per the listing attached.

A copy of the Legal Notice as published in the Artesia Daily News is attached to this filing.

**"Well Data Sheet"**  
**SDX Resources, Inc.**  
**Form C-108 "Application for Authorization to Inject"**

NW State #8

- A. (1) Unit Letter N, Section 32, T17S, R28E, 1090' FSL, 2126' FWL  
Eddy County, New Mexico
- (2) Casing: 8-5/8" @ 461' w/350 sx Cl C – circulated to surface  
5-1/2" @ 3302' w/600 sx Lite & Cl C – circulated to surface  
2-3/8" tubing & packer to be set within 100' of top perforation  
Status of well is producing
- B. (1) Injection Formation: San Andres
- (2) Injection interval will be through perforations @ 2523' – 2859'
- (3) Well was drilled and completed as a producer in the Artesia  
(Queen/Grayburg/San Andres) pool
- (4) Initial perforations – same as above
- (5) Next shallow oil or gas zone: Queen  
Next deeper oil or gas zone: Abo

## NW State C-106 Data Sheet

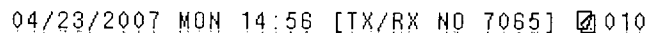
No.	Well Name	Legals	API #	Operator	Status	Compl Date	TD	Perfs	Hole Size	Casing Size	Depth Set	Sxs. Cmt.	TOC	Method	Comments
1	NW SL #8	See 32 1178 R28E 1090 FSL 2126 FWL K	30815	SDX	Active	1/4/2000	3310	2523-2859	12 1/4 7 7/8	8 5/8 5 1/2	461 3302	350 600	Surf Surf	Circ Circ	See Diagram
2	NW SL #5	1900 FSL 2148 FWL K	30781	SDX	Active	12/7/1999	3190	2404-2674 2602-56	12 1/4 7 7/8	8 5/8 5 1/2	520 3181	350 600	Surf Surf	Circ Circ	
3	Empire Abo Unit #25 B	2280 FNL 978 FWL E	01671	BP	TA	9/60	6013	5830-5920 5830 - 80 5611 - 5805	11 7 7/8	6 5/8 5 1/2	990 6012	425 850	Surf 1156	1" w/75 ex Calc 75% 5830-5920 sqrd 5830 sqrd w/250 ex CIBP @ 5580 & 6650	
4	Empire Abo Unit #26	2280 FNL 1980 FWL F	01657	BP	TA	9/60	6171	5944 - 82 5626 - 82		8 5/8 4 1/2	1007 6171	560 1000	Surf 920	Circ Temp Surv	CIBP @ 5822 w/339 ont
5	NW State #18	2772 FNL 2273 FEL G	31824	SDX	Active	5/02	3215	2472 - 2752	12 1/4 7 7/8	8 5/8 5 1/2	485 3208	375 600	Surf Surf	Circ Circ	
6	NW AU #5	1960 FNL 1650 FEL G	02312	SDX	Active	4/62	1955	1911 - 17	11 7 7/8	8 5/8 4 1/2	507 1856	50 75	312 1829	C 75% C 75%	*Assumed
7	Empire Abo Unit #27 G	2310 FNL 1650 FEL G	01653	BP	TA	9/60	6100	5980 - 90 6041 - 68		8 5/8 5 1/2	1003 6106	450 170 units + 150 ex	Surf Surf	Circ Reported	
8	NW AU #7	2310 FSL 660 FEL I	01672	SDX	TA	12/78	2250	1933 - 63 CIBP 1890	10	7 4 1/2	478 2206	25 725	389 Surf	Calc 75% Circ	
9	Empire Abo Unit #28 C	1650 FSL 660 FEL I	01669	BP	Active	8/60	6250	6032 - 72 5753 - 5867	11	8 5/8 4 1/2	1304 6250	600 850	Surf Surf	Circ Circ	CIBP 5970
10	Jeffers State #1	2141 FSL 1655 FEL J	30687	SDX	Active	3/2000	3220	2747 - 2852 2312 - 2632	12 1/4 7 7/8	8 5/8 5 1/2	512 3212	350 650	Surf Surf	Circ Circ	CRT 2710 Sqrd 75 ex
11	State 32 #1	1350 FSL 1650 FEL J	01655	Hanson Energy	Active	4/68	2100	1919 - 2039	10 3/4 8	8 5/8 5 1/2	516 2074	50 150	286 1267	Calc 75% Calc 75%	
12	State 32 #2	1980 FSL 1930 FEL J	01656	Hanson Energy	Active	8/59	2038		10 8	8 5/8 7	490 1704	50 200	350 Surf	Calc 75% Calc 75%	Pulled from 350 P&ID 1940 OH 1940 - 1704
13	Empire Abo Unit #27 B	1650 FSL 1961 FEL J	01670	BP	Active	6/60	6163	6036 - 6112 5810 - 62	11 7 7/8	8 5/8 4 1/2	860 5165	450 850	Surf Surf	Circ	CIBP 6020 Sqrd TOC 1610 - surf w/425 ex
14	Aspen 32 State Com #1	1370 FSL 1609 FEL J	34146	Mentbourne	PA	10/19/2005	10400	17172 12114 834	13 3/8 9 5/8 P&A	478 2660	400 1100	S S	C C	See Diagram	
15	NW AU #8	2310 FSL 2106 FWL K	10618	SDX	PA	5/66	2003	1898 - 1908		8 5/8 4 1/2	462 2002	125 175	Surf 1241	Calc 75% Calc 75%	See Diagram

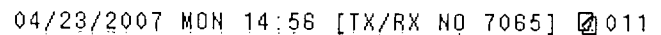
## NW State C-108 Data Sheet

No.	Well Name	Legals	API #	Operator	Status	Compl Date	TD	Perfs	Hole Size	Casing Size	Depth Set	Sxs. Cmt	TOC	Method	Comments
			30-015-												
16	Empire Abo Unit #26B	Sec 32, T17S R28E 1650 FSL 2310 FWL, K	01661	BP	Active	360	6083	5806 - 8068		8 5/8 5 1/2	748 6069	225 450	Surf Surf	Circ	Sqrd 2504 - surf w/800 ex
17	NW State #6	2310 FSL 990 FWL, L	30777	SDX	Active	1169	3204	2434 - 2572	12 1/4 7 7/8	8 5/8 5 1/2	515 3200	350 650	Surf Surf	Circ Circ	
18	NW State #9	2310 FSL 680 FWL, L	10766	SDX	TA	566	1980	1898 - 1927	11 7 7/8	8 5/8 4 1/2	489 1980	100 175	100 1219	Calc 75% Calc 75%	
19	Empire Abo Unit #25A	1650 FSL 990 FWL, L	01662	BP	Active	430	6123	5800 - 6060		8 5/8 5 1/2	728 6125	225 450	Surf Surf	Circ	Sqrd 2482 - surf w/850 ex
20	NW State #7	990 FSL 990 FWL, M	30686	SDX	Active	899	3220	2472 - 2782	12 1/4 7 7/8	8 5/8 5 1/2	490 3215	450 650	Surf Surf	Calc 75% Calc 75%	
21	NW State #12	990 FSL 760 FWL, M	20043	SDX	TA	567	1997	1922 - 49		8 5/8 4 1/2	485 1985	100 150	106 1343	Calc 75% Calc 75%	
22	Empire Abo Unit #25	690 FSL 660 FWL, M	01660	BP	Active	360	6187	5867 - 6087		8 5/8 5 1/2	770 6187	450 450	Surf Surf	Circ	Sqrd 2622 - surf w/800 ex
23	NW State #13	990 FSL 2000 FWL, N	10834	SDX	P&A	696	2006	1921 - 54	11 7 7/8	8 5/8 4 1/2	463 2003	125 175	Surf 1242	Calc 75% Calc 75%	See Diagram
24	Empire Abo Unit #26A	660 FSL 1990 FWL, N	01659	BP	Active	260	6172	5851 - 6118	11 7 7/8	8 5/8 5 1/2	779 6172	280 400	Surf Surf	Circ	Sqrd w/825 ex to surf
25	Empire Abo Unit #261	150 FSL 1400 FWL, N	21536	BP	Active	775	6220	5690 - 6064	11 7 7/8	8 5/8 5 1/2	1000 6222	250	90	Temp Surv	Resinix to surf DV @ 4016: Sig 1 680 Sig 2 875 circ to surf
26	NW State #14	940 FSL 1650 FEL, O	01666	SDX	Active	355	2069		11 7 7/8	8 5/8 5 1/2	485 1802	50 25	290 1650	Calc 75% Calc 75%	*Assumed
27	Empire Abo Unit #27A	660 FSL 1951 FEL, O	01667	BP	Active	160	6215	6134 - 56 5714 - 5620	11 7 7/8	8 5/8 4 1/2	885 6215	800 850	Surf 75	Circ Reported	CIRP 5580
28	Empire Abo Unit #271	330 FSL 1450 FEL, O	21540	BP	TA	675	6221	5705 - 6116	12 1/4 7 7/8	8 5/8 5 1/2	1007 6255	550	Surf Surf	Circ Circ	CIRP @ 5656 w/350 cmt DV @ 4060 Sig 1 450 ex Sig 2 600 ex TOC Surf - C
29	Empire Abo Unit #272	330 FSL 2481 FEL, O	22009	BP	Active	777	6261	5714 - 6166	11 7 7/8	8 5/8 5 1/2	600 6370	275	Surf Surf	Circ Circ	DV @ 4382 Sig 1 475 ex Sig 2 1060 ex TOC Surf - C
30	NW State #15	990 FSL 660 FEL, P	01666	SDX	TA	454	2102	1968 - 2002	11	8 5/8 4 1/2	750 2100	50 335	555 Surf	Calc 75% Circ	(25g run & cmt 1974)
31	Kersey State #2	844 FSL 330 FEL, P	30889	SDX	Active	72000	4104	3643 - 3819 2514 - 2718	12 1/4 7 7/8	8 5/8 5 1/2	511 4096	350 850	Surf Surf	Calc 75% Circ	CIRP 3570
32	Empire Abo Unit #281	200 FSL 660 FEL, P	22597	BP	Active	978	6330	6169 - 6252	11 7 7/8	8 5/8 5 1/2	600 6330	450	Surf Surf	Circ Circ	DV @ 2988 Sig 1 635 ex Sig 2 700 ex TOC Surf - C

NW State C-108 Data Sheet

No.	Well Name	Legals	API #	Operator	Status	Compl Date	TD	Perfs	Hole Size	Casing Size	Depth Set	Sus. Cmt.	TOC	Method	Comments
			30-015-												
33	Empire Abo Unit #28B Aspen?	Sec 32, T17S R28E 660 FSL 660 FEL, P	01668	BP	TA	6/80	6318	5784 - 6140	11 7 7/8	8 5/8 4 1/2	1247 6319	560 850	Surf 150	Circ Reported	CIBP 6200 CIBP 5734 w/35' cmt
34	Empire Abo Unit #28E	Sec 5, T18S R28E 330 FNL 870 FEL, A	02604	BP	Active	2/60	6250	6230 - 65	11 7 7/8	8 5/8 4 1/2	1190 6290	500 750	Surf 400	Circ Temp Surv	CIBP 6160
35	Empire Abo Unit #27E	330 FNL 2271 FEL, B	02605	BP	Active	4/60	6261	6140 - 97	11 7 7/8	8 5/8 4 1/2	1227 6261	750 900	Surf 60	Circ Reported	CIBP 6100 See Diagram
36	Empire Abo Unit #271A	870 FNL 1700 FEL, B	21736	BP	Active	4/76	6350	5772 - 6260	11 7 7/8	8 5/8 5 1/2	535 6350	200	50 Surf	Circ	Redmix @ surf DV @ 4012 Sig 1 400 ex Sig 2 830 ex, TOC Surf - C
37	Empire Abo Unit #273	1300 FNL 1556 FEL, B	22468	BP	TA	8/78	6357	6200 - 10	11 7 7/8	8 5/8 5 1/2	550 6351	350	Surf Surf	Circ Circ	CIBP 6170 DV @ 3034 Sig 1 625 ex Sig 2 775 ex TOC - Surf - C
38	Empire Abo Unit #272A	1300 FNL 2245 FEL, B	22526	BP	Active	7/78	6350	6130 - 70	11 7 7/8	8 5/8 5 1/2	550 6350	375	Surf Surf	Circ Circ	DV @ 3060 Sig 1 755 ex Sig 2 1125 ex TOC - Surf - C
39	EAU 261 A	1080 FNL 1914 FWL, C	22697	BP	TA	1/79	6350	6174 - 6204	11 7 7/8	8 5/8 5 1/2	550 6345	400	Surf Surf	Circ Circ	CIBP 6150 DV @ 3007 Sig 1 700 ex Sig 2 800 ex TOC Surf - C
40	EAU 26 E	330 FNL 1941 FWL, C	02606	BP	Active	7/60	6254	5662 - 6096	11 7 7/8	8 5/8 5 1/2	755 6254	450 850	Surf 895	Circ Reported	
41	EAU 251	660 FNL 150 FWL, D	22750	BP	Active	1/78	6250	5684 - 6152	11 7 7/8	8 5/8 5 1/2	745 6245	400	Surf Surf	Circ Circ	DV @ 3018 Sig 1 650 ex Sig 2 900 ex TOC Surf - C
42	EAU 25C	660 FNL 660 FWL, D	02607	BP	Active	3/60	6273	6122 - 68	11 7 7/8	8 5/8 5 1/2	1186 6273	750 650	Surf 1275	Circ Reported	
43	Empire Abo Unit #26D		01657	BP	Active	12/59	6265	6220 - 45		8 5/8 5 1/2	568 6265	370 150	Surf Surf	Circ	Spd w/1500 ex TOC Surf - Circ
44	EAU #24	Sec 31, T17S R28E 1650 FSL 330 FEL, I	01644	BP	TA	4/60	6106	5806 - 50 6004 - 50	11 7 7/8	8 5/8 5 1/2	738 6104	250 450	Surf Surf	Circ Circ	Pir @ 5783 Perfs 6024 - 50 sqd Spd 650 ex @ 2900 TOC Surf - Circ
45	NW #10	735 FSL 330 FEL, P	30760	SOX	Active	11/69	3210	2482 - 2602	12 1/2 7 7/8	8 5/8 5 1/2	465 3192	350 650	Surf Surf	Calc Calc	

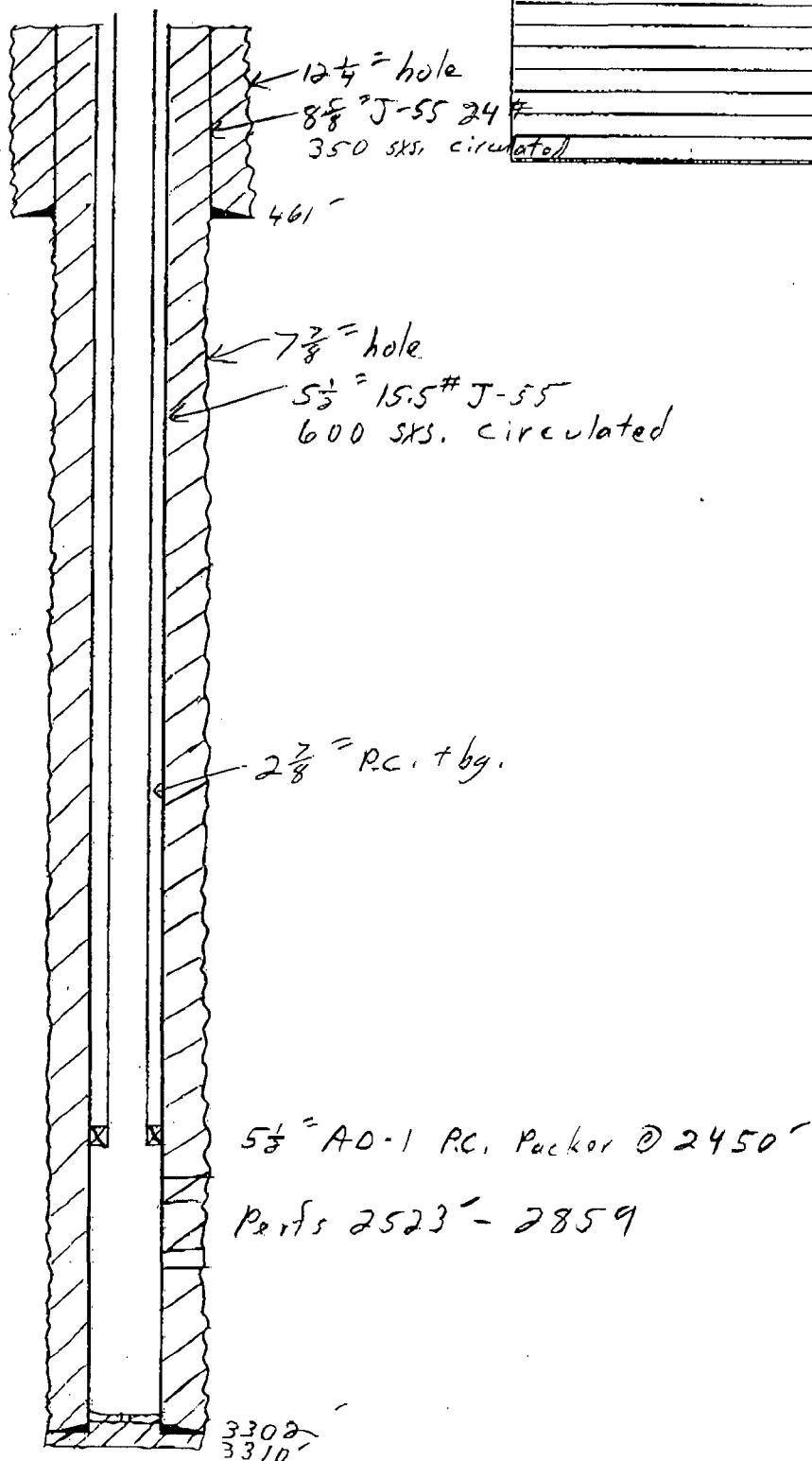








CASING PROGRAM:	
SIZE/WT./GR./CONN.	DEPTH SET
#	
(ato)	



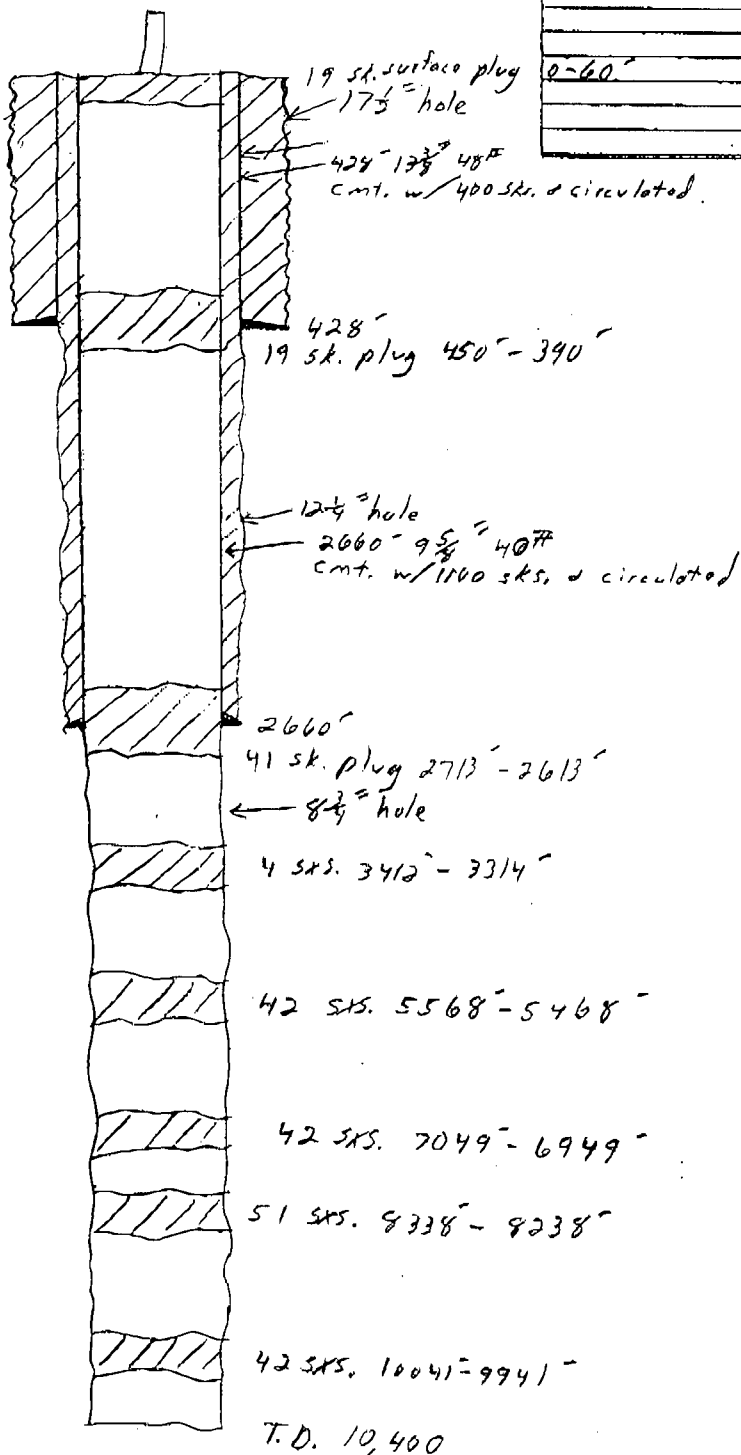
- SKETCH NOT TO SCALE -

REVISED: 4/5/07

P.14

#14

SIZE/WT./GR./CONN.		DEPTH SET
9-60"		



PA 10/18/2005

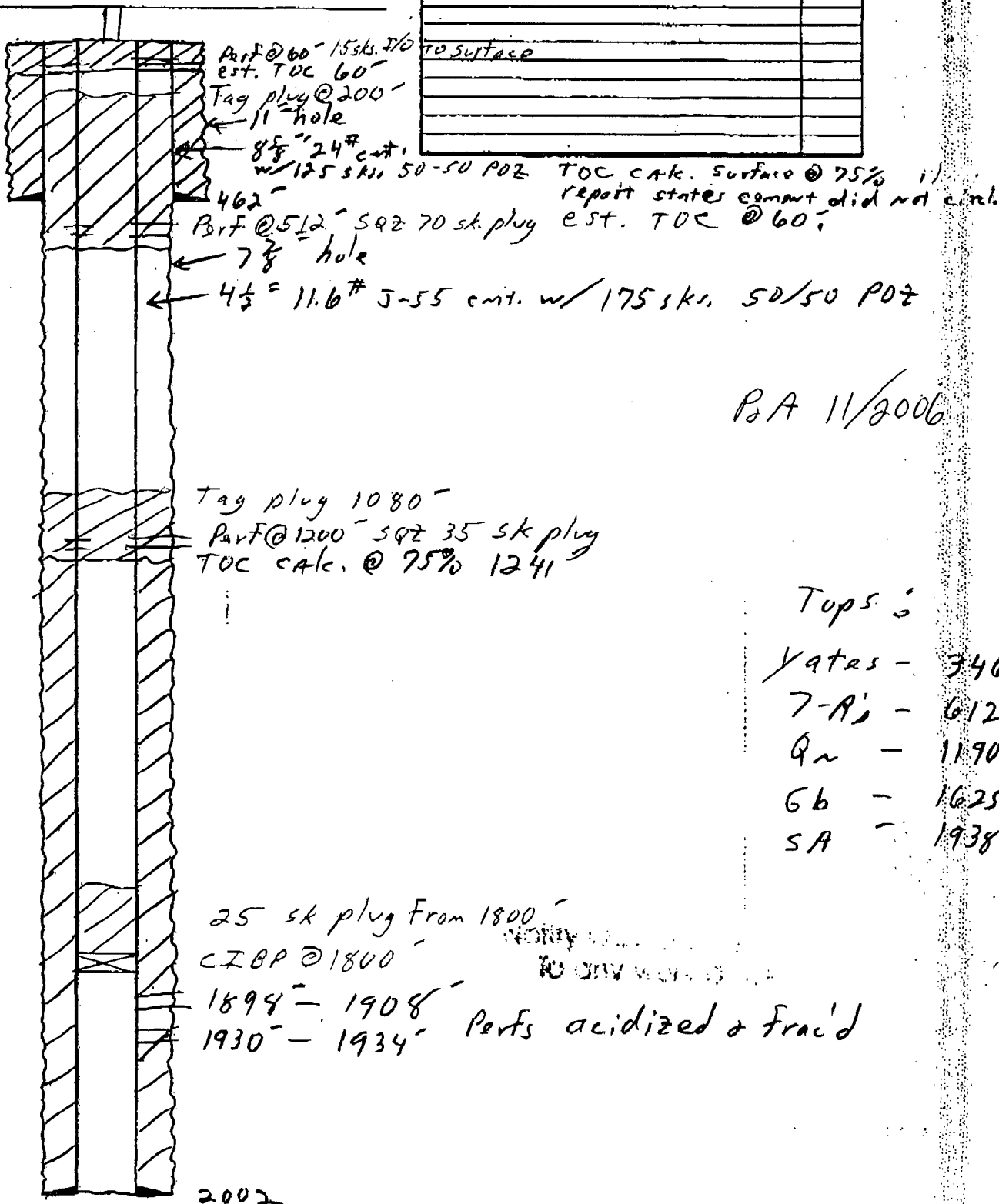
- SKETCH NOT TO SCALE -

REVISÉ:

WELL NAME: Northwest Artesia Unit #8 FIELD AREA: Artesia - Qn - Gb - SA  
 LOCATION: Unit "K" 2310 FSL + 2105 FWL Sec. 32 T17S R28E Eddy Co  
 IL: \_\_\_\_\_ ZERO: \_\_\_\_\_ AGL: \_\_\_\_\_  
 B: 3678 ORIG. DRLG./COMPL. DATE: \_\_\_\_\_  
 COMMENTS: \_\_\_\_\_

## CASING PROGRAM:

SIZE/WT./GR./CONN.	DEPTH SET



PA 11/2006

Tops:

Yates - 346'  
 7-A<sub>1</sub> - 612'  
 Qn - 1190'  
 Gb - 1625'  
 SA - 1938'

2002

- SKETCH NOT TO SCALE -

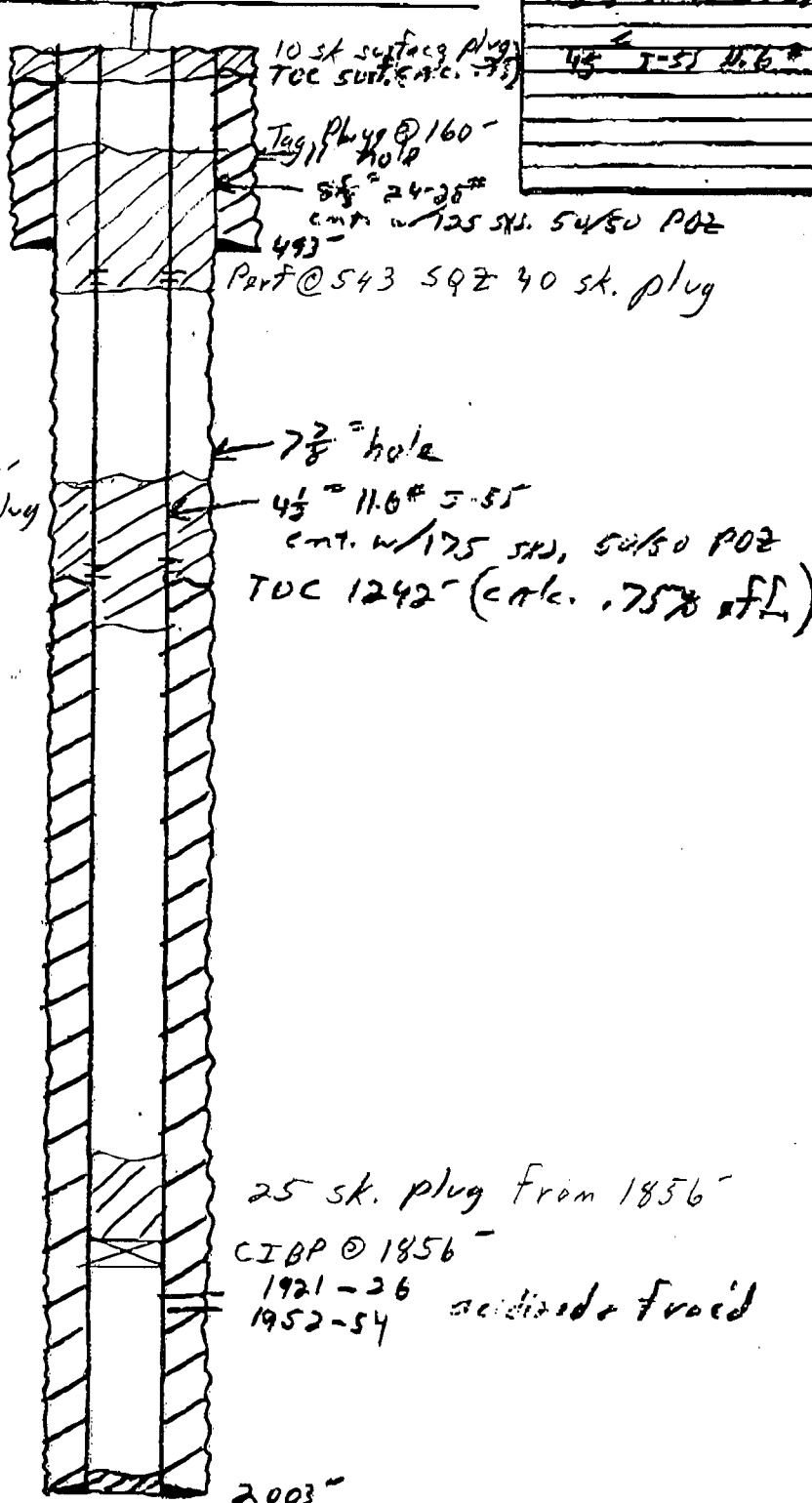
REVISED: 4/2007

#23

WELL NAME: Northwest Artesia Unit #13 FIELD AREA: Artesia  
 LOCATION: SEC. 32 T17S R28E 990' FSL & 2030' FWL  
 CL: \_\_\_\_\_ ZERO: \_\_\_\_\_ AGL: \_\_\_\_\_  
 KD: 3687 ORIG. DRG./COMPL. DATE: \_\_\_\_\_  
 COMMENTS: APZ # 30-015-10534

CASING PROGRAM:

SIZE/WT./GR./CONN.	DEPTH SET
5 1/2" H-40 24-25"	(1966) 299
4 1/2" J-55 11.6"	(1966) 750



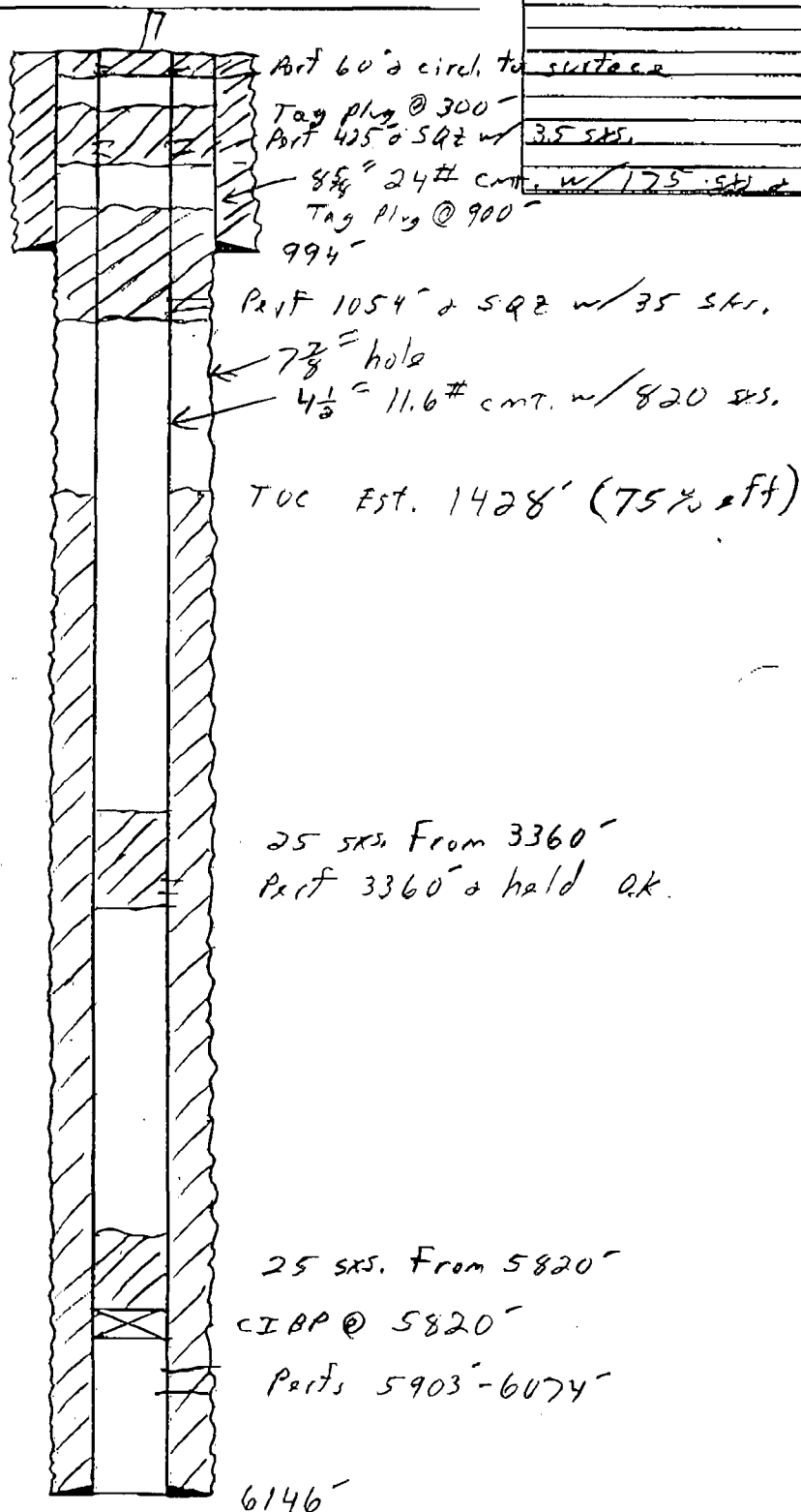
Pa A 10/2006

Tops:

Yates	346
7-A1	607
Qn	1193
Gb	1640
SA	1958

CASING PROGRAM:

SIZE/WT./GR./CONN.	DEPTH SET
surface	
3.5 SH.	
u/175 SH & circulated	



PA 3/2003

REVISSED: \_\_\_\_\_

# Pro-Kem, Inc.

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : SDX Resources

Lease : N.W. St.

Well No. : # 1

Lab No. : F:\ANALYSES\Jul0999.001

Sample Loc. :

Date Analyzed: 09-July-1999

Date Sampled : 01-July-1999

### ANALYSIS

1. pH 5.950
2. Specific Gravity 60/60 F. 1.118
3. CaCO<sub>3</sub> Saturation Index @ 80 F. -0.029  
@ 140 F. +0.871

#### Dissolved Gasses

	MG/L	EQ. WT.	*MEQ/L
4. Hydrogen Sulfide	10		
5. Carbon Dioxide	160		
6. Dissolved Oxygen	Not Determined		

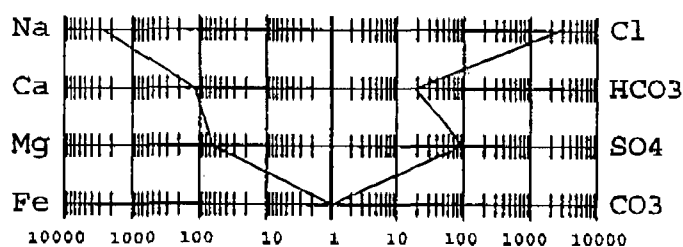
#### Cations

7. Calcium (Ca <sup>++</sup> )	2,341	/ 20.1 =	116.47
8. Magnesium (Mg <sup>++</sup> )	741	/ 12.2 =	60.74
9. Sodium (Na <sup>+</sup> )	60,071	/ 23.0 =	2,611.78
10. Barium (Ba <sup>++</sup> )	Not Determined		

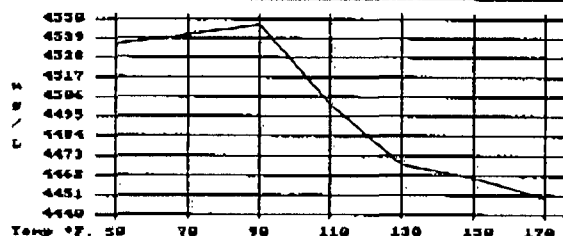
#### Anions

11. Hydroxyl (OH <sup>-</sup> )	0	/ 17.0 =	0.00
12. Carbonate (CO <sub>3</sub> <sup>=</sup> )	0	/ 30.0 =	0.00
13. Bicarbonate (HCO <sub>3</sub> <sup>-</sup> )	1,098	/ 61.1 =	17.97
14. Sulfate (SO <sub>4</sub> <sup>=</sup> )	4,500	/ 48.8 =	92.21
15. Chloride (Cl <sup>-</sup> )	94,979	/ 35.5 =	2,675.46
16. Total Dissolved Solids	163,730		
17. Total Iron (Fe)	7	/ 18.2 =	0.38
18. Total Hardness As CaCO <sub>3</sub>	8,898		
19. Resistivity @ 75 F. (Calculated)	0.028 /cm.		

#### LOGARITHMIC WATER PATTERN \*meq/L.



#### Calcium Sulfate Solubility Profile



COMPOUND	EQ. WT. X	*meq/L =	mg/L.
Ca (HCO <sub>3</sub> ) <sub>2</sub>	81.04	17.97	1,456
CaSO <sub>4</sub>	68.07	92.21	6,277
CaCl <sub>2</sub>	55.50	6.28	349
Mg (HCO <sub>3</sub> ) <sub>2</sub>	73.17	0.00	0
MgSO <sub>4</sub>	60.19	0.00	0
MgCl <sub>2</sub>	47.62	60.74	2,892
NaHCO <sub>3</sub>	84.00	0.00	0
NaSO <sub>4</sub>	71.03	0.00	0
NaCl	58.46	2,608.44	152,490

\*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 H<sub>2</sub>S, CO<sub>2</sub> in solution.

## Pro-Kem, Inc.

## WATER ANALYSIS REPORT

SAMPLE

Oil Co. : SDX Resources  
 Lease : N.W. St.  
 Well No. : Injection Plant  
 Lab No. : F:\ANALYSES\Oct1601.001

Sample Loc. :  
 Date Analyzed: 16-October-2001  
 Date Sampled : 26-September-2001

ANALYSIS

1. pH 7.600  
 2. Specific Gravity 60/60 F. 1.128  
 3. CaCO<sub>3</sub> Saturation Index @ 80 F. +1.737  
 @ 140 F. +2.697

Dissolved Gasses

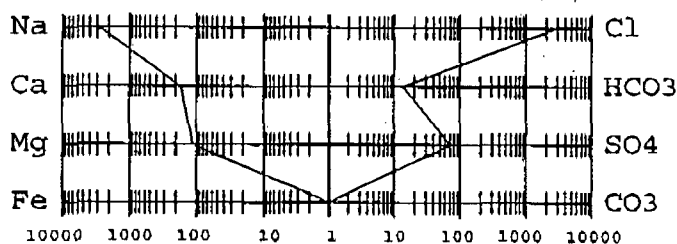
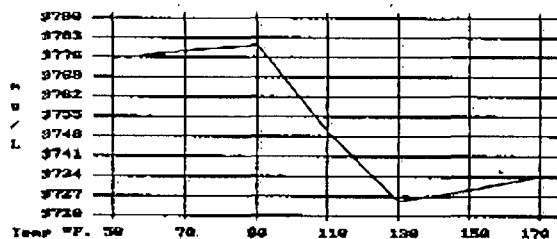
- |                     | MG/L           | EQ. WT. | *MEQ/L |
|---------------------|----------------|---------|--------|
| 4. Hydrogen Sulfide | 10             |         |        |
| 5. Carbon Dioxide   | Not Determined |         |        |
| 6. Dissolved Oxygen | Not Determined |         |        |

Cations

- |                              |                |          |          |
|------------------------------|----------------|----------|----------|
| 7. Calcium (Ca++)            | 3,339          | / 20.1 = | 166.12   |
| 8. Magnesium (Mg++)          | 1,331          | / 12.2 = | 109.10   |
| 9. Sodium (Na+) (Calculated) | 63,599         | / 23.0 = | 2,765.17 |
| 10. Barium (Ba++)            | Not Determined |          |          |

Anions

- |  |            |          |          |
|--|------------|----------|----------|
| 11. Hydroxyl (OH <sup>-</sup> )                  | 0          | / 17.0 = | 0.00     |
| 12. Carbonate (CO <sub>3</sub> <sup>=</sup> )    | 0          | / 30.0 = | 0.00     |
| 13. Bicarbonate (HCO <sub>3</sub> <sup>-</sup> ) | 781        | / 61.1 = | 12.78    |
| 14. Sulfate (SO <sub>4</sub> <sup>=</sup> )      | 3,300      | / 48.8 = | 67.62    |
| 15. Chloride (Cl <sup>-</sup> )                  | 104,976    | / 35.5 = | 2,957.07 |
| 16. Total Dissolved Solids                       | 177,326    |          |          |
| 17. Total Iron (Fe)                              | 9          | / 18.2 = | 0.49     |
| 18. Total Hardness As CaCO <sub>3</sub>          | 13,816     |          |          |
| 19. Resistivity @ 75 F. (Calculated)             | 0.016 /cm. |          |          |

LOGARITHMIC WATER PATTERN  
\*meq/L.Calcium Sulfate Solubility Profile

COMPOUND	EQ. WT.	X	*meq/L = mg/L.
Ca(HCO <sub>3</sub> ) <sub>2</sub>	81.04	12.78	1,036
CaSO <sub>4</sub>	68.07	67.62	4,603
CaCl <sub>2</sub>	55.50	85.71	4,757
Mg(HCO <sub>3</sub> ) <sub>2</sub>	73.17	0.00	0
MgSO <sub>4</sub>	60.19	0.00	0
MgCl <sub>2</sub>	47.62	109.10	5,195
NaHCO <sub>3</sub>	84.00	0.00	0
NaSO <sub>4</sub>	71.03	0.00	0
NaCl	58.46	2,762.26	161,482

\*Milli Equivalents per Liter

This water is mildly corrosive due to the pH observed on analysis.  
 The corrosivity is increased by the content of mineral salts, and the presence of H<sub>2</sub>S in solution.

SDX Resources, Inc.  
NW State #8  
1090' FSL 2126' FWL  
Sec 32, T17S, R28E  
Eddy Co., NM

**½ Mile Radius of Review – Offsetting Operators:**

BP Amoco (Altura/Arco Permian)  
200 N Loraine, Ste 1220  
Midland, TX 79701

Marbob Energy  
PO Box 227  
Artesia, NM 88211

Hanson Energy  
PO Box 1348  
Artesia, NM 88210

Mewbourne Oil Co  
PO Box 5270  
Hobbs, NM 88241

**Surface Owner:**

Marbob Energy  
PO Box 227  
Artesia, NM 88211

Copies of the Oil Conservation Division Form C-108 "Application for Authorization to Inject", Well Data Sheet and map have been sent by certified mail to the above stated parties on this the 16<sup>th</sup> day of April, 2007.

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



**Legal Notice Publication  
Artesia Daily Press**

SDX Resources, Inc., 511 W. Ohio, Ste 601, PO Box 5061, Midland, TX 79704, contact: Chuck Morgan (432)685-1761 is seeking administrative approval from the New Mexico Oil Conservation Division to complete the following well for fluid injection: NW State #8 located in Sec 32, T17S, R28E, 1090' FSL 2126' FWL, Eddy County. Proposed injection interval is the San Andres formation with perforations from 2523' – 2859' with a maximum daily injection volume of produced formation water at 500 bbls per day with a maximum injection pressure of 500#. Interested parties must file objections or request for hearing with the New Mexico Oil Conservation Division, 2040 S Pacheco, Santa Fe, New Mexico 87505 within 15 days of this notice.