Subject: Request for a New Aquifer Exemption

From: Railroad Commission of Texas

To: EPA- District 6

1201 Elm St

Dallas, Texas 75270

Purpose:
The Railroad Commission of Texas ("RRC") requests a new field exemption of the Serbin Wilcox field. The following is included in this request:

1. Aquifer Exemption Checklist
2. RRC Map Images of Current and requested field boundary
3. Shapefile Layer (.shp file to be attached in email)
4. References

An aquifer or a portion thereof which meets the criteria for an "underground source of drinking water" in 40 CFR § 146.3 may be determined to be an "exempted aquifer". Class II wells must meet the criteria under 146.4(a) and criteria specified by least one of the following sections: 146.4(b)(1), 146.4(b)(2), 146.4(b)(3), 146.4(b)(4), or 146.4(c).

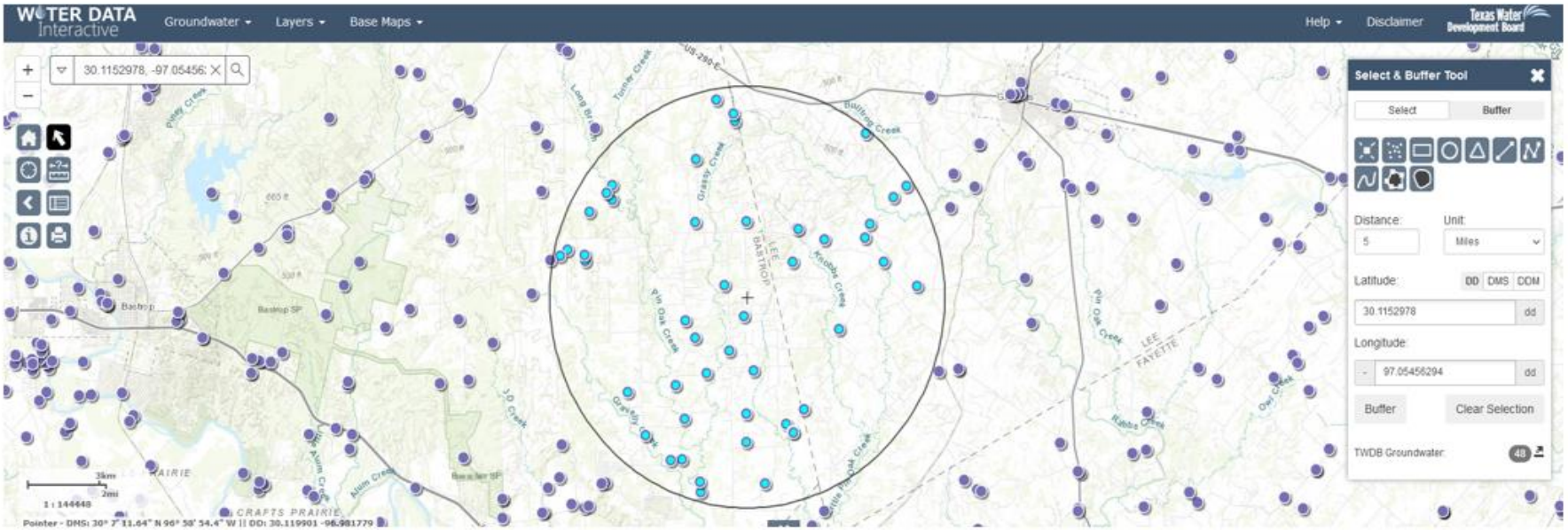
Location of proposed aquifer exemption

- Township, Section, Range, Quarter Section, or other method used to identify the area Located within parts of the S. Cottle A-22, R. Mackey A-47, and J. Burleson A-17 surveys in Bastrop County, and the S. Cottle A-393, S. Wooddy A-332, and J. Burleson A-5 surveys in Lee County.

  Latitude and longitude of the Billie Ann No. 2 UIC Well
  - Latitude: 30.115083
  - Longitude: -97.054299
- Distance to the nearest city/town: Giddings, Texas (approximately 6.5 mile north-east)
- Name of aquifer or portion of aquifer to be exempted:
  - Aquifer to be exempted is the Serbin Wilcox field in the Lower Wilcox formation.
- Areal extent of the area proposed for exemption:
  - 1.55 Miles
- Depth and thickness of the aquifer:
  - Depth: 3,092'-3,196'
  - Thickness: 104' feet at subject well.
- TDS content of the aquifer, including the TDS at the top and bottom of the proposed zone to be exempted, and the locations and depths of all fluid samples taken.
  - TDS of aquifer is between 3,000-10,000 TDS.

1. **Must meet the criterion in §146.4(a): The proposed aquifer or portion of the aquifer for which the exemption is requested is not currently used as a drinking water source.**
    - Are there any public or private drinking water wells within and nearby the proposed well? (Minimum review area of 5 miles)
        i. See Figure one below.
    - Water well table: Table of all inventoried water wells showing: Well Name/#, Owner, (Private/Public), Contact information, Purpose of well (Public Water Supply, Domestic, Irrigation, Livestock, etc.), depth of source water, name of aquifer, well completion data, age of well (if known), and the primary source of well data (Applicant/State/EPA).
        i. See Figure two below.

TWDB WATER WELL 5-MILE RADIUS



ALL WATER WELLS IN 5-MILE RADIUS ARE SHALLOWER THAN INJECTION INTERVAL

Figure One: Map of water well within a 5-mile radius of subject well.

State Well Number	Owner	Water Use	Elevation (ft)	Well Depth (ft)	Aquifer Code Name	County	Well Type
5864405 - Scanned Documents	Steve Henderson	Domestic	350	28	110TRRC - Terrace Deposits	Bastrop	Withdrawal of Water
5864401 - Scanned Documents	Mrs. Mary Keilberk	Stock	370	40	124CKMN - Cook Mountain Formation	Bastrop	Withdrawal of Water
5864502 - Scanned Documents	Ernest Winkler	Stock	350	45	124CKMN - Cook Mountain Formation	Bastrop	Withdrawal of Water
5864101 - Scanned Documents	Mrs. H.F. Friebe	Domestic	375	54	124CKMN - Cook Mountain Formation	Bastrop	Withdrawal of Water
5856705 - Scanned Documents	E.H. Lottman	Stock	425	64	124WCHS - Weches Formation of Claiborne Group	Bastrop	Withdrawal of Water
5864202 - Scanned Documents	Cook Bros.	Stock	405	77	124CKMN - Cook Mountain Formation	Bastrop	Withdrawal of Water
5864504 - Scanned Documents	Walter Kieschink	Stock	360	79	124CKMN - Cook Mountain Formation	Bastrop	Withdrawal of Water
5856501 - Scanned Documents	Alvin Saegert	Unused	540	83	124CKMN - Cook Mountain Formation	Bastrop	Withdrawal of Water
5856601 - Scanned Documents	Erwin E. Arldt	Domestic	472	90	124SPRT - Sparta Sand	Lee	Withdrawal of Water
5949704 - Scanned Documents	Milton Moerbe	Domestic	445	103	124CKMN - Cook Mountain Formation	Lee	Withdrawal of Water
5856704 - Scanned Documents	E.J. Lottman	Domestic	425	140	124SPRT - Sparta Sand	Bastrop	Withdrawal of Water
5864203 - Scanned Documents	Mrs. Anne Dunk	Domestic	440	157	124QNCT - Queen City Sand of Claiborne Group	Bastrop	Withdrawal of Water
5856802 - Scanned Documents	R.F. Pescke	Unused	465	161	124CKMN - Cook Mountain Formation	Bastrop	Withdrawal of Water
5864404 - Scanned Documents	Ed Nink	Domestic	415	180	124SPRT - Sparta Sand	Bastrop	Withdrawal of Water
5864601 - Scanned Documents	Alfred Buscha	Domestic	360	198	124CKMN - Cook Mountain Formation	Lee	Withdrawal of Water
5856504 - Scanned Documents	R.R. Steinbach	Stock	530	200	124SPRT - Sparta Sand	Bastrop	Withdrawal of Water
5855904 - Scanned Documents	Paul Artmann	Unused	470	206	124QNCT - Queen City Sand of Claiborne Group	Bastrop	Withdrawal of Water
5864506 - Scanned Documents	Frank Kirchnak	Domestic	360	206	124SPRT - Sparta Sand	Bastrop	Withdrawal of Water
5949702 - Scanned Documents	Melvin Schantschick	Domestic	461	222	124CKMN - Cook Mountain Formation	Lee	Withdrawal of Water
5864205 - Scanned Documents	Pete Meuth	Domestic	370	242	124CKMN - Cook Mountain Formation	Bastrop	Withdrawal of Water
5949701 - Scanned Documents	Leonard Kappler	Domestic	446	243	124CKMN - Cook Mountain Formation	Lee	Withdrawal of Water
5864204 - Scanned Documents	Milton Petzold	Domestic	425	260	124QNCT - Queen City Sand of Claiborne Group	Bastrop	Withdrawal of Water
5856803 - Scanned Documents	C.A. Ramsel	Irrigation	440	265	124SPRT - Sparta Sand	Bastrop	Withdrawal of Water
5864501 - Scanned Documents	W.J. Hecto	Domestic	340	325	124SPRT - Sparta Sand	Bastrop	Withdrawal of Water
5864503 - Scanned Documents	Nellie Carr	Stock	340	330	124SPRT - Sparta Sand	Bastrop	Withdrawal of Water
5856703 - Scanned Documents	E.H. Lottman	Domestic	425	347	124QNCT - Queen City Sand of Claiborne Group	Bastrop	Withdrawal of Water
5864505 - Scanned Documents	Martin Bohot	Domestic	390	372	124SPRT - Sparta Sand	Bastrop	Withdrawal of Water
5864507 - Scanned Documents	Alfred Menzel	Domestic	410	378	124SPRT - Sparta Sand	Bastrop	Withdrawal of Water
5856906 - Scanned Documents	Martha Lorenz House well	Domestic	465	380	124SPRT - Sparta Sand	Lee	Withdrawal of Water
5856901 - Scanned Documents	Rudolph Lorenz	Unused	465	410	124SPRT - Sparta Sand	Lee	Withdrawal of Water
5864604 - Scanned Documents	Mrs. Wenke	Domestic	360	432	124SPRT - Sparta Sand	Bastrop	Withdrawal of Water
5864602 - Scanned Documents	Quinten Wenke	Domestic	360	444	124SPRT - Sparta Sand	Bastrop	Withdrawal of Water
5864603 - Scanned Documents	Quinten Wenke	Stock	375	454	124SPRT - Sparta Sand	Bastrop	Withdrawal of Water
5856902 - Scanned Documents	Dorothy Bedford	Domestic	500	460	124SPRT - Sparta Sand	Lee	Withdrawal of Water
5864207 - Scanned Documents	Horseshoe Lake Water System	Unused	403	500	124QNCT - Queen City Sand of Claiborne Group	Bastrop	Withdrawal of Water
5856503 - Scanned Documents	R.R. Steinbach	Domestic	530	541	124QNCT - Queen City Sand of Claiborne Group	Bastrop	Withdrawal of Water
5856801 - Scanned Documents	Gus Farrick	Domestic	520	572	124QNCT - Queen City Sand of Claiborne Group	Bastrop	Withdrawal of Water
5864206 - Scanned Documents	A. J. Barker	Irrigation	390	600	124QNCT - Queen City Sand of Claiborne Group	Bastrop	Withdrawal of Water
5856706 - Scanned Documents	Paul Altmann		550	725	124QNCT - Queen City Sand of Claiborne Group	Bastrop	Withdrawal of Water
5864201 - Scanned Documents	Pete Meuth	Stock	410	809	124QNCT - Queen City Sand of Claiborne Group	Bastrop	Withdrawal of Water
5856905 - Scanned Documents	Lee County WSC	Public Supply	490	1183	124QCRK - Queen City Sand and Reklaw Formation	Lee	Withdrawal of Water
5856903 - Scanned Documents	Lee County WSC	Public Supply	482	1442	124QNCT - Queen City Sand of Claiborne Group	Lee	Withdrawal of Water
5864301 - Scanned Documents		Domestic	425		124CKMN - Cook Mountain Formation	Lee	Withdrawal of Water
5957101 - Scanned Documents	E. L. Alexander	Domestic	470		124CKMN - Cook Mountain Formation	Lee	Withdrawal of Water

Figure Two: Primary data source is the Texas Water Development Board's Water Data Interactive, an online GIS for water well data.

- Pertinent map(s) visually showing the areal extent of exemption boundary, depth and thickness of the aquifer proposed for exemption, all known subsurface structures such as faults affecting the aquifer, and each of the inventoried water well locations by well # or owner name.

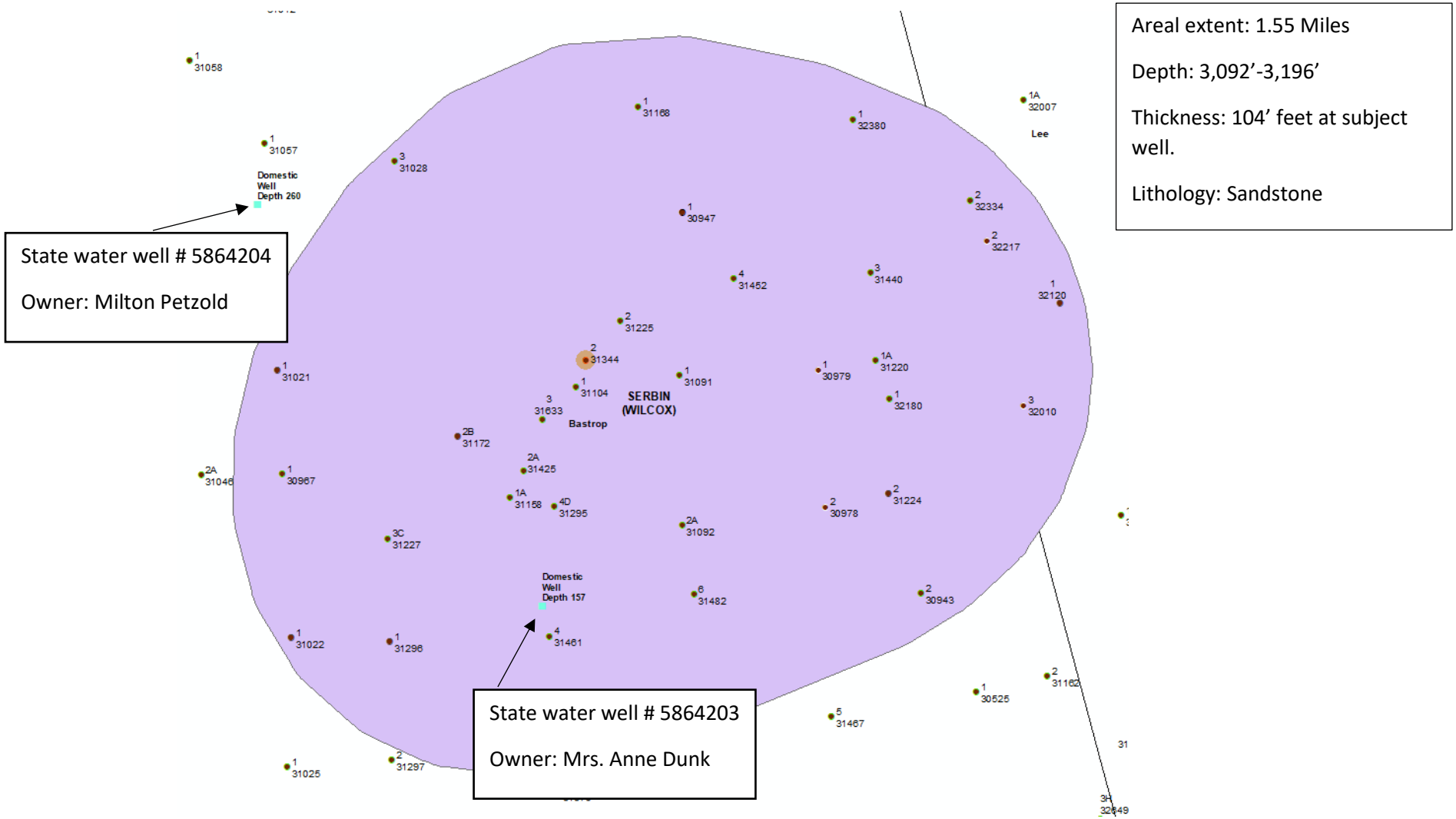


Figure Three: Map showing areal extent of exemption, and each of the water well locations by state well number.

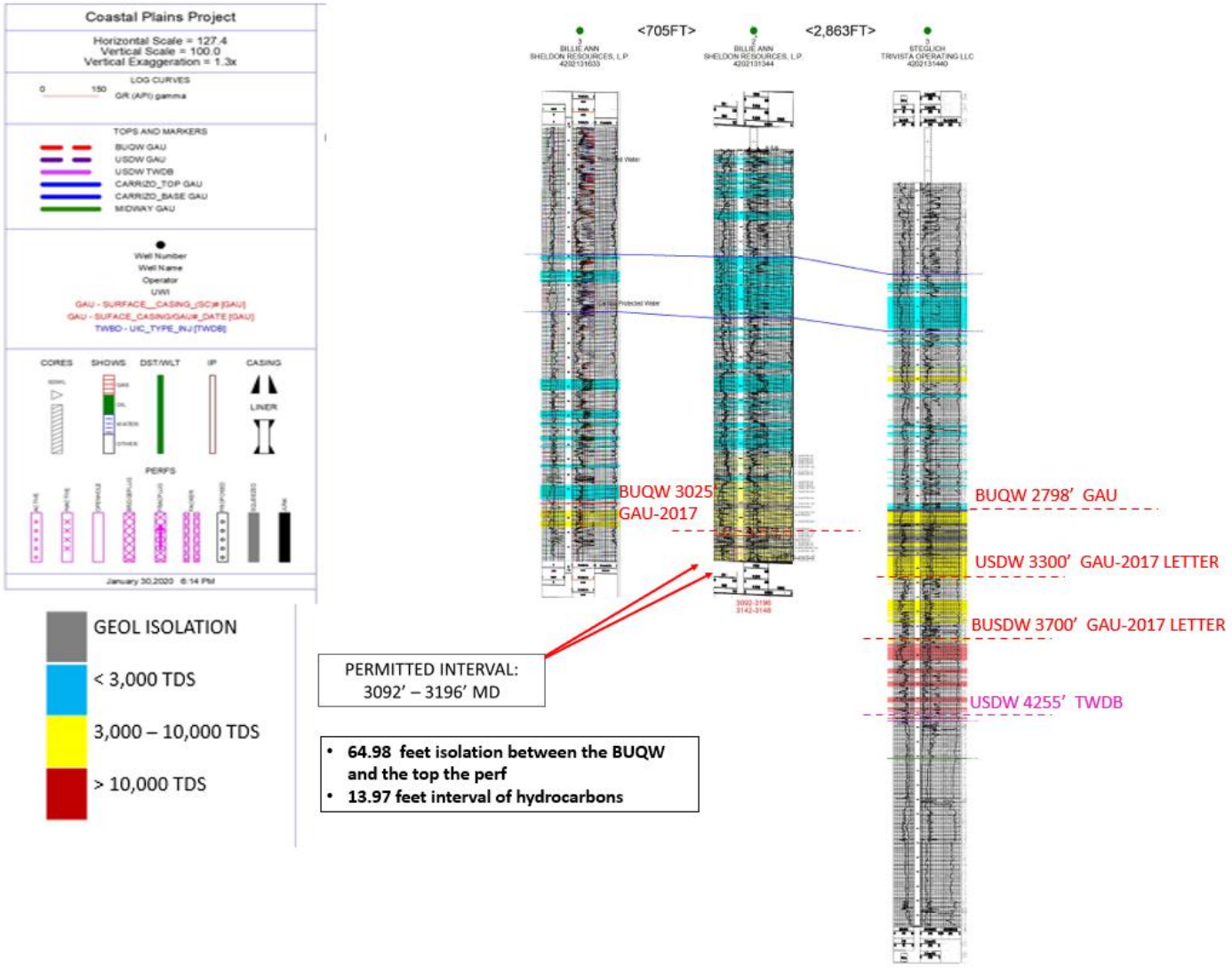


Figure Four: Cross-section of the aquifer, showing the depth and thickness of the aquifer proposed for exemption and all known subsurface structures.

- Map showing the areal extent of exemption boundary, all domestic water wells considered potentially down gradient of the exemption and hydraulically connected to the exemption. If wells are deemed horizontally and/or vertically isolated from the exemption, this should be foot noted on the Table as well. Use arrow(s) to indicate the direction and speed of ground water in the aquifer proposed for exemption.
    i. Refer to Figure three.

2. **Demonstration that the aquifer or portion thereof is mineral, hydrocarbon or geothermal energy producing per 146.4(b)(1)**

- Production history of other wells in the vicinity which produce from the horizon in question.

View by: **Production and Total Disposition** | Disposition Details | County Production

Lease Name: BILLIE ANN, Lease No: 11931
District 01
Lease Production and Disposition
Jan 1996 - Jan 2021

View All Results

Date	OIL (BBL)		Casinghead(MCF)		Operator Name	Operator No.	Field Name	Field No.
	Production	Disposition	Production	Disposition				
Jan 1996	205	162	0	0	EAST TEXAS PRODUCTION MGT. INC	238981	SERBIN (WILCOX)	82265600
Feb 1996	205	150	0	0				
Mar 1996	206	321	0	0				
Apr 1996	499	479	0	0				
May 1996	223	153	0	0				
Jun 1996	286	336	0	0				
Jul 1996	259	334	0	0				
Aug 1996	234	174	0	0				
Sep 1996	343	328	0	0				
Oct 1996	221	153	0	0	CHASE ENERGY, INC.	146678		
Nov 1996	266	334	0	0				
Dec 1996	288	163	0	0				
Jan 1997	302	302	0	0				
Feb 1997	161	161	0	0				
Mar 1997	202	147	0	0				
Apr 1997	262	442	0	0				
May 1997	303	303	0	0				
Jun 1997	348	148	0	0				
Jul 1997	240	290	0	0				
Aug 1997	353	453	0	0				

[Next >] | Page: **1** 2 3 4 5 6 7 8 9 10 of 16 Go to Page Submit View All Results

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Figure Five: Production history for the lease from January 1996 through January 2021.

- Description of the project, if it is an enhanced recovery operation including the number of wells and their location.
    - Well is currently being used for enhanced recovery and is in a zone that contains hydrocarbons.

- Provide a summary of logging indicating that commercially producible quantities of hydrocarbons are present.

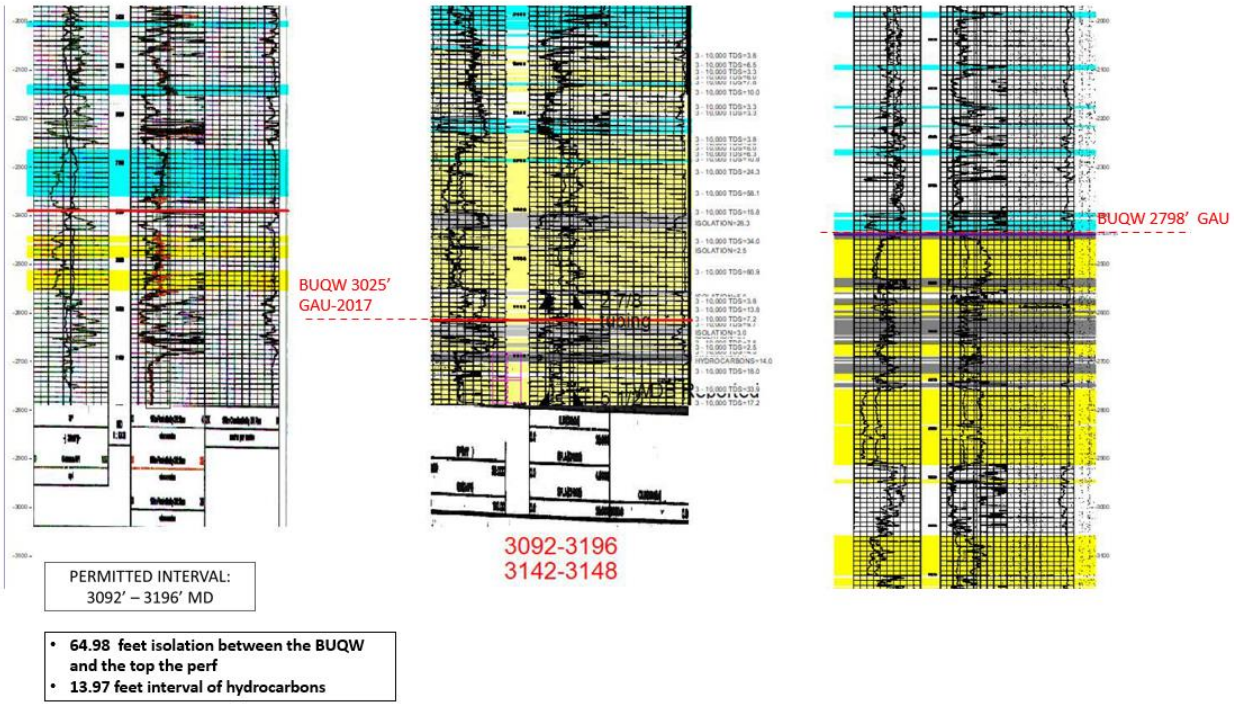
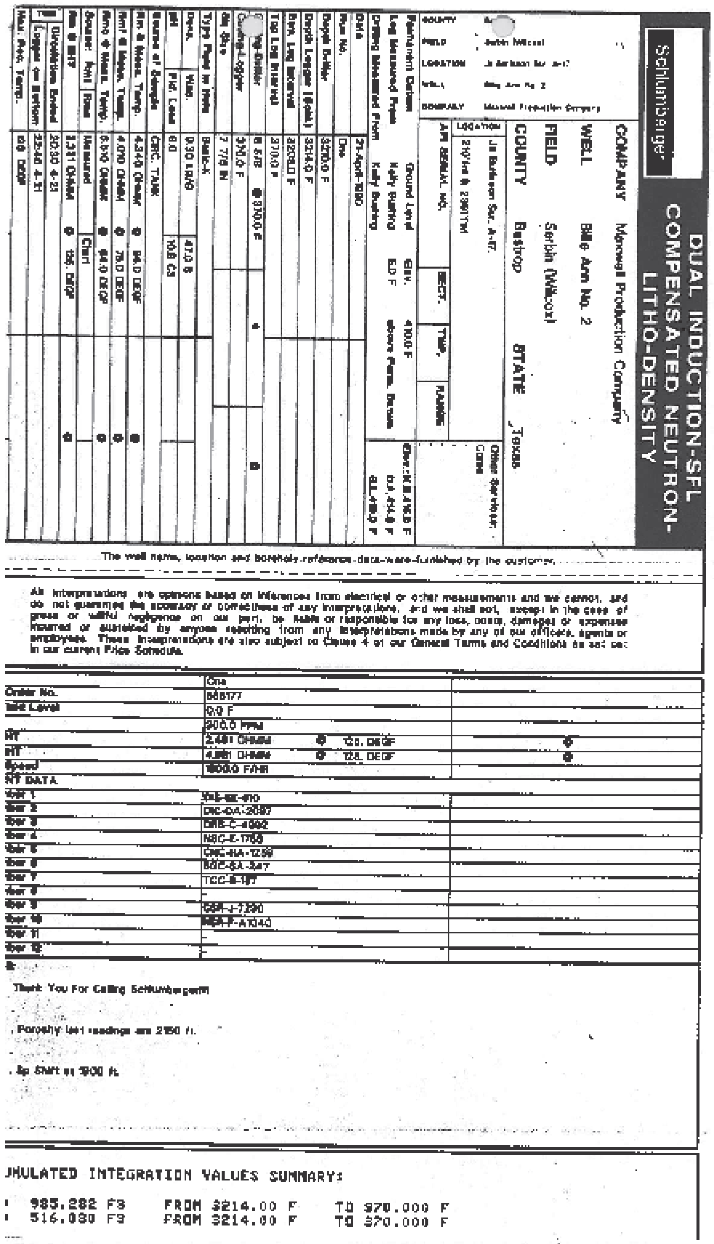


Figure Six: Zoomed in image of figure four showing a clear image of the hydrocarbon zones present in this well.

BILLIE ANN NO. 2 WELL LOG HEADER- ENTIRE LOG ATTACHED IN EMAIL



Schlumberger

DUAL INDUCTION-SFL COMPENSATED NEUTRON-LITHO-DENSITY

COMPANY Maxwell Production Company

WELL Billie Ann No. 2

FIELD Serbin (Wilcox)

COUNTY Bastrop STATE Texas

The well name, location and borehole reference data were furnished by the customer.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretations made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

Thank You For Calling Schlumberger

Porosity last readings are 2150 ft.

Sp Shift at 1900 ft.

JMULATED INTEGRATION VALUES SUMMARY:

985.282 F3 FROM 3214.00 F TO 970.000 F

516.030 F3 FROM 3214.00 F TO 970.000 F

Figure Seven: Log header for well log of subject well. Full log is attached as separate PDF.

RRC Map Image of Field

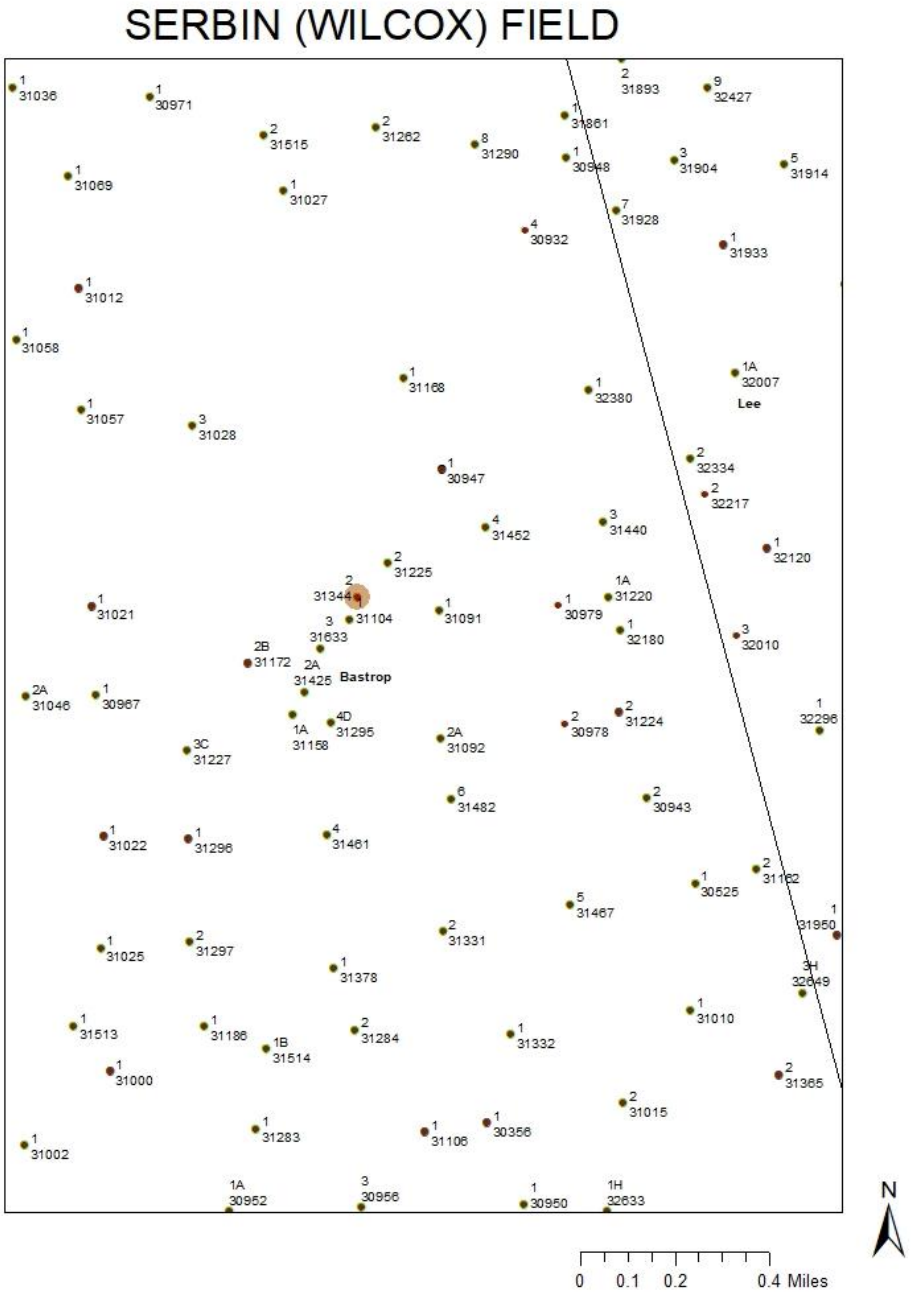


Figure Eight: Current Serbin Wilcox field in RRC Aquifer Exemption Map.

RRC Requested New Field

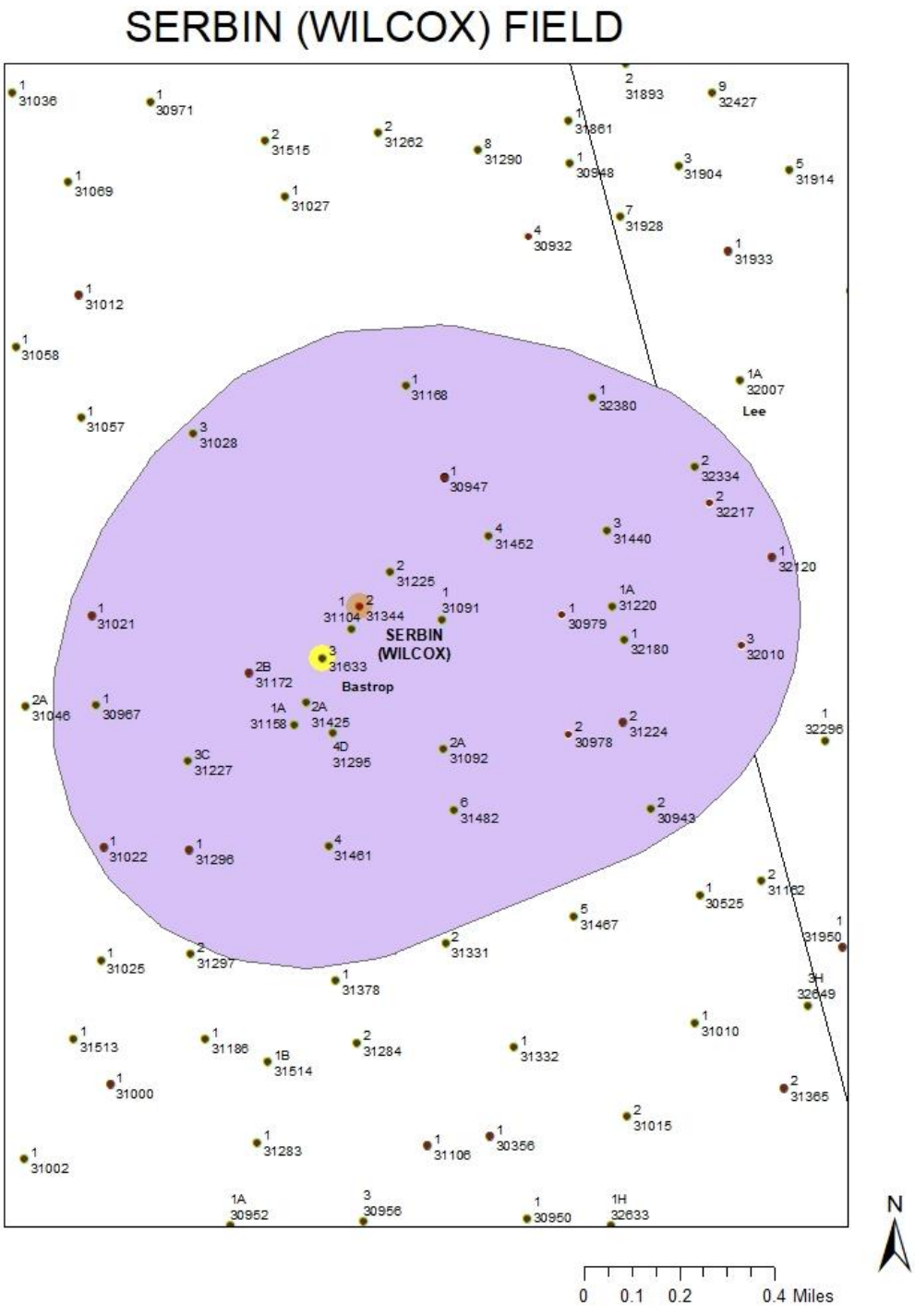


Figure Nine: Image of proposed new Serbin Wilcox field.

REFERENCES

1. https://www3.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer