

4/4/2017 DATE IN	SUSPENSE	WAM ENGINEER	9/17/2017 LOGGED IN	SWD TYPE	PMA17097335973 APP NO.
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☒ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

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

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
- [B] ☐ Offset Operators, Leaseholders or Surface Owner
- [C] ☐ Application is One Which Requires Published Legal Notice
- [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] ☐ Waivers are Attached

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

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

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

Danny J. Holcomb

Print or Type Name

DJ Holcomb
 Signature

Agent for Stearns

Title

3/27/2017
 Date

danny@pwllc.net
 e-mail Address

15 day clock
 starts
 05-01-2017

- SWD well
 - Stearns
 21566
 - well offset to
 well
 - Bowen SWD #1
 30-025 2383J
 Rod
 - SWD's Bought C
 96097

Pueblo West, LLC
125 Greathouse Village
Decatur, Texas 76234

April 4, 2017

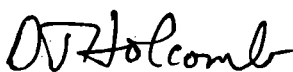
State of New Mexico
NMOCD Engineering Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Per the rules and regulations of the New Mexico Oil Conservation Division, please find enclosed a copy of NMOCD form C108.

Stearns, HC 65 Box 988, Crossroads, NM 88114 has filed form C108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to convert the Bowen #1, API 30-025-23833, 660 FNL x 660 FEL, Unit Letter "A", Section 21, T9S, R35E, Lea County, New Mexico from a plugged and abandoned well to a commercial salt water disposal well. The proposed disposal interval would be the Bough "C" formation through perforations between 9810' – 9854'. Disposal fluid would be produced water from producing oil and gas wells in the area. Anticipated average disposal volume is 3500 BWPD with a maximum anticipated volume of 5000 BWPD. Anticipated disposal pressure is 0 (zero) psi with a maximum disposal pressure of 1962 psi. The well is located approximately 1.4 miles northwest of Crossroads, New Mexico.

All interested parties opposing the aforementioned must file objections with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days. Additional information can be obtained by contacting Danny Holcomb at 806-471-5628.

Sincerely,




Danny J. Holcomb
Pueblo West, LLC
Agent for Stearns
Email: danny@pwllc.net



www.pwllc.net

RECEIVED
2017 APR - 6 PM 1:31

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: Stearns OGRID 21566
ADDRESS: HC 65 Box 988, Crossroads, New Mexico 88114
CONTACT PARTY: Bobby Stearns PHONE: 575-760-2482
- 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: Danny J. Holcomb TITLE: Agent for Stearns
SIGNATURE:  DATE: 3/27/2017
E-MAIL ADDRESS: danny@pwllc.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: _____

**Stearns
Bowen SWD #1
API # 30-025-23833
660 FNL x 660 FEL
Unit Letter 'A', Section 21, T9S, R35E
Lea County, New Mexico
C108 Application for Authorization to Inject**

I.

The purpose of this application is seeking administrative approval for the conversion of the Bowen #1 from a plugged and abandoned well to a commercial Bough "C" salt water disposal well.

II.

Operator: Stearns OGRID: 21566
Address: HC 65 Box 988, Crossroads, New Mexico 88114
Contact Party: Bobby Stearns 575-760-2482 email: bobbystearns1@yahoo.com

III.

Well Name: Bowen #1
API Number: 30-025-23833
Location: Unit Letter 'A', Section 21, T9S, R35E, Lea County, New Mexico
Operator: Stearns OGRID: 21566
Proposed Formation: SWD; Bough C (Pool Code: 96067)
Please see Exhibit "A" for additional well data.

IV.

This is not an expansion of an existing project.

V.

Please see Exhibit "B" of lease map.

VI.

There is one offset well located within the 0.5 mile Area of Review that does not penetrate the proposed disposal interval. There are no offset wells located within the 0.5 mile Area of Review that penetrate the proposed disposal interval. See AOR map and offset well descriptions in Exhibit "C".

VII.

1. Anticipated disposal volume – 3500 BWPD with a maximum of 5000 BWPD.
2. System will be open and closed. It will include a central tank battery and pump. Water will be trucked in and possibly pipelined in as well.
3. Anticipated disposal pressure: Minimum 0 (zero) psig, Maximum 1962 psig.
4. Disposed fluid will be trucked in from producing wells in the immediate area. Please see Exhibit "D" for fluid analysis from area wells.
5. Please see Exhibit "D" for disposal zone fluid analysis.



**Stearns
Bowen SWD #1
API # 30-025-23833
660 FNL x 660 FEL
Unit Letter 'A', Section 21, T9S, R35E
Lea County, New Mexico
C108 Application for Authorization to Inject**

VIII.

Formation Top	Anticipated Depth (ft)
Wolfcamp	8995
Penn	~9630
Bough C	9810
Proposed disposal zone	9810 - 9854
Strawn	~12000
Atoka	~12500

The proposed well is not located within the Capitan Reef Area. The Bough C formation consists of limestone usually with biomoldic and vugular secondary porosity. The Bough C formation in the Crossroads area is a known loss circulation zone and has proven to be void of oil and gas in much of this area. The subject well was drilled as a Bough C test in 1971 and abandoned without running production casing. We find no current Bough C oil/gas production within 4+ miles of the subject well.

IX.

Proposed Completion Procedure: Run a 7-7/8" bit and drill out all cement plugs to TD at 9854', circulate hole clean. Run 5-1/2" casing, set at 9854'. Cement with approximately 2000 sx cement to surface. Run TS, and if necessary, perf/sqz cement to surface, WOC. Perforate 5-1/2" casing at 9810' – 9854'. Obtain swab test if possible. Perform pump-in test to establish initial injection rate. If pump-in test results are favorable, no initial stimulation is planned. If pump-in test results are unfavorable, disposal interval will be acidized with 5000 gallons of 15% NEFE HCL acid. 2-7/8" internally plastic coated injection tubing and packer will be run. Packer will be set a maximum of 100' above the top perforation.

X.

Any additional logs performed will be submitted after completion.

XI.

NM OSE records indicate there are no fresh water wells within the 1 mile Area of Review. However, a site inspection found three fresh water wells located within the 1 mile AOR. Two are house water wells and the third is a windmill utilized for cattle production. Stearns obtained water sample analysis on these wells. See Exhibit "E" for copies of OSE data base queries, fresh water test results and an AOR map.



Stearns
Bowen SWD #1
API # 30-025-23833
660 FNL x 660 FEL
Unit Letter 'A', Section 21, T9S, R35E
Lea County, New Mexico
C108 Application for Authorization to Inject

XII.

Available geological and engineering data have been examined and no evidence of open faults or hydrological connection between the Bough C disposal zone and any underground sources of drinking water has been found.

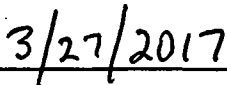
XIII.

Please see Exhibit "F" for Proof of Notice. Included is a map of the Area of Review, list of noticees, certified mail receipts/electronic signature receipts for notices and the original affidavit of publication from the Lovington Leader for the required public notice.

Danny J. Holcomb
Agent for Stearns



Date:





**Stearns
Bowen SWD #1
API # 30-025-23833
660 FNL x 660 FEL
Unit Letter 'A', Section 21, T9S, R35E
Lea County, New Mexico**

Current Well Data

Spud July 27, 1971 as a Bough C oil well test by VF Petroleum.

12-3/4" 34# casing set at 409' in 17-1/2" hole, cemented with 400 sacks of Class "C" cement. Cement was circulated to surface. Casing was pressure tested to 1000 psi for 30 minutes, held ok.

8-5/8" 28# & 32# casing set at 4074' in 11" hole, cemented with 375 sacks of Class "C" cement. Top of cement unknown. Casing was pressure tested to 1500 psi for 30 minutes, held ok.

Drilled 7-7/8" hole to TD at 9854', well was logged and one DST was performed. The Bough C was found to be dry and no production casing was run.

Well was plugged as dry and abandoned 10/21/1971. Plugs were reported at:

- Plug #1 – 40 sx cement @ 9854' (TD)
- Plug #2 – 25 sx cement @ 8995' (Wolfcamp)
- Plug #3 – 25 sx cement @ 7703' (Abo)
- Plug #4 – 25 sx cement @ 5490' (Glorieta)
- Plug #5 – 35 sx cement @ 4035' (Intermediate shoe)
- 8-5/8" casing was cut @ 1896' and 1693' with no recovery
- 8-5/8" casing was cut and pulled from 1461'
- Plug #6 – 35 sx cement @ 1461' (inside and outside 8-5/8" casing stub)
- Plug #7 – 50 sx cement @ 407' (surface shoe)
- Plug #8 – 10 sx cement @ surface

Reported Formation Tops

Anhydrite – 2275'
San Andres – 4035'
Glorieta – 5490'
Abo – 7703'
Wolfcamp – 8995'
Bough C – 9810'



www.pwllc.net

EXHIBIT "A"

CURRENT WELLBORE DIAGRAM

P&A

VF Petroleum

Bowen #1

API # 30-025-23833

660' FNL x 660' FEL, UL 'A' Sec 21, T9S, R35E, Lea County, NM

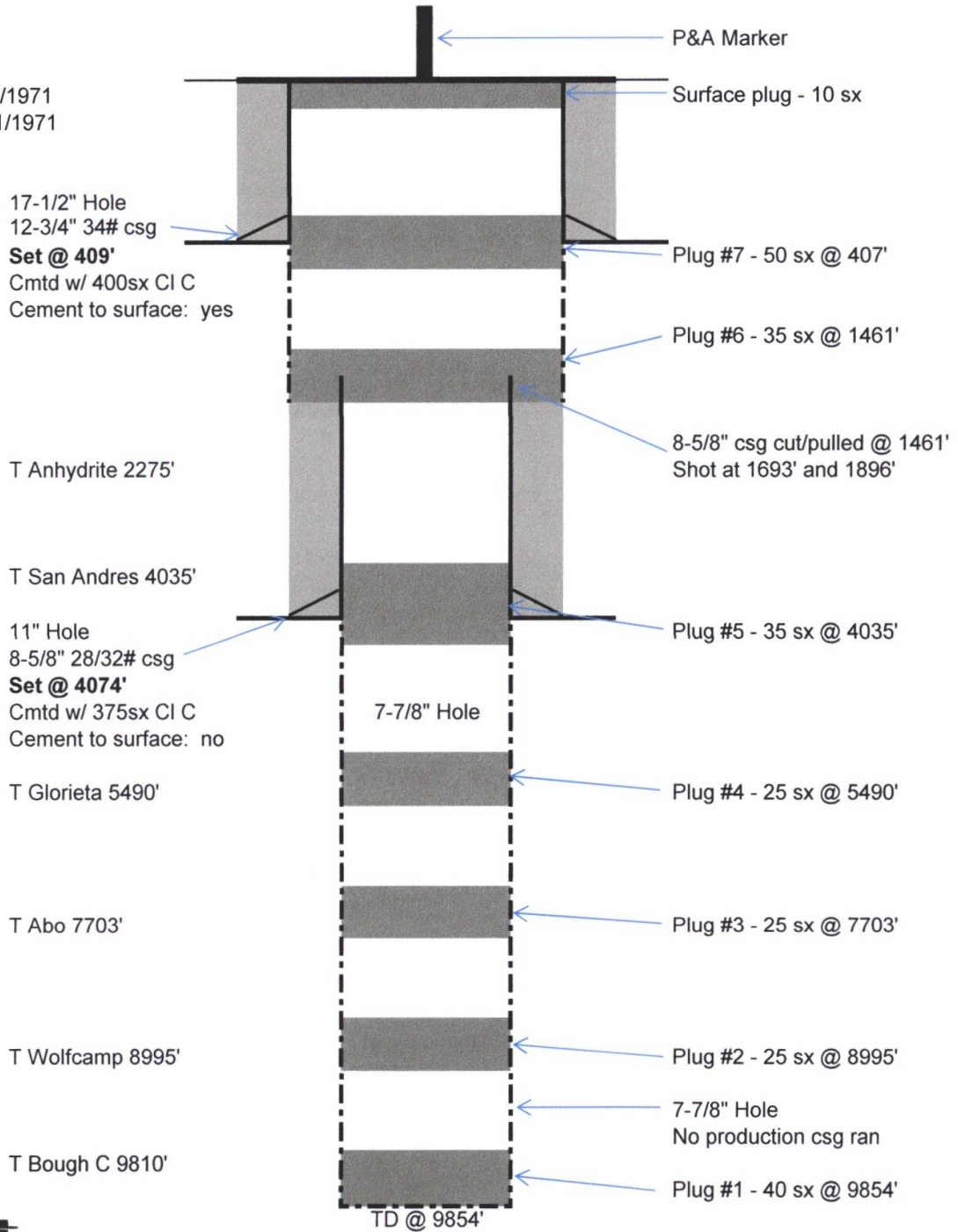
All Depths KB

KB 4163'

GL 4151'

Spud 7/27/1971

P&A 10/21/1971



Drawing Not to Scale

EXHIBIT "A"

PROPOSED WELLBORE DIAGRAM

Configured for SWD Service

Stearns

Bowen SWD #1

API # 30-025-23833

660' FNL x 660' FEL, UL 'A' Sec 21, T9S, R35E, Lea County, NM

All Depths KB

KB 4163'

GL 4151'

Spud 7/27/1971

P&A 10/21/1971

Re-entry 2017

17-1/2" Hole

12-3/4" 34# csg

Set @ 409'

Cmt w/ 400sx CI C

Cement to surface: yes

11" hole

8-5/8" csg cut/pulled @ 1461'

Shot at 1693' and 1896'

T Anhydrite 2275'

T San Andres 4035'

11" Hole

8-5/8" 28/32# csg

Set @ 4074'

Cmt w/ 375sx CI C

Cement to surface: no

2-7/8" IPC Injection Tubing

T Glorieta 5490'

Packer Fluid in Annulus

T Abo 7703'

T Wolfcamp 8995'

T Bough C 9810'

5-1/2" X 2-7/8" NC Arrowset

Packer set @ 9760'

7-7/8" Hole

5-1/2" 17# csg

Set @ 9854'

Cmt w/ 2000 sx

Cement to surface: yes

Proposed Injection Interval
9810' - 9854'

TD @ 9854'

Drawing Not to Scale

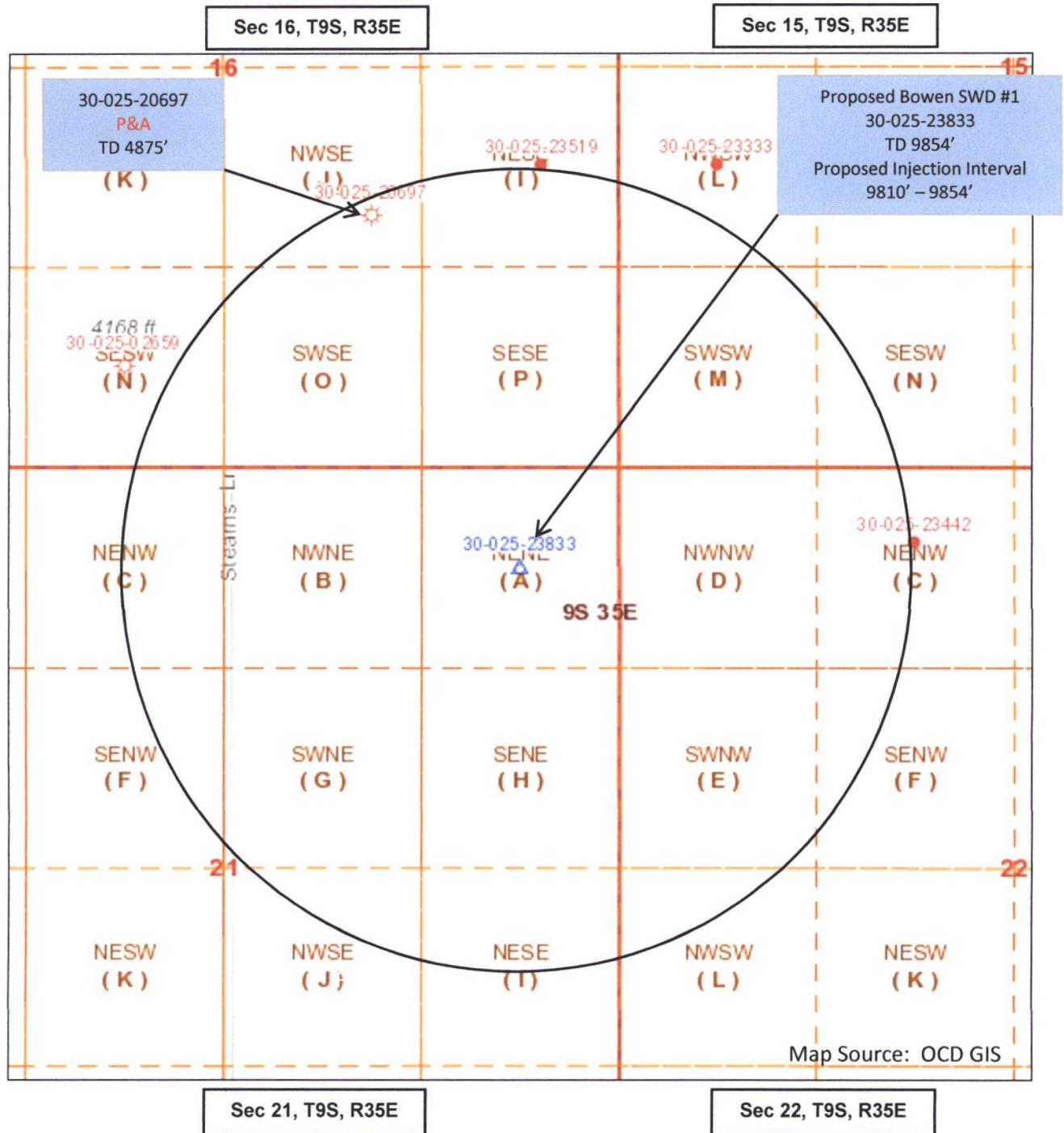
EXHIBIT "A"



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Stearns
Bowen SWD #1
API # 30-025-23833
0.5 Mile AOR



This location 660 FNL x 660 FEL, UL 'A',
Section 21, T9S, R35E, Lea County, New Mexico

EXHIBIT "C"

Stearns
Bowen SWD #1
API # 30-025-23833
Offset Wells within 0.5 Mile AOR

There are no offset wells within the 0.5 mile AOR that penetrates the proposed disposal zone.

There is one offset well within the 0.5 mile AOR that does not penetrate the proposed disposal zone.

UL, Sec, T, R	API Well No.	Well Name	TVD	Status
J-16-9S-35E	30-025-20697	Humble-State #1	4875'	Drilled in 1964, P&A in 1976

EXHIBIT "C"



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**Stearns
Bowen SWD #1
API # 30-025-23833
660 FNL x 660 FEL
Unit Letter 'A', Section 21, T9S, R35E
Lea County, New Mexico**

Exhibit "D"

Formation Water			
<u>API Number</u>	<u>Formation</u>	<u>TDS</u>	<u>Chlorides</u>
30-025-03566	Bough C	128,389	78,582

Possible Disposal Fluid			
<u>API Number</u>	<u>Formation</u>	<u>TDS</u>	<u>Chlorides</u>
30-025-03587	Penn	110,068	60,770
30-025-03622	Devonian	92,794	55,910
30-025-03583	Penn	244,439	149,100
30-025-21005	San Andres	226,221	134,200
30-025-20048	San Andres	227,350	136,000
30-025-20380	Penn	87,460	49,400
30-025-03580	Penn	129,388	78,120
30-025-01806	Wolfcamp	96,330	Not reported

Data obtained from GO-Tech NMWAIDS data base.

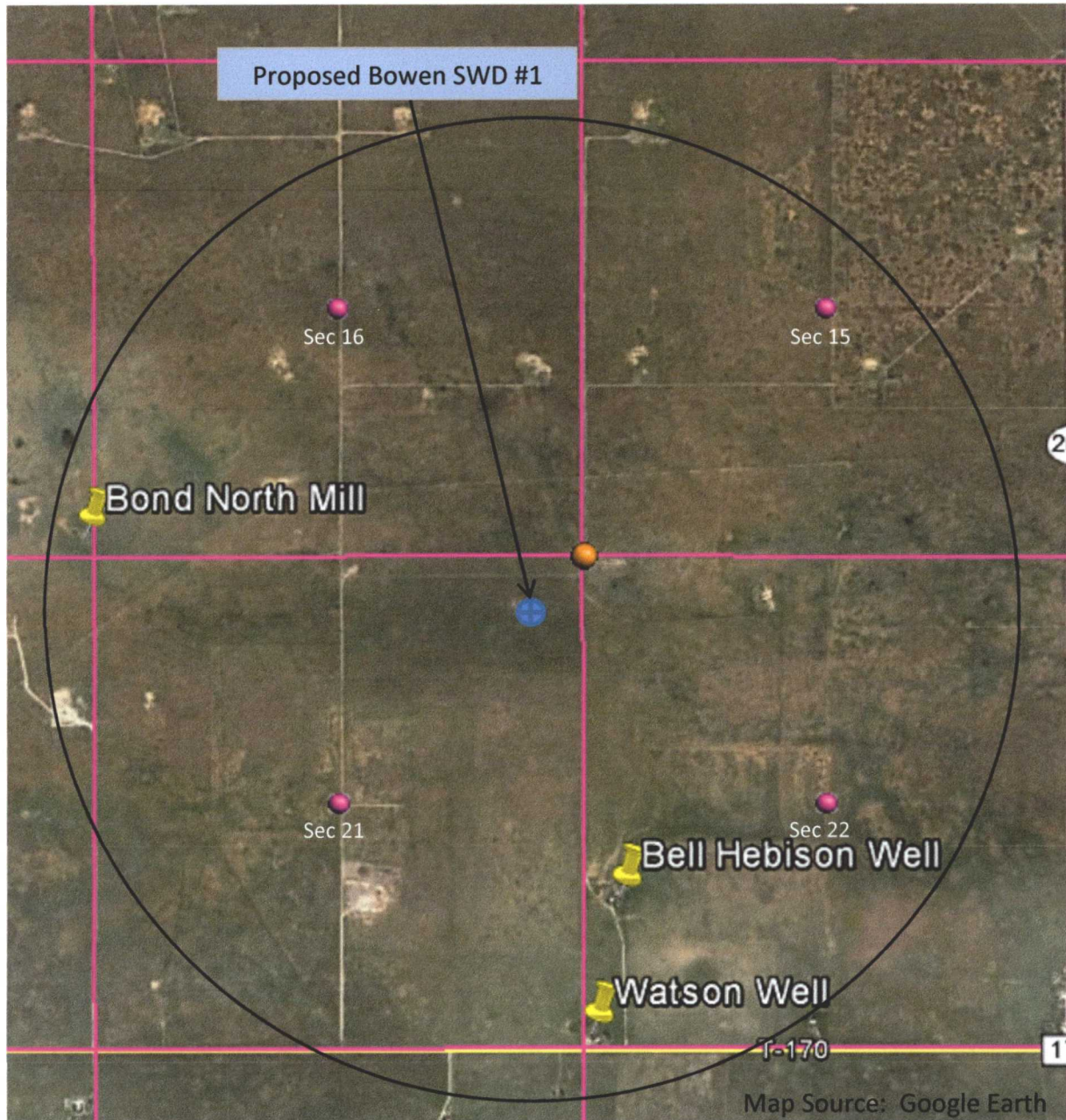
EXHIBIT "D"



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Stearns
Bowen SWD #1
1 Mile AOR for Water Wells

T9S, R35E



OSE records indicated that there were no ground water wells located within the 1 mile AOR. A site inspection found 3 ground water wells located within the 1 mile AOR.



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 15, 16, 17, 20, Township: 09S Range: 35E
21, 22, 27, 28,
29

EXHIBIT "E"

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/24/17 1:56 PM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

**Stearns
Bowen SWD #1
1 Mile AOR List of Water Wells**

List of Water Wells Within 1 Mile AOR Based on Site Inspection

Watson Well – owned by applicant, located at unoccupied house, utilized for livestock water	Lat: 33° 30' 45.68"N Lon: 103° 21' 21.95"W
Bell Hebison Well – located at abandoned house, utilized for livestock water	Lat: 33° 31' 0.73"N Lon: 103° 21' 21.37"W
Bond North Mill Well – windmill utilized for livestock water	Lat: 33° 31' 39.16"N Lon: 103° 22' 28.70"W

See fresh water sample test results for the wells noted above on pages 14 – 16.

EXHIBIT "E"

Pro-Kem WATER ANALYSIS REPORT

AMPL

Oil Co. : J&B Well Services
Lease : Waston Well
Well No.:
Location:
Attention:

Date Sampled : 08-October-2014
Date Analyzed: 08-October-2014
Lab ID Number: Oct0814.002- 4
Salesperson :
File Name : Oct0814.002

NALYSIS

1. Ph 7.760
2. Specific Gravity 60/60 F. .973
3. CACO3 Saturation Index

@ 80F
@140F

0.880
1.480

Moderate
Severe

Dissolved Gasses

4. Hydrogen Sulfide
5. Carbon Dioxide
6. Dissolved Oxygen

MG/L.	EQ. WT.	*MEQ/L
Not Present		
Not Determined		
Not Determined		

Cations

7. Calcium (Ca++)
8. Magnesium (Mg++)
9. Sodium (Na+) (Calculated)
10. Barium (Ba++)

93	/ 20.1 =	4.63
38	/ 12.2 =	3.11
149	/ 23.0 =	6.48
Below 10		

Anions

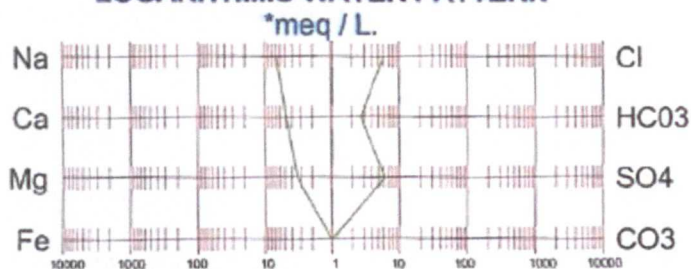
11. Hydroxyl (OH-)
12. Carbonate (CO3=)
13. Bicarbonate (HCO3-)
14. Sulfate (SO4=)
15. Chloride (Cl-)
16. Total Dissolved Solids
17. Total Iron (Fe)
18. Manganese (Mn++)
19. Total Hardness as CaCO3
20. Resistivity @ 75 F. (Calculated)

0	/ 17.0 =	0.00
0	/ 30.0 =	0.00
159	/ 61.1 =	2.60
288	/ 48.8 =	5.90
200	/ 35.5 =	5.63
927		
0.08	/ 18.2 =	0.00

Not Determined
390

2.845 Ohm · meters

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT. =	mg/L.
Ca(HCO3)2	2.60		81.04	211
CaSO4	2.02		68.07	138
CaCl2	0.00		55.50	0
Mg(HCO3)2	0.00		73.17	0
MgSO4	3.11		60.19	187
MgCl2	0.00		47.62	0
NaHCO3	0.00		84.00	0
NaSO4	0.76		71.03	54
NaCl	5.63		58.46	329

* milliequivalents per Liter

Tony Abernathy, Analyst

EXHIBIT "E"

Pro-Kem WATER ANALYSIS REPORT

AMPL

Oil Co. : J&B Well Services
Lease : Bell Hebison
Well No.:
Location:
Attention:

Date Sampled : 08-October-2014
Date Analyzed: 09-October-2014
Lab ID Number: Oct0914.001- 1
Salesperson :
File Name : Oct0914.001

NALYSIS

1. Ph 7.510
2. Specific Gravity 60/60 F. .973
3. CACO3 Saturation Index @ 80F
@140F

Dissolved Gasses

4. Hydrogen Sulfide
5. Carbon Dioxide
6. Dissolved Oxygen

0.724 Moderate
1.324 Severe

MG/L.	EQ. WT.	*MEQ/L
Not Present		
Not Determined		
Not Determined		

Cations

7. Calcium (Ca++)
8. Magnesium (Mg++)
9. Sodium (Na+) (Calculated)
10. Barium (Ba++)

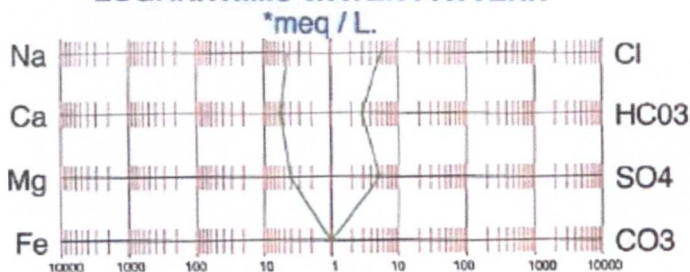
107	/	20.1 =	5.32
47	/	12.2 =	3.85
96	/	23.0 =	4.17
Below 10			

Anions

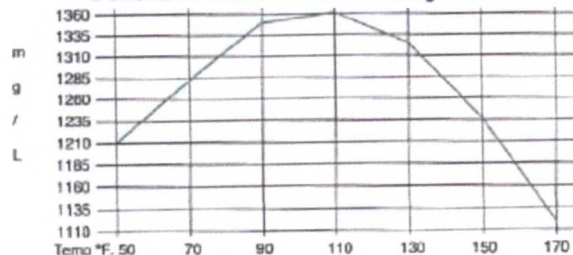
11. Hydroxyl (OH-)
12. Carbonate (CO3=)
13. Bicarbonate (HCO3-)
14. Sulfate (SO4=)
15. Chloride (Cl-)
16. Total Dissolved Solids
17. Total Iron (Fe)
18. Manganese (Mn++)
19. Total Hardness as CaCO3
20. Resistivity @ 75 F. (Calculated)

0	/	17.0 =	0.00
0	/	30.0 =	0.00
171	/	61.1 =	2.80
250	/	48.8 =	5.12
190	/	35.5 =	5.35
861			
0.07	/	18.2 =	0.00
Not Determined			
461			
		2.815 Ohm · meters	

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT. =	mg/L.
Ca(HCO3)2	2.80		81.04	227
CaSO4	2.52		68.07	172
CaCl2	0.00		55.50	0
Mg(HCO3)2	0.00		73.17	0
MgSO4	2.60		60.19	156
MgCl2	1.25		47.62	60
NaHCO3	0.00		84.00	0
NaSO4	0.00		71.03	0
NaCl	4.10		58.46	240

* milliequivalents per Liter

Tony Abernathy, Analyst

EXHIBIT "E"

Pro-Kem WATER ANALYSIS REPORT

AMPL

Oil Co. : J&B Well Services
Lease : Bond North Mill
Well No.:
Location:
Attention:

Date Sampled : 08-October-2014
Date Analyzed: 09-October-2014
Lab ID Number: Oct0914.001- 3
Salesperson :
File Name : Oct0914.001

NALYSIS

1. Ph 7.670
2. Specific Gravity 60/60 F. .973
3. CACO3 Saturation Index @ 80F
@140F

Dissolved Gasses

4. Hydrogen Sulfide
5. Carbon Dioxide
6. Dissolved Oxygen

0.215 Mild
0.915 Moderate
MG/L. EQ. WT. *MEQ/L
Not Present
Not Determined
Not Determined

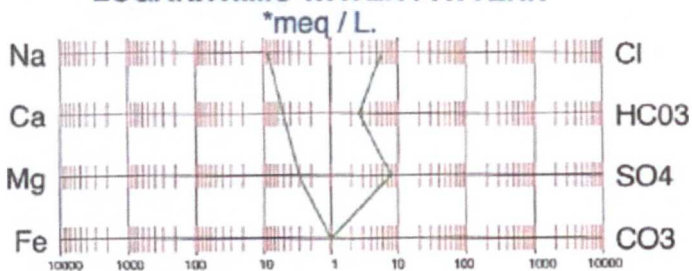
Cations

7. Calcium (Ca++) 96 / 20.1 = 4.78
8. Magnesium (Mg++) 34 / 12.2 = 2.79
9. Sodium (Na+) (Calculated) 190 / 23.0 = 8.26
10. Barium (Ba++) Below 10

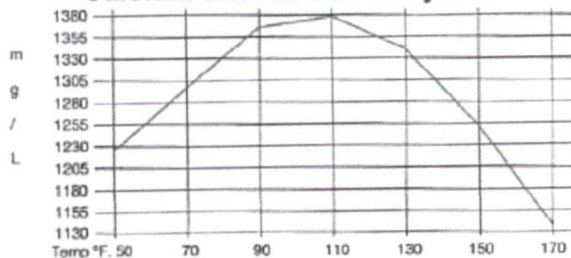
Anions

11. Hydroxyl (OH-) 0 / 17.0 = 0.00
12. Carbonate (CO3=) 0 / 30.0 = 0.00
13. Bicarbonate (HCO3-) 157 / 61.1 = 2.57
14. Sulfate (SO4=) 367 / 48.8 = 7.52
15. Chloride (Cl-) 200 / 35.5 = 5.63
16. Total Dissolved Solids 1,044
17. Total Iron (Fe) 0.02 / 18.2 = 0.00
18. Manganese (Mn++) Not Determined
19. Total Hardness as CaCO3 381
20. Resistivity @ 75 F. (Calculated) 2.889 Ohm · meters

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	2.57		81.04		208
CaSO4	2.21		68.07		150
CaCl2	0.00		55.50		0
Mg(HCO3)2	0.00		73.17		0
MgSO4	2.79		60.19		168
MgCl2	0.00		47.62		0
NaHCO3	0.00		84.00		0
NaSO4	2.53		71.03		179
NaCl	5.63		58.46		329

* milliequivalents per Liter

Tony Abernathy, Analyst

EXHIBIT "E"

Legal Notice

Stearns, HC 65 Box 988, Crossroads, NM 88114 has filed form C108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to convert the Bowen #1, API 30-025-23833, 660 FNL x 660 FEL, Unit Letter "A", Section 21, T9S, R35E, Lea County, New Mexico from a plugged and abandoned well to a commercial salt water disposal well. The proposed disposal interval would be the Bough "C" formation through perforations between 9810' – 9854'. Disposal fluid would be produced water from producing oil and gas wells in the area. Anticipated average disposal volume is 3500 BWPD with a maximum anticipated volume of 5000 BWPD. Anticipated disposal pressure is 0 (zero) psi with a maximum disposal pressure of 1962 psi. The well is located approximately 1.4 miles northwest of Crossroads, New Mexico.

All interested parties opposing the aforementioned must file objections with the New Mexico Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days. Additional information can be obtained by contacting Danny Holcomb at 806-471-5628.

The above legal notice was published in the Lovington Leader newspaper on March 28, 2017. See original Affidavit of Publication on the next page.

EXHIBIT "F"

Affidavit of Publication

STATE OF NEW MEXICO)
) ss.
COUNTY OF LEA)

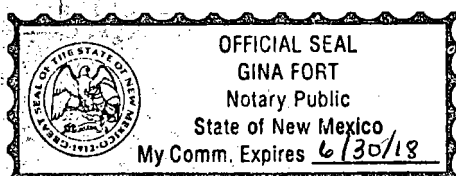
John Graham being first duly sworn on oath deposes and says that he is Publisher of THE LOVINGTON LEADER, a thrice a week newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled Legal Notice was published in a regular and entire issue of THE LOVINGTON LEADER and not in any supplement thereof, for one (1) day(s), beginning with the issue of March 28, 2017 and ending with the issue of March 28, 2017.

And that the cost of publishing said notice is the sum of \$ 34.46 which sum has been (Paid) as Court Costs.


John Graham, Publisher
Subscribed and sworn to before me this 28th day of March, 2017.


Gina Fort
Notary Public, Lea County, New Mexico
My Commission Expires June 30, 2018



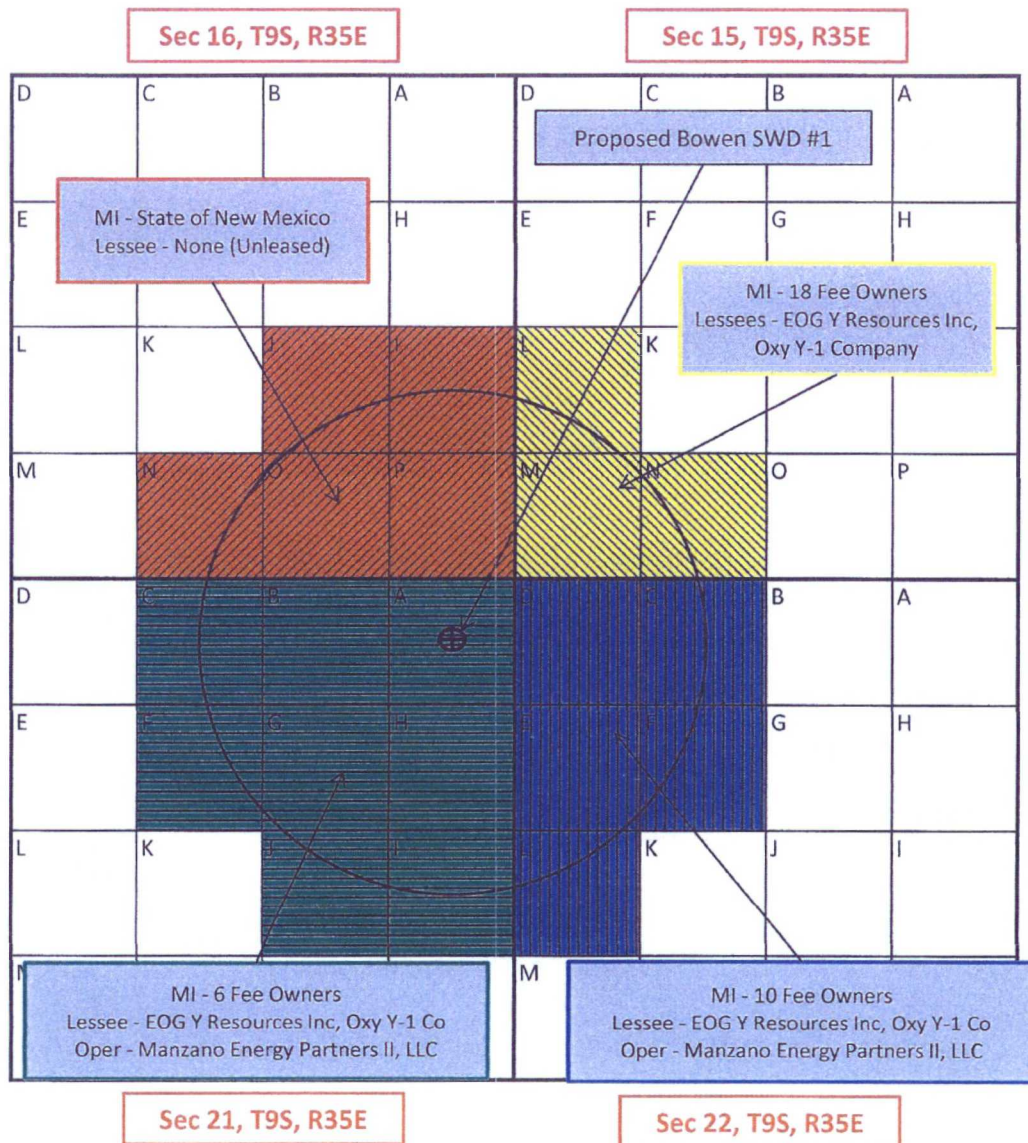
Legal Notice

Stearns, HC 65 Box 988, Crossroads, NM 88114 has filed form C108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to convert the Bowen #1, API 30-025-23833, 660 FNL x 660 FEL, Unit Letter "A", Section 21, T9S, R35E, Lea County, New Mexico from a plugged and abandoned well to a commercial salt water disposal well. The proposed disposal interval would be the Bough "C" formation through perforations between 9810' - 9854'. Disposal fluid would be produced water from producing oil and gas wells in the area. Anticipated average disposal volume is 3500 BWPD with a maximum anticipated volume of 5000 BWPD. Anticipated disposal pressure is 0 (zero) psi with a maximum disposal pressure of 1962 psi. The well is located approximately 1.4 miles northwest of Crossroads, New Mexico.

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Published in the Lovington Leader March 28, 2017

Stearns
Bowen SWD #1
API # 30-025-23833
0.5 Mile AOR



This location 660 FNL X 660 FEL
Surface Owner - John R. Stearns,
HC 65, Box 988, Crossroads, New Mexico 88114
Drawing not to scale

EXHIBIT "F"



Stearns
Bowen SWD #1
API #30-025-23833

EXHIBIT 'F' - NOTIFICATION LIST

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
1	John R. Stearns (Also C108 Applicant)	HC65 Box 988	Crossroads, NM 88114	Surface Owner

Section 15, T9S, R35E, NMPM (ULs L, M, N)

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
2	EOG Y Resources, Inc.	105 S. Fourth Street	Artesia, NM 88210	Lessee
3	Oxy Y-1 Company	P. O. Box 27570	Houston, TX 77227-7570	Lessee
	18 Fee Mineral Owners - Not notified			Mineral Owner

Section 16, T9S, R35E, NMPM (ULs I, J, N, O, P)

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
4	State of New Mexico Commissioner of Public Land	P. O. Box 1148	Santa Fe, NM 87504	Mineral Owner
	None - Unleased			Lessee

Section 21, T9S, R35E, NMPM (ULs A, B, C, F, G, H, I, J)

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
2	EOG Y Resources, Inc.	105 S. Fourth Street	Artesia, NM 88210	Lessee
3	Oxy Y-1 Company	P. O. Box 27570	Houston, TX 77227-7570	Lessee
4	Manzano Energy Partners II, LLC	P. O. Box 2107	Roswell, NM 88202-2107	Operator
	6 Fee Mineral Owners - Not notified			Mineral Owner

Section 22, T9S, R35E, NMPM (ULs C, D, E, F, L)

#	NAME	ADDRESS	CITY STATE ZIP	TYPE
2	EOG Y Resources, Inc.	105 S. Fourth Street	Artesia, NM 88210	Lessee
3	Oxy Y-1 Company	P. O. Box 27570	Houston, TX 77227-7570	Lessee
4	Manzano Energy Partners II, LLC	P. O. Box 2107	Roswell, NM 88202-2107	Operator
	10 Fee Mineral Owners - Not notified			Mineral Owner

NMOCD Noticees

#	NAME	ADDRESS	CITY STATE ZIP
5	State of New Mexico NMOCD Engineering Bureau	1220 South St. Francis Drive	Santa Fe, NM 87505
6	State of New Mexico NMOCD District 1	1625 N. French Drive	Hobbs, NM 88240

Notices with electronic signature receipts attached



Date: May 2, 2017

Danny Holcomb:

The following is in response to your May 2, 2017 request for delivery information on your Certified Mail™ item number 70151730000222122803. The delivery record shows that this item was delivered on May 1, 2017 at 9:41 am in ROSWELL, NM 88201. The scanned image of the recipient information is provided below.

Signature of Recipient :

[Handwritten signature]

Address of Recipient :

Box 2107

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely,
United States Postal Service

7015 1730 0002 2212 2803

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
For delivery information, visit our website at www.usps.com	
ROSWELL, NM 88201	
OFFICIAL USE	
Certified Mail Fee	\$3.35
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$2.80
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$2.03
Total Postage and Fee	\$6.53
Sent to	Manzano Energy Partners II, LLC
Street and Apt. No.	P. O. Box 2107
City, State, ZIP+4®	Roswell, NM 88202-2107
PS Form 3800, 01-01	

Postmark: ROSWELL, NM 05/27/2017



**UNITED STATES
POSTAL SERVICE.**

Date: March 30, 2017

Danny Holcomb:

The following is in response to your March 30, 2017 request for delivery information on your Certified Mail™ item number 70151730000222122759. The delivery record shows that this item was delivered on March 29, 2017 at 7:23 am in ARTESIA, NM 88210. The scanned image of the recipient information is provided below.

Signature of Recipient :

Delivery Section	
Signature	<i>Nancy Anderson</i>
Printed Name	Nancy Anderson

Address of Recipient :

Delivery Address	105 S 4th St
------------------	--------------

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely,
United States Postal Service

7015 1730 0002 2212 2759

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
For delivery information, visit our website at www.usps.com	
ARTESIA, NM 88210	
Certified Mail Fee	\$3.35
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$1.45
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$3.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$1.61
Total Postage and Fees	\$6.41
Sent To	EOG Y Resources, Inc.
Street and Apt. No.	105 S. Fourth Street
City, State, ZIP+4®	Artesia, NM 88210
PS Form 3800, 3-17	

03/27/2017

Postmark: ARTESIA, NM 88210 03/27/2017

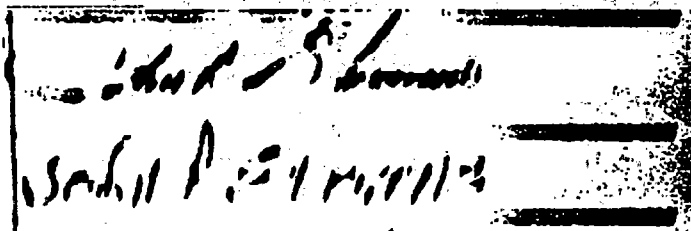


Date: March 30, 2017

Danny Holcomb:

The following is in response to your March 30, 2017 request for delivery information on your Certified Mail™ item number 70151730000222122766. The delivery record shows that this item was delivered on March 29, 2017 at 7:28 am in CROSSROADS, NM 88114. The scanned image of the recipient information is provided below.

Signature of Recipient :



Address of Recipient :



Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely,
United States Postal Service

7015 1730 0002 2212 2766

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
For delivery information, visit our website at www.usps.com ®	
CROSSROADS, NM 88114	
OFFICIAL USE	
Certified Mail Fee	\$3.35
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$1.25
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$1.61
Total Postage and Fees	\$6.41
Sent To	John R. Stearns
Street and Apt. No.	HC65 Box 988
City, State, ZIP+4®	Crossroads, NM 88114
PS Form 3800, Apr 2016	

PS JORDAN STATION
MAR 29 2017
7:28 AM
0206
063459769107121314151617

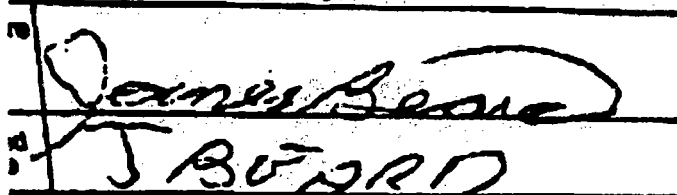


Date: April 4, 2017

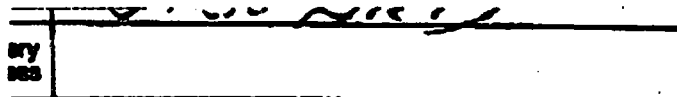
Danny Holcomb:

The following is in response to your April 4, 2017 request for delivery information on your Certified Mail™ item number 70151730000222122742. The delivery record shows that this item was delivered on April 4, 2017 at 6:04 am in HOUSTON, TX 77227. The scanned image of the recipient information is provided below.

Signature of Recipient :

Delivery Section

J BORD

Address of Recipient :


ery
ms

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely,
United States Postal Service

7015 1730 0002 2212 2742

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
For delivery information, visit our website at www.usps.com ™.	
HOUSTON, TX 77227 OFFICIAL USE	
Certified Mail Fee	\$3.35
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$2.80
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$1.61
Total Postage and	\$6.41
Sent To	Oxy Y-1 Company
Street and Apt. No.	P. O. Box 27570
City, State, ZIP+4®	Houston, TX 77227-7570
PS Form 3800, A	


AMARILLO, TX 79004
03/27/2017
1010 1730 1817 1516 1718 1917



Danny Holcomb:

The following is in response to your April 4, 2017 request for delivery information on your Certified Mail™ item number 70151730000222122728. The delivery record shows that this item was delivered on April 4, 2017 at 7:59 am in SANTA FE, NM 87501. The scanned image of the recipient information is provided below.

Signature of Recipient :

Signature	
Printed Name	Eric Auger

Address of Recipient :

Delivery Address	1148
------------------	------

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely,
United States Postal Service

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®

OFFICIAL USE

Certified Mail Fee \$3.35

Extra Services & Fees (check box, add fee as appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$1.61

Total Postage and Fees \$6.41

Sent To _____

Street and Apt. No. _____

City, State, ZIP+4® _____

PS Form 3800, A

Postmark: 03/27/2017
 AMERILLO, TX 79124

03/27/2017

NM Commissioner of Public Land
 P. O. Box 1148
 Santa Fe, NM 87504

McMillan, Michael, EMNRD

From: McMillan, Michael, EMNRD
Sent: Friday, April 7, 2017 10:20 AM
To: 'danny@pwllc.net'
Cc: Kautz, Paul, EMNRD; Goetze, Phillip, EMNRD; Lowe, Leonard, EMNRD; Jones, William V, EMNRD; Lowe, Leonard, EMNRD
Subject: Stearns SWD Well No. 1 Lea County API 30-025-23833

Danny:

Based on a Paul Kautz map of the Upr Penn, the proposed Stearns SWD Well No. 1 API 30-025-23833, is within ½ mile of the Vada; Penn Pool.

As a result, the applicant must show that the proposed SWD will not affect correlative rights.

Did the proposed well test the Bough C-was it perforated?-DST can be very suspect in the Bough C.

The OCD will require verification with the Hobbs District geologist that the disposal well will not affect correlative rights.

Thank You

Mike

MICHAEL A. MCMILLAN

Engineering Bureau, Oil Conservation Division

1220 south St. Francis Dr., Santa Fe NM 87505

O: 505.476.3448

Michael.McMillan@state.nm.us

McMillan, Michael, EMNRD

From: McMillan, Michael, EMNRD
Sent: Friday, April 21, 2017 10:47 AM
To: 'danny@pwllc.net'
Cc: 'Bill Prichard'; Goetze, Phillip, EMNRD; Lowe, Leonard, EMNRD; Jones, William V, EMNRD
Subject: RE: Stearns SWD Well No. 1 Lea County API 30-025-23833

Danny:

After looking at your application, it appears that Manzano Energy Partners II, LLC was not properly notified of the SWD application. As a result your application will be suspended until the OCD receives return receipt from Manzano Energy Partners II, LLC.

I have spoken to Melisa Randle, landman at Manzano Energy Partners II, LLC, and they are expecting the SWD application.

If the return receipts are not received within 10-working days or attempted a good faith effort, your application will be cancelled

Contact Information for Manzano Energy Partners II, LLC

Chad Barbe
Manzano Energy Partners II, LLC
PO Box 2107
Roswell, New Mexico 88202
Phone number: 575.623.1996

Thank You

MICHAEL A. MCMILLAN

Engineering Bureau, Oil Conservation Division
1220 south St. Francis Dr., Santa Fe NM 87505
O: 505.476.3448
Michael.McMillan@state.nm.us

From: McMillan, Michael, EMNRD
Sent: Tuesday, April 18, 2017 7:54 AM
To: 'danny@pwllc.net' <danny@pwllc.net>
Cc: Bill Prichard <billy@pwllc.net>
Subject: RE: Stearns SWD Well No. 1 Lea County API 30-025-23833

There have been no protests
Mike

From: danny@pwllc.net [mailto:danny@pwllc.net]
Sent: Tuesday, April 18, 2017 7:45 AM

To: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>

Cc: Bill Prichard <billy@pwllc.net>

Subject: RE: Stearns SWD Well No. 1 Lea County API 30-025-23833

Michael,

While we work on the correlative rights concern mentioned below, could you please advise if there were any protests from noticees?

Thank you,

Danny J. Holcomb

Pueblo West, LLC

Cell: 806-471-5628

Email: danny@pwllc.net

----- Original Message -----

Subject: Stearns SWD Well No. 1 Lea County API 30-025-23833

From: "McMillan, Michael, EMNRD" <Michael.McMillan@state.nm.us>

Date: Fri, April 07, 2017 11:19 am

To: "danny@pwllc.net" <danny@pwllc.net>

Cc: "Kautz, Paul, EMNRD" <paul.kautz@state.nm.us>, "Goetze, Phillip,

EMNRD" <Phillip.Goetze@state.nm.us>, "Lowe, Leonard, EMNRD"

<Leonard.Lowe@state.nm.us>, "Jones, William V, EMNRD"

<WilliamV.Jones@state.nm.us>, "Lowe, Leonard, EMNRD"

<Leonard.Lowe@state.nm.us>

Danny:

Based on a Paul Kautz map of the Upr Penn, the proposed Stearns SWD Well No. 1 API 30-025-23833, is within ½ mile of the Vada; Penn Pool.

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Thank You

Mike

MICHAEL A. MCMILLAN

Engineering Bureau, Oil Conservation Division

1220 south St. Francis Dr., Santa Fe NM 87505

O: 505.476.3448

Michael.McMillan@state.nm.us

McMillan, Michael, EMNRD

From: danny@pwllc.net
Sent: Monday, April 24, 2017 1:03 PM
To: McMillan, Michael, EMNRD
Cc: Bill Prichard
Subject: RE: Stearns SWD Well No. 1 Lea County API 30-025-23833

Michael,
The notice to Manzano Energy Partners II, LLC was sent via certified mail today (USPS tracking number 70151730000222122797). I will send you the signature receipt when received. Sorry for omitting them. They must have become the operator of that acreage after our landman work was performed.
Thank you,
Danny J. Holcomb
Pueblo West, LLC
Cell: 806-471-5628
Email: danny@pwllc.net

----- Original Message -----

Subject: RE: Stearns SWD Well No. 1 Lea County API 30-025-23833
From: "McMillan, Michael, EMNRD" <Michael.McMillan@state.nm.us>
Date: Fri, April 21, 2017 11:47 am
To: "danny@pwllc.net" <danny@pwllc.net>
Cc: Bill Prichard <billy@pwllc.net>, "Goetze, Phillip, EMNRD" <Phillip.Goetze@state.nm.us>, "Lowe, Leonard, EMNRD" <Leonard.Lowe@state.nm.us>, "Jones, William V, EMNRD" <WilliamV.Jones@state.nm.us>

Danny:

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Chad Barbe
Manzano Energy Partners II, LLC
PO Box 2107
Roswell, New Mexico 88202
Phone number: 575.623.1996

Thank You

MICHAEL A. MCMILLAN

Engineering Bureau, Oil Conservation Division
1220 south St. Francis Dr., Santa Fe NM 87505
O: 505.476.3448
Michael.McMillan@state.nm.us

From: McMillan, Michael, EMNRD
Sent: Tuesday, April 18, 2017 7:54 AM
To: 'danny@pwllc.net' <danny@pwllc.net>
Cc: Bill Prichard <billy@pwllc.net>
Subject: RE: Stearns SWD Well No. 1 Lea County API 30-025-23833

There have been no protests
Mike

From: danny@pwllc.net [mailto:danny@pwllc.net]
Sent: Tuesday, April 18, 2017 7:45 AM
To: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>
Cc: Bill Prichard <billy@pwllc.net>
Subject: RE: Stearns SWD Well No. 1 Lea County API 30-025-23833

Michael,
While we work on the correlative rights concern mentioned below, could you please advise if there were any protests from noticees?
Thank you,
Danny J. Holcomb
Pueblo West, LLC
Cell: 806-471-5628
Email: danny@pwllc.net

----- Original Message -----

Subject: Stearns SWD Well No. 1 Lea County API 30-025-23833
From: "McMillan, Michael, EMNRD" <Michael.McMillan@state.nm.us>
Date: Fri, April 07, 2017 11:19 am
To: "danny@pwllc.net" <danny@pwllc.net>
Cc: "Kautz, Paul, EMNRD" <paul.kautz@state.nm.us>, "Goetze, Phillip, EMNRD" <Phillip.Goetze@state.nm.us>, "Lowe, Leonard, EMNRD" <Leonard.Lowe@state.nm.us>, "Jones, William V, EMNRD" <WilliamV.Jones@state.nm.us>, "Lowe, Leonard, EMNRD" <Leonard.Lowe@state.nm.us>

Danny:
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As a result, the applicant must show that the proposed SWD will not affect correlative rights.
Did the proposed well test the Bough C-was it perforated?-DST can be very suspect in the Bough C.

The OCD will require verification with the Hobbs District geologist that the disposal well will not affect correlative rights.

Thank You
Mike

MICHAEL A. MCMILLAN

Engineering Bureau, Oil Conservation Division
1220 south St. Francis Dr., Santa Fe NM 87505

O: 505.476.3448

Michael.McMillan@state.nm.us



C-108 Review Checklist: Received April 6/2017 Add. Request: 4/18/2017 Reply Date: 5/10/2017 Suspended: 5/10/2017 (Ver 15)

ORDER TYPE: WFX / PMX (SWD) Number: _____ Order Date: _____ Legacy Permits/Orders: _____

Well No. 1 Well Name(s): Bowen SWD

API: 30-0 25-23833 Spud Date: 7-27-1971 New or Old: _____ (UIC Class II Primacy 03/07/1982)

Footages 660FNL 660FEL Lot _____ or Unit A Sec 21 Tsp 9S Rge 35E County Lea

General Location: 1/2 mile NW Crossroads Pool: SWD, B0494 C Pool No.: 96017

BLM 100K Map: Elida Operator: Stearns OGRID: 21566 Contact: Danny Holcomb

COMPLIANCE RULE 5.9: Total Wells: 9 Inactive: 0 Fincl Assur: 96 Compl. Order? NA IS 5.9 OK? OK Date: 05/17/2017

WELL FILE REVIEWED ☐ Current Status: PFA

WELL DIAGRAMS: NEW: Proposed ☐ or RE-ENTER: Before Conv. ☒ After Conv. ☐ Logs in Imaging: N/A

Planned Rehab Work to Well: _____

Well Construction Details		Sizes (in)	Setting	Cement	Cement Top and Determination Method
		Borehole / Pipe	Depths (ft)	Sx or Cf	
Planned ___ or Existing ___ Surface		<u>17 1/2 / 13 1/8</u>	<u>909</u>	<u>400</u>	<u>SURFACE / VISUAL</u>
Planned ___ or Existing ___ Interm/Prod		<u>11 7/8 / 8 1/8</u>	<u>4074</u>	<u>375</u>	<u>SURFACE / VISUAL</u>
Planned ___ or Existing ___ Interm/Prod		<u>7 7/8 / 5 1/2</u>	<u>9854</u>	<u>2000</u>	<u>SURFACE / VISUAL</u>
Planned ___ or Existing ___ Prod/Liner					
Planned ___ or Existing ___ Liner					
Planned ___ or Existing ___ OH / PERF		<u>9810 - 9854</u>		<u>Inj Length 44'</u>	

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		<u>W.C.</u>	<u>8955</u>
Confining Unit: Litho. Struc. Por.		<u>Bayer</u>	<u>9810</u>
Proposed Inj Interval TOP:			
Proposed Inj Interval BOTTOM:			
Confining Unit: Litho. Struc. Por.			
Adjacent Unit: Litho. Struc. Por.			

Completion/Operation Details:	
Drilled TD	<u>9854</u> PBDT _____
NEW TD	NEW PBDT _____
NEW Open Hole	<input type="radio"/> or NEW Perfs <input checked="" type="radio"/>
Tubing Size	<u>2 7/8</u> in. Inter Coated? <input checked="" type="checkbox"/>
Proposed Packer Depth	<u>9760</u> ft
Min. Packer Depth	<u>9710</u> (100-ft limit)
Proposed Max. Surface Press.	<u>1962</u> psi
Admin. Inj. Press.	<u>1962</u> (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P NA Noticed? ☐ BLM Sec Ord ☐ WIPP ☐ Noticed? ☐ Salt/Salado T: _____ B: _____ NW: Cliff House fm _____

FRESH WATER: Aquifer NA Max Depth _____ HYDRO AFFIRM STATEMENT By Qualified Person ☒

NMOSE Basin: Lea CAPITAN REEF: thru adj ☒ No. Wells within 1-Mile Radius? 3 FW Analysis ☒

Disposal Fluid: Formation Source(s) _____ Analysis? ☒ On Lease ☐ Operator Only ☐ or Commercial ☒

Disposal Int: Inject Rate (Avg/Max BWPD): 35K / 50K Protectable Waters? _____ Source: _____ System: Closed or Open

HC Potential: Producing Interval? NA Formerly Producing? _____ Method: Logs DST & A/Other _____ 2-Mile Radius Pool Map ☐

AOR Wells: 1/2-M Radius Map? ☒ Well List? ☒ Total No. Wells Penetrating Interval: NA Horizontals? _____

Penetrating Wells: No. Active Wells 0 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

Penetrating Wells: No. P&A Wells 0 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

NOTICE: Newspaper Date March 21, 2017 Mineral Owner BOY, YATES, Y Surface Owner Stearns N. Date _____

RULE 26.7(A): Identified Tracts? _____ Affected Persons: NMSLO, BOY, OXY-Y-1 N. Date March 23, 2017

Order Conditions: Issues: Open SWAB test b/f commence injection