

DATE IN	SUPERVISOR	ENGINEER	LOGGED IN	TYPE	APPROV
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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.

Jason Wacker
 Print or Type Name

Jason Wacker
 Signature

Operations Manager
 Title

7/22/2015
 Date

j.wacker@nmcog.com
 e-mail Address

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: BC Operating, Inc.
ADDRESS: P.O. Box 50820, Midland, Texas 79710
CONTACT PARTY: Pam Stevens/Billy Moore
PHONE: 432-684-9696
- 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: Pam Stevens TITLE: Regulatory Analyst
SIGNATURE: Pam Stevens DATE: 05/15/2015
E-MAIL ADDRESS: pstevens@bcoperating.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: _____

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.

INJECTION WELL DATA SHEET

WELL NAME & NUMBER: Pre-Ongard #1 to be renamed to Pearson SWD #1 upon recompletion

WELL LOCATION:	1980' FNL & 660' FEL	H	33	21S	33E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELL CONSTRUCTION DATA
Surface Casing

Casing Size: 13 3/8"

Cemented with: 300 sq. or ft³

Top of Cement: 0' Method Determined: Visual

Intermediate Casing

Casing Size: 9 5/8"

Cemented with: 600 SX. or _____ R¹

Top of Cement: 0' Method Determined: Visual

Production Casing

Casing Size: 7 5/8"

Cemented with: 575 SX. or ft³

Top of Cement: 7934' Method Determined: Calculated

Total Depth: 14,983

Injection Interval

5835' feet To 7000'

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 4 1/2" Lining Material: IPC PVC Lined

Type of Packer: Nickel Plated

Packer Setting Depth: 5795'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? _____ Yes X No

If no, for what purpose was the well originally drilled? Oil and Gas Production

2. Name of the Injection Formation: Cherry Canyon

3. Name of Field or Pool (if applicable): _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. See Attached Schematic

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Bone Spring, Wolfcamp

Affidavit of Publication

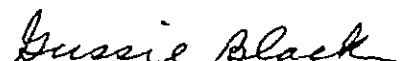
STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

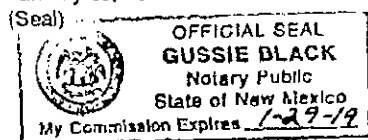
Beginning with the issue dated
June 26, 2015
and ending with the issue dated
June 28, 2015.


Publisher

Sworn and subscribed to before me this
26th day of June 2015.


Business Manager

My commission expires
January 29, 2019



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

LEGAL NOTICE
June 26, 2015

Notice of Application for Oil & Gas Waste Disposal Well Permit BC Operating Inc. is Applying to the New Mexico Oil Conservation Division for a permit to commercially dispose of produced water for other oil and gas waste by well injection into a porous formation not productive of oil or gas.

The applicant proposes to dispose of oil and gas waste into the Pre-Ogallal Well #1, No. 2, renamed: Pearson SWD #1 upon completion located in Section 33, T-21S and R-50E located 15 miles West of Eunice in Lea County.

The waste water will be injected into strata in the subsurface depth interval from 5,790' to 6,870' in the Cherry Canyon Formation. Maximum disposal rate will be 20,000 BWPD. Maximum injection pressure will be 1168 psi.

Interested parties must file objections or requests for hearing with the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505 within 15 days.

Additional information can be obtained by contacting Pam Stevens, BC Operating, Inc. P.O. Box 50820, Midland, Texas 79710 or by phone 432-684-9866 #30148

67108083

00158553

BC OPERATING INC
PO BOX 50820
MIDLAND, TX 79710

New Mexico Oil Conservation Division – Form C-108

I. Purpose : Disposal

II. Operator : BC Operating, Inc.
Address : 4000 N Big Spring St, Midland, Texas 79705
Contact Party : Billy Moore (432) 684-9696 EXT 750

III. Salt Water Disposal Well Data

Pearson #1 SWD

1980' FNL & 660' FEL Sec 33, T21S, R33E

Lea County, New Mexico

The above mentioned well will be re-entered for use as a saltwater disposal well. The proposed injection zone is to the Cherry Canyon formation. No oil or gas zones are known to exist above the disposal interval. One dry hole is located in this Section.

IV. This is not an expansion of an existing project.

V. Subject Area Maps and Area of Review

A map of the subject area, Pearson SWD, including all wells within a 2 mile radius is attached. Also attached is a map showing the subject well's area of review (or half mile radius circle).

VI. There is one well within the within the ½ mile area of review that penetrated the proposed injection interval. The "JD '33' Federal; it was a gas well and is now plugged. Well schematic is attached.

VII. Proposed Operation

1. Average Injection Rate = 5000 BWPD
Maximum Injection Rate = 20000 BWPD
2. The system will be closed.
3. Average Injection Pressure = 900 psig at surface
Maximum Injection Pressure = 1158 psig at surface
4. This injection well is for produced water purposes.
5. The Bilbrey "30" Fed #5 has a water analysis which is attached. The sample is from 5160-5210 from the Cherry Canyon. BC Operating's perfs are a bit lower, but still considered the Cherry Canyon.

VIII. Injection zone: Cherry Canyon Injection Interval

Top Cherry Canyon: 5730'

Base Cherry Canyon: 7160'

Injection Interval: 1430'

The Alluvium-Bolsum-Ogallala shallow water zone is dry in this part of the county – so this is not a concern for BC Operating, Inc

Below this shallow zone is the Dockum Group redbeds that produce fresh water. A nearby well (see attached) has a TD of about 1100 feet and fresh water. This well probably is in the Santa Rosa Sandstone and not the Rustler as suggested in the Formation tops.

BC has fresh water at 1100 feet, more or less and it is in the Dockum Group redbeds. Below these redbeds is salt and anhydrite which do not yield fresh water.

- IX. Acidize Cherry Canyon Perfs from 5790' – 6970' (1180') with 12000 gal 15%NEFE HCl and rock salt diverter. (On procedure that is attached)
- X. Well Logs are filed, other logs will be ran and also submitted to NM OCD as well.
- XI. Freshwater Wells within the Area of Review: There are two, both are BC Operating's. Attached Water analysis follow.
- XII. After examining available geologic and engineering data, BC Operating, Inc. finds no evidence of open faults, or other hydrologic connection, between the disposal zone and any underground source of drinking water.
- XIII. "Proof of Notice"
- XIV. Certification

OCT 14 '98 13:45 FR UNICHEM
OCT 14 '98 14:56 FR

OD. S & E 505 393 1150 TO 1505087
TO 1505393:1150

P.02/02
P.02/02

UNICHEM

A Division of B J Services Company

Lab Test No: 21660

Texasco

Sample Date: 10/6/98

Lab Date In: 10/8/98

Lab Date Out: 10/14/98

Water Analysis

Listed below please find water analysis report from: *Whitney Billy*

#10-5

Specific Gravity: 1.131
Total Dissolved Solids: 183977
pH: 5.75
Conductivity (umhos):
Ionic Strength: 1.557

Cations:

Calcium (Ca++):	10400
Magnesium (Mg++):	1944
Sodium (Na+):	57846
Iron (Fe++):	7.38
Dissolved Iron (Fe++):	
Barium (Ba++):	
Strontium (Sr):	
Manganese (Mn++):	2.72
Resistivity:	

Anions:

Bicarbonate (HCO ₃ -):	33
Carbonate (CO ₃ -):	
Hydroxide (OH-):	0
Sulfate (SO ₄ -):	1730
Chloride (Cl-):	112000

Gases:

Carbon Dioxide (CO ₂):	183.00	Oxygen (O ₂):	
Hydrogen Sulfide (H ₂ S):	0.00		

Scale Index (positive value indicates scale tendency) a blank indicates prime tests were not run

Temperature	CaCO ₃ SI	CaSO ₄ SI
86F 30.0C	-0.79	12.74
104F 40.0C	-0.53	12.74
122F 50.0C	-0.22	12.18
140F 60.0C	0.14	12.70
168F 70.0C	0.53	12.67
176F 80.0C	0.96	12.52

Comments:

If you have any questions or require further information, please contact us.
Sincerely,

cc: Terry White
Jey Brown

Laboratory Technician

P.O. Box 61477 • Midland, TX 79711 • 4312 E County Rd. 1604, Midland, TX 79705
Office (915) 563-0241 • Fax: (915) 563-0243

END TOTAL PAGE, 02 END

MITCHELL ANALYTICAL LABORATORY

2638 Faudree
Odessa, Texas 79765-8538
561-5579

Company: ***X-Chem***

Well Number: Water Well #1
Lease: Battle
Location:
Date Run: 6/29/2015
Lab Ref #: 15-jun-w70820

Sample Temp: 70
Date Sampled: 6/25/2015
Sampled by: Robert Halsell
Employee #:
Analyzed by: GR

Dissolved Gases

			Mg/L	Eq. Wt.	MEQ/L
Hydrogen Sulfide	(H2S)		.00	16.00	.00
Carbon Dioxide	(CO2)	NOT ANALYZED			
Dissolved Oxygen	(O2)	NOT ANALYZED			

Cations

Calcium	(Ca++)	28.06	20.10	1.40
Magnesium	(Mg++)	25.13	12.20	2.06
Sodium	(Na+)	408.04	23.00	17.74
Barium	(Ba++)	NOT ANALYZED		
Manganese	(Mn+)	.35	27.50	.01
Strontium	(Sr++)	NOT ANALYZED		

Anions

Hydroxyl	(OH-)	.00	17.00	.00
Carbonate	(CO3=)	.00	30.00	.00
BiCarbonate	(HCO3-)	317.72	61.10	5.20
Sulfate	(SO4=)	360.00	48.80	7.38
Chloride	(Cl-)	330.36	35.50	9.31
Total Iron	(Fe)	12.53	18.60	.67
Total Dissolved Solids		1,482.19		
Total Hardness as CaCO3		173.18		
Conductivity MICROMHOS/CM		2,318		

pH	9.030	Specific Gravity 60/60 F.	1.001
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CaSO₄ Solubility @ 80 F. 17.19MEq/L, CaSO₄ scale is unlikely

CaCO₃ Scale Index

70.0	.803	100.0	1.153	130.0	1.663
80.0	.933	110.0	1.393	140.0	1.663
90.0	1.153	120.0	1.393	150.0	1.893

X-Chem

MITCHELL ANALYTICAL LABORATORY

2638 Faudree
Odessa, Texas 79765-8538
561-5579

Company: **X-Chem**

Well Number:	Water Well #2	Sample Temp:	70
Lease:	Battle	Date Sampled:	6/25/2015
Location:		Sampled by:	Robert Halsell
Date Run:	6/29/2015	Employee #:	
Lab Ref #:	15-jun-w70821	Analyzed by:	GR

Dissolved Gases

		Mg/L	Eq. Wt.	MEq/L
Hydrogen Sulfide (H ₂ S)		.00	16.00	.00
Carbon Dioxide (CO ₂)	NOT ANALYZED			
Dissolved Oxygen (O ₂)	NOT ANALYZED			

Cations

Calcium (Ca ⁺⁺)		20.42	20.10	1.02
Magnesium (Mg ⁺⁺)		8.49	12.20	.70
Sodium (Na ⁺)		115.34	23.00	5.01
Barium (Ba ⁺⁺)	NOT ANALYZED			
Manganese (Mn ⁺)		.27	27.50	.01
Strontium (Sr ⁺⁺)	NOT ANALYZED			

Anions

Hydroxyl (OH ⁻)		.00	17.00	.00
Carbonate (CO ₃ ⁼)		.00	30.00	.00
Bicarbonate (HCO ₃ ⁻)		244.40	61.10	4.00
Sulfate (SO ₄ ⁼)		69.00	48.80	1.41
Chloride (Cl ⁻)		53.06	35.50	1.49
Total Iron (Fe)		3.2	18.60	.17
Total Dissolved Solids		514.18		
Total Hardness as CaCO ₃		85.86		
Conductivity MICROMHOS/CM		743		

pH	8.980	Specific Gravity 60/60 F.	1.000
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CaSO₄ Solubility @ 80 F. 19.79MEq/L, CaSO₄ scale is unlikely

CaCO₃ Scale Index

70.0	.501	100.0	.851	130.0	1.361
80.0	.631	110.0	1.091	140.0	1.361
90.0	.851	120.0	1.091	150.0	1.591

X-Chem



New Mexico Office of the State Engineer Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

POD Number	Q64 Q16 Q4 Sec Tws Rng	X	Y
CP 01356 POD1	4 2 2 33 21S 33E	634560	3590014

Driller License: 421

Driller Name: GLENN, CLARK A. "CORKY"

Drill Start Date: 08/01/2014

Drill Finish Date: 08/09/2014

Plug Date:

Log File Date: 08/25/2014

PCW Rcv Date:

Source: Artesian

Pump Type:

Pipe Discharge Size:

Estimated Yield:

Casing Size: 15.50

Depth Well: 1098 feet

Depth Water: 555 feet

Water Bearing Stratifications:

Top	Bottom	Description
765	795	Sandstone/Gravel/Conglomerate
795	825	Shale/Mudstone/Siltstone
825	920	Sandstone/Gravel/Conglomerate
920	935	Shale/Mudstone/Siltstone
935	968	Sandstone/Gravel/Conglomerate
968	976	Shale/Mudstone/Siltstone
976	1005	Sandstone/Gravel/Conglomerate
1005	1092	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
735	1098

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.

6/24/15 3:30 PM

Page 1 of 1

POD SUMMARY - CP 01356 POD1



ELEVATION:

GL: 3,847'

KB: 3,654'

PEARSON #1 SWD

API # 30-025-24438

1980' FML & 860' FEL, 33, 21S, 33E

LEA COUNTY, NEW MEXICO

CURRENT WELLBORE

SURFACE CASING:

13-3/8" 64#, K-55 (0' - 390')

w/ 300 SX CMT TO SURF

INTERMEDIATE CASING:

9-5/8" 36.75#, 40#, 43.5# (0' - 5,035')

w/ 600 SX CMT

CALC 80% TOC @ 3,012'

PRODUCTION CASING:

7-5/8" 33# (0' - 11,098')

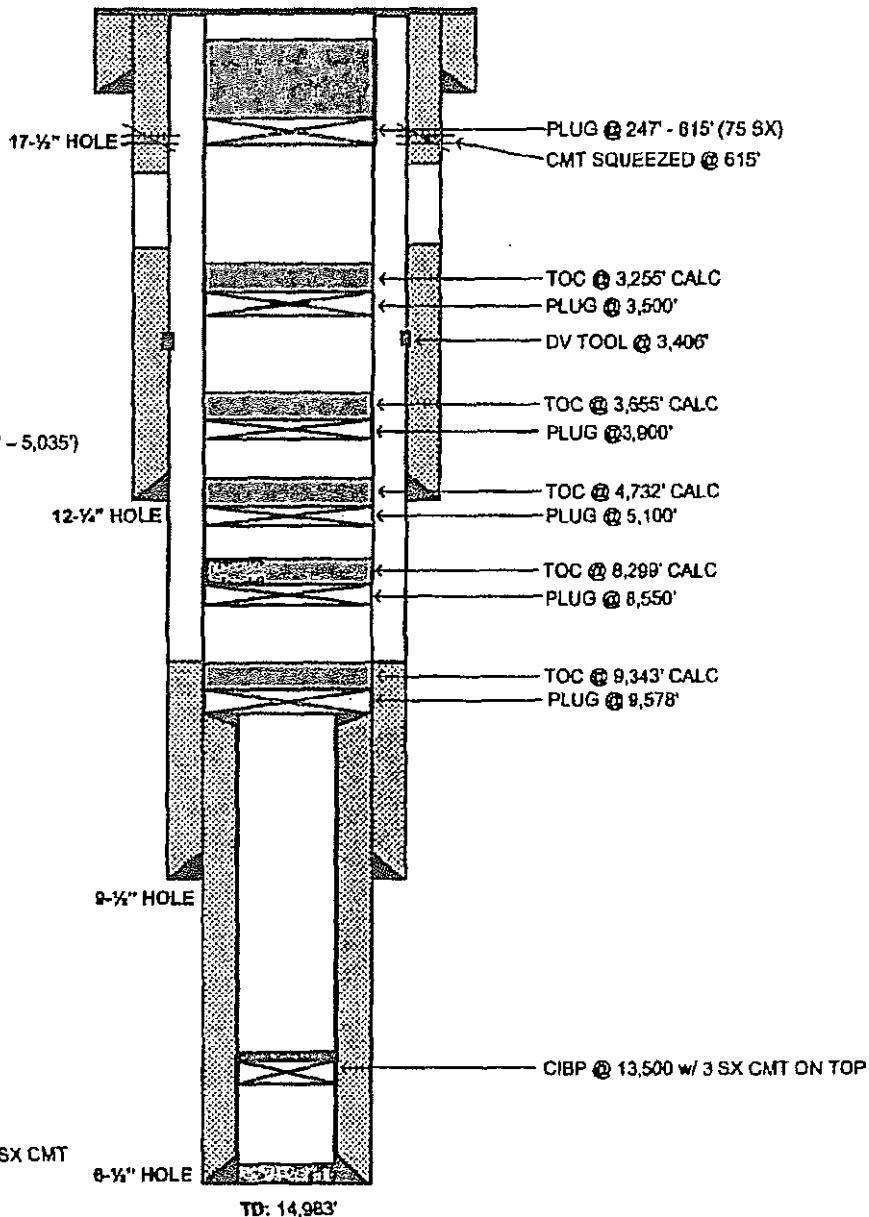
w/ 575 SX CMT

CALC 80% TOC @ 8,314'

PRODUCTION LINER:

5" (8,578' - 14,983') w/ 725 SX CMT

CALC 80% TOC @ 9,578'



Updated 07/20/15

BC OPERATING, INC.

PEARSON #1 SWD

API # 30-025-24438
1980' FNL & 660' FEL, 33, 21S, 33E
LEA COUNTY, NEW MEXICO

ELEVATION:

GL: 3,647'

KB: 3,654'

PROPOSED WELLBORE

CASING:

13-3/8" 64#, K-55 (0' - 390')
w/ 300 SX CMT

CASING:

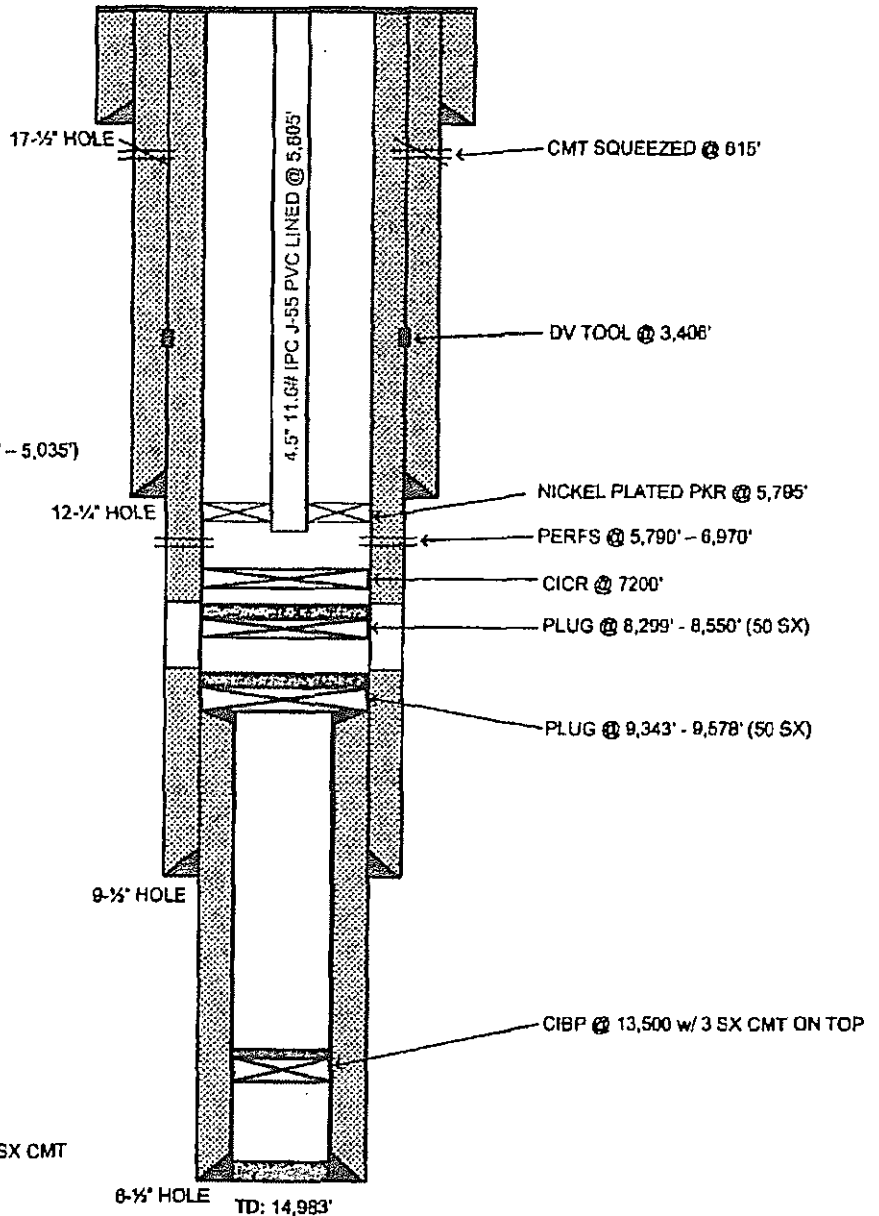
9-5/8" 38.75#, 40#, 43.5# (0' - 5,035')
w/ 600 SX CMT

CASING:

7-5/8" 33# (0' - 11,088')
w/ 575 SX CMT

LINER:

5" (9,578' - 14,983') w/ 725 SX CMT



Updated 02/04/2015

Pearson SWD #1
1980' FNL & 660' FEL Sec 33, T21S, R33E
Lea County, New Mexico
API: 30-025-24438
GL: 3647.1'

6/15/2015

Convert P&A Wellbore to Commercial Disposal
Drill out plugs, set new plug, squeeze cement

Well Data

Tubing: Reports show tubing was pulled

Casing: 13-3/8" 64# K-55 0'-390'

9-5/8" 36.75#, 40#, 43.5# 0'-5,035'

7-5/8" 33# 0'-11,098'

TD: 14,983' PBTD: CIBP @ 615' (75sx cement on top) @3,500' (50sx) @3,900' (50sx) @ 5,100' (50sx) @8,550' (50sx) @9,578' (50sx) @13,500' (3sx)

Procedure

1. Comply with all company and governmental safety regulations.
2. Dig csg and find abandoned well bore.
3. Install all wellheads
4. RU pulling unit. R/U pump truck- Test all wellheads to 500 PSI, N/D wellhead N/U BOP.
5. Pull tbgr (If any). RIH with bit & collars 2-7/8" BC work string. Drill out plugs down to 8,299' +/-.
6. 1st plug should be roughly @615' with cement up to 247' (Test Casing to 500psi for 30 minutes after each plug)
7. 2nd plug is @ 3500' with cement up to 3255'
8. 3rd plug is @ 3900' with cement up to approximately 3655'
9. 4th Plug is @ 5100' with cement to approximately 4732'
10. At the very last plug test casing to 500psi, have it charted for 30 mins and sent to BC Operating, Inc. Pstevens@bcoperating.com
11. TOH then lay down D.C.'s. & Bit
12. MIRU Wireline RIH w/ Gauge rig down and tag bottom around 8299' +/-.
13. Wireline run CBL/CCL/Gamma ray log from 8299' to 4700'
14. If the CBL shows no cement from 7100' to 4735' then proceed with steps 14-19, otherwise RDMO. Go in hole with wireline and shoot squeeze holes @ 7300' and @ 4950'. Set retainer @7200' sting into retainer with tubing, start circulating cement 500 sx class C. Sting out of retainer dump 4 sx on top of retainer reverse circulate. TOOH and wait on cement. RIH with wireline run gauge ring and tag retainer @ PBTD.

15. Run a second CBL from PBTD to 4700'
16. R/D wireline. MIRU pulling unit POH work string laying down on racks. N/D BOP, N/U wellhead. RDWOR 1st job is complete
17. Proposed avg daily rate of 4500 BBL/D and a maximum of 20000 BBL/D
18. Any systems used will be Closed Loop
19. Proposed avg daily pressure is not available (but a Step rate test will be ran to determine what the avg should be.) The maximum injection pressure will be 1158 Psi. The step rate test will be ran as shown at the end of the next future job

~~~~~  
Future Job once this process is complete.

#### Procedure

1. Comply with all company and governmental safety regulations.
2. MIRU pulling unit and pump truck. ND Wellhead, NU BOP.
3. Pressure up on 7-5/8" casing to 500 psig with pump truck for 30 min and run chart.
4. TOOH with Tubing if there is any (Last report shows tubing was pulled)

#### Perforate Cherry Canyon:

5. Rig up wireline lubricator. Perforate Cherry Canyon (Correlate to log dated 02-23-2003) using 3-1/8" HP slick guns with 60 degree phasing & Titan 23 gram charges 4 spf. Perf Sheet attached and below

#### Pearson SWD

3-1/8" HP Slick guns w/ 60 degree phasing & Titan 23 gram Charges (EH-0.43, Pen-37)

|   | Stage #1      |             | <del>Wolfcamp</del> |            |
|---|---------------|-------------|---------------------|------------|
|   | Top Perf      | Bottom Perf | SPF                 | # of Holes |
| 1 | 6,950         | 6,970       | 4                   | 80         |
| 2 | 6,615         | 6,635       | 4                   | 80         |
| 3 | 6,515         | 6,535       | 4                   | 80         |
| 4 | 6,050         | 6,070       | 4                   | 80         |
| 5 | 5,865         | 5,885       | 4                   | 80         |
| 6 | 5,790         | 5,810       | 4                   | 80         |
|   | Plug          | None        | Net H               | 160        |
|   | #Prop/Gross H |             | Total Holes         | 480        |
|   | Total Prop    |             | Gross H             | 1,180      |

→ Cherry Canyon

|         | Acid Program | Depths      |
|---------|--------------|-------------|
| 1st Job | 6000 Gals    | 6515'-6970' |
| 2nd Job | 6000 Gals    | 5790'-6070' |

- 6.
7. RDMO wireline.



**Run Injection Equipment and Acidize Cherry Canyon:**

8. TIH w/ RBP and packer on 2-7/8" Work string
9. MIRU acid trucks. Acidize the Cherry Canyon formation:
  - 1<sup>st</sup> Job- from 6515' – 6970' with an RBP at 7000' and PKR at 6490', acidize with 6000 Gals of 15% HCL at 3BPM with Rock Salt as Diverter, Over flush with 100 bbl of fresh water.
  - 2<sup>nd</sup> Job- from 5790' – 6070' with an RBP at 6100' and PKR at 5750', acidize with 6000 Gals of 15% HCL at 3BPM with Rock Salt as Diverter, Over flush with 100 bbl of fresh water (2,000 psi max treating pressure).
10. TOH w/ RBP and Packer, laying down work string
11. TIH with 4-1/2" IPC lined injection tubing and 7-5/8" Arrowset Nickel Plated injection packer. Circulate corrosion inhibited packer fluid down annulus. Set packer at 5,500'.
12. Perform MIT/Step rate test.

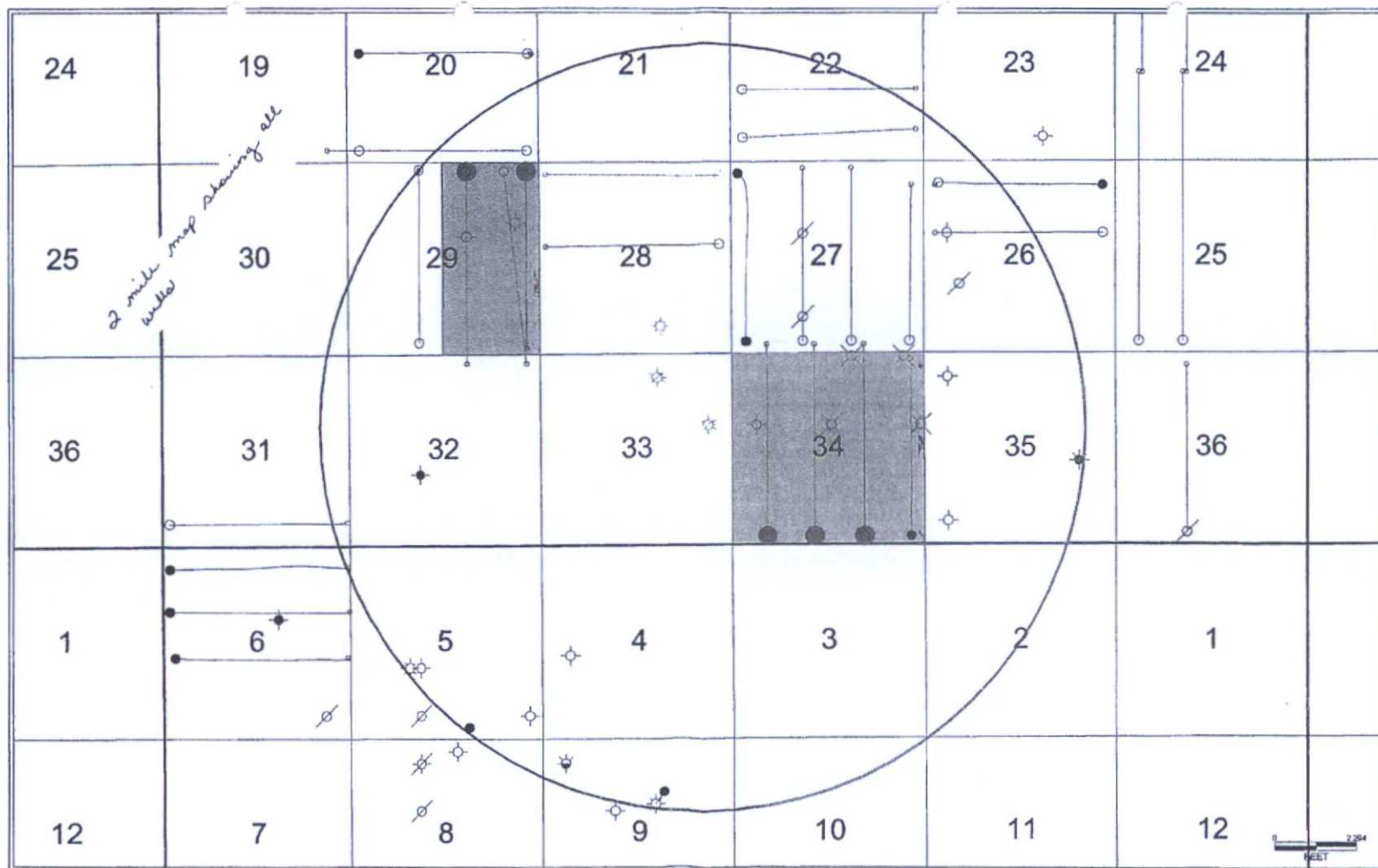
**Step rate test**

13. Establish injection rate at 2 bpm with acid pump truck, document pressure when stable. Increase rate by 1 bpm and wait for pressure to stabilize, 3-5 minutes. Continue increasing by 1 bpm until reaching 2800 psi.
14. Increase rate by 0.5 bpm until reaching 3000 psi, document rate when pressure is stabilized for 3-5 minutes.
15. ND BOP and NU wellhead. RDMO pulling unit.
16. Lay injection lines.

**Contacts**


|               |                         |              |
|---------------|-------------------------|--------------|
| Jason Wacker  | Operations Manager      | 432-631-2142 |
| Bruce Madden  | Superintendent          | 432-894-0721 |
| Art Carrasco  | Sr Completions Engineer | 432-559-0042 |
| Doug Swift    | Geo-Tech                | 432-684-9696 |
| Nicolas Klopp | Operations Engineer     | 979-422-2510 |
| Billy Moore   | Operations Engineer     | 432-770-4217 |




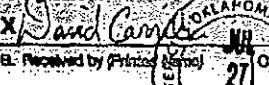






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| <p>1. Article Addressed to:</p> <p>Amtex Energy, Inc.<br/> P.O. Box 3418<br/> Midland, Texas 79702</p>                                                                                                                                                                      |  | <p>3. Service Type<br/> <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Priority Mail Express®<br/> <input type="checkbox"/> Registered® <input type="checkbox"/> Return Receipt for Merchandise<br/> <input type="checkbox"/> Insured Mail <input type="checkbox"/> Collect on Delivery</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>                                       |  |
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| <p>1. Article Addressed to:</p> <p>COG Operating, LLC<br/> 600 W. Illinois<br/> Midland, Texas 79701</p>                                                                                                                                                                    |  | <p>3. Service Type<br/> <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Priority Mail Express®<br/> <input type="checkbox"/> Registered® <input type="checkbox"/> Return Receipt for Merchandise<br/> <input type="checkbox"/> Insured Mail <input type="checkbox"/> Collect on Delivery</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>                                      |  |
| <p>2. Article Number<br/> (Transfer from service label)</p> <p>7014 3490 0000 0951 8904</p>                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |

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| <p>1. Article Addressed to:</p> <p>Devon Energy<br/> 333 West Sheridan Avenue<br/> Oklahoma City, OK 73102-5015</p>                                                                                                                                                         |  | <p>3. Service Type<br/> <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Priority Mail Express®<br/> <input type="checkbox"/> Registered® <input type="checkbox"/> Return Receipt for Merchandise<br/> <input type="checkbox"/> Insured Mail <input type="checkbox"/> Collect on Delivery</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>                                        |  |
| <p>2. Article Number<br/> (Transfer from service label)</p> <p>7014 3490 0000 0951 8942</p>                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |

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| <p>1. Article Addressed to:</p> <p><b>Amtex Energy, Inc.</b><br/>P.O. Box 3418<br/>Midland, Texas 79702</p> |  | <p>A. Signature: <i>[Signature]</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name): <i>[Signature]</i> C. Date of Delivery: <i>8/20/15</i></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input type="checkbox"/> No<br/>If YES, enter delivery address below:</p>                                                                           |  |
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