STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108 Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I.	PURPOSE: Secondary Recovery Pressure Maintenance x Disposal Storage Application qualifies for administrative approval? x Yes No
n.	OPERATOR: BC Operating, Inc.
	ADDRESS: 4000 N Big Spring, Ste 310, Midland, Texas 79705
	CONTACT PARTY: Billy Moore PHONE: 432-684-6969
Ш.	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:
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
*VIII	Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
lX.	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.
XШ.	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: Sarah Presley TITLE: Regulatory Analyst
	SIGNATURE: DATE: 3/1/2018
*	E-MAIL ADDRESS: jwacker@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.

III. WELL DATA

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section. Federal PP #1, Sec. 24-T23S-R26E, 1980' FNL & 1980' FWL, Eddy County, New Mexico
- (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.

Casing Size	Setting Depth	Sacks of Cement	Hole Size	Top of Cement	Determined
13-3/8"	381'	600	17-1/2"	Surface	Circ.
9-5/8"	5,590'	2,900	12-1/4"	520'	Temp Survey
7"	12,050'	1,150	8-3/4"	Top of Liner	Calc.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

4-1/2" BBE Fiberglass lined, set @ 2,600'

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

9-5/8" Arrow Set Nickel Plated Injection Packer Set @ 2,600'

- 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.

Injection Formation: Cherry, Brushy Canyon

(2) The injection interval and whether it is perforated or open-hole.

2,630' - 5,238'; Perforated

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

The well was originally drilled as a Morrow oil 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.

Bone Spring Perfs (6,294' – 6,300'), Cmt Plug (5,367' - 5,517')

Morrow Perfs (11,501' - 11,704'), CIBP @ 6,400' w/ 35' cmt on top, CIBP @ 11,425' w/ 35' cmt on top

(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.

Next Higher: None

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Next Lower: Upper Pennsylvanian 9,954' - 10,123'

INJECTION WELL DATA SHEET

OPERATOR: BC Operating, Inc.	3, Inc.					
WELL NAME & NUMBER:		Federal PP* 30-015	30-015-20908			
WELL LOCATION: 1	1980' FNL & 1980' FWL	FWL	Ŀ	24	(S) _{EZ}	2 (E)
	FOOTAGE LOCATION	TION	UNIT LETTER	SECTION	TOWNSHIP	RANGE
WELLBO	WELLBORE SCHEMATIC	75		WELL CONSTR	WELL CONSTRUCTION DATA Surface Casing	
المراجعة الم		CLASS H	Hole Size: 17-1/2"		Casing Size: 13-3/8"	
C CHIDEACE CASING.			Cemented with: 600	SX.	0r	£
(1) \$ 13-3/8" 48# H-40 (0' – 381) W 600 SX CMT		330000P	Top of Cement: Surface		Method Determined: Circ.	Oire.
Templed X	Ĭ		Ł	Internediate Casing	Casing	
of Internatiate listing			Hole Size: 12-1/4"	Annual in the Language of the State Control of the	Casing Size: 9-5/8"	
			Cemented with: 2900	SX.	or	£
		CMT PLUG (2,600' – 2,750') CLASS H	(0) Top of Cement: 520'		Method Determined: Temp. Survey	Temp. Survey
			·	Production Casing	Casing	
INTERMEDIATE CASING:		CMT PLUG (5,367' - 5,517') CLASS H	7) Hole Size: 8-3/4"		Sasing Size. 7"	
w/ 2,900 SX CMT	7		TANK DIEG.		Sur Suran	
		BONE SPRING PERFS (6,294' – 6,300')	Ocemented with: 1150	SX.	or	H ₃
	M	CIBP @ 6,400' W/ 35'	Top of Cement: Top of Liner	iner	Method Determined: Calc.	Calc.
,	M	CIBP @ 11,425' W/ 35'	Total Depth: 12,050'	der verste state franklike serferstille er kommere er de foreste state.		
PRODUCTION LINER:	Ä N	BAKER MODEL D PKR @ 11,450	50,	Injection Interval	Interval	
/ 26# 5/95 (5/41) = 12,050 / w/ 1,150 SX CMT	#	MORROW PERES (11 501' - 11 704')	2,630'	Jeel	feet to 5,238'	
				rforated or Open H	(Perforated or Open Hole; indicate which)	
	PBTD : 11,501' TD : 12,050'					

INJECTION WELL DATA SHEET

Type of Packer: 9-5/8" Arrow-set Nickel Plated injection packer Packer Setting Depth: 2600 Other Type of Tubing/Casing Scal (if applicable): NIA Additional Data Additional Data	Packer. 9-56" Arrow-set Nickel Plated injection packer Packer Setting Depth: 2600 Other Type of Tubing/Casing Seal (if applicable): NI/A Additional Data Additional Data	qnŢ	Lining Material: BBE Fiberglass lined
Packer Setting Depth: 2600 Other Type of Tubing/Casing Seal (if applicable): N/A Additional Data Additional Data	Packer Setting Depth: 2600 Other Type of Tubing/Casing Seal (if applicable): N/A Additional Data I. Is this a new well drilled for injection? Yes X No If no, for what purpose was the well originally drilled? Oil producer O' Name of the Injection Formation: Cherry/Bushy Canyon Name of Field or Pool (if applicable): Unknown What 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. Yes. Morrow 11,501' - 11,704' what 3 pluga above the proposed injection hierval. CIBP @ 11,425 w/ 35' cmt on top. CIBP @ 6,400 w/ 35' cmt on top. CIBP @ 15,425 w/ 35' cmt on top. CIBP @ 6,400 w/ 35' cmt on top. CIBP @ 11,425 w/ 35' cmt on top.	Тур	ie of Packer: 9-5/8" Arrow-set Nickel Plated injection packer
Other Type of Tubing/Casing Seal (if applicable): N/A Additional Data I. Is this a new well drilled for injection? Yes X No If no, for what purpose was the well originally drilled? Oil producer Name of the Injection Formation: Cherry Bushy Canyon Name of Field or Pool (if applicable): Unknown A. 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. Yes. Morrow 11.501' – 11.704' Has 3 plugs above the proposed injection interval. GIBP @ 11.425' w/ 35' cmt on top. CIBP @ 6.400' w/ 35' cmt on top. Cement plug @ 5.367' – 5.517' class H w/ 35' cmt on top. Genent plug @ 5.367' – 5.517' class H w/ 35' cmt on top. A Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:	Additional Data Additional Data	Pac	ker Setting Depth: 2600'
		Oth	er Type of Tubing/Casing Seal (if applicable): N/A
			Additional Data
		1.	Yes X
•	•		If no, for what purpose was the well originally drilled? Oil producer
		5	Name of the Injection Formation: Cherry/ Brushy Canyon
		3,	Name of Field or Pool (if applicable): Unknown
		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. Yes, Morrow 11,501' – 11,704' Has 3 plugs above the proposed injection interval. CIBP @ 11,425' w/ 35' cmt on top. CIBP @ 6,400' w/ 35' cmt on top. Cement plug @ 5,367' – 5,517' class H w/ 35' cmt on top.
Underlying: Upper Pennsylvanian 9954' – 10123'	Underlying: Upper Pennsylvanian 9954′ – 10123′	5.	Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Overlying: None
			Underlying: Upper Pennsylvanian 9954′ – 10123′

Additional Questions on C-108

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.

See attached data sheet

VII.

1. Proposed average and maximum daily rate and volume of fluids to be injected;

Average: 5,000 BPD Maximum: 9,750 BPD

2. Whether the system is open or closed;

Open

3. Proposed average and maximum injection pressure;

Average: 350 PSI Maximum: 526 PSI

4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,

Initial Bone Spring Water Analysis attached; multiple compatible sources at a later date if converted to Commercial SWD

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.).

See attached water analysis of initial Bone Spring formation water

*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.

Depth to fresh water: 175' in Sec. 24-T23S-R36E

- IX. Describe the proposed stimulation program, if any.
 - **see attached procedure**
- 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.

BC OPERATING, INC. has reviewed and examined available geologic and engineering data in the area of interest for the FEDERAL PP #1 and have found no evidence of faults or other hydrologic connections between the Delaware disposal zone and the underground sources of drinking water.

Jason Wacker, P.E.

VP of Engineering & Operations

Jason Waler

Federal PP #1 SWD API# 30-015-20908 Sec 24, T23S, R26E 1980' FNL & 1980' FWL Eddy County, NM BC Operating, INC

Re-Entry for SWD injection

This procedure is intended as a guide to be closely followed as actual conditions agree reasonably well with completion predictions. When substantially different conditions are encountered, the BC supervisor will take appropriate action to safely and economically control the new conditions and will advise BC of such actions as job conditions permit.

Background and Objective:

BC plans to re-enter for SWD injection from offset leases.

Directions:

See attached road map.

EHS Instructions:

- 1. All personnel on location must wear approved fire retardant clothing (FR's), hard hat, steel-toed shoes and eye protection at all times.
- 2. Tested and properly functioning H2S monitors must be worn at all times.
- 3. No smoking allowed inside rig anchors.
- 4. No pits are to be dug, except in an emergency.
- 5. Have a safety meeting before start of work each day and ensure all personnel know their job and responsibilities.

Well Data: See attached wellbore sketch.

Prod tubing: 4-1/2", 12.6#, CLS tubing, capacity-0.0152 bbl/ft, 0.0854 ft³/ft

Prod casing: 9-5/8", 40#, S-95, capacity-0.0758 bbl/ft, 0.4257 ft³/ft

Annulus 9-5/8" x 4-1/2": $0.0562 \text{ bbls/ft}, 0.3153 \text{ ft}^3/\text{ft}$

Existing Perforations: P&A'ed

Detailed Workover Procedure:

Federal PP #1 SWD API# 30-015-20908 Sec 24, T23S, R26E 1980' FNL & 1980' FWL Eddy County, NM BC Operating, INC

- Hold tailgate safety meeting and discuss plan, Bruce Madden is to be called for any spill 432-894-0721.
- 2. Kill power to location
- 3. Dig csg and find abandoned well bore.
- 4. Install all wellheads
- 5. RU pulling unit. R/U pump truck- Test all wellheads to 500 PSI, N/D wellhead N/U BOP.
- 6. Pull tbg (If any). RIH with bit & collars 2-7/8"BC work string. Drill out plugs down to 5.367'+-.
- 7. 1st plug should be roughly @50' with cement up to surface (Test Casing to 500psi for 30 minutes after each plug)
- 8. 2nd plug is @ 2750' with cement up to 2600'
- 9. At the very last plug test casing to 500psi, have it charted for 30 mins and sent to BC Operating, Inc. Pstevens@bcoperating.com
- 10. TOH then lay down D.C.'s. & Bit
- 11. MIRU Wireline RIH w/ Gauge ring down and tag bottom around 5367' +-.
- 12. Wireline run CBL/CCL/Gamma ray log from 5250' to 2600'. Neutron Density log as well out of hole.
- 13. MORD Wireline, MIRU Pulling unit.
- 14. Proposed avg daily rate of 4500 BBL/D and a maximum of 9750 BBL/D Based off of Erosional Velocity of Steel.
- 15. Any systems used will be Closed Loop
- 16. 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 526 Psi. The step rate test will be ran as shown at the end of the next future job

Procedure

1. Pressure up on 9-5/8" casing to 500 psig with pump truck for 30 min and run chart.

Perforate Cherry/ Brushy Canyon:

- 2. Rig up wireline lubricator. Perforate Cherry Canyon using 3-1/8" HP slick guns with 60 degree phasing & Titan 23 gram charges 4 spf. Perf Sheet attached and below. Pick perfs once new logs are available.
- 3. RDMO wireline.

Federal PP #1 SWD API# 30-015-20908 Sec 24, T23S, R26E 1980' FNL & 1980' FWL Eddy County, NM BC Operating, INC

Run Injection Equipment and Acidize Cherry Canyon:

- 4. TIH w/ RBP and packer on 2-7/8" Work string
- 5. MIRU acid trucks. Acidize the Cherry/Brushy Canyon formation:
 - 1st Job- from 2630' 4000' with an RBP at 4025' and PKR at 2600', acidize with 6000 Gals of 15% HCL at 3BPM with Rock Salt as Diverter, Over flush with 100 bbl of KCL.
 - 2nd Job- from 4030' 5238' with an RBP at 5250' and PKR at 4000', acidize with 6000 Gals of 15% HCL at 3BPM with Rock Salt as Diverter, Over flush with 100 bbl of KCL (2,000 psi max treating pressure).
- 6. TOH w/ RBP and Packer, laying down work string
- 7. TIH with 4-1/2" 12.6# J-55 EUE T&C W/SCC and BBE Fiberglass lined and 9-5/8" Arrowset Nickel Plated injection packer. Circulate corrosion inhibited packer fluid down annulus. Set packer at 2,600'.
- 8. Perform MIT/Step rate test.

Step rate test

- 9. 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.
- 10. Increase rate by 0.5 bpm until reaching 3000 psi, document rate when pressure is stabilized for 3-5 minutes.
- 11. ND BOP and NU wellhead. RDMO pulling unit.
- 12. Lay injection lines.

Contacts

Jason Wacker	Operations Manager	432-631-2142
Bruce Madden	Superintendent	432-894-0721
Doug Swift	Geo-Tech	432-684-9696
Nicolas Klopp	Operations Engineer	979-422-2510

Formation Tops - Federal PP #1 SWD

1. Surface: Quaternary Alluvium

2. Rustler: 491'

3. Top Salt: 947'

4. Base Salt: 1570'

5. Lamar: 1814'

6. Delaware Sands (Bell Canyon): 1936'

7. Cherry Canyon: 2630'

8. Brushy Canyon: 3658'

9. Bone Spring Lime: 5238'

10. FBSG Sand: 6263'

11. SBSG Carbonate: 6502'

12. SBSG Sand: 6715'

13. TBSG Carbonate: 6940'

14. TBSG Sand: 8300'

15. Wolfcamp: 8693'

16. Pennsylvanian Canyon Lime: 10122'

17. Strawn: 10456'

18. Atoka: 10670'

19. Atoka Carbonate: 10780'

20. Morrow: 11153'

21. Lower Morrow: 11757'

22. Mississippian: 11910'



Catalyst Oilfield Services 11999 E Hwy 158 Gardendale, TX 79758 (432) 563-0727 Fax: (432) 224-1038

Water Analysis Report

Customer:	BC Operating		Sample #:	34776	
Area:	New Mexico		Analysis ID #:	33045	
Lease:	Macho Grande				
Location:	1H	0	Bone Spring	Water Analysis	
Sample Point:	Heater				

Sampling Date:	4/21/2016	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	4/25/2016	Chloride:	104778.1	2955.41	Sodium:	65560.0	2851.7
Analyst:	Catalyst	Bicarbonate:	372.0	6.1	Magnesium:	230.7	18.98
TDC (174175.8	Carbonate:			Calcium:	1238.0	61.78
TDS (mg/l or g/m3):	1,119	Sulfate:	360.0	7.5	Potassium:	1146.0	29.31
Density (g/cm3):	1.119	Borate*:	104.8	0.66	Strontium:	386.1	8.81
		Phosphate*			Barium:	0.0	0.
Hydrogen Sulfide:	0				Iron:	0.1	0.
, 0	-		ased on measured	-	Manganese:	0.000	0.
Carbon Dioxide:	19	elemental bor	on and phosphor	us.			
		pH at time of samp	ling:	7			
Comments:		pH at time of analy	sis:				
		pH used in Calcul	ation:	7			
		Temperature @ la	b conditions (F):	75	Conductivity (mid Resistivity (ohm	,	196400 .0509

		Values C	alculated	at the Give	n Conditi	ons - Amou	unts of Sc	ale in lb/10	00 bbl		
Гетр	-	alcite aCO ₃		sum 4 ^{*2H} 2 0		ydrite aSO ₄		estite 'SO ₄		rite aSO ₄	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0.46	13.61	-1.35	0.00	-1.33	0.00	-0.17	0.00	0.00	0.00	
100	0.49	16.57	-1.43	0.00	-1.34	0.00	-0.20	0.00	0.00	0.00	
120	0.52	19.83	-1.50	0.00	-1.33	0.00	-0.22	0.00	0.00	0.00	
140	0.54	23.68	-1.56	0.00	-1.30	0.00	-0.24	0.00	0.00	0.00	
160	0.56	27.52	-1.61	0.00	-1.25	0.00	-0.24	0.00	0.00	0.00	
180	0.59	32.26	-1.65	0.00	-1.18	0.00	-0.24	0.00	0.00	0.00	
200	0.62	36.99	-1.69	0.00	-1.10	0.00	-0.23	0.00	0.00	0.00	
220	0.66	42.32	-1.73	0.00	-1.01	0.00	-0.23	0.00	0.00	0.00	



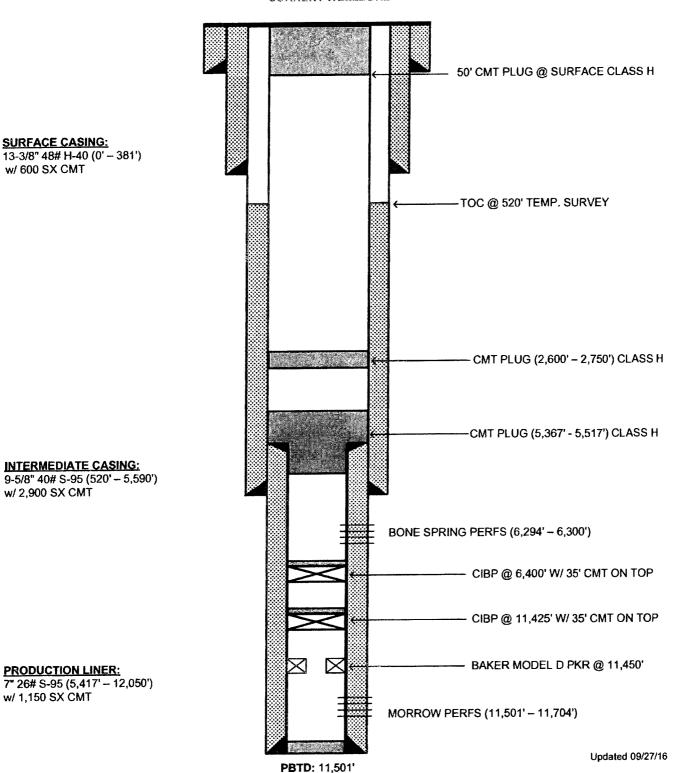
ELEVATION:

GL: 3,421'

FEDERAL PP #1

API # 30-015-20908 1980' FNL & 1980' FWL, 24, T23S, R26E EDDY COUNTY, NEW MEXICO

CURRENT WELLBORE



TD: 12,050'



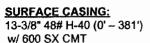
ELEVATION:

GL: 3,421'

FEDERAL PP #1 SWD

API # 30-015-20908 1980' FNL & 1980' FWL, 24, T23S, R26E EDDY COUNTY, NEW MEXICO

PROPOSED WELLBORE



INTERMEDIATE CASING:

9-5/8" 40# S-95 (520' - 5,590')

w/ 2,900 SX CMT

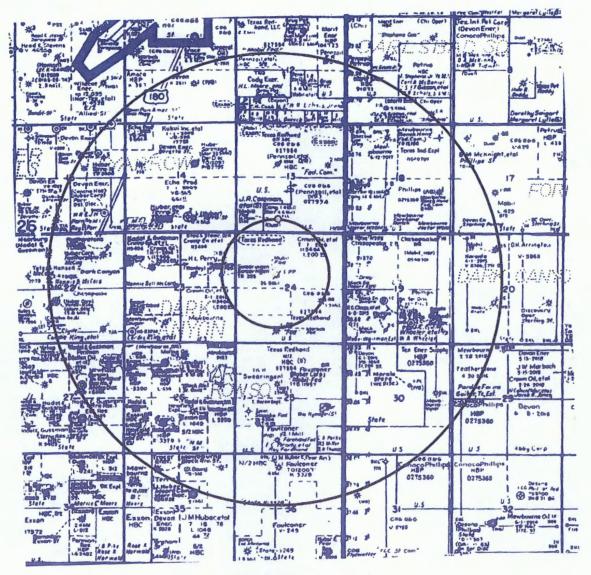
PRODUCTION LINER: 7" 26# S-95 (5,417' - 12,050') w/ 1,150 SX CMT

-TOC @ 520' TEMP. SURVEY 4-1/2" TK LINED INJ TBG TO 2,600' NICKEL PLATED INJ PKR @ 2,600' PERFS (2,630' - 5,238') ·CMT PLUG (5,367' - 5,517') CLASS H BONE SPRING PERFS (6,294' - 6,300') CIBP @ 6,400' W/ 35' CMT ON TOP CIBP @ 11,425' W/ 35' CMT ON TOP - BAKER MODEL D PKR @ 11,450' MORROW PERFS (11,501' - 11,704') Updated 12/07/16

PBTD: 11,501' TD: 12,050'

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	Half Mile
	Radius

Well Name	Federal RR Com #1 30-015-21051 Eddy County	Federal PP #1 30-015-20908 Eddy County	Sederal RR #2 30-015-32657 Eddy County	Federal 'L' #1 30-015-20855 Eddy County
Operator	Marbob Energy Corp PO BOX 227 ARTESIA, NEW MEXICO 88211	BC Operating, Inc. 4000 N BIG 55 PRING STE 310 MIDGAND, TEXAS 79701	RAI Exploration & Production, LLC 3500 ONE WILLIAMS CENTER TULSA, OKLAHOMA 74177	Marbob Energy Corp PO BOX 227 ARTESIA, NEW MEXICO 88211
Prod, Inj. or P&A'd	PRA'd	P&A'd	Prod	Prod
01 01	9,800" (TD) 12,005" (PBTD)	12,050' (TD) 11,786' (PBTD)	12,150° (081'D)	12,090' (TD) 11,958' (PBTO)
SHL/BHL	SHC	ž	SHI.	SHE
Unit	z	~	-	z
×	24	ž	24	t
Location	235	235	235	235
Sug	26£	26€	268	26E
Footage Calls	660' FNL & 1980' FWL	1980 [,] FNL & 1980 [,] FWL	19 0 0 FSL 8. 990 FEL	650 FSL & 1980 FW1.
Type of West	G.	õ	G	Gas
Spud	1/1/1974	8/2/1973	10/25/2003	6/3/1973
Comp	5/13/2005	10/3/1973	9/14/2013	9/28/1973
Completion	9,923:9,954:	11,501 - 11,563	11.604' - 11.973'	9,954°- 10,023° 10,295°- 13,468°
Producing Formation	Wolfcamp	Marrow	Morrow	Morrow
Casing	13-3/8" 9-5/8"	13-3/8" 9-5/8"	13-3/8" 9-5/8" 7" 4-1/2"	13-3/8" 9-5/8"
Depth	0' - 397' 0' - 5,420' 5,236' - 11,478'	0'-381' 0'-5,590' 520'-12,107"	0'-582' 0'-1,772' 0'-9,150' 7,700' - 12,135'	0-375° 0'-5,600° 5,392'-12,090°
Casing Program Sis Cmt	400 2,900 1,950	600 2900' 1150'	550 550 1,325	40 0 3,600 250
700	Surface Surface 5,236'	Surface Surface \$20'	Surface Surface Surface 7,700'	Surface 390° 5,392°
BY	Circ. Calc.	Circ. Circ. Temp Survey	Circ. Circ. Circ.	Circ.



WELLS - ONE-HALF MILE RADIUS

SECTION 24-T23S-R26E

FEDERAL PP #1 SWD BC OPERATING, INC. (OPERATOR) 4000 N BIG SPRING ST, SUITE 300 MIDLAND, TEXAS 79705

- FEDERAL RR #1 MARBOB EVERGY CORP. (OPERATOR) P.O. BOX 227 ARTESIA, NEW MEXICO 88211
- MARBOB EVERGY CORP. (OPERATOR)
 3500 ONE WILLIAMS CENTER
 TULSA, OKLAHOMA 74172

SECTION 23-T23S-R26E

SWEARINGEN #1 SWEARINGEN W H (OPERATOR) P.O. BOX 93 SANTA FE, NEW MEXICO

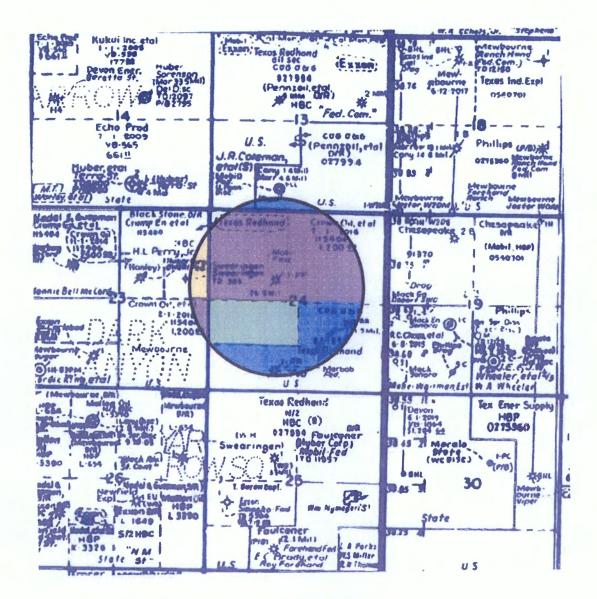
SECTION 13-T23S-R26E

FEDERAL LL #1

MARBOB ENERGY CORP. (OPERATOR)

3500 ONE WILLIAMS CENTER

TULSA, OKLAHOMA 74172



LEASES – ONE-HALF MILE RADIUS

SECTION 24-T23S-R26E

NMNM 115404

CROWN OIL PARTNERS V LP (LESSEE) 4000 N BIG SPRING ST, SUITE 300 MIDLAND, TEXAS 79705

- NMNM 017572
 EXXONMOBILE OIL CORP (LESSEE)
 P.O. BOX 4358
 HOUSTON, TEXAS 77210
- MOBIL PROD TX & NM (LESSEE)
 12450 GREENSPOINT DR.
 HOUSTON, TEXAS 77060

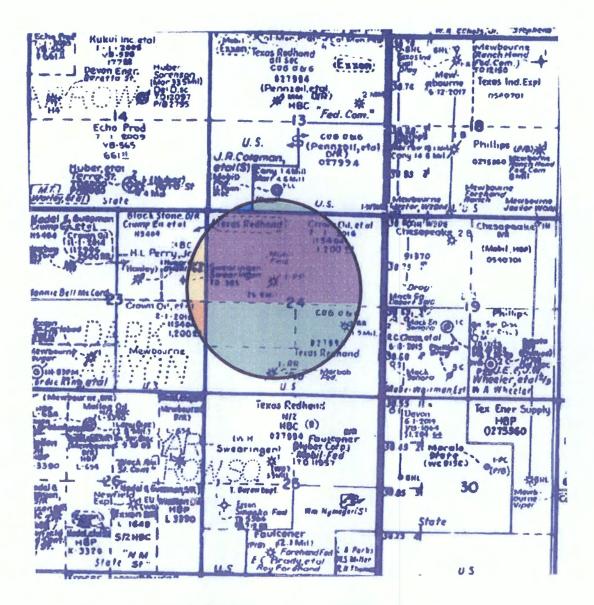
SECTION 23-T23S-R26E

NMNM 0027994A
O'NEILL PROPERTIES LTE (LESSEE)
410 W OHIO
MIDLAND, TX 79701

SECTION 13-T23S-R26E

.

MOBIL PROD TX & NM (LESSEE) 12450 GREENSPOINT DR. HOUSTON, TEXAS 77060



SURFACE OWNERS - ONE-HALF MILE RADIUS

SECTION 24-T23S-R26E

- 2602 74TH PLACE LUBBOCK, TEXAS 79423
- STATE OF NEW MEXICO
 310 OLD SANTA FE TRAIL
 SANTA FE, NEW MEXICO 87504

SECTION 13-T23S-R26E

- 8524 MOLINAR DRIVE
 CARLSBAD, NEW MEXICO 88220
- STATE OF NEW MEXICO
 310 OLD SANTA FE TRAIL
 SANTA FE, NEW MEXICO 87504

SECTION 23-T23S-R26E

- CARLSBAD 960 LLC
 7641 EAST GRAY RD SUITE B-1
 SCOTTSDALE, ARIZONA 85260
- P.O. BOX 2459
 CARLSBAD, NEW MEXICO 88221

LEGAL NOTICE

BC Operating, Inc. has filed a form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to utilize the Federal PP #1 (API: 30-015-20908) as a Salt Water Disposal well.

The Federal PP SWD #1 is located at 1980' FNL and 1980' FWL, Unit Letter F, Section 24, Township 23 South, Range 26 East, Eddy County, New Mexico. The well will dispose of water produced from oil and gas wells into the Cherry/Brushy Canyon formations at 2,630' to 5,238' at a maximum rate of 9,750 barrels of water per day at a maximum pressure of 526 psi.

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

Additional information can be obtained by contacting Jason Wacker, BC Operating, Inc., at (432) 684-9696.

Legal Notice

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Published in the Artesia Daily Press, Artesia, N.M., March 2, 2018 Legal No. 24585.



P.O. Box 50820 Midland, Texas 79710 (432) 684-9696 4000 N. Big Spring Street, Suite 310 Midland, Texas 79705 Fax (432) 686-0600

March 1, 2018

Surface Owner / Offset Operators

Re:

Notification of Application for Authorization to Inject

Federal PP #1

Ladies and Gentlemen:

BC Operating, Inc. is seeking administrative approval to utilize its Federal PP #1 (API – 30-015-20908) as a Salt Water Disposal well. As required by the New Mexico Oil Conservation Division Rules, we are notifying you of the following proposed salt water disposal well. This letter is a notice only. No action is required unless you have questions or objections.

Well:

Federal PP #1

Proposed Disposal Zone:

Cherry/Brushy Canyon (from 2,630' - 5,238')

Location:

1980' FNL & 1980' FWL, Sec. 24, T23S, R36E, Eddy Co., NM

Applicants Name:

BC Operating, Inc.

Applicants Address:

P.O. Box 50820, Midland, TX 79710

This application for water disposal well will be filed with the New Mexico Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Conservation Division address is 1220 South St. Francis Dr., Santa Fe, NM 87505 and their phone number is 505-476-3460.

Please call Jason Wacker if you have any questions at 432-684-9696.

Sincerely,

Saran Presiey

Regulatory Analyst

DISTRIBUTION LIST

BLM Carlsbad Field Office 620 E. Greene Street Carlsbad, NM 88220

Surface Owner

Helen Mignon Preston 2602 74th Place Lubbock, TX 79423

State of New Mexico 310 Old Santa Fe Trail Santa Fe, NM 87504

Brian James Weston 8524 Molinar Drive Carlsbad, NM 88220

Carlsbad 960 LLC 7641 East Gray Rd, Suite B-1 Scottsdale, AZ 85260

Offset Operators

Exxonmobile Oil Corp P.O. Box 4358 Houston, TX 772210

Mobil Prod TX & NM 12450 Greenspoint Drive Houston, TX 77060

O'Neill Properties LTE 410 W Ohio Midland, TX 79701

Royalty Owners

RKI Exploration & Production, LLC 3500 One Williams Center, Suite 3500 Tulsa, OK 73172

TKM Resources, LLC 1775 Sherman Street, Suite 2990 Denver, Co 80203

Texas Oil & Mineral Co., LLC 303 W Wall St Midland, TX 79701

Estate of Peter L. Shea, c/o Mr. John Walsh, Bryan Cave Law Firm 1290 Avenue of the Americas New York, NY 10104-3300

Frank Borden Hanes, Jr. 2870 BARTRAM RD Winston Salem, NC 27106-5105

Edmund T. Anderson, IV 2521 Humble Midland, TX 79705-8407

William G. McCoy (deceased) P. O. Box 1773 Roswell, NM 88202-1773

Dominion OK TX Exploration & Production, Inc. 14000 Quail SPGS Parkway Oklahoma City, OK 73134

Mewbourne Oil Company P.O. Box 7698 Tyler, TX 75711

Edwina S. Millington, c/o Mr. John Walsh, Bryan Cave Law Firm 1290 Avenue of the Americas New York, NY 10104-3300 Clare Lundbeck Fraser 133 East 64th Street, APT 6B New York, NY 10065-7076

Mary Lavelle Anderson, Trustee of the Mary Anderson Bell Family Trust 4006 Blakeford Durham, NC 27713

Sonic Oil and Gas, LP (Bettis) P.O. Box 1240 Graham, TX 76450

Black Stone Energy Company, LLC. 1001 Fannin St., Suite 2020 Houston, TX 77002

Willischild Oil and Gas Corporation (Wellbore) 621 E St Snyder, OK 73566

Drastic Legacy, LLP P. O. Box 1852 Midland, TX 79702

Don M. Kidwell 4208 FAIRWOOD DR Midland, TX 79707-1460

Sigyn Lund 801 Ferne Drive Longwood, FL 32779

Faulconer 1996, LP 1001 E. S.e. Loop 323 Tyler, TX 75703 Bettis Brothers, Inc. 500 W. Texas, #830 Midland, TX 79701

V-F Petroleum, Inc. 550 W. Texas Avenue Midland, TX 79701

Black Mountain Operating, LLC 500 Main Street, Suite 1200 Fort Worth, TX 76102

Marathon Oil Permian LLC 5555 San Felipe Street Houston, TX 77056

Chisholm Energy Operating 801 Cherry Street, Suite 1200 – Unit 20 Fort Worth, TX 76102

Goetze, Phillip, EMNRD

From: Jason Wacker < jwacker@bcoperating.com>

Sent: Friday, April 20, 2018 10:11 AM

To: Goetze, Phillip, EMNRD

Cc: Jones, William V, EMNRD; McMillan, Michael, EMNRD; Nick Klopp

Subject: Federal PP #1 Injection Permit Application

Attachments: Federal PP Injection Permit Application with OCR.PDF; Federal PP Radius of Investigation

Maps.pdf; Federal PP Public Notice.pdf; Federal PP Offset Owner Notifications.pdf

Phillip,

Please find our Injection Permit Application for the Federal PP #1, attached.

Thanks for your help!

Jason Wacker, P.E. VP of Engineering & Operations

BC Operating, Inc. 4000 N. Big Spring #310 Midland, Texas 79705

PO BOX 50820 Midland, Texas 79710

Office (432) 684-9696 Cell (432) 631-2142