

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Friday, May 18, 2007 4:40 PM
To: 'collinsd@zianet.com'
Cc: Ezeanyim, Richard, EMNRD; Hayden, Steven, EMNRD
Subject: SWD Application: Apperson #1E API No. 30-045-31250

Hello Mr. Collins:

The Division has received your application for a permit to convert this Point Lookout producing well into a commercial Cliff House injection well and have the following concerns and requests:

- 1) The Division does not have a record that the Bruington 29#1 30-045-09148 located within 1/2 mile is cemented across this proposed injection interval. This well is operated by ConocoPhillips and is reporting production from the Dakota. The Division will require this well to be cemented across the Cliff House prior to any injection. You could talk to ConocoPhillips and ask them if they are willing to let San Juan Resources squeeze cement its well and verify the top with a bond log. If Conoco wishes to someday produce this well from formations younger than the Dakota, it may be amenable to this workover.
- 2) Division Rule 701 has the new notice requirements. Please go to the Division web site and read these rules and send proof of newspaper notice and certified receipts showing notice to the surface owner of this well site and tank battery and all operators within the Mesaverde within 1/2 mile radius - or lessees or mineral owners as is pertinent. Who is the surface owner?
- 3) The Division only has a TDT log on file for this proposed injection well. Please send all elogs in your well file to Aztec for scanning including a copy of the temperature survey run on the 4-1/2 inch casing.
- 4) Send a water analysis from a nearby Cliff House completion attempt or estimate the salinity in the Cliff House in this well from offset resistivity logs and let us know your estimate. We need this prior to issuing any permit. You will also be required to perforate, swab down the well, and get a native water sample and analysis for the Division prior to any injection.
- 5) Send the Fresh Water well analysis as promised.

Please reply as soon as possible and let us know if item 1 has a possibility of being complied with or if San Juan Resources wishes to abandon this venture.

Regards,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

(No Response)
Corrected
6/10/07

5/18/2007

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Monday, December 18, 2006 10:22 AM
To: 'Jerry McHugh'
Cc: Drew Bates; Hayden, Steven, EMNRD; Ezeanyim, Richard, EMNRD
Subject: RE: Apperson #1E SWD

Hello Jerry:

Because the data is not available, I can't review this and am referring your questions about within and without pool boundaries or other issues to Steve Hayden in Aztec.

I can't find evidence on our web site that the Lee 1E or the Apperson 1E has been drilled. There are no sundrys of drilling or completing in our imaging site (that I could find). Also there are no electric logs imaged for me to review. Both wells have an intention to drill filed and mention that a DV tool would be set above the CH (is this the Chacra of the Cliff House?). Note, if all the AOR wells are not cemented across the intended injection interval, you will have to come to hearing to explain why injection into that interval will not harm oil or gas resources. We have been instructed by our Director to refer SWD applications of that type to hearing. So consider cementing all your wells across any interval intended for future injection.

The Cliff House in some areas has been targeted for protection from injection because it contains waters of lower salts concentration. To check for this constraint, talk to Steve Hayden and also refer me to some induction and porosity logs on offset wells.

In addition, as you know, any SWD application will require notice to all owners of tracts even partially contained in the 1/2 mile area of review.

Regards,

William V. Jones

Engineering Bureau

Oil Conservation Division

Santa Fe

From: Jerry McHugh [mailto:jmchugh@sanjuanbasin.com]

Sent: Friday, December 15, 2006 10:03 AM

To: Jones, William V., EMNRD

Cc: Drew Bates

Subject: Apperson #1E SWD

Will:

We are getting ready to permit a well which we are abandoning and converting it to a SWD.

It is located in SE 30, 30N, 11W, right on the border of the Blanco MV pool and near the Flora Vista MV pool. We plan to get offset operator approval in the MV. My company, San Juan Resources, Inc., operates a well in the MV in an opposite 160 (NW 30, 30N, 11W) called the Lee #1E. It contributes minimally to the MV, approximately 10% of the well's production. It produces from the Point Lookout member of the MV.

What we plan to do is convert the Apperson #1E to a SWD and inject SWD in the Cliff House member of the MV. Since we're out of the pool are we on solid ground to start this permitting process? It would seem that as an offset, our own well would be a major obstacle and our non-operated owners. Any pitfalls you see? What else can you advise us in this process? Thanks in advance for your assistance.

Very truly yours,

5/22/2007

Injection Permit Checklist 2/8/07

SWD Order Number _____ **Dates:** Division Approved _____ District Approved _____
Well Name/Num: APPERSON #1E **Date Spudded:** 4/8/05

A PI Num: (30-) 045-31250 **County:** SAN JUAN
Footages 1964 FSL (670) FEL **Sec** 30 **Tsp** 30N **Rge** 11W

Operator Name: SAN JUAN RESOURCES, INC **Contact** Pam Collins

Operator Address: 1499 BLAKE ST #100 DENVER CO 80202

Current Status of Well: ACTIVE P.L.O. **Planned Work:** PLUG BACK TO CLIFFHOUSE **Inj. Tubing Size:** 27/8" 3550'

	Hole/Pipe Sizes		Depths	Cement	Top/Method
Surface	12 1/4	9 5/8		160	CIRC
Intermediate	8 3/4	7"		650	CIRC
Production	6 1/4	4 1/2		385	2400' IS ✓
Last DV Tool					
Open Hole/Liner					
Plug Back Depth			6731		

Diagrams Included (Y/N): Before Conversion ☒ After Conversion ☒

Checks (Y/N): Well File Reviewed ☒ ELogs in Imaging only one log: TDT !!

Intervals:	Depths	Formation	Producing (Yes/No)
Salt/Potash			
Capitan Reef			
Cliff House, Etc:	<u>Looks higher in salinity here</u>		
Formation Above	<u>1715 - FRC/PC to 2280</u>		
Top Inj Interval	<u>~3620</u>	<u>CLIFF HOUSE</u>	<u>724</u> PSI Max. WHIP
Bottom Inj Interval	<u>~3685</u>	<u>CLIFF HOUSE</u>	<u>NO</u> Open Hole (Y/N)
Formation Below		<u>Point Lookout</u>	<u>NO</u> Deviated Hole (Y/N)

Fresh Water: OR ALAMO **Depths:** 0 - 725' **Wells (Y/N):** yes **Analysis Included (Y/N):** will be sent! **Affirmative Statement** ☒

Salt Water Analysis: Injection Zone (Y/N/NA) _____ DispWaters (Y/N/NA) _____ Types: _____

Notice: Newspaper (Y/N) _____ Surface Owner ? Mineral Owner(s) ?

Other Affected Parties: no notice yet

AOR/Repairs: NumActiveWells 2 Repairs? _____ Producing in Injection Interval in AOR NOT in CLIFF HOUSE

AOR Num of P&A Wells 0 **Repairs?** _____ **Diagrams Included?** _____ **RBDMS Updated (Y/N)** _____

Well Table Adequate (Y/N) NO **AOR STRs:** Sec _____ Tsp _____ Rge _____ **UIC Form Completed (Y/N)** _____

New AOR Table Filename an apperson **Sec** _____ **Tsp** _____ **Rge** _____ **This Form completed** 5/18/07

Conditions of Approval: Sec _____ Tsp _____ Rge _____ **Data Request Sent** 5/18/07

Broughton 29 #1 30-045-09148 ADR Problem! Low CNT TO P. (C.O.P.)

AOR Required Work: _____

Required Work to this Well: _____

4201 Terrace Drive
Farmington, NM 87402
May 8, 2007

2007 MAY 10 AM 11 50

Mr. Will Jones
NMOCD
1220 S. St. Francis St.
Santa Fe, NM 87505


SUBJECT: Apperson 1E (API No: 30-045-31250)

Dear Mr. Jones:

San Juan Resources, Inc proposes to convert the Apperson 1E to salt water disposal and to construct surface facilities to operate as a commercial SWD facility. The permit package is attached.

If you have any questions concerning this project, please call me at 505-325-3514 or email me at collinsd@zianet.com.

Sincerely,

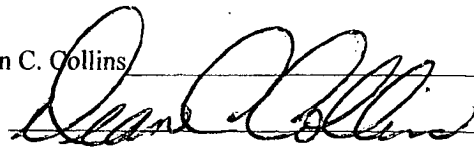


Dean C. Collins
Agent

Enclosures

Cc: NMOCD Aztec Office
San Juan Resources, Inc Denver

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: San Juan Resources, Inc
ADDRESS: 1499 Blake Street, 10C, Denver, CO 80202
CONTACT PARTY: Dean Collins PHONE: 505-325-3514
- 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. **ATTACHMENT NO. 1**
- 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. **ATTACHMENTS NO. 2-1, 2-2 and 2-3**
- VII. Attach data on the proposed operation, including: **ATTACHMENT NO. 3**
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. **ATTACHMENT NO. 4**
- IX. Describe the proposed stimulation program, if any. **ATTACHMENT NO. 5**
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). **ATTACHMENT NO. 6**
- *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. **ATTACHMENT NO. 7**
- 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. **ATTACHMENT NO. 8**
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. **ATTACHMENT NO. 9**
- 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: Dean C. Collins TITLE: Agent
SIGNATURE:  DATE: 5/8/07
E-MAIL ADDRESS: collinsd@zianet.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: _____

INJECTION WELL DATA SHEET

OPERATOR: San Juan Resources

WELL NAME & NUMBER: Apperson 1E

WELL LOCATION: 1964' FSL, 670' FEL
FOOTAGE LOCATION

UNIT LETTER I

SECTION 30

TOWNSHIP 30N

RANGE 11W

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface Casing

Hole Size: 12-1/4" Casing Size: 9-5/8"
Cemented with: 160 sx. or ft³
Top of Cement: Surface Method Determined: Circ

Intermediate Casing

Hole Size: 8-3/4" Casing Size: 7"
Cemented with: 650 sx. or ft³
Top of Cement: Surface Method Determined: Circ

Production Casing

Hole Size: 6-1/4" Casing Size: 4-1/2"
Cemented with: 385 sx. or ft³
Top of Cement: 2400' Method Determined: Temp Survey
Total Depth: 6731'

Injection Interval

Perforated ~ 3620 feet to ~ 3685'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2-7/8" Lining Material: Plastic

Type of Packer: Baker LokSet or equivalent

Packer Setting Depth: ~3550'

Other Type of Tubing/Casing Seal (if applicable): None

Additional Data

1. Is this a new well drilled for injection? Yes N No
 If no, for what purpose was the well originally drilled? Oil & Gas Production - Dakota and Mesa Verde (point Lookout)
2. Name of the Injection Formation: Mesa Verde (Cliffhouse)
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. Yes
Point Lookout -- 4372-4421'; Dakota - 6523-6615' OA
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: None below Dakota - , above Fruitland 1715-2050' and Pictured Cliffs 2050-2280'

San Juan Resources Wellbore Schematic Apperson 1E Current Wellbore Configuration

Location: 1964' FSL & 1970' FEL
Sec 30 T30N R11W NMPM
San Juan Co., New Mexico

Elevation: 5778' GL
5790' KB

Tertiary

Ojo Alamo- 610'
Kirtland - 725'

Fruitland - 1715'

Pictured Cliffs - 2050

9-5/8" 36# J-55 ST&C @ 223' w/ 150 sx

Tubing: 133 jts 2-3/8" 4.7# J-55 EUE to 4472'.
SN 1 jt off bottom 157 3/4" plain and scapered rods.
2 x 1-1/2 x12 RWAC pump

TOC 2400' by temp survey

Mesa Verde
Cliff House - 3620'

7" 20# J-55 ST&C @ 3951' w/ 550 sx lite + 100 sx

Point Lookout - 4375'

Perforations: 4372-4421' Total of 21 holes

Collapsed casing w/ top of fish @ 5018'

Gallup - 5635'

Dakota - 6555'

Perforations: 6523-6531', 6535-6552', 6564-6566', 6580-6582', 6595-6605', 6608-6615' 3 spf

4-1/2" 10.5# J-55 LT&C @ 6731' w/ 385 sx 50/50 Poz

TD @ 6731'

Cretaceous

R 11 W



DATED: 5/8/2007

SAN JUAN RESOURCES, INC
ATTACHMENT NO. 4
TO FORM C-108
APPLICATION FOR AUTHORITY TO INJECT
DATED: 5/8/2007

Section VIII

- A. The proposed injection interval is the Cliffhouse member of the Mesa Verde formation.

The Blanco Mesa Verde pool lies to the north of the proposed disposal well. It ranges from 700' to 1100' thick and consists of sandstones, shales and coals. Porosities range from 10% to 16% in the sandstones with water saturations of 30% to 40%. The Cliffhouse member is not productive in the immediate area. There are currently Cliffhouse disposal wells in Sec 34, T30N, R11W and in Sec 3, T29N, R11W. 3 miles away SE
3 miles SE

- B. There are no known fresh water formations underlying the proposed injection zones. The only fresh water aquifer in the area is the Ojo Alamo formation which is at 610-725' in this well. It is separated from the injection formation by almost three thousand in a wellbore that is cased and cemented to surface and is well protected from injection fluids.

San Juan Resources, Inc
SWD Conversion

Well Name: Apperson 1E

API No: 30-045-31250

Location: 1964' FSL, 670' FEL, Unit I, Sec 30, T30N, R11W
36.7813861640724N, 108.025321865034W
San Juan County, NM

Elevation: 5778' GL

Surface Csg: 9-5/8" 36# J-55 ST&C set @ 223'. Cmt'd w/_150 sx Class B
Circ to surface. 12-14" hole.

Intermediate Csg: 7" 20# J-55 ST&C set @ 3951'. Cmt'd w/ 550 sx 65/35 Poz
6% gel, 5#/sx gilsonite, 1/2#/sx celloflake and 2% CaCl₂
followed by 100 sx Class B w/ 1/4#/sx celloflake. Circ to
surface. 8-3/4" hole.

Production Csg: 4-1/2 10.5 J-55 LT&C set 6731'. Cmt'd w/385 sx 50/50 Poz w/
2% SMS, 5#/sx gilsonite and 1/4#/sx celloflake. 6-1/4" hole.
TOC 2400' by temp survey.

Tbg: 133 jts 2-3/8" 4.7# J-55 EUE to 4472'. SN 1 jt off bottom.

Rods: 157 3/4" plain and scapered rods. 2 x 1-1/2 x12 RWAC pump.

Remarks: Casing collapsed. Fish in hole consisting of 4-1/2' of 2-3/8"
sub, SN, 1 jt 2-3/8" tbg, bit sub and 3-7/8" bit, OAL 44.03'.
Top of fish @ 5108'

Perforations Point Lookout: 4372-4421' Total of 21 holes
Dakota: 6523-6531', 6535-6552', 6564-6566', 6580-6582',
6595-6605', 6608-6615' 3 spf

Procedure:

1. Obtain open pit permit for cementing operations. MIRU workover rig.
2. POOH and lay down rods and pump (energy pump or Cave Enterprises).
3. ND WH. NU / PT BOP. TOOH w/ tbg.
4. Move in ~25 jts additional tbg. Run 3-7/8" bit and 4-1/2" casing scraper to top of fish @ 5108'. TOOH.
5. RIH and set 4-1/2" cement retainer @ ~4950'. Circulate casing full of water. Establish pump rate w/ water. If well will not take water, call OCD for directions. Otherwise,