



DEPARTMENT OF NATURAL RESOURCES
Bill Ritter, Jr., Governor
1120 Lincoln St., Suite 801
Denver, CO 80203
Phone: (303) 894-2100
FAX: (303) 894-2109
www.cogcc.state.co.us

November 4, 2008

Mr. Jesse White
Apollo Operating, LLC
1538 Wazee Street, Suite 200
Denver, Colorado 80203

RE: Injection Permit Application Approval
Apollo 15-18 I
API No. 05-123-25694
SENE 18, T6N, R63W, 6th P.M.
Weld County, Colorado

Dear Mr. White:

The Colorado Oil and Gas Conservation Commission (COGCC) has reviewed the Apollo Operating, LLC application to complete the Lyons Formation as an injection zone in the Apollo 15-18 I commercial disposal well and has found it acceptable. This letter serves as final approval of the disposal application submitted on February 26, 2008.

This application has been assigned **UIC Facility Number 159219**. The maximum injected fluid volume limitation is **10,918,628 bbl** from date of this approval. The maximum authorized surface injection pressure is **1,426 psig**, based on calculation using a fracture gradient of 0.6 psi/foot.

Only approved fluids from approved source wells can be disposed of in Class II disposal wells. Approved fluids include produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells. The Apollo 15-18 I well is currently permitted to inject fluids from sources listed in your narrative description of sources of Class II fluids, specifically oil and gas operations in the Wattenberg Field of the D-J Basin. Sources of produced water and other approved Class II fluids may be added or deleted by submitting a revised narrative description of sources of Class II fluids on a Sundry Notice.

A water analysis of fluids injected into the Apollo 15-18 I well is required within one year of commencement of injection. The injected water must be analyzed for total dissolved solids, major cations and major anions. The analytical data

sheet must be submitted to COGCC along with a Form 4 (Sundry Notice) which also includes the date of initial injection.

The nature of the injected fluids shall be monitored with sufficient frequency to yield data representative of their characteristics. Therefore, a water analysis of fluids injected into the Apollo 15-18 I well will be required annually on the anniversary date of this approval.

The volume of all produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells injected into this well must be measured and reported on COGCC Form 7 (Monthly Report of Operations) 45 days following the month covered by the report.

Class II fluids, other than those described above, must be approved on Form 14A (Authorization of Source of Class II Waste for Disposal) by COGCC Staff prior to injection. These fluids must be reported on Form 14 (Monthly Report of Non-Produced Water Injected).

This well is not permitted for the disposal of fluids that are not Class II waste (e.g., unused stimulation fluids, amine, motor oil, solvents, field-generated sanitary waste, storm water run-off, or other fluids from unapproved sources).

Mechanical integrity tests (MIT's) shall be performed at annually on the Apollo 15-18 I well, as long as it is used for the injection of fluids. The first anniversary date shall commence on the date the initial mechanical integrity test was performed. A MIT is also required after resetting the tubing or packer whenever the tubing or packer is disturbed during workover operations. All injection well MIT's must be witnessed by COGCC Staff.

If you have any questions regarding this approval, please do not hesitate to call me at (303) 894-2100 Ext 145.

Sincerely,



David D. Andrews, P.E., P.G.
Engineering Supervisor
COGCC

Enclosures

FORM
31
Rev 6/99



State of Colorado
Oil and Gas Conservation Commission



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COGCC

Complete the
Attachment Checklist
Oper OGCC

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

UNDERGROUND INJECTION FORMATION PERMIT APPLICATION

1. Submit original and one copy of this form.
2. If data on this form is estimated, indicate as such.
3. Attachments – see checklist and explanation of attachments.
4. Aquifer exemption is required for all injection formations with water quality <10,000 TDS (Rule 322B). Immediately contact the Commission for further requirements if the total dissolved solids (TDS) as determined by water analysis for the injection zone is less than 10,000 ppm.
5. Attach a copy of the certified receipt to each notice to surface and mineral owner(s) or submit a sample copy of the notice and an affidavit of mailing or delivery with names and addresses of those notified. Each person notified shall be specified as either a surface or mineral owner as defined by C.R.S. 34-60-103(7).

Form 31 Original & 1 Copy	
Analysis to Injection Zone Water	
Analysis of Injection Water	
Proposed Injection Program	
Resistivity or Induction Log	
Cement Bond Log	
Surface or Salt Water Displ Agrmt	
Notice to Surface/Mineral Owners	
Remedial Correction Plan for Wells	
Map Oil/Water Wells w/in 1/4 Mile	
List Oil/Gas Wells w/in 1/2 Mile	
Map Surface Owners w/in 1/4 Mile	
List Surface Owners w/in 1/4 Mile	
Map Mineral Owners w/in 1/4 Mile	
List Mineral Owners w/in 1/4 Mile	
Surface Facility Diagram	
Wellbore Diagram	
If Commercial Facility, Description of Ops & Area Served	
Unit Area Plat	

SENE

Project Name: Apollo 15-18 I Project Location: E/2NE/4 S.18-6N-63W 6th P.M.
 Project Type: Enhanced Recovery Disposal Simultaneous Disposal
 Single or Multiple Well Facility? Single Multiple
 IF UNIT OPERATIONS, ATTACH PLAT SHOWING UNIT AREA
 County: Weld Field Name and Number: Wattenberg - 90750

OGCC Operator Number: 10051
 Name of Operator: Apollo Operating, LLC
 Address: 1557 Ogden St., Suite 300
 City: Denver State: CO Zip: 80218

Contact Name and Telephone:
Jesse L. White
 No: 303.830.0888 x 14
 Fax: 303.830.2818

Injection Fluid Type: Produced Water Natural Gas CO₂ Drilling Fluids
 Exempt Gas Plant Waste Used Workover Fluids Other Fluids (describe): _____
 Commercial Facility? Yes No
 If Yes, describe area of operation and types of fluids to be injected at this facility:

Operating in the Wattenberg field of the DJ Basin to dispose of produced water from surrounding oil and gas wells.

PROPOSED INJECTION FORMATIONS

FORMATION A (Name): Lyons Porosity: 16% (average)
42.00 - 44.00% (estimated)
 Formation TDS: 29,600 mg/l Frac Gradient: 0.6 psi/ft Permeability: DST 50-100 MD
 Proposed Stimulation Program: Acid Frac Treatment None

FORMATION B (Name): _____ Porosity: _____
 Formation TDS: _____ Frac Gradient: _____ psi/ft Permeability: _____
 Proposed Stimulation Program: Acid Frac Treatment None

Anticipated Project Operating Conditions

Under normal operating conditions, estimated fluid injection rates and pressures:
 FOR WATER: A minimum of 1000 bbls/day @ vacuum psi to a maximum of 5000 bbls/day @ 1,426 psi.
 FOR GAS: A minimum of _____ mcf/day @ _____ psi to a maximum of _____ bbls/day @ _____ psi.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Jesse L. White Signed: Jeri
 Title: Operations Manager Date: 2/26/2008

OGCC Approved: David And Title: PE II Date: 11/4/2008

UIC FACILITY NO: 159219

Order No: _____
 CONDITIONS OF APPROVAL, IF ANY:

Facility No. 159219; Max. Surface Injection Pressure = 1,426 psi; Max. Injection Volume Limit = 10,918,628 bbl.



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FORM 33 Rev 8/99

State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303) 894-2100 Fax: (303) 894-2109



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INJECTION WELL PERMIT APPLICATION

Submit a completed Form 33 with or after approval obtained on Form 31 (Underground Injection Permit Application) or you must have a previously approved Injection Well Permit. 1. Operator may not commence injection into this well until this form is approved. 2. Each individual injection well must be approved by this form.

Well Name and Number: Apollo 15-18 I API No: 05-123-25694
UIC Facility No: 15-181 159219 (as assigned on an approved Form 31)
Project Name: Apollo 15-18 I Operator Name: Apollo Operating, LLC
Field Name and Number: Wattenberg - 90750 County: Weld
QtrQtr: E/2NE/4 Sec: 18 Twp: 6N Range: 63W Meridian: 6th

Complete the Attachment Checklist
Current Wellbore Diagram
Proposed Wellbore Diagram

SENE CURRENT WELLBORE INFORMATION

Table with columns: SIZE, DEPTH, NO. SACKS, CEMENT TOP, CBL, CIRCULATED, CALCULATED. Rows: Surface Casing, Intermediate Casing (if any), Production Casing.

LINER

Plug Back Total Depth: 8640' Tubing Depth: 8444' (LINER) Packer Depth: N/A
LYNS Formation Gross Perforation Interval: 8540' to 8610'

List below all Plugs, Bridge Plugs, Stage Cementing or Squeeze Work performed on this wellbore: (if more space needed, continue on reverse side of this form.)

- 1.
2.
3.
4.

Describe below any changes to the wellbore which will be made upon conversion. (This includes but not limited to changes of tubing and packer setting depths, any additional squeeze work for aquifer protection or casing leaks, setting of bridge plugs to isolate non-injection formations.)

- 1.
2.
3.
4.

Comments:

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Jesse L. White
Signed: [Signature] Title: Operations Manager Date: 2/26/2008

OGCC Approved: [Signature] Title: PE II Date: 11/4/2008

MAX. SURFACE INJECTION PRESSURE: 1,426 psi If Disposal Well, MAX. INJECTION VOL. LIMIT: 10,918,628 bbl
CONDITIONS OF APPROVAL, IF ANY:

FORM 21 Rev 0700

State of Colorado Oil and Gas Conservation Commission

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MECHANICAL INTEGRITY TEST

Fill out Part II of this form if well tested is a permitted or pending injection well. Send original plus one copy.

- Duration of the pressure test must be a minimum of 15 minutes.
- A pressure chart must accompany this report if this test was not witnessed by a OGCC representative.
- For production wells, test pressures must be at a minimum of 300 psig.
- For injection wells, test pressures must be at 300 psig or minimum injection pressure, whichever is greater.
- A minimum 300 psi differential pressure must be maintained between the tubing and tubing/casing annulus pressure.
- Do not use this form if submitting under provisions of Rule 326 a. (1) B. or C.
- OGCC notification must be provided prior to the test.
- Packers or bridge plugs, etc., must be set within 250 feet of the perforated interval to be considered a valid test

Complete the Attachment Checklist

OGCC Operator Number: 10051		Contact Name and Telephone	
Name of Operator: Apollo Operating, LLC		No: 303.830.0888 x 203	
Address: 1538 Wazee St., Suite 200		Fax: 303.830.2818	
City: Denver	State: CO	Zip: 80202	
API Number: 05-123-25694		Field Name: Wattenberg	Field Number: 90750
Well Name: Apollo		Number: 15-18 I	
Location (QtrQtr, Sec, Twp, Rng, Meridian): SE/4NE/4 Sec. 18 T6N-R63W 6th			

	OGCC	OGCC
Pressure Chart		
Cement Bond Log		
Tracer Survey		
Temperature Survey		

SHUT-IN PRODUCTION WELL INJECTION WELL Facility No.: _____

Part I Pressure Test

5-Year UIC Test Test to Maintain SI/TA Status Reset Packer
 Verification of Repairs Tubing/Packer Leak Casing Leak Other (Describe): Initial MIT

Describe Repairs: _____

NA - Not Applicable	Wellbore Data at Time Test		Casing Test <input type="checkbox"/> NA
Injection/Producing Zone(s)	Perforated Interval: <input type="checkbox"/> NA	Open Hole Interval: <input checked="" type="checkbox"/> NA	Use when perforations or open hole is isolated by bridge plug or cement plug
LYONS	8540'-8610'		Bridge Plug or Cement Plug Depth

Tubing Casing/Annulus Test				<input type="checkbox"/> NA
Tubing Size:	Tubing Depth:	Top Packer Depth:	Multiple Packers?	
2 7/8ths	8444'	n/a - tubing cemented	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO

Test Data					
Test Date	Well Status During Test	Date of Last Approved MIT	Casing Pressure Before Test	Initial Tubing Pressure	Final Tubing Pressure
10/7/08	SI	n/a - First MIT	n/a - tubing Cemented	2100	1930
Starting Casing Test Pressure	Casing Pressure - 5 Min.	Casing Pressure - 10 Min.	Final Casing Test Pressure	Pressure Loss or Gain During Test	
n/a	n/a	n/a	n/a	170	

Test Witnessed by State Representative?	OGCC Field Representative:
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Ed Binkley

Part II Wellbore Channel Test

Complete only if well is or will be an injection well.

Indicate method used for cement integrity test, attach appropriate records, charts, or logs unless previously submitted.

<input type="checkbox"/> Tracer Survey	<input checked="" type="checkbox"/> CBL or Equivalent	<input type="checkbox"/> Temperature Survey
Run Date: _____	Run Date: 10-16-08	Run Date: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Jesse L. White

Signed: Jesse L. White Title: Operations Manager Date: 10/23/08

OGCC Approval: David Amb Title: PE II Date: 11/4/2008

Conditions of Approval, if any:

ANNUAL MIT'S REQUIRED FOR THIS WELL.