

State of Colorado
Oil and Gas Conservation Commission

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FOR OGCC USE ONLY

Document Number:

2361511

Date Received:

03/21/2014

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).

OPERATOR INFO

OGCC Operator Number: <u>10373</u>	Contact Name and Telephone:
Name of Operator: <u>NGL WATER SOLUTIONS DJ LLC</u>	Name: <u>PAUL GOTTLÖB</u>
Address: <u>3773 CHERRY CRK NORTH DR #1000</u>	Phone: <u>(720) 420-5747</u> Fax: <u>(720) 420-5800</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80209</u>	Email: <u>paul.gottlob@iptenergyservices.com</u>

Facility Name: <u>HIGH SIERRA WATER SERVICES-SWD #C3A</u>	Facility Location: <u>NWNW / 32 / 4N / 65W / 6</u>
Facility Type: <input type="checkbox"/> Enhanced Recovery <input checked="" type="checkbox"/> Disposal <input type="checkbox"/> Simultaneous Disposal	
Single or Multiple Well Facility? <input type="checkbox"/> Single <input type="checkbox"/> Multiple	
County: <u>WELD</u>	Field Name and Number: <u>HAMBERT</u> <u>33530</u>

Injection Fluid Type: <input type="checkbox"/> Produced Water <input type="checkbox"/> Natural Gas <input type="checkbox"/> CO2 <input type="checkbox"/> Drilling Fluids	
<input type="checkbox"/> Exempt Gas Plant Waste <input type="checkbox"/> Used Workover Fluids <input type="checkbox"/> Other Fluids (describe):	
Commercial Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	PRODUCED WATER
If Yes, describe area of operation and types of fluids to be injected at this facility:	
<div style="border: 1px solid black; height: 30px;"></div>	

PROPOSED INJECTION FORMATIONS

FORMATION (Name): WOLFCAMP Porosity: 7
Formation TDS: 99945 Frac Gradient: 0.63 psi/ft Permeability: 25
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): LYONS Porosity: 8
Formation TDS: 14570 Frac Gradient: psi/ft Permeability:
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): LOWER SATANKA Porosity: 8
Formation TDS: 99756 Frac Gradient: 0.63 psi/ft Permeability: 25
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): DENVER BASIN COMBINED DISPOSAL ZONE Porosity: 4
Formation TDS: 99945 Frac Gradient: 0.63 psi/ft Permeability: 25
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): COUNCIL GROVE Porosity: 9
Formation TDS: 99945 Frac Gradient: 0.63 psi/ft Permeability: 25
Proposed Stimulation Program: Acid Frac Treatment None

PROPOSED INJECTION FORMATIONS

FORMATION (Name): AMAZON Porosity: 0
Formation TDS: 99945 Frac Gradient: 0.63 psi/ft Permeability: 25
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 0 bbls/day @ 0 psi to A maximum of 10000 bbls/day @ 2000 psi
FOR GAS: A minimum of mcf/day @ psi to A maximum of mcf/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: PAUL GOTTLOB Signed: Y

Title: REGUL & ENGINEERING TECH Date: 3/21/2014 12:00:00 AM

OGCC Approved: *Matthew Lee* Title: Date: 03/21/2014

Order No:

UIC FACILITY NO: 159468

CONDITIONS OF APPROVAL, IF ANY:

<u>COA Type</u>	<u>Description</u>
	From Approval Letter: "NGL is required to install a seismic monitoring station at an appropriate distance from the SWD C3A well to monitor seismicity. The station must be operational by December 31, 2014. NGL shall provide COGCC a semi-annual report for the first two (2) years of operation and then annual reports after that. NGL and COGCC will discuss distribution of data from the station at a later date."

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2361511	FORM 31 SUBMITTED

Total Attach: 1 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
UIC	Originally Maximum Surface Injection Pressure set at 1960 psi. Operator requested increase to 2000 psi in order to make reading gauges and setting automated equipment easier. This was granted. Revised Permit letter sent out.	10/31/2014 10:12:14 AM
UIC	See scanned document # 2361511 for attachments.	10/3/2014 9:48:22 AM
UIC	Final approved maximum daily injection rate is 10000 bbl/day and maximum surface injection pressure of 2000 psi. These are the approved values entered wherever needed. They replace values cited on operators paper or electronic submitted documents. Made up porosity, TDS, permeability etc for DJINJ zone from data for other units. Porosity from logs used in volume calculation much less than pre-drill estimates. Maximum injection volume = 20,158,200 bbl.	10/2/2014 1:51:29 PM

Total: 3 comment(s)