

APPLICATION FOR PERMIT TO:

Drill Deepen Re-enter Recomplete and Operate

TYPE OF WELL OIL <input type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER <u>UIC</u>	Refiling <input type="checkbox"/>
ZONE TYPE SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONES <input checked="" type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input type="checkbox"/>

Date Received:
09/05/2018

Well Name: SOUTH WELD SWD Well Number: 4

Name of Operator: NGL WATER SOLUTIONS DJ LLC COGCC Operator Number: 10373

Address: 3773 CHERRY CRK NORTH DR #1000

City: DENVER State: CO Zip: 80209

Contact Name: JOE VARGO Phone: (303)815-1010 Fax: ()

Email: Joseph.Vargo@nglep.com

RECLAMATION FINANCIAL ASSURANCE
Plugging and Abandonment Bond Surety ID: 20180051

WELL LOCATION INFORMATION

QtrQtr: SWNE Sec: 30 Twp: 1N Rng: 66W Meridian: 6

Latitude: 40.024920 Longitude: -104.816560

Footage at Surface: <u>1665</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>1713</u> Feet	<u>FEL</u>	

Field Name: WATTENBERG Field Number: 90750

Ground Elevation: 4952 County: WELD

GPS Data:
Date of Measurement: 06/13/2018 PDOP Reading: 2.3 Instrument Operator's Name: CASEY KOHOUT

If well is Directional Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone: <u>FNL/FSL</u> <u>FEL/FWL</u> Bottom Hole: <u>FNL/FSL</u> <u>FEL/FWL</u>
<u>271</u> <u>FSL</u> <u>2192</u> <u>FEL</u> <u>259</u> <u>FNL</u> <u>2217</u> <u>FEL</u>
Sec: <u>30</u> Twp: <u>1N</u> Rng: <u>66W</u> Sec: <u>31</u> Twp: <u>1N</u> Rng: <u>66W</u>

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: Fee State Federal Indian

The Surface Owner is: is the mineral owner beneath the location.
(check all that apply) is committed to an Oil and Gas Lease.
 has signed the Oil and Gas Lease.
 is the applicant.

The Mineral Owner beneath this Oil and Gas Location is: Fee State Federal Indian

The Minerals beneath this Oil and Gas Location will be developed by this Well: No

The right to construct the Oil and Gas Location is granted by: applicant is owner

Surface damage assurance if no agreement is in place: _____ Surface Surety ID: _____

LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

There is no lease as there are no minerals applicable to the wellbore.

Total Acres in Described Lease: _____ Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # _____

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: _____ Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

- Building: 351 Feet
- Building Unit: 762 Feet
- High Occupancy Building Unit: 5280 Feet
- Designated Outside Activity Area: 5280 Feet
- Public Road: 320 Feet
- Above Ground Utility: 272 Feet
- Railroad: 2233 Feet
- Property Line: 240 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).
- Enter 5280 for distance greater than 1 mile.
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.

DESIGNATED SETBACK LOCATION INFORMATION

- Check all that apply. This location is within a:
- Buffer Zone
 - Exception Zone
 - Urban Mitigation Area

- Buffer Zone – as described in Rule 604.a.(2), within 1,000' of a Building Unit
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 03/06/2018

SPACING and UNIT INFORMATION

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 3985 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary _____ Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
ADMIRE	ADMI			
AMAZON	AMZN			
COUNCIL GROVE	COUGR			
FOUNTAIN	FNTN			
LOWER SATANKA	LSTKA			
LYONS	LYNS			
MISSOURI	MSSR			
VIRGIL	VRGL			
WOLFCAMP	WFCMP			

DRILLING PROGRAM

Proposed Total Measured Depth: 11994 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: 1064 Feet No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H₂S Drilling Operations Plan)

Will salt sections be encountered during drilling? No

Will salt based (>15,000 ppm Cl) drilling fluids be used? No

Will oil based drilling fluids be used? No

BOP Equipment Type: Annular Preventor Double Ram Rotating Head None

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Commercial Disposal

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: _____ or Document Number: _____

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	26	16	42	0	80	400	80	0
SURF	14+3/4	10+3/4	40.5	0	1164	498	1164	0
1ST	9+7/8	7+5/8	29.7	0	9932	223	9932	8453
1ST LINER	6+5/8	5+1/2	11.6	9882	11994	0		
			Stage Tool		8453	1136	8453	0

Conductor Casing is NOT planned

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)

Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)

- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- Rule 318A.a. Exception Location (GWA Windows).
- Rule 318A.c. Exception Location (GWA Twinning).

RULE 502.b VARIANCE REQUEST

- Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

OTHER LOCATION EXCEPTIONS

Check all that apply:

- Rule 318.c. Exception Location from Rule or Spacing Order Number _____
- Rule 603.a.(2) Exception Location (Property Line Setback).

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments This is the 2nd well to be included with the already approved Form 2A, Doc# 401575754. On the Well Location tab, the TPZ entries are the planned Top of Injection Zone. The Injection Zone will be at about a 15% angle from the Top of the Lyons to TD. Cultural Items distances from this proposed wellhead are on the attachment saved as "Other".

This application is in a Comprehensive Drilling Plan No CDP #: _____

Location ID: 456888

Is this application being submitted with an Oil and Gas Location Assessment application? No

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

Signed: _____ Print Name: PAUL GOTTLÖB

Title: Regulatory & Engin. Tech. Date: 9/5/2018 Email: paul.gottlob@iptenergyservices

Operator must have a valid water right or permit allowing for industrial use or purchased water from a seller that has a valid water right or permit allowing for industrial use, otherwise an application for a change in type of use is required under Colorado law. Operator must also use the water in the location set forth in the water right decree or well permit, otherwise an application for a change in place of use is required under Colorado law. Section 37-92-103(5), C.R.S. (2011).

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved:  Director of COGCC Date: 12/11/2018

Expiration Date: 12/10/2020

API NUMBER
05 123 49041 00

Conditions Of Approval

All representations, stipulations and conditions of approval stated in the Form 2A for this location shall constitute representations, stipulations and conditions of approval for this Form 2 Permit-to-Drill and are enforceable to the same extent as all other representations, stipulations and conditions of approval stated in this Permit-to-Drill.

<u>COA Type</u>	<u>Description</u>
	1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU (spud notice) for the first well activity with a rig on the pad. 2) Comply with Rule 317.j. and provide cement coverage from end of first string casing to a minimum of 200' above Niobrara and from 200' below Shannon to 200' above Sussex. Verify coverage with cement bond log. 3) Bradenhead test shall be performed within 60 days of rig release and the Form 17 submitted within 10 days of the test.
	This Permit to Drill is approved subject to all the BMPs and COAs on the most recently approved Form 2A and any subsequently approved Form 4 for the Oil and Gas Location (Location ID #456888). The most recently approved Form 2A and any subsequent Form 4s containing applicable COAs for this location shall be posted onsite during construction, drilling, and completions operations.
	If location is not built by 2A expiration 8/26/2021, Operator must Refile Form 2A for approval prior to location construction.
	1. Injection is not authorized until approval of Subsequent Forms 31 and 33. 2. Retrieve water sample(s) from injection zone(s) before stimulating formation. Samples must be analyzed for Total Dissolved Solids at a minimum. 3. PRIOR TO PERFORMING OPERATIONS: Operator is required to contact COGCC to discuss acid and fracturing jobs. Approval of Form 4 may be required for acid and fracturing jobs. 4. PRIOR TO PERFORMING OPERATIONS: Operator is required to contact COGCC to discuss Step Rate Test or Injectivity Test criteria for Maximum Surface Injection Pressure determination. Prior approval of Form 4 may be required for step rate and injectivity tests. 5. For ALL NEW DRILL UNDERGROUND INJECTION WELLS a suite of open-hole Resistivity/Gamma Ray and Density/Neutron logs IS REQUIRED from Surface Casing shoe to TD. A PDF, TIFF, or PDS visual image and a LAS or DLIS file version of each log is required. 6. For all new and converted Underground Injection Control wells a Cement Bond Log (CBL) is required on the cased portions of the hole from the bottom of the casing to the top of the next shallower casing string for all casing strings other than the Surface Casing. Only a PDF, TIFF, or PDS visual image is required. 7. Operator must provide all tops of formations encountered from surface to TD on the Form 5 when submitted. 8. Well must pass MIT witnessed by COGCC before Subsequent Forms 31 and 33 will be approved. Well in must be in injection configuration.

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	Open-hole Resistivity Log with Gamma Ray Log will be run from TD into the surface casing. A Cement Bond Log with Gamma-Ray will be run on production casing, or on intermediate casing if a production liner is run. The Form 5, Completion Report, will list all logs run and have those logs attached.
2	Drilling/Completion Operations	For all new and converted Underground Injection Control wells a Cement Bond Log (CBL) is a required on the cased portions of the hole from the bottom of the casing to the top of the next shallower casing string for all casing strings other than the Surface Casing. Only a PDF visual image is required.
3	Drilling/Completion Operations	A Mud log is required containing at least the following information: Rate of Penetration Log, and the location of any drilling breaks or zones of lost circulation.

Total: 3 comment(s)

Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.
http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.
<http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf>

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401576086	FORM 2 SUBMITTED
401576164	OffsetWellEvaluations Data
401673563	OTHER
401753833	WELL LOCATION PLAT
401754361	WELLBORE DIAGRAM
401754362	DIRECTIONAL DATA
401754365	DEVIATED DRILLING PLAN
401870940	OFFSET WELL EVALUATION

Total Attach: 8 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Added Location ID#. Final review complete.	11/29/2018
Permit	Corrections made with Operator concurrence: - changed Zone Type from Single to Multiple - checked box for "Surface Owner is applicant" - deleted surface BMPs (P&A and final reclamation) - revised open hole logging BMP to conform with guidance. Permitting review complete.	11/21/2018
Permit	Status Pending - contacted operator for corrections: - change Zone Type from Single to Multiple - check the box for "Surface Owner is applicant" - delete surface-related BMPs (P&A and final reclamation) - revise logging BMP to standard language per guidance	11/21/2018
Permit	Passed Completeness	09/14/2018

Total: 4 comment(s)