FORM 2A Rev 04/18

State of Colorado
Oil and Gas Conservation Commission

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

Oil and Gas Location Assessment

Document Number: 401715678

Date Received: 08/28/2018

☒ New Location ☐ Refile ☐ Amend Existing Location Location#: _____

This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at http://cogcc.state.co.us/ for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID: **460656**

Expiration Date: **01/11/2022**

☒ This location assessment is included as part of a permit application.

CONSULTATION

☐ This location is included in a Comprehensive Drilling Plan. CDP # _____
☐ This location is in a sensitive wildlife habitat area.
☐ This location is in a wildlife restricted surface occupancy area.
☐ This location includes a Rule 306.d.(1)A.ii. variance request.

Operator

Operator Number: 10373
Name: NGL WATER SOLUTIONS DJ LLC
Address: 3773 CHERRY CRK NORTH DR #1000
City: DENVER State: CO Zip: 80209

Contact Information

Name: JOE VARGO
Phone: (303) 815-1010
Fax: ( )
email: Joseph.Vargo@nglep.com

FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID (Rule 706): 20180130 ☐ Gas Facility Surety ID (Rule 711): _____
☐ Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: ROY SWD FACILITY Number: _____
County: WELD

QuarterQuarter: NWNE Section: 28 Township: 1N Range: 66W Meridian: 6 Ground Elevation: 5047

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 326 feet FNL from North or South section line
2077 feet FEL from East or West section line

Latitude: 40.028580 Longitude: -104.780150

PDOP Reading: 2.3 Date of Measurement: 07/11/2018

Instrument Operator's Name: SCOTT SHERARD

RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:	LOCATION ID #	FORM 2A DOC #
Production Facilities Location serves Well(s)		401722226

FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	4	Oil Tanks*		Condensate Tanks*	5	Water Tanks*	12	Buried Produced Water Vaults*	
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	
Pump Jacks		Separators*		Injection Pumps*	5	Cavity Pumps*		Gas Compressors*	
Gas or Diesel Motors*		Electric Motors		Electric Generators*		Fuel Tanks*		LACT Unit*	
Dehydrator Units*		Vapor Recovery Unit*		VOC Combustor*		Flare*		Pigging Station*	

OTHER FACILITIES*

Other Facility Type	Number
Pump Building	1
Gunbarrell	3
Sludge Tanks - Condensate above	3

*Those facilities indicated by an asterisk (*) shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

Intra-facility flow lines generally 4” fusion bonded schedule 160 steel from WH to Facility Tanks adjacent to wellpad.

CONSTRUCTION

Date planned to commence construction: 01/15/2019 Size of disturbed area during construction in acres: 8.30

Estimated date that interim reclamation will begin: 06/15/2019 Size of location after interim reclamation in acres: 6.30

Estimated post-construction ground elevation: 5047

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H_2S anticipated? No

Will salt sections be encountered during drilling: No

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

Will oil based drilling fluids be used? No

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Commercial Disposal

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: or Document Number:

Centralized E&P Waste Management Facility ID, if applicable:

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: NGL WATER SOLUTIONS DJ Phone:

Address: 3773 Cherry Creek North Drive, Suite 1000 Fax:

Address: Email:

City: Denver State: CO Zip: 80209

Surface Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian

Check all that apply. The Surface Owner:
- ☐ is the mineral owner
- ☐ 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 from or produced to this Oil and Gas Location: No

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

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

Date of Rule 306 surface owner consultation

CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land:	☐ Irrigated	☒ Dry land	☐ Improved Pasture	☐ Hay Meadow	☐ CRP
Non-Crop Land:	☐ Rangeland	☐ Timber	☐ Recreational	☐ Other (describe):	
Subdivided:	☐ Industrial	☐ Commercial	☐ Residential		

Future Land Use (Check all that apply):

Crop Land:	☐ Irrigated	☒ Dry land	☐ Improved Pasture	☐ Hay Meadow	☐ CRP
Non-Crop Land:	☐ Rangeland	☐ Timber	☐ Recreational	☐ Other (describe):	
Subdivided:	☐ Industrial	☐ Commercial	☐ Residential		

CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	1011 Feet	747 Feet
Building Unit:	1011 Feet	794 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	239 Feet	79 Feet
Above Ground Utility:	275 Feet	127 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	246 Feet	87 Feet

INSTRUCTIONS:
- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.
- 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.
-For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- [x] 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.
- Large UMA Facility – 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: 07/17/2018

FOR MULTI-WELL PADS AND PRODUCTION FACILTIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- [x] Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (on or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*

- [x] By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

After careful consideration with the surface owner and the operator the wells and facilities were located on the property in a manner to maximize the distance to offsetting building units while also maintaining required setbacks to property lines, public roads and electrical lines. After looking at all possible alternate options it was determined that this layout is least impactful and as far as possible from neighboring building units and property's, while also remaining operationally feasible for the operator.

SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to used when segregating topsoil.

The required information can be obtained from the NRCS web site at http://soildatamart.nrcs.usda.org/ or from the COGCC web site GIS Online map page found at http://colorado.gov/cogcc. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: #56 - RENOHILL CLAY LOAM, 0 TO 3% SLOPES

NRCS Map Unit Name: #46 & #47 - OLNEY FINE SANDY LOAM, #46 IS 0 TO 1% SLOPES & #47 IS 1 TO 3% SLOPES

NRCS Map Unit Name: #75 - VONA SANDY LOAM, 0 TO 1% SLOPES

PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes ☐ No ☐

Plant species from: ☐ NRCS or, ☐ field observation Date of observation: _____

List individual species:

Check all plant communities that exist in the disturbed area.

- ☐ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- ☐ Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- ☐ Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- ☐ Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- ☐ Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- ☐ Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- ☐ Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- ☐ Alpine (above timberline)
- ☐ Other (describe): _____

WATER RESOURCES

Is this a sensitive area: ☐ No ☒ Yes

Distance to nearest

downgradient surface water feature: 14 Feet

water well: 991 Feet

Estimated depth to ground water at Oil and Gas Location 6 Feet

Basis for depth to groundwater and sensitive area determination:

DIstance to nearest:
1. Downgradient surface water feature: 14' nearest borrow ditch.
2. Water Well: 991' SW to Permit #261707, with Top Perf. at 840'. COGCC GIS Map shows 210' SW to Permit #304032 which Surveyor states could not be found and there are no indications on the DWR that it was actually drilled.
3. Due to surrounding Lakes & Ponds estimated depth to ground water at O&G Location at 6'.

Is the location in a riparian area: ☒ No ☐ Yes

Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer zone: No

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified:

Is the Location within a Floodplain? ☒ No ☐ Yes

Floodplain Data Sources Reviewed (check all that apply)

- ☒ Federal (FEMA)
- ☒ State
- ☒ County
- ☐ Local
- ☐ Other

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

WILDLIFE

- ☐ This location is included in a Wildlife Mitigation Plan
- ☐ This location was subject to a pre-consultation meeting with CPW held on

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500’ of a Building Unit) and is in an Urban Mitigation Area
- ☐ 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)

RULE 502.b VARIANCE REQUEST

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

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: The Location ID tab footages and lat/long reference the Roy SWD 1 well.
Cultural Setbacks are listed on the Cultural Items Drawing saved as "Other" and Distances from Well are from the nearest of the 4 wells planned for this location.

Stormwater:Location will be covered under NGL's field wide permit, permit number COR03 XXXX in process.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.
Signed: _____ Date: 08/28/2018 Email: paul.gottlob@iptenergyservices.com

Print Name: PAUL GOTTLOB Title: Regulatory & Engin. Tech.

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: 1/12/2019

Conditions Of Approval

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

COA Type	Description
	The Approved Form 2A permit will be posted at the location during construction, drilling, and completions operations.

Best Management Practices

No	BMP/COA Type	Description
1	Planning	604.c(2)M. Fencing: The Wellheads will have very small shelters enclosing them with locked doors. The Facility Tanks will be cement bermed and fenced.
2	Planning	604.c.(2)N. Control of fire hazards: All material that is considered a fire hazard shall be a minimum of 25' from the wellhead tanks or separators. Electrical equipment shall comply with API IRP 500 and will comply with the current national electrical code.
3	Traffic control	604.c.(2)S. Access Roads: The access road will be constructed to accommodate local emergency vehicles. This road will be maintained for access at all times. Traffic will be routed to minimize local interruption. Dust control measures will also be utilized.
4	Traffic control	604.c.(2)D: If required by the local government, a traffic plan shall be coordinated with the local jurisdiction prior to commencement of move in and rig up. Any subsequent modification to the traffic plan must be coordinated with the local jurisdiction.
5	General Housekeeping	604.c.(2)P. Trash Removal: All trash, debris and material not intrinsic to the operation of the oil and gas facility shall be removed and legally disposed of as applicable.
6	Storm Water/Erosion Control	Storm Water/Erosion Control: Implement and maintain BMPs to control storm-water runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. Co-locate gas and water gathering lines whenever feasible, and mitigate any erosion problems that arise due to the construction of any pipeline(s). Typical storm-water BMPs installed include a diversion ditch and berm with sediment traps and installation of wattles where necessary.

7	Material Handling and Spill Prevention	Construction / Rule 604.c(2) G: Berms or other secondary containment devices in Designated Setback Locations shall be constructed around crude oil, condensate, and produced water storage tanks and shall enclose an area sufficient to contain and provide secondary containment for one-hundred fifty percent (150%) of the largest single tank. Berms or other secondary containment devices shall be sufficiently impervious to contain any spilled or released material. All berms and containment devices shall be inspected at regular intervals and maintained in good condition. The site will be inspected at a minimum of weekly to a maximum of daily. No potential ignition sources shall be installed inside the secondary containment area unless the containment area encloses a fired vessel. Refer to API Bulletin D16: Suggested Procedure for “Development of a Spill Prevention Control and Countermeasure Plan,” 5th Edition (April 2011). Only the 5th Edition of the API bulletin applies to this rule; later amendments do not apply. All material incorporated by reference in this rule is available for public inspection during normal business hours from the Public Room Administrator at the office of the Commission, 1120 Lincoln Street, Suite 801, Denver, Colorado 80203. In addition, these materials may be examined at any state publications depository library and are available from API at 1220 L Street, NW Washington, DC 20005-4070. NGL plans to construct Cement containment berms per the above guidelines to completely contain all of the planned Tanks on this location.
8	Material Handling and Spill Prevention	Material Handling and Spill Prevention: Construction: 604.c.(3)B.i. An engineered containment system will be constructed around the tank battery. The containment system will be constructed of a perimeter of cement floors and walls to prevent any fluid from leaving the site.
9	Material Handling and Spill Prevention	Material Handling and Spill Prevention: 604.c.(2)F. Leak Detection Plan: Operator will monitor production facilities weekly at a minimum to a maximum of daily to identify fluid leaks, including, but not limited to, visually inspecting all wellheads, tanks and fittings. Additionally, annual SPCC inspections will be conducted and documented. Annual flowline testing will also occur according to COGCC rules 1101 and 1102. Inspection and record retention of flowline testing will be in accordance per COGCC regulation. All records will be made available to the COGCC upon to request.
10	Construction	803. Light sources during all phases of operations will be directed downwards and away from occupied structures where possible. Lighting shall be mounted at Facility on a pole or building and directed downward to illuminate key areas within the facility, while minimizing the amount of light projected outside the facility.
11	Construction	604.c.(2).Q. If the rig contracted requires, all guy line anchors left buried for future use shall be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor.
12	Construction	604.c.(2).E. This will be a 4 well pad (One Vertical and 3 Directional).
13	Noise mitigation	604.c.(2)A. Sound walls will be used to surround the well site during drilling and completion operations.
14	Emissions mitigation	604.c.(2)C.i. Green Completions - Emission Control System: Test separators and associated flow lines and sand traps shall be installed on-site to accommodate green completions techniques pursuant to COGCC Rules. In the anticipated absence of a viable gas sales line, the flowback gas shall be thermally oxidized in an emissions control device (ECD), which will be installed and kept in operable condition for least the first 90-days of production pursuant to CDPHE rules. This ECD shall have an adequate capacity for 1.5 times the largest flowback within a 10 mile radius, will be flanged to route gas to other or permanent oxidizing equipment and shall be provided with the equipment needed to maintain combustions where non-combustible gases are present. NOT APPLICABLE TO UIC WELLS AS NO HYDROCARBONS EXPECTED
15	Odor mitigation	805: Oil & gas facilities and equipment shall be operated in such a manner that odors and dust do not constitute a nuisance or hazard to public welfare. Odors will be managed by engine filters and well gas will initially be flared until connected to sales line. FLARING NOT APPLICABLE TO UIC WELLS AS NO HYDROCARBONS EXPECTED

16	Drilling/Completion Operations	604.c.I: Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections shall be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing shall be conducted and the documented results shall be retained by the operator for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing shall be conducted on a daily basis when practicable.
17	Drilling/Completion Operations	604.c.(2).O. Drilling and Completion-All loadlines shall be bullplugged or capped.
18	Drilling/Completion Operations	604.c.(2)B.i Operator will be utilizing a closed loop system.

Total: 18 comment(s)

Attachment Check List

Att Doc Num	Name
2316495	RULE 306.E. CERTIFICATION
401715678	FORM 2A SUBMITTED
401723810	NRCS MAP UNIT DESC
401738913	PRE-APPLICATION NOTIFICATION CERTIFICATION
401746674	ACCESS ROAD MAP
401746675	OTHER
401746678	HYDROLOGY MAP
401746679	LOCATION DRAWING
401746682	LOCATION PICTURES
401746683	MULTI-WELL PLAN
401746685	OTHER
401746686	FACILITY LAYOUT DRAWING
401759027	WASTE MANAGEMENT PLAN

Total Attach: 13 Files

General Comments

User Group	Comment	Comment Date
Permit	Final Review Completed.	01/08/2019
OGLA	Supervisor review - update construction and interim reclamation dates to future - contacted operator and updated dates. OGLA review complete and task passed.	01/03/2019
OGLA	Operator provided 306.e. with information regarding meeting request (attached). Send to OGLA supervisor for review.	12/18/2018
OGLA	Operator responded with concurrence to add remote related location, change to 5 condensate tanks to match facility drawing, remove downhole BMPs, added timing for inspections on containment (604.c.(2).G, removed duplicate BMP for containment, expaned on guy line anchors will follow COGCC rules if the rig contracted uses them. At this time a specific rig has not been contracted. Added stormwater and containmnet for surface water and shallow groundwater. 306.c. provided referenced a meeting based on a 305.c. Request more information on meeting request.	12/12/2018
OGLA	OGLA review - should have related remote location 401722130 added, Facility drawing has 5 condensate/oil tanks and 2A facility list has 3, need 306.e. certification, Waste management plan references benefical reuse, but 2A has commerical disposal, has downhold BMPs, need more specifics on frequency of inspections for spills, need stormwater and erosion control for nearby surface water body, need containment based on shallow groundwater, need leak detection plan.	12/11/2018
OGLA	Updated facility list from 5 wells to 4 wells and updated BMP for 4 wells vs. 5.	10/04/2018
OGLA	Changed 30-day notice to pre-application notification certification. Form 2A and BMPs reference 5 wells and pumps, but drawing and multi-well plan only have 4 wells.	10/03/2018
Permit	Passed Completeness	09/25/2018
OGLA	Passed Buffer Zone completeness review	09/11/2018
OGLA	Did not pass Buffer Zone completeness review. Pre-Application Notification to Building Unit owners on 8/12/18 is less than 30 days prior to form submittal to COGCC. Missing leak detection plan. Missing Waste Management Plan. Contacted operator and pushed to Draft.	09/11/2018
Permit	Referred to OGLA supervisor for buffer zone review.	09/05/2018

Total: 11 comment(s)