

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



Document Number:

401632296

Date Received:

05/08/2018

Oil and Gas Location Assessment

☒ 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:

455594

Expiration Date:

06/21/2021

☒ 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: 81490

Name: ST CROIX OPERATING INC

Address: P O BOX 13799

City: DENVER State: CO Zip: 80201

Contact Information

Name: ANDY PETERSON

Phone: (970) 203-4263

Fax: ()

email: andy@petersonenergyoperating.com

FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID (Rule 706): 20000108 ☐ Gas Facility Surety ID (Rule 711): _____

☐ Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: JACK CREEK Number: 1

County: WASHINGTON

QuarterQuarter: SENE Section: 4 Township: 2S Range: 51W Meridian: 6 Ground Elevation: 4597

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: 2038 feet FNL from North or South section line

600 feet FEL from East or West section line

Latitude: 39.911610 Longitude: -103.089220

PDOP Reading: 2.2 Date of Measurement: 05/07/2018

Instrument Operator's Name: ADAM SHORT

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 #

FACILITIES

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

Wells	<u>1</u>	Oil Tanks*	<u>4</u>	Condensate Tanks*	<u> </u>	Water Tanks*	<u>2</u>	Buried Produced Water Vaults*	<u> </u>
Drilling Pits	<u> </u>	Production Pits*	<u> </u>	Special Purpose Pits	<u> </u>	Multi-Well Pits*	<u> </u>	Modular Large Volume Tanks	<u> </u>
Pump Jacks	<u> </u>	Separators*	<u> </u>	Injection Pumps*	<u> </u>	Cavity Pumps*	<u>1</u>	Gas Compressors*	<u> </u>
Gas or Diesel Motors*	<u> </u>	Electric Motors	<u>1</u>	Electric Generators*	<u>1</u>	Fuel Tanks*	<u> </u>	LACT Unit*	<u> </u>
Dehydrator Units*	<u> </u>	Vapor Recovery Unit*	<u> </u>	VOC Combustor*	<u>1</u>	Flare*	<u> </u>	Pigging Station*	<u> </u>

OTHER FACILITIES*

Other Facility Type

Number

GUNBARREL	1
HEATER TREATER	1
SKIM TANK	1

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:

Well head to tanks will have a 3 inch buried pipe.

CONSTRUCTION

Date planned to commence construction: 06/01/2018 Size of disturbed area during construction in acres: 2.10
Estimated date that interim reclamation will begin: 09/01/2018 Size of location after interim reclamation in acres: 1.70
Estimated post-construction ground elevation: 4597

DRILLING PROGRAM

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

Is H₂S 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: ONSITE Drilling Fluids Disposal Method: Land application

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: Palser Land Company

Phone: _____

Address: 36393 C.R. 41

Fax: _____

Address: _____

Email: _____

City: OTIS State: CO Zip: 80743

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: Yes

The right to construct this Oil and Gas Location is granted by: oil and gas lease

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:	743 Feet	733 Feet
Building Unit:	912 Feet	894 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	590 Feet	119 Feet
Above Ground Utility:	985 Feet	957 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	600 Feet	129 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:

- ☒ 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: 05/03/2018

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

- ☐ 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.*)
- ☐ 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.

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 be 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: #55 Platner loam, 0 to 3% slopes

NRCS Map Unit Name: _____

NRCS Map Unit Name: _____

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: 2872 Feet

water well: 771 Feet

Estimated depth to ground water at Oil and Gas Location 200 Feet

Basis for depth to groundwater and sensitive area determination:

Distance to nearest:

1. Downgradient surface water feature: 2872' NW to intermittent runoff drainage channel.
2. Water well: Permit #101213 is aprx. 771' NE with a depth of 240' and perforated at 200'.
3. Estimated depth to groundwater at O&G location: 200'

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 No
zone:

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 609

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 Facility part of this pad will only be built if the well is a producer.
The attached Location Drawing has Cultural Distances listed.
A Drilling pit and fluids handling agreement for Water Based bentonitic drilling fluids with the Surface Owner is attached.

Attachment saved as "Other" is a Rule 305 - 30 Day Notice Waiver form the Surface/Building Unit Owner.
Also attached is a Rule 305 Evidence of Compliance Letter to the Director.

A Waste Management Plan is Attached.

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

Signed: _____ Date: 05/08/2018 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: 6/22/2018

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

	St. Croix will be using a closed loop system. Drilling pits will not be used at this Location.
	Operator shall comply with the maximum permissible noise levels for Light Industrial pursuant to Rule 802.b.

Best Management Practices

No BMP/COA Type

Description

1	Planning	Rule 604.c(2)M. Fencing: A meeting with the surface owner will determine a fencing plan. This site is in a remote crop land area and no fencing is planned.
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2	Planning	Rule 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	Rule 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 if needed.
4	Traffic control	RULE 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. A Rig Move permit will be secured with Washington County prior to rig move.
5	General Housekeeping	Rule 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	Material Handling and Spill Prevention	Rule 604.c.(2)F. Leak Detention Plan: Pumper will visit the location daily and visually inspect all tanks and fittings for leaks. Additionally, monthly documented SPCCP inspections are conducted pursuant to 40 CFR 112.
7	Material Handling and Spill Prevention	RULE 604.c.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. 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.
8	Material Handling and Spill Prevention	Tank Specifications: RULE 604.c.R: All newly installed or replaced crude oil and condensate storage tanks shall be designed, constructed, and maintained in accordance with National Fire Protection Association (NFPA) Code 30 (2008 version). The operator shall maintain written records verifying proper design, construction, and maintenance, and shall make these records available for inspection by the Director. Only the 2008 version of NFPA Code 30 applies to this rule. This rule does not include later amendments to, or editions of, the NFPA Code 30. NFPA Code 30 may be examined at any state publication depository library. Upon request, the Public Room Administrator at the office of the Commission, 1120 Lincoln Street, Suite 801, Denver, Colorado 80203, will provide information about the publisher and the citation to the material.
9	Dust control	Dust & Odor: 805.c: Operator shall employ practices for control of fugitive dust caused by their operations. Such practices shall include but are not limited to the use of speed restrictions, regular road maintenance including watering or mag chloride as needed, restriction of construction activity during high wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. Additional management practices such as road surfacing, wind breaks and barriers may be used.
10	Construction	604.c.(3)B. Construction : Berm Construction. Tank berms shall be gravel and designed to contain 150% of the capacity of the largest tank. All berms will be visually checked periodically to ensure proper working condition. Secondary containment devices shall be sufficiently impervious to contain any spilled or released material.
11	Construction	Rule 803 Light sources during all phases of operations will be directed downwards and away from occupied structures where possible. Once the drilling and completion rigs leave the site, there will be no permanently installed lighting on site.
12	Emissions mitigation	Guy Line Anchors: 604.c.(2).Q: 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.
13	Odor mitigation	Rule 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.

14	Drilling/Completion Operations	Well Site Clearance: There are no wells within 1500' as noted on the Form 2.
15	Drilling/Completion Operations	Identification of P&A Wells: 604.c.(2).U: The operator shall identify the location of the wellbore with a permanent monument as specified in Rule 319.a.(5). The operator shall also inscribe or imbed the well number and date of plugging upon the permanent monument.

Total: 15 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
1010433	OTHER
1010436	WASTE MANAGEMENT PLAN
401632296	FORM 2A SUBMITTED
401632327	NRCS MAP UNIT DESC
401633791	ACCESS ROAD MAP
401633792	FACILITY LAYOUT DRAWING
401633793	HYDROLOGY MAP
401633794	LOCATION PICTURES
401634136	RULE 306.E. WAIVER
401634137	PRE-APPLICATION NOTIFICATION CERTIFICATION
401634304	LOCATION DRAWING

Total Attach: 11 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	Removed the Drilling Pit reference from the Waste Management Program - OTHER DISPOSAL DESCRIPTION. Changed the Cuttings Disposal to OFFSITE and COMMERCIAL DISPOSAL.	06/22/2018
Permit	Permitting review complete. Final review complete.	06/22/2018
OGLA	Building Unit located within the Buffer Zone is currently unoccupied.	06/21/2018
OGLA	Operator submitted a Variance Request to have a Drilling Pit on this Buffer Zone Location. - 06/06/2018 Variance Request was withdrawn. - 06/20/2018 Operator using a Closed Loop System; changed Closed Loop from NO to YES on Drilling tab.	06/14/2018
OGLA	<ul style="list-style-type: none"> - Reseve pits for drilling surface casing only. - Drilling Pit can not be used for cuttings. Disposal should be Commercial. - Attachment #401632324 needs to be redacted. - Removed original - Uploaded redacted version - Missing BMPs for Noise, Closed Loop System - Drilling Pit [604.c(B)ii], Loadlines, Guy Line Anchors, Tank Specifications, Well Site Clearance and Identification of P&A Wells - Added missing BMPs with the exception of Noise and Closed Loop System. - 06-07-2018 - Per Operator, added Noise and Closed Loop System COAs. - 06/21/2018 - Dust BMP is inadequate - Added Dust BMP - 06/07/2018 - Changed Land Application to ONSITE. Cuttings Disposal in question due to Drilling Pit rules. - Drilling Waste Management is not in compliance with 604.c(B)ii. 	05/29/2018
Permit	Passed completeness.	05/09/2018
OGLA	Passed Buffer Zone review.	05/09/2018
OGLA	Did not pass Buffer Zone completeness - missing Waste Management Plan required by Rule 303.b.(3)J.ii. Contact operator an push to Draft.	05/09/2018
Permit	Referred to OGLA supervisor for buffer zone completeness review.	05/09/2018

Total: 9 comment(s)