

**APPLICATION FOR PERMIT TO:**

**Drill**       Deepen       Re-enter       Recomplete and Operate

Date Received:  
02/22/2017

TYPE OF WELL    OIL     GAS     COALBED     OTHER \_\_\_\_\_      Refilling

ZONE TYPE      SINGLE ZONE     MULTIPLE ZONES     COMMINGLE ZONES       Sidetrack

Well Name: CSF      Well Number: 41C-4-791

Name of Operator: VANGUARD OPERATING LLC      COGCC Operator Number: 10531

Address: 5847 SAN FELIPE #3000

City: HOUSTON      State: TX      Zip: 77057

Contact Name: Jack Desmond      Phone: (720)359-1612      Fax: ( )

Email: jdesmond@progressivepcs.net

**RECLAMATION FINANCIAL ASSURANCE**  
Plugging and Abandonment Bond Surety ID: \_\_\_\_\_

**WELL LOCATION INFORMATION**

QtrQtr: SESW      Sec: 33      Twp: 6S      Rng: 91W      Meridian: 6

Latitude: 39.479245      Longitude: -107.559985

Footage at Surface: 660 Feet      FNL/FSL      FSL      2308 Feet      FEL/FWL      FWL

Field Name: MAMM CREEK      Field Number: 52500

Ground Elevation: 6539.8      County: GARFIELD

GPS Data:  
Date of Measurement: 11/11/2016      PDOP Reading: 1.8      Instrument Operator's Name: J. Kirkpatrick

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

Footage at Top of Prod Zone:	FNL/FSL	FEL/FWL	Bottom Hole:	FNL/FSL	FEL/FWL
<u>489</u>	FNL	<u>662</u>	FEL	<u>489</u>	FNL
					<u>662</u>
					FEL

Sec: 4      Twp: 7S      Rng: 91W      Sec: 4      Twp: 7S      Rng: 91W

**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: Yes

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

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.)

Section 4-7S-91W: Lot 1-4 & S/2S/2  
Section 31-6S-91W: SE/4SW/4  
Section 5-7S-91W: Lot 1-3 & S/2SE/4  
Section 6-7S-91W: Lot 3 & SE/4 SE/4  
Section 19-7S-91W: NE/4SW/4 & N/2SE/4  
Section 20-7S-91W: NE/4NW/4 & SW/4  
Section 21-7S-91W: N/2N/2  
Section 22-7S-91W: NW/4NE/4 & N/2NW/4 & SE/4  
Section 29-7S-91W: N/2  
Section 30-7S-91W: Lot 2 & S/2NE/4 & SE/4NW/4 & E/2SW/4 & SE/4

Total Acres in Described Lease: 2189 Described Mineral Lease is:  Fee  State  Federal  Indian

Federal or State Lease # COC-66576

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 0 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5280 Feet  
Building Unit: 5280 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 5280 Feet  
Above Ground Utility: 5280 Feet  
Railroad: 5280 Feet  
Property Line: 4337 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: \_\_\_\_\_

## 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: 314 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

Order No. 191-32 approves all of Section 4-7S-91W to be spaced for WMFK and ILES and allow for 10 acre density with 100 foot setbacks to lease line.

## OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
ILES	ILES	191-32		ALL
WILLIAMS FORK	WMFK	191-32		ALL

### DRILLING PROGRAM

Proposed Total Measured Depth: 8618 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: \_\_\_\_\_ Feet  No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H<sub>2</sub>S 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 609

### DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Recycle/reuse

Cuttings Disposal: ONSITE Cuttings Disposal Method: Beneficial reuse

Other Disposal Description:

Beneficial reuse or land application plan submitted? \_\_\_\_\_

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	65	0	80	194	80	0
SURF	12+1/4	9+5/8	36	0	900	380	900	0
1ST	7+7/8	4+1/2	11.6	0	8618	1018	8618	3100

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 The nearest wellbore in same formation is CSF 41D-4-791. Vanguard has a JOA with Ursa for the development of the Minerals in Section 4.

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

Location ID:       424341      

Is this application being submitted with an Oil and Gas Location Assessment application?       Yes      

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

Signed: \_\_\_\_\_ Print Name:       Jack Desmond      

Title:       Regulatory Analyst       Date:       2/22/2017       Email:       jdesmond@progressivepcs.net      

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: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

**API NUMBER**  
  
05

**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.**

<b>COA Type</b>	<b>Description</b>

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	Rule 317.p Requirement to Log Well: One of the first wells drilled on the pad will be logged with open-hole Resistivity Log and Gamma Ray Log from TD into the surface casing. All wells on the pad will have a cement bond log with gamma-ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. The Form 5, Completion Report, for each well on the pad will list all logs run and have those logs attached. The Form 5 for a well without open-hole logs shall clearly state "No open-hole logs were run" and shall clearly identify (by API#, well name & number) the well in which open-hole logs were run.

Total: 1 comment(s)

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401157683	FORM 2 SUBMITTED
401213450	DEVIATED DRILLING PLAN
401213451	DIRECTIONAL DATA
401214226	WELL LOCATION PLAT

Total Attach: 4 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)

**Public Comments**

No public comments were received on this application during the comment period.

