

FORM
2A

Rev
06/19

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:

401779724

Date Received:

10/17/2018

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:

465709

Expiration Date:

07/02/2022

☒ 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: 47120

Name: KERR MCGEE OIL & GAS ONSHORE LP

Address: P O BOX 173779

City: DENVER State: CO Zip: 80217-3779

Contact Information

Name: John Piekara

Phone: (720) 929-3094

Fax: ()

email: john.piekara@anadarko.com

FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID (Rule 706): 20010124 ☐ Gas Facility Surety ID (Rule 711): _____

☐ Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: JODSTER SOUTH Number: 24-25HZ PAD

County: LARIMER

QuarterQuarter: SENE Section: 25 Township: 5N Range: 68W Meridian: 6 Ground Elevation: 4861

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: 2197 feet FNL from North or South section line

704 feet FEL from East or West section line

Latitude: 40.372011 Longitude: -104.947732

PDOP Reading: 1.6 Date of Measurement: 09/03/2018

Instrument Operator's Name: ROB WILSON

LOCAL GOVERNMENT INFORMATION

County: LARIMER Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: County _____

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this COGCC application? If the local government has waived its right to precede the COGCC in siting determination, indicate by selecting "NO" here and selecting "Waived" below.

☐ Yes ☒ No

If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location. ☐

The local government siting permit type is: _____

The local government siting permit was filed on: _____

The disposition of the application filed with the local government is: Other _____

Additional explanation of local process:

No permit is required in unincorporated Larimer County. Larimer County is aware that an oil and gas location is proposed as KMG has submitted an access permit .

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	25	Oil Tanks*	_____	Condensate Tanks*	3	Water Tanks*	10	Buried Produced Water Vaults*	_____
Drilling Pits	_____	Production Pits*	_____	Special Purpose Pits	_____	Multi-Well Pits*	_____	Modular Large Volume Tanks	_____
Pump Jacks	25	Separators*	31	Injection Pumps*	_____	Cavity Pumps*	_____	Gas Compressors*	_____
Gas or Diesel Motors*	_____	Electric Motors	_____	Electric Generators*	_____	Fuel Tanks*	_____	LACT Unit*	5
Dehydrator Units*	_____	Vapor Recovery Unit*	_____	VOC Combustor*	3	Flare*	_____	Pigging Station*	_____

OTHER FACILITIES*

Other Facility Type	Number
---------------------	--------

Gas pipeline	3
Oil pipeline	1
Temp ECD	7
Gas lift lines	25
Flow lines	25
Compressed air supply lines	25
Temp 500 barrel tanks	54

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:

Two 500 barrel skid-mounted frac tanks will be temporarily placed onsite for use of the pre-spud rig only. One tank will store water and the other will store water-based mud. An ECD may be utilized during drilling.

Fifty two temporary 500 barrel skid-mounted frac tanks will be utilized during flowback and initially for produced water. Six temporary ECDs will be utilized while the temporary tanks are present. The temporary equipment is estimated to be on location for 6 to 9 months.

Please see Comments section. Description of pipelines and flow lines does not fit in space provided.

CONSTRUCTION

Date planned to commence construction: 06/25/2019 Size of disturbed area during construction in acres: 25.03
Estimated date that interim reclamation will begin: 12/24/2019 Size of location after interim reclamation in acres: 7.42
Estimated post-construction ground elevation: 4861

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? Yes

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:

PLEASE SEE COMMENTS SECTION. DISPOSAL DESCRIPTION WILL NOT FIT IN SPACE PROVIDED

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: _____ or Document Number: _____

Centralized E&P Waste Management Facility ID, if applicable: 149021

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: ANADARKO E&P ONSHORE LLC

Phone: _____

Address: PO BOX 173779

Fax: _____

Address: _____

Email: _____

City: DENVER State: CO Zip: 80217

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: 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:	410 Feet	388 Feet
Building Unit:	872 Feet	983 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	689 Feet	805 Feet
Above Ground Utility:	730 Feet	844 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	265 Feet	47 Feet
School Facility::	5280 Feet	5280 Feet
School Property Line:	5280 Feet	5280 Feet
Child Care Center:	5280 Feet	5280 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, Designated Outside Activity Area, School Facility, and Child Care Center – as defined in 100 Series Rules.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

SCHOOL SETBACK INFORMATION

Was Notice required under Rule 305.a.(4)? ☐ Yes ☒ No

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: 08/29/2018

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.

The placement of the 52 temporary 500bbl produced water tanks are within 1,000' from a building unit. These tanks are not permanent facilities and will be removed incrementally from location as produced water declines. Utilizing the temporary tanks was chosen as an option for shorter term disturbance versus placing and removing larger more permanent water storage tanks. The maximum time any temporary tank is expected to be on location is estimated to be 6 – 9 months. The placement of these temporary tanks is further from a building unit than the planned Jodster South wells. The location of these tanks allows the most efficient removal of produced water and tanks as they are no longer necessary. Permanent facilities are located greater than 1,000' from a building unit.

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: 7—Ascalon sandy loam, 0 to 3 percent slopes

NRCS Map Unit Name: 95—Satanta loam, 1 to 3 percent slopes

NRCS Map Unit Name: 101—Stoneham loam, 1 to 3 percent 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: 274 Feet

water well: 659 Feet

Estimated depth to ground water at Oil and Gas Location 21 Feet

Basis for depth to groundwater and sensitive area determination:

Hillsboro Ditch: 274' NW Elev: 4849'

Pond: 990 NW Elev: 4827'

Loc Elev: 4861'

Nearest water wells:

659' N, Permit 170537--A, depth 9', Static Water Level 5', Elev 4845'

Sensitive Area Determination: SENSITIVE AREA, downgradient surface water feature within 1,000'

Location is NOT in floodplain according to Weld County and FEMA

(SWL calc: $(4861 - 4845) + 5 = 21$)

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 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

Drilling fluids disposal: KMG will reuse water-based drilling fluids to the maximum extent possible, at which point they will either be land applied or taken to a licensed, commercial disposal site; the decision will be based upon laboratory analysis of fluids. KMG will reuse oil-based drilling fluids to the maximum extent possible, at which point they will be returned to the fluids manufacturer for reconditioning or disposal at a licensed, commercial disposal site.

Cuttings disposal: Water-based cuttings will be disposed of using a Centralized E&P Waste Management facility or a private spread field, depending on what is feasible at the time of drilling. Oil-based cuttings will be disposed of offsite and at a licensed, commercial disposal site.

Pipelines: Buried pipelines will be utilized to gather the gas and oil product from the location (3 gas pipelines, 1 oil pipeline). Both gas and oil pipelines will be constructed from steel of suitable wall thickness and material grade to meet the respective gathering systems design pressure. Gas pipelines will range in diameter from 4" to 20"; oil pipelines from 4" to 12". Capacity of pipelines will vary based on diameter. Pipelines will begin at the location and terminate at larger trunk lines in the area.

Temporary above ground polyethylene water pipelines (diameter 10" – 12" with a 60 BPM capacity) will deliver water to location operations from larger trunk lines.

25 flow lines will flow to the production facility location. During production, flow direction in the flow lines is from the well head to the production facility. The size of flow lines is typically 2". Flow lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the production facility, approximately 230' (North wells) to 210' (South wells).

25 compressed air supply lines will also be installed from the well head to the production facility. During operation flow direction in the supply lines will be from the production facility to the well head. The size of the supply lines is typically 1". Supply lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the production facility, approximately 230' (North wells) to 210' (South wells).

Gas lift lines are also occasionally installed (one per well) from the well head to the production facility. During operation flow direction in the gas lift lines will be from the production facility to the well head. The size of the gas lift lines is typically 2". Gas lift lines will be constructed from steel pipe, buried, and will equal the distance between the well heads and the tank battery, approximately 230' (North wells) to 210' (South wells).

CUSTODY TRANSFER: Gas custody transfer occurs at the custody transfer meter located on the proposed production facility location. Oil custody transfer occurs at the LACT Unit located on the proposed production facility location. Oil is transferred from the LACT Unit into a pipeline owned by Anadarko Wattenberg Oil Complex LLC.

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

Signed: _____ Date: 10/17/2018 Email: DJREGULATORY@ANADARKO.COM

Print Name: JOHN PIEKARA Title: SR. REGULATORY ANALYST

Based on the information provided herein, this Oil and Gas Location Assessment complies with COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved:  _____ Director of COGCC Date: 7/3/2019

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
		Operator shall post a copy of the approved Form 2A on the Location during all construction, drilling, and well completion activities.
<u>Best Management Practices</u>		
No	BMP/COA Type	Description
1	Planning	604c.(2).E. Multi-Well Pads: In order to reduce surface impact, this application is for a 25-well pad / oil and gas location.
2	Planning	604c.(2).Q. Guy Line Anchors: Guy line anchors will not be used. Base Beams will be used to stabilize the rig and removed after drilling.
3	Planning	604c.(2).R. Tank Specifications: Two 500 barrel skid-mounted frac tanks will be temporarily placed on-site for use of the pre-spud rig only. One tank will store water and the other will store water based mud.
4	Planning	604c.(2).S. Access Roads: KMG will utilize a lease access road from Larimer CR 1 / Weld CR 13 for drilling, completions, and production operations, including maintenance equipment. The road will be properly constructed and maintained to accommodate for local emergency vehicle access.
5	Planning	604c.(2).V. Development From Existing Well Pads: Drilling from an existing well pad was not feasible for the development of the wells on this proposed oil and gas location; however, this well pad will be considered for future well locations
6	Community Outreach and Notification	As a part of planning this proposed location, Kerr-McGee held multi-disciplinary Surface Impact Planning Meetings regarding the impacts and mitigations associated with this proposed location. The toll-free hotline number and email for the Anadarko Colorado Response Line will be posted at the entrance to the lease access road for stakeholders during drilling and completion operations at this proposed location.
7	Traffic control	KMG currently plans to use the water-on-demand system on this location which is a network of over 140 miles of underground pipeline that stretches the length of the 20-mile by 30-mile field to source and transport water to completions crews. This system eliminates more than 2,000 truck trips per day, also reducing associated concerns of traffic, noise, emissions and dust.
8	General Housekeeping	604c.(2).O. Loadlines: All loadlines shall be bullplugged or capped.
9	General Housekeeping	604c.(2).P. Removal of Surface Trash: A commercial size trash bin for removing debris will be located on site. This bin will be for use by all parties affiliated with the operation. Upon completion of operations, the commercial trash bin will be removed from the location and disposed of in an appropriate manner.
10	General Housekeeping	803. Lighting: Site lighting shall be shielded and directed downward and inward toward operations to avoid glare on public roads and nearby Building Units.
11	Storm Water/Erosion Control	604c.(2).G. Berm Construction: Kerr-McGee will create tertiary containment by construction of a berm or diversion dike, site grading, or other comparable measures sufficient to further protect adjacent water features, including Hillsboro Ditch 274' and the pond 990' northwest of this proposed oil and gas location.
12	Storm Water/Erosion Control	604c.(2).W. Site-Specific Measures: KMG maintains a Storm Water Management Plan that assesses erosion control for every KMG operated location. This location will be added to this plan once construction begins. This site will be inspected every fourteen (14) days during construction activities, every twenty-eight (28) days after construction is completed, and after any major weather event.
13	Material Handling and Spill Prevention	604c.(2).N. Control of Fire Hazards: KMG and its contractors will employ best management practices during the drilling and production of its wells and facilities and will comply with appropriate COGCC rules concerning safety and fire. KMG will ensure that any material that might be deemed a fire hazard will remain no less than twentyfive (25) feet from the wellhead(s), tanks and separator(s).
14	Material Handling and Spill Prevention	606.A.d. for flammable liquids near the wellhead – Flammable liquids will not be stored within 50' of the proposed wellheads. If storage of flammable liquid is to be conducted within 50' of the wellhead, sufficient safety measure will be implemented.

15	Material Handling and Spill Prevention	604c.(2).F. Leak Detection Plan: Automation technology will be utilized at this facility. This technology includes the use of fluid level monitoring for the tanks and produced water sumps, high-level shut offs, and electronic sensors to monitor the interstitial space of double-walled produced water sumps. All automation is monitored by Kerr-McGee's Integrated Operations Center (IOC), which is manned 24 hours per day, 7 days per week.
16	Material Handling and Spill Prevention	604c.(2).G. Berm Construction: A geosynthetic liner will be laid under the tanks on this location and a metal containment will be constructed. Berms or other secondary containment devices will be constructed around crude oil, condensate, and produced water storage tanks and shall enclose an area sufficient to contain and provide secondary containment for 150% of the largest single tank. Berms and other secondary containment devices shall be inspected at scheduled intervals and maintained in good condition.
17	Material Handling and Spill Prevention	604.c.(2)R BMP: crude oil and condensate storage tanks shall be designed, constructed, and maintained in accordance with National Fire Protection Association (NFPA) Code 30 (2008 version). written records verifying proper design, construction, and maintenance will be maintained and made available to the COGCC upon request.
18	Material Handling and Spill Prevention	604c.(2).G. Berm Construction: The temporary produced water storage tanks will be staged on a geosynthetic liner and surrounded by an earthen berm. The berms shall enclose an area sufficient to provide secondary containment for 150% of the volume of the largest single tank, and shall be sufficiently impervious to contain spilled or released material. Berms and the liner shall be inspected at regular intervals and maintained in good condition.
19	Dust control	805.c. Dust: Water will be placed on dirt access roads to mitigate dust as needed. Magnesium chloride will also be used as needed on access roads to further abate dust.
20	Construction	604c.(2).M. Fencing Requirements: The completed wellsites will be surrounded with a fence and gate with adequate lock to restrict access to authorized personnel only. KMG personnel will monitor the wellsites regularly upon completion of the wells. Authorized representatives and/or KMG personnel shall be on-site during drilling and completion operations.
21	Noise mitigation	604c.(2).A. Noise: Sound surveys have been conducted on each rig type and are utilized to anticipate any additional effective noise mitigation once a drilling rig is determined. At a minimum, and pending a safety review after construction of the location, sound mitigation barriers (sound wall) will be placed along the northern and eastern sides of the pad location, with kickers on the NW and SE corners, to dampen noise and minimize impact to the nearby residences and to County Roads CR 1 and CR 54 during drilling and completions. Additional proactive noise mitigation measures: to further reduce noise impacts, the rig that will drill these wells has been modified to reduce noise. Performed sound studies have confirmed APC will be in compliant with rule 802. Completions will also utilize quiet fleet technology. Should technological advancements allow for better noise mitigation at the time of drilling and completion operations on this location, Kerr-McGee will re-evaluate the most effective method at that time.
22	Emissions mitigation	ECD(s) will be utilized to mitigate releases of emissions from temporary produced water storage tanks for the duration which the tanks are on location and being used.
23	Odor mitigation	805b. Odors: KMG will comply with the provisions of 805b as deemed applicable. Additional BMPs for the Jodster South 24-25HZ location are: 1) the storage of excess drilling fluid (e.g., fluid not being used in the active mud system) in closed, upright tanks; and 2) the use of an odor neutralizer in the active mud system.
24	Drilling/Completion Operations	604c.(2).B. Closed Loop Drilling System: KMG will use a closed loop or "pitless" system for drilling and fluid management and will not construct a reserve pit.
25	Drilling/Completion Operations	Green Completions -Test separators and associated flow lines, sand traps and emission control systems shall be installed on-site to accommodate green completions techniques. When commercial quantities of salable quality gas are achieved at each well, the gas shall be immediately directed to a sales line or shut in and conserved. If a sales line is unavailable or other conditions prevent placing the gas into a sales line, the operator shall not produce the wells without an approved variance per Rule 805.b.(3)C.

26	Drilling/Completion Operations	604c.(2).K. Pit Level Indicators: All storage tanks used for active drilling operations (used in lieu of pits) contain pit level monitors with Electronic Drilling Recorders (EDR). KMG uses EDRs with pit level monitor(s) and alarm(s) for production rigs. Basic level gauges are used on tanks utilized for the surface rig.
27	Final Reclamation	604c.(2).T. Well Site Cleared: The wellsite will be cleared of all non-essential equipment within ninety (90) days after all wells associated with the pad have been plugged and abandoned.
28	Final Reclamation	604c.(2).U. Identification of Plugged and Abandoned Wells: Pursuant to rule 319.a.(5)., once the well has been plugged and abandoned, KMG will identify the location of the wellbore with a permanent monument that will detail the well name and date of plugging.
29	Material Handling and Spill Prevention	604.c.(2)R BMP: temporary water tanks shall be designed, constructed, and maintained in accordance with the following portions of the National Fire Protection Association (NFPA) Code 30 (2008 version): Tanks are built to engineering standards using noncombustible materials, with relief device sizing based on API 2000 standards. Tanks are inspected and maintained while in use. The only pipes within the containment are related to the temporary tanks (i.e. no external piping is co-located within the containment), and firefighting equipment is likewise not stored within the containment area.
30	Material Handling and Spill Prevention	Temporary water tanks will be monitored through a combination of automation and regularly scheduled site visits.

Total: 30 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2478931	FACILITY LAYOUT DRAWING
2478932	RULE 306.E. CERTIFICATION
2478933	CORRESPONDENCE
2479044	MULTI-WELL PLAN
2479045	WASTE MANAGEMENT PLAN
2479097	DIRECTOR OBJECTIVE CRITERIA REVIEW MEMO
2479103	CORRESPONDENCE
401779724	FORM 2A SUBMITTED
401784977	ACCESS ROAD MAP
401784980	LOCATION DRAWING
401784982	LOCATION PICTURES
401793604	NRCS MAP UNIT DESC
401793605	HYDROLOGY MAP
401793622	PRE-APPLICATION NOTIFICATION CERTIFICATION
401794900	WELL LOCATION PLAT

Total Attach: 15 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
OGLA	IN PROCESS - Operator provided two additional BMPs for the 52 500 bbl temp frac tanks for produced water storage during early stages of flowback.	07/02/2019
Final Review	Final Approval form ON HOLD - request BMP (602.c.(4)R or equivalent) for 52 500 bbl temp frac tanks for produced water storage during early stages of flowback.	06/27/2019
Final Review	The Director Objective Criteria Review Summary (Doc#2479097) is attached to this Form 2A. Following additional analysis arising out of the Director Objective Criteria, the Director determined that this application meets the standard for the protection of public health, safety, welfare, the environment and wildlife resources set by SB 19-181.	06/25/2019
Final Review	COGCC staff conducted its technical review of this Form 2A Oil and Gas Location Assessment within the context of SB 19-181 and the required Director Objective Criteria. This Form 2A met Director Objective Criteria #1, 3, 5c, and 8.	06/25/2019
Final Review	•Final permitting review complete. Sent to Final Approval.	06/25/2019
OGLA	Director Objective Criteria Review Memo has been attached to this Form 2A.	06/24/2019
Final Review	Operator provided local government siting permit status and school and childcare distances via the Local Government Information Google Form - information entered with operator concurrence.	05/30/2019
Permit	With operators concurrence changed construction and interim rec date.	05/22/2019
OGLA	Operator provided revised Multi-Well Plan and Waste Management Plan attachments.	04/04/2019
Permit	With operators concurrence changed construction date. Permitting Review Complete.	01/22/2019
OGLA	Operator provided additional Berm Construction and Emission Control BMPs for the temporary tanks. OGLA Supervisor has completed the Siting Raionale review. OGLA task passed.	12/21/2018
OGLA	Operator revised the Noise and Odor mitigation BMPs to be more site specific, provided a revised Multi-Well Plan, provided a revised Facility Layout Drawing, provided updated cultural distance from production facilities to reflect the temporary tanks, provided a Siting Rationale, & provided the Rule 306.e. Certification letter. The temporary tanks will be with 1,000 feet of Building Units. Once they are gone (per operator - approx. 6 to 9 months), the nearest production facility will be 1,118 feet from a Building Unit. OGLA review completed. Waiting on Siting Rationale review by OGLA Supervisor.	12/11/2018
OGLA	Requested operator revise the Noise and Odor mitigation BMPs to be more site specific, provide a revised Multi-Well Plan, & provide the Rule 306.e. Certification letter. Due by 1/10/19.	12/10/2018
Permit	Passed completeness.	11/04/2018
OGLA	Passed Buffer Zone Completeness review.	10/30/2018
OGLA	Referred to OGLA supervisor for buffer zone review. Due Nov 2nd	10/18/2018

Total: 16 comment(s)