

FORM
2A

Rev
08/19

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:

402226219

(SUBMITTED)

Date Received:

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:

Expiration Date:

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: 26580

Name: BURLINGTON RESOURCES OIL & GAS LP

Address: 925 N ELDRIDGE PARKWAY

City: HOUSTON State: TX Zip: 77079

Contact Information

Name: Maxwell Blair

Phone: (303) 268-3711

Fax: ()

email: maxwell.o.blair@conocophillips.com

FINANCIAL ASSURANCE

- Plugging and Abandonment Bond Surety ID (Rule 706): 19920030 Gas Facility Surety ID (Rule 711): _____
- Waste Management Surety ID (Rule 704): _____

LOCATION IDENTIFICATION

Name: EASTERN HILLS 4-65 17-18 Number: 3AH

County: ARAPAHOE

Quarter: NESE Section: 17 Township: 4S Range: 65W Meridian: 6 Ground Elevation: 5639

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: 1380 feet FSL from North or South section line

700 feet FEL from East or West section line

Latitude: 39.700330 Longitude: -104.680887

PDOP Reading: 1.5 Date of Measurement: 04/24/2018

Instrument Operator's Name: Alan Hnizdo

LOCAL GOVERNMENT INFORMATION

County: ARAPAHOE Municipality: Aurora

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: Municipality

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition 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: Oil and Gas Permit

The local government siting permit was filed on: 11/11/2019

The disposition of the application filed with the local government is: In Process

Additional explanation of local process:

Resubmitted to City of Aurora on November 11, 2019. Anticipate approximate 8 week timeframe between submission and disposition.

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>8</u>	Oil Tanks*	<u>5</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>4</u>	Injection Pumps*	<u>2</u>	Cavity Pumps*	<u> </u>	Gas Compressors*	<u>1</u>
Gas or Diesel Motors*	<u> </u>	Electric Motors	<u> </u>	Electric Generators*	<u>1</u>	Fuel Tanks*	<u>1</u>	LACT Unit*	<u>1</u>
Dehydrator Units*	<u> </u>	Vapor Recovery Unit*	<u>4</u>	VOC Combustor*	<u>1</u>	Flare*	<u> </u>	Pigging Station*	<u> </u>

OTHER FACILITIES*

Other Facility Type Number

Vapor Recovery Tower	<u>1</u>
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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:

From the wellheads, 3" carbon steel flowlines run to an inlet manifold which routes flow to either bulk or test 2 phase separators. High pressure gas from the bulk and test 2 phase separators is sent down the sales gas line to a third party. The liquid from the bulk and test 2 phase separators is carried to bulk and test 3 phase separators for further processing. Low pressure gas off the 3 phase bulk and test separators is sent to a vapor recovery unit to compress the low pressure gas so it can be sent down the high pressure sales line to a third party. Oil from the bulk and test 3 phase separators is transferred to a vapor recovery tower then to tankage for storage. Water from the bulk and test 3 phase separators is transferred to the water tanks for storage.

CONSTRUCTION

Date planned to commence construction: 04/01/2020 Size of disturbed area during construction in acres: 11.40
Estimated date that interim reclamation will begin: 10/01/2020 Size of location after interim reclamation in acres: 7.70
Estimated post-construction ground elevation: 5641

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: Recycle/reuse

Cutting Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Commercial Disposal facility for freshwater used to drill surface section. Oil based mud used for remainder of lateral drilled will be reused from pad to pad.

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: Alpert Corporation

Phone: 303-773-3400

Address: 3033 E 1st Avenue

Fax: 303-694-6445

Address: Suite 725

Email: _____

City: Denver State: CO Zip: 80206

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: Surface Use Agreement

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

Date of Rule 306 surface owner consultation _____

If this Form 2A is associated with Drilling and Spacing Unit applications, list docket number(s): _____

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:	1906 Feet	1902 Feet
Building Unit:	4045 Feet	3852 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	680 Feet	320 Feet
Above Ground Utility:	612 Feet	261 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	492 Feet	141 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: _____

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: NrB - Nunn-Bresser-Ascalon complex, 0 - 3 percent 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: 2400 Feet

water well: 1550 Feet

Estimated depth to ground water at Oil and Gas Location 27 Feet

Basis for depth to groundwater and sensitive area determination:

Nearest Water Well: Livestock well no. 35635. Nearby monitoring well, permit no. 13447-F.

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 _____

Operator Proposed Wildlife BMPs

No BMP

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	<p>The location used for footages in the Location Identification portion is the EasternHills 4-65 17-18 3AH (Doc #402233547).</p> <p>"Other" attachment is executed Operator Agreement between City of Aurora and ConocoPhillips.</p> <p>An open house was hosted in Aurora on August 6, 2019 to provide site specific information to all community members within a 1 mile radius of this well site.</p> <p>Overall striving for 360 degree traffic flow on our pad sites. Simops (simultaneous operations) capable pad 151' Existing well to new well- buffer zone for drilling activity, traffic and fall radius of derrick 174' from well row to south edge of pad- rig sticks out 120ft from well center. Remaining space for traffic and general back-in parking 225' East/West- designed for trailers (offices at a minimum, living quarters too normally) to be on perimeter and outside the ~150' fall radius. oNote- on drillers side- catwalk sticks out 93' so allowing minimum 60ft for tubulars handling, need ~150' anyways from well center to trailers oNote- off driller side- pits, solids control equipment, etc sticks out >150ft, then need additional room for traffic flow and loading cuttings trucks</p>
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I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: _____ Date: _____ Email: larry.r.smith@conocophillips.com

Print Name: Larry Smith Title: Sr. Regulatory Coord

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: _____

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

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Storm Water/Erosion Control	ConocoPhillips will sample existing water wells prior to drilling activities and will continue to sample existing or installed wells through the Production Phase, until final Reclamation Phase is completed for the well site to ensure that groundwater has not been contaminated by ConocoPhillips activity. As the well is constructed, concentric layers of steel casing and cement form the barrier to protect groundwater resources from the contents that will later flow inside the well mitigating any potential pollution for groundwater pollution.

2	Material Handling and Spill Prevention	<p>All facilities are capable of being remotely monitored and remotely shut down, which includes isolation at the well head. Engineered liner systems are used in secondary steel containment systems for tank batteries. Pollution control containers (spill boxes) are used on truck loading lines and are placed within the limits of the secondary containment system. Automatic shutdown level devices are installed on each tank with remote monitoring capabilities. Automatic shutdown level devices are installed on all pressure vessels and liquid knockouts. Automatic shutdown pressure devices are installed on flowlines from well heads to facilities with remote monitoring capabilities. Additionally, cathodic protection is used on buried steel lines to mitigate corrosion. Automatic shutdown pressure devices are installed on process vessels with remote monitoring capabilities.</p>	
3	Material Handling and Spill Prevention	<p>Liquid Level High Kills: These kills prevent liquids from exiting a given vessel via a gas stream. If liquids enter a gas stream then the potential to experience small spills increases due to improper equipment for the process medium in the pipe. For example, if level high kills were not in place, liquid could be sent to an atmospheric combustor intended solely for the use of burning excess, or waste, gas in upset situations.</p> <p>Liquid Level Low Kills: Liquid level low kills can be considered a more generic kill that gives indication of one of potentially numerous process upsets. The most likely culprit resulting in a LSL kill is a hung dump valve (minor process upset), however these kills can also capture leaks to atmosphere. If a significant leak occurs on location, predetermined vessel level setpoints will no longer be valid and the affected vessel will then shut-down on a liquid level low kill.</p> <p>Pressure High Kills: Pressure high kills are somewhat self-explanatory, however the main reason we incorporate high pressure kills is not necessarily to protect vessels. We have PSV's installed on every vessel that prevent the vessels from over-pressuring, but we prefer to never pop a PSV as this is both a process safety risk as well as an environmental incident. We set our Pressure High kills to shut-down the site at approximately 80% of max allowable working pressure of each vessel, which shuts down the site before PSVs relieve to the atmosphere.</p> <p>Pressure Low Kills: Very similar to the Liquid Level Low kills, the low pressure shut-down alarm is a fairly generic indication of a process upset. Pressure low site shut-downs typically prevent gas or vapor spills, however they can also catch and prevent liquid spills.</p> <p>2-Phase vessel: On our current 2-Phase vessels we incorporate the following kills: liquid level high, pressure high, and pressure low. Future 2-Phase vessels are planned to be outfitted with liquid level low switches as well.</p> <p>3-Phase vessel: Our current and future 3-Phase vessels (heater treater) will be outfitted with all (4) site ESD kills.</p> <p>Along with automated shut-downs we have preventative maintenance and best practices in place to prevent leaks from vessels. These include:</p> <ul style="list-style-type: none"> • Yearly shut-downs and visual inspections of each 2-phase and 3-phase vessel on site • Yearly NDT (Non-Destructive Testing) of each 2-Phase and 3-Phase vessel shell and head on site <ul style="list-style-type: none"> o Vessels that fail this test are removed from service • Conservative corrosion allowances • Internal coating to prevent corrosion • Semi-Annual PSV testing • Weekly environmental checks by operations personnel (weekly at a minimum, usually every 1-2 days per site) • NDT of all water piping to prevent leaks due to corrosion • NDT spot checking of various flowlines to monitor for thin walled piping due to erosion or corrosion • Yearly test of all devices that shut down the facility (including the 4 shut-down devices listed above) • The above best management practices are similar to those utilized by PSM facilities 	

4	Material Handling and Spill Prevention	<p>A containment system capable of containing one and one-half times (150%) the capacity of the largest vessel, plus sufficient freeboard to prevent overflow will be constructed around all permanent tanks at the Eastern Hills South Well Site. The containment system will be constructed of a steel-rim berm and lined with a synthetic or engineered liner, mechanically connected to the steel-rim which will surround all primary containment vessels. When used, temporary vessels will have secondary containment constructed from lined earthen berms or pre-engineered, duck-pond style containment systems. All berms and containment devices will be inspected quarterly.</p> <p>All flowlines (the pipeline connecting the wellhead to the production facility) are contained entirely within the boundary of the well pad. No off-location flowlines as defined and set forth in COGCC Rule 1101, will be utilized.</p> <p>All tanks installed on the well site will be no taller than sixteen feet (16').</p>
5	Dust control	<p>Dust associated with Site activities and traffic on roads will be minimized throughout all phases such that there are no visible dust emissions from sites or roads to the maximum extent practicable given wind conditions. Numerous mitigation measures are in place to minimize dust emissions including (but not limited to): application of fresh water to roads and ground during earth moving activities, curtailment of work during windy conditions and re-establishment of vegetation on disturbed areas that are not graveled.</p>
6	Noise mitigation	<p>ConocoPhillips will use noise mitigation (berming, bales, or sound walls) during the drilling and completion phases for the Eastern Hills South well site. Based upon modeled receptor locations, the Eastern Hills South wellsite is predicted to comply with the A-weighted and C-weighted COGCC noise limits.</p>
7	Emissions mitigation	<p>This comprehensive plan (see attached) addresses policies and procedures used to evaluate, eliminate, capture, or minimize all potentially harmful emissions and compliance with all applicable state and federal regulations, including regulations promulgated by Colorado Department of Public Health and Environment, Colorado Oil and Gas Conservation Commission and United States Environmental Protection Agency.</p> <p>Combustors will be available at the Eastern Hills South Well Site during the entire production phase to eliminate fugitive emissions for maintenance or emergency use only. The device will be fired using natural gas and operate with a 98% or higher hydrocarbon destruction efficiency. The device will be designed and operated in a manner that will ensure no visible emissions during normal operation.</p> <p>ConocoPhillips will comply with the EPA Reduced Emission Completions rules (under 40 CFR 60 Subpart OOOO and OOOOa) for oil and gas wells. ConocoPhillips will apply best management practices to safely maximize resource recovery and minimize releases to the environment. ConocoPhillips was an early adopter of reduced emissions completions (green completions), a charter member of the Natural Gas Star program, and is committed to reducing emissions from flaring and venting.</p>
8	Odor mitigation	<p>ConocoPhillips will mitigate odors by routing to closed loop systems to the maximum extent practicable. If ConocoPhillips receives complaints from a Residential Building within 1,320 feet from the site, ConocoPhillips will take measures to mitigate the odor within 24 hours, based on the specific circumstances.</p>
9	Drilling/Completion Operations	<p>Lighting is only used during the Drilling and Completion Phases of operations. No permanent lighting will be installed. All lighting used will be situated so that is downcast and does not shine beyond the boundary of the oil and gas operations area.</p>
10	Interim Reclamation	<p>Secure, opaque fencing will be installed at the Eastern Hills South Well Site after interim reclamation has been completed. Fencing will be 8' in height.</p>

Total: 10 comment(s)

Attachment Check List

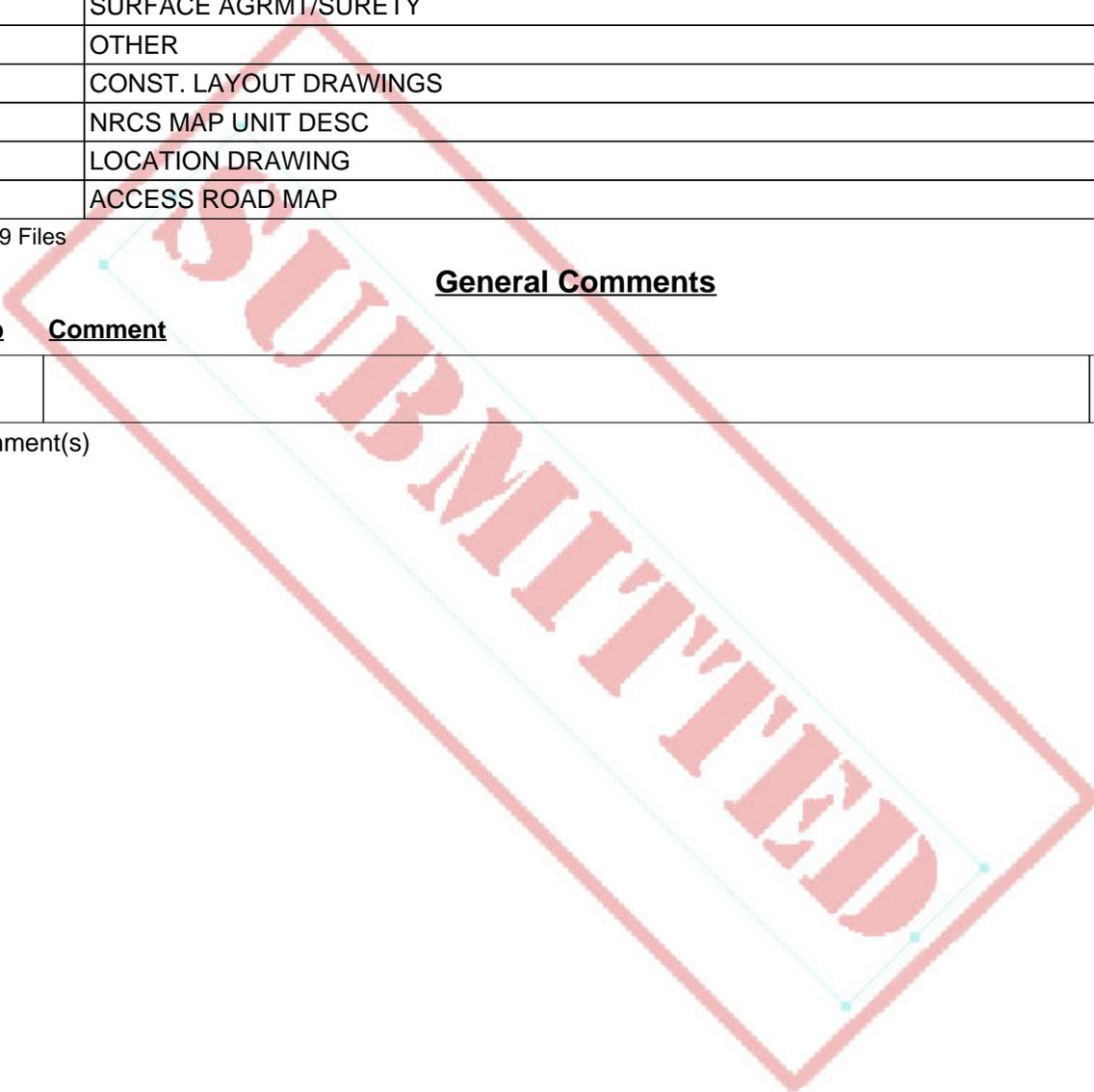
<u>Att Doc Num</u>	<u>Name</u>
402235201	MULTI-WELL PLAN
402235202	HYDROLOGY MAP
402235203	LOCATION PICTURES
402236071	SURFACE AGRMT/SURETY
402236076	OTHER
402236093	CONST. LAYOUT DRAWINGS
402236101	NRCS MAP UNIT DESC
402262160	LOCATION DRAWING
402262417	ACCESS ROAD MAP

Total Attach: 9 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.

