

Rule 303.b Form 2A Location Assessment

**Piceance Energy LLC
Harrison Creek Water Treatment
Facility – DAF Unit**

OA Project No. 014-0465

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FORM
2A

Rev
08/13

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:

400803686

0

Date Received:

03/06/2015

Oil and Gas Location Assessment

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 413056

Submit signed original form. 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:

413056

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: 10433
Name: PICEANCE ENERGY LLC
Address: 1512 LARIMER STREET #1000
City: DENVER State: CO Zip: 80202

Contact Information

Name: Wayne Bankert
Phone: (970) 812.5310
Fax: (303) 339-4399
email: wbankert@laramie-energy.com

RECLAMATION FINANCIAL ASSURANCE

- ☐ Plugging and Abandonment Bond Surety ID: _____ ☐ Gas Facility Surety ID: _____
- ☒ Waste Management Surety ID: 20120085

LOCATION IDENTIFICATION

Name: HCWTF DAF Unit Number: 413056
County: MESA
QuarterQuarter: NENE Section: 22 Township: 9S Range: 93W Meridian: 6 Ground Elevation: 7430
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: 1306 feet FNL from North or South section line
367 feet FEL from East or West section line
Latitude: 39.265921 Longitude: -107.748165
PDOP Reading: 6.0 Date of Measurement: 08/09/2008
Instrument Operator's Name: Alan VanPelt

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:

Production Facilities Location serves Well(s)

LOCATION ID

FORM 2A DOC

334554

334449

334450

334557

334488

334489

334452

334463

334451

334442

312363

334493

312614

334555

312374

334461

334453

425510

312707

312670

334425

334556

334487

334454

334490

334486

312671

334466

312706

334465

262078

334443

334467

311747

FACILITIES

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

Wells _____	Oil Tanks* _____	Condensate Tanks* _____ 3	Water Tanks* _____ 9	Buried Produced Water Vaults* _____
Drilling Pits _____	Production Pits* _____	Special Purpose Pits _____	Multi-Well Pits* _____	Modular Large Volume Tanks _____
Pump Jacks _____	Separators* _____ 3	Injection Pumps* _____	Cavity Pumps* _____ 1	Gas Compressors* _____
Gas or Diesel Motors* _____	Electric Motors _____	Electric Generators* _____	Fuel Tanks* _____	LACT Unit* _____
Dehydrator Units* _____	Vapor Recovery Unit* _____	VOC Combustor* _____ 1	Flare* _____	Pigging Station* _____

OTHER FACILITIES*

<u>Other Facility Type</u>	<u>Number</u>
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DAF Units	4
Emulsion Tank Agitators	2
Make-Down Mixers	6
Emulsion Tanks	3
Electric Pumps	44
Coagulant Tanks	1
VCU Knockout Vessel	1
Filter Press	1
Filter Cake Conveyor	1
Electric Tank Heaters	20
Instrument Air System	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:

Pipe system with DAF Unit to move water through the process
6-12" pipelines to deliver water to and from the field

CONSTRUCTION

Date planned to commence construction: 06/01/2015 Size of disturbed area during construction in acres: 7.50
Estimated date that interim reclamation will begin: 10/30/2015 Size of location after interim reclamation in acres: 7.50
Estimated post-construction ground elevation: 7430

DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: No

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: _____ Drilling Fluids Disposal Method: _____

Cutting Disposal: _____ Cuttings Disposal Method: _____

Other Disposal Description:

Purpose of facility is to recycle flowback and produced water from drilling program for beneficial reuse in the drilling program.

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: Piceance Energy LLC

Phone: 970.812.5310

Address: 1512 Larimer Street, Suite 1000

Fax: 303.339.4399

Address: _____

Email: wbankert@laramie-energy.com

City: Denver State: CO Zip: 80202

Surface Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian

Check all that apply. The Surface Owner: ☐ is the mineral owner

☐ is committed to an oil and Gas Lease

☐ has signed the Oil and Gas Lease

☒ is the applicant

The Mineral Owner beneath this Oil and Gas Location is: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: No

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

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

Date of Rule 306 surface owner consultation 08/07/2014

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): Oil and Gas Operations

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): Oil and Gas Operations

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:	Feet	307 Feet
Building Unit:	Feet	307 Feet
High Occupancy Building Unit:	Feet	5280 Feet
Designated Outside Activity Area:	Feet	5280 Feet
Public Road:	Feet	3345 Feet
Above Ground Utility:	Feet	85 Feet
Railroad:	Feet	5280 Feet
Property Line:	Feet	42 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.

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: 08/07/2014

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 Building Unit is located on property owned by Piceance Energy and is used as an occasional seasonal hunting camp. Project site is located adjacent to DAF Facility that it supports, which is being located on an existing location in order to minimize additional disturbance and construction in the area. 305.a.(2) Buffer Zone Notification is not required as the Building Unit Owner is the applicant. See attached HCWTF Alternatives Analysis.

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: 47. Hesperus-Empedrado, Moist Pagoda Complex 5 to 35% slopes

NRCS Map Unit Name: 53. Pagoda-Hesperus Complex, 12 to 40% slopes

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: 09/25/2014

List individual species: big sagebrush, Utah serviceberry, snowberry, rubber rabbitbrush, oakbrush, American vetch, lupine, Sandberg bluegrass, paintbrush, scorpion weed, sulfur flower, June grass, yarrow, Rocky Mountain penstemon, bluebunch, wheatgrass, green needlegrass, etc.

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: 570 Feet

water well: 300 Feet

Estimated depth to ground water at Oil and Gas Location 140 Feet

Basis for depth to groundwater and sensitive area determination:

Division of Water Resources website information on wells in area.

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: _____

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609 _____

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 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 This site is covered by Piceance Energy's Stormwater Permit #COR030000, Certification #COR03K454

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

Signed: _____ Date: 03/06/2015 Email: wbankert@laramie-energy.com

Print Name: Wayne Bankert Title: Snr. Reg. & Env. Coord.

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: _____

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.

Best Management Practices

No	BMP/COA Type	Description
1	Planning	<ul style="list-style-type: none">• The location and site layout has been designed to accommodate all operations within the limits of the disturbance while meeting federal and state safety regulations, including required buffers and distances between operating components and combustion sources.• Above-ground facilities will be managed to minimize visual effects, such as being painted to blend with environment.• Water pipeline infrastructure will be installed concurrently with the gas pipeline infrastructure where possible.
2	Wildlife	<ul style="list-style-type: none">• The water treatment facility and impoundment facility are surrounded by an 8-foot wildlife fence.• Road design and General<ul style="list-style-type: none">-No firearms, no dogs on location, and no feeding of wildlife.-Minimize the amount of traffic on lease roads within 3 hours of sunrise and sunset.-Use existing routes as much as possible to avoid new disturbance and habitat fragmentation and minimize new road construction.-Maximize the topography as much as possible in designing roads to reduce, visual, noise, impacts, etc.-Participate in road sharing agreements with other Operators when possible.-Design and surface roads based on the traffic, speed, and type of vehicles to reduce, dust, mud, and environmental damage.-Locate roads away from riparian areas and bottoms of drainages as much as possible or re-route entirely.-Obtain Army Corp of Engineer Permits for any stream crossings prior to construction.

- Analyze crossings and flow characteristics to determine the best method of crossing, (i.e. culvert, bridge, or low water).
- Armor all stream crossings to reduce erosion and to comply with Stormwater Requirements.
- Implementation of fugitive dust control measures including but not limited to water or magnesium chloride applications, and road surfacing.
- Limit traffic to the minimum needed for safe and efficient operations.
- No driving or parking off of disturbed areas.
- Install and use locked gates or other means when allowed by landowner or Federal Agencies to prevent unauthorized travel on roads and rights-of ways.
- Well pad design and location
 - Locate well pads to maximize directional drilling practices. PE currently plans and attempts to locate pads for the maximum number of wells which can safely be developed from each pad. This is normally 16-20 wells per pad which equates to roughly 4 well pads per section.
 - Design each location to accommodate both current and future gas production.
 - Locate well pads to minimize disturbance yet maximize use to reduce surface impacts.
 - Review State and Federal GIS mapping to avoid Sensitive Wildlife Habitat (SWH), Restricted Surface Occupancy (RSO) areas, steep slopes, etc., as much as possible with roads and pad location.
 - Design and install gathering lines within the disturbed area of new roads and adjacent to as much as possible to reduce disturbance construction.
 - Design Rights-of Way widths to the minimum needed for safe and efficient construction of pipelines
 - Remote Telemetry for production operations
- Drilling and Production Operations
 - Implement remote telemetry in all operations
 - Where topographically possible and subject to landowner approval, use centralized water gathering and transportation systems.
 - Install exclusionary devices to prevent bird and other wildlife access to equipment stacks, vents, and openings.
 - Locate facilities to minimize visual effects (e.g. paint color, screening, etc.)
 - PE implements a dewatering system in its operations. No fluid pits are constructed or used during drilling or completion operations.
 - PE implements an aggressive weed management program. PE incorporates and uses the BLM Colorado River Valley Field Office's "Noxious and Invasive Weed Management Plan for Oil and Gas Operators- March 2007" for all operations. Each spring, Piceance Energy inventories all pads, roads, and pipelines to insure no noxious weeds have been introduced. If noxious weeds are found, the county will be notified and the weeds will be treated. Weeds are continuously monitored and treated throughout the growing season. Only herbicides approved by the EPA and State are used by certified weed applicators.
- Reclamation
 - Strip and segregate topsoil from other soil horizons during pad, road, and pipeline construction.
 - Minimize topsoil degradation by windrowing no higher than 5 feet when possible.
 - Immediately seed topsoil to reduce erosion and prevent weed establishment and maintain soil microbial activity.
 - Use only certified weed free native seed mixes, unless recommended otherwise by Federal Agencies or the Landowner.
 - Use locally adapted seed when available.
 - Use diverse seed mixes to mirror the surrounding area unless recommended otherwise by Federal Agencies or the Landowner.
 - Monitor re-vegetation success until a minimum of 75% of preferred perennial plant cover (no weeds) is established.
 - Perform "interim" reclamation on all disturbed areas not needed for active producing operations.
 - If possible, conduct interim and final reclamation during optimum periods (e.g. late fall/early winter or early spring).
 - If needed, fence reclaimed areas to minimize livestock/wildlife impact until plant species have are capable of sustaining grazing.
- Black Bear/Human Conflict Area
 - Initiate a food and waste/refuse management program that uses bear-proof food storage containers and trash receptacles.

		<ul style="list-style-type: none"> -Initiate an education program that reduces bear conflicts. -Establish policy to prohibit keeping food and trash in sleeping quarters. -Establish policy to support enforcement of state prohibition on feeding of black bear. -Report bear conflicts immediately to CPW. 	
3	Storm Water/Erosion Control	<ul style="list-style-type: none"> • The water treatment facility is included in Piceance's North Vega Project Area Stormwater Management Area and permit. • The access road was constructed to not allow any sediment to migrate from the access road to nearby surface water or any drainages leading to surface water. • Stormwater best management practices (BMPs), such as diversion ditches and detention ponds will be implemented in a manner that minimizes erosion, transport of sediment offsite, and site degradation. • The facility will be constructed with standard stormwater BMPs (as needed) to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and/or runoff. • Inspections will be conducted in accordance with the Stormwater Permit to confirm that applicable BMPs are in place, maintained and functioning properly. • Stormwater inspections and corrective actions will be conducted on a 14-day schedule under CDPHE stormwater regulations until 70% reclamation is achieved. Once achieved, inspections will be conducted under COGCC regulations until 80% reclamation is achieved and the site is fully stabilized. 	
4	Material Handling and Spill Prevention	<ul style="list-style-type: none"> • Per the appropriate SPCC regulations, all tanks and aboveground vessels containing hydrocarbon fluids have secondary containment structures. The secondary containment areas are lined. • Piceance has an SPCC plan in place to implement BMPs to contain any unintentional release of fluids. • Spills and incidents will be managed in accordance with Piceance's Operating and SPCC Plans; including notifications, reporting, response actions, remediation, and corrective actions. • Spills will be managed in accordance with Piceance's SPCC plan including prevention, spill containment and monthly inspections. At a minimum, high level alarms will be installed on tanks and used in conjunction with shutdown control valves. • The site will be constructed to minimize the potential for any production wastes, chemicals, fluids, etc. from leaving the location, including berms, barriers, and use of spill control materials. • Produced water used for well completions will be recycled and treated to the maximum extent practical for reuse. • Best management practices will be implemented to contain any unintentional releases of fluids. • Secondary containment of 110 percent for any volume of fluids contained at the facility have been implemented. • The impoundments will be double-lined with 60-mil liners. A leak detection system will be included in the construction of the impoundments. 	
5	Dust control	<ul style="list-style-type: none"> • The site and access road will be graveled to reduce fugitive dust, which will be controlled using water or other dust suppressants. • A site will be selected for the wasting of the spoils from the ponds and construction. The topsoil will be stripped from the site and stock piled around the perimeter. The spoils will then be evenly distributed on the site and contoured to blend in with the surrounding topography. Once the construction is completed, the topsoil will be spread over the wasted material and re-seeded with a seed mix appropriate for the elevation and area. The site will be managed under Piceance Energy's Stormwater Management Plan until the vegetation has established. 	
6	Odor mitigation	<ul style="list-style-type: none"> • Combustor controls will be used to mitigate odors from tanks and Pond 1. VOCs coming off of tanks in the DAF will be routed to a combustor in the vicinity of the DAF facility. VOCs coming off of Pond 1 will be routed to a combustor in the vicinity of the impoundments. • Water quality management will mitigate any odors and emissions for Ponds 2, 3, and 4, thus precluding the need for a combustor. 	
7	Interim Reclamation	<ul style="list-style-type: none"> • Noxious weed control will follow Piceance's weed management plan. • Reclamation and revegetation will be used as a weed management tool. • The site will be stabilized using seed mixes and materials compatible with soil types, moisture, and local climate conditions as specified in locally acceptable industry practices. 	

8	Final Reclamation	<ul style="list-style-type: none"> At the time of impoundment closure and site reclamation, Piceance will submit disposal information via a Form 4 Sundry Notice to COGCC. Piceance will collect impoundment water samples and soil samples and analyze per the closure and reclamation plan submitted with the Form 28. Piceance will comply with COGCC's requirements for closure and reclamation.
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Total: 8 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400803686	FORM 2A SUBMITTED
400803952	OTHER
400803953	OTHER
400803954	LOCATION PICTURES
400803955	EQUIPMENT LIST
400803956	LOCATION DRAWING
400803957	HYDROLOGY MAP B, AERIAL
400803958	ACCESS ROAD MAP
400803959	REFERENCE AREA MAP
400803960	REFERENCE AREA PICTURES
400803962	NRCS MAP UNIT DESC
400803967	CONST. LAYOUT DRAWINGS
400803968	OTHER
400803969	OTHER
400803972	PROPOSED BMPS
400804236	OTHER
400804692	FORM 28

Total Attach: 17 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Passed completeness.	3/10/2015 2:59:41 PM
Permit	Quarter Quarter is incorrect On 'Surface and Minerals' tab, questions regard the Surface Owner are incomplete. Return to draft.	3/10/2015 8:09:05 AM
OGLA	Passed Buffer Zone completeness review. confirm that nuisance mitigation measures were adequately addressed during technical review.	3/9/2015 4:28:52 PM
Permit	Located within buffer zone; referred to OGLA for further review.	3/9/2015 1:09:38 PM

Total: 4 comment(s)