

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:

401114299

Date Received:

09/30/2016

Oil and Gas Location Assessment

☐ New Location ☐ Refile ☒ Amend Existing Location Location#: 322536

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:

322536

Expiration Date:

12/03/2019

☒ 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: 96850
Name: TEP ROCKY MOUNTAIN LLC
Address: PO BOX 370
City: PARACHUTE State: CO Zip: 81635

Contact Information

Name: Vicki Schoeber
Phone: (970) 263-2721
Fax: ()
email: vschoeber@terraep.com

RECLAMATION FINANCIAL ASSURANCE

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

LOCATION IDENTIFICATION

Name: MV Number: 5-10
County: GARFIELD
QuarterQuarter: SENW Section: 10 Township: 7S Range: 96W Meridian: 6 Ground Elevation: 6147
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: 2102 feet FNL from North or South section line
1968 feet FWL from East or West section line
Latitude: 39.453013 Longitude: -108.096404
PDOP Reading: 2.2 Date of Measurement: 07/29/2014
Instrument Operator's Name: J. Kirkpatrick

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 #

Well Site is served by Production Facilities

323951

401094364

FACILITIES

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

Wells	33	Oil Tanks*		Condensate Tanks*		Water Tanks*		Buried Produced Water Vaults*	
Drilling Pits		Production Pits*		Special Purpose Pits		Multi-Well Pits*		Modular Large Volume Tanks	
Pump Jacks		Separators*	34	Injection Pumps*		Cavity Pumps*		Gas Compressors*	
Gas or Diesel Motors*		Electric Motors		Electric Generators*		Fuel Tanks*		LACT Unit*	
Dehydrator Units*		Vapor Recovery Unit*		VOC Combustor*		Flare*		Pigging Station*	

OTHER FACILITIES*

Other Facility Type

Number

blow down tank

1

Those facilities indicated by an asterisk () shall be used to determine the distance from the Production Facility to the nearest cultural feature on the Cultural Setbacks Tab.

Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

Completions will frac from the GM 42-3 frac pad (Form 2A Doc #401094364). 3-4.5" surface steel frac lines will run from the GM 42-3 frac pad to the MV 5-10 pad. The surface lines will follow existing roads or pipeline corridors from the frac pad past the MV 45 -10 pad. It will then go cross country for approximately 600' before meeting back up with the existing road/pipeline ROW. Condensate will be piped to the GM 42-3 Frac Pad/Tank Batttery and water through existing infrastructure.
1 - 10" buried steel gas line (8500') from separators to existing infrastructure.
1 - 4" buried steel water line (10,500') from separators to existing infrastructure.
1 - 2" buried steel condensate line (9,260') from separators to existing infrastructure.
The new pipelines will be installed following the road from the MV 5-10 pad down to the tank pad. See POD Map for routes.
33 - 2" steel flowlines from the wellheads to the separators.
1 - 2" dump line from the units to the blowdown tank.

CONSTRUCTION

Date planned to commence construction: 12/05/2016

Size of disturbed area during construction in acres: 8.47

Estimated date that interim reclamation will begin: 04/01/2018

Size of location after interim reclamation in acres: 1.18

Estimated post-construction ground elevation: 6148

DRILLING PROGRAM

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

Is H₂S anticipated? No

Will salt sections be encountered during drilling: No

Will salt based mud (>15,000 ppm Cl) be used? No

Will oil based drilling fluids be used? No

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE

Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal: ONSITE

Cuttings Disposal Method: Cuttings trench

Other Disposal Description:

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: _____ or Document Number: _____

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

SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Bureau of Land Management

Phone: _____

Address: 2300 River Frontage Road

Fax: _____

Address: _____

Email: _____

City: Silt State: CO Zip: 81652

Surface Owner: ☐ Fee ☐ State ☒ Federal ☐ Indian

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

☒ is committed to an oil and Gas Lease

☒ has signed the Oil and Gas Lease

☐ is the applicant

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

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

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

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

Date of Rule 306 surface owner consultation _____

CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☐ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☒ Rangeland ☐ Timber ☐ Recreational ☒ Other (describe): Existing Drill Pad

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): Existing Drill Pad

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:	5280 Feet	5280 Feet
Building Unit:	5280 Feet	5280 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	5280 Feet	5280 Feet
Above Ground Utility:	5280 Feet	5280 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	356 Feet	112 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.
- Enter 5280 for distance greater than 1 mile.
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.
- For measurement purposes only, Production Facilities should only include those items with an asterisk(*) on the Facilities Tab.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- ☐ Buffer Zone
- ☐ Exception Zone
- ☐ Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
- Urban Mitigation Area - as defined in 100-Series Rules.
- Large UMA Facility - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: _____

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: 62—Rock outcrop-Torriorthents complex, very steep

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: 09/07/2016

List individual species: Wyoming Sagebrush, Western wheatgrass, Pinyon Pine, Utah Juniper, Curl-leaf MountainMahogany, Yarrow

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: 685 Feet

water well: 6416 Feet

Estimated depth to ground water at Oil and Gas Location 40 Feet

Basis for depth to groundwater and sensitive area determination:

Please see previously submitted (Form 2A #400652917) Sensitive Area Determination attachment.

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 zone: No

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

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 This amended Form 2A application is for an existing location with 1 existing well and 32 proposed wells.
Since completion operations will be from the GM 42-3 Frac Pad, a plat for this facility is attached for COGCC reference.

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

Signed: _____ Date: 09/30/2016 Email: vschoeber@terraep.com

Print Name: Vicki Schoeber Title: Regulatory Specialist

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: 12/4/2016

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

	In addition to the notifications required by COGCC listed in the Northwest Notification Policy (Notice of Intent to Construct a New Location, Notice of Intent to Spud Surface Casing, and Notice of Intent to Commence Hydraulic Fracturing Operations) and Rule 316C. COGCC Form 42. FIELD OPERATIONS NOTICE (a. Notice of Intent to Conduct Hydraulic Fracturing Treatment and c. Notice of Construction or Major Change); operator shall notify the COGCC 48 hours prior to onsite flowline/pipeline testing (flowlines from wellheads to separators to tanks; and/or any temporary surface lines used for hydraulic stimulation and/or flowback operations) using the Form 42 (as described in Rule 316C.m. Notice of Completion of Form 2/2A Permit Conditions). The appropriate COGCC individuals will automatically be email notified.
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Operator must ensure secondary containment for any volume of fluids contained at the well site during drilling and completion operations; including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices [BMPs] associated with fluid containment/control as well as stormwater management for the control of run-on and run-off) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals as required by CDPHE (at least every 14 days and after precipitation events), and maintained in good condition.

The design/build of any perimeter berm or fluid management structures shall be sized, constructed, and compacted sufficiently to contain and/or manage potential fluid releases during operations in a manner that prevents or controls potential sedimentation and scouring on adjacent lands and drainages. Such design/build of perimeter berms or fluid management structures may include, but are not limited to the following: on location berms; diversion ditches; enhanced vegetation; or other design features necessary to achieve the goal of protecting adjacent lands and drainages from potential sedimentation and scouring.

The location is in an area of moderate to high run-on/run-off potential; therefore standard stormwater BMPs must be implemented; prior to, during, and after well pad location re-construction, as well as during drilling, completion, and production operations; at this location to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and /or stormwater run-off.

The access road will be maintained as to not allow sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.

Strategically apply fugitive dust control measures, including encouraging established speed limits on private or BLM roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.

Berms or other containment devices (if left onsite at the existing production area to the south) shall be constructed to be sufficiently impervious to contain any spilled or released material around temporary or permanent produced water storage tanks.

Operator shall submit a scaled as-built drawing (plan view with distances) of the MV 5-10 well pad location; OGCC ID# 322536; (showing wellheads, onsite flowlines, offsite pipelines, and onsite production facilities) and the nearby GM 42-3 frac pad / tank battery / well pad location; OGCC ID #323951; (showing wellheads, onsite flowlines, offsite pipelines, and onsite production facilities) within 30 calendar days of construction of the production equipment on each location.

	<p>The moisture content of water/bentonite based mud (WBM) generated drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. After drilling and completion operations have been completed, the WBM drill cuttings that will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), must meet the applicable standards of Table 910-1. No liners are allowed to be disposed of with the drill cuttings. After the drill cuttings have been amended (if necessary) and placed on the well pad, sampling frequency of the drill cuttings (to be determined by the operator) shall be representative of the material left on location. No offsite disposal of cuttings to another oil and gas location shall occur without prior approval of a Waste Management Plan (submitted via a Form 4 Sundry Notice) specifying disposal location and waste characterization method. Commercial disposal of drill cuttings will only require notification to COGCC via a Form 4 Sundry Notice.</p> <p>Flowback and stimulation fluids must be sent to enclosed tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline storage vessel, or other open top containment located on the well pad; or into tanker trucks for offsite disposal. No open top tanks can be used for initial flowback fluids containment. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area constructed to be sufficiently impervious to contain any spilled or released material. No additional downgradient berming is required if operator constructs a sufficiently sized perimeter berm.</p> <p>Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated.</p>
	<p>The following conditions of approval (COAs) will apply to the Form 2A Permit if any temporary surface (COAs 1, 2, 3, and 4) or buried permanent (COA 1) flowlines and/or offsite pipelines (poly or steel) are used during operations at the well pad location or nearby well pads:</p> <p>1 - Operator shall pressure test pipelines (flowlines from wellheads to separators to tanks; pipelines from onsite separators to offsite storage tanks, and any temporary surface lines used for hydraulic stimulation and/or flowback operations) in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network, and tested annually, unless agreed to by both parties that the flowlines can be managed under an approved COGCC variance.</p> <p>2 - Operator must routinely inspect the entire length of the surface pipeline to ensure integrity. Operator shall conduct daily inspections of surface poly pipeline routes for leaks during active transfer of fluids and implement best management practices to contain any unintentional release of fluids along all portions of the surface pipeline route where temporary pumps and other necessary equipment are located. Inspections shall be conducted by viewing the length of the pipeline; operator will endeavor to minimize surface disturbance during pipeline monitoring. In addition, pump stations along the surface poly or steel pipeline route will be continuously monitored when operating in order to swiftly respond to such a failure.</p> <p>3 - Operator will implement BMPs necessary to mitigate a potential for a release of fluids to impact streams, intermittent streams, ditches, and drainage crossings. For these crossings: if poly pipe is used on the surface, operator will ensure appropriate containment by either installing over-sized pipe "sleeves" which extend the length of the crossing and beyond to a distance deemed adequate to capture (catchment basins) and/or divert any possible release of fluids and prevent fluids from reaching the stream or drainage; installing over-sized pipe "sleeves" which extend the length of the crossing and installing shut off valves on either side of crossing instead of catchment basins; or develop an alternative means for containment. For all other pipeline materials, operator will implement BMPs necessary to mitigate a potential for E&P fluids not to reach groundwater or flowing surface water.</p> <p>4 - Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the temporary surface pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.</p>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	<ul style="list-style-type: none">* Minimize the number, length, and footprint of oil and gas development roads* Use existing roads where possible* Where possible, consolidate pipeline and existing roadways, or roadways that are planned for development* Maximize the use of directional drilling to minimize habitat loss/fragmentation* Maximize use of long-term centralized tank batteries to minimize traffic* Maximize use of remote completion/frac operations to minimize traffic* Maximize use of remote telemetry for well monitoring to minimize traffic
2	Drilling/Completion Operations	<ul style="list-style-type: none">* Use centralized hydraulic fracturing operations.* Conduct well completions with drilling operations to limit the number of rig moves and traffic.
3	Interim Reclamation	<ul style="list-style-type: none">* TEP will use certified, weed free grass hay, straw, hay or other mulch materials used for the reseeded and reclamation of disturbed areas.* Install exclusionary devices to prevent bird and other wildlife access to equipment stacks, vents and openings.* Reduce visits to well-sites through remote monitoring (i.e. SCADA) and the use of multi-function contractors.

Total: 3 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2108017	MULTI-WELL PLAN
2108018	CORRESPONDENCE
401114299	FORM 2A SUBMITTED
401117455	LOCATION PICTURES
401117491	LOCATION DRAWING
401117492	CONST. LAYOUT DRAWINGS
401117562	OTHER
401120149	OTHER

Total Attach: 8 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review complete. Operator asking for immediate approval.	12/04/2016
OGLA	Initiated/Completed OGLA Form 2A review on 11-30-16 by Dave Kubeczko; previously submitted and approved (12-27-14) Form 2A #400652917 COAs apply - notification, fluid containment, spill/release BMPs, flowback to tanks only, tank berming, cuttings low moisture content, access road sediment and dust control, re-construction BMPs, odor control, and pipeline testing; requested acknowledgement of notification, fluid containment, spill/release BMPs, flowback to tanks only, tank berming, cuttings low moisture content, access road sediment and dust control, re-construction BMPs, odor control, as-built drawing, and pipeline testing; received concurrence of COAs from operator on 12-02-16; passed by CPW on 10-20-16 with BLM lease stipulations and conditions of approval for the proposed activity are adequate to address any anticipated impacts to wildlife and/or wildlife habitats; revised: Date planned to commence construction: from 12/01/2016 to 12/05/2016; passed OGLA Form 2A review on 12-03-16 by Dave Kubeczko; notification, fluid containment, spill/release BMPs, flowback to tanks only, tank berming, cuttings low moisture content, access road sediment and dust control, re-construction BMPs, odor control, as-built drawing, and pipeline testing COAs.	11/30/2016
Permit	Deleted seven attachments that are in the well file and didn't change, as directed by operator. Ready to pass pending OGLA review and aproval.	11/07/2016
DOW	This Form2A permit is to amend an existing location by expanding the existing pad and drilling 32 additional wells. The location is a FED/FED site and the Bureau of Land Managements lease stipulations and conditions of approval for the proposed activity are adequate to address any anticipated impacts to wildlife and/or wildlife habitats. By: Taylor Elm, 10-20-2016, 10:50 a.m.	10/20/2016
LGD	Pass, KHW Please note any location with greater than 5,000 barrels of total storage capacity (pits/tanks) would require a Garfield County land use change permit.	10/10/2016
Permit	Passed completeness.	10/10/2016

Total: 6 comment(s)