

# **Transfer and Receiving Water Reuse Plan**

**Caerus Piceance LLC and  
TEP Rocky Mountain LLC**

**JANUARY 2020**

## Purpose and Need

This Transfer and Receiving Reuse Plan (the "Water Transfer Plan") is hereby submitted to the Colorado Oil and Gas Conservation Commission ("COGCC"); along with the required Form 4 (sundry), for COGCC's review and approval, which would allow for the transfer of produced water between TEP Rocky Mountain LLC ("TEP") (Operator ID: 96850) and Caerus Piceance LLC ("Caerus") (Operator ID: 10456) (collectively the "Parties").

The Parties have entered into a Produced Water Custody Transfer Agreement, dated July 18, 2019 (the "Agreement"), under which, amongst other things, the Parties have agreed to the transfer of production water from a transferring party, who has excess production water and would otherwise be injecting such excess water into underground injection wells, to a receiving party, who has need for such production water in their oil and gas well completions operations. An amendment to the Agreement was entered into between the Parties and is effective December 26<sup>th</sup>, 2019 and recorded January 6<sup>th</sup>, 2020. This amendment extends the Agreement term to December 31<sup>st</sup>, 2020. Caerus currently anticipates that it will require up to 1,000,000 barrels (bbl.) of fresh water for exploration and production ("E&P") operations in Garfield County, Colorado, for 2020. Caerus and TEP have recognized an opportunity in which Caerus' large freshwater demand can be largely offset or even fully replaced by utilizing excess TEP produced water, which would otherwise be injected into underground disposal wells. This strategy and collaborative planning demonstrate responsible operatorship by both parties. The conservation of fresh water that would result from the execution of this Water Transfer Plan benefits the State, its citizens and the thousands of downstream users who rely on the Colorado River as a source for fresh water. Transfer of Production Water is also consistent with State of Colorado regulatory agency objectives of resource conservation, waste minimization and recycling and re-use of water. TEP now wishes to transfer to Caerus and Caerus desires to accept such TEP produced water under the terms of the Agreement and in conformity with this Water Transfer Plan. It is anticipated that water transfers will initiate no earlier than February 25<sup>th</sup>, 2020.

TEP operates wells in the Parachute and Grand Valley fields located in Garfield County, Colorado, located in proximity to Caerus' E&P operations. Currently, produced water from TEP production operations in the Parachute and Grand Valley fields is gathered at Starkey Production Pit 14-28-696 (CE&P Facility ID 454686, Pit ID 414554) located in Sec 28, T6S-R96W.

TEP desires to transfer excess produced water, that otherwise would be injected in its underground disposal infrastructure, for beneficial re-use in Caerus' E&P operations. The produced water to be transferred under this Water Transfer Plan is sourced from TEP operated wells in the Parachute and Grand Valley fields, which is stored at the Starkey Production Pit shown in Exhibit A and attached hereto for reference.

Custody of the produced water will transfer at the Starkey Production Pit 14-28-696 (CE&P Facility ID 454686, Pit ID 414554) located in Sec 28, T6S-R96W (the "Custody Transfer Point"). The lat/long for the Custody Transfer Point is approximately: 39°29'19.4" N, 108°07'13.3" W. Caerus will assume regulatory responsibility upon entry of the water into pump that Caerus will operate on the Starkey Production Pit Site.

Water, drawn from the pit, will be transferred, by a combination of both surface and buried pipelines, to the North Parachute Ranch EP Waste Mgmt Facility (i.e. Middlefork) (I.D. #120803). Produced water will be transferred from Middlefork (I.D. 120803), located in Lot 13 and 14 of Section 30, Township 5S, Range 95W of the 6<sup>th</sup> P.M., via Caerus pipelines to completions operations at the following locations:

- A24 (I.D. #458475) located in NWNW and Lot 4 of Section 24, Township 4S, Range 96W of the 6<sup>th</sup> P.M.
- E34 (I.D. #335928) located in SWNW of Section 34, Township 4S, Range 96W of the 6<sup>th</sup> P.M.
- L27 (I.D. #335939) located in NWSW of Section 27, Township 4S, Range 96W of the 6<sup>th</sup> P.M.
- O04 (I.D. #414231) located in Lot 9 of Section 4, Township 6S, Range 96W of the 6<sup>th</sup> P.M.
- J14 (I.D. #467272) located in NESW of Section 14, Township 4S, Range 96W of the 6<sup>th</sup> P.M.

Transfer of produced water would begin upon the date of COGCC approval and terminate December 31<sup>st</sup>, 2020, with mutual agreement of Caerus and TEP, by extension of the Agreement, and upon subsequent COGCC approval.

### **Benefits**

Under this Water Transfer Plan, each party shall use reasonable and available means to safely transfer production water, in sufficient volumes and quality, to meet the other party's transfer request, when mutually agreeable to do so. The potential benefits include:

- Decreased freshwater withdrawals from surface water sources;
- Decreased reliance on injection wells for disposal of production/flowback water;
- Reduced completions costs versus alternative sources;
- Increased operational efficiencies from reusing local supplies of production/flowback water to meet water demands for drilling, completion and workover activities.
- Reduced volume of truck traffic versus alternatives that could involve trucking of water from other sources.

### **Produced Fluid Pickup, Custody Transfer Point and Delivery Locations**

Water produced from TEP's Grand Valley and Parachute fields will be gathered at the Starkey Production Pit 14-28-696 (CE&P Facility ID 454686, Pit ID 414554) located in Sec 28, T6S-R96W. The Custody Transfer Point will be at point where water is drawn from the pit and enters the Caerus operated pump. The lat/long for the Custody Transfer Point is approximately: 39°29'19.4" N, 108°07'13.3" W. Caerus will assume regulatory responsibility for the produced water at instant that the water enters the pump. The produced water will then be transferred to the North Parachute Ranch EP Waste Mgmt (i.e. Middlefork) (I.D.#120803), located in Lot 13 and 14 of Section 30, Township 5S, Range 95W of the 6<sup>th</sup> P.M., through ~4,566 feet of 8" surface HDPE, having a maximum design pressure of 335 psi and through ~34,084 feet 12" HDPE lined steel, having a maximum design pressure of 2,250 psi. The maximum anticipated operating pressure for delivery of water from the Starkey Production Pit 14-28-696 (CE&P Facility ID 454686,

Pit ID 414554) 300 psi. From Middlefork (I.D. #120803) the produced water will then be delivered to completions operations at the following locations:

- A24 (I.D. #458475) located in the NWNW and Lot 4 of Section 24, Township 4S, Range 96W of the 6th P.M. - From Middlefork (I.D. #120803), produced water will be transferred through ≈51,670' of 12" HDPE lined steel pipeline, having a max design pressure of 2,250 psi to Divide Road Water Facility (I.D. #432214). From Divide Road (I.D. #432214) water will be transferred through ≈9,063' of 12" steel pipeline, having a max design pressure of 1,440 psi into a 3,175' surface 12" HDPE pipeline having a max design pressure of 267 psi to A24 (I.D. #458475). The maximum anticipated operating pressure for delivery from Middlefork (I.D. #120803) to Divide Road (I.D. #432214) will be 1,740 psi in the 12" HDPE lined steel and the maximum anticipated operating pressure for Divide Road (I.D. #432214) to A24 (I.D. #458475) will be 150 psi in the 12" steel pipeline. These pipelines will deliver into 10-25, 500-bbl. temporary steel frac tanks, located on the A24 (I.D. #458475).
- E34 (I.D. #335928) located in the SWNW of Section 34, Township 4S, Range 96W of the 6<sup>th</sup> P.M. - From Middlefork (I.D. #120803), produced water will be transferred through ≈51,670' of 12" HDPE lined steel pipeline, having a max design pressure of 2,250 psi to Divide Road Water Facility (I.D. #432214). From Divide Road (I.D. #432214) water will be transferred through ≈16,685' of 12" HDPE lined steel pipeline, having a max design pressure of 1,440 psi to the E34 (I.D. #335928). The maximum anticipated operating pressure for delivery from Middlefork (I.D. #120803) to Divide Road (I.D. #432214) will be 1,740 psi in the 12" HDPE lined steel and the maximum anticipated operating pressure for Divide Road (I.D. #432214) to the E34 (I.D. #335928) will be 330 psi in the 12" HDPE lined steel pipeline. This pipeline will deliver to 10-25, 500-bbl. temporary steel frac tanks, located on the E34 (I.D. #335928).
- L27 (I.D. #335939) located in the NWSW of Section 27, Township 4S, Range 96W of the 6th P.M. - From Middlefork (I.D. #120803), produced water will be transferred through ≈51,670' of 12" HDPE lined steel pipeline, having a max design pressure of 2,250 psi to Divide Road Water Facility (I.D. #432214). From Divide Road (I.D. #432214) water will be transferred through ≈16,685' of 12" HDPE lined steel pipeline, having a max design pressure of 1,440 psi to the E34 (I.D. #335928). The maximum anticipated operating pressure for delivery from Middlefork (I.D. #120803) to Divide Road (I.D. #432214) will be 1,740 psi in the 12" HDPE lined steel and the maximum anticipated operating pressure for Divide Road (I.D. #432214) to the E34 (I.D. #335928) will be 330 psi in the 12" HDPE lined steel pipeline. This pipeline will deliver to 10-25, 500-bbl. temporary steel frac tanks, located on the E34 (I.D. #335928). From E34 (I.D. #335928), Completions operations will pump into ≈4,105' of 6" steel remote frac line, having a max design pressure of 10,000 psi, with a maximum anticipated operating pressure of 9,500 psi to the L27 (I.D. #335939).
- O04 (I.D. #414231) located in Lot 9 of Section 4, Township 6S, Range 96W of the 6th P.M. - From Middlefork (I.D. #120803), produced water will be transferred through ≈12,205' of 12" HDPE lined steel pipeline, having a max design pressure of 2,250 psi into 12" steel surface line of

≈2,725' to the O04 (I.D. #414231) having a max design pressure of 2,250 psi. The maximum anticipated operating pressure from Middlefork (I.D. #120803) to O04 (I.D. #414231) will be 980 psi. In some cases, if operationally necessary, water may move directly from the Starkey Production Pit to the O04 location for direct delivery to frac. If this is the case, it will be transferred through ~4,566 feet of 8" surface HDPE, having a maximum design pressure of 335 psi and through ~20,750 feet 12" HDPE lined steel, having a maximum design pressure of 2,250 psi, into 12" steel surface line of ≈2,725' to the O04 (I.D. #414231) having a max design pressure of 2,250 psi. The maximum anticipated operating pressure for delivery of water from the Starkey Production Pit 14-28-696 (CE&P Facility ID 454686, Pit ID 414554) 300 psi. This pipeline will deliver to 10-25, 500-bbl. temporary steel frac tanks, located on the O04 (I.D. #414231).

- J14 (I.D. #467272) located in NESW of Section 14, Township 4S, Range 96W of the 6th P.M. From Middlefork (I.D. #120803), produced water will be transferred through ≈51,670' of 12" HDPE lined steel pipeline, having a max design pressure of 2,250 psi to Divide Road Water Facility (I.D. #432214). From Divide Road (I.D. #432214) water will be transferred through ≈9,063' of 12" steel pipeline, having a max design pressure of 1,440 psi into a 3,175' surface 12" HDPE pipeline having a max design pressure of 267 psi to A24 (I.D. #458475). The maximum anticipated operating pressure for delivery from Middlefork (I.D. #120803) to Divide Road (I.D. #432214) will be 1,740 psi in the 12" HDPE lined steel and the maximum anticipated operating pressure for Divide Road (I.D. #432214) to A24 (I.D. #458475) will be 150 psi in the 12" steel pipeline. These pipelines will deliver into 10-25, 500-bbl. temporary steel frac tanks, located at A24 (I.D. #458475). From A24 (I.D. #458475), Completions operations will pump into ≈5,280' of 6" steel remote frac line, having a max design pressure of 10,000 psi, with a maximum anticipated operating pressure of 9,500 psi to the A24 (I.D. #458475).

Please note the following pads were removed in this updated operator plan: NPR A03-596 [335720] and NPR H15-596 [425805] as for 2020, they will either already be completed or have been removed from the schedule.

Caerus chooses a certified/trained service provider for any poly installation, which follows standard protocol for fusing. Dirt berms will be built around the frac tanks set-up at the destination locations. During pumping, there will be operators monitoring at several points along the pipeline pathway, whether it be on-site or remotely using meters.

TEP shall maintain all regulatory responsibility, custody and control for all water, until such time as it is transferred to Caerus at the Custody Transfer Point. Once the water enters the Caerus pump at the Starkey Production Pit 14-28-696 (CE&P Facility ID 454686, Pit ID 414554), Caerus will assume regulatory responsibility, custody and control of the water. (See Exhibit A attached map for additional detail on the Custody Transfer Point).

All isolation valves on pipelines involved in the transfer are shown on Exhibit A.

## **Transfer**

The transferring activities will consist of the following:

The volume of fluid to be transferred is estimated at ~10,000 to 25,000 bbl./day, however, the total volume will not exceed 1,000,000 bbl. over the effective dates of this Water Transfer Plan. Actual received volumes will be tracked at the Custody Transfer Point.

TEP and Caerus will maintain records with the following information:

- Changes to the approved Water Transfer Plan;
- Applicable training requirements for contractors (lock out/ tag out, job hazard analysis at the transfer location, etc.);
- Types and results of internal and contractor audits conducted;
- Tabulated water generator records, if required by Rule 907.b.(2) including:
  - Date of transport
  - Identity of water generator
  - Identity of water transporter
  - Location of the produced water pick up site
  - Type and Volume of water transported
  - Name and Location of receiving point
  
- Summary of spills, incidents or upsets;

Such records shall be submitted by the pumping vendor or via a SCADA Report, made available for inspection by the Director of the COGCC during normal business hours, and copies thereof shall be furnished to the Director of the COGCC upon request.

Truck trips to haul water are not expected as a result of this agreement. If any are deemed necessary, a sundry will be filed with additional details and said trips would occur on existing roads. If this is the case, tickets will be signed and maintained by the operators.

## **Spill Response and Cleanup Measures**

The locations for this water transfer do not fall within a 317.B. area but fall within the Sensitive Wildlife Habitat (SWH) area. Caerus has the following precautions in place for spill response and cleanup measures:

- Caerus pads and facilities are covered under a Spill Prevention Control and Countermeasure Plan (SPCC);
- In addition to the SPCC Plan, Caerus has its own tailored internal Spill Response Program;
- Caerus has strategically located spill response equipment bins throughout the Piceance Basin;
- Integrity testing of flowlines occurs annually and prior to commencing water sharing operations;
- Dirt berms around frac tanks at the destination locations; and
- Caerus operated pads have primary containment around water and condensate tanks and secondary containment around drilling and completions operations.

TEP has the following precautions in place for spill response and cleanup measures:

- TEP locations are covered under a comprehensive Spill Prevention Control and Countermeasure Plan (SPCC);
- TEP has spill response equipment bins located at the proposed produced water receiving locations;
- TEP maintains multiple fully loaded spill kit trailers on stand-by ready for deployment in the event of any incident;
- All new-construction TEP operated pads have secondary containment around the equipment and the pad location has secondary containment built around the pad perimeter.

Transferring and Receiving Operator will implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface pipelines.

### **Analytical Data**

Approval of this Water Transfer Plan is contingent upon analytical laboratory results for representative samples of Caerus water collected from the water sources identified above. Results have been submitted to the COGCC. Standard EPA analytical laboratory analysis shall include:

- Volatile organic compounds EPA Method 624 (GC/MS)
- Semi-Volatile organic compounds (EPA Method 625 (GC/MS)
- Dissolved metals (EPA Method 200.7 ICP)
- Dissolved inorganics (non-metals) (EPA Method 300.0, IC)
  - Br, Cl, F, Nitrate / Nitrite, Sulfate
- General water quality parameters
  - Specific conductance (EPA Method 300.0, IC)
  - Hardness (EPA Method 130.1)
  - Total dissolved solids (EPA Method 160.1)
  - pH (EPA Method 150.2)

### **Operator Contact Information**

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Attn: Brad Kesler  
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Phone: 970.216.8703

Caerus Piceance LLC  
Ryan Guldán  
Water Superintendent  
143 Diamond Ave  
Parachute, CO 81635  
Phone: 970.285.2816

### **Site Due Diligence**

North Parachute Ranch EP Waste Mgmt [120803]: No incidents, NOAV, or complaints identified, Inspection 6/2018, No corrective actions identified.

NPR A03-596 [335720]: No incidents, NOAV, or complaints identified, Inspections 1/15/19, 1/29/19 and 2/21/19, No corrective actions identified.

ELU A24-496 [458475]: No incidents, NOAV, or complaints identified, Inspection 06/2019, Corrective Actions were closed on 7/8/19, FIRR Form #402098416

SG E34 496 [335928]: No incidents, NOAV, or complaints identified, Inspections 1/15/19, 1/29/19, 2/21/19, 4/16/19, No corrective actions identified.

NPR H15-596 [425805]: Incident submitted 3/6/19 (401908622), Remediation Project Number 12949, Inspection 3/1/2019, No corrective actions identified.

SG L27 496 [335939]: No incidents, NOAV, or complaints identified, Inspection 6/25/2019, No corrective actions identified.

Wolf Ranch Compressor Station [433378]: No incidents, NOAV, or complaints identified, No inspections on file.

ELU/J14-496 [467272]: No inspections on file, No incidents, NOAVs, or complaints identified.

NPR/O04-696 Pad [414231]: Inspection 10/15/2019, No incidents, NOAVs, or complaints identified. No corrective actions identified.

Starkey Production Pit 14-28-696 [414554]: This pit is being converted to a Centralized E&P facility and was last inspected on September 29, 2018; all corrective actions identified were addressed by operator.

### **Termination of Transfer**

Both Caerus and TEP shall notify the COGCC via Sundry within 30 days of the termination of activities under this Water Reuse Plan.

### **Annual Reporting**

Caerus and TEP will each separately submit an annual report to the COGCC summarizing the transfer of production water (both as transferring and receiving operator) during the calendar year. The annual report shall be submitted on or before the anniversary of the first date of transfer.

# Exhibit A

