



We answer to you.

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December 29, 2016

Mr. Patrick D. Maher
Venture Resources, Inc.
P.O. Box 1974, 2208 County Road 281
Idaho Springs, Colorado 80452

Engineers
Environmental
Consultants
Surveyors
Landscape
Architects
Safety
Consultants

RE: Hukill Gulch Millsite, Permit #M-2009-076
Groundwater Monitoring Plan
December 2016 Groundwater Monitoring Report

Dear Mr. Maher,

RETTEW Associates, Inc. is pleased to provide Venture Resources, Inc. with this Groundwater Sampling Report documenting groundwater monitoring activities conducted at the Hukill Gulch Mill Site located near Idaho Springs, Colorado (Site).

Groundwater Monitoring Summary

RETTEW conducted groundwater monitoring of the upgradient and downgradient monitoring wells on December 29, 2016. Both monitoring wells were dry, therefore, no samples were collected. The groundwater monitoring field forms are provided as **Attachment 1**.

Tailings Pond Observation

The water level in the tailings pond appears to be unchanged compared to the November sampling event. Snow has drifted against the retaining wall and the water is frozen.

We trust this letter report provides Venture Resources, Inc. with the information required. Please feel free to contact Dustin Krajewski by telephone at (303) 800-4901 or by email at dkrajewski@rettew.com if you have questions or comments regarding this cost estimate. We truly appreciate the opportunity to support Venture Resources, Inc. with this project.

Sincerely,

Devin Black
Geoscientist

Dustin E. Krajewski, PE
Group Manager/Senior Engineer

Enclosures: Attachment 1 – Field Sampling Forms

ATTACHMENT 1
FIELD SAMPLING FORMS



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GROUNDWATER SAMPLING FORM

Page 1 of 1

Downgradient

Well Type: ☒ Monitor ☐ Extraction ☐ Other _____

Well No.: _____

Dup: _____

MS/MSD: _____

Job Name: Hukill Gulch Millsite #M-2009-076 Well Material: ☐ PVC

Job Number: 107732000 Phase _____

Date: 12/29/16 ☐ St. Steel ☒ Other HDPE

Time: 1245

Recorded By: [Signature]

Sampled By: DJB

(Signature)

(Sampling Team Members)

PURGE VOLUME

Casing Diameter (D in inches): 2"

Total Depth of Casing (TD in feet BTOC): 23.8"

Water Level Depth (WL in feet BTOC): dry

Number of Well Volumes to be Purged: _____

Screened/Open Interval in Feet (BTOC) from _____ to _____

5.75 to ground surface

PURGE METHOD

☒ Bailer - Type: _____

☐ Submersible ☐ Peristaltic ☐ Bladder; Pump No.: _____

Other - Type: _____

PUMP INTAKE SETTING

☐ Near Bottom ☐ Near Top ☐ Middle of water column ☐ Other: _____

Depth in feet (BTOC) _____

PURGE VOLUME CALCULATIONS

(-) X ² X X 0.0408 = Gallons
TD (feet) WL (feet) D (inches) No. Volumes Calculated Purge Volume

FIELD PARAMETER MEASUREMENT

Time	Minutes Elapsed	Rate (mL/min)	Gallons Purged	pH	Cond. (mS/cm)	Turbidity (NTUs)	DO (mg/L)	Temp. (°C)	ORP (mV)	Depth to Water (ft t.o.c.)	Comments
	0										
	3										
	6										
	9										
	12										
	15										
	18										
	21										
	24										
	27										
	30										

Note: GT = Greater Than.
NM = Not Measured.

LT = Less Than.
NC = Not Collected.

OBSERVATIONS DURING WELL PURGING: Well Condition: good Color: _____

Turbidity (Qualitative): _____ Odor: _____ Other: _____

Purge Water Disposal: ☐ San. Sewer ☐ Storm Sewer ☐ Bucket: Type _____ Size _____ Other: _____

SAMPLE COLLECTION RECORD

Analysis
Notes: <u>DRY</u>



We answer to you.

GROUNDWATER SAMPLING FORM

Page 1 of 1

Well Type: ☒ Monitor ☐ Extraction ☐ Other _____

Upgradient
Well No.: _____
Dup: _____
MS/MSD: _____

Job Name: Hukill Gulch Millsite #M-2009-076 Well Material: ☐ PVC

☐ St. Steel

☒ Other HDPE

Job Number: 107732000 Phase _____

Date: 12/29/16

Time: 1316

Recorded By: _____

Sampled By: DB

(Signature)

(Sampling Team Members)

PURGE VOLUME

Casing Diameter (D in inches): 2"

Total Depth of Casing (TD in feet BTOC): 25.3'

Water Level Depth (WL in feet BTOC): Dry

Number of Well Volumes to be Purged: _____

Screened/Open Interval in Feet (BTOC) from _____ to _____

6.6' to 9'

PURGE METHOD

☒ Bailer - Type: _____

☐ Submersible ☐ Peristaltic ☐ Bladder; Pump No.: _____

Other - Type: _____

PUMP INTAKE SETTING

☐ Near Bottom ☐ Near Top ☐ Middle of water column ☐ Other: _____

Depth in feet (BTOC) _____

PURGE VOLUME CALCULATIONS

(-) X ² X X 0.0408 = Gallons
TD (feet) WL (feet) D (inches) No. Volumes Calculated Purge Volume

FIELD PARAMETER MEASUREMENT

Time	Minutes Elapsed	Rate (mL/min)	Gallons Purged	pH	Cond. (mS/cm)	Turbidity (NTUs)	DO (mg/L)	Temp. (°C)	ORP (mV)	Depth to Water (ft t.o.c.)	Comments
	0										
	3										
	6										
	9										
	12										
	15										
	18										
	21										
	24										
	27										
	30										

Note: GT = Greater Than.
NM = Not Measured.

LT = Less Than.
NC = Not Collected.

OBSERVATIONS DURING WELL PURGING: Well Condition: good Color: _____

Turbidity (Qualitative): _____ Odor: _____ Other: _____

Purge Water Disposal: ☐ San. Sewer ☐ Storm Sewer ☐ Bucket: Type _____ Size _____ Other: _____

SAMPLE COLLECTION RECORD

Analysis
Notes: <u>DRY - no moisture on probe</u>



