

Appendix G
Otter Creek Mine Baseline Report 304E
Spring and Seep Inventory

Site ID: SSI-11-01



Figure 1. View to the west

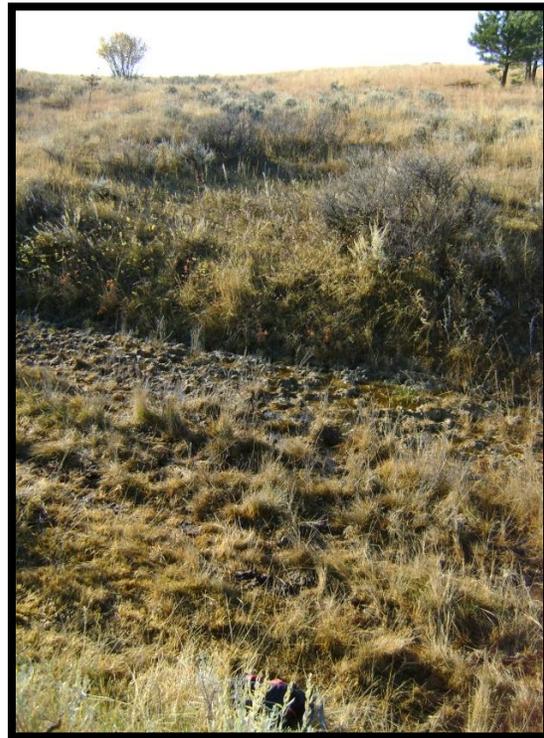


Figure 2. View to the south

Specific Conductivity (μm)	7400
pH	7.56
Temperature ($^{\circ}C$)	5.2
Latitude	45.52555
Longitude	106.13135
Flow Rate	NA

Notes: Water standing in micro depressions created from cattle hoof prints. Deciduous vegetation possibly suggests long-term presence of water. Precipitation occurred within last 24 hrs. Standing water continues intermittently 400-600ft west to a stock pond (SSI-11-02). Interpreted as water from a seep.

Site ID: SSI-11-02



Figure 1. View to the southwest

Specific Conductivity (μm)	7100
pH	8.17
Temperature ($^{\circ}\text{C}$)	6.1
Latitude	45.5266
Longitude	106.13541
Flow Rate	NA
Water Color	Yellow, Transparent

Notes: Stock pond developed from man-made reservoir. Pond is situated in the middle of the drainage; source appears to be groundwater seepage or surface water run-off. Interpreted as water from surface run-off.

Site ID: SSI-11-03



Figure 1



Figure 2

Specific Conductivity (μm)	NA
pH	NA
Temperature ($^{\circ}C$)	NA
Latitude	45.52626
Longitude	106.13667
Flow Rate	NA
Water Color	NA

Notes: Standing water in depression approximately 150ft below man-made berm of SSI-11-02. 3-4 inches of ponding water appears in livestock made tracks. Interpreted as water from a seep.

Site ID: SSI-11-04



Figure 1. View to the North

Specific Conductivity (μm)	4,250
pH	8.75
Temperature ($^{\circ}C$)	7.9
Latitude	45.52647
Longitude	106.1372
Flow Rate	NA
Water Color	Brown, Greenish Tint

Notes: Drainage west of SSI-11-02, above confluence; converges with SSI-11-02 six feet below seep. Pool of standing water 1'x6'x1'. Interpreted as ponding surface water, with slight seepage.

Site ID: SSI-11-05



Figure 1. View to Northeast



Figure 2. View to Northeast

Specific Conductivity (μm)	12,390
pH	9.27
Temperature ($^{\circ}C$)	6.6
Latitude	45.52579
Longitude	106.13757
Flow Rate	NA
Water Color	Tan, Transparent

Notes: Water issued from shallow coal outcrop. Coal is approximately 1 ft. thick. Water continues intermittently down drainage. Interpreted as seeping surface water.

Site ID: SSI-11-200



Figure 1. View to the West



Figure 2. View to the East

Specific Conductivity (μm)	5,430
pH	8.39
Temperature ($^{\circ}C$)	3.8
Latitude	45.53377
Longitude	106.12425
Flow Rate	NA
Water Color	Black, Turbid

Notes: Cottonwoods around seep, suggesting possible long-term presence of water. Black mud around banks and in hoof prints of cattle within the seep. Flow continues intermittently down drainage (Figure 1). Interpreted as possible year around seep with ponding surface water and no estimable flow.

Site ID: SSI-11-201



Figure 1. View to the East



Figure 2. View to the West

Specific Conductivity (μm)	4,280
pH	7.52
Temperature ($^{\circ}C$)	5.9
Latitude	45.53377
Longitude	106.12442
Flow Rate (GPM)	0.5-1.0
Water Color	Black, Turbid

Notes: Seep twenty feet down gradient of SSI-11-200. A corrugated metal pipe partially buried in channel. Water issuing freely from substrate behind metal pipe; black coloration issuing from disturbed mud, suggesting coal seam (Figure 2). Flow continues intermittently down drainage to the East. Interpreted as a seep with the potential to be completely dry as summer progresses.

Site ID: SSI-11-202



Figure 1. View to the North

Specific Conductivity (μm)	NA
pH	NA
Temperature ($^{\circ}C$)	NA
Latitude	45.53379
Longitude	106.12637
Flow Rate	NA
Water Color	NA

Notes: Continuation of SSI-11-201 outflow. Lush vegetation and livestock hoof depressions suggests long-term presence of seeping water being near the surface.

Site ID: SSI-11-203



Figure 1. View to the North

Figure 2. View to the South

Specific Conductivity (μm)	NA
pH	NA
Temperature ($^{\circ}C$)	NA
Latitude	45.53433
Longitude	106.12827
Flow Rate	NA
Water Color	Yellow, Clear

Notes: Small seep to the northeast of SSI-11-201 main drainage.

Site ID: SSI-11-204



Figure 1. View to the Southeast

Specific Conductivity (μm)	NA
pH	NA
Temperature ($^{\circ}C$)	NA
Latitude	45.5335
Longitude	106.14903
Flow Rate	NA
Water Color	NA

Notes: Damp depression with deciduous trees present; disturbed ground approximately 30 x 40ft.

Site ID: SSI-11-205



Figure 1. View to the East



Figure 2. View to the East

Specific Conductivity (μm)	11220
pH	8.48
Temperature ($^{\circ}C$)	10.7
Latitude	45.53463
Longitude	106.15074
Flow Rate	NA
Water Color	Yellow

Notes: Small seep that forms into a more distinct channel 90 feet from source (Figure 1). Seep originates from a flat marshy area.

Site ID: SSI-11-206



Figure 1. View to the South



Figure 2. View to the North

Specific Conductivity (μm)	11,050
pH	8.52
Temperature ($^{\circ}C$)	5.4
Latitude	45.53521
Longitude	106.11172
Flow Rate	NA
Water Color	Light Yellow, Clear

Notes: Fifty feet wide seep with livestock hoof imprints collecting small amounts of water (Figure 2). Trace amounts of saline precipitation forming on edges of divots and grasses; present seep confluences SSI-11-206A to produce a flat saline mud flat.

Site ID: SSI-11-206A



Figure 1. View to the Southeast



Figure 2. Saline precipitation

Specific Conductivity (μm)	23,400
pH	9.3
Temperature ($^{\circ}C$)	7.5
Latitude	45.53544
Longitude	106.11164
Flow Rate	NA
Water Color	Light Orange, Clear

otes: Saline deposit with ponding water forming in divots. Water issues from a leaching drainage to the Southeast and a hillside to the East; intersects SSI-11-206 from the south to form SSI-11-206B. Interpreted as seeping surface water.

Site ID: SSI-11-206B



Figure 1. Saline precipitation



Figure 2. View to the Southeast

Specific Conductivity (μm)	17,720
pH	8.95
Temperature ($^{\circ}C$)	8.1
Latitude	45.53575
Longitude	106.11202
Flow Rate	NA
Water Color	Light Tan, Turbid

Notes: Large amounts of saline precipitate (Figure 1). Confluence of SSI-11-206 and SSI-11-206A; forming a more distinctive seeping channel (Figure 2).

Site ID: SSI-11-207



Figure 1. Coal Seam



Figure 2. View to the South

Specific Conductivity (μm)	7,830
pH	7.95
Temperature ($^{\circ}C$)	6.0
Latitude	45.53490
Longitude	106.13698
Flow Rate	NA
Water Color	Tan

Notes: Coal seam near seep, less than one foot in thickness (Figure 1). 3x3ft pond with lush vegetation, no flow visible, suggesting year around seepage (Figure 2).

Site ID: SSI-11-208; (P10)



Figure 1. View to the East



Figure 2. View to the West

Specific Conductivity (μm)	6,060
pH	9.49
Temperature ($^{\circ}C$)	12.4
Latitude	45.53746
Longitude	106.15382
Flow Rate	NA
Water Color	NA

Notes: Man-made reservoir with saline precipitates forming along edges; appears to have livestock recently drinking from pond. No evident output/input into body of water. Interpreted as water collected from surface runoff only.

Site ID: SSI-11-209



Figure 1. View to the East



Figure 2. View to the West

Specific Conductivity (μm)	2310
pH	8.65
Temperature ($^{\circ}C$)	10.0
Latitude	45.53284
Longitude	106.18938
Flow Rate	Volumetric – 1Gal/20sec
Water Color	NA

Notes: Stock tank in background, foreground shows overflow pipe down gradient of tank where flow was taken (Figure 1). Figure 2 shows surface water ponding as a result of excess water from stock tank. Water was not derived from either a spring or seep.

Site ID: SSI-11-210



Figure 1. View to the West

Specific Conductivity (μm)	2830
pH	8.17
Temperature ($^{\circ}C$)	4.5
Latitude	45.52814
Longitude	106.16158
Flow Rate	NA
Water Color	NA

Notes: Stock tank in foreground. Large amounts of aquatic life present inside of tank. Water is piped from an offsite source to the tank via a two-inch galvanized water line. Water was not derived from either a spring or seep.

Site ID: SSI-11-211



Figure 1. View to the North

Specific Conductivity (μm)	631
pH	9.24
Temperature ($^{\circ}C$)	7.1
Latitude	45.49231
Longitude	106.14772
Flow Rate	NA
Water Color	Tan, Turbid

Notes: Small seep (1'x1.5').

Site ID: SSI-11-212



Figure 1. View to the East

Specific Conductivity (μm)	14,100
pH	8.30
Temperature ($^{\circ}C$)	6.6
Latitude	45.45993
Longitude	106.11430
Flow Rate	Visual~1gal/2.5min
Water Color	Tan, Turbid

Notes: Seep issuing from clay outcropping, within channelized bed; delicious trees adjacent to the site.

Site ID: SSI-11-213



Figure 1. View to the North

Specific Conductivity (μm)	3109
pH	7.35
Temperature ($^{\circ}C$)	6.9
Latitude	45.53724
Longitude	106.14561
Flow Rate	NA
Water Color	NA

Notes: Stock tank fed from well adjacent to Stevens' main ranch house.

Site ID: SSI-11-214



Figure 1. View to the North

Specific Conductivity (μm)	NA
pH	NA
Temperature ($^{\circ}C$)	NA
Latitude	45.49303
Longitude	106.18660
Flow Rate	NA
Water Color	NA

Notes: Small seep that appears to be drying up, located within a dry drainage.

Site ID: SSI-11-215



Figure 1. View to the West

Specific Conductivity (μm)	11,840
pH	8.68
Temperature ($^{\circ}\text{C}$)	7.0
Latitude	45.48907
Longitude	106.19536
Flow Rate	Visual~1Gal/30sec
Water Color	NA

Notes: Small channelized creek, Junipers and lush vegetation next to stream channel. Source not known.

Site ID: SSI-11-216



Figure 1. Algae Present



Figure 2. View to the South

Specific Conductivity (μm)	1,118
pH	7.77
Temperature ($^{\circ}C$)	3.5
Latitude	45.48726
Longitude	106.19411
Flow Rate	NA
Water Color	Tan

Notes: Seep 6x4x1'. Junipers present near edge of surface water, algae growing near edges of issuing water.

Site ID: SSI-11-217



Figure 1. Dry Seep

Specific Conductivity (μm)	NA
pH	NA
Temperature ($^{\circ}C$)	NA
Latitude	45.48566
Longitude	106.18993
Flow Rate	NA
Water Color	NA

Notes: Dry seep although ground still saturated. Junipers down gradient of where picture was taken.

Site ID: SSI-11-218



Figure 1. View to the North

Specific Conductivity (μm)	9,520
pH	8.39
Temperature ($^{\circ}\text{C}$)	7.9
Latitude	45.48835
Longitude	106.18498
Flow Rate	NA
Water Color	NA

Notes: Seep within meandering channel; intermittent flow down gradient of picture.

Site ID: SSI-11-219

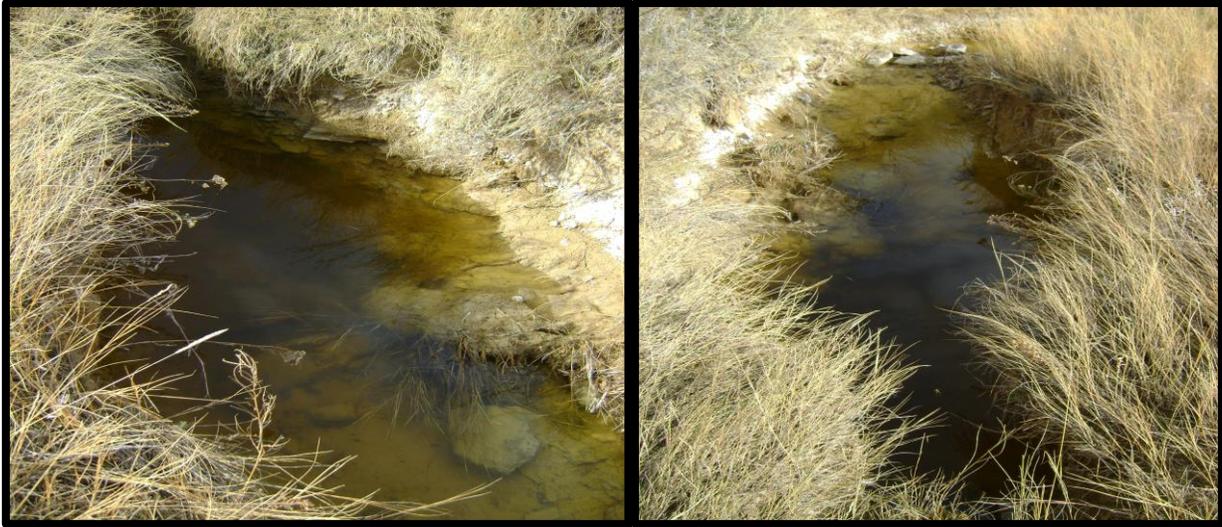


Figure 1. View to the North

Figure 2. View to the South

Specific Conductivity (μm)	7990
pH	8.72
Temperature ($^{\circ}C$)	5.0
Latitude	45.48853
Longitude	106.18526
Flow Rate	NA
Water Color	NA

Notes: Seep 4x10x4'. Water leaching into clearly defined channel below Figure 2.

Site ID: SSI-11-220



Figure 1. View to the West

Figure 2. View to the South

Specific Conductivity (μm)	13,999
pH	8.60
Temperature ($^{\circ}C$)	11.8
Latitude	45.4714
Longitude	106.19186
Flow Rate	NA
Water Color	Yellow Tint

Notes: Water pooled behind man-made berm, 80x30' across channel. Sparse saline precipitation forming against edges of water; reservoir fed by spring to the west as shown in Figure 2.

Site ID: SSI-11-221



Figure 1. View to the North

Specific Conductivity (μm)	12,722
pH	8.51
Temperature ($^{\circ}\text{C}$)	9.5
Latitude	45.47089
Longitude	106.19328
Flow Rate	NA
Water Color	Yellow

Notes: Surface water issues from dry channel up gradient of Figure 1 and drains into SSI-11-220. Saline precipitates around edges of water. Interpreted as a seasonal spring.

Site ID: SSI-11-222



Figure 1. View to the Southwest

Specific Conductivity (μm)	NA
pH	NA
Temperature ($^{\circ}C$)	NA
Latitude	45.47071
Longitude	106.18756
Flow Rate	NA
Water Color	NA

Notes: Site Dry with frozen puddle in middle of center of seep; several deciduous trees down gradient of Figure 1. 2''-6'' coal seam located below 3 inches of topsoil.

Site ID: Fortune Spring



Figure 1. View to the East



Figure 2. View to inlet pipe into stock tank

Specific Conductivity (μm)	7440
pH	7.53
Temperature ($^{\circ}C$)	6.3
Latitude	45.47167
Longitude	106.115
Flow Rate	Volumetric~0.88GPM
Water Color	NA

*Site included in Baseline Study

Note: Water accumulated into small puddles above and below stock tank. Surface water dries up 600 feet down gradient and 800 feet above gradient of tank. In Figure 1 photo was taken down gradient of the tank. Figure 2 was taken across the draw where the tank is situated looking North to South. Site is supplied from up gradient Fortune Spring.

Site ID: P1



Figure 1. View to the Southeast



Figure 2. Saline flats near pond

Specific Conductivity (μm)	1200
pH	9.03
Temperature ($^{\circ}C$)	5.7
Latitude	45.49791
Longitude	106.14552
Flow Rate	NA
Water Color	Green, Very Turbid

*Site included in Baseline Study

Note: Dense vegetation mainly cattails, surround the pond. No evident flow of input or output of water was found. Before sampling the water was observed to have had a green color. Site interpreted to be a spring.

Site ID: P2



Specific Conductivity (μm)	12040
pH	7.8
Temperature ($^{\circ}\text{C}$)	15.8
Latitude	45.47867
Longitude	106.14078
Flow Rate	NA
Water Color	NA

*Site included in Baseline Study

Note: Pond fed from surface run-off only. Site surrounded by cottonwood trees.

Site ID: P3



Figure 1. View to the East



Figure 2. View to the East

Specific Conductivity (μm)	464
pH	8.56
Temperature ($^{\circ}C$)	5.2
Latitude	45.50777
Longitude	106.13491
Flow Rate	NA
Water Color	Moderately Turbid

*Site included in Baseline Study

Note: No visible water entering upslope or exiting down slope of the pond. When arrived at site 15-20 head of livestock were drinking from the pond water. Figure 1, was taken from the northern dyke of the pond. Figure 2, shows the inlet drainage on the east side of the pond, which had no visible surface water. Surface water not derived from seeping water or a spring.

Site ID: P4



Specific Conductivity (μm)	622-4120
pH	7.5-8.0
Temperature ($^{\circ}C$)	0-19.0
Latitude	45.50558
Longitude	106.12069
Flow Rate	NA
Water Color	NA

*Site included in Baseline Study

Note: Pond fed from surface run-off and self-fed spring water. Site surrounded by cottonwood trees.

Site ID: Shorty Creek Reservoir (P5)



Specific Conductivity (μm)	8650
pH	9.43
Temperature ($^{\circ}C$)	9.4
Latitude	45.49373
Longitude	106.10422
Flow Rate	NA
Water Color	Light Yellow,

Figure 1. View to the Southeast

Figure2. View to the Northeast

*Site included in Baseline Study

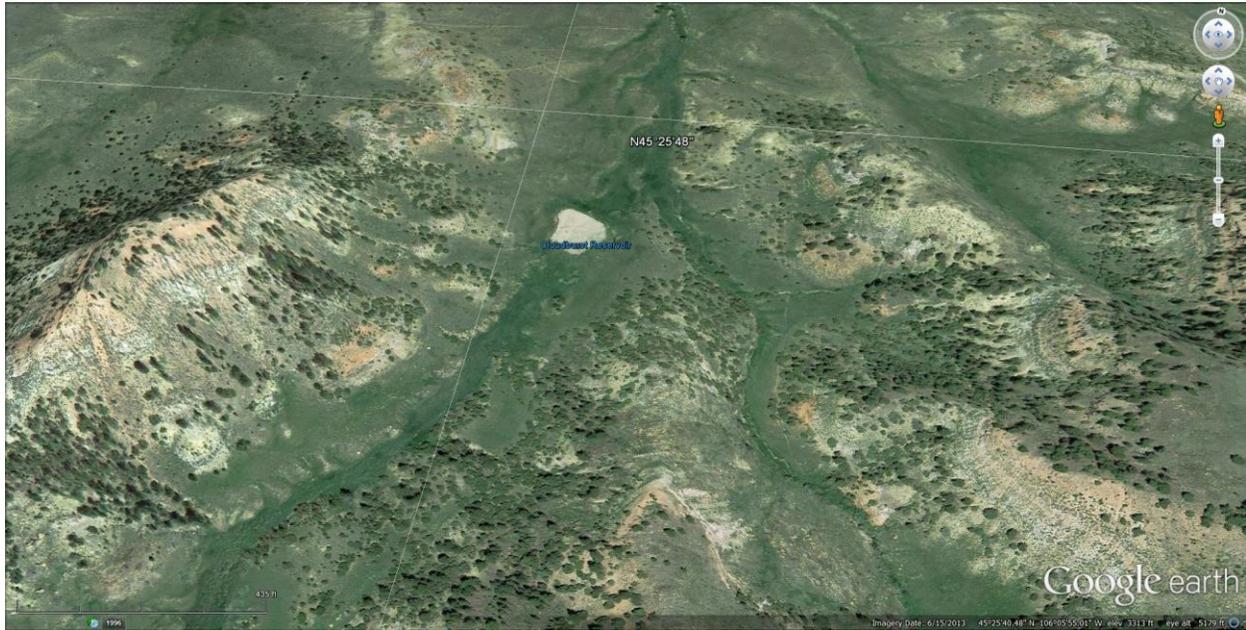
Note: No input/output was visible surrounding the pond. While sampling, noticed insects swimming in the water. Cattle have appeared to water at this site but have not for several weeks. The pond had a depth of 6-8 inches of water along the dyke (Figure 2). Site replenished by surface runoff.

Site ID: P6



Pond 6 is located in Tenmile Creek just outside the southeast Tract 2 boundary (Section 1, T5S, R45E) and was included in the baseline study. A screen shot from Google Earth imagery shows the pond in 2013 above.

Site ID: P7



Pond 7 is located on an ephemeral tributary to Tenmile Creek approximately one mile southeast of the south east corner of the Tract 2 boundary (Secion 6 T5S, R46E). No access to this site was available during baseline studies. A screen shot from Google Earth imagery shows the pond in 2013 above.

Site ID: P8



Pond 8 is located in the southeast corner of Tract 1 (Section 1 T4S, R45E). Access to this site was not available during baseline studies. A screen shot from Google Earth imagery shows the pond in 2013 above.

Site ID: P9



Pond 9 is located in Tract 1 (Section 25, T3S, R45E) on a tributary to Home Creek. The pond is located above a man-made dam. This site was not visited during the spring and seep inventories conducted during the baseline study. A screen shot from Google Earth imagery shows the pond in 2013 above.

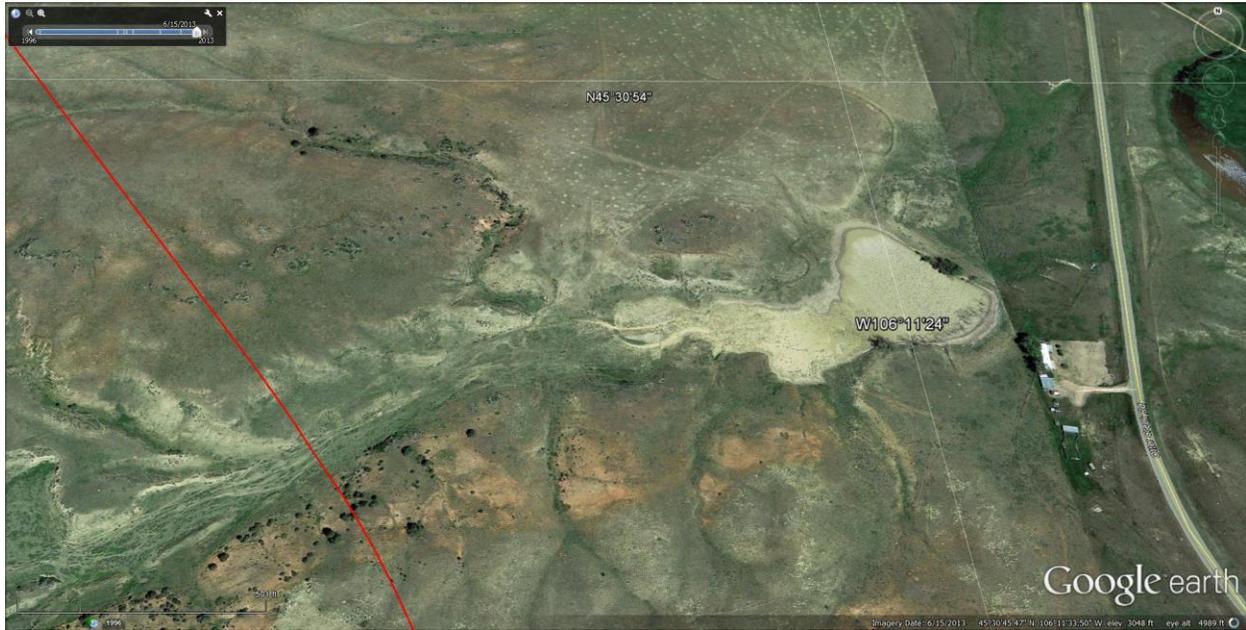
Site ID: P10 – see SSI 11-208

Site ID: P11



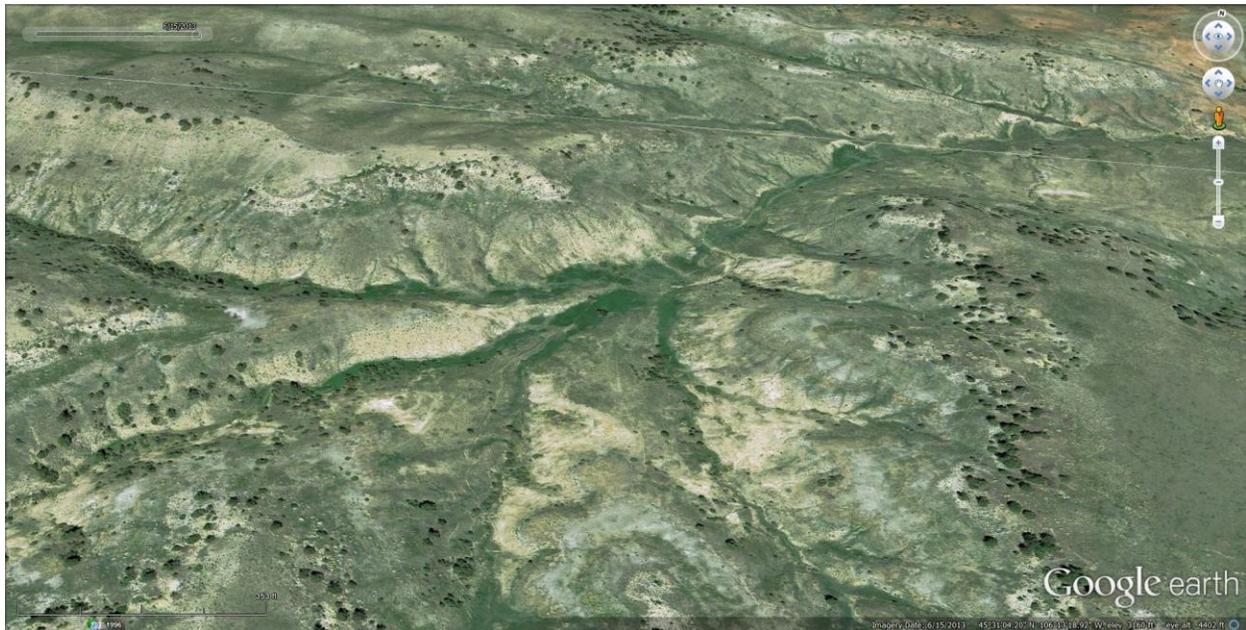
Pond 11 is located in Tract 1 (Section 3, T4S, R45E) in a small tributary to Threemile Creek. It is created by a small man made dam across the drainage to retain surface water runoff. No water has been observed at this pond. This site is underlain by clinker. A screen shot from Google Earth imagery shows the pond in 2013 above.

Site ID: P12

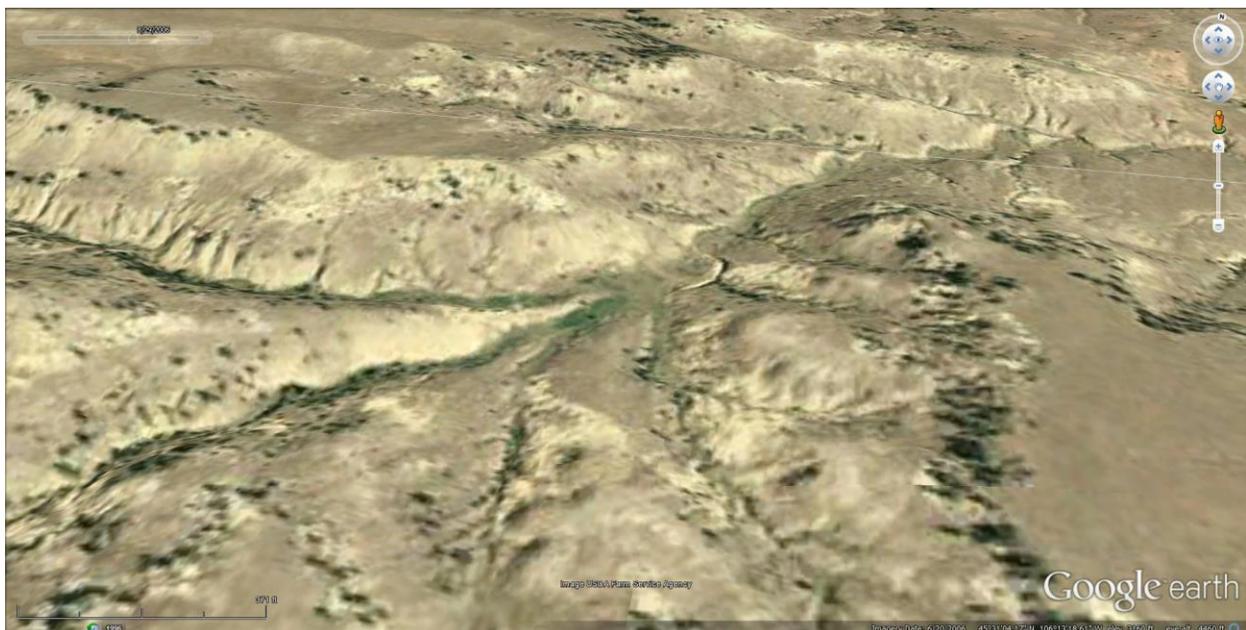


Pond 12 is located between Tract 1 and Tract 3 (Section 4, T4S, R45E) in a tributary to Otter Creek. It is created by a man made dam across the drainage. Access this site was not available during the baseline study. A screen shot from Google Earth imagery shows the pond in 2013 above.

Site ID: P13



Pond 13 is identified as a pond on the 1995 USGS Willow Crossing, MT quadrangle. A review of historical aerial imagery did not show any evidence of ponded water at that location. Screen shots from Google Earth imagery shows the site in 2013 above and from 2006 below.



Site ID: P14



Pond 14 is in Tract 3 (Section 7, T4S, R45E) in a tributary to Otter Creek. It is created by a man made dam across the drainage. This site was not accessed during the baseline study. A screen shot from Google Earth imagery shows the pond in 2013 above.

Site ID: P15



Pond 15 is in Tract 3 (Section 18, T4S, R45E) on Newel Creek, a tributary to Otter Creek. It appears to be created by a man made dam across the drainage. This site was not accessed during the baseline study. A screen shot from Google Earth imagery shows the pond in 2013 above.

Site ID: SSI-10-001



Figure 1. Abandoned stock tank



Figure2.Dried Reservoir

Specific Conductivity (μm)	1940
pH	7.70
Temperature ($^{\circ}C$)	9.3
Latitude	45.46395
Longitude	106.07313
Flow Rate	1Gal/11Mins
Water Color	Slight Turbidity

Note: Figure 1 shows the inlet pipe, source feeding pipe is a spring up gradient. Figure 2, was taken from the dyke of the pond looking at the dry reservoir.

Site ID: Coal Creek Spring (ST6)



Figure 1. Stock tank near Coal Creek Spring

Figure 2. Coal Creek Spring Drainage

Specific Conductivity (μm)	6050
pH	7.71
Temperature ($^{\circ}C$)	8.8
Latitude	45.45495
Longitude	106.09262
Flow Rate	0.5Gal/1Mins
Water Color	Slight Turbidity

*Site included in Baseline Study

Note: The flow rate was taken from inlet pipe coming into the top of the tank. Water flowing on ground beside tank estimated at 0.5 gpm. Figure 2, ponding water occurring down gradient of stock tank. Water supplying the tank comes from Coal Creek Spring.

Site ID: Flowing well near AVF-3 site; (SSI-10-002)



Specific Conductivity (μm)	2490
pH	8.55
Temperature ($^{\circ}C$)	10.5
Latitude	45.48887
Longitude	106.16405
Flow Rate	1Gal/7Mins
Water Color	Transparent

Note: Flowing well.

Site ID: Dry Pond/Reservoir South of Windmill; (SSI-10-003)



Figure 1. View to the South



Figure 2. View to the North

Specific Conductivity (μm)	NA
pH	NA
Temperature ($^{\circ}C$)	NA
Latitude	45.49367
Longitude	106.1254
Flow Rate	NA
Water Color	NA

Note: Reservoir was dry when inventoried. Thick amount of grass was growing on the floor of the pond. Figure 1 gives an example of the size of the reservoir. Figure 2 displays the down gradient drainage leading away from the dry pond, which was also dry. Surface runoff is only means of recharge.

Appendix G
Otter Creek Mine Baseline Report 304E
Spring and Seep Inventory

Site ID: ST1

No Picture Available

Specific Conductivity (μm)	1070
pH	9.11
Temperature ($^{\circ}C$)	3.8
Latitude	45.48543
Longitude	106.1429
Flow Rate	NA
Water Color	Transparent

Site ID: ST2

No Picture Available

Specific Conductivity (μm)	1330
pH	8.69
Temperature ($^{\circ}C$)	4.8
Latitude	45.51208
Longitude	106.15377
Flow Rate	NA
Water Color	Transparent

Note: Ice layer on surface of water in stock tank. Parameters taken from tank, no inlet found.

Site ID: ST3

No Picture Available

Specific Conductivity (μm)	3340
pH	8.15
Temperature ($^{\circ}C$)	4.5
Latitude	45.52815
Longitude	106.1616
Flow Rate	NA
Water Color	Transparent

Site ID: ST4

No Picture Available

Specific Conductivity (μm)	3360
pH	8.26
Temperature ($^{\circ}\text{C}$)	2.2
Latitude	45.5462
Longitude	106.16088
Flow Rate	NA
Water Color	Transparent

Site ID: ST5

No Picture Available

Specific Conductivity (μm)	1940
pH	9.30
Temperature ($^{\circ}\text{C}$)	8.9
Latitude	45.4552
Longitude	106.09527
Flow Rate	NA
Water Color	Transparent

Site ID: ST6; Also Identified as Coal Creek Spring Stock Tank**Site ID: ST7**

No Picture Available

Specific Conductivity (μm)	2120
pH	9.63
Temperature ($^{\circ}\text{C}$)	2.9
Latitude	45.47178
Longitude	106.08673
Flow Rate	NA
Water Color	Transparent

Site ID: ST8

No Picture Available

Specific Conductivity (μm)	1840
pH	9.60
Temperature ($^{\circ}C$)	4.3
Latitude	45.46785
Longitude	106.0835
Flow Rate	NA
Water Color	Transparent

Site ID: ST9

No Picture Available

Specific Conductivity (μm)	1810
pH	9.10
Temperature ($^{\circ}C$)	5.8
Latitude	45.46335
Longitude	106.0672
Flow Rate	NA
Water Color	Transparent

Site ID: ST10

No Picture Available

Specific Conductivity (μm)	3310
pH	8.69
Temperature ($^{\circ}C$)	2.1
Latitude	45.54065
Longitude	106.1514
Flow Rate	NA
Water Color	Transparent

Site ID: SSI-11-06

No Picture Available

Specific Conductivity (μm)	2770
pH	8.37
Temperature ($^{\circ}C$)	7.1
Latitude	45.53312
Longitude	106.12915
Flow Rate	NA
Water Color	NA

Notes: Nick point with accumulated water. The cut is the last in a series within an ephemeral drainage, which pending on precipitation may produce flowing water.

Site ID: SSI-11-07



Figure 1

Specific Conductivity (μm)	4520
pH	8.73
Temperature ($^{\circ}\text{C}$)	6.6
Latitude	45.53354
Longitude	106.12930
Flow Rate	NA
Water Color	NA

Notes: Very wet marshy area above confluence with larger drainage. Water down gradient of Figure 1 continues intermittently 200 feet before flowing into another drainage; interpreted to be a seep.

Site ID: SSI-11-08



Figure 1. View to the North



Figure 2

Specific Conductivity (μm)	9920
pH	8.5
Temperature ($^{\circ}C$)	9.1
Latitude	45.53419
Longitude	106.12958
Flow Rate	NA
Water Color	NA

Notes: Standing water in main channel, pooled water possibly flows to the West. Pooled, standing water continues down the drainage intermittently.

Site ID: SSI-11-09



Figure 1. View to the Southeast



Figure 2. View to the Southeast

Specific Conductivity (μm)	9890
pH	8.65
Temperature ($^{\circ}C$)	9.2
Latitude	45.53098
Longitude	106.16805
Flow Rate	NA
Water Color	NA

Notes: Precipitation occurred in the last 24 hours; signs of water issuing, seeping to the surface, i.e. cattle tracks and surface subsidence. Very little actual standing water.

Site ID: SSI-11-10



Figure 1. View to the Southeast



Figure 2. View to the Southeast

Specific Conductivity (μm)	NA
pH	NA
Temperature ($^{\circ}C$)	NA
Latitude	45.52770
Longitude	106.11395
Flow Rate	NA
Water Color	NA

Notes: Site Dry. Figures 1 and 2 taken at the confluence of three drainages; salt precipitation on surface of ground.

Site ID: SSI-11-11



Figure 1



Figure 2

Specific Conductivity (μm)	7700
pH	8.61
Temperature ($^{\circ}\text{C}$)	7.9
Latitude	45.52845
Longitude	106.11457
Flow Rate	NA
Water Color	Light Brown, Yellow

Notes: Seep present in most Northwestern drainage above SSI-11-10. Water issuing from the Northwest, could not estimate flow. Algae bloom present on top of issuance (Figure 1).

Site ID: SSI-11-12



Figure 1. View to the East



Figure 2. View to the West

Specific Conductivity (μm)	9430
pH	8.88
Temperature ($^{\circ}C$)	6.2
Latitude	45.52739
Longitude	106.16937
Flow Rate	NA
Water Color	Light Brown, Yellow

Notes: Seeps emerge from two nick points in channel identified by larger cottonwood tree Figure 2. Cattle imprints all contain water.

Site ID: SSI-11-13



Figure 1. View to the East



Figure 2. View to the East.

Specific Conductivity (μm)	1259
pH	8.77
Temperature ($^{\circ}\text{C}$)	3.7
Latitude	45.51210
Longitude	106.15378
Flow Rate	NA
Water Color	Clear

Notes: Stock tank water originates from Steven's well nearby, overflow discharges into Threemile drainage.

Site ID: SSI-11-14



Figure 1

Specific Conductivity (μm)	NA
pH	NA
Temperature ($^{\circ}C$)	NA
Latitude	45.50726
Longitude	106.15199
Flow Rate	NA
Water Color	Clear

Notes: Stock pond in a small drainage with evidence of seasonal water. Water ponds behind small man-made berm, pond recharges with seasonal runoff.

Site ID: SSI-11-15



Figure 1. View to the Southeast



Figure 2. View of erosion cuts next to road

Specific Conductivity (μm)	43800
pH	9.16
Temperature ($^{\circ}C$)	0.2
Latitude	45.50171
Longitude	106.13564
Flow Rate	NA
Water Color	Light Brown and Reddish

Notes: Standing water seeping from hillside spring east of road. Ponding water is intermittently visible up to 200 feet down gradient of hillside spring. Interpreted as a seasonal seep.

Site ID: SSI-11-16



Figure 1

Specific Conductivity (μm)	6680
pH	9.66
Temperature ($^{\circ}\text{C}$)	0.0
Latitude	45.50318
Longitude	106.13554
Flow Rate	NA
Water Color	Light Brown, Medium Turbidity

Notes: Site 250 feet North of SSI-11-15, water emerges from nick point in a small drainage. No visible flow. Algae bloom evident, vegetation green around edges of water. Interpreted as a seep.

Site ID: SSI-11-17



Figure 1. View to the East



Figure 2. View to the North

Specific Conductivity (μm)	8600
pH	8.86
Temperature ($^{\circ}C$)	0.5
Latitude	45.49463
Longitude	106.11813
Flow Rate	NA
Water Color	Light Brown

Notes: Point originates south of B6 well battery. Intermittent water present from SSI-11-17 to culvert and beyond; salt precipitation present throughout channel. Interpreted as a seep.

Site ID: SSI-11-18



Figure 1. View to the West

Specific Conductivity (μm)	NA
pH	NA
Temperature ($^{\circ}C$)	NA
Latitude	45.52759
Longitude	106.13757
Flow Rate	NA
Water Color	NA

Notes: No access to collect field parameters. Stock tank across Highway 484 (MP 5, Section 9); Consol Energy, Inc. property.

Site ID: SSI-11-19



Figure 1. View to the Northwest

Specific Conductivity (μm)	1670
pH	9.07
Temperature ($^{\circ}C$)	3.9
Latitude	45.48459
Longitude	106.15689
Flow Rate	NA
Water Color	Light Brown, Medium Turbidity

Notes: Ponding surface water in ephemeral drainage south of K5 well and east of AVF-3 battery. After walking up gradient in drainage only sporadic ponding was found. Standing water suspected to runoff from last precipitation event.

Site ID: SSI-11-20



Figure 1. View to the Southwest

Specific Conductivity (μm)	10790
pH	8.61
Temperature ($^{\circ}C$)	3.8
Latitude	45.48796
Longitude	106.16690
Flow Rate	NA
Water Color	Light Yellow

Notes: Oxbow lake opposite AVF-3 battery in Section 15. Standing water, parameters taken above clinker creek crossing. Interpreted as groundwater recharge from nearby Otter Creek.

Site ID: SSI-11-21



Figure 1. View to the Northwest

Specific Conductivity (μm)	9610
pH	9.68
Temperature ($^{\circ}C$)	3.4
Latitude	45.45470
Longitude	106.14777
Flow Rate	NA
Water Color	NA

Notes: Stock tank on Denson's property not being used at this moment. Water source not near site.

Site ID: SSI-11-22



Figure 1. View to the West

Specific Conductivity (μm)	3700
pH	8.69
Temperature ($^{\circ}C$)	6.4
Latitude	45.43039
Longitude	106.17677
Flow Rate	Visual~0.5Gal/1Min
Water Color	Clear

Notes: Chromo Creek East of B-10 battery. Source of water Chromo Reservoir.

Site ID: SSI-11-23



Figure 1. View to the West

Specific Conductivity (μm)	3850
pH	8.68
Temperature ($^{\circ}C$)	6.4
Latitude	45.43120
Longitude	106.17240
Flow Rate	NA
Water Color	NA

Notes: Chromo Creek, where surface water disappears underground. Ponding water in background of Figure 1.

Site ID: SSI-11-100



Figure 1. View to the Southwest



Figure 2. View to the Northwest

Specific Conductivity (μm)	12820
pH	8.09
Temperature ($^{\circ}C$)	3.5
Latitude	45.49128
Longitude	106.18942
Flow Rate	NA
Water Color	Light Yellow, Brown

Notes: Figure 1 took looking up gradient into the drainage. No flow visible, ponding water in livestock imprints. Figure 2 nick point where surface water in Figure 1 originates. Interpreted as seeping surface water.

Site ID: SSI-11-101



Figure 1. View to the Southeast

Specific Conductivity (μm)	31510
pH	8.41
Temperature ($^{\circ}\text{C}$)	8.8
Latitude	45.49847
Longitude	106.20502
Flow Rate	NA
Water Color	Clear, Slight Turbidity

Notes: Seep extends 200 feet up gradient from where figure was taken, water intermittently flowing in a Southeastern direction.

Site ID: SSI-11-102

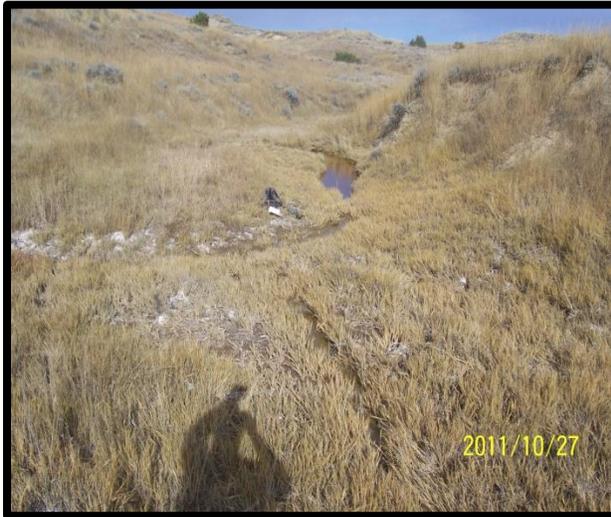


Figure 1. View to the Northeast



Figure 2. View of the originating nick point

Specific Conductivity (μm)	20470
pH	8.37
Temperature ($^{\circ}C$)	2.5
Latitude	45.50001
Longitude	106.20066
Flow Rate	Visual~0.5Gal/1 Min
Water Color	Clear

Notes: Spring has flow, sporadically ponding water in between flowing channels. Channelized water flowing Northeast towards Highway 454.

Site ID: SSI-11-103

No picture Available

Specific Conductivity (μm)	7720
pH	8.35
Temperature ($^{\circ}C$)	5.5
Latitude	45.47247
Longitude	106.20939
Flow Rate	Visual~20 GPM
Water Color	Clear

Notes: Parameters taken at the confluence of two drainages. 300 yards to the Southwest of the confluence spring originates. Other drainage proceeds into forest boundary, source after looking at Forest Service map suspected to be Gene Spring.

Site ID: SSI-11-104



Figure 1. View to the West

Specific Conductivity (μm)	6080
pH	8.45
Temperature ($^{\circ}\text{C}$)	5.2
Latitude	45.45736
Longitude	106.19490
Flow Rate	Visual~10-15 GPM
Water Color	Clear

Notes: Parameters taken at Forest boundary. Livestock imprints along edges of water; suspected source, Gene Spring.