

EXHIBIT 2.04-E3

Geologic Information, Item 9 **Borehole Abandonment Information**

Submitted August 2010 – MR-91

GVB-LW03-01, 02,
GVB-LW04-01, 02, 03
GVB-LW07-02, 03, 04
GVB-LW08-01, 02, 03, 04,

GVB-LW09-01, 01B, 02, 03, 04, 05
GVB-LW10-01, 02, 03, 03B, 03C,
GVB-LW11-01A, 01B, 02, 03
GVB-LW12-01

Submitted December 2010 – MR-94

DG1
DW1
D2B2
D2B2A
D2B2B
VB-01S-01

VB-01S-01 Utility
GVB-LW15-03
GVB-LW15-04
GVB-LW15-05
GVB-LW15-06
GVB-LW15-07

Submitted December 2012 – MR-102

GVB-LW10-04
GVB-LW10-05
GVB-LW15-01A
GVB-LW15-01B
GVB-LW15-02
GVB-LW15-08
GVB-LW16-01B, 01C, 01D, 01E
GVB-LW16-02, 02B, 02C
GVB-LW16-03
GVB-LW16-04, 04B
GVB-LW16-05B, 05C
GVB-LW16-06
GVB-LW16-07, 07B, 07C

GVB-LW17-01A, 01B, 01C
GVB-LW17-02, 02C
GVB-LW17-03
GVB-LW17-04, 04B, 04C,
GVB-LW17-05B
GVB-LW17-06, 06B
GVB-LW17-07
GVB-LW17-08, 08C
GVB-LW17-09
GVB-LW18-03B
GVB-LW18-07
GVB-LW19-01A
GVB-LW19-03

Submitted January 2015 – MR-106

GVB-LW16-05
GVB-LW17-05

Submitted October 2015 – MR-107

Mine Dewater Boreholes: Dewater I, Dewater II
Mine Recovery Gas Monitor Boreholes: TGBMPA, TGA, HGA, 5B, HGBMP
GVB-16-08
GVB-17-02B, 06C
GVB-18-01B, 02, 02B, 03, 04, 04B, 04C, 05, 06, 07B, 08, 09
GVB-19-01B, 01C, 01D, 02, 02B, 03B, 04, 04B, 05, 06, 07, 08, 09

Submitted December 2017 – MR-108

CBM-1,2,3,4,5,6,7,8,9,10,11,12,13,14

Submitted August 2020 – MR-112

ECM: 10-68, 69, 70, 71, 72, 73, 74, 75, 76
TC-1 WELL ABANDONMENT REPORT, TC-2 WELL OWNERSHIP TRANSFER
GVB-16-01, GVB-17-08B, GVB-06-02, GVB-12-02, GVB-12-03, GVB-18-01A

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-LW-03-01
Lease Number: COC-61357
Date Commenced: 29-Jul-04

Project ID.: Elk Creek Mine- Gob Vent Boreholes
(State or Federal) Surface Owner: BLM
Date Completed: 3-Aug-04

Contractor: Stewart Bros.
Geologist: Doug Allen
Driller: J. Barris
F. Yonnie

Rig Type: Gardner-Denver
Date: 3-Aug-04
Truck Driver: B. Joe
B. Roy
E. 34167.0480

Toolpusher: Frank Pichardo
Helper: B. Wollweber
C. Delgarito

Coordinates: N. 12372.5840
Location: Township, Range & Section:
Ground Elevation: 6772'

Collar Elevation: SW 1/4 Sec. 6, T. 13 S., R. 90 W.

Geophysical Log Measured From: Ground

Elevation

Total Depth: 566'

Probe Depth: 484'

Fluid Level: NA

Casing Type: Main hole- Solid steel

Size: 7 5/8"

Casing Type: Bottom hole- slotted

Size: 5 1/2"

Depth: 0-485'

Recovered (Y or N): N

Depth: 446'-566'

Recovered (Y or N): N

Bit Information

Surface Casing 14 1/4" Tri-cone from 0-40' (12" casing)

Main Hole 9 7/8" Tri-cone from 40' to 485'

Core: NA

Bottom Hole 6 3/4" Tri-cone from 485' to 566'

Footage Plugged: 566'

Cored: 0

Drilling Medium: Air:

Sta-Foam 202/Water:

Mud:

Foam Injection:

Depths: 0-40'

40'-566'

Lost Circulation Depths: NA

Regained ? (Y or N): NA

Water Invasion Depth or Intervals: NA

Estimated Inflow Rates: NA

Gas Invasion Depth or Interval: unknown-30% @ wellhead

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X

Neutron:

Temperature:

Density: X

Resistivity: X

Caliper: X

Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation- 20' SE of surface location

Hole Cemented (Y or N), Type: Y

No. of Bags: 9 yds. Portland for annulus

Interval: to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: Hole producing 30%+ CH₄ before cementing. Gas shut off entirely after borehole cemented. Broke through into gob @ 565' (6" void), after which well came under vacuum from mine exhaust fan.

120' of 5 1/2" slotted casing set on bottom of hole to cave along with gob- 39' overlap inside 7 5/8".

Stewart Bros. Drilling: Colorado water well license #1141

Pneumatic plug set @ 430' on Aug. 9, cemented to surface and abandoned on Aug. 24, 2005.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-LW-03-02		Project ID.: Elk Creek Mine- Gob Vent Boreholes	
Lease Number: COC-61357		(State or Federal) Surface Owner: BLM	
Date Commenced: 26-Aug-04		Date Completed: 7-Sep-04	
Contractor: Stewart Bros.		Rig Type: Gardner-Denver	
Geologist: Doug Allen		Date: 10-Sep-04	
Driller: J. Barris		Truck Driver: B. Joe	
F. Yonnie		B. Roy	
Coordinates: N. 11724.4950		E. 37680.6710	
Location: Township, Range & Section:		SE 1/4 Sec. 6, T. 13 S., R. 90 W.	
Ground Elevation: 8056'		Collar Elevation:	
Geophysical Log Measured From: Ground		Elevation	
Total Depth: 1990'		Probe Depth: 1993'	
		Fluid Level: NA	
Casing Type: Main hole- Solid steel		Size: 7 5/8"	
Casing Type: bottom hole- slotted		Size: 5 1/2"	
Depth: 0-1840'		Recovered (Y or N): N	
Depth: 1786'-1946'		Recovered (Y or N): N	
Bit Information			
Surface Casing		14 1/4" Tri-cone from 0-17' (12" casing)	
Main Hole		9 7/8" Tri-cone from 17' to 1840'	
Core:		NA	
Bottom Hole		6 3/4" Tri-cone from 1840' to 1993'	
Footage Plugged: 1993'		Cored: 0	
Drilling Medium: Air		Sta-Foam 202/Water: Mud:	
Depths: 0-20'		20'-1993'	
Lost Circulation Depths: NA		Regained ? (Y or N): NA	
Water Invasion Depth or Intervals: NA		Estimated Inflow Rates: NA	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jet West Geophysical, LLC			
Logs Run:		Neutron:	
Gamma: X		Density: X	
Temperature:		Caliper: X	
Resistivity: X			
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation- 17.2' at 255.75 degrees			
Hole Cemented (Y or N), Type: Y		No. of Bags: 20 bags + 5 yds. for annulus	
		Interval: to surface	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments:			
20 bags cement placed on bottom and allowed to set to prevent redi-mix from coming up inside			
7 5/8" casing. 5 yds. redi-mix slurry placed from surface.			
D2 seam from 1957'- 1972'. Bottom hole drilled to 1990' for logging tool rattail. Hole cemented			
back up to 1946' (11' above coal).			
160' of 5 1/2" slotted casing set on bottom loose to cave along with gob- 54' overlap inside 7 5/8".			
Stewart Bros. Drilling: Colorado water well license # 1141			
Pneumatic plug set @ 290' on Aug. 19, cemented to surface and abandoned on Aug. 24, 2005.			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-LW-04-01 Project ID.: Elk Creek Mine- Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 10-Aug-04 Date Completed: 17-Aug-04

Contractor: Stewart Bros. Rig Type: Gardner-Denver
Geologist: Doug Allen Date: 15-Sep-03 Toolpusher: Frank Pichardo
Driller: J. Barris Truck Driver: B. Joe Helper: Wilburn
F. Yonnie B. Roy C. Delgarito

Coordinates: N. 13569.4927 E. 33640.9018
Location: Township, Range & Section: NW 1/4 Sec. 6, T. 13 S., R. 90 W.

Ground Elevation: 7093' Collar Elevation: _____
Geophysical Log Measured From: _____
Total Depth: 1075 Ground Elevation: _____
Probe Depth: 1067 Fluid Level: NA

Casing Type: Main hole- Solid steel Size: 7 5/8"
Casing Type: bottom hole- slotted Size: 5 1/2"

Depth: 0-910' Recovered (Y or N): N
Depth: 831'-911' Recovered (Y or N): N

Bit Information

Surface Casing 14 1/4" Tri-cone from 0-40' (12" casing)
Main Hole 9 7/8" Tri-cone from 40' to 910'
Core: NA
Bottom Hole 6 3/4" Tri-cone from 910' to 1075'

Footage Plugged: 1075' Cored: 0
Drilling Medium: Air Sta-Foam 202/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-40' 40-1075'

Lost Circulation Depths: NA Regained ? (Y or N): NA
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: NA
Gas Invasion Depth or Interval: unknown-0.8-3.2% @ wellhead

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation- 8' N. of surface location

Hole Cemented (Y or N), Type: Y No. of Bags: 20, + 6 yds portland for annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: First 80' of 7 5/8" casing dropped to bottom of hole; retrieved w/ oilfield spear and ok to use.
20 bags cement placed around bottom of 7 5/8" casing, topped off with 6 yds. Redi-mix, all poured from surface.
Bottom hole drilled thru D seam to verify elevation- survey mistake results in hitting D seam 63' high.
Resurvey shows hole still suitably located over panel. Bottom of solid casing lies 37' above coal (910').
Bottom hole cemented up to 911'; 80' of 5 1/2" slotted casing set with bottom @ 911'.

Stewart Bros. Drilling: Colorado water well license # 1141
Pneumatic plug set @ 73' and abandoned to surface with 0.85 cubic yds portland type II cement August, 2005.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-LW-04-02		Project ID.: Elk Creek Mine- Gob Vent Boreholes	
Lease Number: COC-61357		(State or Federal) Surface Owner: BLM	
Date Commenced: 8-Sep-04		Date Completed: 15-Sep-04	
Contractor: Stewart Bros.		Rig Type: Gardner-Denver	
Geologist: Doug Allen		Date : 21-Sep-04	
Driller: J. Barris		Truck Driver: B. Joe	
F. Yonnie		B. Roy	
Coordinates: N. 12577.5810		E. 38277.7780	
Location: Township, Range & Section:		SE 1/4 Sec. 6, T. 13 S., R. 90 W.	
Ground Elevation: 8086'		Collar Elevation:	
Geophysical Log Measured From: Ground		Elevation	
Total Depth: 2095'		Probe Depth: 2090'	
Casing Type: Main hole- Solid steel		Fluid Level: NA	
Casing Type: Bottom hole- slotted, flush thread		Size: 7"	
Depth: 0-1917'		Size: 5 1/2"	
Recovered (Y or N): N			
Depth: 1870'-2030'		Recovered (Y or N): N	
Bit Information			
Surface Casing		12 1/4" Tri-cone from 0-20' (10" casing)	
Main Hole		9 7/8" Tri-cone from 20' to 1955'	
Core:		NA	
Bottom Hole		6 3/4" Tri-cone from 1955' to 2095'	
Footage Plugged: 2095'		Cored: 0	
Drilling Medium: Air		Sta-Foam 202/Water: Mud:	
Depths: 0-20'		20'-2095'	
Lost Circulation Depths: NA		Regained ? (Y or N): NA	
Water Invasion Depth or Intervals: NA		Estimated Inflow Rates: NA	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jet West Geophysical, LLC			
Logs Run: Gamma: X		Neutron:	
Temperature:		Density: X	
Resistivity: X		Caliper: X	
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation- 67.1' at 241.85 degrees			
Hole Cemented (Y or N), Type: Y		No. of Bags: 22 yds. Portland for annulus	
		Interval: to surface	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments:			
Annulus volume calculated @ 18 yds., pumped 14 yds. down drill pipe, through stinger seated into grout shoe, and up around outside of casing. 8 yds. placed from surface.			
D seam from 2052'- 2069'. Bottom hole drilled to 2095' for logging tool rattail. Hole filled back up to 2047' (5' above seam) with coal fines. Plug gel (2 bags, dry) placed on top of coal fines to 2044'.			
4 bags of cement placed on top of gel, to 2030'. Bottom of 5.5" slotted casing (80' slotted below 80' solid) set at 2030', with 47' overlap inside 7'.			
Stewart Bros. Drilling: Colorado water well license # 1141			
Pneumatic plug set @ 370' on Aug. 19, cemented and abandoned on Aug. 24, 2005.			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-LW04-03
Lease Number: COC-61357
Date Commenced: 24-Jan-05

Project ID.: Elk Creek Mine- Gob Vent Boreholes
(State or Federal) Surface Owner: BLM
Date Completed: 5-Feb-05

Contractor: Himes Drilling, Inc
Geologist: Doug Allen
Driller: Sam Homedew

Rig Type: PortaDrill TKT2000/ Rig R-8
Date: 5-Feb-04 Toolpusher: Tim/Kevin Himes
Truck Driver: Kirk Homedew Helper: Matt Himes

Coordinates: N. 36493.2130 E. 12902.8610
Location: Township, Range & Section: NE 1/4 Sec. 6, T. 13 S., R. 90 W.

Ground Elevation: 7156' Collar Elevation: _____
Geophysical Log Measured From: Ground Elevation _____
Total Depth: 1081' Probe Depth: 1080' Fluid Level: 1050'
Casing Type: Main hole- Solid steel, T&C Size: 7"
Casing Type: Bottom hole- slotted, flush thread Size: 5 1/2"
Depth: 0-841' Recovered (Y or N): N- cemented
Depth: 718'-1061' Recovered (Y or N): N- set on bottom

Bit Information

Surface Casing 13 3/8" Tri-cone from 0-65' (10 3/4" casing)
Main Hole 9 7/8" Tri-cone from 65' to 841'
Core: NA
Bottom Hole 6 1/2" Tri-cone from 841' to 1081'. Touched D2 seam @ 1080'.

Footage Plugged: 1081' Cored: 0
Drilling Medium: Air: Sta-Foam 202/Water: Mud: Foam Injection:
Depths: 0-65' 65'-1081'

Lost Circulation Depths: NA Regained ? (Y or N): NA
Water Invasion Depth or Intervals: 275', 660' Estimated Inflow Rates: 5 gpm, 5 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation- 27.5' at 256 degrees

Hole Cemented (Y or N), Type: redi-mix portland slurr No. of Bags: 9 yds. Portland for annulus
for 7" casing Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA
Comments: 7" casing cemented with 9 yards redi-mix portland slurry. Pumped downhole with
volume cementing unit. Cement level @ 775' upon re-entering hole with 6 1/2" bit. Extra cement
inside casing accounted for by extra volume ordered/ extra water added to thin mix for pumping.
Bottom hole drilled dry, but created water over time. Water in bottom made placing 12' cement
difficult- effort unsuccessful with rig. Jetwest placed 2.5 sacks cement on bottom with 30' dump
baler (2 runs) - three hours on site. (Himes Drilling: Colorado water well license #1285)
343.3' of 5.5" casing (bottom 85' slotted) set on cement plug- elevation 1061' below surface.
Top joint of 5.5" casing threaded left-hand. Overlap inside 7" casing: 123'
Pneumatic plug set @ 74' on Aug. 19, cemented to surface and abandoned on Aug. 24, 2005.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-LW07-02 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 18-Jun-06 Date Completed: 7-Jul-06

Contractor: WDC Drilling, Inc.

Rig Type: Gefco 90K

Geologist: Ken Ball/ D. Allen

Date: 15-Oct-06

Toolpusher: Kevin Jones

Driller: Alan Taylor

Truck Driver: Robert Labahn

Helper: James Timms

Kevin Lewis

Marvin Eldridge

Bill Spain

Coordinates: N. 16094.03

E. 26150.74

Location: Township, Range & Section:

SE 1/4 Sec. 35, T. 12 S., R. 91 W.

Ground Elevation: 7807'

Collar Elevation:

Geophysical Log Measured From: Ground

Elevation

Total Depth: 1720'

Probe Depth: 1640'

Fluid Level: NA

Casing Type: steel, T&C

Size: 9 5/8"

Casing Type: slotted steel, T&C

Size: 7"

Depth: 1494'

Recovered (Y or N): N- cemented

Depth: 1434-1720'

Recovered (Y or N): N-loose

Bit Information

Surface Casing 17" Tri-cone (14" casing) from 0-20'

Main Hole 12 1/4" Tri-cone to 1494'

Core:

Bottom Hole 8 3/4" Tri-cone to 1720'

Footage Plugged: 1720'

Cored: NA

Drilling Medium: Air

Sta-Foam 202/Water:

Mud:

Foam Injection:

Depths: 0-20'

20-1720'

Lost Circulation Depths: NA

Regained ? (Y or N):

Water Invasion Depth or Intervals: NA

Estimated Inflow Rates:

Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jet West Geophysical; Welenco; Century Geophysical

Logs Run: Gamma: X

Neutron:

Temperature:

Density: X

Resistivity: X

Caliper: X

Other (SP, Foc. Elec., Drift, Dep., Sonic): 2 gyro deviation surveys: +/- 40' @ 280 deg.

Hole Cemented (Y or N), Type: Y

No. of Bags: 15 yds portland for annulus

Interval: to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: Hole drilled into gob post-longwalling. Mine void not encountered. Drilled hole 100' past projected D2 elevation with no sign of void. Installed 207.5' slotted casing below 80' solid; 7" casing overlaps 62' inside 9 5/8" casing.

Two deviation surveys, two surface re-surveys confirm correct location and depth.

Halliburton attempts to frac strata at mine horizon with 24,000 gallons water. No pressure built.

Methane pump set up on hole, but did not draw sufficient amount of gas to run. Pump pulled.

9 5/8" casing abandoned to surface with 21 supersacks plug gel, 3 sacks (10') cement August, 2006.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-07-03 Project ID: Elk Creek Mine Exploration
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 6-Jan-06 Date Completed: 1-Feb-06

Contractor: Stewart Bros. Rig Type: Gardner-Denver 2500-Rig #46
Geologist: Doug Allen Date: 15-Feb-06 Toolpusher: Frank Pichardo
Driller: Justin Barris Truck Driver: Ray Contreras Helper: Paco Pizzano
Donn Massey Javier Gallegos Mike Lewis

Coordinates: N. 15302.33 E. 28965.88
Location: Township, Range & Section: NW 1/4 Sec. 1, T. 13 S., R. 91 W.

Ground Elevation: 7728' Collar Elevation: _____
Geophysical Log Measured From: _____ Ground _____ Elevation _____
Total Depth: 1590' Probe Depth: 1590' Fluid Level: n/a
Casing Type: steel, T&C Size: 9 5/8"
Casing Type: slotted steel, T&C Size: 7"
Depth: 0-1445' Recovered (Y or N): N- cemented
Depth: 1346'-1549' Recovered (Y or N): N-loose

Bit Information

Surface Casing 17" auger from 0-10' (14" culvert)
Main Hole 12 1/4" Tri-cone from 10' to 1455'
Core: _____
Bottom Hole 8 3/4" Tri-cone from 1445'-1590'

Footage Plugged: 1590' Cored: 0
Drilling Medium: Air Sta-Foam 202/Water: Mud Foam Injection: _____
Depths: 0-10' 10'-1590'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: CH4 1455'-1557'

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 23.7' at 118 degrees

Hole Cemented (Y or N), Type: Y No. of Bags: 19 yds portland for 9 5/8 annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Unable to merge two deviation logs- cumulative drift 23.7' at 118 degrees.

7" casing overlaps 99' inside 9 5/8" casing (39' slotted, 60' solid)

9 5/8" casing abandoned to surface with 21 cubic yards portland type II cement June, 2007.

Stewart Bros. Colorado water well license #1141.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-07-04 Project ID: Elk Creek Mine Exploration
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 4-Feb-06 Date Completed: 15-Feb-06

Contractor: Stewart Bros. Rig Type: Gardner-Denver 2500-Rig #46
Geologist: Doug Allen Date: 15-Feb-06 Toolpusher: Frank Pichardo
Driller: Justin Barris Truck Driver: Ray Contreras Helper: Paco Pizzano
Ferlin Yonnie Javier Gallegos Mike Lewis

Coordinates: N. 14791.18 E. 31120.93
Location: Township, Range & Section: NE 1/4 Sec. 1, T. 13 S., R. 91 W.

Ground Elevation: 6883' Collar Elevation: _____
Geophysical Log Measured From: _____ Ground _____ Elevation _____
Total Depth: 785' Probe Depth: 786' Fluid Level: NA
Casing Type: steel, T&C Size: 9 5/8"
Casing Type: slotted steel, T&C Size: 7"
Depth: 0-640' Recovered (Y or N): N- cemented
Depth: 580'-740' Recovered (Y or N): N-loose

Bit Information

Surface Casing 17" Tri-cone from 0-56' (14" steel casing-welded)
Main Hole 12 1/4" Tri-cone from 56' to 640'
Core: _____
Bottom Hole 8 3/4" Tri-cone from 640'-785'

Footage Plugged: 785' Cored: 0
Drilling Medium: Air Sta-Foam 202/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-35' 35'-785'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: 35' Estimated Inflow Rates: 0.5 gpm
Gas Invasion Depth or Interval: _____

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 12.8' at 208 degrees

Hole Cemented (Y or N), Type: Y No. of Bags: 9 yds for 9 5/8 annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: _____

7" casing overlaps 80' inside 9 5/8" casing (40' slotted, 40' solid)

9 5/8" casing abandoned to surface with 9 cubic yards portland type II cement July, 2009.

Stewart Bros. Colorado water well license #1141.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 08-01 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 9/2006; 6/2007 Date Completed: 12/2006; 2/2007

Contractor: REI/ Target Rig Type: Fletcher/ UG Directional
Geologist: Doug Allen Date: 15-Jan-08 Toolpusher: _____
Driller: REI: T. Fields Truck Driver: REI: S. Copley Helper: REI: Alan
TGT: Koski/Speedy TGT: Bob/Taylor TGT: Koski/Alex

Coordinates: N. 17543.43/ 17501.2 E. 2998.18/ 22998.06
Location: Township, Range & Section: SW 1/4 Sec. 35, T.12S., R.90W.

Ground Elevation: 6474/ 6466' Collar Elevation: _____
Geophysical Log Measured From: _____
Total Depth: 840/ 50' Probe Depth: NA Fluid Level: NA
Casing Type: steel, welded Size: REI: 10"
Casing Type: steel, welded Size: TGT: 16"
Depth: REI: 40' Recovered (Y or N): N
Depth: TGT: 37' Recovered (Y or N): N

Bit Information

Surface Casing REI: 13 3/4" Tricone; TGT: 18" reamer
Main Hole REI: 3 3/4" PDC pilot, reamed to 5 3/4"
Core: NA
Bottom Hole REI: 3 3/4" PDC pilot to 840'

Footage Plugged: 840' Cored: NA
Drilling Medium: Air: Foam/Water: _____ Mud: _____ Foam Injection: _____
Depths: _____ 0-840'

Lost Circulation Depths: sporadic from 0-840' Regained ? (Y or N): N
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: NA

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: NA No. of Bags: _____
Interval: _____

Coal Core Sent To: NA Rock Sent To: NA

Comments: Directional/ angle hole attempted twice to vent methane in bleeder in
west end of panel 8. Both attempts, with different contractors, failed.
First attempt: REI Drilling sticks directional motor after encountering voids in gob.
(drilled post-longwalling). Unable to retrieve, cemented in place during abandonment.
Open hole abandoned to surface with 4 cubic yds. Portland Type II cement, December, 2006.
Second attempt: Target Drilling unable to drill/ set surface casing on proper alignment, dismissed.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-LW08-02 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 24-Aug-06 Date Completed: 25-Sep-06

Contractor: WDC/ Himes Rig Type: Failing 90K/ Portadrill TKT300
Geologist: Doug Allen Date: 15-Oct-06 Toolpusher: Kevin Jones
Driller: Alan Taylor Truck Driver: Jay Ross Helper: Geoff Sakioka
Kevin Lewis Marvin Eldridge Greg Olson

Coordinates: N. 16654.54 E. 26785.32
Location: Township, Range & Section: SE 1/4 Sec. 35, T. 12 S., R. 91 W.
Ground Elevation: 7875' Collar Elevation: _____
Geophysical Log Measured From: Ground Elevation _____
Total Depth: 1760' Probe Depth: 1762' Fluid Level: NA
Casing Type: steel, T&C Size: 9 5/8"
Casing Type: slotted steel, T&C Size: 7"
Depth: 0-1620' Recovered (Y or N): N- cemented
Depth: 1567.3-1694.7 Recovered (Y or N): N-loose

Bit Information
Surface Casing 17" Tri-cone (14" casing) from 0-20'
Main Hole 12 1/4" Tri-cone to 1620'
Core: _____
Bottom Hole 8 3/4" Tri-cone to 1760'

Footage Plugged: 1760' Cored: 0
Drilling Medium: Air: Sta-Foam 202/Water: Mud: Foam Injection:
Depths: 0-20' 20-1760'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 8.2' @ 184 degrees

Hole Cemented (Y or N), Type: Y No. of Bags: 21 yds. portland for annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Cement plug @ mine roof drilled out by Himes Drilling after WDC failed to land
7" casing where expected. Plug placed correctly, WDC mistaken. Plug replaced in original
location and 7" landed @ 1694.7'.
7" casing (4 slotted, 2 blank, total 127.4') overlaps 52.7" inside 9 5/8" casing.
Bottom hole, 7" casing completed by Himes Drilling after WDC unable to successfully finish hole.
Himes Drilling Colorado water well license # 1285
9 5/8" casing abandoned to surface with 23 cubic yds. Portland type II cement July, 2009.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-LW08-03 Project ID: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 8-Jul-06 Date Completed: 30-Jul-06

Contractor: WDC Drilling, Inc. Rig Type: Gefco 90K
Geologist: Doug Allen Date: 15-Oct-06 Toolpusher: Kevin Jones
Driller: Alan Taylor Truck Driver: Robert Labahn Helper: James Timms
Kevin Lewis Marvin Eldridge Bill Spain

Coordinates: N. 16359.21 E. 28212.23
Location: Township, Range & Section: SW 1/4 Sec. 36, T. 12 S., R. 91 W.
Ground Elevation: 7877' Collar Elevation: _____
Geophysical Log Measured From: _____ Ground Elevation: _____
Total Depth: 1780' Probe Depth: 1772' Fluid Level: NA
Casing Type: steel, T&C Size: 9 5/8"
Casing Type: slotted steel, T&C Size: 7"
Depth: 0-1504' * Recovered (Y or N): N- cemented
Depth: 1302.5-1720' Recovered (Y or N): N-loose

Bit Information

Surface Casing 17" Tri-cone (14" casing) from 0-19'
Main Hole 12 1/4" Tri-cone to 1620'
Core: _____
Bottom Hole 8 3/4" Tri-cone to 1780'

Footage Plugged: 1780' Cored: 0
Drilling Medium: Air Sta-Foam 202/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-20' 20-1780'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 10' @ 208 degrees. Videolog.

Hole Cemented (Y or N), Type: Y No. of Bags: 4 yds. portland for 9 5/8 annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: * 9 5/8" casing parted from 1334-1343'. Bottom of dropped joints (142')
landed 195' above D2 seam.
Daily report incorrectly states casing set on bottom @ 1554', actually @ 1504' including 9' parting.
21 joints of 7" (7 slotted below 14 solid) overlap 30' inside intact, uppermost string of 9 5/8".
9 5/8" casing abandoned to surface with 23 cubic yards portland type II cement July, 2009.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-LW08-04 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 26-Sep-06 Date Completed: 24-Oct-06

Contractor: Himes Drilling, Inc Rig Type: Portadrill TKT-300
Geologist: Doug Allen Date: 24-Oct-06 Toolpusher: Kevin Himes
Driller: Sam Homedew Truck Driver: _____ Helper: Mike
_____ Eric

Coordinates: N. 16131.33 E. 30131.68
Location: Township, Range & Section: SW 1/4 Sec. 36, T. 12 S., R. 91 W.
Ground Elevation: 7023' Collar Elevation: _____
Geophysical Log Measured From: _____ Ground Elevation: _____
Total Depth: 960' Probe Depth: 958' Fluid Level: NA
Casing Type: steel, T&C Size: 9 5/8"
Casing Type: slotted steel, T&C Size: 7"
Depth: 0-820' Recovered (Y or N): N-cemented
Depth: 773-917' Recovered (Y or N): N-loose

Bit Information

Surface Casing 17" Tri-cone (14" casing) from 0-20'
Main Hole 12 1/4" Tri-cone to 820'
Core: _____
Bottom Hole 8 3/4" Tri-cone to 960'

Footage Plugged: 960' Cored: 0
Drilling Medium: Air Sta-Foam 202/Water: Mud Foam Injection: _____
Depths: 0-20' 20-960'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X

Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 56' @ 314 degrees

Hole Cemented (Y or N), Type: Y No. of Bags: 5 yds. portland for 9 5/8 annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 47' inside 9 5/8" casing. 7" landed at 917', 18' above D2 roof.

9 5/8" casing abandoned to surface with 14 cubic yards portland type II cement July, 2009.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 09-01 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 27-Nov-06 Date Completed: 10-Feb-07

Contractor: REI Drilling Rig Type: Fletcher
Geologist: Doug Allen Date: 15-Jan-08 Toolpusher: _____
Driller: Tim Fields Truck Driver: Scott Copley Helper: Duane
Paul

Coordinates: N. 17932.56 E. 23056.88
Location: Township, Range & Section: SW 1/4 Sec. 35, T.12S., R.90W.

Ground Elevation: 6519' Collar Elevation: _____
Geophysical Log Measured From: _____
Total Depth: 924' Ground Elevation: _____
Casing Type: Sonic FJ Probe Depth: NA Fluid Level: NA
Casing Type: Sonic FJ, slotted Size: 6"
Depth: 6": 0-730' Size: 4.5"
Depth: 4": 603-903' Recovered (Y or N): N
Recovered (Y or N): N

Bit Information

Surface Casing 13 3/4" Tricone for 10"x50' surface
Main Hole 3 3/4" PDC pilot reamed to 5 3/4", then reamed to 9 3/4", to 740'
Core: NA
Bottom Hole 3 3/4" PDC pilot reamed to 5 3/4", to 904'

Footage Plugged: 924' Cored: NA
Drilling Medium: Air Foam/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-924'

Lost Circulation Depths: 0-740' Regained ? (Y or N): N
Water Invasion Depth or Intervals: 580-590' Estimated Inflow Rates: 8-10 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: NA

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 17 yds portland for annulus
Interval: see below

Coal Core Sent To: NA Rock Sent To: NA

Comments: Directional hole launched over headgate of panel 9. 4" slotted casing sits @ 903', 15' above D2 seam @ 918'.
5.5 yds portland displaced from inside casing with rubber pig, 11.5 yds placed into annulus at surface. Double volume of cement did not return to surface. Expandable polyurethane resin and 6 sacks cement placed @ 50' to stabilize casing at surface.
6" casing abandoned to surface with 6 cubic yds. portland type II cement November, 2007.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 09-01B Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 30-Aug-07 Date Completed: 7-Sep-07

Contractor: Stewart Bros. Rig Type: Failing 2500 Rig 45
Geologist: Doug Allen Date: 15-Jan-08 Toolpusher: Justin Barris
Driller: Jimson Billy Truck Driver: S. Platero Helper: Z. Asher
Bryan Tulley T. Martinez C. Charley
Earl Martinez D. Hudson O. Chacho

Coordinates: N. 18345.93 E. 24931.23
Location: Township, Range & Section: SW 1/4 Sec. 35, T.12S., R.90W.

Ground Elevation: 7585' Collar Elevation: _____
Geophysical Log Measured From: _____
Total Depth: 1458' Ground Elevation: _____
Casing Type: steel, T&C Probe Depth: 1440' (camera) Fluid Level: NA
Casing Type: steel, FJ Size: 9 5/8"
Depth: 9 5/8": 0-1360' Recovered (Y or N): N Size: 7" (5 slotted, 2 solid)
7": 1300-1440' N

Bit Information

Surface Casing 17" Tricone to 20'; (14" surface casing)
Main Hole 12 1/4" Tricone to 1360'
Core: NA
Bottom Hole 8 3/4" Tricone to 1458'

Footage Plugged: 1458' Cored: NA
Drilling Medium: Air: Foam/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-20' 20-1458'
Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): Videolog casing

Hole Cemented (Y or N), Type: Y No. of Bags: 2 yds portland for 9 5/8 annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Hole drilled post-longwalling, into roof gob. 2' void encountered @ 1445';
top of D2 seam estimated at 1465'. 7" casing set on bottom of hole at 1440'. Videolog casing
after methane pump would not pull enough gas to operate. Casing appears fine- pump removed.

9 5/8" casing abandoned to surface with 26 cubic yards portland type II cement July, 2009.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 09-02 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 21-Aug-07 Date Completed: 28-Aug-07

Contractor: Stewart Bros. Rig Type: Failing 2500 Rig 45
Geologist: Doug Allen Date: 15-Jan-08 Toolpusher: Justin Barris
Driller: Bryan Joe Truck Driver: J. Billy Helper: S. Platero
Bryan Tulley T. Martinez C. Charley
Earl Martinez D. Hudson O. Chacho

Coordinates: N. 18106.43 E. 26166.41
Location: Township, Range & Section: SE 1/4 Sec.35, T.12S., R.90W.

Ground Elevation: 7644' Collar Elevation: _____
Geophysical Log Measured From: _____
Total Depth: 1547' Ground Elevation: _____
Casing Type: steel, T&C Probe Depth: 1533' Fluid Level: NA
Casing Type: steel, FJ Size: 9 5/8"
Depth: 9 5/8": 0-1440' Recovered (Y or N): N Size: 7"(5 slotted, 2 solid)
7": 1384-1524' N

Bit Information

Surface Casing 17" Tricone to 20'; (14" surface casing)
Main Hole 12 1/4" Tricone to 1440'
Core: NA
Bottom Hole 8 3/4" Tricone to 1547'

Footage Plugged: 1547' Cored: NA
Drilling Medium: Air: Foam/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-145' 145-1547'
Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: 1540-1547'

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 56' @ 286 deg.

Hole Cemented (Y or N), Type: Y No. of Bags: 10 yds portland for annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: D2 seam not logged due to time constraint (longwall approaching).
9' cement plug from 1524-1533'. Bottom of 7" slotted casing 18' above D2 seam (1542-1555').

9 5/8" casing abandoned to surface with 26 cubic yds. Portland type II cement July, 2009.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-LW09-03 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 31-Jul-06 Date Completed: 16-Aug-06

Contractor: WDC Drilling, Inc. Rig Type: Gefco 90K
Geologist: Doug Allen Date: 15-Oct-06 Toolpusher: Kevin Jones
Driller: Alan Taylor Truck Driver: Sam Rivera Helper: Max Karish
Kevin Lewis Marvin Eldridge Geoff Sakioka

Coordinates: N. 17671.12 E. 27218.33
Location: Township, Range & Section: SE 1/4 Sec. 35, T. 12 S., R. 91 W.

Ground Elevation: 8121' Collar Elevation: _____
Geophysical Log Measured From: Ground Elevation _____
Total Depth: 2060' Probe Depth: 2060' Fluid Level: NA
Casing Type: steel, T&C Size: 9 5/8"
Casing Type: slotted steel, T&C Size: 7"
Depth: 0-1840' Recovered (Y or N): N-cemented
Depth: 1765-2009' Recovered (Y or N): N-loose

Bit Information

Surface Casing 17" Tri-cone (14" casing) from 0-20'
Main Hole 12 1/4" Tri-cone to 1840'
Core: _____
Bottom Hole 8 3/4" Tri-cone to 2060'

Footage Plugged: 2060' Cored: 0
Drilling Medium: Air Sta-Foam 202/Water: Mud Foam Injection: _____
Depths: 0-20' 20-2060'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 37.7' @ 237 degrees

Hole Cemented (Y or N), Type: Y No. of Bags: 17 yds portland for 9 5/8 annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: First run with 7" unsuccessful- pushed casing through cement plug and 1' into
D2 seam. Casing pulled and reset @ 2006'. 7" casing (244' total) overlaps 75' inside 9 5/8".
(More 7" set than planned- 12 1/4" bits worn out, large hole called 100' short of plan.)

9 5/8" casing abandoned to surface with 21 cubic yards portland type II cement July, 2009.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-LW09-04 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 17-Aug-06 Date Completed: 23-Aug-06

Contractor: WDC Drilling, Inc.

Rig Type: Gefco 90K

Geologist: Doug Allen

Date: 15-Oct-06

Toolpusher: Kevin Jones

Driller: Alan Taylor

Truck Driver: Jay Ross

Helper: Geoff Sakioka

Kevin Lewis

Marvin Eldridge

Greg Olson

Coordinates: N. 17294.34

E. 29017.90

Location: Township, Range & Section:

SW 1/4 Sec. 36, T. 12 S., R. 91 W.

Ground Elevation: 7424'

Collar Elevation:

Geophysical Log Measured From:

Ground

Elevation

Total Depth: 1384'

Probe Depth: 1380'

Fluid Level: NA

Casing Type: steel, T&C

Size: 9 5/8"

Casing Type: slotted steel, T&C

Size: 7"

Depth: 0-1247'

Recovered (Y or N): N- cemented

Depth: 1178.5-1332.5'

Recovered (Y or N): N-loose

Bit Information

Surface Casing 17" Tri-cone (14" casing) from 0-20'

Main Hole 12 1/4" Tri-cone to 1250'

Core:

Bottom Hole 8 3/4" Tri-cone to 1384'

Footage Plugged: 1384'

Cored: 0

Drilling Medium: Air

Sta-Foam 202/Water:

Mud

Foam Injection:

Depths: 0-20'

20-1384'

Lost Circulation Depths: NA

Regained ? (Y or N):

Water Invasion Depth or Intervals: NA

Estimated Inflow Rates:

Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X

Neutron:

Temperature:

Density: X

Resistivity: X

Caliper: X

Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 11.3' @ 154 degrees

Hole Cemented (Y or N), Type: Y

No. of Bags: 6.5 yds portland for 9 5/8 annulus

Interval: to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: 7" casing (5 slotted, 2 blank, total 154') overlaps 68.5' inside 9 5/8" casing.

9 5/8" casing abandoned to surface with 13 cubic yards portland type II cement July, 2009.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 09-05 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 3-Jun-07 Date Completed: 12-Jun-07

Contractor: Stewart Bros. Rig Type: Failing 2500 Rig 48
Geologist: Doug Allen Date: 15-Jan-08 Toolpusher: Danny White
Driller: Gabe Armijo Truck Driver: Austin Martinez Helper: G. Gutierrez
Kevine Begay N. Brite J. Trujillo
Randy McClard L. Smith A. Sandoval

Coordinates: N. 16832.96 E. 31001.74
Location: Township, Range & Section: SW1/4 Sec. 36, T.12S., R.90W.

Ground Elevation: 7581' Collar Elevation: _____
Geophysical Log Measured From: _____
Total Depth: 1615' Ground Elevation: _____
Casing Type: steel, T&C Probe Depth: 1616' Fluid Level: NA
Casing Type: steel FJ Size: 9 5/8"
Depth: 9 5/8": 0-1336' Recovered (Y or N): N Size: 7"(5 slotted, 2 solid)
7": 1303-1543' N

Bit Information

Surface Casing 17" Tricone to 20'; (14" surface casing)
Main Hole 12 1/4" Tricone to 1336'
Core: NA
Bottom Hole 8 3/4" Tricone to 1615'

Footage Plugged: 1615' Cored: NA
Drilling Medium: Air Foam/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-300' 300-1615'
Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: 1550-1570'

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 38' @ 239 deg.

Hole Cemented (Y or N), Type: Y No. of Bags: 7 yds portland for annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Bottom of hole backfilled with coal fines up to 1561', quikrete up to 1552'.
9' cement plug from 1552-1543'. Bottom of 7" slotted casing 13' above D2 seam (1556'-1570').

9 5/8" casing abandoned to surface with 6 cubic yds. Portland type II cement; 6 sacks hole plug;
16 sacks (2400 gallons) plug gel, and 2 sacks (10") cement september, 2009.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 10-01 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 12-Nov-07 Date Completed: 6-Dec-07

Contractor: Stewart Bros. Rig Type: Failing 2500 Rig 45
Geologist: Doug Allen Date: 15-Jan-08 Toolpusher: Justin Barris
Driller: Bryan Joe Truck Driver: D. Martinez Helper: C. Valdenegro
Jimson Billy S. Platero O. Chacho
Earl Martinez D. Hudson

Coordinates: N. 19973.22 E. 25050.43
Location: Township, Range & Section: NW 1/4 Sec. 35, T.12S., R.90W.

Ground Elevation: 8183' Collar Elevation: _____
Geophysical Log Measured From: Ground Elevation
Total Depth: 550' Probe Depth: NA Fluid Level: NA
Casing Type: NA Size: _____
Casing Type: NA Size: _____
Depth: _____ Recovered (Y or N): N
N

Bit Information

Surface Casing 17" Tricone to 40'; (14" surface casing)
Main Hole NA
Core: NA
Bottom Hole 8 3/4" Tricone to 550'

Footage Plugged: 550' Cored: NA
Drilling Medium: Air: Foam/Water: Mud: Foam Injection:
Depths: 0-40' 40-550'
Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: NA Estimated Inflow Rates:
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: NA

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: NA No. of Bags: _____
Interval: _____

Coal Core Sent To: NA Rock Sent To: NA

Comments: 200' vertical 8 3/4" hole drilled prior to starting directional. Numerous problems/delays configuring adequate air package to operate directional tools.
Hole abandoned prior to completion due to delays, weather, and fault in mine which cut panel short, eliminating need for venting gob.

Open hole abandoned to surface with 70 bags (1150 gallons) plug gel; 3 bags (10') cement.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 10-02
Lease Number: COC-61357
Date Commenced: 11-Sep-07

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: USFS
Date Completed: 27-Sep-07

Contractor: Stewart Bros.
Geologist: Doug Allen
Driller: Bryan Joe
Jimson Billy
Dewayne Hudson

Rig Type: Failing 2500 Rig 45
Date: 15-Jan-08
Truck Driver: J. Billy
C. Valdenegro
O. Chacho

Toolpusher: Justin Barris
Helper: S. Platero
J. Carlos
S. Delgarito

Coordinates: N. 19259.99
Location: Township, Range & Section:
Ground Elevation: 7638'

E. 25640.44
SE 1/4 Sec. 35, T.12S., R.90W.

Geophysical Log Measured From:

Total Depth: 1592'

Collar Elevation:

Ground Elevation

Probe Depth: 1590'

Fluid Level: NA

Casing Type: steel, T&C

Size: 9 5/8"

Casing Type: steel, FJ

Size: 7" (5 slotted, 2 solid)

Depth: 9 5/8": 0-1460'

Recovered (Y or N): N

7": 1424-1564'

N

Bit Information

Surface Casing 17" Tricone to 20'; (14" surface casing)

Main Hole 12 1/4" Tricone to 1460'

Core: NA

Bottom Hole 8 3/4" Tricone to 1592'

Footage Plugged: 1592'

Cored: NA

Drilling Medium: Air

Foam/Water:

Mud:

Foam Injection:

Depths: 0-20'

20-1592'

Lost Circulation Depths: NA

Regained ? (Y or N):

Water Invasion Depth or Intervals: NA

Estimated Inflow Rates:

Gas Invasion Depth or Interval: 1575-1590'

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X

Neutron:

Temperature:

Density: X

Resistivity: X

Caliper: X

Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 70' @ 203 deg.

Hole Cemented (Y or N), Type: Y

No. of Bags: 5 yds portland for 9 5/8 annulus

Interval: to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: Bottom of hole backfilled with pea gravel up to 1573'.

9' cement plug from 1564-1573'. Bottom of 7" slotted casing 12' above D2 seam (1576-1587').

9 5/8" casing abandoned to surface with 26 cubic yards portland type II cement July, 2009.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 10-03 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 27-Jul-07 Date Completed: 11-Aug-07

Contractor: Stewart Bros. Rig Type: Failing 2500 Rig 45
Geologist: Doug Allen Date: 15-Jan-08 Toolpusher: Joe Sanchez
Driller: Bryan Joe Truck Driver: J. Billy Helper: S. Platero
Bryan Tulley T. Martinez C. Charley
Earl Martinez D. Hudson O. Chacho
Coordinates: N. 18817.04 E. 27308.90
Location: Township, Range & Section: SE 1/4 Sec.35, T.12S., R.90W.
Ground Elevation: 8167' Collar Elevation: _____
Geophysical Log Measured From: _____
Total Depth: 2180' Ground Elevation: _____
Casing Type: steel, T&C Probe Depth: 2173' Fluid Level: NA
Casing Type: steel, FJ Size: 9 5/8"
Depth: 9 5/8": 0-2020' Recovered (Y or N): N Size: 7" (5 slotted, 2 solid)
7": 1971-2111 N

Bit Information

Surface Casing 17" Tricone to 20'; (14" surface casing)
Main Hole (Reamed) 12 1/4" Tricone to 2020'
Core: NA
Bottom Hole 8 3/4" Tricone to 2180'

Footage Plugged: 2180' Cored: NA
Drilling Medium: Air: Foam/Water: Mud: Foam Injection:
Depths: 0-286' 286-2180'
Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: 2125-2135'

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 73' @ 256 deg.

Hole Cemented (Y or N), Type: Y No. of Bags: 18 yds portland for 9 5/8 annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Drilled 8 3/4" pilot hole to verify mineable thickness, then reamed
12 1/4" to 2020' for 9 5/8" casing. Cuttings filled bottom hole during reaming, cleaned out to 2120'.
9" cement plug from 2111-2120'. Bottom of 7" slotted casing 13' above D2 seam (2124-2135').

9 5/8" casing abandoned to surface with 33 cubic yards portland type II cement July, 2008.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 10-03B Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 20-Apr-08 Date Completed: 1-May-08

Contractor: Boart Longyear Rig Type: LK38A
Geologist: Doug Allen Date: 11-Nov-08 Toolpusher: Paul Breider
Driller: S. Balenseifer Truck Driver: B. Cox Helper: J. Hamilton
J. Jessop R. Ostler P. Cramer

Coordinates: N. 18891.82 E. 27324.14
Location: Township, Range & Section: SE 1/4 Sec.35, T.12S., R.90W.

Ground Elevation: 8171' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 2328' Probe Depth: NA Fluid Level: NA
Casing Type: steel Size: 14"
Casing Type: steel T&C Size: 9 5/8"
Depth: 0-20' Recovered (Y or N): N
Depth: 0-2217' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 20'
Main Hole 12.319" Hammer to 723' / 12 1/4" Tricone to 2217'
Core: _____
Bottom Hole 8" Hammer to 2328'

Footage Plugged: 2328' Cored: 0
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-20' 20-2328'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: NA

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 16 Supersacks
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 115' slotted 7" casing below 38' solid 7" casing for bottom hole.
7" overlaps 42' inside 9 5/8" casing.

9 5/8" casing abandoned to surface with 25 cubic yards portland type II cement July, 2008.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 10-03C Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 2-May-08 Date Completed: 11-May-08

Contractor: Boart Longyear Rig Type: LK38A
Geologist: Doug Allen Date: 11-Nov-08 Toolpusher: Paul Breider
Driller: D. Dare Truck Driver: J. Hamer Helper: C. Lull
J. Jessop R. Ostler P. Cramer

Coordinates: N. 18914.00 E. 27338.11
Location: Township, Range & Section: SE 1/4 Sec.35, T.12S., R.90W.

Ground Elevation: 8170' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 2328' Probe Depth: NA Fluid Level: NA
Casing Type: steel Size: 14"
Casing Type: _____ Size: _____
Depth: 0-20' Recovered (Y or N): N
Depth: _____ Recovered (Y or N): _____

Bit Information

Surface Casing 16" Tricone to 20'
Main Hole 12.29" Hammer to 415' / 12 1/4" Tricone to 1627'
Core: _____
Bottom Hole _____

Footage Plugged: 1627' Cored: 0
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-20' 20-1627'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: NA

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: unk # Supersacks (= 49 cubic yds.)
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Hole not completed to depth- ran out of time. Open hole cemented to surface
by driller with unknown number of supersacks of portland type II cement,
volume of cement equal to 49 cubic yards.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 11-01A
Lease Number: COC-61357
Date Commenced: 2-Aug-07

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: USFS
Date Completed: 15-Aug-07

Contractor: Stewart Bros.
Geologist: Doug Allen
Driller: Gabe Armijo
Kevine Begay
Randy McClard

Rig Type: Failing 2500 Rig 48
Date: 15-Jan-08
Truck Driver: Austin Martinez
J. Trujillo
A. Sandoval

Toolpusher: Danny White
Helper: A Torrez
J. Long
N. Brite

Coordinates: N. 20396.13

E. 25432.66

Location: Township, Range & Section:

NE 1/4 Sec. 35, T.12S., R.90W.

Ground Elevation: 8227'

Collar Elevation:

Geophysical Log Measured From:

Ground Elevation

Total Depth: 2280'

Probe Depth: 2272'

Fluid Level: NA

Casing Type: steel, T&C

Size: 9 5/8"

Casing Type: steel FJ

Size: 7"

Depth: 9 5/8": 0-2120'

Recovered (Y or N): N

7": 1293-1455'

N

Bit Information

Surface Casing 17" Tricone to 20'; (14" surface casing)

Main Hole (Reamed) 12 1/4" Tricone to 2130'

Core: NA

Bottom Hole 8 3/4" Tricone to 2230'

Footage Plugged: 2220'

Cored: NA

Drilling Medium: Air

Foam/Water: Mud

Foam Injection:

Depths: 0-20'

20-2230'

Lost Circulation Depths: 260-600'

Regained ? (Y or N): Y

Water Invasion Depth or Intervals: NA

Estimated Inflow Rates:

Gas Invasion Depth or Interval: 2250-2265'

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X

Neutron:

Temperature:

Density: X

Resistivity: X

Caliper: X

Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 55' @ 229 deg.

Hole Cemented (Y or N), Type: Y

No. of Bags: 2 yds portland for 9 5/8 annulus

Interval: to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: Drilled 8 3/4" pilot hole to verify mineable thickness, then reamed

12 1/4" to 2130' for 9 5/8" casing. Cuttings filled bottom hole during reaming, cleaned out to 2251'.

9' cement plug from 2240-2249'. Bottom of 7" slotted casing 11' above D2 seam (2251-2263').

Unable to get dumpbailer past 1437'- plug placed by driller through drill pipe.

9 5/8" casing abandoned to surface with 32 cubic yards portland type II cement May, 2008.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 11-01B Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 11-Aug-07 Date Completed: 1-Sep-07

Contractor: Stewart Bros. Rig Type: Failing 2500 Rig 45
Geologist: Doug Allen Date: 15-Jan-08 Toolpusher: Justin Barris
Driller: Bryan Joe Truck Driver: J. Billy Helper: S. Platero
Bryan Tulley T. Martinez C. Charley
Earl Martinez D. Hudson O. Chacho

Coordinates: N. 19852.34 E. 27335.57
Location: Township, Range & Section: NE 1/4 Sec. 35, T.12S., R.90W.

Ground Elevation: 8193' Collar Elevation: _____
Geophysical Log Measured From: _____
Total Depth: 2220' Ground Elevation: _____
Casing Type: steel, T&C Probe Depth: 2212' Fluid Level: NA
Casing Type: steel, FJ Size: 9 5/8"
Depth: 9 5/8": 0-2000' Recovered (Y or N): N Size: 7"(5 slotted, 5 solid)
7": 1952-2152' _____
N

Bit Information

Surface Casing 17" Tricone to 20'; (14" surface casing)
Main Hole (Reamed) 12 1/4" Tricone to 2000'
Core: NA
Bottom Hole 8 3/4" Tricone to 2220'

Footage Plugged: 2220' Cored: NA
Drilling Medium: Air Foam/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-20' 20-2220'
Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: 2180-2195'

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 45' @ 235 deg.

Hole Cemented (Y or N), Type: Y No. of Bags: 10 yds portland for 9 5/8 annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Drilled 8 3/4" pilot hole to verify mineable thickness, then reamed
12 1/4" to 2000' for 9 5/8" casing. Cuttings filled bottom hole during reaming, cleaned out to 2180'.
9' cement plug from 2152-2161'. Bottom of 7" slotted casing 30' above D2 seam (2182-2193').

Rig 45 redirected on 8/20 to begin GVB 09-02, bottom hole completed by Rig 48 on 9/1/07.

9 5/8" casing abandoned to surface with 24 cubic yards portland type II cement July, 2008.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 11-02 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 15-Jul-07 Date Completed: 24-Jul-07

Contractor: Stewart Bros. Rig Type: Failing 2500 Rig 48
Geologist: Doug Allen Date: 15-Jan-08 Toolpusher: Danny White
Driller: Gabe Armijo Truck Driver: Austin Martinez Helper: G. Gutierrez
Kevine Begay N. Brite J. Trujillo
Randy McClard L. Smith A. Sandoval

Coordinates: N. 19448.14 E. 29236.65
Location: Township, Range & Section: N.1/2 Sec. 36, T.12S., R.91W.

Ground Elevation: 7444' Collar Elevation: _____
Geophysical Log Measured From: _____ Ground Elevation _____
Total Depth: 1548' Probe Depth: 1548' Fluid Level: NA

Casing Type: steel, T&C Size: 9 5/8"
Casing Type: steel FJ Size: 7" (5 slotted, 3 solid)

Depth: 9 5/8": 0-1383' Recovered (Y or N): N
7": 1317-1482' N

Bit Information

Surface Casing 17" Tricone to 20'; (14" surface casing)
Main Hole (Reamed) 12 1/4" Tricone to 1408'
Core: NA
Bottom Hole 8 3/4" Tricone to 1548'

Footage Plugged: 1548' Cored: NA
Drilling Medium: Air: Foam/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-617' 617-1548'
Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: 1500-1515'

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 39' @ 186°

Hole Cemented (Y or N), Type: Y No. of Bags: 5.5 yds portland for 9 5/8 annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Drilled 8 3/4" pilot hole to verify mineable thickness, then reamed
12 1/4" to 1408' for 9 5/8" casing. Cuttings filled bottom hole during reaming, cleaned out to 1487'.
9' cement plug from 1478-1487'. Bottom of 7" slotted casing 22' above D2 seam (1500-1511').

9 5/8" casing abandoned to surface with 22 cubic yards portland type II cement July 2009.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 11-03 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 21-Jun-07 Date Completed: 13-Jul-07

Contractor: Stewart Bros.
Geologist: Doug Allen
Driller: Gabe Armijo
Kevine Begay
Randy McClard

Rig Type: Failing 2500 Rig 48
Date: 15-Jan-08
Truck Driver: Austin Martinez
N. Brite
L. Smith
E. 30620.57

Toolpusher: Danny White
Helper: G. Gutierrez
J. Trujillo
A. Sandoval

Coordinates: N. 18921.76
Location: Township, Range & Section: N.1/2 Sec. 36, T.12S., R.91W.

Ground Elevation: 7500'

Collar Elevation:

Geophysical Log Measured From: Ground

Elevation

Total Depth: 1643'

Probe Depth: 1617'

Fluid Level: NA

Casing Type: steel, T&C

Size: 9 5/8"

Casing Type: steel FJ

Size: 7" (5 slotted, 9 solid)

Depth: 9 5/8": 0-1300'

Recovered (Y or N): N

7": 1265-1565'

N

Bit Information

Surface Casing 17" Tricone to 20'; (14" surface casing)

Main Hole 12 1/4" Tricone to 1340'

Core: NA

Bottom Hole 8 3/4" Tricone to 1643'

Footage Plugged: 1643'

Cored: NA

Drilling Medium: Air

Foam/Water:

Mud:

Foam Injection:

Depths: 0-92'

92-1643'

Lost Circulation Depths: NA

Regained ? (Y or N):

Water Invasion Depth or Intervals: NA

Estimated Inflow Rates:

Gas Invasion Depth or Interval: 1585-1600'

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X

Neutron:

Temperature:

Density: X

Resistivity: X

Caliper: X

Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 42' @ 219 deg. Video 9 5/8" casing

Hole Cemented (Y or N), Type: Y

No. of Bags: 40 sacks for annulus

Interval: to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: Bottom of hole cemented off and drilled out to 1565'.

Bottom of 7" slotted casing 23' above D2 seam (1588-1600').

Video of 9 5/8" casing shows separations at 866', 1040' and 1207'. Cemented off and milled out.

9 5/8" casing abandoned to surface with 6 cubic yds. Portland type II cement; 4 sacks hole plug;

48 sacks (7200 gallons) plug gel; 2 sacks (10') cement September, 2009.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: DG1 Project ID: Hubbard Creek Fan H2O Wells
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 22-Nov-10 Date Completed: 23-Nov-10

Contractor: Harriman Drilling Rig Type: Gardner Denver 15W
Engineer: Doug Smith Date: 15-Dec-10 Toolpusher: _____
Driller: Dennis Harriman Truck Driver: _____ Helper: Bruce Jones

Coordinates: N. 14129.87 E. 24183.63
Location: Township, Range & Section: NW1/4 Sec. 2, T. 13S, R. 91 W
Ground Elevation: 6382' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 55' Probe Depth: NA Fluid Level: NA
Casing Type: steel T&C Size: 7 5/8"
Casing Type: _____ Size: _____
Depth: 0-55' Recovered (Y or N): N
Depth: _____ Recovered (Y or N): _____

Bit Information

Surface Casing _____
Main Hole 12 1/4" Tricone from 0-55'
Core: _____
Bottom Hole _____

Footage Plugged: 0-55' Cored: 0
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-55'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: NA

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 1.5 cubic yds portland slurry
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Drilled into D seam mine for communications/ utility lines.

Hole abandoned to surface with 1.5 cubic yards portland slurry June, 2006.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: DW1 Project ID: Hubbard Creek Fan H2O Wells
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 18-Nov-05 Date Completed: 21-Nov-05

Contractor: Harriman Drilling Rig Type: Gardner Denver 15W
Engineer: Doug Smith Date: 15-Dec-10 Toolpusher: _____
Driller: Dennis Harriman Truck Driver: _____ Helper: Bruce Jones

Coordinates: N. 14134.41 E. 24184.72
Location: Township, Range & Section: NW1/4 Sec. 2, T. 13S, R. 91 W
Ground Elevation: 6382' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 55' Probe Depth: NA Fluid Level: NA
Casing Type: steel Size: 8 5/8"
Casing Type: steel T&C Size: 4 1/2"
Depth: 0-19' Recovered (Y or N): N
Depth: 0-55' Recovered (Y or N): N

Bit Information

Surface Casing 12 1/4" Tricone from 0-19'
Main Hole 6 3/4" Tricone from 19-55'
Core: _____
Bottom Hole _____

Footage Plugged: 0-55' Cored: 0
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-19' 19-55'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: NA

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 4 hole plug, 1 cement
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Drilled into D seam mine for extraction of mine sump water.

Hole abandoned to surface with 4 sacks hole plug, 1 sack cement November, 2010.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: D2B2 Project ID: Hubbard Creek Fan H2O Wells
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 26-Oct-10 Date Completed: 31-Oct-10

Contractor: Harriman Drilling
Engineer: Doug Smith
Driller: Dennis Harriman

Rig Type: Gardner Denver 15W
Date: 15-Dec-10
Truck Driver: _____

Toolpusher: _____
Helper: Tex Piele

Coordinates: N. 14136.12 E. 24210.81
Location: Township, Range & Section: NW1/4 Sec. 2, T. 13S, R. 91 W

Ground Elevation: 6382' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 336' Probe Depth: NA Fluid Level: NA
Casing Type: steel Size: 8 5/8"
Casing Type: steel T&C Size: 4 1/2"
Depth: 0-19' Recovered (Y or N): N
Depth: 0-297' Recovered (Y or N): N

Bit Information

Surface Casing 12 1/4" Tricone from 0-19'
Main Hole 6 3/4" Tricone from 19-297'
Core: _____
Bottom Hole 6" Tricone from 297-336'

Footage Plugged: 0-336' Cored: 0
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-19' 19-336'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: 220' Estimated Inflow Rates: 50 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: NA

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 18 hole plug, 2 cement
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 3 rubber shale packers set at 280' and annulus cemented to surface.
Drilled into old B seam mine workings to inject D seam mine sump water.
Static water level @ 135'.

Hole abandoned to surface with 18 sacks hole plug, 2 sacks cement May, 2010.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: D2B2A Project ID.: Hubbard Creek Fan H2O Wells
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 13-Oct-05 Date Completed: 17-Oct-05

Contractor: Harriman Drilling Rig Type: Gardner Denver 15W
Engineer: Doug Smith Date: 15-Dec-10 Toolpusher: _____
Driller: Dennis Harriman Truck Driver: _____ Helper: Tex Piele

Coordinates: N. 14130.06 E. 24206.06
Location: Township, Range & Section: NW1/4 Sec. 2, T. 13S, R. 91 W
Ground Elevation: 6382' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 357' Probe Depth: NA Fluid Level: NA
Casing Type: steel Size: 8 5/8"
Casing Type: _____ Size: _____
Depth: 0-20' Recovered (Y or N): N
Depth: _____ Recovered (Y or N): _____

Bit Information

Surface Casing 12 1/4" Tricone from 0-20'
Main Hole 6 3/4" Tricone from 20-357'
Core: _____
Bottom Hole _____

Footage Plugged: 0-57' Cored: 0
Drilling Medium: Air Foam/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-20' 20-357'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: NA

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 1.0 cubic yards
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Failed attempt to intersect old B seam mine workings for water injection.
Static water level @ 138'.
Hole cemented to surface with 1.0 cubic yards cement slurry June, 2006.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: D2B2B Project ID.: Hubbard Creek Fan H2O Wells
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 20-Oct-05 Date Completed: 25-Oct-05

Contractor: Harriman Drilling Rig Type: Gardner Denver 15W
Engineer: Doug Smith Date: 15-Dec-10 Toolpusher: _____
Driller: Dennis Harriman Truck Driver: _____ Helper: Tex Piele

Coordinates: N. 14133.09 E. 24206.31
Location: Township, Range & Section: NW1/4 Sec. 2, T. 13S, R. 91 W
Ground Elevation: 6382' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 357' Probe Depth: NA Fluid Level: NA
Casing Type: steel Size: 8 5/8"
Casing Type: steel T&C Size: _____
Depth: 0-19' Recovered (Y or N): N
Depth: _____ Recovered (Y or N): N

Bit Information

Surface Casing 12 1/4" Tricone from 0-19'
Main Hole 6 1/2" Tricone from 19-302'
Core: _____
Bottom Hole 6" Tricone from 302-357'

Footage Plugged: 0-357' Cored: 0
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-19' 19-357'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: NA

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 0.5 cubic yards
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Failed attempt to intersect old B seam mine workings for water injection.

Hole cemented to surface with 0.5 cubic yards cement slurry June, 2006.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: VB-01S-01 Project ID: Elk Creek Mine Methane Ventilation
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 1-Nov-08 Date Completed: 15-Nov-08

Contractor: Himes Drilling Rig Type: Portadrill TKT Rig 7
Geologist: Doug Allen Date: 13-Dec-08 Toolpusher: _____
Driller: Kevin Himes Truck Driver: Aaron Bucheim Helper: Will Juusola

Coordinates: N. 4720.40 E. 30957.70
Location: Township, Range & Section: SE 1/4 Sec. 12, T.13S., R.91W.
Ground Elevation: 7024' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 430' Probe Depth: NA Fluid Level: NA
Casing Type: steel Size: 14"
Casing Type: steel T&C Size: 10 3/4"
Depth: 0-40' Recovered (Y or N): N
Depth: 0-435' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 40'
Main Hole 13 3/4" Tricone to 440'
Core: _____
Bottom Hole _____

Footage Plugged: 440' Cored: 0
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-440'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: NA

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 6 hole plug, 16 plug gel, 2 cement
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Also drilled 6 1/4" hole 15' east of vent well and cased off with 4.5"
steel T&C casing for communications/ utility. Both strings of casing cemented to surface.

13 3/4" drilled to mine floor; 10 3/4" casing held back 5' to accommodate valve assembly.
10 3/4" casing abandoned to surface with 6 sacks hole plug, 2400 gallons plug gel, and
two sacks cement September, 2009.
Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: VB-01S-01utility Project ID: Elk Creek Mine Methane Ventilation
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 16-Nov-08 Date Completed: 17-Nov-08

Contractor: Himes Drilling Rig Type: Portadrill TKT Rig 7
Geologist: Doug Allen Date: 13-Dec-10 Toolpusher: _____
Driller: Kevin Himes Truck Driver: Aaron Bucheim Helper: Will Juusola

Coordinates: N. 4720.60 E. 30974.70
Location: Township, Range & Section: SE 1/4 Sec. 12, T.13S., R.91W.
Ground Elevation: 7024' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 429' Probe Depth: NA Fluid Level: NA
Casing Type: steel T&C Size: 7.0"
Casing Type: steel T&C Size: 4.5"
Depth: 0-40' Recovered (Y or N): N
Depth: 0-430' Recovered (Y or N): N

Bit Information

Surface Casing 8 3/4" Tricone to 40'
Main Hole 6 1/4" Tricone to 429'
Core: _____
Bottom Hole _____

Footage Plugged: 440' Cored: 0
Drilling Medium: Air Foam/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-440'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical for bridge plug

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 1.25 cubic yds cement slurry
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Casing installed for utility line and tubing sampling bundle.

Bridge plug set at 400' and casing cemented to surface with 1.25 cubic yards
portland cement September, 2010.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 15-03
Lease Number: COC-61357
Date Commenced: 23-Oct-09

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: Hotchkiss
Date Completed: 27-Oct-09

Contractor: Himes Drilling
Geologist: Doug Allen
Driller: Jim Weatherston
Sam Homedew

Rig Type: Atlas Copco RD20
Date: 13-Nov-09
Truck Driver: Will Juusola
Tommy Dennis

Toolpusher: Matt Himes
Helper: Beau O.
Sean V.

Coordinates: N. 15546.70
Location: Township, Range & Section:
Ground Elevation: 7501'

E. 34773.68
SW 1/4, Sec. 31, T. 12 S., R. 90 W.

Geophysical Log Measured From:

Collar Elevation:

Total Depth: 1540'

ground Elevation
Probe Depth: 1542'

Fluid Level: NA

Casing Type: steel T&C

Size: 9 5/8"

Casing Type: sol/slot steel T&C

Size: 7"

Depth: 0-1340'

Recovered (Y or N): N

Depth: 1300-1510'

Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 40' (14" surface casing)

Main Hole 12 1/4" PDC from 40-1340'

Core:

Bottom Hole 8 3/4" Tricone from 1340-1540'

Footage Plugged: 0-1540'

Cored: NA

Drilling Medium: Air

Foam /Water:

Mud:

Foam Injection:

Depths: 0-107'

107-1540'

Lost Circulation Depths: NA

Water Invasion Depth or Intervals: NA

Regained ? (Y or N):

Gas Invasion Depth or Interval: NA

Estimated Inflow Rates:

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y

Neutron:

Temperature:

Density: Y

Resistivity: Y

Caliper: Y

Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N

No. of Bags:

Interval:

Coal Core Sent To: NA

Rock Sent To: NA

Comments: 7" casing overlaps 40' inside 9 5/8" casing.

9 5/8" annulus cemented with 30 bags plus 3 yds neat cement slurry.

Tagged gravel at 1517', tagged cement plug at 1510'.

9 5/8" casing abandoned to surface with 22 cubic yards portland type II cement October, 2010.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 15-04
Lease Number: COC-61357
Date Commenced: 3-Nov-09

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: Hotchkiss
Date Completed: 6-Nov-09

Contractor: Himes Drilling
Geologist: Doug Allen
Driller: Jim Weatherston
Sam Homedew

Rig Type: Atlas Copco RD20
Date: 13-Nov-09
Truck Driver: Will Juusola
Tommy Dennis

Toolpusher: Matt Himes
Helper: Beau O.
Shaun L.

Coordinates: N. 15312.12
Location: Township, Range & Section:
Ground Elevation: 7734'

E. 35666.54
SE 1/4, Sec. 31, T. 12 S., R. 90 W.

Geophysical Log Measured From:

Collar Elevation: ground
Elevation

Total Depth: 1775'

Probe Depth: 1777'

Fluid Level: 600'

Casing Type: steel T&C

Size: 9 5/8"

Casing Type: sol/slot steel T&C

Size: 7"

Depth: 0-1652'

Recovered (Y or N): N

Depth: 1564-1742'

Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 20' (14" surface casing)

Main Hole 12 1/4" PDC from 20-1652'

Core: _____

Bottom Hole 8 3/4" Tricone from 1652-1775'

Footage Plugged: 0-1775'

Cored: NA

Drilling Medium: Air

Foam /Water: Mud

Foam Injection: _____

Depths: 0-410'

410-1775'

Lost Circulation Depths: NA

Regained ? (Y or N): _____

Water Invasion Depth or Intervals: 410'

Estimated Inflow Rates: 25 gpm

Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y

Neutron: _____

Temperature: _____

Density: Y

Resistivity: Y

Caliper: Y

Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N

No. of Bags: _____

Interval: _____

Coal Core Sent To: NA

Rock Sent To: NA

Comments: 7" casing overlaps 88' inside 9 5/8" casing.

9 5/8" annulus cemented with 30 bags plus 8 yds neat cement slurry.

Tagged gravel at 1750', tagged cement plug at 1742'.

9 5/8" casing abandoned to surface with 39 cubic yards portland type II cement October, 2010.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 15-05
Lease Number: COC-61357
Date Commenced: 9-Sep-09

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: Hotchkiss
Date Completed: 19-Sep-09

Contractor: Himes Drilling
Geologist: Doug Allen
Driller: Jim Weatherston
Sam Homedew

Rig Type: Atlas Copco RD20
Date: 13-Nov-09
Truck Driver: Shaun L.
Tommy Dennis

Toolpusher: Matt Himes
Helper: Dave T.
Eldon S.

Coordinates: N. 14997.10
Location: Township, Range & Section:
Ground Elevation: 8132'

E. 36692.30
SW 1/4, Sec. 31, T. 12 S., R. 90 W.

Geophysical Log Measured From:
Total Depth: 2190'
Casing Type: steel T&C
Casing Type: sol/slot steel T&C

Collar Elevation:
ground Elevation
Probe Depth: 2190'

Fluid Level: NA
Size: 9 5/8"
Size: 7"

Depth: 0-2065' Recovered (Y or N): N
Depth: 1969-2154' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 20' (14" surface casing)
Main Hole 12 1/4" PDC from 20-2065'
Core:
Bottom Hole 8 3/4" Tricone from 2065-2190'

Footage Plugged: 0-2190' Cored: NA
Drilling Medium: Air Foam /Water: Mud: Foam Injection:
Depths: 0-470' 470-2190'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: NA Estimated Inflow Rates:
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron:
Temperature: Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags:
Interval:

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 96' inside 9 5/8" casing.
9 5/8" annulus cemented with 30 bags plus 6 yds neat cement slurry.
Tagged gravel at 2163', tagged cement plug at 2154'.

9 5/8" casing abandoned to surface with 24 cubic yards portland type II cement September, 2010.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 15-06 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: BLM
Date Commenced: 20-Aug-09 Date Completed: 25-Aug-09

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 13-Nov-09 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Shaun L. Helper: Dave T.
Sam Homedew Tommy Dennis Eldon S.

Coordinates: N. 14997.87 E. 37519.50
Location: Township, Range & Section: NW 1/4, Sec. 5, T. 13 S., R. 90 W.

Ground Elevation: 8003' Collar Elevation: ground
Geophysical Log Measured From: ground Elevation
Total Depth: 2100' Probe Depth: 2103' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-1960' Recovered (Y or N): N
Depth: 1921-2061' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 20' (14" surface casing)
Main Hole 12 1/4" PDC from 20-1960'
Core: _____
Bottom Hole 8 3/4" Tricone from 1960-2100'

Footage Plugged: 0-2152' Cored: NA
Drilling Medium: Air Foam /Water: Mud Foam Injection: _____
Depths: 0-1960' 1960-2100'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: _____
Interval: _____

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 39' inside 9 5/8" casing.
9 5/8" annulus cemented with 30 bags plus 3 yds neat cement slurry.
Gravel backfill bridged- dump bailer tagged at 2044'. Trip in bit and clean
out hole to 2064'. 7" casing tagged cement plug at 2061'.
9 5/8" casing abandoned to surface with 30 cubic yards portland type II cement August, 2010.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 15-07
Lease Number: COC-61357
Date Commenced: 26-Aug-09

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: BLM
Date Completed: 4-Sep-09

Contractor: Himes Drilling
Geologist: Doug Allen
Driller: Jim Weatherston
Sam Homedew

Rig Type: Atlas Copco RD20
Date: 13-Nov-09
Truck Driver: Shaun L.
Tommy Dennis

Toolpusher: Matt Himes
Helper: Dave T.
Eldon S.

Coordinates: N. 14620.78
Location: Township, Range & Section:
Ground Elevation: 8089'

E. 38353.47
NW 1/4, Sec. 5, T. 13 S., R. 90 W.

Geophysical Log Measured From:

Collar Elevation:

ground

Elevation

Total Depth: 2190'

Probe Depth: 2190'

Fluid Level: NA

Casing Type: steel T&C

Size: 9 5/8"

Casing Type: sol/slot steel T&C

Size: 7"

Depth: 0-2060'

Recovered (Y or N): N

Depth: 1981-2150'

Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 20' (14" surface casing)

Main Hole 12 1/4" PDC from 20-2060'

Core:

Bottom Hole 8 3/4" Tricone from 2060-2190'

Footage Plugged: 0-2190'

Cored: NA

Drilling Medium: Air

Foam /Water:

Mud:

Foam Injection:

Depths: 0-2190'

Lost Circulation Depths: NA

Water Invasion Depth or Intervals: NA

Gas Invasion Depth or Interval: NA

Regained ? (Y or N):

Estimated Inflow Rates:

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y

Neutron:

Temperature:

Density: Y

Resistivity: Y

Caliper: Y

Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N

No. of Bags:

Interval:

Coal Core Sent To: NA

Rock Sent To: NA

Comments: 7" casing overlaps 79' inside 9 5/8" casing.

9 5/8" annulus cemented with 30 bags plus 2 yds neat cement slurry.

Tagged gravel at 2161', tagged cement plug at 2150'.

9 5/8" casing abandoned to surface with 30 cubic yards portland type II cement August, 2010.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 10-04	Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357	(State or Federal):	Surface Owner: BLM
Date Commenced: 26-Jul-07	Date Completed: 1-Aug-07	
Contractor: Stewart Bros.	Rig Type: Failing 2500 Rig 48	
Geologist: Doug Allen	Date: 15-Jan-08	Toolpusher: Danny White
Driller: Gabe Armijo	Truck Driver: Austin Martinez	Helper: G. Gutierrez
	N. Brite	J. Trujillo
	L. Smith	A. Sandoval
	E. 29074.86	
Coordinates: N. 18423.43	SW1/4 Sec. 36, T.12S., R.90W.	
Location: Township, Range & Section:		
Ground Elevation: 7498'	Collar Elevation:	
Geophysical Log Measured From: Ground	Elevation	
Total Depth: 1525'	Probe Depth: 1504'	Fluid Level: NA
Casing Type: steel, T&C	Size: 9 5/8"	
Casing Type: steel FJ	Size: 7" (5 slotted, 3 solid)	
Depth: 9 5/8": 0-1345'	Recovered (Y or N): N	
7": 1293-1455'	N	
Bit Information		
Surface Casing	17" Tricone to 20'; (14" surface casing)	
Main Hole	(Reamed) 12 1/4" Tricone to 1351'	
Core:	NA	
Bottom Hole	8 3/4" Tricone to 1525'	
Footage Plugged: 1525'	Cored: NA	
Drilling Medium: Air	Foam/Water: Mud:	Foam Injection:
Depths: 0-		
Lost Circulation Depths: NA	Regained ? (Y or N):	
Water Invasion Depth or Intervals: NA	Estimated Inflow Rates:	
Gas Invasion Depth or Interval: 1470-1490'		
Geophysical Logging Contractor: Jet West Geophysical, LLC		
Logs Run:	Gamma: X	Neutron:
	Temperature:	Density: X
	Resistivity: X	Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 51' @ 181 deg.		
Hole Cemented (Y or N), Type: N	No. of Bags: 4.5 yds portland slurry for 9 5/8"	
	Interval: to surface	
Coal Core Sent To: NA	Rock Sent To: NA	
Comments: Drilled 8 3/4" pilot hole to verify mineable thickness, then reamed		
12 1/4" to 1351' for 9 5/8" casing. Cuttings filled bottom hole during reaming, cleaned out to 1455'.		
9" cement plug from 1455-1446'. Bottom of 7" slotted casing 17' above D2 seam (1472-1484').		
9 5/8" casing abandoned to surface with 9 cubic yards portland type II cement June, 2010.		

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 10-05 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 13-Jun-07 Date Completed: 20-Jun-07

Contractor: Stewart Bros. Rig Type: Failing 2500 Rig 48
Geologist: Doug Allen Date: 15-Jan-08 Toolpusher: Danny White
Driller: Gabe Armijo Truck Driver: Austin Martinez Helper: G. Gutierrez
Kevine Begay N. Brite J. Trujillo
Randy McClard L. Smith A. Sandoval

Coordinates: N. 17970.04 E. 30342.72
Location: Township, Range & Section: SW1/4 Sec. 36, T.12S., R.90W.

Ground Elevation: 7517' Collar Elevation: _____
Geophysical Log Measured From: _____
Total Depth: 1560' Probe Depth: 1571' Fluid Level: NA
Casing Type: steel, T&C Size: 9 5/8"
Casing Type: steel FJ Size: 7" (3 slotted, 2 solid)
Depth: 9 5/8": 0-1473' Recovered (Y or N): N
7": 1411'-1511' N

Bit Information

Surface Casing 17" Tricone to 20'; (14" surface casing)
Main Hole 12 1/4" Tricone to 1480'
Core: NA
Bottom Hole 8 3/4" Tricone to 1571'

Footage Plugged: 1571' Cored: NA
Drilling Medium: Air: Foam/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-400' 400-1560'
Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: 1520-1530'

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X

Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 39.5' @ 222 deg.

Hole Cemented (Y or N), Type: N No. of Bags: 2 yds portland slurry for 9 5/8"
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Bottom of hole backfilled with coal fines/quikrete up to 1525'.

14' cement plug from 1511-1525'. Bottom of 7" slotted casing 9' above D2 seam (1520-1532').

9 5/8' casing abandoned to surface with 6 cubic yds. Portland type II cement; 4 sacks hole plug;
48 sacks (7200 gallons) plug gel; 2 sacks (10') cement September, 2009.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 15-01 A	Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357	(State or Federal)	Surface Owner: Hotchkiss
Date Commenced: 19-Oct-09	Date Completed: 23-Oct-09	
Contractor: Himes Drilling	Rig Type: Atlas Copco RD20	
Geologist: Doug Allen	Date : 13-Nov-09	Toolpusher: Matt Himes
Driller: Jim Weatherton	Truck Driver: Will Juusola	Helper: Beau O.
Sam Homedew	Tommy Dennis	Shaun L.
Coordinates: N. 15694.06	E. 33662.77	
Location: Township, Range & Section: SW 1/4, Sec. 31, T. 12 S., R. 90 W.		
Ground Elevation: 7631'	Collar Elevation:	
Geophysical Log Measured From: ground	Elevation	
Total Depth: 1730'	Probe Depth: NA	Fluid Level: NA
Casing Type: steel T&C	Size: 9 5/8"	
Casing Type: sol/slot steel T&C	Size: 7"	
Depth: 0-1630'	Recovered (Y or N): N	
Depth: 1550-1730'	Recovered (Y or N): N	
Bit Information		
Surface Casing	16" Tricone to 20' (14" surface casing)	
Main Hole	12 1/4" PDC from 20-1630'	
Core:		
Bottom Hole	8 3/4" Tricone from 1630-1730'	
Footage Plugged: 0-1730'	Cored: NA	
Drilling Medium: Air	Foam /Water:	Mud:
Depths: 0-120'	120-1630'	Foam Injection:
Lost Circulation Depths: NA	Regained ? (Y or N):	
Water Invasion Depth or Intervals: NA	Estimated Inflow Rates:	
Gas Invasion Depth or Interval: NA		
Geophysical Logging Contractor: directional hole- no logging		
Logs Run:	Gamma:	Neutron:
	Temperature:	Density:
	Resistivity:	Caliper:
Other (SP, Foc. Elec., Drift, Dep., Sonic):		
Hole Cemented (Y or N), Type: N	No. of Bags:	
	Interval:	
Coal Core Sent To: NA	Rock Sent To: NA	
Comments: 7" casing overlaps 80' inside 9 5/8" casing.		
9 5/8" annulus cemented with 30 bags plus 5 yds neat cement slurry.		
Directional hole drilled with Scientific Drilling, azimuth 279.		
9 5/8" casing abandoned to surface with 11 cubic yards portland cement slurry May, 2012.		
Himes Drilling Colorado water well license #1285		

Oxbow Mining LLC
Elk Creek Mine

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: Hotchkiss
Date Completed: 19-Oct-09

Toolpusher: Matt Himes
Helper: Beau O.
Eldon S.

E. 33688.96
SW 1/4, Sec. 31, T. 12 S., R. 90 W.

Elevation

Fluid Level: NA

NA

7"

N

$$\frac{N}{N}$$

Surface Casing	16" Tricone to 20' (14" surface casing)
Main Hole	12 1/4" PDC from 20-1600'
Core:	
Bottom Hole	8 3/4" Tricone from 1600-1700'

NA

Foam Injection:

Regained ? (Y or N):

Estimated Inflow Rates: _____

Figure 1

Geophysical Logging Contractor: Directional hole- no logging

Neutron:

Density: _____

Caliper: _____

Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

No. of Bags:

Interval: _____

Rock Sent To: NA

9 5/8" annulus cemented with 30 bags plus 8 yds neat cement slurry.

Directional hole drilled with Scientific Drilling, azimuth 287.

9 5/8" casing abandoned to surface with 10 cubic yards portland cement slurry May, 2012.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 15-02 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 3-Oct-09 Date Completed: 6-Oct-09

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 13-Nov-09 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Will Juusola Helper: Beau O.
Sam Homedew Tommy Dennis Eldon S.

Coordinates: N. 15723.32 E. 33715.40
Location: Township, Range & Section: SW 1/4, Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 7631' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 1625' Probe Depth: 1626' Fluid Level: NA

Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"

Depth: 0-1470' Recovered (Y or N): N
Depth: 1406-1588' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 20' (14" surface casing)
Main Hole 12 1/4" PDC from 20-1470'
Core: _____
Bottom Hole 8 3/4" Tricone from 1470-1625'

Footage Plugged: 0-1625' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-20' 20-1625'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y

Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: _____
Interval: _____

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 64' inside 9 5/8" casing.
9 5/8" annulus cemented with 30 bags plus 3 yds neat cement slurry.
Tagged gravel at 1596', tagged cement plug at 1588'.

9 5/8" casing abandoned to surface with 1 cubic yards portland cement slurry May, 2012.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: BLM
Date Completed: 9-Sep-09

Toolpusher: Matt Himes
Helper: Dave T.
Eldon S.

Ground Elevation:	8169'	Collar Elevation:	
Geophysical Log Measured From:	ground	Elevation	
Total Depth:	2280'	Probe Depth:	2282'
		Fluid Level:	NA

Casing Type:	steel T&C	Size:	9 5/8"
Casing Type:	sol/slot steel T&C	Size:	7"
Depth:	0-2150'	Recovered (Y or N):	N
Depth:	2066-2235'	Recovered (Y or N):	N

Surface Casing	16" Tricone to 20' (14" surface casing)
Main Hole	12 1/4" PDC from 20-2150'
Core:	
Bottom Hole	8 3/4" Tricone from 2150-2280'

Footage Plugged:	<u>0-2280'</u>	Cored:	<u>NA</u>	
Drilling Medium:	<u>Air:</u>	Foam /Water:	<u>Mud:</u>	Foam Injection:
Depths:	<u>0-380'</u>	<u>380-2280'</u>		

Lost Circulation Depths:	NA	Regained ? (Y or N):	
Water Invasion Depth or Intervals:	NA	Estimated Inflow Rates:	
Gas Invasion Depth or Interval:	NA		

Logs Run:

Gamma:	<u>Y</u>	Neutron:	<u> </u>
Temperature:	<u> </u>	Density:	<u>Y</u>
Resistivity:	<u>Y</u>	Caliper:	<u>Y</u>

Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: _____ N _____ No. of Bags: _____
Interval: _____

Coal Core Sent To: NA **Rock Sent To:** NA

Comments: 7" casing overlaps 84' inside 9 5/8" casing.
9 5/8" annulus cemented with 6 yds neat cement slurry.
Tagged gravel at 2242', tagged cement plug at 2235'.

9 5/8" casing abandoned to surface with 30 cubic yards portland cement slurry June, 2012.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 16-01B	Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357	(State or Federal) Surface Owner: Hotchkiss
Date Commenced: 5-Aug-09	Date Completed: 9-Aug-09

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 16-01C Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 27-Jul-09 Date Completed: 4-Aug-09

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 13-Nov-09 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Shaun L. Helper: Dave T.
Sam Homedew Tommy Dennis Eldon S.

Coordinates: N. 17015.93 E. 33758.62
Location: Township, Range & Section: SW 1/4, Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 8121' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 2144' Probe Depth: NA Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2050' Recovered (Y or N): N
Depth: 2004-2144' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 19.5' (14" surface casing)
Main Hole 12 1/4" PDC from 19.5-2050'
Core: _____
Bottom Hole 8 3/4" Tricone from 2050-2144'

Footage Plugged: 0-2144' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-952'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: no logging due to close proximity to GVB 16-01

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 5 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 46' inside 9 5/8" casing

9 5/8" casing abandoned to surface with 9 yds portland type II cement October, 2011.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: <u>GVB 16-01D</u>	Project ID.: <u>Elk Creek Mine Gob Vent Boreholes</u>	
Lease Number: <u>COC-61357</u>	(State or Federal) Surface Owner: <u>Hotchkiss</u>	
Date Commenced: <u>23-Nov-10</u>	Date Completed: <u>4-Dec-10</u>	
Contractor: <u>Himes Drilling</u>	Rig Type: <u>Atlas Copco RD20</u>	
Geologist: <u>Doug Allen</u>	Date: <u>5-Dec-10</u>	Toolpusher: <u>Matt Himes</u>
Driller: <u>Jim Weatherston</u>	Truck Driver: <u>Kirk Homedew</u>	Helper: <u>Richard M.</u>
	<u>Sam Homedew</u>	<u>Trey H.</u>
Coordinates: N. <u>17218.00</u>	E. <u>33738.20</u>	
Location: Township, Range & Section: <u>SE 1/4, Sec. 31, T. 12 S., R. 90 W.</u>		
Ground Elevation: <u>8121'</u>	Collar Elevation: _____	
Geophysical Log Measured From: _____	ground Elevation _____	
Total Depth: <u>2252'</u>	Probe Depth: <u>NA</u>	Fluid Level: <u>NA</u>
Casing Type: <u>steel T&C</u>	Size: <u>9 5/8"</u>	
Casing Type: <u>sol/slot steel T&C</u>	Size: <u>7"</u>	
Depth: <u>0-1292'</u>	Recovered (Y or N): <u>N</u>	
Depth: <u>1292-2252'</u>	Recovered (Y or N): <u>N</u>	
Bit Information		
Surface Casing	<u>16" Tricone to 21' (14" surface casing)</u>	
Main Hole	<u>12 1/4" PDC from 21-1292'</u>	
Core:	_____	
Bottom Hole	<u>8 3/4" Tricone from 1292-2252'</u>	
Footage Plugged: <u>0-2252'</u>	Cored: <u>NA</u>	
Drilling Medium: <u>Air</u>	Foam /Water: _____	Mud: _____
Depths: <u>0-320'</u>	<u>320-2252'</u>	Foam Injection: _____
Lost Circulation Depths: <u>NA</u>	Regained ? (Y or N): _____	
Water Invasion Depth or Intervals: _____	Estimated Inflow Rates: _____	
Gas Invasion Depth or Interval: <u>1292-2252'</u>		
Geophysical Logging Contractor: <u>Directional hole- no logging</u>		
Logs Run:	Gamma: _____	Neutron: _____
	Temperature: _____	Density: _____
	Resistivity: _____	Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____		
Hole Cemented (Y or N), Type: <u>Y</u>	No. of Bags: <u>3 yds for 9 5/8" annulus</u>	
	Interval: <u>to surface</u>	
Coal Core Sent To: <u>NA</u>	Rock Sent To: <u>NA</u>	
Comments: <u>No 7" casing; left 8 3/4" hole open from 1292-2252', at estimated mine roof.</u>		
<u>12 1/4" directional hole steered by Scientific Drilling from 320-1292' (to point where angle fully built)</u>		
<u>then motor tripped out to avoid sticking tools in broken gob. Bottom of 12 1/4" hole located at</u>		
<u>azimuth 101 degrees, 183' from surface location. No circulation loss during drilling.</u>		
<u>9 5/8" casing abandoned to surface with 24 yds portland type II cement October, 2011.</u>		
<u>Himes Drilling Colorado water well license #1285</u>		

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 16-01E Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 5-Oct-10 Date Completed: 10-Oct-10

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 5-Dec-10 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Kirk Homedew Helper: Jake C.
Sam Homedew Will Juusola Trey H.

Coordinates: N. 17121.20 E. 33757.50
Location: Township, Range & Section: SE 1/4, Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 8121' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 2252' Probe Depth: NA Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2164' Recovered (Y or N): N
Depth: 2088-2245' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 20' (14" surface casing)
Main Hole 12 1/4" PDC from 20-2164'
Core: _____
Bottom Hole 8 3/4" Tricone from 2164-2252'

Footage Plugged: 0-2252' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-152' 152-2252'

Lost Circulation Depths: 1935-2164' / 2245-2252' Regained ? (Y or N): N
Water Invasion Depth or Intervals: _____ Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: 1924-2245'

Geophysical Logging Contractor: Directional hole- no logging

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 5 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 76' inside 9 5/8" casing.
12 1/4" directional hole steered by Scientific Drilling. Bottom of 9 5/8" casing located 554.23
at azimuth 118.13 from surface location. Drilled into gob behind longwall.

9 5/8" casing abandoned to surface with 26 yds portland type II cement October, 2011.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 16-02 Project ID.: Elk Creek Mine Exploration
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 11-Nov-09 Date Completed: 14-Nov-09

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 13-Nov-09 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Will Juusola Helper: Beau O.
Sam Homedew Tommy Dennis Shaun L.

Coordinates: N. 16686.53 E. 34824.63
Location: Township, Range & Section: SW 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 7701' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 1800' Probe Depth: 1802' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-1650' Recovered (Y or N): N
Depth: 1583-1755' Recovered (Y or N): N

Bit Information
Surface Casing 16" Tricone to 60' (14" surface casing)
Main Hole 12 1/4" PDC from 60-1650'
Core: _____
Bottom Hole 8 3/4" Tricone from 1650-1800'

Footage Plugged: 0-1800' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-290' 290-1800'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: Y No. of Bags: 3 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 67' inside 9 5/8" casing.
Tagged gravel at 1765', tagged cement plug at 1755'.

9 5/8" casing abandoned to surface with 18 yds portland type II cement September, 2011.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 16-02B Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 11-Dec-10 Date Completed: 14-Dec-10

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 22-Jan-11 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Kirk Homedew Helper: Richard M.
Sam Homedew Will Juusola Trey H.

Coordinates: N. 16571.80 E. 34821.60
Location: Township, Range & Section: SW 1/4, Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 7690' Collar Elevation: _____
Geophysical Log Measured From: _____ ground _____ Elevation _____
Total Depth: 1815' Probe Depth: NA Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: _____ Size: _____
Depth: 0-840' Recovered (Y or N): N
Depth: _____ Recovered (Y or N): _____

Bit Information

Surface Casing 16" Tricone to 84' (14" surface casing)
Main Hole 12 1/4" PDC from 84-840'
Core: _____
Bottom Hole 8 3/4" Tricone from 840-1815'

Footage Plugged: 0-1815' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-292' 292-1810'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Directional hole- no logging.

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 6 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Drilled into gob behind longwall. No 7" casing- 8 3/4" hole left open.
12 1/4" directional hole drilled from 290- 840'. Bottom of 9 5/8" casing located at azimuth 69.65 degrees,
63.34' from surface location. Only upper portion drilled directionally in order to avoid sticking motor in gob.

9 5/8" casing abandoned to surface with 18 yds portland type II cement September, 2011.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 16-02C Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 4-Jan-11 Date Completed: 9-Jan-11

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 22-Jan-11 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Kirk Homedew Helper: Richard M.
Sam Homedew Will Juusola Trey H./Chad H.

Coordinates: N. 16593.80 E. 34802.80
Location: Township, Range & Section: SW 1/4, Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 7691' Collar Elevation:
Geophysical Log Measured From: ground Elevation
Total Depth: 1802' Probe Depth: NA Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: Size:
Depth: 0-840' Recovered (Y or N): N
Depth: Recovered (Y or N):

Bit Information

Surface Casing 16" Tricone to 87' (14" surface casing)
Main Hole 12 1/4" PDC from 87-864'
Core:
Bottom Hole 8 3/4" Tricone from 864-1802'

Footage Plugged: 0-1802' Cored: NA
Drilling Medium: Air Foam /Water: Mud: Foam Injection:
Depths: 0-290' 290-1802'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: NA Estimated Inflow Rates:
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Directional hole- no logging.

Logs Run: Gamma: Neutron:
Temperature: Density:
Resistivity: Caliper:
Other (SP, Foc. Elec., Drift, Dep., Sonic):

Hole Cemented (Y or N), Type: Y No. of Bags: 5 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Drilled into gob behind longwall. No 7" casing- 8 3/4" hole left open.
12 1/4" directional hole drilled from 290- 840'. Bottom of 9 5/8" casing located at azimuth 18.55 degrees,
72.99' from surface location. Only upper portion drilled directionally in order to avoid sticking motor in gob.

9 5/8" casing abandoned to surface with 18 yds portland type II cement September, 2011.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number:	<u>GVB 16-03</u>	Project ID.:	<u>Elk Creek Mine Exploration</u>
Lease Number:	<u>COC-61357</u>	(State or Federal) Surface Owner:	<u>Hotchkiss</u>
Date Commenced:	<u>7-Nov-09</u>	Date Completed:	<u>10-Nov-09</u>

Contractor:	<u>Himes Drilling</u>	Rig Type:	<u>Atlas Copco RD20</u>	Toolpusher:	<u>Matt Himes</u>
Geologist:	<u>Doug Allen</u>	Date:	<u>13-Nov-09</u>	Helper:	<u>Beau O.</u>
Driller:	<u>Jim Weatherton</u>	Truck Driver:	<u>Will Juusola</u>		<u>Shaun L.</u>
	<u>Sam Homedew</u>		<u>Tommy Dennis</u>		
Coordinates: N.	<u>16521.25</u>	E.	<u>35362.90</u>		
Location: Township, Range & Section:			<u>SE 1/4, Sec. 31, T. 12 S., R. 90 W.</u>		
Ground Elevation:	<u>7759'</u>	Collar Elevation:	<u>ground</u>		
Geophysical Log Measured From:		Elevation	<u></u>		
Total Depth:	<u>1855'</u>	Probe Depth:	<u>1856'</u>	Fluid Level:	<u>NA</u>
Casing Type:	<u>steel T&C</u>		Size:	<u>9 5/8"</u>	
Casing Type:	<u>sol/slot steel T&C</u>		Size:	<u>7"</u>	
Depth:	<u>0-1720'</u>	Recovered (Y or N):	<u>N</u>		
Depth:	<u>1642-1819'</u>	Recovered (Y or N):	<u>N</u>		

Bit Information

Surface Casing	16" Tricone to 60' (14" surface casing)
Main Hole	12 1/4" PDC from 60-1720'
Core:	
Bottom Hole	8 3/4" Tricone from 1720-1855'

Footage Plugged:	<u>0-1855'</u>	Cored:	<u>NA</u>	
Drilling Medium:	<u>Air:</u>	Foam /Water:	<u>Mud:</u>	Foam Injection:
Depths:	<u>0-75'</u>	<u>75-1855'</u>		

Lost Circulation Depths:	NA	Regained ? (Y or N):	
Water Invasion Depth or Intervals:	75'	Estimated Inflow Rates:	30 gpm
Gas Invasion Depth or Interval:	NA		

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: _____ Y _____ Neutron: _____
 Temperature: _____ Density: _____ Y _____
 Resistivity: _____ Y _____ Caliper: _____ Y _____
 Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: Y No. of Bags: 9 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA **Rock Sent To:** NA

Comments: 7" casing overlaps 79' inside 9 5/8" casing.
Tagged gravel at 1824', tagged cement plug at 1819'.

Hole made 30 gpm water while drilling, stopped by T.D. 1855'.
9 5/8" casing abandoned to surface with 18 yds portland type II cement September, 2011.
Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number:	<u>GVB 16-04B</u>	Project ID.:	<u>Elk Creek Mine Gob Vent Boreholes</u>
Lease Number:	<u>COC-61357</u>	(State or Federal) Surface Owner:	<u>Hotchkiss</u>
Date Commenced:	<u>12-Jan-11</u>	Date Completed:	<u>21-Jan-11</u>

Contractor:	<u>Himes Drilling</u>	Rig Type:	<u>Atlas Copco RD20</u>	Toolpusher:	<u>Matt Himes</u>
Geologist:	<u>Doug Allen</u>	Date :	<u>22-Jan-11</u>	Helper:	<u>Richard M.</u>
Driller:	<u>Jim Weatherton</u>	Truck Driver:	<u>Kirk Homedew</u>		<u>Trey H./Chad H.</u>
	<u>Sam Homedew</u>		<u>Will Juusola</u>		
Coordinates: N.	<u>16640.10</u>	E.	<u>35897.50</u>		
Location: Township, Range & Section:			<u>SE 1/4, Sec. 31, T. 12 S., R. 90 W.</u>		
Ground Elevation:	<u>7989'</u>	Collar Elevation:	<u>ground</u>		
Geophysical Log Measured From:		Elevation	<u> </u>		
Total Depth:	<u>2072'</u>	Probe Depth:	<u>NA</u>	Fluid Level:	<u>NA</u>
Casing Type:	<u>steel T&C</u>	Size:	<u>9 5/8"</u>		
Casing Type:	<u> </u>	Size:	<u> </u>		
Depth:	<u>0-1796'</u>	Recovered (Y or N):	<u>N</u>		
Depth:	<u> </u>	Recovered (Y or N):	<u> </u>		

Bit Information

Surface Casing	16" Tricone to 42' (14" surface casing)
Main Hole	12 1/4" PDC from 42-1796'
Core:	
Bottom Hole	8 3/4" Tricone from 1796-2072'

Footage Plugged:	0-2072'	Cored:	NA	
Drilling Medium:	Air:	Foam /Water:	Mud:	Foam Injection:
Depths:	0-290'	290-2072'		

Lost Circulation Depths:	NA	Regained ? (Y or N):	
Water Invasion Depth or Intervals:	110'	Estimated Inflow Rates:	2 gpm
Gas Invasion Depth or Interval:	approx 1700-2072'		

Geophysical Logging Contractor: Directional hole- no logging.

Logs Run: Gamma: _____ Neutron: _____
 Temperature: _____ Density: _____
 Resistivity: _____ Caliper: _____
 Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 21 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To:	NA	Rock Sent To:	NA
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Comments: Drilled into gob behind longwall. No 7" casing- 8 3/4" hole left open.
Drilled directional from 290-1796'. Bottom of 9 5/8" casing located 232.4' at azimuth 275.56 degrees.

9 5/8" casing abandoned to surface with 27 yds portland type II cement July, 2011.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: <u>GVB 16-05B</u>	Project ID.: <u>Elk Creek Mine Gob Vent Boreholes</u>	
Lease Number: <u>COC-61357</u>	(State or Federal) Surface Owner: <u>Hotchkiss</u>	
Date Commenced: <u>5-Dec-10</u>	Date Completed: <u>23-Jan-11</u>	

Contractor: <u>Himes Drilling</u>	Rig Type: <u>Atlas Copco RD20</u>	
Geologist: <u>Doug Allen</u>	Date: <u>23-Jan-11</u>	Toolpusher: <u>Matt Himes</u>
Driller: <u>Jim Weatherston</u>	Truck Driver: <u>Kirk Homedew</u>	Helper: <u>Richard M.</u>
<u>Sam Homedew</u>	<u>Will Juusola</u>	<u>Trey H./Chad H.</u>

Coordinates: N. <u>16256.80</u>	E. <u>36629.00</u>	
Location: Township, Range & Section: <u>SE 1/4, Sec. 31, T. 12 S., R. 90 W.</u>		
Ground Elevation: <u>8094'</u>	Collar Elevation: _____	
Geophysical Log Measured From: <u>ground</u>	Elevation _____	
Total Depth: <u>2214'</u>	Probe Depth: <u>NA</u>	Fluid Level: <u>NA</u>
Casing Type: <u>steel T&C</u>	Size: <u>9 5/8"</u>	
Casing Type: _____	Size: _____	
Depth: <u>0-1413'</u>	Recovered (Y or N): <u>N</u>	
Depth: _____	Recovered (Y or N): _____	

Bit Information

Surface Casing	<u>16" Tricone to 42' (14" surface casing)</u>
Main Hole	<u>12 1/4" PDC from 42-1413'</u>
Core:	_____
Bottom Hole	<u>8 3/4" Tricone from 1413-2214'</u>

Footage Plugged: <u>2214'</u>	Cored: <u>NA</u>	
Drilling Medium: <u>Air</u>	Foam /Water: _____	Mud: _____
Depths: <u>0-130'</u>	<u>130-2214'</u>	Foam Injection: _____

Lost Circulation Depths: <u>2000'</u>	Regained ? (Y or N): <u>N</u>	
Water Invasion Depth or Intervals: <u>130'</u>	Estimated Inflow Rates: <u>2 gpm</u>	
Gas Invasion Depth or Interval: <u>NA</u>		

Geophysical Logging Contractor: Directional hole- no logging.

Logs Run: <u>Gamma</u>	Neutron: _____	
<u>Temperature</u>	Density: _____	
<u>Resistivity</u>	Caliper: _____	
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____		

Hole Cemented (<u>Y</u> or N), Type: <u>Y</u>	No. of Bags: <u>6 yds for 9 5/8" annulus</u>
	Interval: <u>to surface</u>

Coal Core Sent To: <u>NA</u>	Rock Sent To: <u>NA</u>
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Comments: Drilled into gob behind longwall. No 7" casing- 8 3/4" hole left open.

Drilled directional from 290-1413'. Bottom of 9 5/8" casing located 205.3' at azimuth 306.1 degrees.

9 5/8" casing abandoned to surface with 18 yds portland type II cement September, 2011.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 16-05C Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 23-Jan-11 Date Completed: 27-Jan-11

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 3-Feb-11 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Kirk Homedew Helper: Richard M.
Sam Homedew Will Juusola Trey H./Chad H.

Coordinates: N. 16324.30 E. 36643.80
Location: Township, Range & Section: SE 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8094' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 2260' Probe Depth: NA Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: _____ Size: _____
Depth: 0-1976' Recovered (Y or N): N
Depth: _____ Recovered (Y or N): _____

Bit Information
Surface Casing 16" Tricone to 42' (14" surface casing)
Main Hole 12 1/4" PDC from 42-1976'
Core: _____
Bottom Hole 8 3/4" Tricone from 1976-2260'

Footage Plugged: 2260' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-130' 130-2260'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: 130' Estimated Inflow Rates: 2 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Directional hole- no logging.

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 16 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: No 7" casing- 8 3/4" hole left open.
Drilled directional from 290-1976'. Bottom of 9 5/8" casing located 369.02' at azimuth 89.22 degrees.
9 5/8" casing abandoned to surface with 20 yds portland type II cement September, 2011.
Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number:	<u>GVB 16-06</u>	Project ID.:	<u>Elk Creek Mine Gob Vent Boreholes</u>
Lease Number:	<u>COC-61357</u>	(State or Federal)	Surface Owner: <u>USFS</u>
Date Commenced:	<u>28-Jul-10</u>	Date Completed:	<u>1-Aug-10</u>

Contractor:	<u>Himes Drilling</u>	Rig Type:	<u>Atlas Copco RD20</u>		
Geologist:	<u>Doug Allen</u>	Date :	<u>5-Dec-10</u>	Toolpusher:	<u>Matt Himes</u>
Driller:	<u>Jim Weatherton</u>	Truck Driver:	<u>Kirk Homedew</u>	Helper:	<u>Sean Vivian</u>
	<u>Sam Homedew</u>		<u>Will Juusola</u>		<u>Cameron S.</u>
Coordinates: N.	<u>16020.26</u>	E.	<u>37536.83</u>		
Location: Township, Range & Section:	<u>SW 1/4, Sec. 32, T. 12 S., R. 90 W.</u>				
Ground Elevation:	<u>8111'</u>	Collar Elevation:	<u></u>		
Geophysical Log Measured From:	<u>ground</u>	Elevation	<u></u>		
Total Depth:	<u>2293'</u>	Probe Depth:	<u></u>		
Casing Type:	<u>steel T&C</u>	Size:	<u>9 5/8"</u>	Fluid Level:	<u>NA</u>
Casing Type:	<u>sol/slot steel T&C</u>	Size:	<u>7"</u>		
Depth:	<u>0-2120'</u>	Recovered (Y or N):	<u>N</u>		
Depth:	<u>2057-2236'</u>	Recovered (Y or N):	<u>N</u>		

Bit Information

Surface Casing	16" Tricone to 20' (14" surface casing)
Main Hole	12 1/4" PDC from 20-2120'
Core:	
Bottom Hole	8 3/4" Tricone from 2120-2293'

Footage Plugged:	<u>0-2293'</u>	Cored:	<u>NA</u>	
Drilling Medium:	<u>Air:</u>	Foam /Water:	<u>Mud:</u>	Foam Injection:
Depths:	<u>0-230'</u>	<u>230-2293'</u>		

Lost Circulation Depths: NA
 Water Invasion Depth or Intervals: NA
 Gas Invasion Depth or Interval: NA

Regained ? (Y or N): _____
 Estimated Inflow Rates: _____

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: _____ Y _____ Neutron: _____
 Temperature: _____ Density: _____ Y _____
 Resistivity: _____ Y _____ Caliper: _____ Y _____
 Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: Y No. of Bags: 13 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To:	NA	Rock Sent To:	NA
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Comments: 7" casing overlaps 63' inside 9 5/8" casing.
Tagged gravel at 2241', tagged cement plug at 2236'.

9 5/8" casing abandoned to surface with 30 yds portland type II cement September, 2011.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: <u>GVB 16-07</u>	Project ID.: <u>Elk Creek Mine Gob Vent Boreholes</u>	
Lease Number: <u>COC-61357</u>	(State or Federal) Surface Owner: <u>USFS</u>	
Date Commenced: <u>21-Sep-10</u>	Date Completed: <u>26-Sep-10</u>	

Contractor: <u>Himes Drilling</u>	Rig Type: <u>Atlas Copco RD20</u>	
Geologist: <u>Doug Allen</u>	Date: <u>5-Dec-10</u>	Toolpusher: <u>Matt Himes</u>
Driller: <u>Jim Weatherton</u>	Truck Driver: <u>Kirk Homedew</u>	Helper: <u>Jake C.</u>
<u>Sam Homedew</u>	<u>Will Juusola</u>	<u>Trey H.</u>
Coordinates: N. <u>15902.60</u>	E. <u>38325.89</u>	

Location: Township, Range & Section: SW 1/4, Sec. 32, T. 12 S., R. 90 W.

Ground Elevation: <u>8207'</u>	Collar Elevation: <u> </u>	
Geophysical Log Measured From: <u>ground</u>	Elevation <u> </u>	
Total Depth: <u>2370'</u>	Probe Depth: <u>2372'</u>	Fluid Level: <u>NA</u>
Casing Type: <u>steel T&C</u>	Size: <u>9 5/8"</u>	
Casing Type: <u>sol/slot steel T&C</u>	Size: <u>7"</u>	
Depth: <u>0-2240'</u>	Recovered (Y or N): <u>N</u>	
Depth: <u>2159-2338'</u>	Recovered (Y or N): <u>N</u>	

Bit Information

Surface Casing	<u>16" Tricone to 42' (14" surface casing)</u>
Main Hole	<u>12 1/4" PDC from 42-2240'</u>
Core:	<u> </u>
Bottom Hole	<u>8 3/4" Tricone from 2240-2370'</u>

Footage Plugged: <u>0-2370'</u>	Cored: <u>NA</u>	
Drilling Medium: <u>Air</u>	Foam /Water: <u> </u>	Mud: <u> </u>
Depths: <u>0-150'</u>	<u>150-2370'</u>	Foam Injection: <u> </u>

Lost Circulation Depths: <u>NA</u>	Regained ? (Y or N): <u> </u>	
Water Invasion Depth or Intervals: <u>150'</u>	Estimated Inflow Rates: <u>5 gpm</u>	
Gas Invasion Depth or Interval: <u>NA</u>		

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: <u>Y</u>	Neutron: <u> </u>	
Temperature: <u> </u>	Density: <u>Y</u>	
Resistivity: <u>Y</u>	Caliper: <u>Y</u>	
Other (SP, Foc. Elec., Drift, Dep., Sonic): <u>cement dump bailer</u>		

Hole Cemented (<u>Y</u> or N), Type: <u>Y</u>	No. of Bags: <u>4 yds for 9 5/8" annulus</u>
	Interval: <u>to surface</u>

Coal Core Sent To: <u>NA</u>	Rock Sent To: <u>NA</u>
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Comments: 7" casing overlaps 81' inside 9 5/8" casing.

Tagged gravel at 2344', tagged cement plug at 2338'.

9 5/8" casing abandoned to surface with 24 yds portland type II cement July, 2011.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: <u>GVB 16-07B</u>	Project ID.: <u>Elk Creek Mine Gob Vent Boreholes</u>	
Lease Number: <u>COC-61357</u>	(State or Federal) <u>Surface Owner:</u> <u>USFS</u>	
Date Commenced: <u>1-Feb-11</u>	Date Completed: <u>11-Feb-11</u>	

Contractor: <u>Himes Drilling</u>	Rig Type: <u>Atlas Copco RD20</u>	
Geologist: <u>Doug Allen</u>	Date: <u>12-Feb-11</u>	Toolpusher: <u>Matt Himes</u>
Driller: <u>Jim Weatherston</u>	Truck Driver: <u>Kirk Homedew</u>	Helper: <u>Richard M.</u>
<u>Sam Homedew</u>	<u>Will Juusola</u>	<u>Trey H./Chad H.</u>
Coordinates: N. <u>16127.60</u>	E. <u>38379.60</u>	
Location: Township, Range & Section: <u>SW 1/4, Sec. 32, T. 12 S., R. 90 W.</u>		
Ground Elevation: <u>8234'</u>	Collar Elevation: _____	
Geophysical Log Measured From: _____	ground _____	Elevation _____
Total Depth: <u>2390'</u>	Probe Depth: <u>NA</u>	Fluid Level: <u>NA</u>
Casing Type: <u>steel T&C</u>	Size: _____	Size: <u>9 5/8"</u>
Casing Type: _____	Size: _____	
Depth: <u>0-1976'</u>	Recovered (Y or N): <u>N</u>	
Depth: _____	Recovered (Y or N): _____	

Bit Information

Surface Casing	<u>16" Tricone to 42' (14" surface casing)</u>
Main Hole	<u>12 1/4" PDC from 42-1976'</u>
Core:	_____
Bottom Hole	<u>8 3/4" Tricone from 1976-2390'</u>

Footage Plugged: <u>0-2390'</u>	Cored: <u>NA</u>	
Drilling Medium: <u>Air</u>	Foam /Water: _____	Mud: _____
Depths: <u>0-290'</u>	<u>290-2390'</u>	Foam Injection: _____

Lost Circulation Depths: <u>NA</u>	Regained ? (Y or N): _____	
Water Invasion Depth or Intervals: <u>NA</u>	Estimated Inflow Rates: <u>NA</u>	
Gas Invasion Depth or Interval: <u>NA</u>		

Geophysical Logging Contractor: directional hole- no logging

Logs Run: <u>Gamma:</u> _____	Neutron: _____	
<u>Temperature:</u> _____	Density: _____	
<u>Resistivity:</u> _____	Caliper: _____	
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____		

Hole Cemented (<u>Y</u> or N), Type: <u>Y</u>	No. of Bags: <u>9 yds for 9 5/8" annulus</u>
	Interval: <u>to surface</u>

Coal Core Sent To: <u>NA</u>	Rock Sent To: <u>NA</u>
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Comments: No 7" casing- 8 3/4" hole left open.

Drilled directionally from 290-1976'. Bottom of 9 5/8" casing located 279' at azimuth 300.05 degrees.

9 5/8" casing abandoned to surface with 35 yds portland type II cement July, 2011.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 16-07C Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 11-Feb-11 Date Completed: 16-Feb-11

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 23-Feb-11 Toolpusher: Matt Himes
Driller: Jim Weatherton Truck Driver: Kirk Homedew Helper: Richard M.
Sam Homedew Will Juusola Trey H./Chad H.
Coordinates: N. 16167.0 E. 38379.0
Location: Township, Range & Section: SW 1/4, Sec. 32, T. 12 S., R. 90 W.
Ground Elevation: 8134' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 2435' Probe Depth: NA Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: _____ Size: _____
Depth: 0-2000' Recovered (Y or N): N
Depth: _____ Recovered (Y or N): _____

Bit Information

Surface Casing 17" Hammer to 42' (14" surface casing)
Main Hole 12 1/4" PDC from 42-2000'
Core: _____
Bottom Hole 8 3/4" Tricone from 2000-2435'

Footage Plugged: 0-2435' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-290' 290-2435'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: NA
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: directional hole- no logging

Logs Run: Gamma: _____ Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: N No. of Bags: 11 cubic yds-annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: No 7" casing- 8 3/4" hole left open.
Drilled directionally from 290-2000'. Stopped directional +/- 445' above mine due to slow drilling (suspected
problem with motor). Bottom of 9 5/8" casing located 405.7 feet at azimuth 99.89 degrees.

9 5/8" casing abandoned to surface with 24 cubic yards portland cement slurry June, 2012.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-01A		Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357		(State or Federal) Surface Owner: Hotchkiss	
Date Commenced: 10-Oct-10		Date Completed: 14-Oct-10	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20	
Geologist: Doug Allen		Date: 5-Dec-10	
Driller: Jim Weatherston		Truck Driver: Kirk Homedew	
Sam Homedew		Will Juusola	
Coordinates: N. 18379.61		E. 33105.70	
Location: Township, Range & Section:		SE 1/4, Sec. 36, T. 12 S., R. 91 W.	
Ground Elevation: 8086'		Collar Elevation:	
Geophysical Log Measured From: ground		Elevation	
Total Depth: 2220'		Probe Depth: 2219'	
Casing Type: steel T&C		Fluid Level: NA	
Casing Type: sol/slot steel T&C		Size: 9 5/8"	
Depth: 0-2092'		Size: 7"	
Depth: 2028-2184'		Recovered (Y or N): N	
		Recovered (Y or N): N	
Bit Information			
Surface Casing		16" Tricone to 20' (14" surface casing)	
Main Hole		12 1/4" PDC from 20-2092'	
Core:			
Bottom Hole		8 3/4" Tricone from 2092-2220'	
Footage Plugged: 0-2220'		Cored: NA	
Drilling Medium: Air		Foam /Water:	
Depths: 0-800'		Mud:	
		Foam Injection:	
Lost Circulation Depths: NA		Regained ? (Y or N):	
Water Invasion Depth or Intervals: NA		Estimated Inflow Rates:	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run:		Gamma: Y	
		Neutron:	
Temperature:		Density: Y	
Resistivity: Y		Caliper: Y	
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer			
Hole Cemented (Y or N), Type: N		No. of Bags:	
		Interval:	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments: 7" casing overlaps 64' inside 9 5/8" casing.			
9 5/8" annulus cemented with 4 yds neat cement slurry.			
Tagged gravel at 2184', set 7" into 9' wet cement plug to 2184' (5' above seam).			
9 5/8" casing abandoned to surface with 39 cubic yards portland cement slurry June, 2012.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-01B		Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357		(State or Federal) Surface Owner: Hotchkiss	
Date Commenced: 19-Oct-10		Date Completed: 21-Oct-10	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20	
Geologist: Doug Allen		Date: 5-Dec-10	
Driller: Jim Weatherston		Truck Driver: Kirk Homedew	
Sam Homedew		Will Juusola	
Coordinates: N. 18347.92		E. 33162.48	
Location: Township, Range & Section:		SE 1/4, Sec. 36, T. 12 S., R. 91 W.	
Ground Elevation: 8088'		Collar Elevation:	
Geophysical Log Measured From: ground		Elevation	
Total Depth: 2180'		Probe Depth: 2063'	
Casing Type: steel T&C		Fluid Level: NA	
Casing Type: sol/slot steel T&C		Size: 9 5/8"	
Depth: 0-2092'		Size: 7"	
Depth: 2008-2180'		Recovered (Y or N): N	
		Recovered (Y or N): N	
Bit Information			
Surface Casing		16" Tricone to 20' (14" surface casing)	
Main Hole		12 1/4" PDC from 20-2092'	
Core:			
Bottom Hole		8 3/4" Tricone from 2092-2180'	
Footage Plugged: 0-2180'		Cored: NA	
Drilling Medium: Air		Foam /Water: Mud:	
Depths: 0-600'		600-2180'	
Lost Circulation Depths: NA		Regained ? (Y or N):	
Water Invasion Depth or Intervals: NA		Estimated Inflow Rates:	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run:		Gamma: Y	
		Neutron:	
Temperature:		Density: Y	
Resistivity: Y		Caliper: Y	
Other (SP, Foc. Elec., Drift, Dep., Sonic): optical borehole imager			
Hole Cemented (Y or N), Type: N		No. of Bags:	
		Interval:	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments: 7" casing overlaps 84' inside 9 5/8" casing.			
9 5/8" annulus cemented with 6 yds neat cement slurry.			
Hole not drilled/logged through seam due to close proximity of GVB 17-01A.			
Optical borehole imager (fracture log) run to 518' before cuttings/ foam clouded image.			
9 5/8" casing abandoned to surface with 50 cubic yards portland cement slurry June, 2012.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-01C Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 23-Oct-10 Date Completed: 27-Oct-10

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 5-Dec-10 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Kirk Homedew Helper: Richard M.
Sam Homedew Trey H. Matt Himes

Coordinates: N. 18200.13 E. 33793.52
Location: Township, Range & Section: SW 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8152' Collar Elevation: Elevation
Geophysical Log Measured From: ground
Total Depth: 2290' Probe Depth: Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2182' Recovered (Y or N): N
Depth: 2092-2256' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 20' (14" surface casing)
Main Hole 12 1/4" PDC from 20-2182'
Core:
Bottom Hole 8 3/4" Tricone from 2182-2290'

Footage Plugged: 0-2290' Cored: NA
Drilling Medium: Air Foam /Water: Mud Foam Injection:
Depths: 0-410' 410-2290'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: NA Estimated Inflow Rates:
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron:
Temperature: Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags:
Interval:

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 90' inside 9 5/8" casing.
9 5/8" annulus cemented with 5 yds neat cement slurry.
Tagged gravel at 2256', set 7" into 9' wet cement plug to 2256' (3' above seam).
Optical borehole imager (fracture log) run to 2144' before cuttings/ foam clouded image.
9 5/8" casing abandoned to surface with 24 cubic yards portland cement slurry June, 2012.
Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-02 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 27-Oct-10 Date Completed: 6-Nov-10

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 5-Dec-10 Toolpusher: Matt Himes
Driller: Jim Weatherton Truck Driver: Kirk Homedew Helper: Richard M.
Sam Homedew Will Juusola Trey H.
Coordinates: N. 18046.12 E. 34286.94
Location: Township, Range & Section: SW 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8143' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 2290' Probe Depth: 2292' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2152' Recovered (Y or N): N
Depth: 2101-2254' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 20' (14" surface casing)
Main Hole 12 1/4" PDC from 20-2152'
Core: _____
Bottom Hole 8 3/4" Tricone from 2152-2290'

Footage Plugged: 0-2290' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-480' 480-2290'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer/ Gas gun

Hole Cemented (Y or N), Type: N No. of Bags: _____
Interval: _____

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 51' inside 9 5/8" casing. 9 5/8" annulus cemented
with 5 yds neat cement slurry. Tagged gravel at 2262', tagged cement plug at 2254'.
Optical borehole imager (fracture log) run to 1900' before cuttings/ foam clouded image.
Ran three gasguns: 4' @2244-2248' (D2 rider); 10' @2220-2230' (siltstone) and
10' @2200-2210' (siltstone) to stimulate methane flow ahead of longwall.
9 5/8" casing abandoned to surface with 31 cubic yards portland cement slurry Sept., 2012.
Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-02C Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 24-Aug-11 Date Completed: 3-Sep-11

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 26-Oct-11 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Mike Hibberd Helper: Nick D.
Kirk Homedew Will Juusola Jimmy L.

Coordinates: N. 18128.41 E. 34310.34
Location: Township, Range & Section: SW 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8140' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____

Total Depth: 2379' Probe Depth: 2355' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2076' Recovered (Y or N): N
Depth: 1993-2343' Recovered (Y or N): N

Bit Information
Surface Casing 17" Hammer to 40' (14" surface casing)
Main Hole 12 1/4" PDC from 40-2076'
Core: _____
Bottom Hole 8 3/4" PDC from 2076-2379'

Footage Plugged: 0-2379' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-40' 40-2379'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 6 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 83' inside 9 5/8" casing.
Tagged gravel at 2352', bottom of 7" casing at 2343'.
Attempted coal log, but unable to get below D2 rider. Gravel backfill and cement dump
bailer run to 2355'. D2 depth determined to be 2360' +/- 3' based on driller info and
adjacent holes. Bottom of 9 5/8' casing located 406' at azimuth 78.54 degrees.
9 5/8" casing abandoned to surface with 22 cubic yards portland cement slurry July, 2012.
Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: <u>GVB 17-03</u>		Project ID.: <u>Elk Creek Mine Gob Vent Boreholes</u>	
Lease Number: <u>COC-61357</u>		(State or Federal)	Surface Owner: <u>Hotchkiss</u>
Date Commenced: <u>6-Nov-10</u>		Date Completed: <u>10-Nov-10</u>	
Contractor: <u>Himes Drilling</u>		Rig Type: <u>Atlas Copco RD20</u>	
Geologist: <u>Doug Allen</u>		Date: <u>5-Dec-10</u>	Toolpusher: <u>Matt Himes</u>
Driller: <u>Jim Weatherston</u>		Truck Driver: <u>Kirk Homedew</u>	Helper: <u>Richard M.</u>
<u>Sam Homedew</u>		<u>Will Juusola</u>	<u>Trey H.</u>
Coordinates: N. <u>17892.15</u>		E. <u>35155.84</u>	
Location: Township, Range & Section: <u>N1/2, S1/2, Sec. 31, T. 12 S., R. 90 W.</u>			
Ground Elevation: <u>8055'</u>		Collar Elevation: <u>Elevation</u>	
Geophysical Log Measured From: <u>ground</u>		Elevation	
Total Depth: <u>2252'</u>		Probe Depth: <u>2235'</u>	Fluid Level: <u>NA</u>
Casing Type: <u>steel T&C</u>		Size: <u>9 5/8"</u>	
Casing Type: <u>sol/slot steel T&C</u>		Size: <u>7"</u>	
Depth: <u>0-2092'</u>		Recovered (Y or N): <u>N</u>	
Depth: <u>2022-2193'</u>		Recovered (Y or N): <u>N</u>	
Bit Information			
Surface Casing		<u>16" Tricone to 31' (14" surface casing)</u>	
Main Hole		<u>12 1/4" PDC from 31-2092'</u>	
Core:			
Bottom Hole		<u>8 3/4" Tricone from 2092-2232'</u>	
Footage Plugged: <u>0-2232'</u>		Cored: <u>NA</u>	
Drilling Medium: <u>Air</u>		Foam /Water: <u>Mud:</u>	Foam Injection:
Depths: <u>0-220'</u>		<u>220-2232'</u>	
Lost Circulation Depths: <u>NA</u>		Regained ? (Y or N):	
Water Invasion Depth or Intervals: <u>NA</u>		Estimated Inflow Rates:	
Gas Invasion Depth or Interval: <u>NA</u>			
Geophysical Logging Contractor: <u>Jetwest Geophysical</u>			
Logs Run:		Gamma: <u>Y</u>	
		Neutron: <u>Y</u>	
		Density: <u>Y</u>	
		Caliper: <u>Y</u>	
		Other (SP, Foc. Elec., Drift, Dep., Sonic): <u>cement dump bailer/ Gas gun</u>	
Hole Cemented (Y or N), Type: <u>N</u>		No. of Bags:	
		Interval:	
Coal Core Sent To: <u>NA</u>		Rock Sent To: <u>NA</u>	
Comments: <u>7" casing overlaps 70' inside 9 5/8" casing. 9 5/8" annulus cemented with 5 yds neat cement slurry. Tagged gravel at 2201', tagged cement plug at 2193'.</u>			
<u>Optical borehole imager (fracture log) run to 1700' before cuttings/ foam clouded image.</u>			
<u>Ran three gasguns: 10' @2172-2182' (sandstone); 10' @2138-2148' (siltstone) and 10' @2114-2124' (siltstone) to stimulate methane flow ahead of longwall.</u>			
<u>9 5/8" casing abandoned to surface with 43 cubic yards portland cement slurry June, 2012.</u>			
<u>Himes Drilling Colorado water well license #1285</u>			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-04	Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357	(State or Federal) Surface Owner: Hotchkiss	
Date Commenced: 17-Aug-10	Date Completed: 28-Aug-10	

Contractor: Himes Drilling	Rig Type: Atlas Copco RD20	
Geologist: Doug Allen	Date: 5-Dec-10	Toolpusher: Matt Himes
Driller: Jim Weatherton	Truck Driver: Kirk Homedew	Helper: Sean Vivian
Sam Homedew	Will Juusola	Trey H.

Coordinates: N. 17504.65	E. 36096.78	
Location: Township, Range & Section: SE 1/4, Sec. 31, T. 12 S., R. 90 W.		
Ground Elevation: 8104'	Collar Elevation:	

Geophysical Log Measured From: ground	Elevation	
Total Depth: 2327'	Probe Depth:	Fluid Level: NA
Casing Type: steel T&C	Size: 9 5/8"	
Casing Type: sol/slot steel T&C	Size: 7"	
Depth: 0-2122'	Recovered (Y or N): N	
Depth: 2051-2282'	Recovered (Y or N): N	

Bit Information

Surface Casing	16" Tricone to 40' (14" surface casing)
Main Hole	12 1/4" PDC from 40-2122'
Core:	
Bottom Hole	8 3/4" Tricone from 2122-2327'

Footage Plugged: 0-2327'	Cored: NA	
Drilling Medium: Air	Foam /Water:	Mud:
Depths: 0-700'	700-2327'	Foam Injection:

Lost Circulation Depths: NA	Regained ? (Y or N):	
Water Invasion Depth or Intervals: 700'	Estimated Inflow Rates:	10 gpm
Gas Invasion Depth or Interval: NA		

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run:	Gamma: Y	Neutron:
	Temperature:	Density: Y
	Resistivity: Y	Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer; deviation		

Hole Cemented (Y or N), Type: N	No. of Bags:
	Interval:

Coal Core Sent To: NA	Rock Sent To: NA
------------------------------	-------------------------

Comments: 7" casing overlaps 71' inside 9 5/8" casing.
9 5/8" annulus cemented with 3 yds neat cement slurry.
Tagged gravel at 22289', tagged cement plug at 2282'.
Hole deviated approximately 335' at 90 degrees azimuth.

9 5/8" casing abandoned to surface with 24 cubic yards portland cement slurry May, 2012.
Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: <u>GVB 17-04B</u>	Project ID.: <u>Elk Creek Mine Gob Vent Boreholes</u>	
Lease Number: <u>COC-61357</u>	(State or Federal) <u>Surface Owner:</u>	<u>Hotchkiss</u>
Date Commenced: <u>6-Jul-11</u>	Date Completed: <u>11-Jul-11</u>	
Contractor: <u>Himes Drilling</u>	Rig Type: <u>Atlas Copco RD20</u>	
Geologist: <u>Doug Allen</u>	Date: <u>26-Oct-11</u>	Toolpusher: <u>Matt Himes</u>
Driller: <u>Jim Weatherton</u>	Truck Driver: <u>Jason Grundy</u>	Helper: <u>Kenny N.</u>
<u>Kirk Homedew</u>	<u>Will Juusola</u>	<u>Cameron S.</u>
Coordinates: N. <u>17544.06</u>	E. <u>36084.75</u>	
Location: Township, Range & Section: <u>SE 1/4, Sec. 31, T. 12 S., R. 90 W.</u>		
Ground Elevation: <u>8104'</u>	Collar Elevation: _____	
Geophysical Log Measured From: <u>ground</u>	Elevation _____	
Total Depth: <u>2312'</u>	Probe Depth: <u>NA</u>	Fluid Level: <u>NA</u>
Casing Type: <u>steel T&C</u>	Size: <u>9 5/8"</u>	
Casing Type: <u>sol/slot steel T&C</u>	Size: <u>7"</u>	
Depth: <u>0-2010'</u>	Recovered (Y or N): <u>N</u>	
Depth: <u>1960.3-2312'</u>	Recovered (Y or N): <u>N</u>	
Bit Information		
Surface Casing	<u>17" Hammer to 40' (14" surface casing)</u>	
Main Hole	<u>12 1/4" PDC from 40-2010'</u>	
Core:	_____	
Bottom Hole	<u>8 3/4" PDC from 2010-2312'</u>	
Footage Plugged: <u>0-2312'</u>	Cored: <u>NA</u>	
Drilling Medium: <u>Air</u>	Foam /Water: _____	Mud: _____
Depths: <u>0-40'</u>	<u>40-2312'</u>	Foam Injection: _____
Lost Circulation Depths: <u>NA</u>	Regained ? (Y or N): _____	
Water Invasion Depth or Intervals: <u>NA</u>	Estimated Inflow Rates: _____	
Gas Invasion Depth or Interval: <u>NA</u>		
Geophysical Logging Contractor: <u>directional hole- no logging</u>		
Logs Run: <u>Gamma:</u>	<u>Neutron:</u>	
<u>Temperature:</u>	<u>Density:</u>	
<u>Resistivity:</u>	<u>Caliper:</u>	
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____		
Hole Cemented (<u>Y</u> or N), Type: <u>N</u>	No. of Bags: <u>6 yds for 9 5/8" annulus</u>	
	Interval: <u>to surface</u>	
Coal Core Sent To: <u>NA</u>	Rock Sent To: <u>NA</u>	
Comments: <u>7" casing overlaps 49.7' inside 9 5/8" casing.</u>		
<u>298.5' slotted 7" casing below 53.2' solid 7" casing. Landed at 2306.3'.</u>		
<u>Drilled directionally from 500-2010'. Bottom of 9 5/8" casing located 360' at azimuth 318.23 degrees.</u>		
<u>9 5/8" casing abandoned to surface with 28 cubic yards portland cement slurry May, 2012.</u>		
<u>Himes Drilling Colorado water well license #1285</u>		

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-04C		Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357		(State or Federal) Surface Owner: Hotchkiss	
Date Commenced: 8-Sep-11		Date Completed: 16-Sep-11	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20	
Geologist: Doug Allen		Date: 26-Oct-11	
Driller: Jim Weatherston		Truck Driver: Mike Hibberd	
Kirk Homedew		Will Juusola	
Coordinates: N. 17522.07		E. 36087.30	
Location: Township, Range & Section:		SE 1/4, Sec. 31, T. 12 S., R. 90 W.	
Ground Elevation: 8103'		Collar Elevation:	
Geophysical Log Measured From: ground		Elevation	
Total Depth: 2281'		Probe Depth: 2271'	
Casing Type: steel T&C		Fluid Level: NA	
Casing Type: sol/slot steel T&C		Size: 9 5/8"	
Depth: 0-1942'		Size: 7"	
Depth: 1880-2240'		Recovered (Y or N): N	
		Recovered (Y or N): N	
Bit Information			
Surface Casing 17" Hammer to 40' (14" surface casing)			
Main Hole 12 1/4" PDC from 40-1942'			
Core:			
Bottom Hole 8 3/4" Tricone from 1942-2281'			
Footage Plugged: 0-2281'		Cored: NA	
Drilling Medium: Air		Foam /Water: Mud	
Depths: 0-40'		Foam Injection:	
Lost Circulation Depths: NA		Regained ? (Y or N):	
Water Invasion Depth or Intervals: NA		Estimated Inflow Rates:	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run:		Gamma: Y	
		Neutron:	
Temperature:		Density: Y	
Resistivity: Y		Caliper: Y	
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer			
Hole Cemented (Y or N), Type: N		No. of Bags: 6 yds for 9 5/8" annulus	
		Interval: to surface	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments: 7" casing overlaps 62' inside 9 5/8" casing.			
Tagged gravel at 2248', bottom of 7" casing at 2240'.			
9 5/8" casing abandoned to surface with 38 cubic yards portland cement slurry June, 2012.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-05B		Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357		(State or Federal) Surface Owner: Hotchkiss	
Date Commenced: 10-Aug-10		Date Completed: 16-Aug-10	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20	
Geologist: Doug Allen		Date: 5-Dec-10	
Driller: Jim Weatherston		Truck Driver: Kirk Homedew	
Sam Homedew		Will Juusola	
Coordinates: N. 17553.44		E. 36799.63	
Location: Township, Range & Section:		SE 1/4, Sec. 31, T. 12 S., R. 90 W.	
Ground Elevation: 8194'		Collar Elevation:	
Geophysical Log Measured From: ground		Elevation	
Total Depth: 2400'		Probe Depth:	
Casing Type: steel T&C		Fluid Level: NA	
Casing Type: sol/slot steel T&C		Size: 9 5/8"	
Depth: 0-2198'		Size: 7"	
Depth: 2160-2356'		Recovered (Y or N): N	
		Recovered (Y or N): N	
Bit Information			
Surface Casing		16" Tricone to 84' (14" surface casing)	
Main Hole		12 1/4" PDC from 84-2198'	
Core:			
Bottom Hole		8 3/4" Tricone from 2198-2400'	
Footage Plugged: 0-2400'		Cored: NA	
Drilling Medium: Air		Foam /Water: Mud	
Depths: 0-800'		800-2400'	
Lost Circulation Depths: NA		Regained ? (Y or N):	
Water Invasion Depth or Intervals: 1550'		Estimated Inflow Rates: 20 gpm	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run:		Gamma: Y	
		Neutron:	
Temperature:		Density: Y	
Resistivity: Y		Caliper: Y	
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer			
Hole Cemented (Y or N), Type: N		No. of Bags: 458 sacks+3 cubic yds.	
		Interval:	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments: 7" casing overlaps 38' inside 9 5/8" casing.			
9 5/8" annulus cemented with BJ Services- 458 sacks + 3 cubic yards from surface.			
Tagged gravel at 2356', tagged cement plug at 2356'. (Gravel apparently settled after dump bailing-			
bottom of 7" casing still 4' above top of seam.)			
Attempted to drill with mud through water zone at 1550'- unsuccessful- no returns.			
9 5/8" casing abandoned to surface with 20 cubic yards portland cement slurry June, 2012.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-06 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 16-Jul-10 Date Completed: 21-Jul-10

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 5-Dec-10 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Kirk Homedew Helper: Sean Vivian
Matt Himes Will Juusola Cameron S.

Coordinates: N. 17207.95 E. 37708.01
Location: Township, Range & Section: SW 1/4, Sec. 32, T. 12 S., R. 90 W.

Ground Elevation: 8226' Collar Elevation: Elevation
Geophysical Log Measured From: ground
Total Depth: 2460' Probe Depth: Size: 9 5/8" Fluid Level: NA
Casing Type: steel T&C Size: 7"
Casing Type: sol/slot steel T&C
Depth: 0-2300' Recovered (Y or N): N
Depth: 2261-2410' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 42' (14" surface casing)
Main Hole 12 1/4" PDC from 42-2300'
Core: _____
Bottom Hole 8 3/4" Tricone from 2300-2460'

Footage Plugged: 0-2460' Cored: NA
Drilling Medium: Air: Foam /Water: Mud: Foam Injection: _____
Depths: 0-42' 42-2460'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: _____
Interval: _____

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 39' inside 9 5/8" casing.
9 5/8" annulus cemented with 5 yds neat cement slurry.
Tagged gravel at 2416', tagged cement plug at 2410'.
9 5/8" casing abandoned to surface with 22 cubic yards portland cement slurry June, 2012.
Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-06B Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 27-Jun-11 Date Completed: 6-Jul-11

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 26-Oct-11 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Jason Grundy Helper: Kenny
Kirk Homedew Will Juusola Cameron
Coordinates: N. 17212.30 E. 37741.35
Location: Township, Range & Section: SW 1/4, Sec. 32, T. 12 S., R. 90 W.
Ground Elevation: 8226' Collar Elevation:
Geophysical Log Measured From: ground Elevation
Total Depth: 2485' Probe Depth: NA Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-1951' Recovered (Y or N): N
Depth: 1911-2485' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 40' (14" surface casing)
Main Hole 12 1/4" PDC from 40-1951'
Core:
Bottom Hole 8 3/4" PDC from 1951-2485'

Footage Plugged: 0-2485' Cored: NA
Drilling Medium: Air Foam /Water: Mud: Foam Injection:
Depths: 0-40' 40-2485'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: NA Estimated Inflow Rates:
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: directional hole- no logging

Logs Run: Gamma: Neutron:
Temperature: Density:
Resistivity: Caliper:
Other (SP, Foc. Elec., Drift, Dep., Sonic):

Hole Cemented (Y or N), Type: N No. of Bags: 2 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 39.8' inside 9 5/8" casing.
294.3' slotted 7" casing below 279.5' solid 7" casing. Landed at 2482'.
Drilled directionally from 504-1952'. Bottom of 9 5/8" casing located 330' at azimuth 300.66 degrees.
9 5/8" casing abandoned to surface with 34 cubic yards portland cement slurry July, 2012.
Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-07		Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357		(State or Federal) Surface Owner: USFS	
Date Commenced: 26-Sep-10		Date Completed: 1-Oct-10	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20	
Geologist: Doug Allen		Date: 5-Dec-10	
Driller: Jim Weatherston		Truck Driver: Kirk Homedew	
Sam Homedew		Will Juusola	
Coordinates: N. 16967.84		E. 38363.21	
Location: Township, Range & Section:		SW 1/4, Sec. 32, T. 12 S., R. 90 W.	
Ground Elevation: 8314'		Collar Elevation:	
Geophysical Log Measured From: ground		Elevation	
Total Depth: 2515'		Probe Depth: 2513'	
Casing Type: steel T&C		Fluid Level: NA	
Casing Type: sol/slot steel T&C		Size: 9 5/8"	
Depth: 0-2410'		Size: 7"	
Depth: 2303-2479'		Recovered (Y or N): N	
		Recovered (Y or N): N	
Bit Information			
Surface Casing		16" Tricone to 42' (14" surface casing)	
Main Hole		12 1/4" PDC from 42-2410'	
Core:			
Bottom Hole		8 3/4" Tricone from 2410-2515'	
Footage Plugged: 0-2515'		Cored: NA	
Drilling Medium: Air		Foam /Water: Mud:	
Depths: 0-610'		610-2515'	
Lost Circulation Depths: NA		Regained ? (Y or N):	
Water Invasion Depth or Intervals: NA		Estimated Inflow Rates:	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run:		Gamma: Y	
		Neutron:	
		Density: Y	
		Caliper: Y	
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer			
Hole Cemented (Y or N), Type: N		No. of Bags:	
		Interval:	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments: 7" casing overlaps 107' inside 9 5/8" casing.			
9 5/8" annulus cemented with 3 yds neat cement slurry.			
Tagged gravel at 2484', tagged cement plug at 2479'.			
9 5/8" casing abandoned to surface with 19 cubic yards portland cement slurry July, 2012.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-08 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 20-Jul-11 Date Completed: 23-Jul-11

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 26-Oct-11 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Jason Grundy Helper: Nick D.
Kirk Homedew Will Juusola Jimmy L.

Coordinates: N. 16902.14 E. 39146.67
Location: Township, Range & Section: SW 1/4, Sec. 32, T. 12 S., R. 90 W.

Ground Elevation: 8137' Collar Elevation: Elevation
Geophysical Log Measured From: ground
Total Depth: 2384' Probe Depth: 2377' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2043' Recovered (Y or N): N
Depth: 1981-2347' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 40' (14" surface casing)
Main Hole 12 1/4" PDC from 40-2043'
Core: _____
Bottom Hole 8 3/4" PDC from 2043-2458'

Footage Plugged: 0-2384' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-40' 40-2384'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y

Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 5 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 62' inside 9 5/8" casing.
Tagged gravel at 2352', tagged cement plug at 2347'.

9 5/8" casing abandoned to surface with 21 cubic yards portland cement slurry July, 2012.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-08C		Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357		(State or Federal) Surface Owner: USFS	
Date Commenced: 8-May-12		Date Completed: 13-May-12	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20	
Geologist: Doug Allen		Date: 12-Sep-12	
Driller: Mike Hibbard		Truck Driver: Brandon Yates	
Kirk Homedew		Richard Moores	
Coordinates: N. 16919.44		E. 39177.39	
Location: Township, Range & Section:		SW 1/4, Sec. 32, T. 12 S., R. 90 W.	
Ground Elevation: 8138'		Collar Elevation:	
Geophysical Log Measured From: ground		Elevation	
Total Depth: 2401'		Probe Depth: NA	
Casing Type: steel T&C		Fluid Level: NA	
Casing Type: sol/slot steel T&C		Size: 9 5/8"	
Depth: 0-2214'		Size: 7"	
Depth: 2162.7-2318'		Recovered (Y or N): N	
		Recovered (Y or N): N	
Bit Information			
Surface Casing		17" Hammer to 40' (14" surface casing)	
Main Hole		12 1/4" PDC from 40-2214'	
Core:			
Bottom Hole		8 3/4" PDC from 2214-2320"	
Footage Plugged: 0-2320'		Cored: NA	
Drilling Medium: Air		Foam /Water: Mud	
Depths: 0-40'		Foam Injection:	
		40-2320'	
Lost Circulation Depths: NA		Regained ? (Y or N):	
Water Invasion Depth or Intervals: 500/700'		Estimated Inflow Rates: 25/5 gpm	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: directional hole- no logging			
Logs Run: Gamma:		Neutron:	
Temperature:		Density:	
Resistivity:		Caliper:	
Other (SP, Foc. Elec., Drift, Dep., Sonic):			
Hole Cemented (Y or N), Type: N		No. of Bags: 7 yds for 9 5/8" annulus	
		Interval: to surface	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments: 7" casing overlaps 51.3' inside 9 5/8" casing.			
122.4' slotted 7" casing below 32.9' solid 7" casing. Landed at 2318'.			
Drilled directionally from 500-2162'. Bottom of 9 5/8" casing located 393.7' at azimuth 83.59 degrees.			
9 5/8" casing abandoned to surface with 32 cubic yards portland cement slurry July, 2012.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: <u>GVB 17-09</u>		Project ID.: <u>Elk Creek Mine Gob Vent Boreholes</u>	
Lease Number: <u>COC-61357</u>		(State or Federal)	Surface Owner: <u>USFS</u>
Date Commenced: <u>27-Jul-11</u>		Date Completed: <u>5-Aug-11</u>	
Contractor: <u>Himes Drilling</u>		Rig Type: <u>Atlas Copco RD20</u>	
Geologist: <u>Doug Allen</u>		Date: <u>26-Oct-11</u>	Toolpusher: <u>Matt Himes</u>
Driller: <u>Jim Weatherton</u>		Truck Driver: <u>Jason Grundy</u>	Helper: <u>Nick D.</u>
<u>Kirk Homedew</u>		<u>Will Juusola</u>	<u>Jimmy L.</u>
Coordinates: N. <u>16586.06</u>		E. <u>39898.57</u>	
Location: Township, Range & Section: <u>SE 1/4, Sec. 32, T. 12 S., R. 90 W.</u>			
Ground Elevation: <u>8100'</u>		Collar Elevation: <u>Elevation</u>	
Geophysical Log Measured From: <u>ground</u>		Elevation	
Total Depth: <u>2353'</u>		Probe Depth: <u>2339'</u>	Fluid Level: <u>NA</u>
Casing Type: <u>steel T&C</u>		Size: <u>9 5/8"</u>	
Casing Type: <u>sol/slot steel T&C</u>		Size: <u>7"</u>	
Depth: <u>0-2003'</u>		Recovered (Y or N): <u>N</u>	
Depth: <u>1945-2313'</u>		Recovered (Y or N): <u>N</u>	
Bit Information			
Surface Casing		<u>17" Hammer to 40' (14" surface casing)</u>	
Main Hole		<u>12 1/4" PDC from 40-2003'</u>	
Core:			
Bottom Hole		<u>8 3/4" PDC from 2003-2353'</u>	
Footage Plugged: <u>0-2353'</u>		Cored: <u>NA</u>	
Drilling Medium: <u>Air</u>		Foam /Water: <u>Mud</u>	Foam Injection:
Depths: <u>0-40'</u>		<u>40-2353'</u>	
Lost Circulation Depths: <u>NA</u>		Regained ? (Y or N): <u>5 gpm</u>	
Water Invasion Depth or Intervals: <u>1170'</u>		Estimated Inflow Rates:	
Gas Invasion Depth or Interval: <u>NA</u>			
Geophysical Logging Contractor: <u>Jetwest Geophysical</u>			
Logs Run:		Gamma: <u>Y</u>	
Temperature:		Neutron: <u>Y</u>	
Resistivity: <u>Y</u>		Density: <u>Y</u>	
Other (SP, Foc. Elec., Drift, Dep., Sonic): <u>cement dump bailer</u>		Caliper: <u>Y</u>	
Hole Cemented (Y or N), Type: <u>N</u>		No. of Bags: <u>15 yds for 9 5/8" annulus</u>	
		Interval: <u>to surface</u>	
Coal Core Sent To: <u>NA</u>		Rock Sent To: <u>NA</u>	
Comments: <u>7" casing overlaps 56' inside 9 5/8" casing.</u>			
<u>Tagged gravel at 2311', bottom of 7" casing at 2313'.</u>			
<u>9 5/8" casing abandoned to surface with 34 cubic yards portland cement slurry Aug., 2012.</u>			
<u>Himes Drilling Colorado water well license #1285</u>			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 18-03B		Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357		(State or Federal) Surface Owner: Hotchkiss	
Date Commenced: 1-Oct-11		Date Completed: 6-Oct-11	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20	
Geologist: Doug Allen		Date: 26-Oct-11	
Driller: Jim Weatherston		Truck Driver: Mike Hibberd	
Kirk Homedew		Will Juusola	
Coordinates: N. 19518.08		E. 35373.62	
Location: Township, Range & Section:		NE 1/4, Sec. 31, T. 12 S., R. 90 W.	
Ground Elevation: 8309'		Collar Elevation:	
Geophysical Log Measured From: ground		Elevation	
Total Depth: 2670'		Probe Depth: 2660'	
Casing Type: steel T&C		Fluid Level: NA	
Casing Type: sol/slot steel T&C		Size: 9 5/8"	
Depth: 0-2211'		Size: 7"	
Depth: 2155-2496'		Recovered (Y or N): N	
		Recovered (Y or N): N	
Bit Information			
Surface Casing 17" Hammer to 40' (14" surface casing)			
Main Hole 12 1/4" PDC from 40-2230'			
Core:			
Bottom Hole 8 3/4" Tricone from 2230-2670'			
Footage Plugged: 0-2670'		Cored: NA	
Drilling Medium: Air		Foam /Water: Mud	
Depths: 0-40'		Foam Injection:	
Lost Circulation Depths: NA		Regained ? (Y or N):	
Water Invasion Depth or Intervals: 1700'		Estimated Inflow Rates: 5 gpm	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run:		Gamma: Y	
		Neutron:	
Temperature:		Density: Y	
Resistivity: Y		Caliper: Y	
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer			
Hole Cemented (Y or N), Type: N		No. of Bags: 5 yds for 9 5/8" annulus	
		Interval: to surface	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments: 7" casing overlaps 56' inside 9 5/8" casing.			
Tagged gravel at 2506', bottom of 7" casing at 2496'.			
9 5/8" casing abandoned to surface with 18 cubic yards portland cement slurry June, 2012.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: <u>GVB 18-07</u>	Project ID.: <u>Elk Creek Mine Gob Vent Boreholes</u>	
Lease Number: <u>COC-61357</u>	(State or Federal) <u>Surface Owner:</u>	<u>USFS</u>
Date Commenced: <u>17-Nov-10</u>	Date Completed: <u>August, 2011</u>	
Contractor: <u>Himes Drilling</u>	Rig Type: <u>Atlas Copco RD20</u>	
Geologist: <u>Doug Allen</u>	Date: <u>13-Oct-11</u>	Toolpusher: <u>Matt Himes</u>
Driller: <u>Jim Weatherston</u>	Truck Driver: <u>Kirk Homedew</u>	Helper: <u>Richard H.</u>
	<u>Sam Homedew</u>	<u>Trey H.</u>
Coordinates: N. <u>18167.80</u>	E. <u>38708.10</u>	
Location: Township, Range & Section:		<u>SW 1/4, Sec. 32, T. 12 S., R. 90 W.</u>
Ground Elevation: <u>8217'</u>	Collar Elevation: _____	
Geophysical Log Measured From: _____	ground _____	Elevation _____
Total Depth: <u>2516'</u>	Probe Depth: <u>2513'</u>	Fluid Level: <u>NA</u>
Casing Type: <u>steel T&C</u>	Size: _____	<u>9 5/8"</u>
Casing Type: _____	Size: _____	
Depth: <u>0-2304'</u>	Recovered (Y or N): <u>N</u>	
Depth: _____	Recovered (Y or N): _____	
Bit Information		
Surface Casing	<u>16" Tricone to 63' (14" surface casing)</u>	
Main Hole	<u>12 1/4" PDC from 63-2362'</u>	
Core:	_____	
Bottom Hole	<u>8 3/4" Tricone from 2362-2516'</u>	
Footage Plugged: <u>0-2516'</u>	Cored: <u>NA</u>	
Drilling Medium: <u>Air:</u>	Foam /Water: _____	Mud: _____
Depths: <u>0-220'</u>	<u>220-2516'</u>	Foam Injection: _____
Lost Circulation Depths: <u>NA</u>	Regained ? (Y or N): _____	
Water Invasion Depth or Intervals: <u>220'/ 1200'</u>	Estimated Inflow Rates: <u>20 gpm/ 5 gpm</u>	
Gas Invasion Depth or Interval: <u>NA</u>		
Geophysical Logging Contractor: <u>Jetwest Geophysical</u>		
Logs Run: Gamma: <u>Y</u>	Neutron: _____	
Temperature: _____	Density: <u>Y</u>	
Resistivity: <u>Y</u>	Caliper: <u>Y</u>	
Other (SP, Foc. Elec., Drift, Dep., Sonic): <u>ABI</u>		
Hole Cemented (<u>Y</u> or N), Type: <u>Y</u>	No. of Bags: <u>58 sacks annulus</u>	
	Interval: _____	
Coal Core Sent To: <u>NA</u>	Rock Sent To: <u>NA</u>	
Comments: <u>Hole bridged below 9 5/8" casing at lip of 8 3/4" hole (2360'), unable</u>		
<u>to keep open to bottom after tripping in 8 3/4" bit, unable to dump bail. Opt to leave hole sil</u>		
<u>until able to pressure cement next summer. Canceled plan to frac with gas gun.</u>		
<u>Summer 2011: Mine plan changed spring 2011 and hole no longer falls over panel 18.</u>		
<u>9 5/8" casing abandoned to surface with 24 yds portland type II cement September, 2011.</u>		
<u>Himes Drilling Colorado water well license #1285</u>		

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-01 A Project ID.: Elk Creek Mine Exploration
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 10-Aug-09 Date Completed: 3-Sep-09

Contractor: Himes Drilling Rig Type: Atlas Copco RD20/ CR-7
Geologist: Doug Allen Date: 13-Nov-09 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Shaun L. Helper: Dave T.
Sam Homedew Tommy Dennis Eldon S.
Coordinates: N. 20961.06 E. 33440.49
Location: Township, Range & Section: NW 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8140' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 2398.5' Probe Depth: 2399' Fluid Level: NA
Casing Type: steel Size: 7"
Casing Type: steel T&C Size: 4 1/2"
Depth: 0-70' Recovered (Y or N): N
Depth: 0-2200' Recovered (Y or N): N

Bit Information
Surface Casing 9 7/8" Tricone to 70'
Main Hole 6 1/4" Tricone from 70-2200'
Core: 3.838" from 2200-2398.5'
Bottom Hole _____

Footage Plugged: 0-2200' Cored: 2200-2398.5'
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-2200'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: 53' Estimated Inflow Rates: 10 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 600 gallons plug gel
Interval: cement 0-10'

Coal Core Sent To: SGS Rock Sent To: Agapito

Comments: Cored from 2200-2398.5' with air. Galen Homedew-Driller; Beau O./ Sean V.- helpers.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-03
Lease Number: COC-61357
Date Commenced: 12-Aug-09
Project ID.: Elk Creek Mine Exploration
(State or Federal) Surface Owner: Hotchkiss
Date Completed: 8-Sep-09

Contractor: Himes Drilling
Geologist: Doug Allen
Driller: Jim Weatherston
Sam Homedew
Coordinates: N. 21418.65
Location: Township, Range & Section:
Ground Elevation: 8327'
Geophysical Log Measured From:
Total Depth: 2635'
Casing Type: steel
Casing Type: steel T&C
Depth: 0-22.5'
Depth: 0-2400'
Rig Type: Atlas Copco RD20/ CR-7
Date: 13-Nov-09
Truck Driver: Shaun L.
Tommy Dennis
E. 35285.96
NE 1/4, Sec. 31, T. 12 S., R. 90 W.
Collar Elevation:
ground Elevation
Probe Depth: 2633'
Fluid Level: NA
Size: 7"
Size: 4 1/2"
Recovered (Y or N): N
Recovered (Y or N): N

Bit Information

Surface Casing 9 7/8" Tricone to 22.5'
Main Hole 6 1/4" Tricone from 22.5-2400'
Core: 3.830" from 2400-2635'
Bottom Hole

Footage Plugged: 0-2400'
Drilling Medium: Air: Foam /Water: Cored: 2400-2635'
Depths: 0-30' 30-2400' Mud: Foam Injection:

Lost Circulation Depths: NA
Water Invasion Depth or Intervals: NA
Gas Invasion Depth or Interval: NA
Regained ? (Y or N):
Estimated Inflow Rates:

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y
Temperature:
Resistivity: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic):
Neutron:
Density: Y
Caliper: Y

Hole Cemented (Y or N), Type: Y
No. of Bags: 600 gallons plug gel
Interval: cement 0-10'

Coal Core Sent To: SGS
Rock Sent To: Agapito

Comments: Cored from 2672-2811.5' with air. Galen Homedew-Driller; Beau O./ Sean V.- helpers.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 16-05 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 19-Sep-09 Date Completed: 23-Sep-09

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 13-Nov-09 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Shaun L. Helper: Dave T.
Sam Homedew Tommy Dennis Eldon S.
Coordinates: N. 16249.16 E. 36667.65
Location: Township, Range & Section: NE 1/4, Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 8095' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 2220' Probe Depth: 2214' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2085' Recovered (Y or N): N
Depth: 2025-2185' Recovered (Y or N): N

Bit Information
Surface Casing 16" Tricone to 20' (14" surface casing)
Main Hole 12 1/4" PDC from 20-2085'
Core: _____
Bottom Hole 8 3/4" Tricone from 2085-2220'

Footage Plugged: 0-2220' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-1792' 1792-2220'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: _____
Interval: _____

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 60' inside 9 5/8" casing.
9 5/8" annulus cemented with 8 yds neat cement slurry.
Tagged gravel at 2180', tagged cement plug at 2188'. Rechecked with bailer for cement tag of 2185'-
gravel must have bridged, then settled after dump bailing. Bottom of 7" casing 5 feet above seam.
9 5/8" casing abandoned to surface with 31 yds cement slurry June, 2013
Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: <u>GVB 17-05</u>	Project ID.: <u>Elk Creek Mine Gob Vent Boreholes</u>	
Lease Number: <u>COC-61357</u>	(State or Federal) Surface Owner: <u>Hotchkiss</u>	
Date Commenced: <u>1-Aug-10</u>	Date Completed: <u>5-Aug-10</u>	
Contractor: <u>Himes Drilling</u>	Rig Type: <u>Atlas Copco RD20</u>	
Geologist: <u>Doug Allen</u>	Date: <u>5-Dec-10</u>	Toolpusher: <u>Matt Himes</u>
Driller: <u>Jim Weatherston</u>	Truck Driver: <u>Kirk Homedew</u>	Helper: <u>Sean Vivian</u>
	<u>Sam Homedew</u>	<u>Cameron S.</u>
Coordinates: N. <u>17504.25</u>	E. <u>36829.06</u>	
Location: Township, Range & Section: <u>SE 1/4, Sec. 31, T. 12 S., R. 90 W.</u>		
Ground Elevation: <u>8194'</u>	Collar Elevation: <u> </u>	
Geophysical Log Measured From: <u>ground</u>	Elevation: <u> </u>	
Total Depth: <u>1581'</u>	Probe Depth: <u> </u>	Fluid Level: <u>NA</u>
Casing Type: <u>steel T&C</u>	Size: <u>9 5/8"</u>	
Casing Type: <u>sol/slot steel T&C</u>	Size: <u>7"</u>	
Depth: <u> </u>	Recovered (Y or N): <u>N</u>	
Depth: <u> </u>	Recovered (Y or N): <u>N</u>	
Bit Information		
Surface Casing	<u>16" Tricone to 62' (14" surface casing)</u>	
Main Hole	<u>12 1/4" PDC from 62-1581'</u>	
Core:	<u> </u>	
Bottom Hole	<u> </u>	
Footage Plugged: <u>0-1581'</u>	Cored: <u>NA</u>	
Drilling Medium: <u>Air</u>	Foam /Water: <u>Mud</u>	Foam Injection: <u> </u>
Depths: <u>0-800'</u>	<u>800-1581'</u>	
Lost Circulation Depths: <u>NA</u>	Regained ? (Y or N): <u> </u>	
Water Invasion Depth or Intervals: <u>1500'</u>	Estimated Inflow Rates: <u>100 gpm</u>	
Gas Invasion Depth or Interval: <u>NA</u>		
Geophysical Logging Contractor: <u>Jetwest Geophysical</u>		
Logs Run: Gamma: <u> </u>	Neutron: <u> </u>	
Temperature: <u> </u>	Density: <u> </u>	
Resistivity: <u> </u>	Caliper: <u> </u>	
Other (SP, Foc. Elec., Drift, Dep., Sonic): <u> </u>		
Hole Cemented (<u>Y</u> or N), Type: <u>Y</u>	No. of Bags: <u>27 cubic yards</u>	
	Interval: <u>1581' to surface</u>	
Coal Core Sent To: <u>NA</u>	Rock Sent To: <u>NA</u>	
Comments: <u>Encountered 100 gpm H2O @ 1500'. Switched to mud, no returns.</u>		
<u>Hole abandoned- filled to surface with cement slurry.</u>		
<u> </u>		
<u> </u>		
<u> </u>		
<u>Himes Drilling Colorado water well license #1285</u>		

Oxbow Mining LLC
Elk Creek Mine

Project ID.: Elk Creek Mine Dewater Wells
(State or Federal) Surface Owner: USFS
Date Completed: 25-May-13

Rig Type: Atlas Copco RD20
Date : 22-Aug-13
Truck Driver: Jim Weatherton
 Richard Moores

Toolpusher: Matt Himes
Helper: Kenny Nobriga
Jerry Blair

E. 41868.56

NW 1/4, Sec. 32, T. 12 S., R. 90 W.

Collar Elevation:

Elevation

Probe Depth: 2235'

Fluid Level: NA

Size: 14"

Size: 9 5/8"

Recovered (Y or N): N

Recovered (Y or N): _____

Surface Casing 16" Tricone to 120'

Main Hole 12 1/4" PDC from

Core:

Bottom Hole	Directional drilled f
--------------------	-----------------------

Footage Plugged: 0-2595'

Cored: NA

Drilling Medium: _____ **Air:** _____

Foam / Water: _____ **Mud:** _____

Foam Injection:

Depths: 0-120'

120-2595'

Lost Circulation Depths: 2387' @ mine roof

Regained? (Y or N): N

Water Invasion Depth or Intervals: NA

Estimated Inflow Rates:

Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: X

Neutron:

Temperature:

Density:

Resistivity:

Caliper:

Other (SP, Foc. Elec., Drift, Dep., Sonic): video/ perforate 9 5/8" casing in mine horizon

Hole Cemented (Y or N), Type: N

No. of Bags: 6 cubic yds cement for annulus

Interval: to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: Hole drilled 197' below mine floor to accommodate pump assembly. Pump hung off of 5.5" drop tubing. Top of pump at 2495.17' below surface.

9-21-15 Push plug to 60', mix 2x80# sacks concrete, put on top of plug.

9-22-15 - mix 39.5 sacks of concrete and dump down hole back to within 2" of surface.

9-25-15 - mix 2x80# sacks concrete and put in hole.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: Dewater II Project ID.: Elk Creek Mine Dewater Wells
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 18-Jun-13 Date Completed: 29-Jun-13

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 22-Aug-13 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Jimmy Lovato Helper: Chuck M.
Kirk Homedew Richard Moores Galen Homedew

Coordinates: N. 19823.64 E. 41690.86
Location: Township, Range & Section: NW 1/4, Sec. 32, T. 12 S., R. 90 W.

Ground Elevation: 7966' Collar Elevation: Elevation
Geophysical Log Measured From: ground
Total Depth: 2595' Probe Depth: 2235' Fluid Level: NA
Casing Type: welded steel Size: 14"
Casing Type: steel T&C Size: 9 5/8"
Depth: 0-102' Recovered (Y or N): N
Depth: 0-2590' Recovered (Y or N): N

Bit Information

Surface Casing 17.5" Tricone to 102'
Main Hole 12 1/4" PDC from 102-2384'
Core: _____
Bottom Hole Directional drilled from 500' into mine @ approx. 19792N/ 41701E

Footage Plugged: 0-2590' Cored: NA
Drilling Medium: Air Foam /Water: Mud Foam Injection: _____
Depths: 0-102' 102-2590'

Lost Circulation Depths: 2384' @ mine roof Regained ? (Y or N): N
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): video/ perforate 9 5/8" casing in mine horizon

Hole Cemented (Y or N), Type: N No. of Bags: 12 cubic yds cement for annulus

Coal Core Sent To: NA Interval: to surface
Rock Sent To: NA

Comments: Hole drilled 206' below mine floor to accommodate pump assembly. Pump hung off
of 5.5" drop tubing. Top of pump at 2491.77' below surface.

9-21-15 Push plug to 60', mix 2x80# sacks concrete, put on top of plug.

9-22-15 - mix 39.5 sacks of concrete and dump down hole back to within 2" of surface.

9-25-15 - mix 2x80# sacks concrete and put in hole.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number:	<u>TGBMPA</u>	Project ID.:	<u>Elk Creek Mine Gas Sample Wells</u>
Lease Number:	<u>COC-61357</u>	(State or Federal)	Surface Owner: <u>Hotchkiss</u>
Date Commenced:	<u>21-May-13</u>	Date Completed:	<u>25-May-13</u>

Contractor:	<u>Himes Drilling</u>	Rig Type:	<u>Atlas Copco RD20</u>	Toolpusher:	<u>Matt Himes</u>
Geologist:	<u>Doug Allen</u>	Date :	<u>22-Aug-13</u>	Helper:	<u>Kenny Nobriga</u>
Driller:	<u>Mike Hibbard</u>	Truck Driver:	<u>Jim Weatherston</u>		<u>Jimmy Lovato</u>
	<u>Sam Homedew</u>		<u>Chad Homedew</u>		
Coordinates: N.	<u>19795.35</u>	E.	<u>33679.88</u>		
Location: Township, Range & Section:			<u>NW 1/4, Sec. 31, T. 12 S., R. 90 W.</u>		
Ground Elevation:	<u>8026'</u>	Collar Elevation:	<u> </u>		
Geophysical Log Measured From:	<u> </u>	Elevation	<u> </u>		
		<u>ground</u>			
Total Depth:	<u>2230'</u>	Probe Depth:	<u>2235'</u>	Fluid Level:	<u>NA</u>
Casing Type:	<u>steel T&C</u>		Size:	<u>7"</u>	
Casing Type:	<u>steel T&C</u>		Size:	<u>4.5"</u>	
Depth:	<u>0-32'</u>	Recovered (Y or N):	<u>N</u>		
Depth:	<u>0-2230'</u>	Recovered (Y or N):	<u>N</u>		

Bit Information

Surface Casing	9 7/8" Tricone to 32'
Main Hole	6 1/4" PDC from 32-2230'
Core:	
Bottom Hole	Directional drilled from 500' into mine @ 19634.27N/ 33320.02E

Footage Plugged:	0-2230'	Cored:	NA	
Drilling Medium:	Air:	Foam /Water:	Mud:	Foam Injection:
Depths:	0-32'	32-2230'		

Lost Circulation Depths:	NA	Regained ? (Y or N):	
Water Invasion Depth or Intervals:	NA	Estimated Inflow Rates:	
Gas Invasion Depth or Interval:	NA		

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: _____ **Neutron:** _____
Temperature: X-97.8deg F in mine **Density:** _____
Resistivity: _____ **Caliper:** _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): video

Hole Cemented (Y or N), Type: N **No. of Bags:** 3 cubic yds cement for annulus

Coal Core Sent To:		NA	Interval:	to surface
Rock Sent To:		NA		

Comments:

1 1/4" tubing hung from flange/valve assembly on 4.5" casing with 10' slotted joint in mine horizon for gas sampling.
9-24-15 - Pulled 1.25" tubing, pushed plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 - use cement truck to fill up 4.5" casing back to surface , 1/4 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: TGA		Project ID.: Elk Creek Mine Gas Sample Wells	
Lease Number: COC-61357		(State or Federal) Surface Owner: USFS	
Date Commenced: 29-Apr-13		Date Completed: 3-May-13	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20	
Geologist: Doug Allen		Date: 22-Aug-13	
Driller: Mike Hibbard		Truck Driver: Jim Weatherston	
Kirk Homedew		Richard Moores	
Coordinates: N. 18503.21		E. 37846.87	
Location: Township, Range & Section:		SW 1/4, Sec. 32, T. 12 S., R. 90 W.	
Ground Elevation: 8386'		Collar Elevation: _____	
Geophysical Log Measured From: ground		Elevation _____	
Total Depth: 2632'		Probe Depth: 2637'	
Casing Type: steel T&C		Fluid Level: NA	
Casing Type: steel T&C		Size: 7"	
Depth: 0-112'		Size: 4.5"	
Depth: 0-2632'		Recovered (Y or N): N	
		Recovered (Y or N): N	
Bit Information			
Surface Casing		9 7/8" Tricone to 112'	
Main Hole		6 1/4" PDC from 112-2632'	
Core:			
Bottom Hole		Directional drilled from 500' into mine @ 18497.72N/ 37891.73E	
Footage Plugged: 0-2762'		Cored: NA	
Drilling Medium: Air		Foam /Water: _____	
Depths: 0-112'		Mud: _____	
		Foam Injection: _____	
Lost Circulation Depths: NA		Regained ? (Y or N): _____	
Water Invasion Depth or Intervals: NA		Estimated Inflow Rates: _____	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run: Gamma: _____		Neutron: _____	
Temperature: X-89deg F in mine		Density: _____	
Resistivity: _____		Caliper: _____	
Other (SP, Foc. Elec., Drift, Dep., Sonic): video			
Hole Cemented (Y or N), Type: N		No. of Bags: 4 cubic yds cement for annulus	
		Interval: to surface	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments:			
1 1/4" tubing hung from flange/valve assembly on 4.5" casing with 10' slotted joint in mine horizon for gas sampling.			
9-23-15 pulled 1.25" tubing, pushed plug to 60', mix 2x80# sacks concrete and put on top of plug.			
9-28-15- use cement truck to fill up 4.5" casing back to surface 1/4 Yd concrete.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: HGA Project ID.: Elk Creek Mine Gas Sample Wells
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 5-May-13 Date Completed: 3-May-13

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 22-Aug-13 Toolpusher: Matt Himes
Driller: Mike Hibbard Truck Driver: Jim Weatherston Helper: Kenny Nobriga
Kirk Homedew Richard Moores Jerry Blair

Coordinates: N. 19674.41 E. 37964.88
Location: Township, Range & Section: NW 1/4, Sec. 32, T. 12 S., R. 90 W.
Ground Elevation: 8323' Collar Elevation: ground
Geophysical Log Measured From: ground Elevation
Total Depth: 2623' Probe Depth: 2634' Fluid Level: NA
Casing Type: steel T&C Size: 7"
Casing Type: steel T&C Size: 4.5"
Depth: 0-83' Recovered (Y or N): N
Depth: 0-2623' Recovered (Y or N): N

Bit Information

Surface Casing 9 7/8" Tricone to 83'
Main Hole 6 1/4" PDC from 112-2623'
Core: _____
Bottom Hole Directional drilled from 500' into mine @ 19659.04N/ 37966.94E

Footage Plugged: 0-2623' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-83' 83-2623'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: _____ Neutron: _____
Temperature: X-87.4deg F in mine Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): video

Hole Cemented (Y or N), Type: N No. of Bags: 2 cubic yds cement for annulus

Coal Core Sent To: NA Interval: to surface
Rock Sent To: NA

Comments: _____

1 1/4" tubing hung from flange/valve assembly on 4.5" casing with 10' slotted joint in mine horizon for gas sampling.
9-23-15 - Pulled 1.25" tubing, pushed plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 - use cement truck to fill up 4.5" casing back to surface , 1/4 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: 5B Project ID.: Elk Creek Mine Gas Sample Wells
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 24-Apr-13 Date Completed: 28-Apr-13

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 22-Aug-13 Toolpusher: Matt Himes
Driller: Sam Homedew Truck Driver: Chad Homedew Helper: Jimmy Lovato
Kirk Homedew Richard Moores Jerry Blair
Coordinates: N. 20550.48 E. 36167.48
Location: Township, Range & Section: NW 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8457' Collar Elevation: ground
Geophysical Log Measured From: ground Elevation
Total Depth: 2762' Probe Depth: 2758' Fluid Level: NA
Casing Type: steel T&C Size: 7"
Casing Type: steel T&C Size: 4.5"
Depth: 0-164.5' Recovered (Y or N): N
Depth: 0-2762' Recovered (Y or N): N

Bit Information

Surface Casing 9 7/8" Tricone to 164.5'
Main Hole 6 1/4" PDC from 164.5-2762'
Core:
Bottom Hole Directional drilled from 500' into mine @ 20614.24N/ 36044.54E

Footage Plugged: 0-2762' Cored: NA
Drilling Medium: Air Foam /Water: Mud Foam Injection:
Depths: 0-164.5' 164.5-2762'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: NA Estimated Inflow Rates:
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Neutron:
Temperature: X-87.5deg F in mine Density:
Resistivity: Caliper:
Other (SP, Foc. Elec., Drift, Dep., Sonic): video

Hole Cemented (Y or N), Type: N No. of Bags: 3 cubic yds cement for annulus

Coal Core Sent To: NA Interval: to surface
Rock Sent To: NA

Comments:

1 1/4" tubing hung from flange/valve assembly on 4.5" casing with 10' slotted joint in mine horizon for gas sampling.
9-24-15-pulled 1.25" tubing, pushed plug to 60', mix 2x80# sacks concrete & put on top of plug.
9-28-15-use cement truck to fill up 4.5" casing back to surface 1/4 yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: HGBMP Project ID.: Elk Creek Mine Gas Sample Wells
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 15-Apr-13 Date Completed: 20-Apr-13

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 22-Aug-13 Toolpusher: Matt Himes
Driller: Mike Hibbard Truck Driver: Brandon Yates Helper: Kenny Nobriga
Kirk Homedew Richard Moores Jimmy Lovato

Coordinates: N. 20894.34 E. 33808.76
Location: Township, Range & Section: SW 1/4, Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 8131' Collar Elevation: ground
Geophysical Log Measured From: Elevation
Total Depth: 2372' Probe Depth: 2374' Fluid Level: NA
Casing Type: steel T&C Size: 7"
Casing Type: steel T&C Size: 4.5"
Depth: 0-118' Recovered (Y or N): N
Depth: 0-2372' Recovered (Y or N): N

Bit Information

Surface Casing 9 7/8" Tricone to 118'
Main Hole 6 1/4" PDC from 118-2372'
Core: _____
Bottom Hole Directional drilled from 500' into mine @ 20876.85N/ 33768.49E

Footage Plugged: 0-2372' Cored: NA
Drilling Medium: Air: Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-118' 118-2372'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: 42' Estimated Inflow Rates: 20 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: _____ Neutron: _____
Temperature: X-90.7deg F in mine Density: _____
Resistivity: _____ Caliper: _____
Other (SP, Foc. Elec., Drift, Dep., Sonic): video

Hole Cemented (Y or N), Type: N No. of Bags: 3 cubic yds cement for annulus

Coal Core Sent To: NA Interval: to surface
Rock Sent To: NA

Comments: First attempt cased off to 53', but encountered more ground water at 75'. Hole unstable,
eventually forced to abandon after inability to directional drill bottom hole. Abandoned with 3 supersacks hole
plug and 1 sack cement.
1 1/4" tubing hung from flange/valve assembly on 4.5" casing with 10' slotted joint in mine horizon for gas sampling.
9-24-15-pulled 1.25" tubing, pushed plug to 60' mix 2x80#sacks concrete on top of plug,
9-28-15 used cement truck to fill up 4.5" casing to surface w/1/4 yd concrete.
Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 16-08		Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357		(State or Federal) Surface Owner: USFS	
Date Commenced: 12-Sep-10		Date Completed: 21-Sep-10	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20	
Geologist: Doug Allen		Date : 5-Dec-10	
Driller: Jim Weatherston		Truck Driver: Kirk Homedew	
Sam Homedew		Will Juusola	
Coordinates: N. 15526.87		E. 39356.35	
Location: Township, Range & Section:		SW 1/4, Sec. 32, T. 12 S., R. 90 W.	
Ground Elevation: 8172'		Collar Elevation:	
Geophysical Log Measured From: ground		Elevation	
Total Depth: 2351'		Probe Depth: 2351'	
Casing Type: steel T&C		Fluid Level: NA	
Casing Type: sol/slot steel T&C		Size: 9 5/8"	
Depth: 0-2200'		Size: 7"	
Depth: 2136-2309'		Recovered (Y or N): N	
		Recovered (Y or N): N	
Bit Information			
Surface Casing		16" Tricone to 42' (14" surface casing)	
Main Hole		12 1/4" PDC from 42-2200'	
Core:			
Bottom Hole		8 3/4" Tricone from 2200-2351'	
Footage Plugged: 0-2351'		Cored: NA	
Drilling Medium: Air		Foam /Water: Mud	
Depths: 0-710'		Foam Injection:	
		710-2351'	
Lost Circulation Depths: NA		Regained ? (Y or N):	
Water Invasion Depth or Intervals: NA		Estimated Inflow Rates:	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run:		Gamma: Y	
Temperature:		Neutron:	
Resistivity: Y		Density: Y	
		Caliper: Y	
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer			
Hole Cemented (Y or N), Type: N		No. of Bags:	
		Interval:	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments: 7" casing overlaps 64' inside 9 5/8" casing.			
9 5/8" annulus cemented with 9 yds neat cement slurry.			
Tagged gravel at 2314', tagged cement plug at 2309'.			
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.			
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-02B
Lease Number: COC-61357
Date Commenced: 21-Jun-11

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: Hotchkiss
Date Completed: 26-Jun-11

Contractor: Himes Drilling
Geologist: Doug Allen
Driller: Jim Weatherston
Kirk Homedew

Rig Type: Atlas Copco RD20
Date: 26-Oct-11
Truck Driver: Jason Grundy
Will Juusola

Toolpusher: Matt Himes
Helper: Kenny
Cameron

Coordinates: N. 18089.88 E. 34300.95
Location: Township, Range & Section: SW 1/4, Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 8140'

Collar Elevation:

Geophysical Log Measured From:

ground

Elevation

Total Depth: 2292'

Probe Depth: NA

Fluid Level: NA

Casing Type: steel T&C

Size: 9 5/8"

Casing Type: sol/slot steel T&C

Size: 7"

Depth: 0-1985'

Recovered (Y or N): N

Depth: 1937-2292'

Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 40' (14" surface casing)

Main Hole 12 1/4" PDC from 40-1985'

Core:

Bottom Hole 8 3/4" Tricone from 1985-2292'

Footage Plugged: 0-2292'

Cored: NA

Drilling Medium: Air

Foam /Water: Mud

Foam Injection:

Depths: 0-40'

40-2292'

Lost Circulation Depths: NA

Regained ? (Y or N):

Water Invasion Depth or Intervals: NA

Estimated Inflow Rates:

Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: directional hole- no logging

Logs Run: Gamma:

Neutron:

Temperature:

Density:

Resistivity:

Caliper:

Other (SP, Foc. Elec., Drift, Dep., Sonic):

Hole Cemented (Y or N), Type: N

No. of Bags: 6 yds for 9 5/8" annulus

Interval: to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: 7" casing overlaps 47.7' inside 9 5/8" casing.

298.0' slotted 7" casing below 56.7' solid 7" casing. Landed at 2290'.

Drilled directionally from 325-1985'. Bottom of 9 5/8" casing located 303' at azimuth 318.01 degrees.

9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.

9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-06C
Lease Number: COC-61357
Date Commenced: 3-Sep-11

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: Hotchkiss
Date Completed: 8-Sep-11

Contractor: Himes Drilling
Geologist: Doug Allen
Driller: Jim Weatherston
Kirk Homedew

Rig Type: Atlas Copco RD20
Date: 26-Oct-11
Truck Driver: Mike Hibberd
Will Juusola

Toolpusher: Matt Himes
Helper: Connor
Jimmy L.

Coordinates: N. 17184.83

E. 37764.65

Location: Township, Range & Section:

SW 1/4, Sec. 32, T. 12 S., R. 90 W.

Ground Elevation: 8227'

Collar Elevation:

Geophysical Log Measured From:

ground

Elevation

Total Depth: 2423'

Probe Depth:

NA

Fluid Level: NA

Casing Type: steel T&C

Size: 9 5/8"

Casing Type: sol/slot steel T&C

Size: 7"

Depth: 0-2132'

Recovered (Y or N): N

Depth: 2041-2406'

Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 40' (14" surface casing)

Main Hole 12 1/4" PDC from 40-2132'

Core:

Bottom Hole 8 3/4" PDC from 2132-2423'

Footage Plugged: 0-2423'

Cored: NA

Drilling Medium: Air:

Foam /Water:

Mud:

Foam Injection:

Depths: 0-500'

500-2423'

Lost Circulation Depths: NA

Regained ? (Y or N):

Water Invasion Depth or Intervals: NA

Estimated Inflow Rates:

Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Directional hole- no logging.

Logs Run: Gamma:

Neutron:

Temperature:

Density:

Resistivity:

Caliper:

Other (SP, Foc. Elec., Drift, Dep., Sonic):

Hole Cemented (Y or N), Type: N

No. of Bags: 10 yds for 9 5/8" annulus

Interval: to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: 7" casing overlaps 91' inside 9 5/8" casing.

Bottom of 9 5/8" casing projected to 278' at azimuth 57.40 degrees.

7" casing landed 17' above bottom of 8 3/4" hole, approx. 31' above top of D2 seam.

Directional tools shorted out at 1715' with hole on plan. Drilled out to TD 2343' based on

E seam elevations encountered while drilling and correlations with adjacent holes.

9-28-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.

9-28-15 use cement truck to fill 9 5/8" casing, got 1/2 Yard and plug went down hole.

9-28-15 - reset another 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.

9-29-15 mix 36x80# sacks of concrete and put on top of concrete and fill hole back to surface.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 18-01B Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 11-Oct-11 Date Completed: 15-Oct-11

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 26-Oct-11 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Mike Hibberd Helper: Brandon Y.
Kirk Homedew Jimmy L.

Coordinates: N. 19968.43 E. 34126.50
Location: Township, Range & Section: NW 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8113' Collar Elevation: ground
Geophysical Log Measured From: Elevation
Total Depth: 2372' Probe Depth: 2368' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2153' Recovered (Y or N): N
Depth: 1978-2314' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 40' (14" surface casing)
Main Hole 12 1/4" PDC from 40-2153'
Core: _____
Bottom Hole 8 3/4" Tricone from 2153-2372'

Footage Plugged: 0-2372' Cored: NA
Drilling Medium: Air Foam /Water: Mud Foam Injection: _____
Depths: 0-40' 40-2372'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: 1400' Estimated Inflow Rates: 5 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 7 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 175' inside 9 5/8" casing.
Tagged gravel at 2314', bottom of 7" casing at 2314'. (Gravel settled during dump bailing.)
9-24-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 18-02
Lease Number: COC-61357
Date Commenced: 15-Oct-11

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: Hotchkiss
Date Completed: 19-Oct-11

Contractor: Himes Drilling
Geologist: Doug Allen
Driller: Jim Weatherton
Kirk Homedew
Coordinates: N. 20120.00
Location: Township, Range & Section: E. 34460.30
NW 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8157' Collar Elevation:
Geophysical Log Measured From: ground Elevation
Total Depth: 2426' Probe Depth: 2409' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2273' Recovered (Y or N): N
Depth: 2197-2377' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 40' (14" surface casing)
Main Hole 12 1/4" PDC from 40-2273'
Core:
Bottom Hole 8 3/4" Tricone from 2273-2426'

Footage Plugged: 0-2426' Cored: NA
Drilling Medium: Air Foam /Water: Mud Foam Injection:
Depths: 0-40' 40-2426'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: NA Estimated Inflow Rates:
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron:
Temperature: Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 6 yds for 9 5/8" casing
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 76' inside 9 5/8" casing.
Tagged gravel at 2378', bottom of 7" casing at 2377'. (Gravel settled after dump bailing.)
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 18-02B Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 21-Sep-11 Date Completed: 30-Sep-11

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 26-Oct-11 Toolpusher: Matt Himes
Driller: Jim Weatherton Truck Driver: Mike Hibberd Helper: Brandon Y.
Kirk Homedew Will Juusola Jimmy L.
Coordinates: N. 19755.78 E. 34865.60
Location: Township, Range & Section: NW 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8233' Collar Elevation: ground
Geophysical Log Measured From: ground Elevation
Total Depth: 2497' Probe Depth: 2489' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2150' Recovered (Y or N): N
Depth: 2091-2450' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 40' (14" surface casing)
Main Hole 12 1/4" PDC from 40-2150'
Core:
Bottom Hole 8 3/4" Tricone from 2150-2497'

Footage Plugged: 0-2497' Cored: NA
Drilling Medium: Air: Foam /Water: Mud: Foam Injection:
Depths: 0-40' 40-2497'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: 1100' Estimated Inflow Rates: 10 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron:
Temperature: Y Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 7 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 59' inside 9 5/8" casing.
Tagged gravel at 2459', bottom of 7" casing at 2450'.
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number:	GVB 18-03	Project ID.:	Elk Creek Mine Exploration
Lease Number:	COC-61357	(State or Federal) Surface Owner:	Hotchkiss
Date Commenced:	8-Jul-09	Date Completed:	23-Jul-09

Recovered (Y or N): N

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number:	<u>GVB 18-04</u>	Project ID.:	<u>Elk Creek Mine Gob Vent Boreholes</u>
Lease Number:	<u>COC-61357</u>	(State or Federal) Surface Owner:	<u>Hotchkiss</u>
Date Commenced:	<u>20-Aug-11</u>	Date Completed:	<u>24-Aug-11</u>

Contractor:	Himes Drilling	Rig Type:	Atlas Copco RD20		
Geologist:	Doug Allen	Date :	26-Oct-11	Toolpusher:	Matt Himes
Driller:	Jim Weatherton	Truck Driver:	Mike Hibberd	Helper:	Nick D.
	Kirk Hornedew		Will Juusola		Jimmy L.
Coordinates: N.	19277.24	E.	35984.37		
Location: Township, Range & Section:	NE 1/4, Sec. 31, T. 12 S., R. 90 W.				
Ground Elevation:	8262'	Collar Elevation:			
Geophysical Log Measured From:	ground	Elevation			
Total Depth:	2534'	Probe Depth:	2534'	Fluid Level:	NA
Casing Type:	steel T&C		Size:	9 5/8"	
Casing Type:	sol/slot steel T&C		Size:	7"	
Depth:	0-2214'	Recovered (Y or N):	N		
Depth:	2146-2457'	Recovered (Y or N):	N		

Bit Information

Surface Casing	17" Hammer to 40' (14" surface casing)
Main Hole	12 1/4" PDC from 40-2214'
Core:	
Bottom Hole	8 3/4" PDC from 2214-2534'

Footage Plugged:	0-2534'	Cored:	NA	
Drilling Medium:	Air:	Foam /Water:	Mud:	Foam Injection:
Depths:	0-40'	40-2534'		

Lost Circulation Depths: NA
 Regained ? (Y or N):
 Water Invasion Depth or Intervals: NA
 Estimated Inflow Rates:
 Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: **Gamma:** Y **Neutron:**
 Temperature: **Density:** Y
 Resistivity: Y **Caliper:** Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 6 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA **Rock Sent To:** NA

Comments: 7" casing overlaps 68' inside 9 5/8" casing.
Tagged gravel at 2454', bottom of 7" casing at 2458'.
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 18-04B Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 17-Sep-11 Date Completed: 20-Sep-11

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 26-Oct-11 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Mike Hibberd Helper: Brandon Y.
Kirk Homedew Will Juusola Jimmy L.
Coordinates: N. 19635.35 E. 35952.76
Location: Township, Range & Section: NE 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8320' Collar Elevation: ground Elevation:
Geophysical Log Measured From: ground Elevation:
Total Depth: 2595' Probe Depth: 2584' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2243' Recovered (Y or N): N
Depth: 2147-2243' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 40' (14" surface casing)
Main Hole 12 1/4" PDC from 40-2243'
Core:
Bottom Hole 8 3/4" Tricone from 2243-2595'

Footage Plugged: 0-2595' Cored: NA
Drilling Medium: Air: Foam /Water: Mud: Foam Injection:
Depths: 0-40' 40-2595'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: 1100' Estimated Inflow Rates: 5 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron:
Temperature: Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 2 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 96' inside 9 5/8" casing.
Tagged gravel at 2553', bottom of 7" casing at 2543.5'.
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 18-04C Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 10-Aug-11 Date Completed: 20-Aug-11

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 26-Oct-11 Toolpusher: Matt Himes
Driller: Jim Weatherton Truck Driver: Mike Hibberd Helper: Jason G.
Kirk Homedew Will Juusola Jimmy L.
Coordinates: N. 19272.81 E. 36762.88
Location: Township, Range & Section: NE 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8318.7' Collar Elevation: ground
Geophysical Log Measured From: ground Elevation
Total Depth: 2609' Probe Depth: 2604' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2253' Recovered (Y or N): N
Depth: 2209-2595** Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 30' (14" surface casing)
Main Hole 12 1/4" PDC from 30-2253'
Core:
Bottom Hole 8 3/4" PDC from 2245-2609'

Footage Plugged: 0-2609' Cored: NA
Drilling Medium: Air: Foam /Water: Mud: Foam Injection:
Depths: 0-40' 30-2609'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: 120' Estimated Inflow Rates: 30 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron:
Temperature: Y Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 14 yds for 9 5/8" annulus
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 36' inside 9 5/8" casing.
Gravel backfilled to 2562'. 7" casing (319.9' slotted, 66.4' blank) dropped from grapple on trip in.
**Casing likely fell through cement plug and gravel and spans thickness of D2 seam and into floor +/- 10'.
Attempted retrieval of 7", but unsuccessful. Attempted to drill out inside of 7" with 6 1/4" tricone,
but also unsuccessful. Will mill out casing or remove from underground. 9-25-15 - push 9 5/8" plug to 60',
mix 2x80# sacks concrete on top of plug.
9-28-15 - use cement truck to fill up 9 5/8' casing back to surface - 1 Yd concrete.
Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 18-05 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 6-Aug-11 Date Completed: 9-Aug-11

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 26-Oct-11 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Jason Grundy Helper: Nick D.
Kirk Homedew Will Juusola Jimmy L.
Coordinates: N. 19165.35 E. 37117.76
Location: Township, Range & Section: NE 1/4, Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 8366' Collar Elevation: ground
Geophysical Log Measured From: Elevation
Total Depth: 2645' Probe Depth: 2622' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2305' Recovered (Y or N): N
Depth: 2239.9-2601.5' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 40' (14" surface casing)
Main Hole 12 1/4" PDC from 40-2305'
Core: _____
Bottom Hole 8 3/4" PDC from 2305-2645'

Footage Plugged: 0-2645' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-40' 40-2645'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: 180' Estimated Inflow Rates: 10 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 8 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 65' inside 9 5/8" casing.
Tagged gravel at 2601.5', bottom of 7" casing at 2603'.
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 18-06		Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357		(State or Federal) Surface Owner: USFS	
Date Commenced: 28-Sep-12		Date Completed: 2-Oct-12	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20	
Geologist: Doug Allen		Date : 30-Sep-12	
Driller: Mike Hibbard		Truck Driver: Brandon Yates	
Kirk Homedew		Richard Moores	
Coordinates: N. 18835.85		E. 38017.38	
Location: Township, Range & Section:		SW 1/4, Sec. 32, T. 12 S., R. 90 W.	
Ground Elevation: 8339'		Collar Elevation: ground	
Geophysical Log Measured From:		Elevation	
Total Depth: 2642'		Probe Depth: 2626'	
Casing Type: steel T&C		Fluid Level: NA	
Casing Type: sol/slot steel T&C		Size: 9 5/8"	
Depth: 0-2301'		Size: 7"	
Depth: 2218.2-2592'		Recovered (Y or N): N	
		Recovered (Y or N): N	
Bit Information			
Surface Casing		17" Hammer to 25'; 16" Tricone to 80' (14" surface casing)	
Main Hole		12 1/4" PDC from 80-2301'	
Core:			
Bottom Hole		8 3/4" PDC from 2301-2626'	
Footage Plugged: 0-2626'		Cored: NA	
Drilling Medium: Air		Foam /Water: Mud	
Depths: 0-80'		Foam Injection:	
Lost Circulation Depths: NA		Regained ? (Y or N):	
Water Invasion Depth or Intervals: NA		Estimated Inflow Rates:	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run:		Gamma: Y	
		Neutron:	
Temperature:		Density: Y	
Resistivity: Y		Caliper: Y	
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer			
Hole Cemented (Y or N), Type: N		No. of Bags: 4 yds for 9 5/8" surface	
		Interval: to surface	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments: 7" casing overlaps 83' inside 9 5/8" casing.			
Tagged gravel at 2601', bottom of 7" casing at 2592'.			
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.			
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 18-07B Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 31-Aug-12 Date Completed: 4-Sep-12

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 30-Sep-12 Toolpusher: Matt Himes
Driller: Mike Hibbard Truck Driver: Brandon Yates Helper: Kenny Nobriga
Kirk Homedew Richard Moores Jimmy Lovato
Coordinates: N. 18675.06 E. 38867.03
Location: Township, Range & Section: SW 1/4, Sec. 32, T. 12 S., R. 90 W.
Ground Elevation: 8188' Collar Elevation: ground
Geophysical Log Measured From: Elevation
Total Depth: 2542' Probe Depth: 2529' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2211' Recovered (Y or N): N
Depth: 2137-2482' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 80' (14" surface casing)

Main Hole 12 1/4" PDC from 80-2211'

Core:

Bottom Hole 8 3/4" PDC from 2211-2542'

Footage Plugged: 0-2542' Cored: NA
Drilling Medium: Air Foam /Water: Mud Foam Injection:
Depths: 0-80' 80-2542'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: 1100'; 1200'; 1340' Estimated Inflow Rates: 10; 15; 10 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: Y
Temperature: Y Density: Y
Resistivity: Y Caliper: Y

Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 4 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: 7" casing overlaps 74' inside 9 5/8" casing.

Tagged gravel at 2500', bottom of 7" casing at 2482'.

9-21-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.

9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 18-08 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 5-Sep-12 Date Completed: 13-Sep-12

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 30-Sep-12 Toolpusher: Matt Himes
Driller: Mike Hibbard Truck Driver: Brandon Yates Helper: Kenny Nobriga
Kirk Homedew Richard Moores Jimmy Lovato

Coordinates: N. 18459.85 E. 39237.81
Location: Township, Range & Section: SW 1/4, Sec. 32, T. 12 S., R. 90 W.

Ground Elevation: 8182' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 2522' Probe Depth: 2502.5' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2212' Recovered (Y or N): N
Depth: 2152.3-2474.3' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 80' (14" surface casing)
Main Hole 12 1/4" PDC from 80-2212'
Core: _____
Bottom Hole 8 3/4" PDC from 2212-2522'

Footage Plugged: 0-2522' Cored: NA
Drilling Medium: Air: _____ Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-80' 80-2522'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump baller

Hole Cemented (Y or N), Type: N No. of Bags: 4 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 59.6' inside 9 5/8" casing.
Tagged gravel at 2479', bottom of 7" casing at 2474.3'.
9-21-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 18-09 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 4-Aug-12 Date Completed: 8-Aug-12

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 12-Sep-12 Toolpusher: Matt Himes
Driller: Mike Hibbard Truck Driver: Brandon Yates Helper: Kenny Nobriga
Kirk Homedew Richard Moores Jimmy Lovato
Coordinates: N. 18236.49 E. 39981.38
Location: Township, Range & Section: SE 1/4, Sec. 32, T. 12 S., R. 90 W.

Ground Elevation: 8057' Collar Elevation: ground Elevation
Geophysical Log Measured From:
Total Depth: 2392' Probe Depth: 2378' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2050' Recovered (Y or N): N
Depth: 1979.1-2347' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 120' (14" surface casing)
Main Hole 12 1/4" PDC from 120-2050'
Core:
Bottom Hole 8 3/4" PDC from 2050-2392'

Footage Plugged: 0-2392' Cored: NA
Drilling Medium: Air: Foam /Water: Mud: Foam Injection:
Depths: 0-120' 120-2392'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: NA Estimated Inflow Rates:
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron:
Temperature: Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 5 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 70.9' inside 9 5/8" casing.
Tagged gravel at 2352', bottom of 7" casing at 2347'.
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-01B	Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357	(State or Federal)	Surface Owner: Hotchkiss
Date Commenced: 11-Jun-12	Date Completed: 21-Jun-12	
Contractor: Himes Drilling	Rig Type: Atlas Copco RD20	
Geologist: Doug Allen	Date : 6-Jul-12	Toolpusher: Matt Himes
Driller: Mike Hibbard	Truck Driver: Brandon Yates	Helper: Kenny Nobriga
Kirk Homedew	Richard Moores	Jimmy Lovato
Coordinates: N. 21567.27	E. 34384.00	
Location: Township, Range & Section: NW 1/4 Sec. 31, T. 12 S., R. 90 W.		
Ground Elevation: 8239'	Collar Elevation: ground	Elevation
Geophysical Log Measured From:	Probe Depth: NA	Fluid Level: NA
Total Depth: 2510'		Size: 9 5/8"
Casing Type: steel T&C		Size: 7"
Casing Type: sol/slot steel T&C		
Depth: 0-2213'	Recovered (Y or N): N	
Depth: 2144.5-2510'	Recovered (Y or N): N	
Bit Information		
Surface Casing	17" Hammer to 120' (14" surface casing)	
Main Hole	12 1/4" PDC from 120-2213'	
Core:		
Bottom Hole	8 3/4" PDC from 2213-2510'	
Footage Plugged: 0-2510'	Cored: NA	
Drilling Medium: Air	Foam /Water:	Mud: Foam Injection:
Depths: 0-120'	120-2510'	
Lost Circulation Depths: NA	Regained ? (Y or N):	
Water Invasion Depth or Intervals: 1690'	Estimated Inflow Rates: 10 gpm	
Gas Invasion Depth or Interval: NA		
Geophysical Logging Contractor: NA- see below		
Logs Run:	Gamma:	Neutron:
	Temperature:	Density:
	Resistivity:	Caliper:
Other (SP, Foc. Elec., Drift, Dep., Sonic):		
Hole Cemented (Y or N), Type: N	No. of Bags: 3 yds for 9 5/8" surface	
	Interval: to surface	
Coal Core Sent To: NA	Rock Sent To: NA	
Comments: 7" casing overlaps 68.5' inside 9 5/8" casing.		
No logging- twin of hole #ECM 05-34. Used E seam for marker for TD; GVB hole came in		
7' lower than ECM, adjusted down accordingly.		
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.		
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.		
Himes Drilling Colorado water well license #1285		

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-01C Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 14-May-12 Date Completed: 22-May-12

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 6-Jul-12 Toolpusher: Matt Himes
Driller: Mike Hibbard Truck Driver: Brandon Yates Helper: Kenny Nobriga
Kirk Homedew Richard Moores Jimmy Lovato

Coordinates: N. 21233.21 E. 34464.66
Location: Township, Range & Section: NW 1/4 Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8223' Collar Elevation: ground Elevation
Geophysical Log Measured From: ground Elevation

Total Depth: 2523' Probe Depth: 2517' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2181' Recovered (Y or N): N
Depth: 2141.1-2485' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 40' (14" surface casing)
Main Hole 12 1/4" PDC from 40-2181'
Core:
Bottom Hole 8 3/4" PDC from 2181-2523'

Footage Plugged: 0-2523' Cored: NA
Drilling Medium: Air: Foam /Water: Mud: Foam Injection:
Depths: 0-40' 40-2523'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: 95' Estimated Inflow Rates: 10 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron:
Temperature: Y Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 3 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 39.9' inside 9 5/8" casing.
Tagged gravel at 2487', bottom of 7" casing at 2485'.
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-01D Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 23-May-12 Date Completed: 27-May-12

Contractor: Himes Drilling
Geologist: Doug Allen
Driller: Mike Hibbard
Kirk Homedew

Rig Type: Atlas Copco RD20
Date: 6-Jul-12
Truck Driver: Brandon Yates
Richard Moores

Toolpusher: Matt Himes
Helper: Kenny Nobriga
Jimmy Lovato

Coordinates: N. 21397.56 E. 34703.17
Location: Township, Range & Section: NW 1/4 Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 8254'

Collar Elevation:

Geophysical Log Measured From:

ground

Elevation

Total Depth: 2573'

Probe Depth: 2561'

Fluid Level: NA

Casing Type: steel T&C

Size: 9 5/8"

Casing Type: sol/slot steel T&C

Size: 7"

Depth: 0-2123'

Recovered (Y or N): N

Depth: 2079.9-2524'

Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 60' (14" surface casing)

Main Hole 12 1/4" PDC from 60-2123'

Core:

Bottom Hole 8 3/4" PDC from 2123-2573'

Footage Plugged: 0-2573'

Cored: NA

Drilling Medium: Air

Foam /Water: Mud

Foam Injection:

Depths: 0-60'

60-2573'

Lost Circulation Depths: NA

Water Invasion Depth or Intervals: 1120/1250'

Regained ? (Y or N):
Estimated Inflow Rates: 10/10 gpm

Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y

Neutron:

Temperature:

Density: Y

Resistivity: Y

Caliper: Y

Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N

No. of Bags: 3 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: 7" casing overlaps 43.1' inside 9 5/8" casing.

Tagged gravel at 2528', bottom of 7" casing at 2524'.

Ran extra 100' of 7" casing (blanks) due to difficult, slow drilling and lack of volume in reserve pit..

9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.

9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-02
Lease Number: COC-61357
Date Commenced: 27-May-12
Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: Hotchkiss
Date Completed: 5-Jun-12

Contractor: Himes Drilling
Geologist: Doug Allen
Driller: Mike Hibbard
Kirk Homedew
Coordinates: N. 21347.99
Location: Township, Range & Section:
Ground Elevation: 8302'
Geophysical Log Measured From:
Total Depth: 2642'
Casing Type: steel T&C
Casing Type: sol/slot steel T&C
Depth: 0-2291'
Depth: 2249-2580'
Rig Type: Atlas Copco RD20
Date: 6-Jul-12
Truck Driver: Brandon Yates
Richard Moores
E. 35149.54
NW 1/4 Sec. 31, T. 12 S., R. 90 W.
Collar Elevation:
ground Elevation
Probe Depth: 2626'
Fluid Level: NA
Size: 9 5/8"
Size: 7"
Recovered (Y or N): N
Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 80' (14" surface casing)
Main Hole 12 1/4" PDC from 80-2291'
Core:
Bottom Hole 8 3/4" PDC from 2291-2642'

Footage Plugged: 0-2642'
Drilling Medium: Air: Foam /Water: NA
Depths: 0-80' 80-2642'

Lost Circulation Depths: NA
Water Invasion Depth or Intervals: 1430'
Gas Invasion Depth or Interval: NA
Regained ? (Y or N):
Estimated Inflow Rates: 10 gpm

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y
Temperature: Y
Resistivity: Y
Neutron: Y
Density: Y
Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N
No. of Bags: 4 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA
Rock Sent To: NA

Comments: 7" casing overlaps 42' inside 9 5/8" casing.
Tagged gravel at 2584.5', bottom of 7" casing at 2580'.
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-02B Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 5-Jun-12 Date Completed: 11-Jun-12

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 6-Jul-12 Toolpusher: Matt Himes
Driller: Mike Hibbard Truck Driver: Brandon Yates Helper: Kenny Nobriga
Kirk Homedew Richard Moores Jimmy Lovato

Coordinates: N. 21137.76 E. 35436.14
Location: Township, Range & Section: NW 1/4 Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 8333' Collar Elevation: Elevation
Geophysical Log Measured From: ground
Total Depth: 2642' Probe Depth: 2666' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2331.5' Recovered (Y or N): N
Depth: 2273.4-2635' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 80' (14" surface casing)
Main Hole 12 1/4" PDC from 80-2331.5'
Core: _____
Bottom Hole 8 3/4" PDC from 2331.5-2642'

Footage Plugged: 0-2642' Cored: NA
Drilling Medium: Air: Foam /Water: Mud: Foam Injection: _____
Depths: 0-80' 80-2642'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: 500' Estimated Inflow Rates: 5 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 7 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 58.1' inside 9 5/8" casing.
Tagged gravel at 2634', bottom of 7" casing at 2635'.
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-03B Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 22-Jun-12 Date Completed: 26-Jun-12

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 6-Jul-12 Toolpusher: Matt Himes
Driller: Mike Hibbard Truck Driver: Brandon Yates Helper: Kenny Nobriga
Kirk Homedew Richard Moores Jimmy Lovato

Coordinates: N. 21129.26 E. 35818.02
Location: Township, Range & Section: NW 1/4 Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 8415' Collar Elevation:
Geophysical Log Measured From: ground Elevation
Total Depth: 2780' Probe Depth: 2758' Fluid Level: NA

Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"

Depth: 0-2453' Recovered (Y or N): N
Depth: 2424.4-2780' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 120' (14" surface casing)
Main Hole 12 1/4" PDC from 120-2453'
Core:
Bottom Hole 8 3/4" PDC from 2453-2780'

Footage Plugged: 0-2780' Cored: NA
Drilling Medium: Air Foam /Water: Mud: Foam Injection:
Depths: 0-120' 120-2780'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: NA Estimated Inflow Rates:
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron:
Temperature: Density: Y
Resistivity: Y Caliper: Y

Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 13 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 28.6' inside 9 5/8" casing.
Tagged gravel at 2733', bottom of 7" casing at 2737'.
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-04 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 8-Jul-12 Date Completed: 11-Jul-12

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 12-Sep-12 Toolpusher: Matt Himes
Driller: Mike Hibbard Truck Driver: Brandon Yates Helper: Kenny Nobriga
Kirk Homedew Richard Moores Jimmy Lovato
Coordinates: N. 20802.02 E. 36281.63
Location: Township, Range & Section: NE 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation: 8469' Collar Elevation: _____
Geophysical Log Measured From: ground Elevation _____
Total Depth: 2836' Probe Depth: 2825' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2512' Recovered (Y or N): N
Depth: 2444.1-2793' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 40' (14" surface casing)
Main Hole 12 1/4" PDC from 40-2512'
Core: _____
Bottom Hole 8 3/4" PDC from 2512-2836'

Footage Plugged: 0-2836' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-40' 40-2836'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 8 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 67.9' inside 9 5/8" casing.
Tagged gravel at 2796', bottom of 7" casing at 2793'.
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-04B Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 6-Jul-12 Date Completed: 11-Jul-12

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 12-Sep-12 Toolpusher: Matt Himes
Driller: Mike Hibbard Truck Driver: Brandon Yates Helper: Kenny Nobriga
Kirk Homedew Richard Moores Jimmy Lovato

Coordinates: N. 20982.96 E. 36742.73
Location: Township, Range & Section: NE 1/4, Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 8484' Collar Elevation:
Geophysical Log Measured From: ground Elevation
Total Depth: 2861' Probe Depth: 2852' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2542' Recovered (Y or N): N
Depth: 2470.9-2808.4' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 30'; 16" Tricone to 100' (14" surface casing)
Main Hole 12 1/4" PDC from 100-2542'
Core:
Bottom Hole 8 3/4" PDC from 2542-2861'

Footage Plugged: 0-2861' Cored: NA
Drilling Medium: Air: Foam /Water: Mud: Foam Injection:
Depths: 0-100' 100-2861'

Lost Circulation Depths: NA Regained ? (Y or N):
Water Invasion Depth or Intervals: NA Estimated Inflow Rates:
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron:
Temperature: Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 5 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 71.1' inside 9 5/8" casing.
Tagged gravel at 2821', bottom of 7" casing at 2808.4'.
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-05 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 26-Jun-12 Date Completed: 6-Jul-12

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 12-Sep-12 Toolpusher: Matt Himes
Driller: Mike Hibbard Truck Driver: Brandon Yates Helper: Kenny Nobriga
Kirk Homedew Richard Moores Jimmy Lovato

Coordinates: N. 20668.63 E. 37096.01
Location: Township, Range & Section: NE 1/4, Sec. 31, T. 12 S., R. 90 W.

Ground Elevation: 8463' Collar Elevation: Elevation
Geophysical Log Measured From: ground
Total Depth: 2834' Probe Depth: 2822.5 Fluid Level: NA

Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"

Depth: 0-2495' Recovered (Y or N): N
Depth: 2425.1-2792' Recovered (Y or N): N

Bit Information

Surface Casing 17" Hammer to 80' (14" surface casing)
Main Hole 12 1/4" PDC from 80-2495'
Core: _____
Bottom Hole 8 3/4" PDC from 2495-2834'

Footage Plugged: 0-2834' Cored: NA
Drilling Medium: Air: Foam /Water: Mud: Foam Injection: _____
Depths: 0-80' 80-2834'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y

Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 4 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 69.9' inside 9 5/8" casing.
Tagged gravel at 2791', bottom of 7" casing at 2792'.
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-15 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: USFS
Date Completed: 18-Sep-12

Toolpusher: Matt Himes
Helper: Kenny Nobriga
Jimmy Lovato

F. 38659.63
NW 1/4, Sec. 32, T. 12 S., R. 90 W.

Elevation

Fluid Level: NA

Size: 9 5/8"

Size: 7"

Recovered (Y or N): N

Recovered (Y or N): N

Surface Casing 16" Tricone to 40' (14" surface casing)

Core:

.....

NA

Mud: Foam Injection:

40-2666'

Regained? (Y or N):

Estimated Inflow Rates: 5 gpm

NA

Neutron:

Density: Y

Caliper: Y

No. of Bags: 5 yds for 9 5/8" surface

Interval: to surface

Rock Sent To: NA

Tagged gravel at 2624', bottom of 7" casing at 2616'.

9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.

9-28-2015 use cement truck to fill 9 5/8 " casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-08 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: USFS
Date Commenced: 21-Aug-12 Date Completed: 31-Aug-12

Contractor: Himes Drilling Rig Type: Atlas Copco RD20
Geologist: Doug Allen Date: 30-Sep-12 Toolpusher: Matt Himes
Driller: Mike Hibbard Truck Driver: Brandon Yates Helper: Kenny Nobriga
Kirk Homedew Richard Moores Jimmy Lovato

Coordinates: N. 20142.11 E. 39331.48
Location: Township, Range & Section: NW 1/4, Sec. 32, T. 12 S., R. 90 W.

Ground Elevation: 8131' Collar Elevation: Elevation
Geophysical Log Measured From: ground
Total Depth: 2541' Probe Depth: 2526' Fluid Level: NA
Casing Type: steel T&C Size: 9 5/8"
Casing Type: sol/slot steel T&C Size: 7"
Depth: 0-2302' Recovered (Y or N): N
Depth: 2256.5-2494.5' Recovered (Y or N): N

Bit Information

Surface Casing 16" Tricone to 80' (14" surface casing)
Main Hole 12 1/4" PDC from 80-2302'
Core: _____
Bottom Hole 8 3/4" PDC from 2302-2541'

Footage Plugged: 0-2541' Cored: NA
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-80' 80-2541'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: NA Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer

Hole Cemented (Y or N), Type: N No. of Bags: 4 yds for 9 5/8" surface
Interval: to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: 7" casing overlaps 45.5' inside 9 5/8" casing.
Tagged gravel at 2498', bottom of 7" casing at 2494.5'.
9-21-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.
9-28-2015 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 19-09	Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357	(State or Federal)	Surface Owner: USFS
Date Commenced: 8-Aug-12	Date Completed: 20-Aug-12	
Contractor: Himes Drilling	Rig Type: Atlas Copco RD20	
Geologist: Doug Allen	Date: 12-Sep-12	Toolpusher: Matt Himes
Driller: Mike Hibbard	Truck Driver: Brandon Yates	Helper: Kenny Nobriga
Kirk Homedew	Richard Moores	Jimmy Lovato
Coordinates: N. 19010.44	E. 40144.50	
Location: Township, Range & Section: NE 1/4, Sec. 32, T. 12 S., R. 90 W.		
Ground Elevation: 8012.1'	Collar Elevation:	
Geophysical Log Measured From: ground	Elevation	
Total Depth: 2595'	Probe Depth: NA	Fluid Level: NA
Casing Type: steel T&C	Size: 9 5/8"	
Casing Type: sol/slot steel T&C	Size: 7"	
Depth: 0-2595'	Recovered (Y or N): N	
Depth: 1966.5-2485'	Recovered (Y or N): N	
Bit Information		
Surface Casing	16" Tricone to 80' (14" surface casing)	
Main Hole	12 1/4" PDC from 80-2123'	
Core:		
Bottom Hole	8 3/4" PDC from 2123-2595'	
Footage Plugged: 0-2595'	Cored: NA	
Drilling Medium: Air	Foam /Water:	Mud:
Depths: 0-80'	80-2595'	Foam Injection:
Lost Circulation Depths: NA	Regained ? (Y or N):	
Water Invasion Depth or Intervals: 1820'	Estimated Inflow Rates: 10 gpm	
Gas Invasion Depth or Interval: NA		
Geophysical Logging Contractor: Directional hole- no logging		
Logs Run:	Gamma:	Neutron:
Temperature:		Density:
Resistivity:		Caliper:
Other (SP, Foc. Elec., Drift, Dep., Sonic):		
Hole Cemented (Y or N), Type: N	No. of Bags: 12 yds for 9 5/8" surface	
	Interval: to surface	
Coal Core Sent To: NA	Rock Sent To: NA	
Comments: 7" casing overlaps 156.5' inside 9 5/8" casing.		
Bottom of 9 5/8" casing located 735' at azimuth 5.87 degrees.		
9-25-15 - push 9 5/8" plug to 60', mix 2x80# sacks concrete and put on top of plug.		
9-28-2015 use cement truck to fill 9 5/8" casing up to surface with 1 Yd concrete.		
Himes Drilling Colorado water well license #1285		

HIMES DRILLING COMPANY, INC.

Telephone 970/242-8893

2390 Highway 6 and 50, Grand Junction CO 81505

FAX 970/242-8895

OXBOW MINING

CBM WELL P&A

July 2017

<u>HOLE NO.</u>	<u>CASING SIZE (IN.)</u>	<u>DEPTH OF PLUG (FT)</u>	<u>VOLUME OF CONCRETE (SACKS)*</u>	<u>VOLUME OF CONCRETE (CU. FT.)</u>
CBM-1	9-5/8	60	43	25.8
CBM-2	9-5/8	60	43	25.8
CBM-3	9-5/8	60	45	27.0
CBM-4	9-5/8	60	43	25.8
CBM-5	7	60	26	15.6
CBM-6	9-5/8	60	48	28.8
CBM-7	9-5/8	60	43	25.8
CBM-8	9-5/8	60	43	25.8
CBM-9	9-5/8	60	43	25.8
CBM-10	9-5/8	60	43	25.8
CBM-11	9-5/8	60	46	27.6
CBM-12	9-5/8	60	43	25.8
CBM-13	9-5/8	60	45	27.0
CBM-14	9-5/8	60	43	25.8

*80lb. sacks

Himes Drilling water well license #1285

Gobvent Boreholes associated with Sanborn Creek Mine

Gob Vent Borehole Abandonment Report (4.07.3(3))

Oxbow Mining, LLC

Elk Creek/ Sanborn Creek Mines

Sanborn Creek Coal Bed Methane Holes: **CBM-1**

Lease COC-53510

Surface Owner – BLM

Date Completed 1/24/2001

Drilling Contractor: Lang Exploratory Drilling

Coordinates: N: 411416, E: 1455883

Location: SW1/4, NE1/4, S2, T13S, R90W

Depth/ Inclination: 2,490' @ 18°

Collar Elev. 7,860'

Intervals where water was encountered during drilling: N/A

Borehole Diameter: 15"/ 8.75"

Hole Casing: 9 5/8" casing +1' to 2,228.75',
6" blank casing 2,183.45' to 2,204.68'
6" slotted casing 2,204.68' to 2,485'

Portland Type II/ Bentonite mix to cement casing 0' to 2,210'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 43 sacks (25.8 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))

Oxbow Mining, LLC

Elk Creek/ Sanborn Creek Mines

Sanborn Creek Coal Bed Methane Holes: CBM-2

Lease COC-53510

Surface Owner – BLM

Date Completed 3/17/2001

Drilling Contractor: Lang Exploratory Drilling

Coordinates: N: 411416, E: 1455845

Location: SW1/4, NE1/4, S2, T13S, R90W

Depth/ Inclination: 2,410' @ 8°

Collar Elev. 7,860'

Intervals where water was encountered during drilling: N/A

Borehole Diameter: 15" / 8.75"

Hole Casing: 9 5/8" casing +3' to 2,144',
6" blank casing 2,110' to 2,150'
6" slotted casing 2,150' to 2,410'

Portland Type II/ Bentonite mix to cement casing 0' to 2,210'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 43 sacks (25.8 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))
Oxbow Mining, LLC
Elk Creek/ Sanborn Creek Mines
Sanborn Creek Coal Bed Methane Holes: **CBM-3**
Lease COC-53510
Surface Owner – BLM
Date Completed 6/12/2001
Drilling Contractor: Lang Exploratory Drilling
Coordinates: N: 411416, E: 1455833
Location: SW1/4, NE1/4, S2, T13S, R90W
Depth/ Inclination: 2,380' @ 7°
Collar Elev. 7,860'
Intervals where water was encountered during drilling: N/A
Borehole Diameter: 15"/ 8.75"
Hole Casing: 9 5/8" casing +1.2' to 2,214',
6" slotted casing 2,180' to 2,380'
Portland Type II/ Bentonite mix to cement casing 0' to 2,300'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 45 sacks (27.0 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))
Oxbow Mining, LLC
Elk Creek/ Sanborn Creek Mines
Sanborn Creek Coal Bed Methane Holes: **CBM-4**
Lease COC-53510
Surface Owner – BLM
Date Completed 6/27/2001
Drilling Contractor: Lang Exploratory Drilling
Coordinates: N: 409915, E: 1455832
Location: SW1/4, SE1/4, S2, T13S, R90W
Depth/ Inclination: 2,028' @ 12°
Collar Elev. 7,553'
Intervals where water was encountered during drilling: N/A
Borehole Diameter: 15" / 8.75"
Hole Casing: 9 5/8" casing 0' to 1,219',
7 5/8" blank casing 1,164' to 1,928'
7 5/8" slotted casing 1,928' to 2,028'
Portland Type II/ Bentonite mix to cement casing 0' to 1,218'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 43 sacks (25.8 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))
Oxbow Mining, LLC
Elk Creek/ Sanborn Creek Mines
Sanborn Creek Coal Bed Methane Holes: **CBM-5**
Lease COC-53510
Surface Owner – BLM
Date Completed 7/15/2001
Drilling Contractor: Lang Exploratory Drilling
Coordinates: N: 409915, E: 1455782
Location: SW1/4, SE1/4, S2, T13S, R90W
Depth/ Inclination: 1,980' @ 3°
Collar Elev. 7,553'
Intervals where water was encountered during drilling: N/A
Borehole Diameter: 15" / 6 1/8"
Hole Casing: 7" casing 0' to 1,800.67',
5" blank casing 1,688' to 1,741'
5" slotted casing 1,741' to 1,980'
Portland Type II/ Bentonite mix to cement casing 0' to 1,800'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 7" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 26 sacks (15.6 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))
Oxbow Mining, LLC
Elk Creek/ Sanborn Creek Mines
Sanborn Creek Coal Bed Methane Holes: **CBM-6**
Lease COC-53510
Surface Owner – BLM
Date Completed 6/17/2001
Drilling Contractor: Lang Exploratory Drilling
Coordinates: N: 411416, E: 1455844
Location: SW1/4, NE1/4, S2, T13S, R90W
Depth/ Inclination: 2,460' @ 10°
Collar Elev. 7,860'
Intervals where water was encountered during drilling: N/A
Borehole Diameter: 15"/ 8.75"
Hole Casing: 9 5/8" casing 0' to 1,297',
7" blank casing 1,224' to 2,398'
7" slotted casing 2,398' to 2,460'
Portland Type II/ Bentonite mix to cement casing 0' to 1,297'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 48 sacks (28.8 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))

Oxbow Mining, LLC

Elk Creek/ Sanborn Creek Mines

Sanborn Creek Coal Bed Methane Holes: CBM-7

Lease COC-53510

Surface Owner – BLM

Date Completed 8/11/2001

Drilling Contractor: Lang Exploratory Drilling

Coordinates: N: 411416, E: 1455805

Location: SW1/4, NE1/4, S2, T13S, R90W

Depth/ Inclination: 2,505' @ 16°

Collar Elev. 7,860'

Intervals where water was encountered during drilling: N/A

Borehole Diameter: 15"/ 8.75"

Hole Casing: 9 5/8" casing 0' to 1,312',
 7 5/8" blank casing 1,241' to 2,310'
 7 5/8" slotted casing 2,310' to 2,505'

Portland Type II/ Bentonite mix to cement casing 0' to 1,310'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 43 sacks (25.8 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))

Oxbow Mining, LLC

Elk Creek/ Sanborn Creek Mines

Sanborn Creek Coal Bed Methane Holes: **CBM-8**

Lease COC-53510

Surface Owner – BLM

Date Completed 1/15/2002

Drilling Contractor: Lang Exploratory Drilling

Coordinates: N: 410271, E: 1454073

Location: NW1/4, SW1/4, S2, T13S, R90W

Depth/ Inclination: 2,593' @ 14°

Collar Elev. 7,977'

Intervals where water was encountered during drilling: N/A

Borehole Diameter: 12.25"/ 8.75"

Hole Casing: 9 5/8" casing 0' to 926',
7" blank and slotted casing 732' to 2,593'

Portland Type II/ Bentonite mix to cement casing 0' to 926'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe.

A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 43 sacks (25.8 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))
Oxbow Mining, LLC
Elk Creek/ Sanborn Creek Mines
Sanborn Creek Coal Bed Methane Holes: **CBM-9**
Lease COC-53510
Surface Owner – BLM
Date Completed 2/10/2002
Drilling Contractor: Lang Exploratory Drilling
Coordinates: N: 409033, E: 1453970
Location: SW1/4, SW1/4, S2, T13S, R90W
Depth/ Inclination: 2,540' @ 12°
Collar Elev. 8,000'
Intervals where water was encountered during drilling: N/A
Borehole Diameter: 12.25"/ 8.75"
Hole Casing: 9 5/8" casing 0' to 2,330',
7 5/8" blank casing 2123' to 2,300'
7 5/8" slotted casing 2,300' to 2,540'
Portland Type II/ Bentonite mix to cement casing 0' to 2,330'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 43 sacks (25.8 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))
Oxbow Mining, LLC
Elk Creek/ Sanborn Creek Mines
Sanborn Creek Coal Bed Methane Holes: **CBM-10**
Lease COC-53510
Surface Owner – BLM
Date Completed 2/24/2002
Drilling Contractor: Lang Exploratory Drilling
Coordinates: N: 409003, E: 1453959
Location: SW1/4, SW1/4, S2, T13S, R90W
Depth/ Inclination: 2,575' @ 24°
Collar Elev. 8,000'
Intervals where water was encountered during drilling: N/A
Borehole Diameter: 12.25" / 8.75"
Hole Casing: 9 5/8" casing 0' to 2,375',
7" blank casing 2,273' to 2,335'
7" slotted casing 2,335' to 2,575'
Portland Type II/ Bentonite mix to cement casing 0' to 2,375'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 43 sacks (25.8 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))
Oxbow Mining, LLC
Elk Creek/ Sanborn Creek Mines
Sanborn Creek Coal Bed Methane Holes: **CBM-11**
Lease COC-53510
Surface Owner – BLM
Date Completed 1/11/2002
Drilling Contractor: Lang Exploratory Drilling
Coordinates: N: 410264, E: 1454015
Location: NW1/4, SW1/4, S2, T13S, R90W
Depth/ Inclination: 2,465' @ 5°
Collar Elev. 7,977'
Intervals where water was encountered during drilling: N/A
Borehole Diameter: 12.25"/ 8.75"
Hole Casing: 9 5/8" casing 0' to 2,250',
7" slotted casing 2,057' to 2,465'
Portland Type II/ Bentonite mix to cement casing 0' to 2,250'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 46 sacks (27.6 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))
Oxbow Mining, LLC
Elk Creek/ Sanborn Creek Mines
Sanborn Creek Coal Bed Methane Holes: **CBM-12**
Lease COC-53510
Surface Owner – BLM
Date Completed 5/08/2002
Drilling Contractor: Lang Exploratory Drilling
Coordinates: N: 409079, E: 1454007
Location: SW1/4, SW1/4, S2, T13S, R90W
Depth/ Inclination: 2,375' @ 1°
Collar Elev. 8,000'
Intervals where water was encountered during drilling: N/A
Borehole Diameter: 12.25"/ 8.75"
Hole Casing: 9 5/8" casing 0' to 2,125',
7" blank casing 2,024' to 2,311'
7" slotted casing 2,311' to 2,375'
Portland Type II/ Bentonite mix to cement casing 0' to 2,125'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 43 sacks (25.8 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))
Oxbow Mining, LLC
Elk Creek/ Sanborn Creek Mines
Sanborn Creek Coal Bed Methane Holes: **CBM-13**
Lease COC-53510
Surface Owner – BLM
Date Completed 5/31/2002
Drilling Contractor: Lang Exploratory Drilling
Coordinates: N: 410259, E: 1453965
Location: NW1/4, SW1/4, S2, T13S, R90W
Depth/ Inclination: 2,525' @ 13.5°
Collar Elev. 7,977'
Intervals where water was encountered during drilling: N/A
Borehole Diameter: 12.25"/ 8.75"
Hole Casing: 9 5/8" casing 0' to 2,230',
7" slotted casing 2,141' to 2,525'
Portland Type II/ Bentonite mix to cement casing 0' to 2,230'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 45 sacks (27.0 cubic feet) of mixed concrete.

Gob Vent Borehole Abandonment Report (4.07.3(3))
Oxbow Mining, LLC
Elk Creek/ Sanborn Creek Mines
Sanborn Creek Coal Bed Methane Holes: **CBM-14**
Lease COC-53510
Surface Owner – BLM
Date Completed 5/23/2002
Drilling Contractor: Lang Exploratory Drilling
Coordinates: N: 409020, E: 1453910
Location: SW1/4, SW1/4, S2, T13S, R90W
Depth/ Inclination: 2,448' @ 11°
Collar Elev. 8,000'
Intervals where water was encountered during drilling: N/A
Borehole Diameter: 12.25"/ 8.75"
Hole Casing: 9 5/8" casing 0' to 2,207',
7" blank casing 2,095' to 2,157'
7" slotted casing 2,157' to 2,448'
Portland Type II/ Bentonite mix to cement casing 0' to 2,206'

Hole Plugged and Abandoned by Himes Drilling – Water well license #1456,
in July 2018.

A 9 5/8" diameter "wiper" or "top" plug (friction style) was set in place, 60 feet below the surface, by pushing the plug into the casing with a crane service rig and weighted pipe. A cable secured the plug to the surface, and 2 sacks (1.2 cubic feet) of mixed ASTM C387-4000 psi concrete was poured down the hole. The concrete set for a minimum of 24 hours and then the plug was completed to the existing grade on surface with 43 sacks (25.8 cubic feet) of mixed concrete.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: ECM 10-68		Project ID.: Elk Creek Mine Exploration	
Lease Number: COC-61357		(State or Federal) Surface Owner: Hotchkiss	
Date Commenced: 29-Aug-10		Date Completed: 9-Sep-10	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20/ CR-7	
Geologist: Doug Allen		Date: 22-Nov-10	
Driller: Jim Weatherston		Truck Driver: Kirk Homedew	
Sam Homedew		Will Juusola	
Coordinates: N. 20380.48		E. 32776.57	
Location: Township, Range & Section:		NW 1/4, Sec. 36, T. 12 S., R. 91 W.	
Ground Elevation: 8037'		Collar Elevation: ground	
Geophysical Log Measured From:		Elevation	
Total Depth: 2274'		Probe Depth: 2267'	
Casing Type: steel		Fluid Level: NA	
Casing Type: steel T&C		Size: 7"	
Depth: 0-61'		Size: 4 1/2"	
Depth: 0-2189.5'		Recovered (Y or N): N	
Recovered (Y or N): N			
Bit Information			
Surface Casing		9 7/8" Tricone to 61'	
Main Hole		6 1/4" Tricone from 61-2189.5'	
Core:		3.937" from 2189.5-2274'	
Bottom Hole			
Footage Plugged: 2189.5'		Cored: 84.5'	
Drilling Medium: Air		Foam /Water: Mud	
Depths: 0-600'		Foam Injection:	
Depths: 600-2190'			
Lost Circulation Depths: NA		Regained ? (Y or N):	
Water Invasion Depth or Intervals: NA		Estimated Inflow Rates:	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run: Gamma: Y		Neutron:	
Temperature:		Density: Y	
Resistivity: Y		Caliper: Y	
Other (SP, Foc. Elec., Drift, Dep., Sonic):			
Hole Cemented (Y or N), Type: Y		No. of Bags: 300 gal plug gel; 9 yds cement	
		Interval: from 2274' to surface	
Coal Core Sent To: SGS		Rock Sent To: Agapito	
Comments: Cored from 2189.5-2274' with air. Galen Homedew-Driller; Beau O./ Jake C.- helpers.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: ECM 10-69		Project ID.: Elk Creek Mine Exploration	
Lease Number: COC-61357		(State or Federal)	Surface Owner: Hotchkiss
Date Commenced: 16-Jun-10		Date Completed: 31-Jul-10	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20/ CR-7	
Geologist: Doug Allen		Date: 22-Nov-10	Toolpusher: Matt Himes
Driller: Jim Weatherston		Truck Driver: Kirk Homedew	Helper: Sean Vivian
Sam Homedew		Tommy Dennis	Will Juusola
Coordinates: N. 20912.18		E. 32319.78	
Location: Township, Range & Section: NW 1/4, Sec. 36, T. 12 S., R. 91 W.			
Ground Elevation: 8074'		Collar Elevation: ground	Elevation
Geophysical Log Measured From: 2325'		Probe Depth: 2327'	Fluid Level: NA
Total Depth: 2325'		Casing Type: steel	Size: 7"
Casing Type: steel T&C			Size: 4 1/2"
Depth: 0-22'		Recovered (Y or N): N	
Depth: 0-2130'		Recovered (Y or N): N	
Bit Information			
Surface Casing		9 7/8" Tricone to 22'	
Main Hole		6 1/4" Tricone from 22-2130'	
Core:		3.937" from 2130-2325'	
Bottom Hole			
Footage Plugged: 2130'		Cored: 195'	
Drilling Medium: Air		Foam /Water: Mud	Foam Injection:
Depths: 0-280'		280-2130'	
Lost Circulation Depths: NA		Regained ? (Y or N):	
Water Invasion Depth or Intervals: 280'		Estimated Inflow Rates: 3 gpm	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run: Gamma: Y		Neutron:	
Temperature:		Density: Y	
Resistivity: Y		Caliper: Y	
Other (SP, Foc. Elec., Drift, Dep., Sonic):			
Hole Cemented (Y or N), Type: Y		No. of Bags: 600 gal plug gel; 12 yds cement	
		Interval: from 2325' to surface	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments: Cored from 2130-2325' with air. Galen Homedew-Driller; Beau O./ Jake C. - helpers.			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: ECM 10-70 Project ID.: Elk Creek Mine Exploration
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 19-Jun-10 Date Completed: 12-Aug-10

Contractor: Himes Drilling Rig Type: Atlas Copco RD20/ CR-7
Geologist: Doug Allen Date: 22-Nov-10 Toolpusher: Matt Himes
Driller: Jim Weatherston Truck Driver: Kirk Homedew Helper: Sean Vivian
Sam Homedew Tommy Dennis Will Juusola
Coordinates: N. 21245.40 E. 32421.13
Location: Township, Range & Section: NW 1/4, Sec. 36, T. 12 S., R. 91 W.
Ground Elevation: 8137' Collar Elevation: ground
Geophysical Log Measured From: ground Elevation
Total Depth: 2411' Probe Depth: 2408' Fluid Level: NA
Casing Type: steel Size: 7"
Casing Type: steel T&C Size: 4 1/2"
Depth: 0-22' Recovered (Y or N): N
Depth: 22-2313' Recovered (Y or N): N

Bit Information

Surface Casing 9 7/8" Tricone to 22'
Main Hole 6 1/4" Tricone from 22-2313'
Core: 3.937" from 2300-2411'
Bottom Hole _____

Footage Plugged: 2300' Cored: 111'
Drilling Medium: Air Foam /Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-331' 331-2313'

Lost Circulation Depths: NA Regained ? (Y or N): _____
Water Invasion Depth or Intervals: 1225' Estimated Inflow Rates: 40 gpm
Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y Neutron: _____
Temperature: _____ Density: Y
Resistivity: Y Caliper: Y
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 300 gal plug gel; 12 yds cement
Interval: from 2411' to surface

Coal Core Sent To: NA Rock Sent To: NA

Comments: Cored from 2311-2411' with air. Galen Homedew-Driller; Beau O./ Jake C. - helpers.

Oxbow Mining LLC
Elk Creek Mine

Project ID.: Elk Creek Mine Exploration
(State or Federal) Surface Owner: Hotchkiss
Date Completed: 11-Sep-10

Toolpusher: Matt Himes
Helper: Will K.
Trey H.

33065.34
NW 1/4, Sec. 36, T. 12 S., R. 91 W.

Fluid Level: NA

Size: 4 1/2"

Recovered (Y or N):

Surface Casing	9 7/8" Tricone to 109'
Main Hole	6 1/4" Tricone from 109-2340'
Core:	3.937" from 2340-2409'
Bottom Hole	

Lost Circulation Depths:	<u>230'</u>	Regained ? (Y or N):	<u>Y</u>
Water Invasion Depth or Intervals:	<u>NA</u>	Estimated Inflow Rates:	<u> </u>
Gas Invasion Depth or Interval:	<u>NA</u>		

Logs Run: Gamma: Y
 Temperature:
 Resistivity: Y
 Other (SP, Foc. Elec., Drift, Dep., Sonic)

Neutron: _____
Density: _____ Y _____
Caliper: _____ Y _____

No. of Bags: 300 gal plug gel; 25 yds cement
Interval: from 2409' to surface

Rock Sent To: Agapito

Comments: Cored from 2340-2409' with air. Galen Homedew-Driller; Beau O./ Jake C.- helpers.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: ECM 10-72
Lease Number: COC-61357
Date Commenced: 21-Jun-10

Project ID.: Elk Creek Mine Exploration
(State or Federal) Surface Owner: Hotchkiss
Date Completed: 16-Aug-10

Contractor: Himes Drilling
Geologist: Doug Allen
Driller: Jim Weatherston
Sam Homedew

Rig Type: Atlas Copco RD20/ CR-7
Date: 22-Nov-10
Truck Driver: Kirk Homedew
Tommy Dennis

Toolpusher: Matt Himes
Helper: Sean Vivian
Will Juusola

Coordinates: N. 21950.56 E. 33168.58
Location: Township, Range & Section: NW 1/4, Sec. 36, T. 12 S., R. 91 W.

Ground Elevation: 8199'

Collar Elevation:

Geophysical Log Measured From:

ground

Elevation

Total Depth: 2551'

Probe Depth: 2547'

Fluid Level: NA

Casing Type: steel

Size: 7"

Casing Type: steel T&C

Size: 4 1/2"

Depth: 0-56'

Recovered (Y or N): N

Depth: 0-2313'

Recovered (Y or N): N

Bit Information

Surface Casing 9 7/8" Tricone to 56'

Main Hole 6 1/4" Tricone from 56-2313'

Core: 3.937" from 2313-2551'

Bottom Hole

Footage Plugged: 2313'

Cored: 234'

Drilling Medium: Air:

Foam /Water:

Mud:

Foam Injection:

Depths: 0-270'

270-2313'

Lost Circulation Depths: NA

Regained ? (Y or N):

Water Invasion Depth or Intervals: 270'

Estimated Inflow Rates: 2 gpm

Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: Y

Neutron:

Temperature:

Density: Y

Resistivity: Y

Caliper: Y

Other (SP, Foc. Elec., Drift, Dep., Sonic):

Hole Cemented (Y or N), Type: Y

No. of Bags: 600 gal plug gel; 15 yds cement

Interval: from 2551' to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: Cored from 2313-2551' with air. Galen Homedew-Driller; Beau O./ Jake C. - helpers.

Oxbow Mining LLC
Elk Creek Mine

Hole Number:	ECM 10-73	Project ID.:	Elk Creek Mine Exploration
Lease Number:	COC-61357	(State or Federal) Surface Owner:	Hotchkiss
Date Commenced:	9-Sep-10	Date Completed:	15-Sep-10
Contractor:	Himes Drilling	Rig Type:	Atlas Copco RD20/ CR-7
Geologist:	Doug Allen	Date :	22-Nov-10
Driller:	Jim Weatherston	Truck Driver:	Kirk Homedew
	Sam Homedew		Will Jusuola
Coordinates: N.	22138.86	E.	33679.06
Location: Township, Range & Section:			NW 1/4, Sec. 31, T. 12 S., R. 90 W.
Ground Elevation:	8239'	Collar Elevation:	
Geophysical Log Measured From:	ground	Elevation	
Total Depth:	2600'	Probe Depth:	2595'
Casing Type:	steel	Fluid Level:	NA
Casing Type:	steel T&C	Size:	7"
Depth:	0-83'	Size:	4 1/2"
Depth:	0-2490'	Recovered (Y or N):	N
		Recovered (Y or N):	N

Bit Information

Surface Casing	9 7/8" Tricone to 83'
Main Hole	6 1/4" Tricone from 83-2490'
Core:	3.937" from 2490-2600'
Bottom Hole	

Footage Plugged:	<u>2490'</u>	Cored:	<u>110'</u>	
Drilling Medium:	<u>Air:</u>	Foam /Water:	<u>Mud:</u>	Foam Injection:
Depths:	<u>0-177'</u>	<u>177-2490'</u>		

Lost Circulation Depths:	NA	Regained ? (Y or N):	
Water Invasion Depth or Intervals:	177'	Estimated Inflow Rates:	2 gpm
Gas Invasion Depth or Interval:	NA		

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: _____ Y
 Temperature: _____
 Resistivity: _____ Y
 Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Neutron: _____
 Density: _____ Y
 Caliper: _____ Y

Hole Cemented (Y or N), Type: Y No. of Bags: 300 gal plug gel; 10 yds cement
Interval: from 2600' to surface

Coal Core Sent To: SGS Rock Sent To: Agapito

Comments: Cored from 2490-2600' with air. Galen Hornedew-Driller; Beau O./ Jake C.- helpers.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: ECM 10-74		Project ID.: Elk Creek Mine Exploration	
Lease Number: COC-61357	(State or Federal)	Surface Owner: Hotchkiss	
Date Commenced: 24-Jun-10	Date Completed: 13-Sep-10		
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20/ CR-7	
Geologist: Doug Allen	Date: 22-Nov-10	Toolpusher: Matt Himes	
Driller: Jim Weatherston	Truck Driver: Kirk Homedew	Helper: Sean Vivian	
	Tommy Dennis	Will Juusola	
Coordinates: N. 22692.87	E. 34708.84		
Location: Township, Range & Section:		NW 1/4 Sec. 31, T. 12 S., R. 90 W.	
Ground Elevation: 8242'	Collar Elevation:		
Geophysical Log Measured From: ground	Elevation		
Total Depth: 2654'	Probe Depth: 2640'	Fluid Level: NA	
Casing Type: steel	Size: 7"		
Casing Type: steel T&C	Size: 4 1/2"		
Depth: 0-50'	Recovered (Y or N): N		
Depth: 0-2553'	Recovered (Y or N): N		
Bit Information			
Surface Casing	9 7/8" Tricone to 50'		
Main Hole	6 1/4" Tricone from 50-2553'		
Core:	3.937" from 2553-2654'		
Bottom Hole			
Footage Plugged: 2553'	Cored: 101'		
Drilling Medium: Air	Foam /Water:	Mud:	Foam Injection:
Depths: 0-690'	690-2553'		
Lost Circulation Depths: NA		Regained ? (Y or N):	
Water Invasion Depth or Intervals: 690'		Estimated Inflow Rates: 5 gpm	
Gas Invasion Depth or Interval: NA			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run:	Gamma: Y	Neutron:	
	Temperature:	Density: Y	
	Resistivity: Y	Caliper: Y	
Other (SP, Foc. Elec., Drift, Dep., Sonic):			
Hole Cemented (Y or N), Type: Y		No. of Bags: 300 gal plug gel; 10 yds cement	
		Interval: from 2654' to surface	
Coal Core Sent To: SGS	Rock Sent To: Agapito		
Comments: Cored from 2553-2654' with air. Galen Homedew-Driller; Beau O./ Jake C. - helpers.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: <u>ECM 10-75</u>	Project ID.: <u>Elk Creek Mine Exploration</u>	
Lease Number: <u>COC-61357</u>	(State or Federal) Surface Owner: <u>Hotchkiss</u>	
Date Commenced: <u>2-Jul-10</u>	Date Completed: <u>1-Sep-10</u>	
Contractor: <u>Himes Drilling</u>	Rig Type: <u>Atlas Copco RD20/ CR-7</u>	
Geologist: <u>Doug Allen</u>	Date: <u>22-Nov-10</u>	Toolpusher: <u>Matt Himes</u>
Driller: <u>Jim Weatherston</u>	Truck Driver: <u>Kirk Homedew</u>	Helper: <u>Sean Vivian</u>
	<u>Sam Homedew</u>	<u>Cameron S.</u>
Coordinates: N. <u>22247.36</u>	E. <u>35783.06</u>	
Location: Township, Range & Section: <u>NE 1/4, Sec. 31, T. 12 S., R. 90 W.</u>		
Ground Elevation: <u>8340'</u>	Collar Elevation: <u> </u>	
Geophysical Log Measured From: <u>ground</u>	Elevation: <u> </u>	
Total Depth: <u>2793'</u>	Probe Depth: <u>2785'</u>	Fluid Level: <u>NA</u>
Casing Type: <u>steel</u>	Size: <u>7"</u>	
Casing Type: <u>steel T&C</u>	Size: <u>4 1/2"</u>	
Depth: <u>0-56'</u>	Recovered (Y or N): <u>N</u>	
Depth: <u>0-2478'</u>	Recovered (Y or N): <u>N</u>	
Bit Information		
Surface Casing	<u>9 7/8" Tricone to 56'</u>	
Main Hole	<u>6 1/4" Tricone from 56-2478'</u>	
Core:	<u>3.937" from 2478-2793'</u>	
Bottom Hole	<u> </u>	
Footage Plugged: <u>2478'</u>	Cored: <u>315'</u>	
Drilling Medium: <u>Air:</u>	Foam /Water: <u> </u>	Mud: <u> </u>
Depths: <u>0-380'</u>	<u>380-2478'</u>	Foam Injection: <u> </u>
Lost Circulation Depths: <u>2494-2793'</u>	Regained ? (Y or N): <u>sporadic</u>	
Water Invasion Depth or Intervals: <u>380'; 2420'</u>	Estimated Inflow Rates: <u>2 gpm; 5 gpm</u>	
Gas Invasion Depth or Interval: <u>2580'; 2660'</u>		
Geophysical Logging Contractor: <u>Jetwest Geophysical</u>		
Logs Run: Gamma: <u>Y</u>	Neutron: <u> </u>	
Temperature: <u> </u>	Density: <u>Y</u>	
Resistivity: <u>Y</u>	Caliper: <u>Y</u>	
Other (SP, Foc. Elec., Drift, Dep., Sonic): <u> </u>		
Hole Cemented (<u>Y</u> or N), Type: <u>Y</u>	No. of Bags: <u>900 gal plug gel; 21 yds cement</u>	
	Interval: <u>from 2793' to surface</u>	
Coal Core Sent To: <u>SGS</u>	Rock Sent To: <u>Agapito</u>	
Comments: <u>Cored from 2478-2793' with air. Galen Homedew-Driller; Beau O./ Jake C.- helpers.</u>		
<u>Hole precollared above target depth due to poor hole conditions.</u>		
<u>Himes Drilling Colorado water well license #1285</u>		

Oxbow Mining LLC
Elk Creek Mine

Hole Number: ECM 10-76		Project ID.: Elk Creek Mine Exploration	
Lease Number: COC-61357		(State or Federal) Surface Owner: Hotchkiss	
Date Commenced: 7-Jul-10		Date Completed: 25-Aug-10	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20/ CR-7	
Geologist: Doug Allen		Date : 22-Nov-10	
Driller: Jim Weatherston		Toolpusher: Matt Himes	
Sam Homedew		Helper: Sean Vivian	
		Cameron S.	
Coordinates: N. 22110.99		E. 37216.82	
Location: Township, Range & Section:		NE 1/4, Sec. 31, T. 12 S., R. 90 W.	
Ground Elevation: 8368'		Collar Elevation: _____	
Geophysical Log Measured From: _____		Elevation _____	
Total Depth: 2856.5'		Probe Depth: 2852'	
Casing Type: steel		Fluid Level: NA	
Casing Type: steel T&C		Size: 7"	
Depth: 0-60'		Size: 4 1/2"	
Depth: 0-2733'		Recovered (Y or N): N	
		Recovered (Y or N): N	
Bit Information			
Surface Casing		9 7/8" Tricone to 60'	
Main Hole		6 1/4" Tricone from 60-2733'	
Core:		3.937" from 2733-2856.5'	
Bottom Hole		_____	
Footage Plugged: 2733' Cored: 123.5'			
Drilling Medium: Air		Foam /Water: Mud	
Depths: 0-751'		Foam Injection: _____	
		751-2733'	
Lost Circulation Depths: NA		Regained ? (Y or N): _____	
Water Invasion Depth or Intervals: NA		Estimated Inflow Rates: _____	
Gas Invasion Depth or Interval: 2845'			
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run: Gamma: Y		Neutron: _____	
Temperature: _____		Density: Y	
Resistivity: Y		Caliper: Y	
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____			
Hole Cemented (Y or N), Type: Y		No. of Bags: 600 gal plug gel; 13 yds cement	
		Interval: from 2733' to surface	
Coal Core Sent To: SGS		Rock Sent To: Agapito	
Comments: Cored from 2733-2856.5' with air. Galen Homedew-Driller; Beau O./ Jake C. - helpers.			
CH4 blowing @ 125 PSI from sandstone in D2 floor.			
Himes Drilling Colorado water well license #1285			

TC-1

Form No. GWS-09 6/2006	STATE OF COLORADO, OFFICE OF THE STATE ENGINEER 821 Centennial Bldg., 1313 Sherman St., Denver, CO 80203 (303) 866-3581 Fax (303) 866-3589 http://www.water.state.co.us	RECEIVED OCT 04 2007 WATER RESOURCES STATE ENGINEER COLO.															
WELL ABANDONMENT REPORT Use to report plugging and sealing of permitted wells, monitoring and other holes. Type or print in black or blue ink. Instructions and plugging standards are on reverse side of form.																	
Well Permit Number of the well being plugged <u>197377/TC-1</u> or MH File Number MH- _____ Hole ID #/Name _____																	
Individual/Company responsible for plugging and sealing the well: NAME(S) <u>Wildcat Drilling & Pump, Inc</u> Mailing Address <u>Po Box 12</u> City, St., Zip <u>Cedaredge, CO 81413</u> Phone <u>(970) 856-6583</u>																	
Well (Hole) Owner: NAME(S) <u>Oxbow Carbon Minerals, Inc</u> Phone <u>(970) 929-5122</u> Mailing Address, City, St., Zip <u>Somerset, CO 81434</u>																	
ACTUAL WELL LOCATION: County <u>Gunnison</u> Property Address, City, St, Zip _____ <u>SE</u> 1/4 of the <u>NW</u> 1/4, Sec. <u>7</u> , Twp. <u>13</u> <input type="checkbox"/> N. or <input checked="" type="checkbox"/> S., Range <u>89</u> <input type="checkbox"/> E. or <input checked="" type="checkbox"/> W., <u>6</u> P.M. Distance from Section Lines <u>2300</u> Ft. From <input checked="" type="checkbox"/> N. or <input type="checkbox"/> S., <u>1100</u> Ft. From <input type="checkbox"/> E. or <input checked="" type="checkbox"/> W. Line. Subdivision Name _____ Lot _____, Block _____, Filing/Unit _____ Optional: GPS well location information in UTM format. You must check GPS unit for required settings as follows: Format must be UTM, zone 12 <input type="checkbox"/> or zone 13 <input type="checkbox"/> ; Units must be meters; Datum must be NAD83; Unit must be set to true north. Easting _____ Northing _____																	
I (we) report the existing well (hole) was plugged and sealed on the date of _____ for the following reason(s): <input type="checkbox"/> The well was plugged and sealed as required under Well Permit Number _____ <input checked="" type="checkbox"/> The well was not in use and was plugged and sealed. <input type="checkbox"/> Other (please explain) _____																	
The well was plugged with the following materials placed at the indicated intervals: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Amount and Type of Material</th> <th style="text-align: left;">Method of Placement</th> <th style="text-align: left;">Interval</th> </tr> </thead> <tbody> <tr> <td><u>155 Gallons Neat Cement</u></td> <td><u>Positive Displacement</u></td> <td>from <u>0'</u> feet to <u>720'</u> feet</td> </tr> <tr> <td><u>1 Bag Cement to 7 Gallons Water</u></td> <td></td> <td>from _____ feet to _____ feet</td> </tr> <tr> <td></td> <td><u>Casing Removed</u></td> <td>from <u>0'</u> feet to <u>-4'</u> feet</td> </tr> <tr> <td>Intervals of casing removed/ripped in feet</td> <td><u>Casing Perforated</u></td> <td>from <u>680'</u> feet to <u>720'</u> feet</td> </tr> </tbody> </table>			Amount and Type of Material	Method of Placement	Interval	<u>155 Gallons Neat Cement</u>	<u>Positive Displacement</u>	from <u>0'</u> feet to <u>720'</u> feet	<u>1 Bag Cement to 7 Gallons Water</u>		from _____ feet to _____ feet		<u>Casing Removed</u>	from <u>0'</u> feet to <u>-4'</u> feet	Intervals of casing removed/ripped in feet	<u>Casing Perforated</u>	from <u>680'</u> feet to <u>720'</u> feet
Amount and Type of Material	Method of Placement	Interval															
<u>155 Gallons Neat Cement</u>	<u>Positive Displacement</u>	from <u>0'</u> feet to <u>720'</u> feet															
<u>1 Bag Cement to 7 Gallons Water</u>		from _____ feet to _____ feet															
	<u>Casing Removed</u>	from <u>0'</u> feet to <u>-4'</u> feet															
Intervals of casing removed/ripped in feet	<u>Casing Perforated</u>	from <u>680'</u> feet to <u>720'</u> feet															
Report <u>must</u> be signed by person who performed the well plugging work or by the well owner if this person is unknown or not reachable. I (we) have read the statements made herein, know the contents thereof, and that they are true to my (our) knowledge.																	
Signature(s) <u>Billy D. Kissner</u> <u>President</u>	Please print the Signer's Name & Title <u>Billy D. Kissner</u> <u>President</u>	Date <u>8/29/07</u>															
It is the responsibility of the well owner to have the well/hole properly plugged and sealed. The Well Construction Contractor is responsible for notifying the owner of this requirement.																	

**COLORADO**

Division of Water Resources

Department of Natural Resources

WELL PERMIT NUMBER 264042-

RECEIPT NUMBER 0538929

ORIGINAL PERMIT APPLICANT(S)

SPRUCE GROUP LLC

APPROVED WELL LOCATION

Water Division: 4 Water District: 40

Designated Basin: N/A

Management District: N/A

County: GUNNISON

Parcel Name: N/A

Physical Address: 8844 STATE HIGHWAY 133 SOMERSET,
CO 81434

SW 1/4 NW 1/4 Section 7 Township 13.0 S Range 89.0 W Sixth P.M.

UTM COORDINATES (Meters, Zone: 13, NAD83)

Easting: 293263.3 Northing: 4312512.0

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT**CONDITIONS OF APPROVAL**

- 1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of this permit does not ensure that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.
- 2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 18.
- 3) Approved pursuant to CRS 37-92-602(3)(b)(II)(A) as the only well on a residential site of 30.54 acre(s) described as that portion of the SW 1/4 of the NW 1/4, Sec. 7, Twp. 13 S, Rng. 89 W, Sixth P.M., Gunnison County, more particularly described on the attached exhibit A.
- 4) Approved for the change and/or expansion of use of the well constructed under permit number 197378. The issuance of this permit hereby cancels permit number 197378.
- 5) The use of ground water from this well is limited to ordinary household purposes inside one single family dwelling. The ground water shall not be used for irrigation or other purposes.
- 6) The pumping rate of this well shall not exceed 15 GPM.
- 7) The return flow from the use of this well must be through an individual waste water disposal system of the non-evaporative type where the water is returned to the same stream system in which the well is located.
- 8) This well shall be constructed not more than 200 feet from the location specified on this permit.

NOTE: This parcel is exempt from the Gunnison County Subdivision Rules. The subdivision exemption was issued by the Board of County Commissioners of Gunnison County on June 16, 2005 in Resolution number 2005-30.

Date Issued: 6/28/2005

Expiration Date: 6/28/2007

Issued By

PERMIT HISTORY

04-15-2019 CHANGE IN OWNER NAME/MAILING ADDRESS. CHANGED TO KATHERINE COLLINS
07-23-2007 CHANGE IN OWNER NAME/MAILING ADDRESS

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 16-01		Project ID.: Elk Creek Mine Gob Vent Boreholes	
Lease Number: COC-61357		(State or Federal) Surface Owner: Hotchkiss	
Date Commenced: 15-Jul-09		Date Completed: 26-Jul-09	
Contractor: Himes Drilling		Rig Type: Atlas Copco RD20	
Geologist: Doug Allen		Date: 13-Nov-09	
Driller: Jim Weatherston		Truck Driver: Shaun L.	
Sam Homedew		Tommy Dennis	
Coordinates: N. 17103.54		E. 33525.98	
Location: Township, Range & Section:		SW 1/4, Sec. 31, T. 12 S., R. 90 W.	
Ground Elevation: 8138'		Collar Elevation: _____	
Geophysical Log Measured From: ground		Elevation _____	
Total Depth: 2250'		Probe Depth: 2248'	
Casing Type: steel T&C		Fluid Level: NA	
Casing Type: sol/slot steel T&C		Size: 9 5/8"	
Depth: 0-2080'		Recovered (Y or N): N	
Depth: 1999-2169'		Recovered (Y or N): N	
Bit Information			
Surface Casing 16" Tricone to 20' (14" surface casing)		_____	
Main Hole 12 1/4" PDC from 20-2080'		_____	
Core: _____		_____	
Bottom Hole 8 3/4" Tricone from 2080-2250'		_____	
Footage Plugged: 0-2250'		Cored: NA	
Drilling Medium: Air		Foam /Water: _____	
Depths: 0-1130'		Mud: _____	
		Foam Injection: _____	
Lost Circulation Depths: NA		Regained ? (Y or N): _____	
Water Invasion Depth or Intervals: NA		Estimated Inflow Rates: _____	
Gas Invasion Depth or Interval: NA		_____	
Geophysical Logging Contractor: Jetwest Geophysical			
Logs Run:		Neutron: _____	
Gamma: Y		Density: Y	
Temperature: _____		Caliper: Y	
Resistivity: Y		_____	
Other (SP, Foc. Elec., Drift, Dep., Sonic): cement dump bailer; deviation; video			
Hole Cemented (Y or N), Type: N		No. of Bags: _____	
		Interval: _____	
Coal Core Sent To: NA		Rock Sent To: NA	
Comments: *9 5/8" casing abandoned to surface with 28 yds cement slurry June, 2013			
Gravel backfill tagged with dump bailer @ 2152', (2) bailers dumped for t.o. plug elevation			
at 2143', but 7" casing tagged cement @ 2167' (3' above seam). Videolog run but unable			
to see bottom due to silt in hole. Rig spears into 7" and pulls 20,000 lbs. over string/casing			
weight and determines casing is pinned in place. Deviation 40' SW of surface.			
7" casing overlaps 89' inside 9 5/8" casing. 9 5/8" annulus cemented with 6 yds neat cement slurry.			
Himes Drilling Colorado water well license #1285			

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 17-08B
Lease Number: COC-61357
Date Commenced: 23-Jul-11

Project ID.: Elk Creek Mine Gob Vent Boreholes
(State or Federal) Surface Owner: USFS
Date Completed: 27-Jul-11

Contractor: Himes Drilling
Geologist: Doug Allen
Driller: Jim Weatherston
Kirk Homedew

Rig Type: Atlas Copco RD20
Date: 26-Oct-11
Truck Driver: Jason Grundy
Will Juusola

Toolpusher: Matt Himes
Helper: Nick D.
Jimmy L.

Coordinates: N. 16949.06
Location: Township, Range & Section:
Ground Elevation: 8138'

E. 39199.30
SW 1/4, Sec. 32, T. 12 S., R. 90 W.

Geophysical Log Measured From:

Collar Elevation:

ground

Elevation

Total Depth: 2401'

Probe Depth:

NA

Fluid Level:

NA

Casing Type: steel T&C

Size:

9 5/8"

Casing Type: sol/slot steel T&C

Size:

7"

Depth: 0-2101'

Recovered (Y or N):

N

Depth: 2043-2394'

Recovered (Y or N):

N

Bit Information

Surface Casing 17" Hammer to 40' (14" surface casing)

Main Hole 12 1/4 PDC from 40-2101'

Core:

Bottom Hole 8 3/4" PDC from 2101-2401

Footage Plugged: 0-2401'

Cored: NA

Drilling Medium: Air:

Foam /Water:

Mud:

Foam Injection:

Depths: 0-40'

40-2401'

Lost Circulation Depths: NA

Regained ? (Y or N):

Water Invasion Depth or Intervals: 700'

Estimated Inflow Rates: 40 gpm

Gas Invasion Depth or Interval: NA

Geophysical Logging Contractor: directional hole- no logging

Logs Run: Gamma:

Neutron:

Temperature:

Density:

Resistivity:

Caliper:

Other (SP, Foc. Elec., Drift, Dep., Sonic):

Hole Cemented (Y or N), Type: N

No. of Bags: 7 yds for 9 5/8" annulus

Interval: to surface

Coal Core Sent To: NA

Rock Sent To: NA

Comments: 7" casing overlaps 58' inside 9 5/8" casing

287.4' slotted 7" casing below 63.4' solid 7" casing. Landed at 2394'.

Drilled directionally from 554-2101'. Bottom of 9 5/8" casing located 333' at azimuth 313.31 degrees.

Hole redrilled after losing 3 joints 9 5/8" casing to bottom. Cemented back original hole to 554' with

18 cubic yards neat cement slurry and sidetracked second hole directionally.

9 5/8" casing abandoned to surface with 32 cubic yards portland cement slurry July, 2012.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB-06-02
Lease Number: COC-61357
Date Commenced: 3-Dec-05

Project ID.: Elk Creek Mine Exploration
(State or Federal) Surface Owner: BLM
Date Completed: 5-Jan-06

Contractor: Stewart Bros.
Geologist: Doug Allen
Driller: Justin Barris
Donn Massey

Rig Type: Gardner-Denver 2500 Rig #46
Date: 8-Jan-06
Truck Driver: Ray Contreras
Javier Gallegos

Toolpusher: Frank Pichardo
Helper: Paco Pizzano
Mike Lewis

Coordinates: N. 14116.41
Location: Township, Range & Section:
Ground Elevation: 7815'

E. 28463.19
NW 1/4, Sec. 1, T. 13 S., R. 91 W.

Geophysical Log Measured From:

Collar Elevation:
Ground Elevation

Total Depth: 1602'

Probe Depth: 2444'

Fluid Level: NA

Casing Type: steel, T&C

Size: 9 5/8"

Casing Type: slotted steel, T&C

Size: 7"

Depth: 0-1420"

Recovered (Y or N): N- cemented

Depth: 1354'-1565'

Recovered (Y or N): N- loose

Bit Information

Surface Casing 17" auger from 0-10' (14" culvert)

Main Hole 12 1/4" Tri-cone from 10' to 1437'

Core:

Bottom Hole 8 3/4" Tri-cone from 1420- 1602'

Footage Plugged: 1602'

Cored: 0

Drilling Medium: Air:

Foam 202/Water:

Mud:

Foam Injection:

Depths: 0-60'

60'- 1602'

Lost Circulation Depths: NA

Regained ? (Y or N):

Water Invasion Depth or Intervals:

Estimated Inflow Rates:

Gas Invasion Depth or Interval:

Geophysical Logging Contractor: Jetwest Geophysical

Logs Run: Gamma: X

Neutron:

Temperature:

Density: X

Resistivity: X

Caliper: X

Other (SP, Foc. Elec., Drift, Dep., Sonic): Deviation: 46' at 190 degrees

Hole Cemented (Y or N), Type:

No. of Bags:

Interval:

Coal Core Sent To: NA

Rock Sent To: NA

Comments: From/ To of 7" casing determined by Jetwest Geophysical.

(5) runs with 40' dump baler should have cemented bottom of hole from 1585' to 1565'- 14' above

D seam roof. (Bailer volume fills approx. 1 foot of 8 3/4" hole per 10 feet of baler.)

9 5/8" casing cemented from surface with 18 yards portland slurry redi-mix.

7" casing overlaps 66' inside 9 5/8" casing (6' slotted, 60' solid)

9 5/8" casing abandoned to surface with 21 supersacks plug gel, 3 sacks (10') cement August, 2006

Stewart Bros. Colorado water well license #1141.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 12-02 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 11-Oct-07 Date Completed: 25-Oct-07

Contractor: Himes Drilling, Inc Rig Type: Portadrill TKT-300
Geologist: Doug Allen Date: 15-Jan-08 Toolpusher: _____
Driller: Kevin Himes Truck Driver: Aaron B. Helper: Mike Himes

Coordinates: N. 20250.74 E. 29646.61
Location: Township, Range & Section: N.1/2 Sec. 36, T.12S., R.91W.
Ground Elevation: 7297' Collar Elevation: _____
Geophysical Log Measured From: _____ Ground Elevation: _____
Total Depth: 1500' Probe Depth: 1500' Fluid Level: NA
Casing Type: steel, T&C Size: 6 5/8"
Casing Type: _____ Size: _____
Depth: 0-20' Recovered (Y or N): Y
Depth: _____ Recovered (Y or N): _____

Bit Information

Surface Casing 8 3/4" Tricone to 20'
Main Hole 5 7/8" PDC to 1350'
Core: 4 7/8" bit, 3" core to 1430'
Bottom Hole _____

Footage Plugged: 1350' Cored: 80'
Drilling Medium: Air Foam/Water: _____ Mud: _____ Foam Injection: _____
Depths: 0-620' 620-1430'

Lost Circulation Depths: _____ Regained ? (Y or N): _____
Water Invasion Depth or Intervals: _____ Estimated Inflow Rates: _____
Gas Invasion Depth or Interval: _____

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron: _____
Temperature: _____ Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic): _____

Hole Cemented (Y or N), Type: Y No. of Bags: 40 bags plug gel; 3 bags cement
Interval: 1430-15'; 15-0'

Coal Core Sent To: SGS Rock Sent To: Agapito

Comments: Drilled pilot hole at gob vent site to verify coal thickness- D2 too thin to mine.
Hole abandoned and sealed to surface.

Oxbow Mining LLC
Elk Creek Mine

Hole Number: GVB 12-03 Project ID.: Elk Creek Mine Gob Vent Boreholes
Lease Number: COC-61357 (State or Federal) Surface Owner: Hotchkiss
Date Commenced: 2-Oct-07 Date Completed: 10-Oct-07

Contractor: Himes Drilling, Inc Rig Type: Portadrill TKT-300
Geologist: Ken Ball Date: 15-Jan-08 Toolpusher:
Driller: Kevin Himes Truck Driver: Aaron B. Helper: Mike Himes

Coordinates: N. 19889.69 E. 31140.16
Location: Township, Range & Section: N.1/2 Sec. 36, T.12S., R.91W.

Ground Elevation: 7384' Collar Elevation:
Geophysical Log Measured From: Ground Elevation
Total Depth: 1530' Probe Depth: 1519' Fluid Level: NA
Casing Type: steel, T&C Size: 6 5/8"
Casing Type: Size:
Depth: 0-19.5' Recovered (Y or N): N
Depth: Recovered (Y or N):

Bit Information

Surface Casing 8 3/4" Tricone to 19.5'
Main Hole 5 7/8" PDC to 1490'
Core: 4 7/8" bit, 3" core to 1530'
Bottom Hole

Footage Plugged: 1390' Cored: 40'
Drilling Medium: Air Foam/Water: Mud: Foam Injection:
Depths: 0-200' 200-1530'

Lost Circulation Depths: Regained ? (Y or N):
Water Invasion Depth or Intervals: Estimated Inflow Rates:
Gas Invasion Depth or Interval:

Geophysical Logging Contractor: Jet West Geophysical, LLC

Logs Run: Gamma: X Neutron:
Temperature: Density: X
Resistivity: X Caliper: X
Other (SP, Foc. Elec., Drift, Dep., Sonic):

Hole Cemented (Y or N), Type: Y No. of Bags: 41 bags plug gel; 2 cement
Interval: 1530-10'; 10-0'

Coal Core Sent To: Rock Sent To:

Comments: Drilled pilot hole at gob vent site to verify coal thickness- D2 too thin to mine.
Hole abandoned and sealed to surface.

Himes Drilling Colorado water well license #1285

Oxbow Mining LLC
Elk Creek Mine

Hole Number: <u>GVB 18-01 A</u>		Project ID.: <u>Elk Creek Mine Exploration</u>	
Lease Number: <u>COC-61357</u>		(State or Federal) Surface Owner: <u>Hotchkiss</u>	
Date Commenced: <u>11-Jul-09</u>		Date Completed: <u>23-Aug-09</u>	
Contractor: <u>Himes Drilling</u>		Rig Type: <u>Atlas Copco RD20/ CR-7</u>	
Geologist: <u>Doug Allen</u>		Date : <u>13-Nov-09</u>	Toolpusher: <u>Matt Himes</u>
Driller: <u>Jim Weatherston</u>		Truck Driver: <u>Shaun L.</u>	Helper: <u>Dave T.</u>
		<u>Matt Himes</u>	<u>Bill W.</u>
Coordinates: N. <u>19699.66</u>		E. <u>33407.95</u>	
Location: Township, Range & Section: <u>NW 1/4, Sec. 31, T. 12 S., R. 90 W.</u>			
Ground Elevation: <u>7944'</u>		Collar Elevation: <u>ground</u>	
Geophysical Log Measured From: <u>Elevation</u>			
Total Depth: <u>2443'</u>	Probe Depth: <u>2444'</u>	Fluid Level: <u>NA</u>	
Casing Type: <u>steel</u>	Size: <u>7"</u>		
Casing Type: <u>steel T&C</u>	Size: <u>4 1/2"</u>		
Depth: <u>0-20'</u>	Recovered (Y or N): <u>N</u>		
Depth: <u>0-2060'</u>	Recovered (Y or N): <u>N</u>		
Bit Information			
Surface Casing	<u>9 7/8" Tricone to 20'</u>		
Main Hole	<u>6 1/4" Tricone from 20-2060'</u>		
Core:	<u>3.937" from 2060-2443'</u>		
Bottom Hole			
Footage Plugged: <u>2060'</u>		Cored: <u>2060-2443'</u>	
Drilling Medium: <u>Air:</u>	Foam /Water: <u>Mud:</u>	Foam Injection:	
Depths: <u>0-539'</u>	<u>539-2060'</u>		
Lost Circulation Depths: <u>NA</u>		Regained ? (Y or N): <u></u>	
Water Invasion Depth or Intervals: <u>NA</u>		Estimated Inflow Rates: <u></u>	
Gas Invasion Depth or Interval: <u>NA</u>			
Geophysical Logging Contractor: <u>Jetwest Geophysical</u>			
Logs Run: Gamma: <u>Y</u>		Neutron: <u></u>	
Temperature: <u></u>		Density: <u>Y</u>	
Resistivity: <u>Y</u>		Caliper: <u>Y</u>	
Other (SP, Foc. Elec., Drift, Dep., Sonic): <u></u>			
Hole Cemented (<u>Y</u> or N), Type: <u>Y</u>		No. of Bags: <u>600 gallons plug gel</u>	
		Interval: <u>cement 0-10'</u>	
Coal Core Sent To: <u>SGS</u>		Rock Sent To: <u>Agapito</u>	
Comments: <u>Galen Homedew-Core driller; Beau O./ Will J.- helpers.</u>			
<u>Cored from 2060-2134' with air; plug drilled 2134-2365'; air cored to 2443'.</u>			
<u></u>			
<u></u>			
<u></u>			
<u>Himes Drilling Colorado water well license #1285</u>			