

Worst Case Discharge Calculations

As part of the integrity management program required by 49 CFR §195.452, Bridger Pipeline LLC (Bridger) performs a worst case discharge scenario that determines where Bridger pipelines could impact a High Consequence Area (HCA). There are several assumptions made in the modeling software to determine extent of any discharge and what the worst possible impact could be. As a general rule points are chosen at given intervals along a pipeline (the attached used every 300 feet) and then key points are also calculated such as at actual river crossings etc.

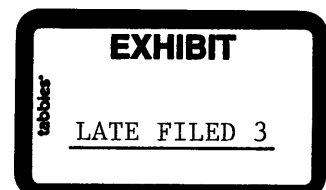
Other key assumptions made in the model which created the attached, include the length of time required to recognize a leak (10 minutes), length of time to shut down system and close valves (10 minutes), flow rate of rivers/streams (2 ft/sec for meandering and in this case intermittent streams) and length of time for responders to get on the scene and take action to mitigate the impact of a spill (8 hours). Additionally the model assumes full guillotine failure of the pipeline leaving both sides of the break fully open.

In actual practice a full guillotine failure on any pipeline is highly unlikely but does represent a worst case scenario. In addition, a guillotine failure on this line would be recognized almost immediately by the SCADA system rather than in 10 minutes. Also because it is a short segment and the pumps and valves are co-located at the origination station, they can be closed near immediately and near simultaneously. In addition with a full guillotine failure the valves on the termination of the line can be closed nearly immediately. The resulting time to recognize a full guillotine failure, shut down and close in the system is more likely to be in the 5-10 minute range resulting in much less total volume lost.

Finally because of the proximity of employees, offices, and equipment to this line segment a much quicker response to the spill is anticipated. Remember the model uses 8 hours, but Bridger has demonstrated the ability during drills to mobilize equipment and have it on site much quicker, even in more remote locations. Something closer to 2 hours is the more likely scenario resulting in much less migration of a much smaller quantity of product than the worst case modeling shows.

27 **PU-15-97** Filed: 9/14/2015 Pages: 3
Late-filed Exhibit 3

Bridger Pipeline LLC
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Analysis Parameters

Valves

Line Name: 152075852.1026
 Mass: 10.000000 / 1000.0000
 Specific Gravity: 0.8
 Flow Direction: >

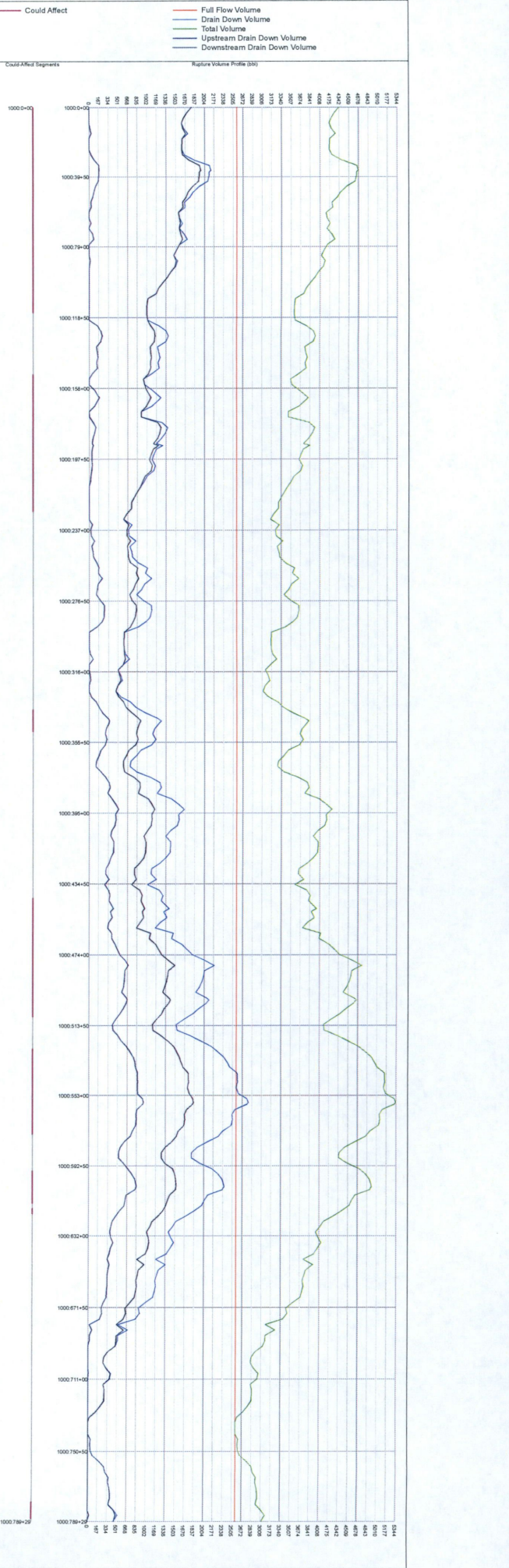
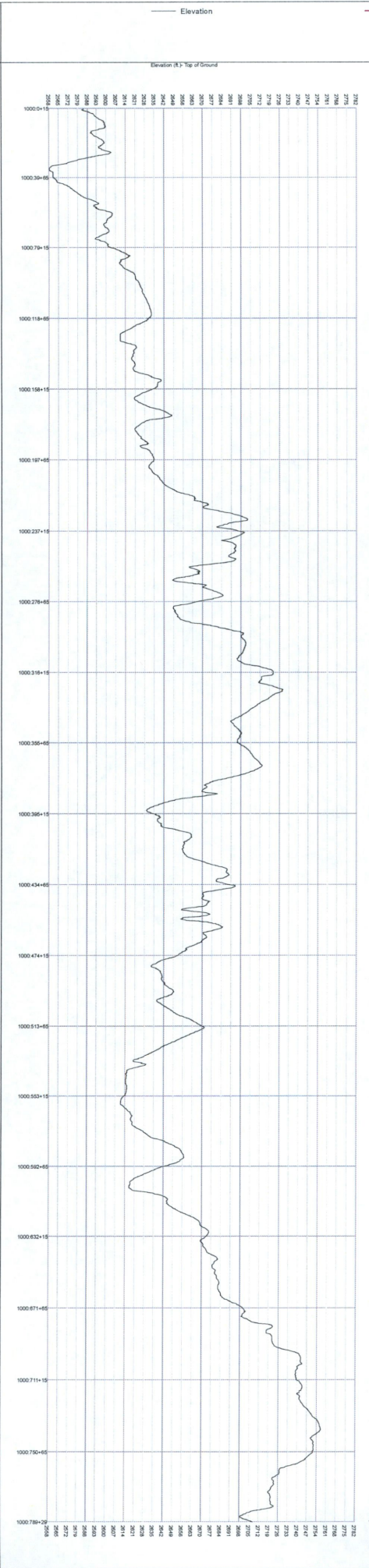
Pump Name: 4100 591 (254, 1000.0000 - 3584, 1000.7500-29)
 Location: 2542.5 BM

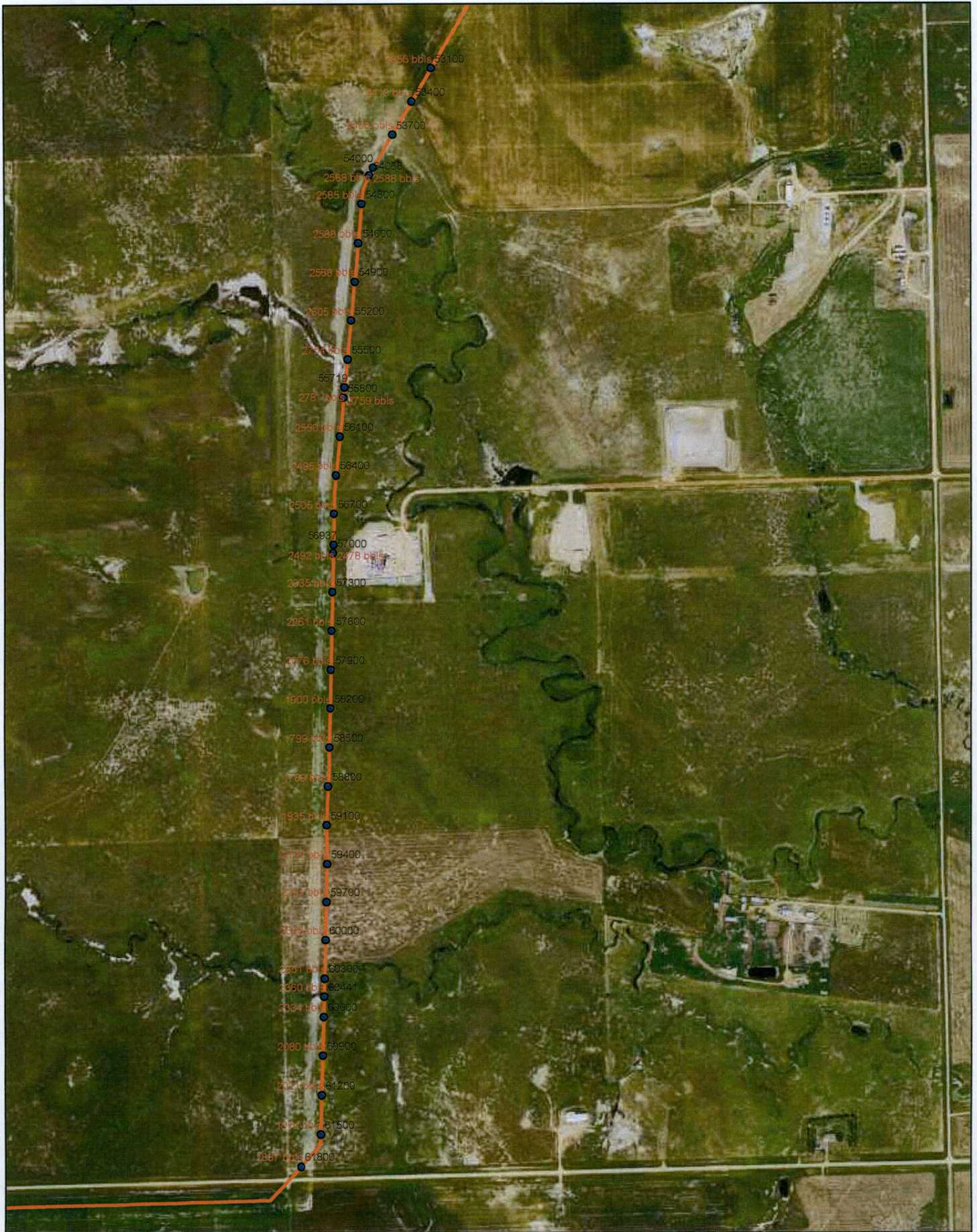
Hydraulic Volume Release Point
 Full Pipe Volume: 2542.5 BM
 Drain Down Volume: 2542.5 BM
 Total Volume: 2542.5 BM

Elevation Source: Downloaded

Isolation Valve
 Non-Isolation Valve
 Check Valve

Bridger Pipeline LLC
 Rupture Volume Profile
 Analysis Date: 8/20/2015 7:36:27 AM





HEART RIVER SPILL MODEL

- Release Point
- Centerline



MAP SIZE: 8.5" X 11" SCALE 1:12,000 DATE: 09/11/2015
 COMPILED BY JACK MURRAY

