U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Fred Boling Oil Wells Lease - Removal Polrep
Final Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: **POLREP #7**
Plugging of Abandoned Oil Wells Completed
Fred Boling Oil Wells Lease

Reynolds Station, KY
Latitude: 37.7425100 Longitude: -86.7431700

To:
From: Perry Gaughan, On Scene Coordinator
Date: 1/30/2015
Reporting Period: 10/27/14 through 11/10/14

1. Introduction

1.1 Background

Site Number:	Z4XA	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	OPA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	11/15/2013	**Start Date:**	11/16/2013
Demob Date:	11/11/2014	**Completion Date:**	11/10/2019
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:	E14409	**Reimbursable Account #:**	

1.1.1 Incident Category

This is an Oil Pollution Act removal project and an ongoing effort to plug abandoned oil wells identified in western Kentucky which are impacting neighboring streams with the potential to impact larger rivers downstream. The OPA 90 Work Plan (funding document) can be viewed in the documents section of this website.

1.1.2 Site Description

The Fred Boling Oil Well Lease consists of twenty-four (24) abandoned oil wells sitting on an 81 acre tract of farm land along Bates Hollow Road near Weberstown, Hancock County, Kentucky. The farm owner has been complaining of crude oil discharging into several tributaries on her land and affecting drinking water for her livestock and farmland downstream. Recently, she has made several complaints to Kentucky Oil and Gas officials (KOG) as well as Kentucky Department Environmental Protection and other state officials. KOG's Greg Welsh referred the property owner to EPA Region 4 ERRB's Chuck Eger for follow up action under the Oil Pollution Act.
The 24 identified oil wells were drilled in the 1940s through 1960's and continuously produced crude oil until the late 1990's. Visual inspection by KOG's Welsh, the EPA OSC and USCG Strike Team members found numerous wells leaking at land surface and impacting tributaries to Sugarcamp Creek, a contributing stream to Panther Creek in Hancock County. Panther Creek is a tributary to the Green River, which is over three hundred miles in length in Kentucky. The Green River, which empties into the Ohio River, serves as an important transportation artery for the coal industry. The Ohio River flows westerly into the Mississippi River. The farm land upon which the Fred Boling Oil Well Lease occupies is rural and hilly, with numerous tributaries to the Sugarcamp Branch of Panther Creek.
II. Assessment Findings:
On Tuesday, November 5th, EPA OSC Perry Gaughan met KOG's Greg Welsh and two USCG Strike Team members to inspect the 81 acre farm. Several of the abandoned well locations were leaking crude oil to land surface and impacting adjacent creeks. (see supporting photographs) Approximately one third of a mile west of the residence, a large twenty-five foot long sludge pit downgradient of a tank battery was filled with crude oil and sludge to a depth exceeding four feet. EPA estimates that it could be holding as much as 14,000 gallons of crude oil and it is also impacting a neighboring stream.
III. Access and Owner Concerns:
The OSC had a lengthy conversation with the property owner on signing an access agreement to perform the well plugging operations. Her initial concern was that she was reluctant to grant access to EPA subcontractors because she didn't want her farmland "torn up with random access roads to well locations".

She simply wanted the contractors to treat the land as “if it were their own backyard”. The OSC and Kentucky Oil and Gas' Greg Welsh stated that only previously used access roads would be used and graded as necessary and that all land would be brought back to its original state to the best of our ability.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Monday, October 27th, 2014
Funding to continue operations was approved by NPFC on Oct 14th, 2014. The ERRs crew mobed to the site to continue operations.

Fred Boiling Well # 2 (North Bates Hollow Road) Tuesday, October 28th, 2014

This well consisted of 7” casing and 2” production tubing. Initially, ERRs and oil well service contractors opened the well and extracted 290 feet of corroded production tubing. 280’ of 2” wash tubing was inserted. Wash down of the well interior was performed and a significant volume of residual oil and gas was noted at this location.

On Wednesday, Oct 29th, Southern Well Services, Henderson, Kentucky logged the well for placement of a cast iron bridge plug and determination of water bearing sands/zone. The depth of the well was determined to be 318 feet. The Vienna limestone layer was found at 310, the tar springs production zone was located beneath that layer and water bearing sands/zone was noted at 40-50 feet. The casing was perforated at 60 feet to protect the water aquifer prior to cementing. A cast iron bridge plug was set at 257 feet and 100 sacks of grout were used to finalize well closure.

Fred Boiling Well # 12 (North Bates Hollow Road) Monday November 3rd, 2014

This well consisted of 6.25" casing and 2” production tubing. Initially, ERRs and oil well service contractors opened the well and extracted 360 feet of corroded production tubing. 360’ of 2” wash tubing was inserted and wash down of the well interior was performed. A significant volume of residual oil and gas was noted at this location.

On Tuesday, Nov 4th, Southern Well Services, Henderson, Kentucky logged the well for placement of a cast iron bridge plug and determination of water bearing sands/zone. The depth of the well was determined to be 378 feet. A cast iron bridge plug was set at 302 feet on a tubing collar. The Vienna limestone layer was found at 356, the tar springs production zone was located beneath that layer and water bearing sands/zone was noted at 30-50 feet. The cement bond log showed good cement behind the well casing so no casing perforations were performed on this well. 125 sacks of grout were used later that afternoon to finalize well closure.

Fred Boiling Well # 7S (North Bates Hollow Road) Wednesday November 5th, 2014

This well consisted of 4.5” casing and 2” production tubing. Initially, ERRs and oil well service contractors opened the well and extracted 330 feet of corroded production tubing. 320’ of 2” wash tubing was inserted and wash down of the well interior was performed. A significant volume of residual oil and gas was noted at this location.

On Thursday, Nov 6th, Southern Well Services, Henderson, Kentucky logged the well for placement of a cast iron bridge plug and determination of water bearing sands/zone. The depth of the well was determined to be 346 feet. A cast iron bridge plug was set at 309 feet on a tubing collar. The Vienna limestone layer was found at 315, the tar springs production zone was located beneath that layer and water bearing sands/zone was noted at 30-50 feet. The cement bond log showed good cement behind the well casing so no casing perforations were performed on this well. 75 sacks of grout were used later that afternoon to finalize well closure.

Fred Boiling Well # 5 (North Bates Hollow Road) Friday November 7th, 2014

This well consisted of 4.5” casing and 2” production tubing. Initially, ERRs and oil well service contractors opened the well and extracted 240 feet of corroded production tubing. 240’ of 2” wash tubing was inserted and wash down of the well interior was performed. A significant volume of residual oil and gas was noted at this location.

On Monday, Nov 10th, Southern Well Services, Henderson, Kentucky logged the well for placement of a cast iron bridge plug and determination of water bearing sands/zone. The depth of the well was determined to be 250 feet. A cast iron bridge plug was set at 236 feet on a tubing collar. The cement bond log showed good cement behind the well casing so no casing perforations were performed on this well. 55 sacks of grout were used later that afternoon to finalize well closure.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*

2.2 Planning Section

No information available at this time.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

No information available at this time.

4. Personnel On Site

No information available at this time.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.