

4/2014

IN-OFFICE BENEFICIAL USE EXAM REPORT

Permit No. 57-11693

Prepared by VICKY MUSIC

Date 8/21/2014

Same as permit Different than permit

Owner Name	☒	☐ _____
Owner Address	☒	☒ <u>change of address form signed & processed</u>
Source	☒	☐ _____
Tributary	☒	☐ _____
POD	☒	☐ _____
POU	☒	☒ _____
Beneficial Use(s)	☒	☐ _____

Exam Fee Required for Permitted Rate \$50

Exam Fee Paid \$50

Overlaps ☐ No ☒ Yes, summarize POD 57-10197

Amendment ☒ No ☐ Yes, summarize _____

Technical Confirmation Tools

ArcMap	☒	GPS	☒
Taxlot	☒	Photos	☒
Well Log	☐	Diagrams	☒
Other	☒ explain: <u>field exam</u>		

Conditions/Comments see memo in file

Exam Date Entered ☒

Draft License Created ☒

Shapes Updated ☒

MEMORANDUM

TO: LICENSING FILE 57-11693
FROM: VICKY MUSIC
SUBJECT: FIELD EXAM AND LICENSING RECOMMENDATIONS
DATE: 8/21/2014

The permit was issued for 0.09 cfs for domestic and stockwater uses from a spring. The correct fee was timely paid. This permit qualified for an in-house licensing review; however, because a spring source has to have been developed for a water right to exist, I conducted a field exam for this purpose. The field exam was conducted on 8/20/2014. Kenneth Cooper, the permittee, accompanied me on the exam. Field photographs are included in this memo.

Mr. Cooper signed a change of address form. The permit has a former address, and the correct address is in the database, but I am not sure how, unless it was done when the proof was filed.

Mr. Cooper stated that the system was developed and in place before he purchased the property. Sage Creek used to flow through the middle of Mr. Cooper's property southwest of his house. Topographic maps show the creek as bisecting the property. The creek was rerouted so that it flows north and east around Mr. Cooper's property, and then resumes its natural course.

Mr. Cooper was told that a casing about 20 feet long was driven into the spring. The casing is not visible from the ground surface so no GPS reading was taken. Currently, it is in the middle of a bean field. From the spring, there is a buried pipe to a pump and motor northeast of the house, and on the bank of Sage Creek. Mr. Cooper did not know the type and size of the pipe; however, in his proof of beneficial use, filed in 2007, he stated the pipe had a diameter of 8 inches. Mr. Cooper says there are several springs on the property.

According to Mr. Cooper, the electric submersible pump is a 3 hp variable speed, rated for 60 gpm. It is in an 18 to 24 inch casing, and is not visible from the surface. Mr. Cooper said the pump and motor were set about 20 feet below the ground surface. Mr. Cooper looked in his records to see if he had been provided any information about the system or pump or motor specs, and he could not find any. There is an overflow valve so that excess water flows into the creek. Mr. Cooper says there is always water flowing into the creek at this point, and it was audible during the exam.

Water is pumped through buried 2-inch diameter pipe to T connections northeast of the house, then to the house and outbuilding and to 1 ¼ inch pipe for yard irrigation. There is no other source of water for the house. There are several spigots on the property, and one that is routed south of the outbuilding for stockwater. The piping reduces in size to 1-inch diameter to the sprinkler heads and spigots.

The spring is also the POD for right 57-10197, domestic for the neighboring property to the east, according to the application.

No stock were on site the day of the exam. Mr. Cooper stated he has had 100 head on site. His proof statement stated 50 head, which may have been the number onsite at that time.

Condition regarding stockwater should be modified to state 100 head range cattle.

FLOW CALCULATION

- 1] IDWR reference for pipe flows: flow through 2 inch pipe is 0.11 cfs.
- 2] IDWR standard 0.04 cfs per home. A diversion rate of 0.05 is acceptable for stockwater, so the system is capable of producing 0.09 cfs as licensed.

VOLUME CALCULATION

- 1] domestic – use IDWR standard of 1.2 af for both internal and irrigation.
- 2] stockwater -
 - a] $\text{Vir} = 100 \text{ head} \times 0.0134 \text{ af per head}$ is IDWR standard irrigation requirement = 1.34 af = 1.3 af
 - b] $\text{Vdr} = 0.05 \text{ cfs} \times 1.9835 \times 365 \text{ days} = 14.48 = 14.5 \text{ af}$

RECOMMENDATION FOR LICENSING

Domestic use	0.04 cfs	1.2 af
Stockwater use	0.05 cfs	1.3 af -lesser of the Vir and Vdr values.
Totals	0.09 cfs	2.5 af



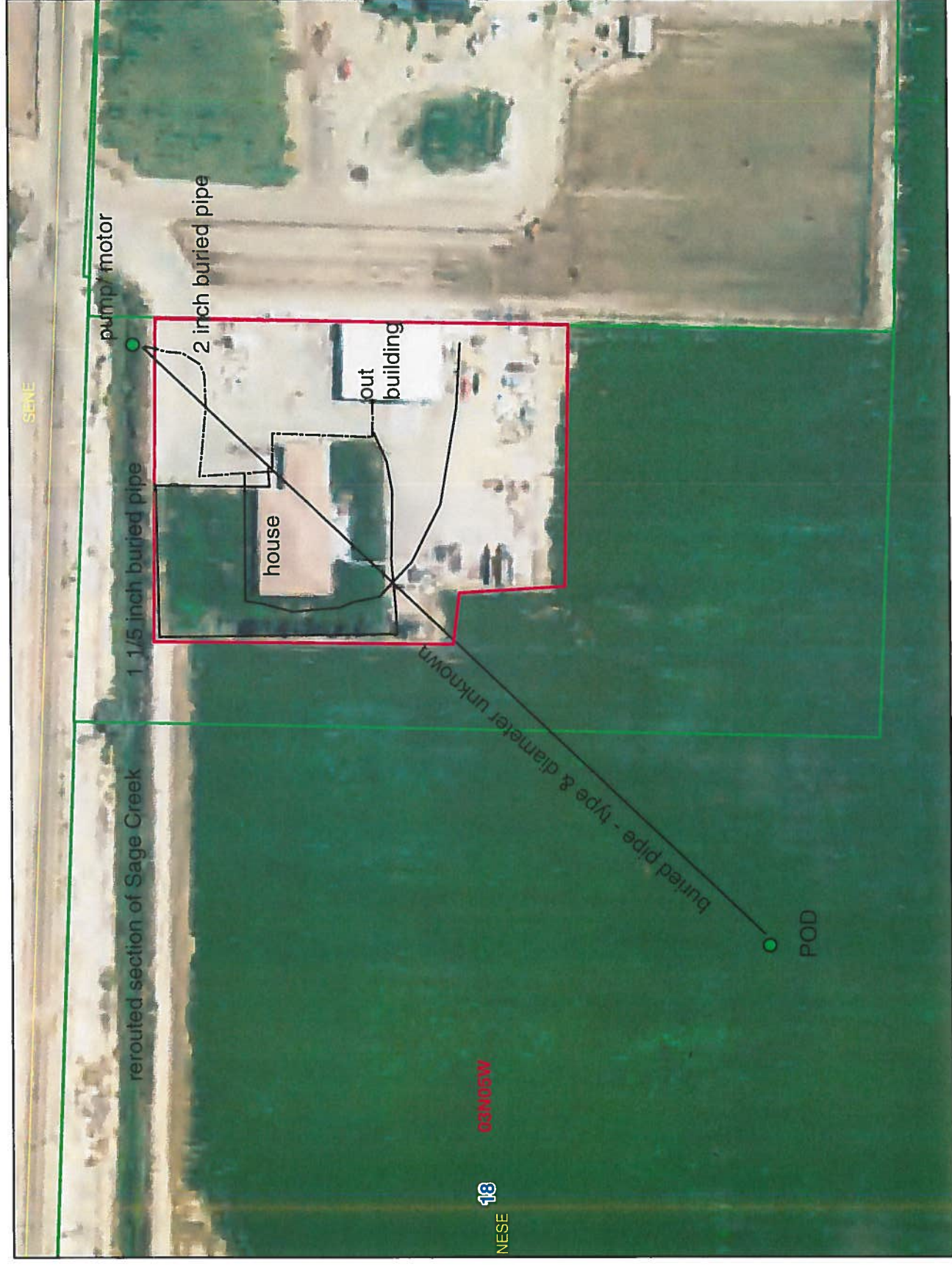
Pump and motor is about 20 feet deep in this casing [middle of photo] , adjacent to Sage Creek.



Looking northwest at house and lawn. Spring is about 400 – 500 feet southwest of the house.



Looking south at house and outbuilding.



57-11693-- 2013 NAIP. Spring is in original Sage Creek bed. Approximately location of buried pipe from spring to pump and piping to house, outbuilding labeled. POU outlined in red.