



WATER-RIGHT DOCKET

Agate Fossil Beds National Monument

Docket No: 1

HEADQUARTERS AREA WELL.

Administrative Agreements

04-01-1973: special use permit: permit no. 2-165-3

Form 10-1147
(Rev. Dec. 1966)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

This permit shall be

of _____ pages

D

SPECIAL USE PERMIT

Agate Fossil Beds National Monument

PERMIT NO. 2 - 165 - 3	EXPIRES 1/1/73
PREVIOUS PERMIT NO. None	

Agate Springs Ranch, of Sioux County, Nebraska, is hereby authorized during the period from April 1, 1972, to April 1, 1973, to use the following-described land in the above-named area:

to tap on to the National Park Service water installation within
S1/4, Sec. 3, T26N, R55W, 6PM.

for the purpose of

Watering Agate Springs Ranch livestock grazing on adjacent lands
north of the Monument, while they are installing watering facilities
on their own land.

subject to the conditions on the reverse hereof and attached pages and to the payment to the Government of the United States of the sum of Twenty five and 00/100 Dollars (\$ 25.00), in advance (Monthly, semiannually, etc.), or as follows: May 1, 1972

payment to be made to the Superintendent by Express or Postal Money Order, Certified Check, or Draft payable to the National Park Service, or Cash.

Issued at Jefferson Ranch, this 18 day of April, 19 72.
Donald R. Harper
Superintendent

The undersigned hereby accepts this permit subject to the terms, covenants, obligations, and reservations, expressed or implied, therein.

TWO WITNESSES TO SIGNATURES		PERMITTEE (SIGNATURE)	
NAME <u>Roy W. Wear</u>	NAME <u>Margaret C. Hoffman</u>		
ADDRESS <u>Jefferson, Neb.</u>	ADDRESS <u>Jefferson, Neb. 69346</u>		
NAME <u>James M. Dempsey</u>	NAME <u></u>		
ADDRESS <u>P.O. Box 2440 Estes Park, Colo.</u>	ADDRESS <u></u>		
APPROVED: (If approval is required by higher authority)			
NAME <u></u>	TITLE <u></u>	DATE <u></u>	

When name or names are used on a copy of permit, for co-partnership, partnership, or other, the officer or officers of the partnership, corporation, or other, authorized to execute the permit, shall sign with their authority of such signature being attested by the Secretary, with corporate seal, in lieu of witnesses.

(This copy for the Superintendent's files)

Page 1

Special Conditions Continued

16. Agate Springs Ranch will furnish all supplies, materials, and labor for installation, maintenance, and use of stock watering facility.
17. The installation will proceed only under the supervision of the Monument staff.
18. The installation will include:
 - at least 100' distance down slope from the well;
 - a shut off valve inside the pump/well shelter; a vacuum break in the pipeline to the watering tank outlet; at least a 2" gap between the water pipe outlet and the rim of the water tank; a demand valve installed in such a way that the water is delivered to the watering tank from above the tank, not from the floor of the tank.
19. No cattle rubbers using insecticide will be placed in the vicinity of the well or stock watering facility.
20. National Park Service demand for the water shall take precedence.

ATTACHMENT A

CONTINUATION OF CONDITIONS OF THIS PERMIT (FORM 10-114)

The following provisions constitute Condition 4 in accordance with Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967.

Nondiscrimination. If use of the resource covered by the permit will involve the employment by the permittee of a person or persons, the permittee agrees as follows:

- (1) The Permittee will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Permittee will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Permittee agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Superintendent setting forth the provisions of this nondiscrimination clause.
- (2) The Permittee will, in all solicitations or advertisements for employees placed by or on behalf of the Permittee, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- (3) The Permittee will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Superintendent, advising the labor union or workers' representative of the Permittee's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, as amended, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The Permittee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (5) The Permittee will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, as amended, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Superintendent and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

ENVIRONMENTAL CONSULTANTS, INC.

391 NEWMAN AVE. • P. O. BOX 2037 • CLARKSVILLE, INDIANA 47130 • TEL. (812) 282-8481

From - U.S. Department of the Interior
 National Park Service
 Superintendent
 Post Office Box 427
 Scotts Bluff National Monument
 Gering, Nebraska 69341

Date - 17 March 1975**E.C.I. #** 3783**Sample Description -**

Agate Fossil Beds National Monument

P. O. No. - PX 6700-5-0042**Job No. -** 7416-02

Alkyl benzene sulfonates (ABS)	<u><0.005</u> mg/l	Lead (Pb)	<u><0.030</u> mg/l
Arsenic (As)	<u>0.009</u> mg/l	Manganese (Mn)	<u><0.008</u> mg/l
Barium (Ba)	<u><0.030</u> mg/l	Mercury (Hg)	<u><0.001</u> mg/l
Cadmium (Cd)	<u><0.002</u> mg/l	Nitrate (NO ₃ ⁻)	<u>1.88</u> mg/l
Chloride (Cl ⁻)	<u>14.18</u> mg/l	Phenols (Phenols)	<u><0.001</u> mg/l
Chromium, hexavalent (Cr ⁺⁶)	<u><0.005</u> mg/l	Selenium (Se)	<u><0.01</u> mg/l
Copper (Cu)	<u><0.005</u> mg/l	Silver (Ag)	<u><0.002</u> mg/l
Cyanide (Cn ⁻)	<u><0.002</u> mg/l	Sulfate (SO ₄ ⁼)	<u>140.00</u> mg/l
Fluoride (F ⁻)	<u>0.12</u> mg/l	Total dissolved solids (TDS)	<u>508</u> mg/l
Iron (Fe)	<u><0.010</u> mg/l	Zinc (Zn)	<u>0.186</u> mg/l

Remarks:




254CNSSC
AGFO
USPS

UNITED STATES
DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY
Water Resources Division
Rm. 127, Nebraska Hall
901 North 17th Street
Lincoln, Nebraska 68508
July 19, 1968

IN REPLY REFER TO

RECEIVED	
San Francisco Planning and Service Center Office of Land and Water Rights NATIONAL PARK SERVICE	
JUL 22 1968	
ACT. INFO.	CHIEF
	ASST. CHIEF
	STAFF ASST.
	SUPV. APPR.
	PRELIM. PLAN.
	FILE
	EXCHANGE
	Supv. r.y.f. Eng.
	Robert G. 7/23
	Reed
DOCKET	
FILE	

Memorandum

To: Mr. J. W. Roberts
National Park Service
San Francisco, Calif. 94102

From: District Chief, WRD
Lincoln, Nebr.

Subject: Agate Fossil Beds, Nebraska

In accordance with your request that this office supervise the drilling and test of Well #1 at the Agate Fossil Beds site the following is submitted. Information thus contained is for administrative use. No formal report is contemplated.

The test was conducted at the location of NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 28 N., R. 55 W. in Sioux County. The well was drilled in July 1967 and tested for performance August 7-9, 1967. Samples of the rock materials drilled were obtained. The upper 89.5 feet was sampled by H. M. DeGraw, geologist. The driller, George Snyder, caught samples from 89.5 feet to the 193-foot depth. Difficulties with mud circulation attributed to fracture zones occurred during the drilling. Circulation was lost a number of times, particularly at a depth of 41 feet, 66 feet, and 193 feet. At the 66-foot depth it was necessary to fill the 4-inch test hole with concrete and redrill with an 8-inch bit with which the hole was finally completed to the 240-foot depth.

A description of the drill samples is attached. Microscopic examination in the laboratory was made by H. M. DeGraw who has been making an intensive study of the Tertiary rocks of northwest Nebraska.

The completed well was cased with 6-inch I.D. steel pipe to a depth of 240 feet. The lower 100 feet of casing was slotted to provide entrance of ground water to the well.

The well was test pumped at 160 gallons a minute for a period of 30 hours. The static water level was 36.33 feet below the top of the casing. The pumping level after 30 hours was 133 feet below the top of the casing, drawdown being 97 feet. The water was clear and appeared to be free of sediment and had excellent taste. Samples of the water were obtained for chemical-quality analysis given in the attached table.

It is my opinion that the well is capable of 150 gallons a minute sustained yield. The pump could be set at about the 200-foot depth below the top of the casing; this would allow ample space below the intake to serve as a sump for sediment that might be drawn into the well.

FOR THE DISTRICT CHIEF:


Chas. F. Keech

Attach. 2

Scotts Bluff National Monument and
Agate Fossil Beds National Monument
Gering, Nebraska 69341

August 15, 1967

Memorandum

To: Regional Director, Midwest Region
Attn: Mr. Harvey Reynolds

From: Superintendent

Subject: Pumping Test (Project WR-4) Agate Fossil Beds

The first construction project at Agate Fossil Beds was (for all practical purposes) completed on August 8. Those present at the pumping test included Mr. Charles Keech, Supervisory Hydrologist, U.S. Geological Survey, Lincoln, Mr. Hal DeGraw, State of Nebraska Geologist, Mr. Meder Smith (the contractor) and myself.

An optimum flow of 165 gallons per minute has been achieved, which is far in excess of the volume required in the contract specifications. The water seems to be very pure, good tasting, and sand free. The bore hole is 240 feet in depth, and the water level is 36.4 feet below ground surface, when the pump is not running.

Mr. Keech has signed a statement recommending that we accept the job. The contractor has capped the top section of casing, removed his apparatus, and cleared the area. Necessary papers for payment were submitted to San Francisco Planning Center on August 14.

The attached pictures were taken on August 8, and are appropriately captioned.

I will appreciate anything you can do to speed up the timetable for the projects to follow. The planning guides which we are receiving from the SSC still reflect a desire for completion in 1968, the Nebraska Centennial year, which is of course, grossly in error.

Richard L. Holder
Superintendent

Enclosure

August 8, 1967

Memorandum

To: Chief, SSC-SLW

From: Charles Keech, United States Geological Survey,
Lincoln, Nebraska

Subject: Test Well (Project WR-4) - Agate Fossil Beds National
Monument

On August 8, 1967, I was present for the pump testing of the subject well.

It is my opinion that the contractor (Meder Smith Company of Alliance, Nebraska) has complied with the contract specifications, and I recommend that the work be accepted.


Charles Keech
Supervisory Hydrologist



INVOICE

MEDER SMITH, Inc.

WELLS ★ PUMPS ★ ACCESSORIES

1016 West Third P. O. Box 517 Phone 762-5791

Alliance, Nebraska 69301

No 6137
~~81272~~

Contract No. 14-10-7-973-78

Date August 11, 1967

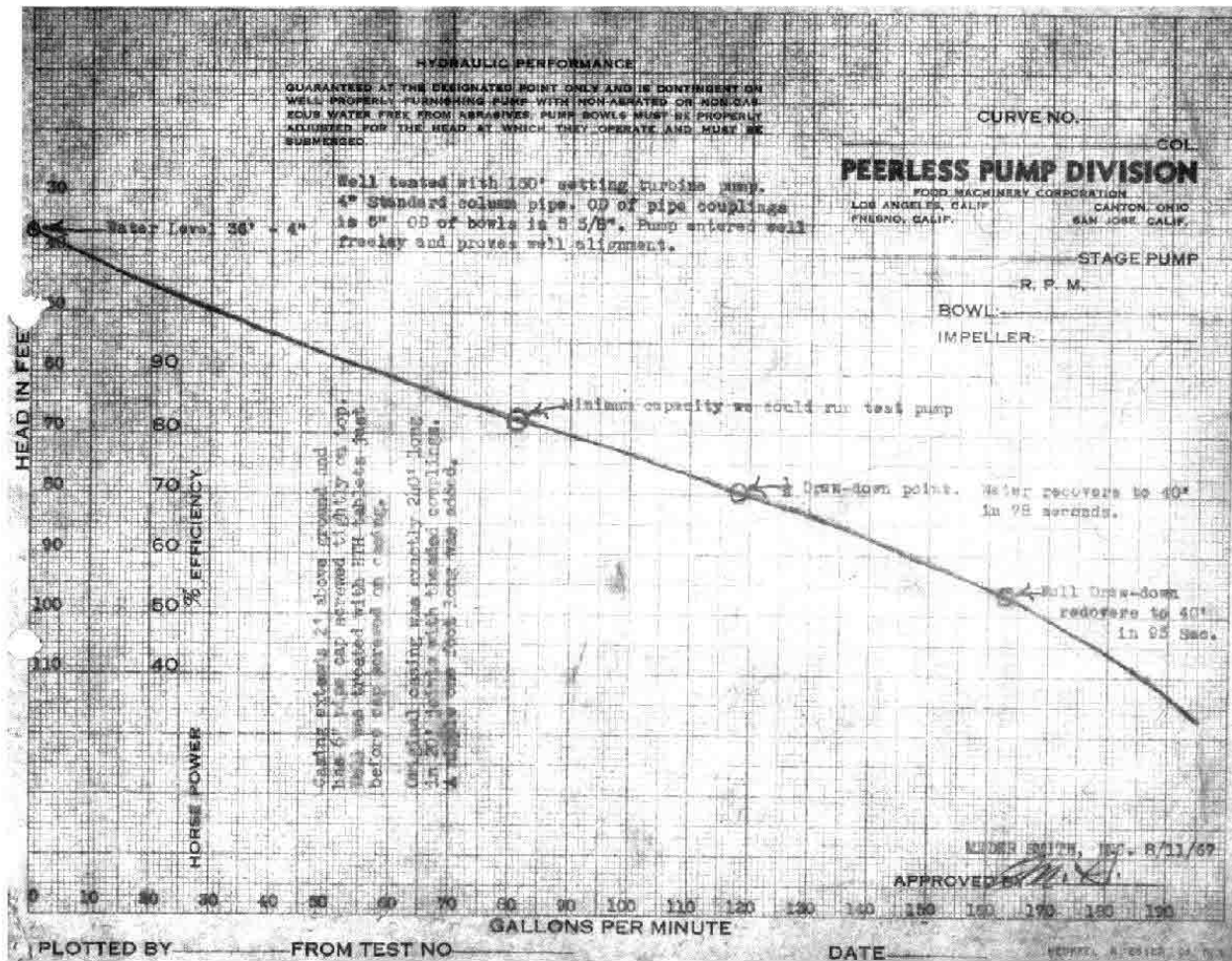
To National Park Service

Address Office of Land & Water Rights - Box 36063

City San Francisco, California 94102 Terms Net

ITEM	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
No.1		Moving equipment to and from site		100 00
2		Moving from site to site		0 00
3.	100	Lineal feet 8" hole	3 00	300 00
4.	100	Lineal feet 8" hole	3 00	300 00
5.	39	Lineal feet 8" hole	2 50	97 50
6.	300-400'			0 00
7.	141	Lineal feet 6" I.D. casing	3 10	437 10
8.	100	Lineal feet 6" I.D. perforated casing	6 00	600 00
9.	8	Hrs. bailing test	12 00	96 00
10.	48	Hours pumping test	6 00	288 00
11.		Plugging		0 00
12.	20	Hours developing well	12 00	240 00
13.	10	Feet reaming to 14" and cementing	5 00	50 00
14.	1	Days standby time	50 00	50 00
		June 30, 1967-Rig and men were on job ready to start. Don Bottles from Rapid City did not show up to pick spot. Dick Holder was present and can verify. Location was not selected until July 5, 1967.		
15.	80	Feet concret seal between casing and bore	2 00	160 00
Extra	149	Feet gravel pack between 8" bore and 6" casing	1 00	149 00
				82867 60

Interest at the rate of 8 per cent will be charged on all accounts 30 days past due.





MEDER SMITH, President

MEDER SMITH, Inc.

WELLS ★ PUMPS ★ ACCESSORIES

1016 West Third P. O. Box 517 Phone 762-5791

Alliance, Nebraska 69301

July 24, 1967

LOG OF AGATE FOSSIL BEDS TEST WELL



1 - -	5 - -	Top soil & sand
5 - -	10 - -	Sand
10 - -	15 - -	Loose rocks & sand
15 - -	20 - -	Sand with some loose rocks
20 - -	23 - -	Magnesia rock & sand
23 - -	28 - -	Magnesia rock & sandrock with some fine sand
28 - -	35 - -	Sandrock & hard rock & fine sand
35 - -	36 - -	Soft sandrock & sand
36 - -	42 - -	Hard rock with little layers of sand
42 - -	46 - -	Hard course & fine sand
46 - -	47 - -	Soft & fine sand
47 - -	48 - -	Hard rock & soft fine sand
48 - -	54 - -	Hard & soft rock with intermittent 6" layers of sand between rocks
54 - -	58 - -	Course sandrock & fine sand
58 - -	63 - -	Fine black water sand
63 - -	67 - -	Layers of fine black water sand & rock
67 - -	68 - -	Sandrock & hard rock
68 - -	69 - -	Fine black water sand
69 - -	71 - -	Layers of sandrock & fine black water sand
71 - -	75 - -	Fine black water sand with very little rock
75 - -	78 - -	Soft sandrock & fine black water sand
78 - -	82 - -	About 3" alternate layers of hard sandrock & fine black water sand
82 - -	83 - -	Fine black water sand
83 - -	85 - -	Hard sandrock & fine sand
85 - -	89 - -	Very hard sandrock
89 - -	90 - -	Hard rock
90 - -	93 - -	Fine black water sand
93 - -	100 - -	Fine black water sand with layers of rock 2" to 3" thick
100 - -	104 - -	Fine black water sand with thin layers of rock
104 - -	111 - -	Fine black water sand
111 - -	112 - -	Hard rock & sand
112 - -	145 - -	Fine black water sand with few thin layers of rock (33' which would make good well without any of the other water formations.)
145 - -	153 - -	Sandrock & fine brown sand
153 - -	187 - -	Sandrock & rock with fine sand
187 - -	193 - -	Sandrock & rock
193 - -		Hit another rock fracture & lost water immediately
193 - -	200 - -	Soft sandrock with thin layers of rock & runs of light brown sand
200 - -	208 - -	Soft sandrock & small layers of sand
208 - -	239 - -	Soft sandrock with layers of light brown sand & some rock layers

Water level - - 36' 4"

PUMPS



SPRINKLING SYSTEMS



WELLS

Agate Test #1 Microscopic Analysis
H. M. DeGraw
July 10, 1967

<u>Description</u>	<u>Depth, in feet</u>	
	<u>From</u>	<u>To</u>
Quaternary		
Holocene and Pleistocene		
Topsoil.....	0	1+
Sand, very fine to fine, predominantly very fine; slightly silty, noncalcareous.....	1+	7
Sand, very fine to fine, predominantly very fine; slightly silty, noncalcareous; trace of calcite.....	7	12
Sand, clean, very fine to fine with pieces of limestone, sandstone, and medium gravel; probably very slightly calcareous from 15-16 ft.....	12	16
Sand and gravel, predominantly very fine to medium; mostly gravel and pebbles (of limestone and calcareous cemented sandstone); predominantly very calcareous.....	16	20
Tertiary		
Miocene		
Arikaree Group		
Harrison Formation (?)		
Sand, predominantly very fine to fine; some medium to coarse with white soft lime; grayish-brown; non to very calcareous.....	20	23
Circulation sample		
Sandstone, predominantly very fine to fine with medium, light brownish-gray; lime-cemented and limestone, white, gray, some pebbles.....		23
Sand, predominantly very fine to fine, grayish-brown with soft white limestone pieces; predominantly noncalcareous.	23	28
As above.....	28	34.5
Interbedded (34.5-35.5 is sand).....	34.5	43
Sand, predominantly very fine to fine, grayish-brown and hard white limestone layers, non to very calcareous		
Losing circulation and lost circulation at 41 ft.		
Circulation sample		
Limestone, white and sandstone, very fine to fine, silty, light-gray and soft sandstone, light-brown, very fine to fine, very slightly calcareous.....		43
Limestone, hard, sandy, very fine to fine, very light gray, very calcareous.....	43	46

	Depth, in feet	
	From	To
Harrison Formation (?)--Continued		
Sandstone, soft, predominantly very fine to fine, slightly calcareous (white limestone may be lag from above).....	46	47
Interbedded, (47-48 hard, 48-50 soft), grayish-brown, sand and sandstone with lime cement; predominantly very fine to fine sand; slightly to very calcareous.....	47	50
Interbedded sand and sandstone; predominantly very fine to fine, grayish-brown; slightly silty; slightly to very calcareous.....	50	54
Monroe Creek Formation		
Hard sandstone, lime-cemented; predominantly very fine to fine; light-gray; very calcareous.....	54	58
Sand, very fine to fine; possibly slightly silty; slightly calcareous.....	58	62
Lost circulation		
No sample with 4" bit; changed to oversized 8" bit.....		
(Poor sample) Sand with white limestone pieces, predominantly very fine to fine with some medium and coarse, probably from cement plug; slightly calcareous.....	62	64.5
Circulation sample		
(Sand and gravel and pebbles from cement plug)		
Sandstone, very fine to fine, noncalcareous, light-brown..		
Sandstone, very fine to fine, moderately to very calcareous, very light gray; limestone, white, very calcareous.....		64.5
Sand, soft, brown, predominantly very fine to fine; trace of limy pieces; very slightly calcareous.....	64.5	67
Sandstone, hard, predominantly very fine to fine with white limy pieces, light brownish-gray, (poor sample ?); much medium to very coarse sand, which may be lag, slightly to very calcareous.....	67	68
Sand, soft, brown, predominantly very fine to fine, some coarser sand, probably from cement plug, non to very slightly calcareous.....	68	69
(Two samples) Interbedded, noncalcareous		
Sand, predominantly very fine to fine; brown; sandstone very fine to fine; non to medium calcareous.....	69	72
Sandstone, moderately hard, predominantly very fine to fine, some medium to coarse (lag ?); brown; slightly calcareous.....	72	75
Sand, soft; predominantly very fine to fine with trace of medium; trace of white limy sandstone; brown; non to slightly calcareous.....	75	78

	Depth, in feet	
	From	To
Monroe Creek Formation--Continued		
Sandstone, hard; predominantly very fine to fine with some medium to coarse (lag ?); some white limy pieces; brown; slightly calcareous.....	78	80
Interbedded (80-81 and 82-83 soft; 81-82, hard)		
Sand and sandstone; predominantly very fine to fine, with trace of coarser, some moderately calcareous; cemented, brown, non to slightly calcareous.....	80	83
Sandstone, hard; predominantly very fine to fine, with trace of coarser sand; brown; some moderately calcareous, mostly non to slightly calcareous.....	83	85
Circulation sample		
Sandstone, very fine to fine; predominantly slightly silty; very light brownish-gray; slightly to moderately calcareous.....		85
Sandstone, hard, trace of medium to coarse; predominantly very fine to fine; slightly silty; light-brown; very calcareous.....	85	89.5
Sandstone; light brownish-gray and light brown; slightly to very calcareous.....	89.5	90
Sand; predominantly very fine to fine with dark minerals; slightly silty, trace of white limy sandstone; light-brown; noncalcareous.....	90	93
Interbedded.		
Sand; predominantly very fine to fine; slightly silty with black minerals; light-brown; noncalcareous; with white limestone pieces and sandstone, soft, lime-cemented, moderately calcareous, light brownish-gray.....	93	100
Sand, trace coarser, very fine to fine; predominantly noncalcareous; some white limy pieces with sandstone, moderately calcareous.....	100	104
Sand, soft, predominantly very fine to fine with trace of coarser; few lime-cemented pieces; light-brown; noncalcareous.....	104	111
Sandstone, hard, predominantly very fine to fine; slightly silty; light brownish-gray; moderately to very calcareous.	111	112
Sandstone, soft, as above, slightly silty.....	112	113
Sand, soft, as above, trace of coarser sand; slightly silty; light brownish-gray; moderately calcareous.....	113	125
Sand, predominantly very fine to fine, slightly silty with limy pieces (small sand size); light-brown; noncalcareous.	125	133
As above (limy pieces are probably in limestone layers.....	133	139
Sand, predominantly very fine with fine; moderately silty with limy pieces; light-brown; slightly calcareous.....	139	145
As above.....	145	153

	<u>Depth, in feet</u>	
	From	To
Monroe Creek Formation--Continued		
Sandstone, predominantly very fine to fine; slightly silty with hard white limestone pieces (layers); light-brown; noncalcareous.....	153	166
Sandstone, soft to hard; predominantly very fine to fine; moderately silty with hard white limestone pieces (layers); non to very calcareous; and sand, light-brown and white to very light-gray.....	166	187
(No sample), probably sandstone and limestone.....	187	193
Fracture zone.....		193
No samples collected.....	193	240
Total depth of test well.....		240

Samples are stored at the Conservation and Survey Division of the University of Nebraska, Room 113 Nebraska Hall, 901 North 17th Street, Lincoln, Nebr. 68508.

U.S. DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

Analyses by Geological Survey, United States Department of the Interior
(parts per million)

9-268 q

Well Location 28N55W13eb 42°23'50"N Long. 103°41'41" Depth of sample, 240 ft.						
Date of collection		Aug. 8, 1967				
Silica (SiO ₂)	56					
Iron (Fe)	--					
Manganese (Mn)	--					
Calcium (Ca)	36					
Magnesium (Mg)	7.9					
Sodium (Na)	13					
Potassium (K)	6.7					
Bicarbonate (HCO ₃)	163					
Carbonate (CO ₃)	0					
Sulfate (SO ₄)	13					
Chloride (Cl)	3.1					
Fluoride (F)	.5					
Nitrate (NO ₃)	13					
Dissolved solids						
Calculated	229					
Residue on evaporation at 180°C ..	248					
Hardness as CaCO ₃	122					
Noncarbonate hardness as CaCO ₃ ..	0					
Alkalinity as CaCO ₃	134					
Specific conductance (micromhos at 25°C)	332					
pH	7.3					
Color	5					
Boron	.03					
SAR	.5					

GPO 830-857

Other Supporting Information

REPORT ON SURVEY OF ENVIRONMENTAL HEALTH FACILITIES
AGATE FOSSIL BEDS NATIONAL MONUMENT, NEBRASKA

NOVEMBER 1974

By
Bert W. Mitchell
National Park Service Consultant
U.S. Public Health Service
655 Parfet Street
P.O. Box 25287
Denver, Colorado 80225

REPORT ON SURVEY OF ENVIRONMENTAL HEALTH FACILITIES
AGATE FOSSIL BEDS NATIONAL MONUMENT, NEBRASKA

NOVEMBER 1974

By
Bert W. Mitchell
National Park Service Consultant
U.S. Public Health Service
655 Parfet Street
P.O. Box 25237
Denver, Colorado 80225

A survey of the environmental health facilities at Agate Fossil Beds National Monument, Nebraska, was made on November 8, 1974. Mr. Dennis Turay, Park Ranger, assisted in making the inspection.

All buildings at the Monument are of temporary construction consisting, primarily, of standard or modified mobile homes. The area contains two mobile residences, an office trailer, a mobile comfort station for men and women, a large mobile museum, a steel storage and utility building, a small steel well house and one double pit privy. There are no concessioner facilities.

WATER SUPPLY

Water is supplied to the area through approximately 1,400 feet of 8-inch asbestos-cement pipe running from the developed area to the well which is located to the northwest of the main area. The 100-foot deep drilled well contains a 6-inch steel casing and a 1-hp Jacuzzi submersible pump with a sanitary well seal. Pressure is provided by five Jacuzzi Hydro-cels rated at 75 psi and operated at 40- to 60-psi. Chlorination is accomplished with an Aerofeed, Model WF 1530, hypochlorinator. There is approximately 3,700 gallons of line storage which furnishes adequate chlorine contact time.

Bid proposals have been distributed to renovate the water supply system as follows: A new 100,000-gallon concrete reservoir will be constructed on a hillside approximately 1/4-mile northwest of the existing well. A small addition to the well house will be made to provide storage for application of chlorine cylinders which will be utilized instead of the existing hypochlorinator.

The cattle watering tank which was previously located near the well house has been removed, and the urinals in the men's room have been protected by the addition of approved backsiphon devices.

Bacteriological sampling and analysis is adequate and current to date. A sample of the water for complete chemical analysis was collected and submitted to the appropriate laboratory during October, 1974.

Recommendations:

None.

SEWAGE DISPOSAL

The two residential trailers and the comfort station discharge wastes to the sewer system in the summer months. Winter discharge is from one trailer residence only. A pit privy is provided for winter visitor usage. The disposal system consists of a 7,000-gallon concrete, dual-chamber septic tank which discharges to two 100-foot-long absorption trenches. The septic tank and absorption field is located about 500 feet east of the residential area and is operating satisfactorily. Visual inspection of the septic tank indicated a sludge depth of approximately twelve inches and a scum depth of approximately two inches.

Recommendations:

None.

SOLID WASTE DISPOSAL

The very small amount of refuse collected in this area is hauled to a dump owned and operated by the City of Harrison, Nebraska. PHS Form 4977, "Report of National Park Service Solid Waste Disposal Practices," is attached.

REPLACES EPA-18 (CIN) WHICH IS OBSOLETE.

INSTRUCTIONS

1. **IDENTIFICATION NUMBER** – This is a 14 digit code number that geographically identifies the location of the utility. It will be filled in by EPA personnel.
2. **NAME OF WATER UTILITY** – This is the complete, official name of the utility.
3. **ADDRESS** – This is the mailing address of the utility (*this may be but does not necessarily have to be the physical location of the treatment plant*).
4. **CITY, COUNTY, STATE** – This is the city, county and state of the mailing address of the utility.
5. **ZIP CODE** – This is the zip code of the mailing address of the utility.
6. **IS THE UTILITY OWNED BY A MUNICIPALITY, DISTRICT, INVESTOR OWNER, STATE OR OTHER** (*specify in remarks*) – Place an **X** in the box that describes the type of ownership of the utility.
7. **RETAIL POPULATION SERVED - NUMBER SERVICES, METERS** – Fill in these boxes with the most current information available. Do Not include the population served by water utilities that purchase water from you wholesale.
8. **NUMBER OF WHOLESALE CUSTOMERS** – In cases where water is sold to wholesale customers (*customers who buy water from you for resale*) fill in the boxes with the number of this type of customer.
9. **WHAT IS THE CHARACTERISTIC(S) OF YOUR SERVICE AREA?** – Place an **X** in the boxes necessary to describe the predominant characteristic(s) of your service area.
10. **CAPACITIES** – Fill in these boxes with the most current information available. Report all storage that does not have to be pumped into the system, whether it is elevated or ground storage.
11. **PRODUCTION** – Fill in these boxes with the most current information available.
12. **DATE FORM COMPLETED** – Fill in the numeric designation of the month (01 - 12) and the last two digits of the year when the form was completed.
13. **REMARKS** – Additional information can be provided (*maximum of 50 Alpha and/or Numeric characters*).
14. **SOURCE AND TREATMENT** – Write in the spaces below Name the name of the river, lake, other utility, well field, or other source from which the supply of water is taken. Circle "R" for regular source or "A" for auxiliary source. If more than one source is used, use separate lines for each source. If more than four sources are used, then list on a second form starting with 05. Place an **X** in the block(s) for the types of treatment rendered the raw water. Mark each source separately.
15. **INTAKE LOCATION** – Latitude and Longitude of intake.
16. **LABORATORY CONTROL** – Place an **X** in the box for the type of types of laboratory analyses made at the treatment facility. Leave these blocks blank if no laboratory analyses are performed.

Scotts Bluff National Monument and
Agate Fossil Beds National Monument
Gering, Nebraska 69341

L54 MWR (PC)

June 19, 1968

Memorandum

To: Regional Director, Midwest Region

From: Superintendent

Subject: Water Resources Survey

As was done last year, we are submitting forms for Agate Fossil Beds only. The situation at Scotts Bluff is stable. The existing system is fully adequate and we can foresee no need for additional facilities.

The sheets for Agate (enclosed) are self-explanatory.

Richard L. Holder
Superintendent

Enclosures

RLH:lr

WATER RESOURCES SURVEY

1. Park Agate Fossil Beds National Monument
2. Area within park where water is required Headquarters (Temporary)
3. First year in which water is needed September, 1968
4. Types of uses to which it is to be put (i.e., domestic, irrigation, etc.)
Fire control, drinking and domestic
5. Was there a previous investigation at this site for water resources Yes
By whom USGS (Philip A. Emery) When May 17, 1966
6. (a) Is water presently available Yes. (b) In use? No
(c) From what source Well -drilled August 21, 1967
7. (a) Will this be new or supplemental water for new development new
(b) Will this supplement or replace an existing supply No
Why? _____
8. What new ~~or existing~~ (state which) facilities will be served: (a) Campground
(no. of sites) _____. (b) Picnic area (no. of sites) _____.
(c) Concessioner _____
(d) Comfort stations 1. (e) Residences 2
(f) Other office and visitor center (Note: all facilities are mobile Trailers)
9. What percentage of the water do you estimate will be seasonal use 65
10. Estimate of total requirement on day of greatest use in gallons 5000
Estimate of capacity of the present source if it is now in use (gallons per
day or gallons per minute) _____. Do you think this source would be
adequate for 20 years following its initial use Yes
11. What likely effect would result if new water were not developed unable
to open headquarters complex.

Prepared by Superintendent Date June 19, 1968

WATER RESOURCES SURVEY

1. Park Agate Fossil Beds National Monument
2. Area within park where water is required Headquarters (permanent)
3. First year in which water is needed 1970
4. Types of uses to which it is to be put (i.e., domestic, irrigation, etc.)
Fire control, domestic & irrigation of lawns
5. Was there a previous investigation at this site for water resources yes
By whom USGS (Philip A. Emery) When May 17, 1966
6. (a) Is water presently available Yes. (b) In use? No
(c) From what source Well, drilled August 21, 1967
7. (a) Will this be new or supplemental water for new development New
(b) Will this supplement or replace an existing supply No
Why? _____

NOTE: 8. What new or existing (state which) facilities will be served: (a) Campground
(over)

- (no. of sites) _____, (b) Picnic area (no. of sites) _____
_____. (c) Concessioner _____
(d) Comfort stations _____. (e) Residences 5-single family
8-seasonal apart.
(f) Other Visitor Center, Utility Bldg., Headquarters complex
9. What percentage of the water do you estimate will be seasonal use 45%
 10. Estimate of total requirement on day of greatest use in gallons 7500
Estimate of capacity of the present source if it is now in use (gallons per
day or gallons per minute) _____. Do you think this source would be
adequate for 20 years following its initial use Yes
 11. What likely effect would result if new water were not developed Development
of facilities impossible without water service.

Prepared by Superintendent Date June 19, 1968

Reference to items 7&8

Final Locations for the various buildings listed under item 8 have not been determined at this time. The final placement of certain structures may necessitate the development of new and seperate supplies to serve them.

WATER RESOURCES SURVEY

1. Park Agate Fossil Beds National Monument
2. Area within park where water is required Picnic area (initial development)
3. First year in which water is needed needed now
4. Types of uses to which it is to be put (i.e., domestic, irrigation, etc.)
Domestic (mostly drinking)
5. Was there a previous investigation at this site for water resources yes
By whom USGS (Philip A. Emery) When May 17, 1966
6. (a) Is water presently available yes. (b) In use? yes
(c) From what source well
7. (a) Will this be new or supplemental water for new development Supplemental
Note: (over) (b) Will this supplement or replace an existing supply Supplement
Why? Strong possibility of contamination of present supply due to
location of cattle feed lot and privies
8. What new or existing (state which) facilities will be served: (a) Campground
(no. of sites) . (b) Picnic area (no. of sites) 10
 . (c) Concessioner
(d) Comfort stations . (e) Residences
(f) Other
9. What percentage of the water do you estimate will be seasonal use 95
10. Estimate of total requirement on day of greatest use in gallons 300
Estimate of capacity of the present source if it is now in use (gallons per
day or gallons per minute) ?. Do you think this source would be
adequate for 20 years following its initial use no
11. What likely effect would result if new water were not developed
as stated in 7b above

Prepared by Superintendent Date June 19, 1968

There is a well on the site at present which is not Park Service.

For reasons given under 7b, the Park Service may not wish to incorporate it into the water system for the picnic area after the land is purchased as part of the Monument.

WATER RESOURCES SURVEY

1. Park Agate Fossil Beds National Monument
 2. Area within park where water is required Picnic area (expanded development)
 3. First year in which water is needed 1970
 4. Types of uses to which it is to be put (i.e., domestic, irrigation, etc.)
Domestic
 5. Was there a previous investigation at this site for water resources yes
By whom USGS (Philip A. Emery) When May 17, 1966
 6. (a) Is water presently available Yes. (b) In use? Yes
(c) From what source Well
 7. (a) Will this be new or supplemental water for new development Supplemental
(b) Will this supplement or replace an existing supply Replace
Why? Additional supply needed for expanded facilities of extra sites and comfort station
 8. What new or existing (state which) facilities will be served: (a) Campground
(no. of sites) existing 10 sites. (b) Picnic area (no. of sites) new 10 sites. (c) Concessioner new 10 sites.
(d) Comfort stations 1 - new. (e) Residences new 10 sites.
(f) Other new 10 sites
 9. What percentage of the water do you estimate will be seasonal use 90
 10. Estimate of total requirement on day of greatest use in gallons 750
Estimate of capacity of the present source if it is now in use (gallons per day or gallons per minute) ?. Do you think this source would be adequate for 20 years following its initial use No
 11. What likely effect would result if new water were not developed Expanded facilities of extra sites and comfort station could not be served
- Prepared by Superintendent Date June 19, 1968

Form 10-174
(June 1962)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FACE SHEET FOR COMPLETION REPORT

Park Agate Fossil Beds National Monument	Region Midwest	Work Order No. 165-211702
Location in Park Headquarters Area	State(s) Nebraska	Fund Symbol 14X1035
☒ Contract and/or ☐ Day Labor	County or Counties Sioux	Year Programmed 1967
	Work Order Title Water and Sewer Systems	PCP No. U-1
		Master Plan No. NM-AFB-3006
		Master Plan Corrected By
		As Built Drawings By Holland
		Date Started July 30, 1968
		Date Completed July 25 1969 (November 19, 1968 extended)

DESCRIPTION OF FIXED ASSETS (For completion by employee in charge of project)	TOTAL COSTS (For completion by FFO)
for 230 Utilities Systems	
1. Water System Pump, treatment plant (including pump house) and pipe lines Construction cost \$17,301.38	32,452.33
2. Sewer System Construction cost \$14,969.45	
5. Electrical Systems Construction cost \$5,145.50	654.50
Day Labor PS&S	6,091.33
262 Equipment	4,964.00
TOTAL	\$ 44,162.16

DISTRIBUTION	THE FIXED ASSET DESCRIBED ABOVE HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED DRAWINGS, SPECIFICATIONS, AND AUTHORIZED CHANGES	
No. To	Submitted	Title: James V. Holland
	By:	Project Supervisor
	Approved	Date: 12/4/69
	By:	Title:
	COSTS VERIFIED	Date:
	BY	REGIONAL ACCOUNTANT DEC 10 1969

Form 10-411
(July 1965)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

DISTRIBUTION OF COPIES

NO.	TO

PROJECT CONSTRUCTION PROPOSAL

1. STATEMENT OF MANAGEMENT'S REQUIREMENTS, PROPOSED WORK, AND ITS RELATIONSHIP TO OTHER FACETS OF THE PARK PROGRAM. (Provide detail data for "Management Information" on Form 10-411a, Supplemental Sheet and attach.)

Design and construct interim water and sewage systems to serve temporary facilities. (Systems to be integrated into larger one when permanent facilities are erected on the same site.) Systems will serve the needs of the office and the domestic needs of two employee residences (average 6 people) as well as the visitor needs in the visitor center and comfort station. Daily load on system estimated to range from 300 to 400 on a peak day in winter to summer highs of 1,000, with 75-100 people in the area at any one time. Drilled well with electric pump and pressure system to trailers (temporary facilities). Winter protection against freezing necessary for entire system. Treatment system, if necessary, to insure purity. ~~Details of specifications by Midwest Regional Office~~

Justification:

Necessary for service to interim visitor center, administrative and domestic facilities until permanent facilities are planned and constructed.

2. ADVANCE REQUIREMENTS DATA

LAND STATUS Private land programmed for purchase.	MASTER PLAN NO. NM-AFB-3001	APPROVAL DATE Pending
PCP NUMBERS OF PREVIOUSLY COMPLETE PORTIONS None	INTERRELATED & DEPENDENT PROJECT PCP NUMBERS B-3, B-4, B-5, B-6, R-1, and M-1.	
INTERPRETIVE PROSPECTUS APPROVAL DATA None required.		DATE
WATER RIGHT NEEDS & STATUS None		
RESEARCH NEEDS & STATUS None		
OTHER		

3. RECOMMENDED BY SUPERINTENDENT (Signature & Date)

Richard L. Holder 12/20/65

4. APPROVED BY REGIONAL DIRECTOR (Signature & Date)

Kenny B. Ryngaert JAN 13 1966

5. LOCATION WITHIN AREA OR TERMINI

Headquarters

7. REGION

Midwest

8. PARK

Agate Fossil Beds National Monument

9. PROJECT

Interim Water and Sewage Systems

Sioux

(Country)

Nebraska

(State)

6. BLDG. OR RT.# AND SEC.

10. PCP INDEX NO.

U-1

11/15/65

CLASS (B) - Estimate based on preliminary plans
 CLASS ☒ (C) - Estimate based on similar facilities in other parks

CLASS (B) & (C) by []

BPR ☐ NPS ☐

ESTIMATE

ITEM	QUANTITY	COST
I. Water System		
1. 100 L.Ft. Drilling a 100 Feet deep well with 8" casing @ \$14./Ft.		\$1,400.00
2. Each, Submersible pump 20 Gal/Min. with Motor and Appurtenances (Temporary Aggrangement) @		1,000.00
3. Each, 200 Gallon Capacity pressure tank & Control and concrete pad. @		700.00
4. Each, Prefabricated Armco type Bldg. to house pump motor, pressure tank, heating system, Hypochlorinator, etc. @		3,000.00
5. Each, Hypochlorinator, (Electric)		1,000.00
6. 400 L.Ft., 4-inch diameter asbestos cement pipe in place (temporary arrangement) @ 4.00/Ft.		1,600.00
7. 600 L.Ft. 2-inch galvanized steel pipe @ 3.00/Ft.		1,800.00
8. 4 Ea. 4-inch Gate Valves & V. Box @ 250.00		1,000.00
9. 6 Ea. 2-inch Gate Valves & Box @ 150.00		900.00
10. Contingent Sum		2,000.00
Subtotal Water System:		14,300.00
II. Sewage System		
1. L.S. 7,000 Gallon capacity Reinf. Concr. Septic Tank @		7,000.00
per L.S. - (Permanent)		
2. 4 Each, Standard Reinforced Concr. Manholes @350./Ea		1,400.00
3. 10 L.Ft. Additional Reinf. Conc Manhole @80./Ft.		800.00
4. 5 Ea. Cleanouts per \$50./Ea.		250.00
5. 600 L.Ft. 6" Dia. V.C. Sewer Pipe @\$5./Ft.		3,000.00
6. 1 L.S. Distribution Box @L.S.		250.00
7. 300 L.Ft. Absorption Trench @4.00/Ft.		1,200.00
8. Contingent Sum		1,000.00
Subtotal Sewage System		14,900.00

RESEARCH ESTIMATE APPROVED:

(Asst. Director, Resource Studies)

(Date)

CONSTRUCTION ESTIMATE APPROVED:

FOR (Design Office Chief)

2/23/66
(Date)

INTERPRETIVE ESTIMATE APPROVED:

(Asst. Regional Director, Oj)

(Date)

ESTIMATE TOTALS

RESEARCH ESTIMATE

CONSTRUCTION (Both)

Plans, Surveys, and Supervision

Contingencies

CONSTRUCTION

SUB TOTAL

INTERPRETIVE

SUB TOTAL (100%)

Form 10-174A
(June 1962)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

COMPOSITION OF COST FOR COMPLETION REPORT

Work Order Number
165-211702Fund Symbol
14X1035Year Programmed
1967Park
Agate Fossil Beds National MonumentRegion
MidwestLocation in Park
Headquarters AreaWork Order Title
Water and Sewer System

COMPOSITION OF COST

COSTS CHARGED TO FUNDS ALLOTTED TO FIELD FINANCE OFFICE		
(1) Personal Services.....	\$	
(2) Travel.....		
(3) Contract Work.....	32,452.33	
(4) Supplies and Materials.....		
(5) Other Direct Expenses.....	654.50	
(6) Operation of Equipment.....		
(7) Depreciation of Equipment.....		
(8) Purchase of Construction Equipment.....		
(9) Purchase of Other Accountable Equipment.....	4,964.00	
(10) Other Costs:		
(11) TOTAL COST CHARGED TO FFO FUNDS	XXXXXXXXXX	\$ 38,070.83
OTHER COSTS:		
(12) PS&S, AP, and/or Facilitating Services @ 16 %.....	\$ 6,091.33	
(13) Inventory and Other Non-Fund Costs		
(14) GROSS WORK ORDER COSTS	XXXXXXXXXX	\$ 6,091.33
LESS:		
(15) Residual Value of Construction Equipment on Line 8.....	\$	
(16) Other Credits		
(17) NET COST OF FIXED ASSETS	XXXXXXXXXX	\$ 44,162.16

Identify other costs and other credits by line item entry, on an attached schedule, or explain in narrative.

Form 10-285
(April 1962)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Property Voucher No.

Proceeds Received

REPORT OF PROPERTY TRANSACTION, CLASS 61.9-4

Type of Transaction (Report each type separately)

☐ Transfer ☐ Sale ☐ Trade In ☐ Donation ☒ Purchase ☐ Destruction ☐ Abandonment

☐ Construction ☐ Other _____ (Specify)

FROM:

 Superintendent
 Agate Fossil Beds National Monument
 Gering, Nebraska

TO:

 Regional Director, Midwest Region
 National Park Service
 1709 Jackson Street
 Omaha, Nebraska 68102

Richard L. Miller
 (Signature)

 8/6/68
 (Date)

(Signature)

(Date)

QTY.	PROPERTY NO.	DESCRIPTION	AMOUNT
1	NPS-61.9-4	Portable comfort station, aluminum, 10' x 30', Serial No. PS341743 WSH Purchase Order No. 920-298, dated 4/3/68. AGATE FOSSIL BEDS NATIONAL MONUMENT <i>CONSTRUCTION</i> <i>211702</i> <i>+ 26 ~ Agate</i> <i>8-9-68 81# 1356</i> <i>211702</i> <i>copies to area 8/19/68</i>	4,964.00

PROPERTY OFFICE

I certify this transaction is completed. Entries have been made in the Property Records and will be finalized upon receipt of cost information.

Ruth A. Shaw
 (Signature)

 8/7/68
 (Date)

ACCOUNTING OFFICE

☐ Sum received in the amount of _____
 Collection No. _____

☒ Entries have been made to adjust records

B. Neuman
 (Signature)

DEC 10 1968

(Date)

Form 10-555
EDP Revision(MWR)

U. S. DEPARTMENT OF THE INTERIOR
PARK SERVICE POSTING SHEET

Western Plains Construction Co.
P.O. Box 934
Lincoln, Nebr. 68501

1401033--

1401034--

1401036--

14X1035-- 400.00

14X1037--

14X6875 200.00

INT NPS ESTIMATE NO. 5 - FINAL 14-10-7-971-161

EDP Posting(Do not exceed number of spaces indicated)

Amt. Paid 600.00

(5) Bu/Vo	(5) Date	(6) MP/PO	(30) Abbreviated comments or payee	(4) Area	(7) Cost Acct.	(6) Obj. Class	(7) Dollars, Dec., & cents	(1)(2)
354	11/69	878	Western Plains Est 5 971-161	165	211702	32	400.00	

List M.O. or P.O.
liquidated amount by
Activity _____

☐ Partial
B/V

211700 MO 877 Liq. Bal.
211700 MO-878 Liq. Bal.
225100 MO 879 Liq. Bal.

Schedule No. 397 Remarks: _____

Prepared by _____ vml 11/14

Form 10-194
(Rev. 9/62)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

MW

Agate Fossil Beds National Monument

(Park)

Check One:

Monthly
Estimate ☐Final
Estimate ☒

UNIT PRICE CONTRACT

ESTIMATE NO. 5 (Final)	FOR (Period) Final	DATE November 7, 1969
CONTRACT NO. 14-10-7-971-161	COMPLETION DATE November 26, 1968	EXTENDED DATE July 25, 1969
CONTRACTOR Western Plains Construction Co., Box 934, Lincoln, Nebraska		ORIGINAL CONTRACT \$ 70,121.70
PROJECT Construction of Roads, Parking, Utilities, etc.		CHANGE ORDERS* \$ 525.00
LOCATION Headquarters Area		TOTAL CONTRACT \$ 70,646.70

ITEM NO.	CONTRACT QUANTITY	DESCRIPTION	QUANTITY TO DATE	UNIT PRICE	AMOUNT TO DATE
SCHEDULE I - UTILITIES					
20.	Lump Sum	Furnish and install portable compressor to operate hypochlorinator	100%	\$400.00	400.00
		Total - Schedule I (Items 1-20)			37,416.33
		(Quantities and amounts for all other items and schedules unchanged as shown on Estimate No. 4)			

RECOMMENDED (Project Supervisor)

SUMMARY

APPROVED (Contracting Officer)

DATE


 Donald S. Marley

NOV 12 1969

TOTAL TO DATE	\$ 70,169.14
LESS RETAINED AMOUNT.....	0.00
NET.....	70,169.14
LESS PREVIOUS PAYMENTS.....	69,569.74
LESS LIQUIDATED DAMAGES.....	0.00
DUE THIS ESTIMATE.....	600.00
% COMPLETED TO DATE:	100%

*Show Breakdown on Reverse

(See Reverse for Distribution)

CONTRACT TIME SUMMARY

Contract No. 14-10-7-971-161

Agate Fossil Beds National Monument

<u>Document</u>	<u>Period</u> (Calendar days)	<u>Original</u>	<u>Completion Date(s)</u>	
			<u>Extended</u>	<u>Final (Actual)</u>
Notice of Beginning Date 7/30/68	120	11/26/68		
Change Order No. 2	-		7/25/69	
Letter of Acceptance (Final) 11/7/69				7/25/69

Since all work under the contract was completed within the contract time, as extended, the question of liquidated damages does not apply.

NARRATIVE STATEMENT

Roads, Parking Areas, Utilities, Installation of Trailers

WORK ORDER NO. 165-211702

DESCRIPTION OF WORK: The project consisted of installing 2,000 linear feet of water line, 1,000 linear feet of sewer line, 7,000 gallon Septic Tank with absorption field, water pump and pumphouse, 720 linear feet of underground power and various utility connections to install various trailers.

Plans and Specifications for this project were prepared by the Design Office of the San Francisco Service Center.

Project Activities preliminary surveys were made by DCSSC.

Construction Layout was made by John Rossiter, Civil Engineer DCSSC.

2 bids were received and opened June 18, 1968. Award of Contract No. 14-10-7-971-161 was made to Western Plains Construction Company, for the construction of Roads, Parking Areas, Utilities, and Installation of Trailers.

Notice to Proceed was issued on July 26, 1968 and the date of July 30, 1968 was established as the first day of the contract.

Construction work consisting of excavation for utility lines started on August 13, 1968.

No unusual weather, geological, or latent conditions were encountered. Subcontractor Energy Enterprises Corporation, 2400 Folsom, Lincoln, Nebraska installed all of the electrical facilities required under the contract. Neither the prime or the subcontractor utilized other than standard construction practices. The pump is capable of pumping 54 gallons per minute against a discharge pressure of 40 pounds per square inch.

- a. Water Rights Docket, No. 1, has been established for the well supplying this system but there has been no application for a permit. All water rights matters for this area are handled by the Office of Land Acquisition and Water Rights, SSC.

On December 16, 1968, Change Order No. 1 was issued to enlarge the Visitor Center deck, eliminate the meter base and circuit breaker on the pumphouse, provide for 40' of electrical cable to allow for the electrical connection of the Visitor Center, and to provide for the skirting of the office trailer at its highway location.

All construction was completed on November 19, 1968 and the final inspection was made on November 20, 1968.

No liquidation damages were assessed.

Overruns and Underruns on Contract Bid Schedule

No major overruns or underruns were experienced except 2" Galv. Steel Pipe (item 2 - Schedule I) which was increased for use as electrical conduit for secondary power as it passes under the entrance road.

1. Utility Systems

- a. See the attached estimate for length, type, and sizes of utility lines.
- c. 42 gallons per minute is the capacity of the pumping station produced from a 3 horse power pump against a 40 pound per square inch head from a depth to water level of 104 feet. Hypochlorination is provided by an Aerofeed Chemical Disperser which feeds from 0 to 20 gallons per day.

The sewage treatment plant is made up of a 7,000 gallon septic tank and with a 750 feet of 6" Vitrified Clay pipe disposal field.

2. Roads and Trails

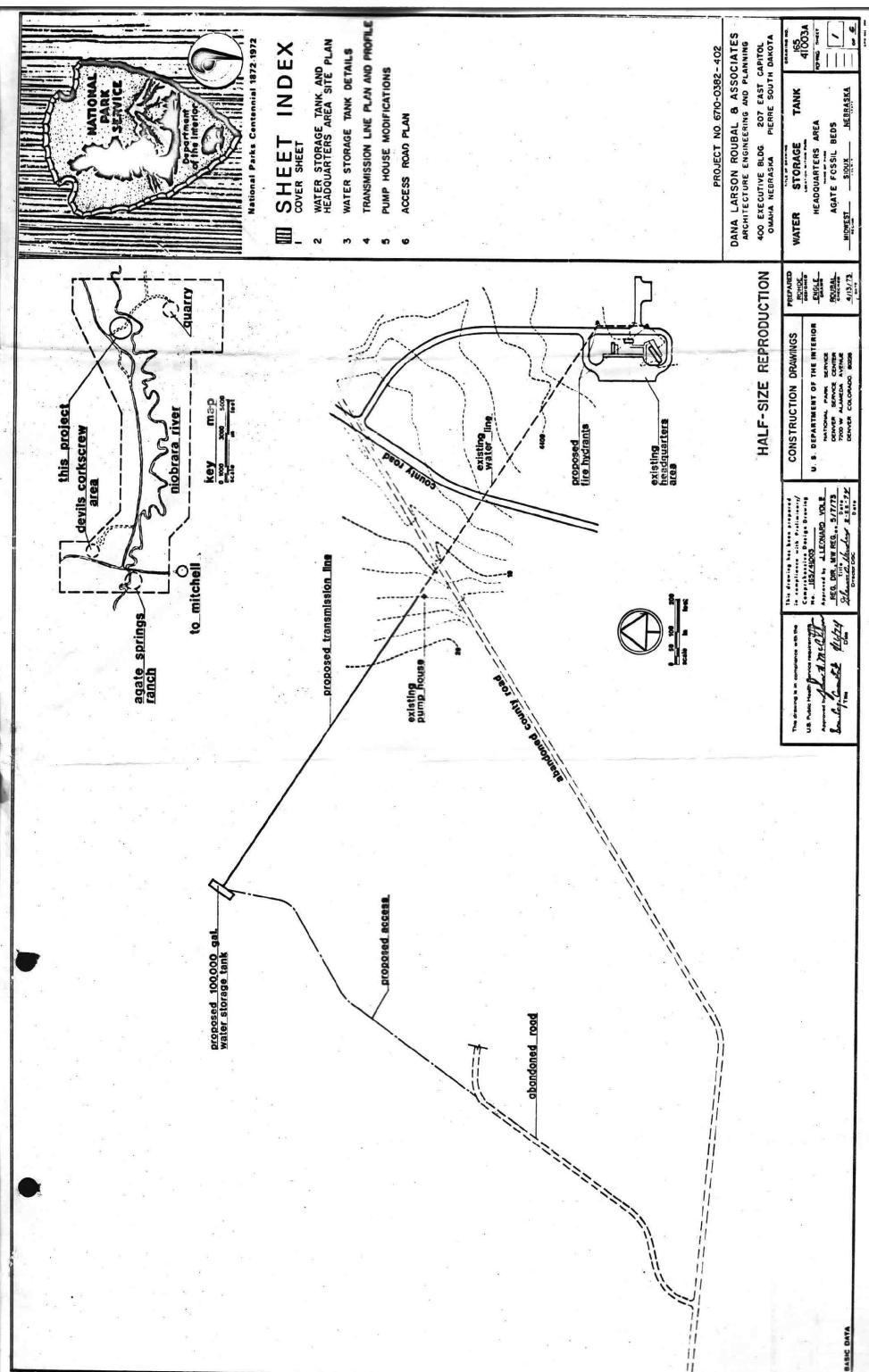
- a. 0.45 miles, 20' wide, seal and chip primary road with 6" crushed stone base course.
- b. 0.11 miles of (20' wide equivalent width road) 11,550 square feet of public parking.
- c. 850 feet of 4' wide equivalent 4" thick concrete sidewalk with 3" of base course.

3. Buildings

- a. A pumphouse, NFS Building No. 1, 54 square feet, steel Armco building.

The water and sewer systems constructed under this work order resulted in a usable unit.

Maps and Miscellaneous Information



SHEET INDEX

1	COVER SHEET
2	WATER STORAGE TANK AND HEADQUARTERS AREA SITE PLAN
3	WATER STORAGE TANK DETAILS
4	TRANSMISSION LINE PLAN AND PROFILE
5	PUMP HOUSE MODIFICATIONS
6	ACCESS ROAD PLAN

PROJECT NO. 670-0392-402

DANA LARSON ROUBAL & ASSOCIATES
ARCHITECTS AND ENGINEERS
400 EXECUTIVE BLDG. 307 EAST GASTON
OMAHA NEBRASKA PIERRE SOUTH DAKOTA

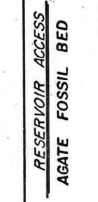
DATE	BY	FOR
1/15/73	DL	1
1/15/73	DL	2
1/15/73	DL	3
1/15/73	DL	4
1/15/73	DL	5
1/15/73	DL	6

HALF-SIZE REPRODUCTION

This drawing has been prepared in accordance with the standards of the U.S. Department of the Interior, National Park Service, and is hereby approved for publication. Approved: <i>[Signature]</i> Special Agent in Charge National Park Service 7500 W. ALAMOSA AVENUE DENVER, COLORADO 80202	CONSTRUCTION DRAWINGS U. S. DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE 7500 W. ALAMOSA AVENUE DENVER, COLORADO 80202	REVISIONS DATE BY REASON
---	---	---

MADE DATA





REVISED	UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE BRANCH OF LANDS MIDWEST REGIONAL OFFICE	MIDWEST REGION
DATE / INITIAL	WATER RESOURCES	SHEET OF 1
		DRAWING NO. JANUARY 2000
	AGATE FOSSIL NAT'L MONUMENT	DATE: 3-10-95



