



WATER-RIGHT DOCKET

Dinosaur National Monument

Docket No: 26

ARTESIA HEADQUARTERS WELL.

Preliminary Docket Information

00-00-0000: water right record

WATER RIGHT RECORD

Park: DINO

Docket Number:
Fed. #26

IDENTIFICATION NO: DINO W 0 5 0 3 103 A F 26

DITCH/WATER SYSTEM: Artesia Headquarters

SOURCE OF SUPPLY: Well

LOCATION: N62°49'30"E 76.97 ft. from the ¼ cor. common to Secs. 5 & 8,
T3N, R103W, 6th PM

WATER RIGHT:

Appropriator: United States of America, National Park Service

Application/Permit Number: 03066-F

Certificate Record Number:

Date of Priority:

Quantity of Water: 200 gpm

Purpose: Domestic, fire protection and irrigation

Irrigated Land Description:

SUMMARY OF STATUS: This is a Federal water right consisting of a well and distribution system.

The well was completed in February, 1962.

DOCKET INFORMATION SHEET

Docket Identity	D11101 W 1015 D13 11013 1A E 26
Region	ROCKY MOUNTAIN
Area	D111015A11B
Site	ARTESIAN HEADQUARTERS
State	COLORADO
County	MOFFAT
Docket	D11101 WATER RIGHT DOCKET 26
Location	T3N R103W N62°49'30"E 76.97 FT FR COR SECS 15 & 18
Acquired by	APPROPRIATION
Application	
Permit	03066-F APPROVED APRIL 15 1961
Certificate	
Priority	
Reservation	OCT 14 1915
Status	ACTIVE FEDERAL
Source	GROUND WATER
Use	DOMESTIC FIRE PROTECTION AND IRRIGATION
Quantity	20.0 GPM
Hydrologic Unit	14050007
Remarks	FEDERAL WATER RIGHT CONSISTING OF A WELL AND DISTRIBUTION SYSTEM

DOCKET INFORMATION SHEET

Docket Identity	DINO W 30 104 24 A F 21
Region	ROCKY MOUNTAIN
Area	DINOSAUR NATIONAL MONUMENT
Site	SPLIT MOUNTAIN GORGE WATER SYSTEM
State	UTAH
County	UINTAH
Docket	DINO WATER RIGHT DOCKET 21
Location	T4S R24E N57045'E 1950 FT FR 1/4 CORN SEC 30-31
Acquired by	APPROPRIATION
Application	36635 APPROVED AUG 10 1955
Permit	
Certificate	
Priority	JAN 24 1955 0.015 CFS
Reservation	OCT 4 1915
Status	ACTIVE FEDERAL
Source	GROUND WATER
Use	DOMESTIC
Quantity	0.015 CFS
Hydrologic Unit	14060001
Remarks	FEDERAL WATER RIGHT CONSISTING OF A WELL AND HAND PUMP WELL DRILLED IN 1958 THREE TEST WELLS DRILLED IN THIS AREA IN MARCH 1960

Other Supporting Information

L54
L54 MWR(OL)

OCT 27 1965

Memorandum

To: Superintendent, Dinosaur

From: Hydraulic Engineer

Subject: Application for Use of Ground Water No. 03066-F, dated
April 5, 1961, Artesia Headquarters, Dinosaur

After discussing the copy of the subject permit enclosed with Acting Superintendent Jones' memorandum of September 9, 1965, we telephoned the State Engineer's Office, Denver, Colorado, relative to the purpose of use and the quantity of water permitted.

The Assistant Ground Water Engineer concurred that the permit should be corrected as for purpose of use and the amount of water so as to reflect the primary use of the water in the Headquarters area. The Supplemental Statement attached to the permit should reflect a secondary use of water by the road contractor during the interim of the construction of the South Entrance Road.

The Engineer's Office advised that the Health Department regards water supplying more than two residences should be classified as "Semimunicipal" use. The Semimunicipal use includes irrigation of lawns about the residences. However, the purpose of use should include fire protection as well as semimunicipal.

We shall appreciate, if you have the original permit in your files, your preparing copies showing the correct location and the changes in quantity and purposes of use. The copies should be completely legible. Our copy does not show the applicant's name in legible form.

In order to show the sequence of the amendments to the permit, we shall include in the dockets, copies of your letters to the State Engineer requesting that appropriate changes be made on the original permit.

Mott 10/26
Auton 10/26
Bagley 10/27

Upon receipt of the amended permit, we shall place the copies in the docket which we will assemble here in the Regional Office and make proper distribution to the other Water Resources files.

(Sd) William A. Mott

William A. Mott
Hydraulic Engineer

WAMott:Fh

L54

Dinosaur National Monument
Dinosaur, Colorado 81610

September 9, 1965

State of Colorado
Division of Water Resources
Office of the State Engineer
Ground Water Section
Colorado State Capitol
Denver, Colorado

Dear Sir:

Please refer to our Application for Use of Ground Water No. 03066-F approved April 5, 1961. A recent survey of the well site indicates the well location shown on the application is in error. The well location is, by course and distance, N 62° 49' 30" E 76.97 feet from the $\frac{1}{4}$ corner common to sections 5 and 8, T3N, R103W which places it in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 5, T3N, R103W. 6th PM, Colorado. Please correct the application accordingly.

Also please note this well serves the domestic, fire protection, and lawn irrigation needs for the Dinosaur National Monument residential and headquarters area.

Sincerely yours,

James E. Jones

James E. Jones
Acting Superintendent

cc:
Reg.Dir. MW Reg.
w/attachments ✓

Reg. Director	RE
Mrs. Howe	ET
Operations	UN
Administration	TO
Coop. Act.	FI
Pub. Affairs	LE
Dev. Act.	TO
Reg. Dir.	FI
Field	LE
<i>Land & Water</i>	
<i>Moisture</i>	
<i>Sept 10/26/65</i>	
<i>10/26/65</i>	

RECEIVED
MIDWEST
REGIONAL OFFICE

1965 SEP 10 PM 2 13

NATIONAL PARK SERVICE
OMAHA, NEBRASKA

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER, GROUND WATER SECTION

PERMIT TO USE GROUND WATER

This permit is issued to the applicant of the address shown below authorizing the use of ground water in the amount for the use as indicated on/at the location given in the application and on the initiation date shown

Form C (Rev.)
7-54/SM

STATE OF COLORADO
APPLICATION FOR USE OF GROUND WATER

(Use Indicate Permit or Temporary)

United States of America, Department of the Interior,

Applicant National Park Service

P.O. Address Yongest, Utah

Quantity applied for 200 gpm or
AF Storage

Used for Industrial (see supplemental sheet) Purposes

on, at (see supplemental sheet)
(legal description of land site)

Total acreage irrigated and other use

ESTIMATED DATA OF WELL
Hole since 14 in to 400 ft
in to ft.

Casing Plain 12 in. from 0 to 400 ft

in. from to ft.

Perf 12 in. from 390 to 390 ft.

in. from to ft.

PUMP DATA: Type Turbine HP 40 Size 4-in. Outlet

Use initiation date June 1, 1961
(Use Supplemental pages for additional data)

THIS APPLICATION APPROVED

NO. 03066-5

DATE APR 5, 1961 19

RECEIVED

APR 5 1961

GROUND WATER SECTION

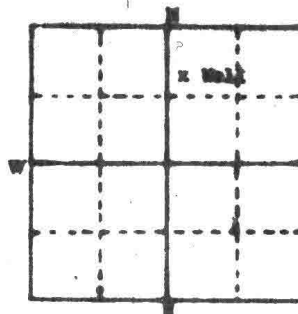
LOCATION OF WELL Colorado

County (1/4) Section 8 Township (30)
(NW) (NE) (SW)

Sec. 101 N. 6th P.M. OR
(103 W.) (6th) (OR)

Street Address or Lot & Block No.

Town or Subdivision



Locate well in
40 acre
(small)
square
as near
as possible.

\$25.00 fee required for Industrial,
Commercial or Irrigation uses.

Applicant

Agent or Rep. Blanchard Station
Driller Drilling Contract not awarded

Address

NOTE - SATISFACTORY COMPLETION REQUIRED FOR APPROVAL OF APPLICATION

INDICATED.

SEAL

J. B. Whetton
STATE ENGINEER
Dr. J. B. Whetton

S U P P L E M E N T A L

This supply of ground water will be used initially by a road contractor in the construction of the new Artesia Entrance Road, which extends north from the National Park Service Headquarters (About 1½ miles east of Artesia, Colorado on US Highway 40) to Harpers Corner and the Yampa River Canyon Section in Dinosaur National Monument. Subsequently, when developments in the Headquarters area are completed, this well will supply the water for domestic, fire-protection requirements and irrigation needs for a limited area of lawns and landscaping in the headquarters area.

The Headquarters area lies in a part of the SE¼, NE¼ and NE¼, SE¼ of Section 8, Township 3 North, Range 103 W, 6th principal meridian.

Dino
L54 MWR(OL)

JUN 25 1965

Mott 6/24
Barrow 6/25
mo
June 6/25

Memorandum

To: Superintendent, Dinosaur
From: Hydraulic Engineer
Subject: Application for Use of Ground Water No. 03066-F, State of Colorado, Dinosaur

not rec'd w/ this
Copies of the subject application were submitted to this office with your memorandum of June 1, 1965, which showed the results of research on water rights and water resource activities in Colorado.

The particular water supply for which the subject application was made is not clearly identified by name or location of the development area. The application shows the well to be located in the SW¹/₄SW¹/₄NE¹/₄ Section 8, T. 3N., R. 103W., 6th P.M., and was approved under No. 03066-F, but the date of approval is not legible.

We have a Log and History of the well under Permit No. 03066-F showing the location of the well to be in the SW¹/₄SW¹/₄SE¹/₄ of Section 5, and identified the well as Artesia Colorado Headquarters Well. We believe these two locations are intended for the same well and that the location on the permit is erroneous. The application indicates water "Used for industrial purposes on/at (see supplemental sheet)." This supplemental sheet referred to is not attached to the copies of the permit.

Please check the correct location, and if the application is in error, a corrected application should be submitted to the State. It is important that the well be identified by the name of the development area on all applications so the documents will be filed in their proper places. It is important that all copies of all documents be legible to avoid the need of locating the original copy for pertinent information.

We are returning one copy of the application which we believe is for the Artesia Headquarters Water Supply to assist you in verifying the correct location and providing the date of approval of the application.

Sgd Duane B. Inaba

Acting Assistant Regional Director

Enclosure

WAMott:fh

Marley

PESmith

April 22, 1965

L-54

AIR MAIL
Memorandum

To: Superintendent, Dinosaur

From: Chief Engineer, WODC

Subject: Additional Water Pumping Capacity, Artesia Headquarters - Dinosaur

By copy of your memorandum of March 29, 1965 to the Regional Director, Midwest Region, we were informed of your proposal to install a new pump to provide for anticipated increases in water demand. Project Supervisor Gallagher checked into this matter before he left for the field, and as a result of his check and review of the problem by others here, it is considered that a Reda Model 63164 Pump Type 16G70E, 15 HP would suffice as a replacement, if a replacement pump is desired. For reference we attach a copy of Mr. Gallagher's calculations with the thought that he can interpret them for you, if you like.

We feel, however, that the existing pump is probably adequate to handle this additional load. An additional 4 hours per day of pumping will provide the water to supply the estimated additional demand (12,500 gpd). This would be considerably cheaper than spending about \$2,000.00 for a larger pumping unit. We assume that the existing pump is not operating more than 8 hours per day to supply the present demand unless a great deal of water is being used for irrigation.

SIGNED

P. E. Smith

Enclosure

cc:
Reg. Dir., Midwest (2)
Proj. Supv. Gallagher

Area III
PESmith
Informational: Stratton
Marley:ceb

WHY NOT GET
ANOTHER WELL TO
ASSURE AN ADEQUATE
SUPPLY R. RICHEY

Copy
to
file

(M)

Dinosaur National Monument
Artesia, Colorado 81610

March 29, 1965

1965-50TH ANNIVERSARY YEAR

154

AIRMAIL
Memorandum

To: Regional Director, Midwest Region
Attention: William A. Mott, Hydraulic Engineer

From: Superintendent, Dinosaur

Subject: Water Well Pump, Artesia Headquarters, Job Corps Center

In anticipation of establishment of a Job Corps Center here please expedite your specifications and recommendations for installing a larger capacity per minute pump for our well at the Artesia Headquarters. As you know, we now have a 50-gallon per minute pump.

The well was test pumped with a 100-gallon per minute pump for 30 hours and produced about 98 gallons per minute.

Additional water supply for a 100-man Job Corps Center with a 25-man staff will be needed.

I talked with well contractor Campbell at Roosevelt, and he recalled that the pump test was made with a new "Advance Pump" manufactured by the Advance Pump Co., Berkley, California. Possibly WODC could check with this company for you to determine specifications required, etc.

The final completion report you have on file will provide the information needed for specifying depth for setting a new 100-gallon per minute pump. I believe the 100-gallon per minute pump test was made at a depth of 500 feet and draw down was about 300 feet or so.

Mr. Campbell is very interested in bidding on removal of the existing pump, furnishing and installing the new pump.

It appears to me that a 100-gallon per minute pump is required to serve all water needs here if a Job Corps Center is established.

Your early reply will be appreciated.

Earl M. Semingsen
Earl M. Semingsen
Superintendent

In duplicate

cc: Chief, WODC

W O D C
MA: 31 1965

CHF	
ADM	
PERS	
P & P	
ARCH	
EX	4/22
Y	
HABS	

1. Mott
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50. Mott

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

FACE SHEET FOR COMPLETION REPORT

Park Dinosaur National Monument	Region Midwest	Work Order No. B-17-DINO
Location in Park Artesia Headquarters	State(s) Colorado	Fund Symbol 14x1035
	County or Counties	Year Programmed 1963
☒ Contract and/or ☒ Day Labor		PCP No. U-18-2
Work Order Title Water System		Master Plan No. NM-DIN-3142D
		Master Plan Corrected By
		As Built Drawings By M. Egan
		Date Started August 25, 1962
		Date Completed April, 1964

DESCRIPTION OF FIXED ASSETS
(For completion by employee in charge of project)TOTAL COSTS
(For completion by FFO)100.8 (2) Utilities, water system including
pump, 200,000 gallon reservoir,
distribution lines, chlorination
equipment.

131,105.58

Fire siren system

100.30 Equipment, fire hose trailer with
hose and accessories

414.54

Cost	112,964.87
Equipment	414.54
PS&S	18,140.51
	131,520.12

TOTAL \$ **131,520.12**

DISTRIBUTION		THE FIXED ASSET DESCRIBED ABOVE HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED DRAWINGS, SPECIFICATIONS, AND AUTHORIZED CHANGES	
No.	To	Submitted By: <i>G.H. Gallagher</i>	Title: Park Engineer Date: 2/26/65
1	WASO	Approved By: <i>G.H. Gallagher</i>	Title: Park Engineer Date: 2/26/65
1	WODC	Approved By: <i>Carl H. Semington</i>	Title: Superintendent Date: 2/26/65
1	MRO	Costs Verified By: <i>Carl H. Semington</i>	Title: Superintendent Date: 2/26/65
1	DINO	BY: <i>Carl H. Semington</i>	Title: Superintendent Date: 2/26/65
		BY: <i>Carl H. Semington</i>	Title: Accounting Officer Date: Mar. 10 1965

11360

COMPLETION REPORT NARRATIVE
WATER SYSTEM, ARTESIA HEADQUARTERS
W.O. B-17-DINO

CONTRACT PORTION

Contract No. 14-10-0232-705 dated August 15, 1962 was awarded to H.E. Britton and Burke Moving and Storage Co., Cheyenne, Wyoming. The contract also included sewer system construction under W.O. B-18-DINO, covered by separate completion report. Sub-contractors engaged in the construction were Ross Construction Company, Vernal for earthwork and Story Electric Co., Rangely, Colorado for electrical and pump installation.

Work was started on August 25, 1962 and progressed until stop order was issued January 10, 1963 due to adverse weather conditions. Work was resumed on January 28, 1963 and progressed to satisfactory completion with final acceptance on March 7, 1963. The water system consisted of one 200,000 gallon underground concrete reservoir, deep well submersible pump, and water distribution system including valves, water meter, fire hydrants, and appurtenances.

Change Order No. 1 modified the sewer system septic tank. Change Order No. 2 was issued to modify the concrete valve box to provide adequate opening size to permit removal of the water meter. Change Order No. 3 did not affect the water system but increased the contract time five days. The overall contract underrun the total contract amount by \$3,473.95 due to not placing bentonite on the sewage lagoon. The water system portion of the contract overrun the original contract amount slightly due to minor overruns of unit quantities.

The well pump installation consisted of a Peerless $7\frac{1}{2}$ H.P. turbine-type submersible pump, capable of delivering 50 gpm against a total dynamic head of 330 feet, a pitless unit type sealed well housing, and necessary automatic control equipment and float switch on the reservoir. The pump was suspended on 300 lineal feet of $2\frac{1}{2}$ " pipe, placing the suction intake at approximately 310 feet below ground level. The well was constructed by separate project under Contract No. 14-10-0232-579 by Uintah Basin Drilling Co., Mr. Darwood L. Campbell, Roosevelt, Utah. The well was drilled and cased with 10 inch casing to the 403 foot level. Open hole 10 inch diameter was extended to the 762 foot level, and $7\frac{1}{2}$ inch diameter open hole drilled to the 800 foot level. The well was test pumped at a average discharge rate of 93 gpm with a maximum drawdown of 346 feet below the top of casing. The well construction is covered by separate completion report. Static water level is at 212 feet below the top of casing.

Form 10-194
(Rev. 9/60)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Dinosaur National Monument

(Park)

Check One:

Monthly
Estimate ☐Final
Estimate ☒

UNIT PRICE CONTRACT

ESTIMATE NO. FINAL 6	FOR (Period) February 1, 1963 to March 9, 1963	DATE March 11, 1963
CONTRACT NO. 14-10-0232-705	COMPLETION DATE February 20, 1963	EXTENDED DATE March 9, 1963
CONTRACTOR H. E. Britton and Burke Moving & Storage Company		ORIGINAL CONTRACT \$ 145,120.00
PROJECT Construction of Water and Sewer Systems		CHANGE ORDERS* \$ 175.00**
LOCATION Artesia Headquarters, Dinosaur NM, Colorado		TOTAL CONTRACT \$ 145,295.00

ITEM NO.	CONTRACT QUANTITY	DESCRIPTION	QUANTITY TO DATE	UNIT PRICE	AMOUNT TO DATE
<u>WATER SYSTEM</u>					
1	1	Each, 200,000 gal. Concrete Reservoir	100%	57,000.00	57,000.00
2	1	Each, Pump, Pump Housing and Controls	100%	9,000.00	9,000.00
3	1,205	Lin. Ft., 8" Cast Iron Water Pipe	1200	7.50	9,000.00
4	5,100	Lin. Ft., Cast Iron Water, 6"	5247	4.24	22,247.28
5	700	Lin. Ft., Cast Iron Water Pipe 4"	679	3.00	2,037.00
6	110	Lin. Ft., 2" Galv. Steel Pipe	101	2.25	227.25
7	90	Lin. Ft., 1 1/2" Galv. Steel Pipe	90	1.81	162.90
8	305	Lin. Ft., 1" Galv. Steel Pipe	496	1.60	793.60
9	10	Each, 4" Fire Hydrants w/Valves	10	310.00	3,100.00
10	2	Each, Gravity Drains	2	125.00	250.00
11	14	Each, Curb Steps and Suction Drains	17	75.00	1,275.00
12	1	Each, Concrete Valve Box	100%	2,250.00	2,250.00
13	3	Each, 6" Gate Valves w/Cast Iron Ext. Bx.	4	115.00	460.00
14	1	Each, 4" Gate Valve w/Cast Iron Ext. Bx.	1	80.00	80.00
15	2	Each, 2" Gate Valve w/Cast Iron Ext. Bx.	2	60.00	120.00
16	1	Each, 1 1/2" Gate Valve w/Cast Iron Ext. Bx.	1	55.00	55.00
17	2	Each, 1" Air Relief Valve	3	215.00	645.00

L54 Dino

Mott 4/22
Auton 4/23
Jus
Robinson
4/23

APR 23 1963

Memorandum

To: Superintendent, Dinosaur

From: Hydraulic Engineer

Subject: Location of Artesia Headquarters Water Well, Dinosaur

Enclosed is a map of the Artesia Headquarters area showing the water and sewer systems. We would like you to have the location of the well surveyed and tied to a surveyed land corner, by bearing and distance. Perhaps the project engineer from WODC could obtain this data.

Please return this map with the desired data and we will prepare copies for the docket folder which we are preparing.

SIGNED

William A. Mott
Hydraulic Engineer

Enclosure

WAMott:fh

P.S. Please get in touch with the Project Engineer from WODC and determine if he can accomplish the survey and the cost connected therewith. Please advise us of your findings.

WAM W.A.M.

LSH-RLW

April 1, 1963

W O D C
1 APR 3 1963
CHIEF
ADM
PERS
P & P
ARCH
ENCL
L.A.
SPEC
CONT
SFTY
HABS
STATIONERY DATE

[Handwritten signatures and initials over the routing slip]

Memorandum

To: Regional Director, Midwest Region

From: Chief, Branch of Water Resources

Subject: Initiation of Docket No. 7 for Artesia Headquarters, Dinosaur

There is enclosed a map made from joined portions of the 1910 Jensen and Rangely quadrangles (scale 1:125,000), which gives convenient single page coverage of the lands and right-of-way related to the subject area. This would be a suitable base map for a docket which should be compiled and distributed at field level as data becomes available.

Also enclosed, for discussion purposes, is a copy of a major roads map on which water lines are shown. Our records are incomplete as to the source of water. A proposal to pipe water from the town of Artesia was the subject of earlier memoranda but the status of the test well drilled in the subject area has not to our knowledge been received. We would like to be advised as to whether it is planned to have well water supplement water purchased from town or used exclusively.

[Handwritten signature]

E. W. Reed

Enclosures 2

cc:

Superintendent, Dinosaur, w/c encls.
Chief, WQDC (2), w/c encls.

RECEIVED
REGION TWO OFFICE

1962 APR 19 AM 10:16

NATIONAL PARK SERVICE
OMAHA, NEBRASKA

Navajo formation. Had this action not been taken we would have ended up with a non-producing water well and all funds expended to that stage of the contract wasted.

A smaller diameter casing, 8 inch or less could have been installed from the surface to the bottom of the 762 foot level with perforated sections at the bottom. However, this action and additional expense was considered unnecessary and a waste of funds.

For your information three water wells drilled by the city of Artesia, Colorado, in the same geological formations, to depth ranging from 600 to 900 feet, the same boring experiences were encountered as found in our well wherein between the 400 and 500 foot levels, it was necessary to case off at these levels and then continue the bore to the 600 to 900 foot depth to reach the desired artesian water horizon sources.

Furthermore, plumbness and alignment of a well bore for use with a submersible pump does not require a true perpendicular bore. Nearly all deep water wells in this area have submersible pumps due to the fact that well bores cannot be drilled perfectly true. This fact is also borne out by the several thousand oil wells that have been drilled surrounding the entire monument area, especially along the southern slopes of the Uintah mountain range.

You are correct in stating that the specifications for this well, as well as the Quarry area well, are "too tight". The oil well company representatives in this area have confirmed this fact on several occasions during our discussions with them. The oil people say, "If your water well specifications were not so rigid the government would secure more reasonably priced bids for drilling their water wells."

Several good suggestions have been made by those more experienced in well drilling than those in our service. If you wish, we can furnish you with the suggestions. However, I believe it would be best to have Mr. Mott and a representative from WODC join us here to meet with the oil well and water well contractors in this area to gain intimate knowledge and suggestions for drafting changes in water well specifications acceptable to the service.

Rest assured that we gave this contract our personal day-to-day attention and that contract specifications were explicitly followed and interpretations of these specifications were made, at all times in the best interest of the government, to construct and develop the best possible producing water well. A water well we have, and one with a very excellent quality of water and exceptionally good quantity to serve our Artesia headquarters development for many years.



Earl M. Semingsen
Superintendent

In duplicate

Mr. Fry -
b7d?

I presume you
discussed this w/
Seringer during your
visit to the area

As far as I am
concerned this does
not satisfactorily
explain why the
contractor was not
made to comply
with the specifications

Discussed
w/ Petrone
a
LTP
10

✓
L54

Dino

Mott 4/3
W. Brown 4/3

APR 4 1962

Memorandum

To: Chief, WODC

From: Acting Regional Chief of Operations, Region Two Office

Subject: Completion Report, Drilling of Test Well, Artesia Headquarters,
Artesia, Colorado, Dinosaur National Monument

Enclosed is copy of subject report for your information and use.

We will prepare and distribute a docket assembly file for this well, and the subject report will become a part thereof. In the meantime, we are placing our copy in a temporary folder entitled "Dinosaur National Monument --- Artesia Headquarters Water Supply (temporary file)."

(Sgd) L. R. Brown

LeRoy R. Brown
Acting Regional Chief of Operations

In duplicate

Enclosure (1 report)

Copy to: The Director (2), w/enclosure (1 report)
Supt., Dinosaur, w/enclosure (1 report)

WAMott/etb

154 *Dino*

Mott 3/15
Auton 3/15
W. S. 3/15

Memorandum

MAR 16 1962

To: Superintendent, Dinosaur
From: Acting Regional Chief of Operations
Subject: Request for Contingency Funds for Test-well Drilling,
Artesia Headquarters

You sent to this office a request for \$240, using the subject request form and indicated the activity to be 2-WR-62B. We believe this \$240 expenditure should be charged to the work order authorization of 2-WR-62B as it appears to be an appropriate charge against the drilling of the test well.

We request you to submit to this office further information to clarify the expenditures covered by this \$240. Please advise how the money was spent, such as labor, equipment, etc., giving the account numbers and voucher numbers to which these charges were applied. Please show the pay periods within which the charges were incurred and paid. This information is required to credit the proper accounts.

(Sgd) L. R. Brown

LaRoy R. Brown
Acting Regional Chief of Operations

WAMott/etb

Peterson 3/12

Fry 3/13

Bagley 3/13

Melan 3/13

154
Dine

Memorandum

MAR 13 1962

To: Superintendent, Dinocaur

From: Acting Assistant Regional Director

Subject: Water well project, Artesia Headquarters, Contract No.
14-10-0232-579

al 26 21
Your February 21 memorandum furnished us with Completion Reports of the above project, the final estimate which was approved for payment, together with a request for contingency reserves in the amount of \$240 spent from your regularly appropriated funds to keep the road in passable condition during bad weather periods and to participate in pump-testing. These latter two items will be the subject of a separate memorandum.

The report has been given technical review, and has been examined in light of the specifications for the drilling of this well. As a result, we question whether the well meets the specifications in regard to the plumbness and alignment test. This, evidenced by the alignment test made at the conclusion of the pumping test wherein the 40-foot test dummy could be lowered only 440 feet before jamming. It is further evidenced by the fact that casing was set only to elevation minus 403. It seems rather futile to prepare carefully detailed and meaningful specifications for these contracts if they are disregarded in the field. Provision is included in the contract whereby the contracting officer can accept the contract in the event the work fails to meet the specifications in every respect. However, in making such a decision the contracting officer must consider fully the intent of the specifications and the possible effects of accepting something less than that which is specified. It would appear that in the best interests of the Government the contractor in this instance should have been required to comply with the specifications regarding the plumbness and alignment test.

Since you have accepted the contract and have placed the final estimate in line for payment, it would appear that an explanation justifying the acceptance of this contract should be made by you, to become a part of the file. We have reason to believe that because of the exacting requirements of the specifications for this contract the bid submitted

by the contractor was considerably greater than the well might have been drilled for had the specifications not been so tight. There certainly is nothing to indicate the contractor would have reason to believe that he would not be required to complete the project within these specifications.

In view of the fact that considerable work will be accomplished in your area in the next several years, and the number of contracts that will be involved in this work, we believe that a long range view should be taken of this work and everything planned and executed in an orderly manner. This will assure us that each individual contract is being given the personal attention necessary for conformance with its specifications. We would appreciate it if you would give this matter your personal attention.

(Sgd) George W. Fry

George W. Fry
Acting Assistant Regional Director

GW Fry:LTP:mo

154 *Dino*

FEB 16 1962

Mott 2/15/62
Autw 2/15
nr6
Fry 2/15

Memorandum

To: Superintendent, Dinosaur National Monument
From: Regional Chief of Operations
Subject: Supplemental Work Order, 2-WR-62B (1st Rev.), dated February 15, 1962, Dinosaur National Monument

Attached is copy of subject work order to cover costs for work on the drilling and test-pumping the test well in Artesia Headquarters area and for work on Well #4 in the Quarry area.

As the test-pumping has been completed under Contract No. 14-10-0232-579, dated August 31, 1961, we would appreciate the completion report and the final estimate at your earliest convenience.

Ed George W. Fry

George W. Fry
Regional Chief of Operations

Attachment

Copy to: FFO Region Two Office

WAMott/etb

Form 10-556
(June 1956)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICESUPPLEMENTAL
WORK ORDER

Area or Office Region Two Office		Region Two	No. Supplemental DINO 2-WR-62B (1st Rev.)
The Dinosaur National Monument (Organizational Unit) under the supervision of Superintendent is authorized and requested to proceed with the performance of the work or service described below in accordance with the detail and plan more specifi- cally set forth in the drawing or plan referred to herein.		General Ledger Acct. No. 102.5	Date February 15, 1962
		Fund Symbol 14X1035 (0343)	
		Statutory Authority (where necessary)	
		Plan No.	
Title and/or Description of Project or Service to be Performed Drilling, casing and test-pumping a 10-inch test-well for new Headquarters water supply.			PCP No.
			Year Programmed FY 1962
			Est. Starting Date July 1, 1961
			Est. Completion Date June 30, 1962
Location of Work Requested Headquarters Area, Artesia, Colorado, and Quarry Area.			
ESTIMATE OF COSTS			
Components of Costs	Amount	Project Features	Amount
Quarry Area Well #4:		Quarry Area Well #4.	\$ 1,367
Perforating casing in place. \$ 1,297			
Superintendent's use. 70	\$ 1,367		
Artesia Headquarters Area:		Artesia Headquarters:	
Drilling, casing & test-pumping. \$15,975		Drilling, casing & test-pumping 10-inch test well.	16,605
Water Analyses 80			
Superintendent's use. 550	16,605		
TOTAL	\$17,972	TOTAL	\$17,972
Distribution of Copies TO 1 Dinosaur NM 1 R/2 Files 1 R/2 FFO 1 R/2 WAMott Remark: This authorization sets the maximum to be expended on a refund- able basis for the purposes described. Any balance not expended be- fore the end of the fiscal year, June 30, 1962, is automatically can- celled as of the close of the fiscal year. Unpaid obligations as of June 30 will be reprogrammed in the following year. Approved by (Signature, Title, & Date) February 15, 1962 /s/ William A. Mott, Hydraulic Engineer Regional Office Clearance when Required (Signature, Title, & Date) /s/ George W. Fry February 15, 1962 /s/ John F. Atkinson, Asst. Reg. Ch. of Operations			
			ALLOTMENT ACTION
			Allotment Advice No.
			Allotment Advice Date
			Amount for Work Order

If Additional Space is Necessary, Use Reverse in Tumble Fashion

101621

LS4 Dmd
-85039

Dinosaur National Monument
91 West Main, Vernal, Utah

February 16, 1962

REQUEST FOR RELEASE OF CLAIMS

Rec. Director
Asst. Reg. Director
Chf. Div. of Admin.
Chf. Div. of Operations
Chf. Div. of Interp.
Chf. Rec. Res. Planning
Chf. Rec. Activities
Chf. Solicitor

Enclosure for Wilson for

Action: Release

Spencer

Darwood L. Campbell
Utah Basin Drilling Company
Roosevelt, Utah

Dear Mr. Campbell:

In order that the final payment be made on your Contract No. 14-10-0232-579 for the Drilling of a Test Well, Artesia Headquarters, Dinosaur National Monument you are requested to execute the original and all copies of the enclosed RELEASE OF CLAIMS. You should keep one copy for your files and return the original and other copies to this Office.

The requirement for this release is contained in the General Provisions, Standard Form 23A, Clause 7, "Payments to Contractors", subparagraph (d).

If you have any claims against the Government arising under and by virtue of this contract, they should be excepted and described in sufficient detail to identify them and the amounts of each should be stated separately.

If you have no claims you should have the words "No Exceptions" typed in the space immediately above the last sentence reading "This release has been executed***".

Final payment on your contract will not be made until this release has been signed by you and furnished this Office.

Sincerely yours,

Earl M. Semingsen
Earl M. Semingsen
Superintendent
Contracting Officer

cc: Reg. Two 2 ✓
WASC
WODC
Supt.
Proj. Supv.

C.C. MAILED TO	
BY	DATE

RECEIVED
REGION TWO OFFICE

1962 FEB 19 AM 10:55

NATIONAL PARK SERVICE
OMAHA, NEBRASKA

RELEASE OF CLAIMS

*File
Completed
2/16/62
fw*

For and in consideration of the receipt of final payment in the amount of \$5,438.57 from the United States of America (hereinafter called the Government) under and pursuant to Contract No. 14-10-0232-579 for the Drilling of a Test Well, Artesia Headquarters, Dinosaur National Monument the undersigned hereby does remise, release, and discharge the Government, its officers, agents, and employees of and from any and all claims and demands whatsoever under or arising from the said contract, except specified claims in stated amounts listed as follows:

This release has been executed this 16 day of Feb, 1962.

Uintah Basin Drilling Company

By D. L. Campbell
Pastor
Title

254
~~75039~~

Dinosaur National Monument
91 West Main, Vernal, Utah

February 15, 1962

LETTER OF ACCEPTANCE

Darwood L. Campbell
Uintah Basin Drilling Company
Roosevelt, Utah

Dear Mr. Campbell:

In accordance with the specifications for Contract No. 14-10-0232-579 for the Drilling of a Test Well, Artesia Headquarters, Dinosaur National Monument, a final inspection was made on February 7, 1962. This inspection revealed that the work was completed in accordance with the plans and specifications and is entirely acceptable.

Sincerely yours,

Earl M. Semingsen
Earl M. Semingsen
Superintendent
Contracting Officer

cc: Reg. Two 2 ✓
WASO
WODC
Supt.
Proj. Supv.

*File
Completed
2/7/62
LW*



IN REPLY REFER TO:

L54

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Region Two Office
307 Federal Office Building
106 South 15th Street
Omaha 2, Nebraska

February 6, 1962

Memorandum

To: Regional Director, Region Two
From: Regional Chief of Operations
Subject: Test-pumping Operations to date, Test Well at Artesia
Headquarters, Dinosaur National Monument

Mr. Mott advises that Bob Haraden, Supervisor of test-pumping operations of subject well, reported by telephone this date that the contractor had test-pumped the water supply which produced 92 gpm with a 132-foot drawdown from static water level. This supply was delivered with the pump operating at full capacity. There remains some 240 feet of drawdown available before reaching the screen of the pump which was set at 587 feet below the ground surface.

A sample of this water supply has been delivered to the laboratory for a complete chemical analysis, but the report from the laboratory has not yet been received. It is believed this water comes from the same aquifer from which nearby wells derive their water supply for the town of Artesia, Colorado, and should be about the same potable quality.

The pumping tests that have been presently completed indicate an adequate supply is available to meet the requirements of the area development.

As approval for the development of the residential area has been delayed contingent upon obtaining a suitable water supply, we recommend plans be developed to use this source of water to facilitate the consummation of the development of the area residential plans.

George W. Fry
Regional Chief of Operations

Copy to: ☒ Superintendent, Dinosaur

Long Distance Telephone Call

Feb 6
January 6, 1962

LS4 DINO

Aiton
Peterson
Fry

From: Bob Haraden at Artesia, Colorado

FILES

To: William A. Mott, Hydraulic Engineer, Region Two Office

Subject: Report on Test-pumping to date of the Artesia Headquarters
Test Well - Dinosaur National Monument

The contractor installed the test-pump with a screen at elevation of 587 feet below the ground surface. Test-pumping was started about 8:30 PM, February 5, with a discharge of 100 gallons per minute, and the testing continued, and at 6:00 AM this date the discharge had reduced to 92 gpm. The static water level before pumping operations started was 215 feet below ground surface. The discharge was regulated at the beginning of the test-pumping to 100 gpm, in hopes that this discharge might be held constant during a drawdown to approximately 500 feet, but due to the increasing head on the pump the maximum capacity of 92 gpm was obtained when the water surface became practically stable at a depth of 347 feet below the ground surface. During the forepart of the testing period the discharge was held at 100 gpm until the drawdown was 92 feet, and then it was necessary to open up the discharge to permit the pump to operate at its full capacity. This pumping operation indicates a specific yield of approximately .7 gpm per foot of depth of drawdown.

After a discussion of subsequent tests to be performed on the water supply, Mr. Haraden was advised that he should shut the pump off, and ^{and} when operating at 92 gpm, record the rate of recovery until the water surface reached to within 5 feet of the static level elevation, or until it exceeds the probable recovery period during normal pumping operations when supplying water for the development area. Following the recovery tests it was suggested that he start pumping the well at 75 gpm, holding the discharge constant until the water surface stabilizes and the pumping operations have continued for approximately 14 hours. At the end of the constant discharge pumping test, it was suggested that the discharge be cut down to 60 gpm and held until the water surface stabilizes, and subsequently reducing the discharge to 40 gpm and then 20 gpm, holding each discharge until the water surface stabilizes. This step-testing of the yield is for the purpose of projection and estimation of the possible available supply that might be expected when the water surface is drawn down beyond the 347 feet elevation below the ground surface.

Mr. Haraden said he would contact this office if we can be of further assistance in consummating the tests.

William A. Mott PE
William A. Mott
Hydraulic Engineer

WAMott/etb

154

February 6, 1962

Memorandum

To: Regional Director, Region Two
From: Regional Chief of Operations
Subject: Test-pumping Operations to date, Test Well at Artesia
Headquarters, Dinosaur National Monument

Mr. Mott advises that Bob Haraden, Supervisor of test-pumping operations of subject well, reported by telephone this date that the contractor had test-pumped the water supply which produced 92 gpm with a 132-foot drawdown from static water level. This supply was delivered with the pump operating at full capacity. There remains some 240 feet of drawdown available before reaching the screen of the pump which was set at 587 feet below the ground surface.

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The pumping tests that have been presently completed indicate an adequate supply is available to meet the requirements of the area development.

As approval for the development of the residential area has been delayed contingent upon obtaining a suitable water supply, we recommend plans be developed to use this source of water to facilitate the consummation of the development of the area residential plans.

George W. Fry
Regional Chief of Operations

Copy to: Superintendent,
Dinosaur

WAMott/etb

Mott 2/7/62
Fry 3/14
action 3/14
Bagley
3/14

L54 DINO and L54 ROMO

LONG DISTANCE TELEPHONE CALL

February 2, 1962

Aiton ^{2/5}
Petersen ^{1/9}
Fry ^{2/6}

From: Bob Haraden, Park Engineer,
Rocky Mountain National Park

FILES

To: William A. Mott, Hydraulic Engineer
Region Two Office

Subject: Report on Test-pumping Operations at Artesia Headquarters,
Dinosaur National Monument and a Discussion on East Side
and West Side Campgrounds in Rocky Mountain National Park

The well driller at Artesia, in preparing to test-pump the well, encountered difficulties with his power supply requiring him to order some parts before test-pumping could be started. Mr. Haraden was at the well site on January 29, but returned to Rocky Mountain. He expects to return to Artesia the 1st of the week, February 5, upon notification from Supt. Semingsen that the well driller is ready to pump the Artesia well.

The well is equipped with a 10-inch casing installation to a depth of 403 feet. Between the depths of 403 feet and 800 feet, the bore is uncased. Water surface stands at about 215 feet below the ground surface. The driller bail-tested a supply for $7\frac{1}{2}$ hours at approximately 24.6 to 25 gpm, and reported there was no drawdown of the water surface.

Mr. Haraden asked if it would be satisfactory to set the test-pump at 600-foot depth instead at the previously proposed 650-foot depth. We concurred with this pump setting as it appears that the well may produce a considerable supply of water.

Mr. Haraden requested clarification of some of the details of the test-pumping and was advised that the pump should be operated at full capacity to drawdown the water surface to either a stable elevation or to within 5 feet of the top of the pump bowls. This is to determine more quickly the maximum yield available, and from this he is to set the pump discharge at 50% of the maximum yield and perform the desired yield test. He was advised that we do not feel any danger exists for setting the pump below the cased section relative to the Navajo formation caving and creating difficulties with the pumping.

Mr. Haraden advised that the contractor had installed a 16-inch section of casing approximately a foot (plus or minus) in length below the ground surface and had requested permission to grout between the 16-inch and 10-inch casings to form the ground surface seal. He was advised that the contractor should remove the 16-inch casing and fill the area outside the 10-inch casing to within 10 feet of the ground surface and cast concrete between the 10-inch casing and the natural surface of the remaining 16-inch bore. Mr. Haraden was advised that we desire a supply of 60 to 75 gpm for the requirements of the Artesia Headquarters development.

Rocky Mountain National Park

This office inquired of Mr. Haraden what was considered involved in the reconnaissance of right of way in connection with water supply developments at the East Side Campground. He said he would have to check but believed there was a mix-up in regard to a reconnaissance of right of way connecting this water development. He is going to check on this and report his findings. Relative to development of water for the West Side Campground, he believed that the streams upon which the Government presently owns water rights are possibly five to 6 miles distant from the area proposed for the West Side Campground development. They feel that a well in the vicinity of the West Side Campground can be drilled which would supply a satisfactory water for the development. This ^{thinking} ~~fact~~ is based upon the fact that the well drilled for the Grand Lake Entrance Station this past year is located at the opposite end of the Phantom Valley Meadows and produces a very satisfactory yield.



William A. Mott
Hydraulic Engineer

WAMott/etb 2/2/62

Telephone call to this office.

February
~~January~~ 7, 1962

Letitia
Aitor
Fry

L54 DINO

From: Bob Haraden, Supervisor for Test-pumping of Test Well
at Artesia Headquarters, Dinosaur National Monument

To: Superintendent Semingsen of Dinosaur and to Hydraulic
Engineer Mott - (both on Conference Call in Region Two
Office).

Files

Subject: Report on Test-Pumping operations.

A section of casing was used to test the alignment of the well. This test casing was lowered through the entire length of the well casing, passing without difficulty of lodging. When the section of casing was lowered below the well casing, it seemingly lodged on some sharp protrusions from the formation. (450 ft)
well is more than 700 feet deep. LHB

After the test pump was shutdown when pumping at 92 gpm, observations of the recovery were noted at one-minute intervals during the first of the recovery period, and as the recovery rate reduced the period of observations were taken at greater intervals. It required approximately three hours for the water surface to recover a distance of 145 feet. The water surface was still rising, but slowly, so subsequent test data was pursued to establish a rating curve of the well supply. The pump was operated, discharging 75 gpm for a period of 12 hours during which the water surface held stable at a considerable portion of this time. Then the discharge was cut to 60 gpm and within two hours time the water surface had stabilized. Subsequently, the discharge was reduced to 40 gpm and to 20 gpm and operated at these discharges until the water surface stabilized.

The lower end of the airline was set at 582 feet below the ground surface.

When the driller removed the pump from the well, the depth to the water surface was sounded by using the baler cable-line and it was believed the static water surface had risen to a higher elevation than before the test pumping was started.

Mr. Haraden will forward to this office his field notes on the pump-testing and we are to analyze the supply and make recommendations to WODC of the water supply potential.

William A Mott P.E.
William A. Mott
Hydraulic Engineer

WAMott/etb 2/8/62

854
D5039
Dinosaur National Monument
91 West Main, Vernal, Utah

January 31, 1962

ORDER TO RESUME WORK

File
Completed
4/7/62
for

Darwood L. Campbell
Uintah Basin Drilling Company
Roosevelt, Utah

Dear Mr. Campbell:

In accordance with the provisions of the specifications which form a part of your Contract No. 14-10-0232-579, you are hereby directed to resume operations on Monday, February 5, 1962.

Under date of January 8, 1962, you were directed to stop work at the close of business January 8, 1962, until further notice. In view of the fact that you were directed by the Contracting Officer to discontinue work for a period of 27 days which is the time from January 9, 1962, through February 4, 1962, both dates inclusive, your contract time is accordingly extended and the final completion date of your contract is recorded as February 26, 1962.

Sincerely yours,



Earl M. Semingsen
Superintendent
Contracting Officer

cc: Reg. Dir., Reg. Two 2
WASO
WODC
Supt.
Proj. Supv.

Form 10-194
(Rev. 9/60)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE**Dinosaur National Monument**

(Park)

Check One:

Monthly
Estimate ☐Final
Estimate ☒

UNIT PRICE CONTRACT

ESTIMATE NO. 1	FOR PERIOD September 20, 1961 to January 31, 1962	DATE February 14, 1962
CONTRACT NO. 14-10-0232-579	COMPLETION DATE December 18, 1961	EXTENDED DATE February 26, 1962
CONTRACTOR Wintah Basin Drilling Co. % D. L. Campbell		ORIGINAL CONTRACT \$ 15,975.00
PROJECT Drilling of a Test Water Well - Artesia Headquarters		CHANGE ORDERS* \$ 876.80
LOCATION Artesia, Colorado		TOTAL CONTRACT \$ 16,851.80

ITEM NO.	CONTRACT QUANTITY	DESCRIPTION	QUANTITY TO DATE	UNIT PRICE	AMOUNT TO DATE
B-1	200	Lin. Ft., Bore for 10-inch (I.D.) Casing, Surface to 200 feet	100% 200'	13.00	2,600.00
B-2	200	Lin. Ft., Bore for 10-inch (I.D.) Casing, 200 feet to 400 feet	100% 200'	13.00	2,600.00
B-3	200	Lin. Ft., Bore for 10-inch (I.D.) Casing, 400 feet to 600 feet	100% 200'	13.00	2,600.00
B-4	100	Lin. Ft., Bore for 10-inch (I.D.) Casing, 600 feet to 700 feet	100% 100'	13.00	1,300.00
		* Change Order No. 1			
1.	100	Lin. Ft., Bore for 10-inch (I.D.) Casing, 700 feet to 800 feet or bottom of well	62 ft.	13.00	806.00

RECOMMENDED (Project Supervisor) W.P. Ellis Project Supervisor H. Paul Ellis	SUMMARY														
APPROVED (Contracting Officer) Earl M. Semingson Earl M. Semingson, Superintendent	DATE 1/31/62														
<table border="1"> <tr> <td>TOTAL TO DATE</td> <td>\$ 9,906.00</td> </tr> <tr> <td>LESS RETAINED AMOUNT.....</td> <td>990.60</td> </tr> <tr> <td>NET.....</td> <td>8,915.40</td> </tr> <tr> <td>LESS PREVIOUS PAYMENTS.....</td> <td>0.00</td> </tr> <tr> <td>LESS LIQUIDATED DAMAGES.....</td> <td>0.00</td> </tr> <tr> <td>DUE THIS ESTIMATE.....</td> <td>8,915.40</td> </tr> <tr> <td>% COMPLETED TO DATE: 60%</td> <td></td> </tr> </table>		TOTAL TO DATE	\$ 9,906.00	LESS RETAINED AMOUNT.....	990.60	NET.....	8,915.40	LESS PREVIOUS PAYMENTS.....	0.00	LESS LIQUIDATED DAMAGES.....	0.00	DUE THIS ESTIMATE.....	8,915.40	% COMPLETED TO DATE: 60%	
TOTAL TO DATE	\$ 9,906.00														
LESS RETAINED AMOUNT.....	990.60														
NET.....	8,915.40														
LESS PREVIOUS PAYMENTS.....	0.00														
LESS LIQUIDATED DAMAGES.....	0.00														
DUE THIS ESTIMATE.....	8,915.40														
% COMPLETED TO DATE: 60%															

*Show Breakdown on Reverse

(See Reverse for Distribution)

DISTRIBUTION

If Region is Finance Office

Region..... 1 original and 1 conformed copy
WASO..... 1 signed copy
Field Design Off. 1 conformed copy
Supt..... 1 conformed copy
Proj. Supv..... 1 conformed copy
Contractor..... 1 signed copy

If Park is Finance Office

WASO..... 1 signed copy
Region..... 1 conformed copy
Supt..... 1 original and 1 conformed copy
Field Design Off. 1 conformed copy
Proj. Supv..... 1 conformed copy
Contractor..... 1 signed copy

Form 107-4
(Rev. 9/60)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICEDinosaur National Monument

(Park)

Check One:

Monthly
Estimate ☐Final
Estimate ☒

UNIT PRICE CONTRACT

ESTIMATE NO. 2 and Final		FOR (Period) January 31, 1962 to February 7, 1962		DATE February 16, 1962	
CONTRACT NO. 14-10-0232-579		COMPLETION DATE December 18, 1961		EXTENDED DATE February 26, 1962	
CONTRACTOR Uintah Basin Drilling Co., 5 D. L. Campbell				ORIGINAL CONTRACT \$15,975.00	
PROJECT Drilling of a Test Water Well - Artesia Headquarters				CHANGE ORDERS* \$ 876.72	
LOCATION Artesia, Colorado				TOTAL CONTRACT \$ 16,851.72	

ITEM NO.	CONTRACT QUANTITY	DESCRIPTION	QUANTITY TO DATE	UNIT PRICE	AMOUNT TO DATE
B-1	200	Lin. Ft., Bore for 10-inch (I.D.) Casing, Surface to 200 feet	200' 100%	13.00	2,600.00
B-2	200	Lin. Ft., Bore for 10-inch (I.D.) Casing, 200 feet to 400 feet	200' 100%	13.00	2,600.00
B-3	200	Lin. Ft., Bore for 10-inch (I.D.) Casing, 400 feet to 600 feet	200' 100%	13.00	2,600.00
B-4	100	Lin. Ft., Bore for 10-inch (I.D.) Casing, 600 feet to 700 feet	100' 100%	13.00	1,300.00
		<u>*Change Order No. 1</u>			
1.	100	Lin. Ft., Bore for 10-inch (I.D.) Casing, 700 feet to 800 feet or bottom of well	62 ft.	13.00	806.00

Paired
BY-3794

File
completed
2/7/62

Form 10-74
(Rev. 9/60)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICEDinosaur National Monument

(Park)

Check One:

Monthly
Estimate☐Final
Estimate☒

UNIT PRICE CONTRACT

ESTIMATE NO. 2 - Final	FOR (Period) January 31, 62 to February 7, 1962	DATE February 16, 1962
CONTRACT NO. 14-10-0232-579	COMPLETION DATE February 7, 1962	EXTENDED DATE February 26, 1962
CONTRACTOR Uintah Basin Drilling Company - % D. L. Campbell		ORIGINAL CONTRACT \$ 15,975.00
PROJECT Drilling of a Test Water Well - Artesia Headquarters		CHANGE ORDERS* \$ 376.72
LOCATION Artesia, Colorado		TOTAL CONTRACT \$ 16,851.72

ITEM NO.	CONTRACT QUANTITY	DESCRIPTION	QUANTITY TO DATE	UNIT PRICE	AMOUNT TO DATE
B-5	700	Lin. Ft., 10-inch (I.D.) Casing, Furnished and Installed from Surface to Bottom of Well	403	7.00	2,821.00
B-6	60	Lin. Ft., Perforating Casing	000	5.00	0.00
B-7	30	Hours, Development and Experimental Work as directed	100%	12.50	375.00
B-8	1	Lump Sum, Furnish and Set Test Pump and Equipment	100%	700.00	700.00
B-9	40	Hours, Test Pumping of Well as directed	30.5	12.50	381.25
B-10	1	Lump Sum, Reaming and Grouting Upper 10 feet of Well	100%	100.00	100.00
		<u>*Change Order No. 2</u>			
1.	1	Furnish all labor, equipment and material to install a 10" drive shoe to be welded to 10" casing	100%	70.72	70.72

RECOMMENDED (Project Supervisor)

Project Supervisor **S. Paul Ellis**

APPROVED (Contracting Officer)

Earl M. Semingsen, Superintendent

DATE

2/16/62

SUMMARY

TOTAL TO DATE	\$ 14,353.97
LESS RETAINED AMOUNT.....	0.00
NET.....	14,353.97
LESS PREVIOUS PAYMENTS.....	8,915.40
LESS LIQUIDATED DAMAGES.....	0.00
DUE THIS ESTIMATE.....	5,438.57
% COMPLETED TO DATE:	100%

*Show Breakdown on Reverse

(See Reverse for Distribution)

DISTRIBUTION

If Region is Finance Office

Region.....1 original and 1 conformed copy
WASO..... 1 signed copy
Field Design Off..1 conformed copy
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If Park is Finance Office

WASO.....1 signed copy
Region..... 1 conformed copy
Supt..... 1 original and 1 conformed copy
Field Design Off. 1 conformed copy
Proj. Supv..... 1 conformed copy
Contractor..... 1 signed copy

L54 Dino.

Wot 1/27/62

Jan. 27, 1962

To: Superintendent Rocky Mountain National Park
From: Regional Hydraulic Engineer, Region Two
Subject: Supervision of Test Pumping, Artesia Headquarters Area,
Dinosaur National Monument

This is to confirm a telephone conversation I had with Messers Whitcraft and Haraden of your office relative to the subject work. It was agreeable with both gentlemen that Mr Haraden supervise the test pumping of the Artesia well, they were advised the contractor ~~plans to be ready to test pump on January 31st.~~

Mr Haraden should contact the Superintendent of Dinosaur N.M. and avail a copy of the specifications and the contract to review. The contractor is the Uintah Drilling Co., Roosevelt, Utah.

The contractor plans to use a submersible pump and proposed setting the pump at 650 feet elevation below the ground surface. This setting will perhaps be satisfactory to analyze the supply, dependent upon the amount of yield as determined by bailing, while cleaning out the well, or while developing the supply.

When installing the pump into the well, the airline should be securely attached to the drop pipe and all connections checked for any leaks. Before the pump is put into operation, the air should be expelled from the air line and the static water surface checked. The specifications included the use of a hand pump for use on the air line but it may be necessary to use the high pressure air compressor that is stored at the Quarry area.

There are three tests shown in the specifications and maybe a few suggestions would assist Mr. Haraden in to work, as follows:

Maximum Yield Test: If the pump is operated at its full capacity, the water surface will lower more rapidly and level off or become constant unless the capacity of the pump exceeds the yield, then in such event the discharge should be reduced so the pump does not pump air. This maximum discharge should be held for a period of six hours.

Maximum Yield Test (Cont'd)

At the end of this pumping period the shall be allowed to fully recover to its static level. Readings on the drawdown and the discharge should be taken at five minute intervals both during the pumping and the recovery times.

Constant Pumping Rate Drawdown Curve: From the Maximum Yield Test you will be able to determine the desired pumping rate which you want to hold constant during this test. During this test readings every five minutes of the discharge and the drawdown should be recorded.

Desired Yield Test: This test is quite self-explanatory, however the depth at which the pump is set with respect to the depth of the well will have an effect somewhat as to the potential of the well/

It might be well for Mr. Haraden to contact Superintendent Semingsen, by phone and verify that the driller is ready to test pump on Jan. 31st.

Please advise this office of the costs involved for Mr Haraden to supervise the test pumping and we will submit you a work order covering these costs.

The following outline of desired data may be helpful:

	<u>Name of test</u>	<u>Date</u>
Static water surface	_____ feet below ground surface.	
Top of casing extends	_____ feet above the ground surface.	
Temperature of water is	_____ degrees Fahr.	
Test pump is set at	_____ feet below ground surface.	
Elevation lower end of air line	_____ feet below ground surface.	

	<u>Air line</u>	<u>Static head</u>	<u>Drawdown</u>	<u>Discharge-Q</u>
<u>Time</u>	<u>pressure</u>	<u>(feet)</u>	<u>(feet)</u>	<u>(G.P.M.)</u>
	<u>(p.s.i.)</u>			

Should Mr. Haraden encounter difficulties he might contact this office if we can be of assistance.

William A. Mott
Regional Hydraulic Engineer.

P.S. Attached is one copy each, teletype to Supt. Semingsen, Rating Curve for a 90 degree V-notched-sharp crested wier.

Typed by WAMott - Sat. Jan. 27/62

Nott 1/26/62
attn 1/16
Jm 1/26

January 26, 1962

SUPERINTENDENT, ^{*ad*}DINOSAUR NATIONAL MONUMENT, 91 WEST MAIN,
COOPER BUILDING, VERNAL, UTAH

✓ Dino
L54. WE HAVE ARRANGED FOR BOB HARADEN TO SUPERVISE TEST PUMPING
OF ARTESIA WELL. HE PLANS TO ARRIVE JANUARY 30 IN TIME TO REVIEW
SPECIFICATIONS.

FRY, REGIONAL CHIEF OF OPERATIONS

Original to PBS Teletype

Copy to: Bob Haraden, Dino. and Romo.

Voucher

Daybook

✓ File

Phoned 4:40
L.H.

(Sgd) George W. Fry

George W. Fry
Regional Chief of Operations

WANott/etb

Long Distance Telephone Call

January 6, 1962

154 DINO

~~Aitor~~
~~Petersen~~
~~Fry~~

From: Bob Haraden at Artesia, Colorado

FILES

To: William A. Mott, Hydraulic Engineer, Region Two Office

Subject: Report on Test-pumping to date of the Artesia Headquarters
Test Well - Dinosaur National Monument

The contractor installed the test-pump with a screen at elevation of 587 feet below the ground surface. Test-pumping was started about 8:30 PM, February 5, with a discharge of 100 gallons per minute, and the testing continued, and at 6:00 AM this date the discharge had reduced to 92 gpm. The static water level before pumping operations started was 215 feet below ground surface. The discharge was regulated at the beginning of the test-pumping to 100 gpm, in hopes that this discharge might be held constant during a drawdown to approximately 500 feet, but due to the increasing head on the pump the maximum capacity of 92 gpm was obtained when the water surface became practically stable at a depth of 347 feet below the ground surface. During the forepart of the testing period the discharge was held at 100 gpm until the drawdown was 92 feet, and then it was necessary to open up the discharge to permit the pump to operate at its full capacity. This pumping operation indicates a specific yield of approximately .7 gpm per foot of depth of drawdown.

After a discussion of subsequent tests to be performed on the water supply, Mr. Haraden was advised that he should shut the pump off, ~~and~~ ^{and when} operating at 92 gpm record the rate of recovery until the water surface reached to within 5 feet of the static level elevation, or until it exceeds the probable recovery period during normal pumping operations when supplying water for the development area. Following the recovery tests it was suggested that he start pumping the well at 75 gpm, holding the discharge constant until the water surface stabilizes and the pumping operations have continued for approximately 14 hours. At the end of the constant discharge pumping test, it was suggested that the discharge be cut down to 60 gpm and held until the water surface stabilizes, and subsequently reducing the discharge to 40 gpm and then 20 gpm, holding each discharge until the water surface stabilizes. This step-testing of the yield is for the purpose of projection and estimation of the possible available supply that might be expected when the water surface is drawn down beyond the 347 feet elevation below the ground surface.

Mr. Haraden said he would contact this office if we can be of further assistance in consummating the tests.

William A Mott P.E.

William A. Mott
Hydraulic Engineer

WAMott/etb

254
B5039

Dinosaur National Monument
91 West Main, Vernal, Utah

January 2, 1962

CHANGE ORDER NO. 2

*File
Completed
H 1/6/2
for*

Uintah Basin Drilling Co.
Roosevelt, Utah

Gentlemen:

In accordance with the provisions of Article 3 of your Contract No. 14-10-0232-579, dated July 25, 1961, you are hereby directed to perform the following additional work:

1. Furnish all labor, equipment, and material to install a 10" drive shoe to be welded to the 10" casing to prevent sand caving and seepage from water source above the 400 foot depth. You are directed to set 10" casing with the drive, and drive the casing and shoe in place at approximately the 400 foot depth.

Following this work you are directed to continue to drill a 10" bore to the depth of 800 feet which was previously drilled by the rotary drill rig with a 7 1/4" pilot bore.

The work shall be accomplished in accordance with the applicable provisions of the specifications. You will be compensated in the amount of Seventy dollars and seventy-two cents, (\$70.72) for one 10" drive shoe actually installed as defined in Measurement and Payment.

This Change Order will increase your contract price by \$70.72. An allowance of five (5) additional days will be made on account of the extra work involved, and your completion date is changed accordingly, from January 25, 1962 to January 30, 1962.

Very truly yours,



Earl M. Semingsen
Superintendent
Contracting Officer

Roosevelt, Utah
January 8, 1962

Superintendent
Dinosaur National Monument
91 West Main
Vernal, Utah

*File
Completed
2/7/62
JW*

Dear Sir:

Adjustment of the amount of compensation under Contract
No. 14-10-0232-579 and in the time required for its performance
by reason of Change Order No. 2 is satisfactory and is hereby
accepted.

Uintah Basin Drilling Company

By

D.L. Campbell
Owner

cc: Reg. Two -2
Contractor
WASO
WODC
Supt.
Proj. Supv.

February 24, 1961

Heubner
PESmith

L-54

Memorandum

To: Regional Director, Region Two
From: Supervisory Engineer, WQDC
Subject: Water Well, Artesia, Dinosaur

Attached is a marked drawing showing the general location where we would like to have the subject well drilled, as requested in a recent telephone call from your office. This location is based on Mr. Ralph E. Smith's report on "Water-Supply Possibilities of Park Service Facilities in and near Dinosaur National Monument, Colorado and Utah". We wish to point out that this location is as good as we can determine from the report; however the location should be checked by a qualified geologist or hydraulic engineer.

Also attached is a copy of our standard specifications for water wells to assist the Bureau of Public Roads in preparing its contract. We would like to see a minimum of a 12" casing installed.

(Sgd.) P. E. Smith
P. E. Smith
Supervisory Engineer

In duplicate

Attachments

Copy to: Supt., Dinosaur w/print

PESmith

Informational: Hafferman, Montgomery, Wright

ADHeubner:vs

FILE COPY

L-54

Dinosaur National Monument
91 West Main, Vernal, Utah
February 20, 1961

Memorandum

To: Regional Director, Region Two
From: Superintendent, Dinosaur
Subject: Water well, Artesia

This confirms my telephone conversation with Mr. Baggle recently in which he stated that the Region Two Office would furnish geological assistance for spotting and the potential drilling of a water well for the Artesia headquarters development site together with a water well for use by the road construction contractors and the Bureau of Public Roads in connection with the water required for road construction purposes.

We have learned from Fleet L. Stanton, BPR project engineer that a well does exist on the Gaisson property and attached is a copy of his report memorandum to Dwight E. Winsor, Highway Engineer, BPR, Denver. Mr. Stanton has learned that Mr. Clifford Lichtenhahn of Craig, Colorado, has drilled the well and has a log of the well which we will be able to secure from him at a later date. It is also my understanding that Mr. Lichtenhahn drilled the three wells for the City of Artesia and is very familiar with the formation for water well drilling in this vicinity.

In the event that a water well is drilled under the road contract by the BPR, it will be necessary for your office and WODC to furnish BPR with water well specifications so that we will eventually end up with a water well with potable water and capacity enough to take care of the Artesia headquarters development as planned.

The location of the well found by Mr. Stanton is about in the vicinity of where we plan to construct the utility buildings and maintenance yards. As soon as more information is learned about other wells drilled in the vicinity of the Gaisson property and our headquarters site, we will forward it promptly to you.

Earl M. Samingsen
Earl M. Samingsen
Superintendent

cc: Chief; WODC ✓

Attachment (1)

W O D C
FEB 23 '61
CHF
ADM
PERS
P & P
ARCH
ENR
L. A. <i>2/24</i>
SPEC
CONT
SFTY
ACTION TAKEN - DATE

last
K. Baggle
2/24/61-ADH
Wright

16 February 1961

Mr. Dwight E. Winsor

Fleet L. Stanton

Existing Well on Caisson Property, Artesia Colorado

In a telephone conversation with Mr. Clifford Lichtenhahn, Craig, Colorado, it was found that the present existing well on the Caisson property (recently purchased for Park Service) is not potable. The well was drilled to a depth of 425 feet (water available) but was tapped at a depth of 35 feet. His recommendations were that 3 wells located (scattered) in the Navajo formation (approximately 1000 to 2000 feet from Highway 40) to a depth of approximately 250 feet would adequately provide potable water at the rate of 50 to 100 gallons per minute.

L-54

Memorandum

FEB 15 1961

To: Superintendent, Dinosaur National Monument

From: Acting Regional Chief of Operations

Subject: Water Well for Artesia Headquarters Site, Dinosaur
National Monument

W O D C
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lunt *1/3/23*
Wright *Montgomery*
Huffman
none

The attachment to your memorandum of January 20 shows the general location of two proposed sites for drilling water test wells. According to the geologic report prepared by the U. S. Geological Survey in 1959, the Navajo formation dips from the outcrop to the south. A review of their report indicates that a well 1,000 feet deep would possibly intercept the Navajo formation within the area of the Headquarters development.

We suggest WODC arrange with the Bureau of Public Roads regarding specifications for drilling so the well will be acceptable as a supply well for the Service insofar as plumbness and alignment are concerned.

WODC is forwarding to this office a sketch showing the proposed location of the supply reservoir for the Headquarters development and general area within which drilling sites may be located. When this sketch is received we will forward you information giving 3 proposed locations for drilling by the contractor. The exact locations can be adjusted on the site to accommodate drilling operations and construction of the pump house.

(SGD.) JOHN F. AITON

John F. Aiton
Acting Regional Chief of Operations

Copy to: ✓ Chief, WODC (2)

11417-OBL

FEB 10 - 1961

W O D C	
FEB - 9 '61	
	CHP
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	L. A.
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	CONT
	SFTY
ACTION TAKEN - DATE	
m/p	

Memorandum

To: Regional Director, Region Two

From: Assistant Director

Subject: Recommended Bureau of Land Management Lands to be Selected for Artesia Headquarters, Dinosaur National Monument

The contents of Superintendent Semingsen's memorandum to you of January 19 on the above have been noted.

It is assumed that your office will file the necessary application for withdrawal of the lands with the Denver Office of the Bureau of Land Management, as required by Title 43 C.F.R., part 295.9. Please furnish us with a copy of the plat filed with your application.

(SGD) JACKSON E. PRICE

Assistant Director

In duplicate

Copy to: Chief, WODC (2)

EXTRA FILE COPY

