8/22/56

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

August 20, 1956

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3989 (Uranium) Contract Idm-E933, Food Machinery and Chemical Corp., Westvaco Mineral Products Division (Sec. 29, T13N, R9W) McKinley County, New Mexico - Operator's Monthly Progress Report for the month of June, 1956

Enclosed are two sets of supplemental data consisting of lithological logs, radiometric probing data, and maps, which are to be attached to the two copies of Form MF-104, Operator's Monthly Report and Voucher, for June, 1956, which were transmitted to your office on August 16, 1956.

W. M. Traver

W. M. Traver

Enclosures

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8/20/56

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III

Administrative Audit Difference Statement

[illegible]
[illegible]
[illegible]

FINAL DISTRIBUTION

MADE AUG 16 1956

[illegible]

Date: [illegible]
Payee's Reference: [illegible]

DMEA-3989

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed	$	[illegible]
Difference	$	[illegible]
Amount Approved	$	[illegible]

The reason for the difference was due to:

[illegible]

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

RECEIVED
AUG 20 1956

N. E. Stokes
Audit Section

R-III-B & F Form No. 4
4-15-52 D

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

224 New Customhouse
Denver 2, Colorado

August 13, 1956

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3989 (Uranium) Contract Idm-E933, Food Machinery and Chemical Corp., Westvaco Mineral Products Division (Sec. 29, T13N, R9W) McKinley County, New Mexico - Operator's Monthly Progress Report for the month of June, 1956

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

Except as otherwise noted below, it is deemed that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made on the following basis, contingent on your verification of arithmetical accuracy within the report.

It has been determined administratively that 10 feet is the maximum allowable penetration into Entrada sandstone formation to assure penetration through the entire Todilto limestone interval which overlies the Entrada. Therefore, the excess footage beyond that depth in the following holes is disallowed.

Hole No.	Month Drilled	Total Depth	Bottom of Todilto ls.	Footage Drilled Below Todilto ls.	Footage subject to disallowance Core	Footage subject to disallowance Noncore
1100-200	May, 1956	165	154	11	0	1
1300-200	May, 1956	175	162	13	0	3
1600-200	May, 1956	210	199	11	0	1
2400-200	May, 1956	290	269	21	0	11
2900-200	May, 1956	330	314	16	0	6

Hole No.	Month Drilled	Total Depth	Bottom of Todilto ls.	Footage Drilled Below Todilto ls.	Footage subject to disallowance Core	Footage subject to disallowance Noncore
3000-200	May, 1956	350	328	22	0	12
3300-200	May, 1956	367	351	16	0	6
3400-200	May, 1956	365	351	14	0	4
3800-200	May, 1956	395	383	12	0	2
4400-200	May, 1956	460	447	13	0	3
5000-200	May, 1956	535	524	11	0	1
300-600	June, 1956	112	98	14	0	4
700-600	June, 1956	140	128	12	0	2
1300-600	June, 1956	207	195	12	2	0
1900-600	June, 1956	277	261	16	0	6
2300-600	June, 1956	320	304	16	0	6
2500-600	June, 1956	337	323	14	0	4
2900-600	June, 1956	375	359	16	0	6
3700-600	June, 1956	440	428	12	0	2
1800-1000	May, 1956	290	270	20	0	10
2000-1000	May, 1956	295	284	11	0	1
2200-1000	May, 1956	320	308	12	0	2
3000-1000	May, 1956	400	385	15	0	5
3400-1000	May, 1956	425	414	11	0	1
3800-1000	May, 1956	457	444	13	0	3
4000-1000	June, 1956	480	468	12	0	2
500-1400	June, 1956	202	189	13	0	3
900-1400	June, 1956	230	215	15	0	5
1300-1400	June, 1956	250	239	11	0	1
200-1800	May, 1956	190	179	11	0	1
1600-1800	June, 1956	290	274	16	0	6
2000-1800	June, 1956	355	318	17	0	7
1600-2600	June, 1956	306	291	15	0	5
2000-2600	June, 1956	350	336	14	0	4
					2	136

Disallow 136 ft. of non-core drilling at invoice cost plus 2% N. M. School tax----------$105.88
Disallow incidental allowance for 136 ft. drilling at $0.18 per foot---------- 24.48
Total amount to be disallowed----------$130.36

Note: Due to an arithmetical error 16 feet of core drilling was disallowed from the May, 1956 voucher, whereas only 14 feet was subject to disallowance. Therefore, the excess 2 feet of core listed in the above tabulation is not disallowed herewith.

AUG 3 3 1953

Reconciliation with Amount Reported by the Operator on Form MF-104 for June, 1956

Amount reported on Form MF-104 for June, 1956	$18,111.66
Amount to be disallowed----------	130.36
Total accepted cost for June, 1956	$17,981.30

Government Participation at 75 percent--------- $13,485.98

Remarks

Date of Report- July 5, 1956
Date Received in Field Office- - - - - - - - - - - July 30, 1956
Date Received in Region Office- - - - - - - - - August 6, 1956

W. M. TRAVER

W. M. Traver

Enclosures

JDC:jy
cc: MF-104 File E933
Sec. Op. Comm. (2)
Shaw (2)
Townsend)
Hasler) w/copy engr's report
Chron.

DMEA
Date Rec'd

AUG 6 1956

BUREAU OF MINES
Denver, Colorado

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
August 2, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III
Through: John F. Shaw
Supervising Mining Engineer

From: W. D. McMillan

Subject: Docket DMEA 3989 (Uranium) Contract Idm-2933, Food Machinery and Chemical Company, Westvaco Mineral Products Division, Sec. 29, T. 13 N., R. 9 W., NMPM, McKinley County, New Mexico -- Progress report for June 1956

Progress was checked on July 11, 1956 in company with Mr. McAlexander, geologist for the applicant.

During June a total of 54 holes were completed, logged radiometrically and all samples were logged geologically, labeled, and stored.

Data on these holes are shown on Map No. 936-B, with the depths of the top and bottom of the Todilto limestone, the total depths of the holes, and whether or not mineralization was encountered. Further details are given on the enclosed log sheets, and north-south cross-sections of all lines completed to the end of June, 1956. An isograd map of Section 29 is being prepared.

The drilling contractor's logs showed 17,228 feet of plug-bit drilling as compared with 16,594 feet claimed by the operator and 634 feet of core drilling, the same as claimed by the operator.

Approved costs for June are 16,594 feet of plug-bit drilling at $0.7698 a foot, or $12,774.12, 634 feet of core drilling at $3.50 a foot or $2219.00, incidental allowance, 17,228 feet at $0.18 a foot or $3104.86 and 5 chemical analyses at $3.50 each or $17.90, a total of $18,111.66.

At $0.773 a foot for plug-bit drilling, the total amount is $12,827.16 instead of $12,774.12, the amount claimed and approved.

It is recommended that 75 percent of the approved total amounting to $13,583.74 be approved for payment.

W. D. McMillan
Mining Engineer

WDM/mw
cc: 6
Idm-2933 - Chron

Dike A - 3989 - Contract Idm-8933 - June Holes

Hole No. N.	No. E	Total Depth	Feet Cored	Feet Samp.
100	600	95	10	
300		112		22
500		119	20	
700		140		24
900		159	40	
1100		178	30	
1300		207	20	
1500		276		12
1700		238	10	
1900		277		26
2100		284	30	
2300		320		36
2500		337		26
2700		353	15	
2900		375		38
3000		377	30	
3100		382		30
3200		393	40	
3300		410		16
3400		410		24
3500		417	30	
3600		425		18
3700		440		24
3800		448	30	
3900		455		22
4000		465		24
4100		476	35	
4300		498		18
4500		503	30	
4000	1000	480		30
100	1400	172		20
300		179	30	
500		202		20
700		206	30	
900		230		22
1100		231	20	
1300		250		24
1500		258	30	
1700		277		26
2700		381		22
1600	1800	290		26
2000		335		20
2400		357		24
2800		393		20

800	2600	247		24
1000		248	30	
1600		306		26
1800		327	27	
2000		350		40
2200		353	27	
2400		374		18
2600		387	40	
2800		406		24
3000		418	30	
		17,[illegible]	654	746

claimed 16,594

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June, 1956 Docket No. DMEA 3989 Contract No. Idm-E933
Operator's Name Food Machinery & Chem. Corp.(Westvaco Min. Prod.) Minerals Uranium
Address P. O. Box 250 Pocatello, Idaho
Contract Amount, $ 91,908.00 Government Participation: 75 % Amount, $

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent / Short Form Contracts:						
Drilling	14,993.12	16,704.94	31,698.06			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	17.50	00.00	17.50			
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): Incidental Allowance per ft. @ .18	3,101.04	3,247.02	6,348.06			
TOTALS	18,111.66	19,951.96	38,063.62	17,981.30	19,951.96	37,933.26
				—	42.36	42.36
					19,909.60	37,890.90
					$ 13485.95	

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 7/5/56 *Payee Food Machinery & Chem. Corp. Westvaco Min. Products Div.
Per Russell J. Hayden Title Project Engineer

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

RECEIVED AUG 30 1956

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$

Signature
(Authorized Certifying Officer)
Date 8/15/56 Vou. No. 57-20
(See other side)

Previous Disallowance

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Tdm. E 937 in accordance with the terms of the contract.

Signature [illegible] ($13,583.74) Title Min. Engr. Date 7/31/56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. M. Lacy Title Executive Officer Date AUG 13 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1956 Docket No. DMEA 3989 Contract No. Idm-E933

Operator's Name Food Machinery & Chem. Corp. (Westvaco Min. Products) Minerals Uranium

Address P.O. Box 250 Pocatello, Idaho

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core per	ft.	2,219.00	634	5,673.50	1,621	3.50	2,415	3.50
~~Churn~~ plug bit	"	12,774.12	16,594	26,024.56	33,646	.773	57,390	1.25
Auger								
Stripping								
Trenching								
~~Test Pits~~ Analysis per	sample	17.50	5	17.50	5	3.50	80	3.50
Roads and Trails								
Incidental @.18 per	ft.	3,101.04	17,228	6,348.06	35,267	.18	59,805	.18
TOTAL DISTRIBUTED COSTS		18,111.66	17,228	38,063.62				TOTAL COSTS AUTHORIZED BY CONTRACT 91,908.00
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 7/5/56 Operator Food Machinery Chem. Corp. Westvaco Min. Products Div.

Per Russell J. Hayden Project Engineer

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only) Thorn-Miller

RECEIVED
AUG 20 1956

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

July 5, 1956

Mr. John F. Shaw
U.S. Bureau of Mines
Room 137, Building 20, Denver Federal Center
Denver 2, Colorado

Re: Progress Report
Docket No. DMEA 3989 (Uranium)
Contract Idm-E933
Food Machinery Chemical Corporation
Westvaco Mineral Products
Section 29, T. 13 N., R. 9 W.

Dear Sir:

The drilling program for the month continued without interruption. A total of 54 holes were drilled, logged radiometrically and all samples were geologically logged, labelled and stored. For data on these holes see Map No. 936-B. Shown on this map are depths of the top and bottom of the Todilto limestone (the ore horizon in this area), total depths of the holes drilled, and whether or not mineralization was encountered. For detailed logs of these holes see the log sheets enclosed. In those holes in which the limestone was cored, an inset sheet gives a detailed description of the recovered core.

Accompanying this report are north-south cross sections of each row of drill holes thus far completed.

DRILLING:

A total of 17,288 feet was drilled on the section during the month of June, of which 16,594 feet was plug drilling and

634 feet was core drilling. Forty-four drill days were required to complete the 56 holes. Two holes (2100-600 and 2700-600) were deepened to locate the limestone. All holes are being drilled wet through the blow sand, and blown dry in an effort to drill the ore horizon dry in the plug holes. Most of the holes in the southeast quarter of the area encountered water at or near the contact at the top of the Todilto which prevented drilling the ore horizon dry.

The following holes were completed during the month of June 1956. Detailed information of the following table may be found in the geologic logs following this report.

Hole No.	T. D.	Ft. Cored	Ft. Sampled	Mineralization
100-600	95	10		none
300-600	112		22	none
500-600	119	20		none
700-600	140		24	none
900-600	159	40		none
1100-600	178	30		none
1300-600	207	20		none
1500-600	276		12	none
1700-600	238	10		none
1900-600	277		26	none
2100-600	284	30		none
2300-600	320		36	none
2500-600	337		26	none
2700-600	353	15		none

Hole No.	T. D.	Ft. Cored	Ft. Sampled	Mineralization
2900-600	375		38	none
3000-600	377	30		none
3100-600	382		30	none
3200-600	395	40		none
3300-600	410		16	none
3400-600	410		24	none
3500-600	417	30		none
3600-600	425		18	none
3700-600	440		24	none
3800-600	448	30		none
3900-600	455		22	none
4000-600	465		24	none
4100-600	476	35		Slt.
4300-600	498		18	none
4500-600	503	30		none
4000-1000	480		30	none
100-1400	172		20	none
300-1400	179	30		none
500-1400	202		20	none
700-1400	206	30		none
900-1400	230		22	none
1100-1400	231	20		none
1300-1400	250		24	none
1500-1400	258	30		none
1700-1400	277		26	none

Hole No.	T. D.	Ft. Cored	Ft. Sampled	Mineralization
2700-1400	381		22	none
1600-1800	290		26	none
2000-1800	335		20	none
2400-1800	357		24	none
2800-1800	393		20	none
800-2600	247		24	none
1000-2600	248	30		none
1600-2600	306		26	ore
1800-2600	327	27		mineralized
2000-2600	350		40	none
2200-2600	353	27		none
2400-2600	374		18	none
2600-2600	387	40		none
2800-2600	406		24	none
3000-2600	418	30	—	none
Total	17,228	634	746	

Items of geologic interest encountered this month are small anticlinal structures, mineralization and absence of limestone in one hole.

Mineralization was found associated with a small anticlinal structure at 4100-600 and ore grade rock at 1600-2600. The mineralization at 4100-600, however, was very slight and the depth to the ore horizon excessive to be of much concern at the present time. Hole number 1400-2050, drilled prior to DMEA

drilling, was mineralized as much as .14% eU308. This hole is located south and west of 1600-2600 in the general direction of trends of ore bodies in this area. No holes have as yet been drilled between these two strongly mineralized holes.

The Todilto ore horizon was completely absent in hole number 1500-600. The hole was drilled to a depth of 60 feet below the projected horizon in an attempt to locate the limestone. The absence of the limestone in this hole, and the extreme irregularity of the top of the Todilto in this vicinity would suggest a pre-Summerville erosional surface or a fossil Karst topography. The surrounding holes do not reveal any evidence of major faulting.

Hole number 1600-2600 was drilled and stron mineralization indicated by probing with an Atomic Engineering Tomcat and an Eberline Mine Evaluation type instrument. The. U.S.G.S. gamma logging machine indicated some ore grade and strong mineralization while the AEC scintillation equipment recorded ore grade rock as high as .6% eU308. Since this was a plug drilled hole in bad ground that caved readily it was felt that the results of the scaler assay of the cuttings could not be considered decisive in umpiring the descrepency. Consequently a three foot offset hole was drilled and cored at the Company's expense. The core through the mineralized zone was assayed radiometrically and chemically with the following results.

Depth	Radiometric eU_3O_8	Chemical U_3O_8
268-269	.033	.481
269-270	.381	.481
270-271	.018	
282-283	.072	
283-283.6	.209	.305
283.6-284.4	.659	.800
284.4-285	.272	.400
285-286	.076	.101
286-287	.005	

The eU3O8 interpretation is based on a curve plotted from limestone samples taken from an adjoining section.

A replica of the mineralized zone of holes 1600-2600, 4300-600, 2600-1800, 2800-1800, taken from AEC probe log is included in this report.

Respectfully submitted

R. J. Hayden

R. J. Hayden, Project Engineer
Food Machinery Chemical Corporation
Westvaco Mineral Products
P. O. Box 250
Pocatello, Idaho

STATEMENT

FROM Grants Assay Office

P.O. Box 532 Grants New Mexico

June 29 19 56

TO Westvaco Min. Dev.

ADDRESS Star Rt. Box 24 Grants New Mexico

CITY

TERMS

5	Wet U308		20	00
		Tax		40
		Total	20	40

J. Gurney Jr

STATEMENT

DATE July 1, 1956 19

NAME Westvaco Mineral Products

ADDRESS Box 24, Star Route

Grants, New Mexico

In Account With

Stewart Bros. & Parker

DRILLING CONTRACTORS

Phone ~~[illegible]~~ AT7-4416 P. O. Box ~~[illegible]~~ 154

~~[illegible]~~

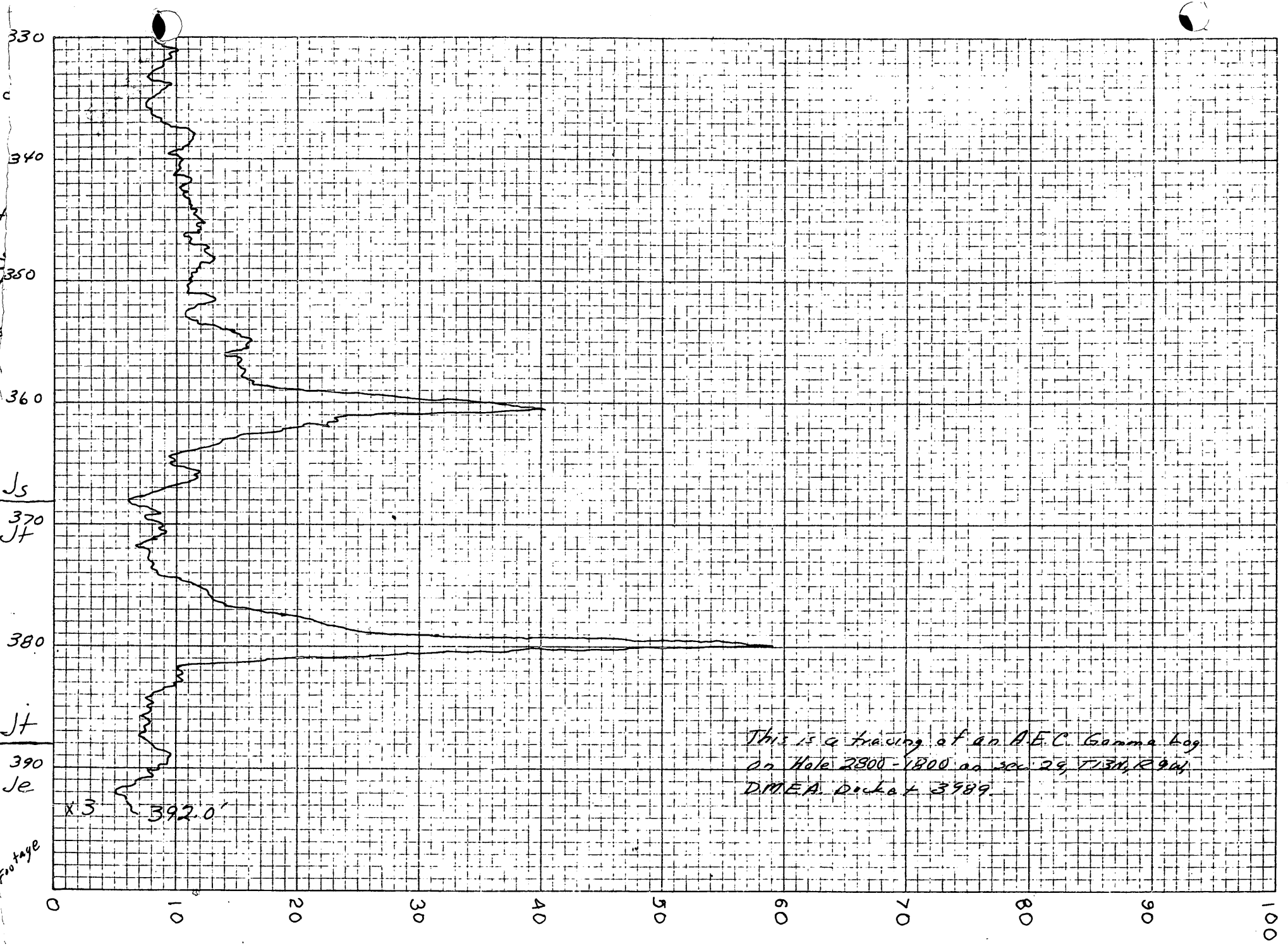
Grants, New Mexico

		Amount
Exploration drilling on Section 29 during June, 1956 as follows:		
RIG #5 - SECTION 29		
4,010 feet @ 75¢ per foot	$3,007.50	
132 feet @ 90¢ per foot	118.80	
202 feet core @ $3.50 per foot	707.00	$3,833.30
RIG #7 - SECTION 29		
6,047 feet @ 7 5¢ per foot	$4,535.25	
309 feet @ 90¢ per foot	278.10	
432 feet core @ $3.50 per foot	1,512.00	6,325.35
RIG #11 - SECTION 29		
6,016 feet @ 75¢ per foot	$4,512.00	
80 feet @ 90¢ per foot	72.00	4,584.00
		$14,742.65
2% N. M. School Tax		294.85
TOTAL		$15,037.50

THANKS

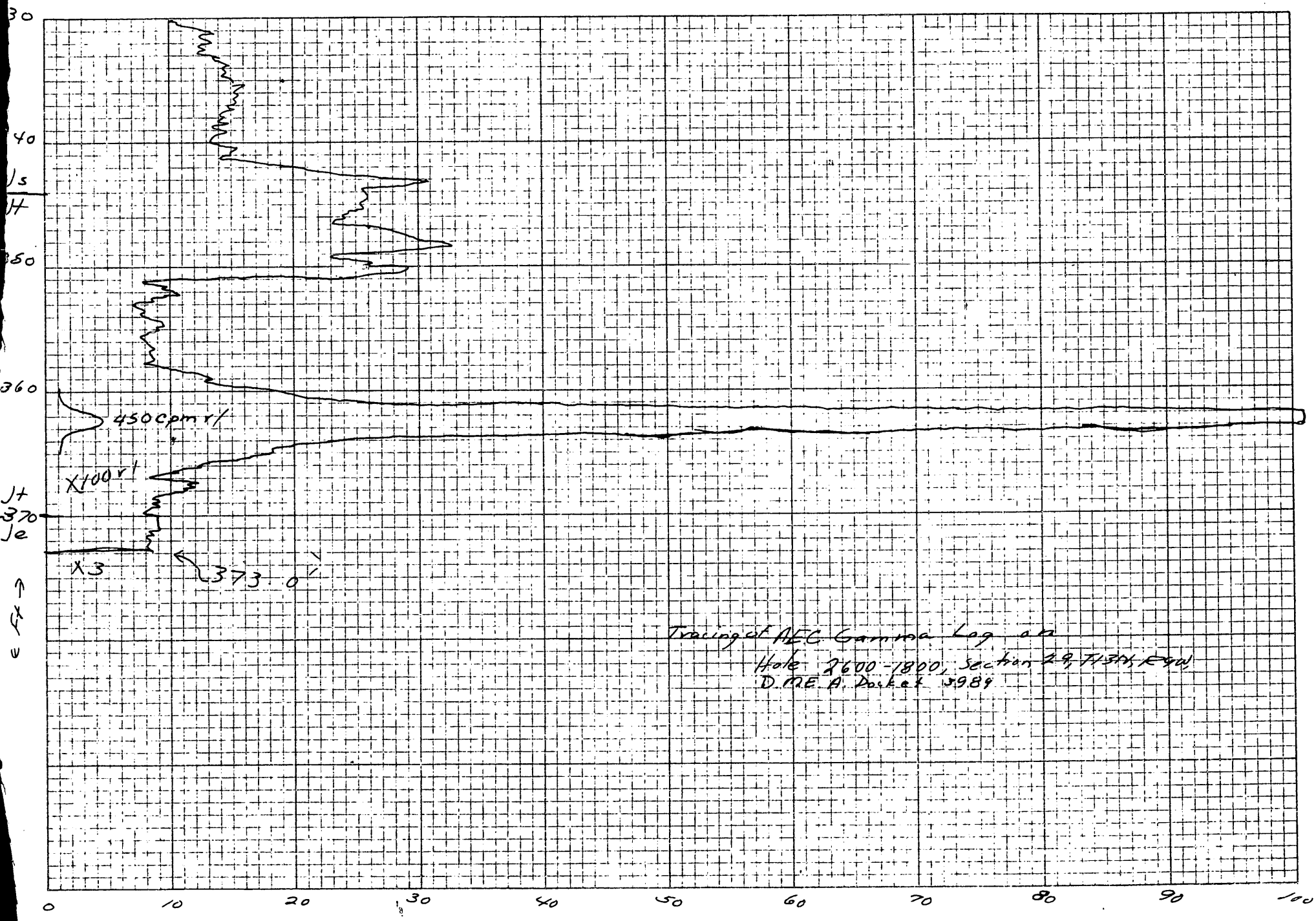
STEWART BROS. & PARKER DRILLING CO.

By [signature]
H. K. Stewart, Partner

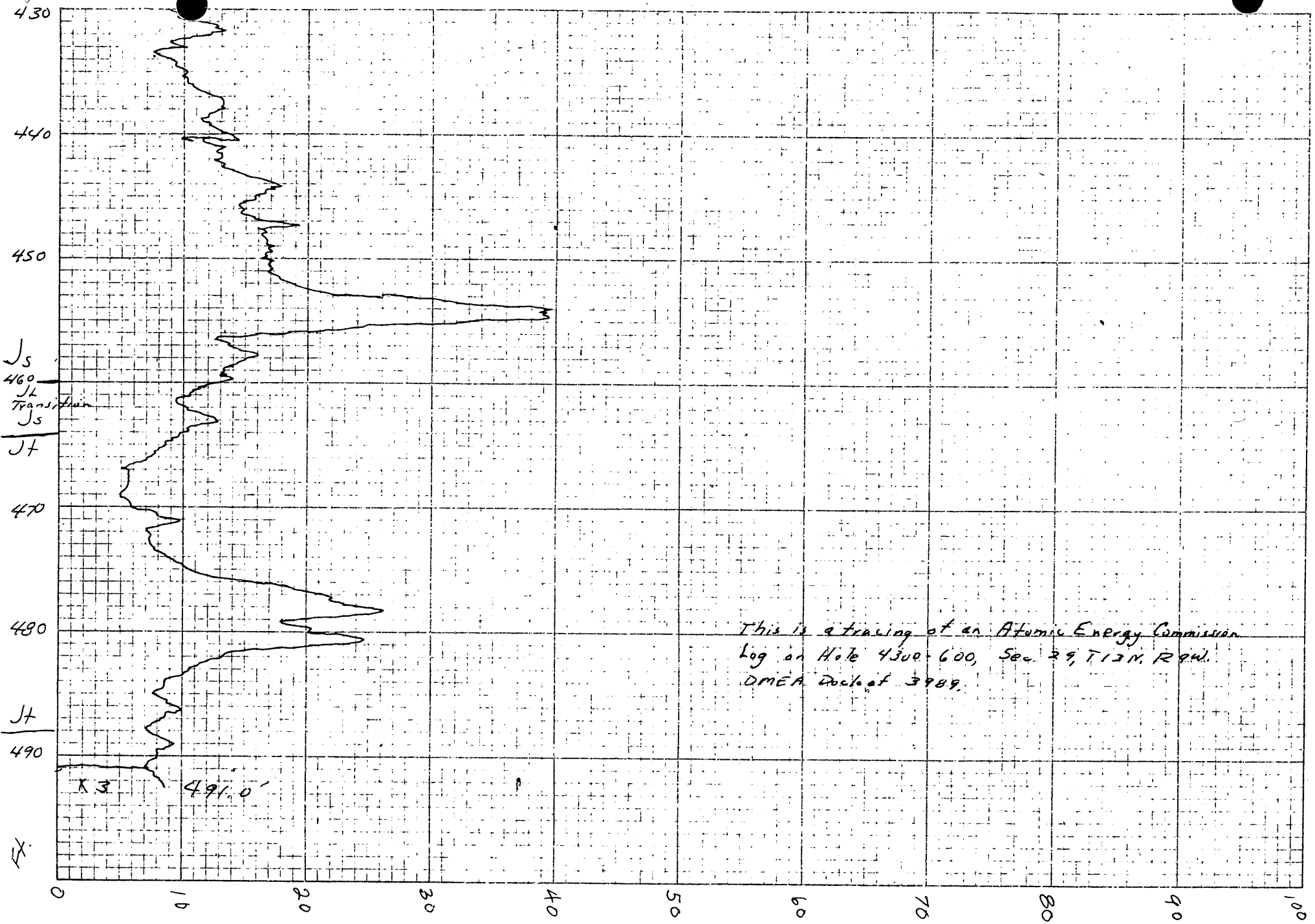


10 X 10 TO THE INCH 359-5
KEUFFEL & ESSER CO. MADE IN U.S.A.

K+E 10 X 10 TO THE INCH 359-5
KEUFFEL & ESSER CO. MADE IN U.S.A.

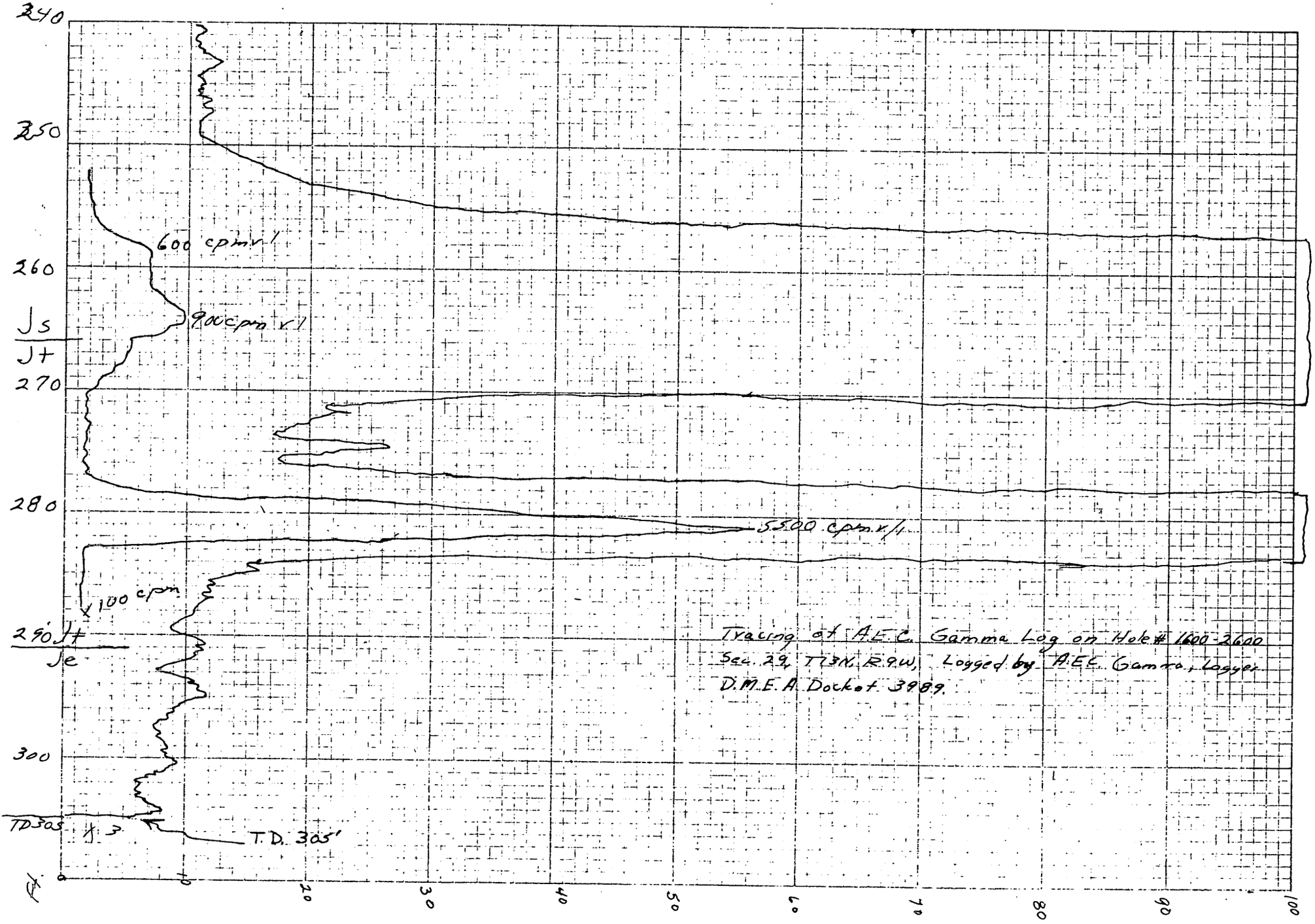


Tracing of AEC Gamma Log on
Hole 2600-1800, Section 29, T13N, R9W
D.M.E.A. Docket 3989



This is a tracing of an Atomic Energy Commission Log on Hole 4300-600, Sec. 29, T13N, R9W. DMEA Docket of 3989.

K+E 10 X 10 TO THE INCH 359-5
KEUFFEL & ESSER CO. MADE IN U.S.A.



Tracing of A.E.C. Gamma Log on Hole # 1600-2600
Sec. 29, T13N, R9W, Logged by A.E.C. Gamma Logger
D.M.E.A. Docket 3989.

Hole No	Sec	Elevation	Page	of	Pages	No Fosc's	Date	Logged by
100-600B-1	29 13-4	6774	1		2	1	6/7/56	T.H.R.

Geologic Description

Woody Rig 5

Depth	Geologic Age	Lithologic Symbol	Lithologic Description	Probe Reading	Scaler Reading	Scaler Assay	Geologic Log	Depth
0	QAL		Blow sand & Gravel	THB. 0 ↓ 95'	.01 0		QAL	
20								
40								
60								
80	Qal / Jt / JE	LS. m-gy aren. 10% re-xtallized. / SS. wh-Brn. v.f.gr.		core / Probe .01 mr/hr			QAL / Jt / JE	
100	TD 95'						TD 95'	
120								
140								
160								
180								
200								
220								
240								
260								

Inset Sheet

Hole No	Sec	Page of Pages	Date	Logged by
100-600 B-1	29 13-9	1 / 1	6/7/56	J.A.R.

Footage From	Footage To	Formation	Geology: Description	Samples
85	87-8	Je	LS, L-m.gy. aren. bands of f xd. sand & shale, increasing sand with depth, calcitic 2% pyre-x + silicification	
87	95	Je	SS, red, lt.gy near top. f-m.gr.	

Hole No	Sec	Elevation	Page of Pages	No. Insets	Date	Logged by
0-600 B-2	29-13-9	6773	1 / 1	0	6/7/56	TCTN

Hannum, rig 11

Geology

Footage | Formation | Type of Rock | Color | Description

Samples | Lacker | Geiger | Decontacts | Features

Probe: Depth | Reading | Scale

Scaler: Interval | Assay

Graphic log | Description

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Footage	Formation	Type of Rock	Color	Description
0	Qal			
20				
40				
60		Sand		sand med-conglomeratic gr.
	Qal / Jb			
	Jt	LS.	dk gray	10% re-xtalized, thin bed, argill. (slightly)
		LS	med brn.	25% re-xtalized, massive,
		LS.		argill, platy.
100	Jt / Je	S.S.	red	Fn-med gr.
	TD 112			
120				
140				
160				

Samples: 20 count; 2' wet Samples

Depth: THB 0 → 112

Reading: .01 mr/hr; .01 mr/hr

Graphic log: Blowsand; Qal; Jb; Jb; Jt; Jt; Je; TD 112

Hole No.	Sec	Elevation	Page of	Pages	No. Insets	Date	Logged
5800 - 600 B-3	29 13-9	6779	1	2	1	6/7/56	JAR

Taylor Rig 7

Depth	Lithologic Description	Core	Probe	Scale	Lab. Assay	Geologic Age	Lithologic Description	Detailed Graphic Study and Time-Frame
0	QAL						QAL	
	Blowsand							
20								
40								
60	QAL sand & gravel						Qal	
	Js ss & sh, red						Js	
80								
100	Js sh, grn.						Js	
	Jt LS						Jt	
	Jt						Jt	
120	T.D. 119'						JE	
							TD 119'	
140								
160								
180								
200								
220								
240								
260								

Probe 0 - 119'

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
5000-600 B-3	29 13-9	2 2	6/7/56	J.A.R.

Footage From	Footage To	Formation	Geology: Description	Samples
99	101	Jt	Ls, m-gy-brngy, 50% re-xtallized, crenulated bd., calcitic, brn. sh. partings.	aren.
101	111.8	Jt	Ls, m gy, brngy, pure, brn. sh. partings ¼" thick, Mn. stain, 10% re-xtallized,	
			Calcitic, appears more brown with depth., aren. in bot. 1'	
108.7	108.8	Jt	Calcite, lattice structure	
111.8	112.2	Jt	Ls., mgy. 90% re-xtallized, Mn. stain., aren.	
112.2	118	JE	SS. purple for top 8", lgy with red bands m-f gr., some grn. sh.	
118	119	JE	SS. red. some grn sh & lgy. sand, f-m grain.	

Hole No.	Sec	Elevation	Page of	Pages	No. Insets	Date	Logged by
700-600 B-4	29-13-9	6775	1	1	0	6/8/56	TCTN

Hannum, rig 11

Description

Footage | Lithologic Description | Lithologic Code | Geologic Age | Geologic Code | Probe Reading | Scale Reading | Scale Equivalent | Assay Cu | Geologic Log | Geologic Code | Geologic Time Units

THB 0 → 140

8 → 8

5 →

Blowsand

0

20

40

60

80

100

Qal / Js — sh. red-bn aren, calc, streaks of moist, bn. s.s.

Js / Jt — L.S. med gy 40% re-xralized, calc xtals., aren. thin bed. blk. calc. on Fl. xtals.

L.S. lt. gy 20% re-xralized, calc. xtals, thin bed, red sh. inter

L.S. med gy 20% re-xralized, calc. xtals, dense

L.S. med gy slight re-xralization, thin bed, red sh. interbedded

120

L.S. lt. gy. 40% re-xralized, calc. xtals, aren.

Jt / Je — L.S. lt gy. 50% re-xralized, pure

S.S. red Fn-med gr.

no count

wet Samples

Qal / Js

Js / Jt

Jt / Je

TD 140

140

160

180

200

220

240

260

Hole No.	Sec.	Elevation	Page of	Pages	No. Insets	Date	Logged by
900-600-B-~~35~~29-13-9	6779		1	2	1	6-7-56	TCM

Woody, rig

Description

Qal
Js sh. red-bn. aren., calc., streaks of gn sh & wet bn. ss. near base

Js sh. white
Jt

See inset for Detailed Log

Jt
Jc

TD 159

no count

cone

THB 159

.01 mg/liter

.01 mg/liter

Blowsand

Qal
Js

Js
Jt

Jt
Jc

TD 159

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
900-600 B-5'	29-13-9	2 / 2	6/7/56	TCTN

Footage From	Footage To	Formation	Geology Description	Samples
119		Jt	L.S., dk gray-brown, 20% re-xxalized, stylolites, vert. healed Frac lin. in	
	119.7		Frac zones	
119.7	123.0	Jt	S.S., lt gray, Fn-med gr, argill, calc,	
123.0	123.9	Jt	L.S., dk gray, slightly re-xxalized.	
123.9	129.5	Jt	S.S., lt., gray, Fn-med gr., argill, calc.	
129.5	~~135~~	Jt	L.S., dk gray-brown, 40% re-xxalized, vert Fracs, open & healed, massive	
	135.0		bedded, mang. or carbon dendrites.	
135.0	~~138.0~~	Jt	L.S., dk gray-brown, 60% re-xxalized, mang. or carbon dendrites, calc.	
	138.0		xtals, crennulated, irregular bedding	
138.0	142.6	Jt	L.S., med gray-brown, reg. bedded, slightly re-xxalized, platy	
142.6	142.8	Jt	L.S., 100% re-xxalized, calc. xtals, lattice struc., slip plane(?)	
142.8	146.0	Jt	L.S., med gray-brown, reg. bed., slightly re-xxalized, platy	
146.0	146.1	Jt	L.S., 100% re-xxalized, calc. xtals, lattice struc., slip plane(?)	
146.1	150.0	Jt	L.S., med gray-brown, reg bed. slightly rexxalized, platy	
150.0	157.0	Je	S.S., Fn-med. grain, purple, argill, calc.	
157.0	159.0	Je	S.S., Fn-med. grain, red.	

Drawing No. 293

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1100-600 B-6	29 13-9	6777	1 2	1	6/7/56	J.A.R.

Taylor Ridge

Geology: Footage, Formation, Type of Rock, Color, Description, Diagnostic Features, Geiger, Samples Taken

Probe: Depth, Reading, Scale

Scaler: Interval, Foot, Assay

Graphic log, Description

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Footage	Formation	Type of Rock	Color	Description
0	QAL			Blow sand
60	QAL / Js	ss.	rd.	
80		Sh.	rd.	
140	Js / Jt	Sh. / Ls.	grn.	
178	Jt / JE			TD 178'

Probe: T.H.B. .07 mr/hr; 0 ↓ .07 mr/hr; 17'

Graphic log: QAL; QAL / Js; Js / Jt; Jt / JE; TD 178'

Cored

Probe .07 mr/hr

Footage: 0, 20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240, 260

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
1100-600 B-6	29 13-9	2 2	6/7/56	J.A.R.

Footage From	Footage To	Formation	Geology: Description	Samples
148	151.5	Jt	Ls, m-dk.gr, v.muddy ~ 20% silt & sand,	
151.5	156	Jt	Ls, dk-v.dk. gy, re-xtallized along bd. planes & vert. fract., slickensides along bd. planes	
156	160.5	Jt	Ls, dk.gr & brn gy. tn.cren. bd., 80% re-xtallized, aren.	
160.5	165	Jt	Ls, dk.gy, tn.bd., silty	
165	165.2	Jt	~~Ls~~, Calcite, lattice struct. (slip plane)	
165.2	169	Jt	Ls dk gy, aren., muddy towards base, calcitic	
169	169.1	Jt	slip plane calcite	
169.1	172.5	Jt	Ls. dk gy, aren, muddy, calcitic	
172.5	178	Je	SS., rd, f-v.f. gr., purple & coarser grained near top.	

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1300-600	29 13-9	6777	1 / 1	1	6/8/56	J.A.R.

Taylor Rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0	Qal			Blowsand				T.H.B. 6 ↓ 20.5	2 0 0 0	5				Qal
20	Qal / JB	ss. / ss.	coarse conglomeritic, red / red											Qal / JB
40														
60	JB ? / JS ?	ss. / sh.	white / red	wet										JB ? / JS ?
80														
100														
120														
140														
160														
180														JS
	JS	sh.	green											JT
	JT	ls.	m-dk. gy.	argill, aren. 10% re-xtallized, thin sh. lenses.										
	JT	ls.	m-dk. gy.	argill, sand near bottom, calcite in steeply dipping fract, slickensides, 30% re-xtallized, grn shale lenses.										JT
200	JE	ss.	red-brn.	m-f. grained				Core ↑ ↓ Probe						JE
	T.D. 207													207'
220														
240														
260														

Dotted line Graphic Assay Solid Line - Probe
0% .20% .60

Dwg. No 792.

Hole No. 1300-600
Section 29-13

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
1300 - 600	29 13-9	1 / 1	6/8/56	J.A.R.

Footage From	Footage To	Formation	Geology: Description	Samples
			Taylor Rig	
187	189	J_T	LS. argill, aren, m-dk gy-brn, 10% re-xtallized, thin interbeded brn. shale.	
189	196.2	J_E	LS. m-dk. gr, aren towards bottom, Calcite in steeply dipping fractures, steeply dipping slickensides, some thin green sh. lenses, 30% re-xtallized	
~~[illegible]~~	~~[illegible]~~			
191.8	192.8	J_E	Fractured zone, white yellow calcite, slickensides	
196.2	197	J_E	SS. purple, ~~gray green~~ lenses, m-f. grain.	
197	207	J_E	SS. red-brown, m-f. grain.	

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1500-600	29 13-9	6781	1 2	0	6/8/56	J.A.R.

Hannum Rig 11

Geology

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken
0	QAL			Blowsand			
40	QAL / JB	SS		hard			
120		SS		Brown hard-wet			
160	JB? / Js?	sh		red			
240	Js? / JE?	SS		Brown hard, m-f grain			

Probe

Depth	Reading	Scale
Jamcat T.B.H.	2	5
0 ↓ 276	0	

Scaler

Foot Interval	Assay

Graphic log

Description: Qal; Qal / JB; JB? / Js?; Js? / JE?

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

4' cuttings sampled

Dwg No 192

Hole No 1500-600
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1500-600	29-13-9	6781	2 2	0	6/8/56	J.A.R.

Footage	Formation	Type of Rock	Color	Hannum Rig 11 Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description	Dotted line Graphic Assay Solid Line - Probe 0% .20% .60
260	TE?	SS	brown	hard										JE?	260
280 20	T.D.	276'												TD 276'	280 20
40															40
60															60
80															80
100															100
120															120
140															140
160															160
180															180
200															200
220															220
240															240
260															260

Dwg No. 792

Hole No. 1500-600
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1700-600	29 13-9	6787	1 / 1	1	6/8/56	J.A.R.

Geology: Footage, Formation, Type of Rock, Color, Description, Diagnostic Features, Geiger, Samples Taken

Probe: Depth, Reading, Scale

Scaler: Foot Interval, Assay

Graphic log, Description, Dotted line Graphic Assay, Solid Line - Probe (0% .20% .60)

Woody Rig 5

Tomcat THB. 8 5 / 0 / 238 — 0 5

Footage	Formation	Type of Rock	Color	Description
0	Qal			Blowsand
40	Qal / Jo	ss.	gy	f-m grain
60				
80	Jo ? / Js ?	sh.	dk red	
100				
120				
140				
160				
180				
200				Sh. red, white & blue intracalated
220	Js / Jt / JE	ls. / ss.	m-dk gy / red	argill, conglomeritic, clay near bot. 20% recrystall. / f-m grain
240	TD 238'			

Graphic log: Qal; Qal / Jo; Jo ? / Js ?; Js / Jt / JE; TD 238'

core probe

Dwg No 792

Hole No. 1700-600

Section 29-13-9

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
1700 - 600		1 / 1	6/8/56	J.A.R.

Footage From	Footage To	Formation	Geology: Description	Samples
			Woody Rigs	
228	230	Jt	Ls. cong., argill., m-dk. gy. grn, 20% re-xtallized, red clay at bottom	
230	230.2	JE	SS. purple, f-m. grain	

Drawing No. 7-43

Hole No.	Sec	Elevation	Page of Pages	No. Insets	Date	Logged by
1900-600 B-10	29-13-9	6795	1 2	0	6/9/56	T.C.T.N.

Geology

Hannum, rig. 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
0	Qal / Jb	s.s	red-brn	F.n.-med.gr.				THB 0 — 277	.01 — .01	mr/hr — mr/hr			Blowsand	Qal / Jb
120	Jb ? / Js	s.s	Brn.	wet										Jb ? ? ? ? / Js
140	Jb ? / Js	sh.	red.	aren., calc., streaks of gr. sh. & wet brn. s.s.										Jb ? — ? — / Js
240	Js / Jt	L.S.	lt. gry.	Slight recrystallization, Few calc. xtals, aren, thin bedded										Js / Jt
		L.S.	lt. gy.	20% re-crystallized, calc. xtals. thin bedded										
		L.S.	med gry.	20% re-crystalized, calc. xtals, dense										
		L.S.	med dk gy.	Slight re-crystalization, aren, thin bed.										
		L.S.	lt-med gy.	40% re-crystalization, calc. xtals, aren, dense										

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

no count

2' wet Samples

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1900-600 B-10	29-13-9	6795	2 2	0	6/9/56	T.C.T.N.

Geology: Hannum, rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
260 Ø	Jt Je	L.S. S.S.	lt gry red	20% re-crystalized, calc. rtals, carn., red sh. thin bedded fn-med gr.		↓	↓							Jt Je
280 20	TD 277													TD 277

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

260 Ø
280 20
40
60
80
100
120
140
160
180
200
220
240
260

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2100-600 B-11	29 13-9	6806	1 4	2	6/8/56	J.A.P. & R. Kaun

Taylor, R. S. S.

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0				blow sand										
	Qal / Jb			in creeks for mileage										Qal / Jb
20														
40														
60														
80		ss	white	f-med. gr.										
	Jb ? Js.	sh.	red	green										Jb ? Js.
100														
120														
140														
160														
180														
200														
220		ss	wht.	f-med. gr										
240		sh	gy-gr.	green, reddish stringers, calc.										
		ss	wht.	f-med. gr.										
260							Core							

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Hole No 2100-600
Section 29

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2100-600 B-11	29 13-9	6806	2 4	2	6-10-56	RMM & JAR

Geology

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken
260	Js.	ss.	wht.	fn-med. gr.			
	Jt	ls.	med gy	sltly re-xtallized			
				see inset for core log.			
280	Jt						
280	Je	ss	red-brn	fn-med. gr.			
	TD 284						
300				Hole originally bottomed at 248' in what was presumably Je ss. - however, structural interpretation showed a strong possibility that if needed to go deeper, and was deepened accordingly, encountering Jt. ls.			
320							

Probe

Depth	Reading	Scale
THB 0	3	5
238	0	5
238	7	5
240		
240	0	5
248		

Scaler

Foot Interval	Assay

Graphic log / Description

Js
Jt
Jt
Je
TD 284

Dotted line - Graphic Assay; Solid Line - Probe

0% .20% .60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Dwg No 192

Hole No 2100-600
Section 29

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
2100-600 B-11	13 29/9	2 2	6/13/56	J.A.R.

Footage From	Footage To	Formation	Geology: Description	Samples
			Taylor Rigs	
264	268.4	JT	Ls. m. gray, 60% re-xtallized, crem. bedding, aren, brn. shale partings	
268.4	279.8	JT	Ls, m-dk. gray, 20% re-xtallized, thin bedded, pure, calcitic, aren at top & bott 8'	
279.8	284	JE	SS, l. gray, purplish in top 4", f-m grain, streaks of red & brn. sand.	

Drawing No. 793

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
2100-600	29 13-9	1 1	6/8/56	J.A.R.

Footage From	Footage To	Formation	Geology: Description	Samples
			Taylor Rig 7	
238	245	?	SS, white-l. gray, fine grained, calcar., lenses of l. green shale, hard.	
245	248	J_E?	SS, red-brown, fine grained, lenses of l green shale & some patches of white sand., hard.	

Drawing No. 797

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2300-600 B-12	29 13-9	6820	1 2	0	6/11/56	J.A.R.

Hannum Rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
0								Tomcat T.H.B. 0	2	5				
	Q_{AL} / J_B	SS		Blowsand				↓ 320	6	5				Q_{AL} / J_B
40														
60				Sh red										
80														
100														
120														
140														
160														
180				SS brown wet										
	J_B ? / J_S ?	Sh	red											J_B ? / J_S ?
200														
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Hole No.	Sec.	Elevation	Page of	Pages	No. Insets	Date	Logged by
2300-600 B-12	29 13-9	6820	2	2		6/11/56	J.A.R.

Geology: Footage | Formation | Type of Rock | Color | Hannum Rio 11 Description | Diagnostic Features | Geiger | Samples Taken | Probe Depth | Probe Reading | Scale | Scaler Foot Interval | Assay | Graphic log | Description

Dotted line Graphic Assay Solid Line - Probe 0% 20% 60

Footage	Formation	Type of Rock	Color	Description
260		Sh.	red	
		SS.	white	fine
280 20				
	Js			
	Jt	LS.	m gy	gren, 20% re-xtallized (water at 286' suitable for well)
		LS.	m gy	gren. very muddy
		LS	m gy-lgrn	gren, 20% re-xtallized, calcitic
		LS.	m gy-gy-brn	30% re-xtallized, gren, calcitic,
300 40		LS	l.-m gy	40% re-xtallized, calcitic, gren.
	Jt	LS.	m gy	very gren, mixed with red SS & green shale
	JE	SS.	red-br	f.m. incl. gr.
320 60	TD 320'			
340 80				
100				
120				
140				
160				
180				
200				
220				
240				
260				

Samples Taken: 2' cutting samples; Probe. Scale Ton cot No count

Graphic log: Js, Jt, Jt, TD 320'

Scale: 260, 280/20, 300/40, 320/60, 340/80, 100, 120, 140, 160, 180, 200, 220, 240, 260

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2500-600 B-13	29-13-9	6832	1 / 2	0	6/11/56	T. C. T. N

Geology

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
0	Qal / Jb													Qal / Jb
60	Jb ? Js	Sh. red bn.												Jb ? ? ? Js
		S.S. brn		streaks of red sh.										
160		Sh. red-brn.												

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2500-600 B-13	29-13-9	6832	2 / 2	0	6/11/56	TCTN

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
260 ~~0~~								THB 0	.02 mr/hr					
								377	.02 mr/hr					
280 ~~20~~														
300 ~~40~~	Js												Js	
	Jt			L.S. med. gy Slight re-realization, few calc. xtals, thin bedded									Jt	
				L.S. lt gy 20% re-realized, calc. xtals, aven., dense, reddish.										
320 ~~60~~				L.S. med. gy slight re-realization, aven., thin bedded									Jt	
	Je												Je	
340 ~~80~~	TD 337												TD 337	

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Samples: 2' wet; nw count

260 ~~0~~ 280 ~~20~~ 300 ~~40~~ 320 ~~60~~ 340 ~~80~~ 100 120 140 160 180 200 220 240 260

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2700-600 B-14	29 / 13-9	6844	1 / 3	1	6-14-56	RMM & JAR

A.D. Woody, Driller Rig 5

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0	Qal			blow sand										Qal
	Qal / Jb	ss.	grey	fine medium gr.										
20														
40														
60														
80														
00														
	Jb → Js.			sh red-brn. green										Jb Js
20														
10														
60														
80														
00														
20														
40														
160														

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Dwg No 198

Hole No 2700-600
Section 29

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2700-600 B-14	29	6844	2 3	1	6-14-56	RMM.

Geology — A.D. Woody, Rig 5.

Footage | Formation | Type of Rock | Color | Description | Diagnostic Features | Geiger | Samples Taken | Probe: Depth, Reading, Scale | Scaler: Foot Interval, Assay | Graphic log | Description | Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)

260 — sh. red-brn. green

280 — 20

sh. gy-gr. green, calc.

300 — 40

sh. wht. calc. green

320 — 60

ss. red-brn. med. gr.

original TD 320

340 — 80

Js — Jt. ls. red-dkgy. sltly re-crystallized

Jt — see inset sheet for core log.

Je — ss. fn. med. gr. red-brn.

TD 353

MD Core

completed TD 353.

2 hrs. wash out time for re-set up.

note: this hole was originally a plug hole, but, due to the question as to whether or not fault to Js existed, it was decided to core to gain more accurate & positive information.

100 — 120 — 140 — 160 — 180 — 200 — 220 — 240 — 260

Dwg. No. 1012

Hole No. 2700-600

Section 29

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
2700-600 B-14	29 13-9	1 1	6/14/56	JAR.

Geology

Woody Rig 5

Footage From	Footage To	Formation	Description	Samples
338	344.9	JT	med-dk gray, 20% re-xtallized, pure, v. little green sandy shale	
344.9	348.8	JE	SS, purple into 6", l. gray & green in lower part, f-m. grain	
348.8	353	JE	SS, red, f-m. grain	
340.9	341.1	JT	calcite, lattice struct	

Drawing No. 793

Hole No.	Sec	Elevation	Page of Pages	No Insets	Date	Logged by
2900-600 B-15	29-13-9	6853	1	0	6/12/56	TCFN

Hannum, rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Scaler Foot	Assay	Graphic log	Description
0	Qal													Blow Sand	Qal
	Jb	s.s	Brn.	Fn-med gr., aren, wet at base.											Jb
120	Jb ? Js	Sh.	red-brn												Jb ? Js
		s.s.	m. gry	Fn-med gr., moist.											
140		s.s.	brn.	med gr., wet											
160		sh.	red-brn												
		s.s.	w	Fn-med gr.											
		s.s.	Brn.	Fn-med gr, moist											
200		sh.	red-brn.	aren, calc.											

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2900-600 B-15	29-13-9	6853	2 2	0	6/12/56	TCTN

Geology: Footage | Formation | Type of Rock | Color | Description (Hannum, rig 11) | Diagnostic Features | Geiger | Samples Taken

Probe: Depth | Reading | Scale

Scaler: Foot Interval | Assay

Graphic log | Description

Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)

Footage	Formation	Type of Rock	Color	Description
260 ~~0~~		Sh.	red. brn.	
280 ~~20~~				
300 ~~40~~				
320 ~~60~~	Js			L.S. med-lt gry. slight recrystalized, aren.
	Jt			L.S. lt med gry. 20% recrystalized, calc. xtals, aren. thin bed.
				L.S. lt. gry. 20% recrystalized, very aren. thin bed.
340 ~~80~~				L.S. lt. gry. 40% recrystalized, calc. xtals., aren, dense red sh's
	Jt			L.S. med-dk gry. slight recrystalization, aren, (red-gr. sh.) few calc. xtals, dense
	Je			L.S. med gry. slight recrystalization, thin bed.
				L.S. dark gry. aren, dense, 20% recrystalized, calc. xtals.
360 ~~100~~	Jt			
	Je			
380 ~~120~~	TD 375			
400 ~~140~~				
160				
180				
200				
220				

No cavings

Good Samples

Js
Jt
Jt
Je
Jt
Je
TD 375

260 ~~0~~
280 ~~20~~
300 ~~40~~
320 ~~60~~
340 ~~80~~
360 ~~100~~
380 ~~120~~
400 ~~140~~
160
180

Hole No.	Sec	Elevation	Page of Pages	No. Insets	Date	Logged by
3000-600 B-16	29 13-9	6857	1 2	1	6/11/56	J.A.R.

Geology | Probe | Scaler

Footage | Formation | Type of Rock | Color | Taylor Rio 7 Description | Diagnostic Features | Geiger | Samples Taken | Depth | Reading | Scale | Interval | Foot | Assay | Graphic log | Description | Dotted line Graphic Assay Solid Line - Probe 0% .20% .60

Tomco T
T.H.B.
0 ↓ 278

0 — QAL — ss. — Blow sand

120 — ss. white

ss. brown wet

160 — Jß?

Js? Sh. red

Jß ?

Js ?

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Hole No	Sec	Elevation	Page of Pages	No. Insets	Date	Logged by
3000-600 B-16	29 13-9	6857	2 2	1	6/11/56	J.A.R.

Geology — Taylor Rig 7

Footage | Formation | Type of Rock | Color | Description | Diagnostic Features | Geiger | Samples Taken | Probe Depth | Probe Reading | Scaler Scale | Foot Interval | Assay | Graphic log | Description

Dotted line Graphic Assay Solid Line - Probe

0% 20% 60

260 — Js — Sh. red

280 20

300 40

320 60

340 80

Js — Sh. green

Jt — LS. m-dk. gray, green, vent. fract., 40% re-xtallized, calcitic

LS. m-dk. gray, green, crem. bedding, calcitic, 50% re-xtallized

360 100

See inset for core-log

Jt

JE — ss. reddish [illegible]

380 120

T.D. 377

core

probe

Js

JT

JT

JE

T.D. 377'

140

160

180

200

220

240

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
3000-600 B-16.	23 13-9	1 / 1	6/11/56	J.A.R.

Footage From	Footage To	Formation	Geology — Description	Samples
			Taylor Rig 7	
347	350.5	JT	LS., m-dk. gray, aren. vertical fractures, 40% re-xtallized, calcitic,	
350.5	352.7	JT	LS., m-dk. gy., aren, cren. bedding, 50% re-xtallized, layers of brown shale., calcitic	
352.7	365.2	JT	LS., m. gray to brownish gray, 10% re-xtallized, layers of brown shale, vertical fractures, calcite in fract. streaks of green sh.	
365.2	370.7	JE	SS. purple for top 1½', streaks of red & green sand & shale in lower part, m-f. grain.	
370.7	377	JE	SS., red, m-f. grain	
356.7	356.8	JT	calcite, lattice struct.	

Drawing No. 793

Hole No.	Sec	Elevation	Page of Pages	No Insets	Date	Logged by
3100-600 B-17	29 13-9	6858'	1 2	0	6/13/56	J.A.R.

Hannum Rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Decr	Probe Reading	Probe Scale	Scaler Interval Foot	Assay	Graphic Log	Description	Dotted Line Graphic Assay Solid Line - Probe 0% 20% 60
0	φAL							T.H.B. 0 ↓ 382	1 No count					φAL	
	JB	S.S.	brown	hard										JB	
20															
40															
60															
80															
100															
120															
140															
160															
180															
200															
220	JB? + Js?	ss. Sh	brown red	wet, streaks of red shale										JB? Js?	
240															
260															

Hole No	Sec	Elevation	Page of	Pages	No Insets	Date	Logged by
3100-600 B-17	29 13-9	6858	2	2	0	6/13/56	J.A.R.

Hannum Rig 11

Probe Reading Scale

Scale 1 Div = 1 ft

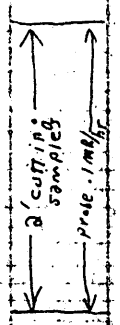
Adsorption

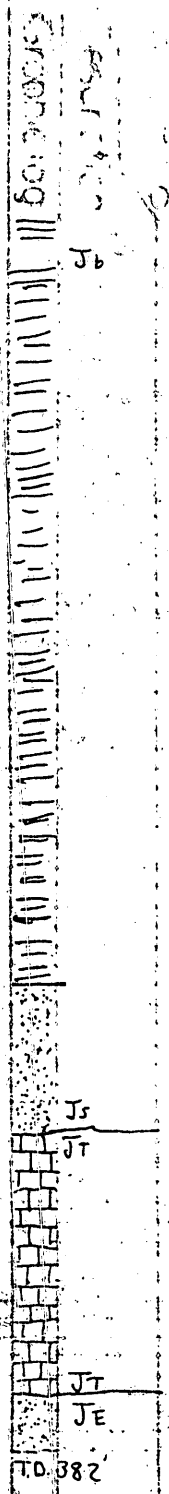
Lithologic Log

Located on Graphic Log Solid line - Probe

0% 60

Depth	Formation	Color	Description
260	Js	sh red	
280			
300			
320			
340	SS.	brown	
360	Js / JT		
	LS.	l-m gy,	40% re-xtallized, calcitic
	LS.	dk. gy,	20% re-xtallized, aren, calcitic
	LS.	l-m gy	60% re-xtallized, aren, calcitic
	LS	l-m gy	70% re-xtallized, calcitic
	LS.	m-dk. gy,	10% re-xtallized, aren.
	LS	l-m gy.	10% re-xtallized, aren, calcitic
	LS.	m gy.	20% re-xtallized, calcitic
	LS.	lt. gy	10% re-xtallized, muddy, aren.
380 JT / JE	LS	l-dk gy	20% re-xtallized, v. muddy, calcitic, mixed with red sand
	SS.		
	T.D. 382		
400			





160 180 200 220 240 260

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3200-600 BIG	29 13-9	6862	1 2	1	6/11/56	J.H.R.

Geology — Woody Rig 5

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
0	QAL			Blowsand				TH.B. 0 ↓	7	.01				QAL
	JB	SS	gray						0	.01				JB
160	JB ? / Js	? Sh.	red											JB ? / Js ?

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Hole No.	Sec.	Elevation	Page of	Pages	No Insets	Date	Logged by
3200-600 B18	29 13-9	6862	2	2	1	6/11/56	J.A.R.

Geology — Woody Rig 5

Footage | Formation | Type of Rock | Color | Description | Diagnostic Features | Geiger | Samples Taken | Probe Depth | Probe Reading | Probe Scale | Scaler Foot Interval | Assay | Graphic log | Description

Dotted line - Graphic Assay; Solid Line - Probe; 0% 20% .60

Depth	Formation	Type of Rock	Color	Description
260	Js	sh	red	
280				
300				
320				
340		sh	white & blue	
360	Js / Jt	LS		See insert for detailed log.
380				
400	Jt / JE	SS	brown	
	Js		red	soft
	TD 395'			
160				
180				
200				
220				
240				
260				

Probe Depth: 260, 280, 300, 320, 340, 360, 380, 400

Probe Reading: .01 .01 .01

Probe Scale: mr/hr mr/hr mr/hr

Graphic log: Js, Jt, JE, TD 395'

Probe or scale no count

No count

Coal

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
3200-600 B18	29 13-9	1 / 1	6/11/56	J.A.R.

Footage From	Footage To	Formation	Geology: Description	Samples
			Woody Rig 5	
355	360	Js	SS, l. gray, f-m. grain, calcar., nod. of green shale	
360	363.3	Js	SS, variegated red, green, & gray, f-m. grain., calcar.	
363.3	369	JE	LS, light-med gray, aren, 20% re-xtallized.	
369	372	JT	LS, dk. gray, 50% re-xtallized, crenulated bedding, calcitic, slightly aren.	
372	384.8	JT	LS, m. gray, 10% re-xtallized, pure, partings of brown-gray shale, thinbedded.	
384.8	388.8	JE	SS, variegated red, gray, green, purple in top 6", m-f. grain.	
388.8	395	JE	SS, red, m-f. grain., firm.	

Drawing No. 793

Hole No.	Sec.	Elevation	Page of	Pages	No. Insets.	Date	Logged by
3300-600 8-19	29 13-9	6867'	1	2	0	6/15/56	J.A.R.

Geology

Woody Rios

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
0	QAL	Blowsand						THB. 0 → 410	4	5				QAL
40	QAL / JB	SS	gray											QAL / JB
100	JB? / JS?	SS & sh	red											JB? / JS?
180		sh	red											

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Hole No	Sec	Elevation	Page of Pages	No Insets	Date	Logged by
3300-600 B-19	29 13-9	6867'	2 2	0	6/15/56	J.A.R.

Geology — Woody Rigs

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
260	Js	sh	red					THB 0 408	.01 .01 .01	m/hr m/hr m/hr				Js
280														
300														
320														
340														
360														
380		Sh	white											
	Js													Js
	JT	LS	l-m gy.	30% re-xtallized, calcitic, oren.										JT
		Ls	"											
		Ls	m-dk gy	40% re-xtallized, mdly. calcitic. very mulh										
400	JT	LS	[illegible]	15% re-xtallized, calcitic, oren										JT
	JE	SS	red											JE
	T.D. 410'													T.D. 410'

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Hold Cony
2' wet cut in sample
1 pole (no sample)

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3400-600 B-29	29-13-9	6874	1 2	0	6/20/56	TCTN

Taylor, rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scaler Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0														
20													Blow sand	
	Qal / Jb	ss	red	Fn-med gr.										Qal / Jb
40														
60		ss	lt gry-wh	Fn-med gr.										
80														
100														
120														
140														
160		ss	gry	med gr.										
180														
200	Jb / Js	sh	red	calc., arcn, streaks gr. sh & wet brn. ss.									Jb / Js	
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Dwg No 792

Hole No _____
Section _____

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3400-600 B-2a	29-13-9	6874	2 / 2	0	6/20/56	TCTN

Taylor, rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
260 0		Sh.	red	cak., acen. streaks gr. sh. & wet brn. s.s.				JHB 0	.005	mr/hr				
								390	.005	mr/hr				
280 20								390.5	.04	mr/hr				
								395.6	.04					
								396.0	.005	mr/hr				
								410.0	.005	mr/hr				
300 40														
320 60														
340 80														
360 100														
380 120	Js	Sh.	gr.											
	Jt	LS	lt gry	20% re-xxalized, acen, massive										
		Sh.	gr.	acen										
		LS	med. gry	40% re-xxalized, calc. xtals, massive, pure										
		LS	med-dk gry	slightly re-xxalized, acen										
		LS	med-dk gry	10% re-xxalized, calc. xtals, argill & acen										
400	Jt													
	Je	S.S.	red	Fn-med gr										
	TD 410													
420 50														
440 30														
0														
0														

← no signi. count →

← 2" wet samples →

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Dwg No 792

Hole No _____
Section _____

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3500-600 B21	29 13-9	6879	1 2	1	6/12/56	J.A.R.

Taylor Rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0	Q_{AL}		Blowsand					T.H.B. 0 ↓ 417	4	.01				Q_{AL}
									No count					
20														
40	Q_{AL}	SS												Q_{AL}
60														
80														
100														
120														
140				SS. white										
				SS. redbrown										
160														
180														
200														
220														
240	J_B ? / J_S ?	Sh	red										J_B ? / J_S ?	
260														

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Hole No	Sec	Elevation	Page of Pages	No Insets	Date	Logged by
3500-600 B-21	29 13-9	6879	2 2	1	6/12/56	J.A.R.

Geology — Taylor Rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scaler Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
260	Js	Sh	red											Js
280 (20)														
300 (40)														
320 (60)														
340 (80)														
360 (100)														
380 (120)														
400 (140)														
420 (160)														

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Js — Sh green
JT — LS. l-mgy, gren, 30% re-xtallized.
LS. m-dk.gy, 80% re-xtallized, calcitic, vert. fract.
LS. dk.gy 10% re-xtallized, cren. bedding, calcitic, lenses of brown shale
LS. l-dk.gy 10% re-xtallized, gren, green sand near bott.
See inset for detail. hog. of core.
JT
JE SS red
TD 417'

Probe .01 mR/hr scale

Js
JT
JE
TD 417'

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
3500-600 B-21	13-29-9	1 / 1	6/12/56	J.A.R.

Footage From	Footage To	Formation	Geology: Taylor Rig7 Description	Samples
387	389.4	JT	LS, l-m gray, v.aren, 30% re-xtallized,	
389.4	395.2	JT	LS, m-dk.gray, 80% re-xtallized, calcitic, vertical fractures, thick bedded	
395.2	397	JT	LS, dk.gray, 10% re-xtallized, even bedding, thin lenses of brown shale, calcitic	
397	410.5	JT	LS, l-dk.gray, aren, 10% re-xtallized, green sand near bottom	
410.5	414.8	JE	SS, purple in top 1', white, green, & red in lower part, f-m. grain	
414.8	417	JE	SS., brownish-red, f-m. grain, hard	

Drawing No. 793

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3600 -600 B-22	29 13-9	6882	1 2	0	6/21/56	J.A.R.

Geology

Taylor Rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0								TOP CBT T.H.B.	8	5				
	QAL	Blousand						0 ↓ NO LOGGING 425						QAL
60	QAL / JB	SS	red											QAL / JB
		SS												
	JB? / Js?	Sh	red											JB? / Js?

Dotted line Graphic Assay Solid Line - Probe

0% .20% .60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Hole No 3600-600
Section 29-13-9

Dwg No

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3600 -600 B22	29 13-9	6882	2 2	0	6/21/56	J.A.R.

Geology — Taylor Rig #7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
260	Js	sh	red											Js
280 20														
300 40														
320 60														
340 80														
360 100														
380 120														
		sh	green											
400 140	Js													Js
	JT	LS	m.gy.	10% re-xtallized, gren, much hard white rh										JT
		LS	Grn-gy	20% re-xtallized, gren,										
							← 2' wet cutting sample							
420 160	JT	LS	m.gy	10% re-xtallized, gren, calcitic										JT
	JE	SS	red											JE
	T.D.	425												T.D. 425'
440 180														
200														
220														
240														
260														

Dotted line Graphic Assay Solid Line - Probe
0% 20% 60

Hole No 3600 -600 B-22
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3700-600	29-13-9	6887	1 2	0	6/22/56	TCTN.

Geology | Probe | Scaler

Footage | Formation | Type of Rock | Color | Description (Taylor, rig 7) | Diagnostic Features | Geiger | Samples Taken | Depth | Reading | Scale | Foot Interval | Assay | Graphic log | Description | Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)

0

20

40

Qal / Jb — s.s. red-brn. fn-med gr.

60

s.s. lt gry fn-med gr., moist.

80

00

20

0

60

80

00

20

40

60

Jb / Js — Sh red-brn aren., calc., streaks gr sh & moist brn. s.s.

Graphic log: Qal / Jb; Jb ? ? Js

Dotted line Graphic Assay Solid Line - Probe: 0 20 40 60 80 100 120 140 160 180 200 220 240 260

Hole No

Section

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3700-600	29-13-9	6887	2 / 2	0	6/22/56	TCTN

Taylor, rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
260 / 0		sb.	red-brn	c.rem. calc.				THB 0	6	V				
								440	6	V				
280 / 20														
300 / 40														
320 / 60														
340 / 80														
360 / 100														
380 / 120														
400 / 140	Js	Sh.	gr.										Js	
	Jt	L.S.	lt-med gry	20% re-mineralized, calc. stels, accen. massive									Jt	
		L.S.	med gry	thin-bedded, argill.										
420 / 160		L.S.	lt-med gry	40% re-mineralized, calc. stels., argill.										
	Jt												Jt	
	Je	S.S.	red	fn-med. gr.									Je	
440 / 180	TD 440												TD 440	

no count → ← 2" wet samples

Hole No.

Sec. Twp.

Hole No	Sec	Elevation	Page of Pages	No. Insets	Date	Logged by
3800-600 B-24	29-13-9	6890	1 / 3	1	6/13/56	TCTN

Geology

Woody, rig 5

Footage	Formation	Type of Rock	Color	Description
0				
20				
40	Qal	s.s.	brn-w.	med.-conglom. gr.
60				
80		s.s.	brn.	fn.-med. gr.
		s.s.	brn.	fn.-conglom. gr
100		s.s.	w.	quartz
120		congl.	w.	quartz pebbles, fair cemt.
		congl.	wh.	gravel
140		congl.	gry.	fn-conglom. gr.
160				
180				
200		s.s.	red	fn-med gr.
220				
240				
260				

Probe: Depth, Reading, Scale

Scaler: Interval, Foot

Samples Taken: Geiger, Diagnostic Features

Assay: Graphic log, Description

Graphic log: Blowsand; Qal; Jb

Dotted line: Graphic Assay
Solid Line - Probe
0% 20% 60

Hole No.	Sec.	Elevation	Page of	Pages	No. Insets	Date	Logged by
3800-600 B-24	29-13-9	6890	2	3	1	6/13/56	TCTN

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval Foot	Assay	Graphic log	Description
260 ~~0~~				Woody, rig #5										
280 ~~20~~														
300 ~~40~~														
320 ~~60~~														
340 ~~80~~														
360 ~~100~~														
380 ~~120~~														
400			Sh.	gry. or sandy										
420 ~~160~~	J / Jt	LS											J / Jt	
440 ~~180~~	Jt / Je	S.S.	red	Fn-med gr.									Jt	
	TD 448												T.D. 448	

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

See loset for detail log

Sample Zone

Inset Sheet

Hole No	Sec.	Page of Pages	Date	Logged by
3800-600 8-24	29-13-9	3 3	6/13/56	T.C.T.N.

Footage From	Footage To	Formation	Geology — Description	Samples
418	418.2	Jt	L.S., 60% re-xxalized, calc. xtals, lt-med. gray	
418.2	420.5	Jt	L.S., med.-drk. gray, 20% re-xxalized, calc. xtals, aren. vert. Frac (heal)	
420.5	425	Jt	L.S., lt-med. gray, 20% re-xxalized, calc. xtals, crennulated struc., aren. vert. Frac.	
425	429	Jt	L.S., lt-med. gray, slightly re-xxalized, aren	
429	429.6	Jt	L.S., lt. gray, 40% re-xxalized, vert. Frac (healed with calc), aren. (red sh)	
429.6	429.8	Jt	L.S., white, 100% re-xxalized, calc. xtals, lattice struc.	
429.8	433	Jt.	L.S., med-drk gray, slightly re-xxalized, aren.	
433	433.4	Jt	L.S., white, 100% re-xxalized, calc. xtals, lattice struc.	
433.4	437.5	Jt	L.S., drk. gray, slightly (very) re-xxalized, aren mat. interbedded with L.S.	
437.5	437.8	Jt.	L.S., lt-med gray, 20% re-xxalized, calc. xtals, interbedded with red & gn. sh.	
437.8	441.7	Jc	S.S., lt brn, interbedded with red & gn sh, fn-med gr	
441.7	448	Jc	S.S., red, fn-med gr.	

Drawing No. 793

Page No.	Date	Page of	Pages	No. Tests	Date	Logged by
3900-600 B-25 29-13-9	6893	1	2	0	6/26/56	TCTN

Taylor, rig 7

Scale

Blowing sand

Qal

s.s. ltgray-wh. Fn-med. gr.

s.s. brn. Fn-med gr.

s.s. wh. Fn-gr.

ss red Fn-med gr., argill.

Jb ? Js

Sh red-brn arg., calc., streaks gr sh & moist wet brn s.s.

Qal

Jb

Js

Hole No	Sec.	Elevation	Page of	Pages	No. Insets	Date	Logged by
3900-600 B-25	29-13-9	6893	2	2	0	6/26/56	TCTN

Geology

Taylor, rig 7

Footage | Formation | Type of Rock | Color | Description | Diagnostic Features | Geiger | Samples Taken | Probe Depth | Probe Reading | Probe Scale | Scaler Foot Interval | Assay | Graphic log | Description

Dotted line Graphic Assay Solid Line - Probe

0% 20% 60

THB 0 — 455

8 — 8

Formation	Type of Rock	Color	Description
	Sh.	red-brn	
	Sh.	gr.	
Js	Sh.	wh.	
Jt	L.S.	med gry	slightly re-realized, massive.
	L.S.	lt. gry	20% re-realized, calc. xtals, arcn.
Jt	L.S.	med gry	10% re-realized, calc. xtals, very argill.
Je	S.S.	red	Fn.-med gr.
TD 455			

no count

2 wet Sampler

Js

Jt

Jt

Je

TD 455

260 280 300 320 340 360 380 400 420 440 460

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
4000-600 B26	29 13-9	6897	2 2	0	6/26/56	J.A.R.

Taylor Rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval Foot	Assay	Graphic log	Description
260	Js	Sh	red					THB. 0 ↓ 465	9	5	No count			
280 20														
300 70														
320 60														
340 80														
360 00														
380 20														
400 0			SS	brown										
420 30														
			Sh	green										
440 30	Js / JT		LS.	m-gy.	10% re-xtallized, aren.								Js / JT	
			LS.	m-dk-gy.	30% re-xtallized, aren. calcitic.									
			LS.	lio-gy.	40% re-xtallized, aren, calcitic., some grn sh.									
			LS.	dk-gy.	20% re-xtallized, aren, some grn. sh.			2' cutting samples ↑ ↓						
460 20	JT / JE		LS.	m-dk-gy	20% re-xtallized, vary aren,								JT / JE	
	T.D.	465'											T.D. 465'	
480 20														
500 20														
60														

Graphic Assay: Dotted line; Solid Line - Probe; 0% .20% .60

Depth scale: 260, 280, 300, 320, 340, 360, 380, 400, 420, 440, 460, 480, 500

Graphic Assay scale: 260, 280 20, 300 40, 320 60, 340 80, 360 00, 380 120, 400 140, 420 160, 440 180, 460 200, 480 220, 500 240, 260

Dwg No 192

Hole No. 4000-600 B-26

Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
4000-600 B-26	29 13-9	6897'	1 2	0	6/26/56	JAR

Geology: Footage, Formation, Type of Rock, Color, Taylor Rig #7 Description, Diagnostic Features, Geiger, Samples Taken. Probe: Depth, Reading, Scale. Scaler: Foot Interval, Assay. Graphic log, Description. Dotted line Graphic Assay Solid Line - Probe 0% . .20% .60

Footage	Formation	Type of Rock	Color	Description
0	QAL	Blowsand		
60	QAL JB	SS. red		
80		SS. lt gy, f-m grain		
200	JB? Js?	SH. red		

Graphic log: QAL; QAL JB; JB? Js?

Dotted line Graphic Assay Solid Line - Probe: 0 20 40 60 80 100 120 140 160 180 200 220 240 260

Hole No 4000-600 B-26
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
4100-600 B-27	29-13-9	6903	1 / 3	1	6/14/56	TCTN

Geology: Footage | Formation | Type of Rock | Color | Description | Diagnostic Features | Geiger | Samples Taken

Probe: Depth | Reading | Scale

Scaler: Foot Interval | Assay | Graphic log | Description

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Taylor, rig 7

0
20
40
60
80
100
120
140
160
180
200
220
240
260

Qal / Jb ss. gray-brn. fn-med. gr

ss. w. Fn-med gr, wet.

Jb ? / Js ss. red-brn. green, calc., streaks of gr. sh + wet brn. ss.

Blowsand

Qal / Jb

Jb ? / Js

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
4100-600 B-27	29-13-9	6903	2 3	1	6/19/56	TCTN

Geology: Taylor, rig 7

Probe: THB 0 → 454 .005; 455.3 .03; 456.0 .04; 456.7 .01; 457.0 .005 → 476 .005 mr/hr

Scaler: .005 mr/hr

Footage / Formation / Type of Rock / Color / Description / Diagnostic Features / Geiger / Samples Taken / Foot Interval / Assay / Graphic log / Description / Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)

260 ~~0~~ — Sh. red-brn, green, calc. streaks grsh. & wat brn. ss.

280 ~~20~~

300 ~~40~~

320 ~~60~~

340 ~~80~~

360 ~~100~~

380 ~~120~~

400 ~~140~~ — ss. brn. Fn-med gr.

420 ~~160~~

440 ~~180~~ — Js / Jt — LS. med gray

460 ~~200~~

Jt / Jc — ss. rdd. Fn-med gr.

480 ~~220~~ — TD 476

500 ~~240~~

Core

Js / Jt / Jt / Jc / TD 476

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
4100-600 B-27	29-13-9	3 3	6/14/56	T.C.T.N

Footage From	Footage To	Formation	Geology: Description	Samples
441	444.3	Jt	L.S., lt-med. gray, zones of green shaly-muddy material, calc. xtals, slight re-xxalization.	
444.3	444.9	Jt	L.S., med. gray, 40% re-xxalized, calc xtals, fl. xtals (?),	
444.9	447.5	Jt	L.S., drk. gray, aren., slightly rexxalized.	
447.5	451.0	Jt	L.S., drk. gray, crennulated struc., calc. xtals.	
451	456.	Jt	L.S., lt gray, aren. slightly re-xxalized, thin bedded, zones of shaly-muddy mat.	
456.	456.2	Jt	L.S. calc xtals.	
456.2	459.6	Jt	L.S. lt-med. gray, healed frac. zones, limonite (?) stains.	
459.6	459.8	Jt	L.S., w., 100% re-xxalized, calc. xtals, lattice struc.	
459.8	463.9	Jt	L.S., med-drk. gray, yellow-green stains, red sh in Frac. zones, sandy aren.	
463.9	469.1	Je	S.S. calc. purple & gr. zones, main color is wh., Fn-med gr	
469.1	476	Je	S.S. red, Fn-med. gr.	

Drawing No. 793

Hole No.	Sec.	Elevation	Page of Pages	No Insets	Date	Logged by
4300-600 B-28	29 13-9	6908'	1 2	0	6/14/56	J.A.R.

Geology — Woody Rig 5

Footage | Formation | Type of Rock | Color | Description | Diagnostic Features | Geiger | Samples Taken | Probe Depth | Probe Reading | Scale | Scaler Interval | Foot | Assay | Graphic log | Description | Plotted Log Grade Assay Solid Line - Probe

0% 10% 80

Probe Reading: AEC 1 .01

T.H.B. 0 ↓ 491 — No count

0 — QAL — Blowsand

20

40

60 — Gravel

80 — QAL — JB — SS 89

100

120

140

160

180

200

220

240 — JB? — Js? — SS+Sh, red

260

Graphic log: QAL — JB — JB? — Js?

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
4300-600 B-28	29 13-9	6908'	2 2	0	6/14/56	J.A. R.

Geology: Footage | Formation | Type of Rock | Color | Woody Rig 5 Description | Diagnostic Features | Geiger | Samples Taken

Probe: Depth | Reading | Scale

Scaler: Foot Interval | Assay

Graphic log | Description | Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)

Probably AEC Gamma Log 9-20

Footage	Formation	Type of Rock	Color	Description
260	Js	ss & sh, red		
280				
300				
320				
340				
360				
380				
400				
420				
440				
460	Js	sh	white	
	Jt	Ls	l-m gy	some brownish, 80% re-xtallized, calcitic,
		Ls	l-dk gy	40% re-xtallized, calcitic, aren.
		Ls	l-m gy	" "
480		Ls	l-m gy	20% re-xtallized, calcitic, very aren.
	Jt ?			
	JE ?	ss ?		
500	T.D. 498			
260				

No Count. 2' cutting samples

Probably AEC No count

0

Js / Jt

Jt ? / JE ?

T.D. 498'

Lost circulation at 482'

Drilled from 482' to 498' blind.

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
4500-600 B-29	29-13-9	6911	1 / 3	1	6/15/56	TCTN

Geology

Taylor, rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scaler Scale	Scaler Interval	Assay Foot	Graphic log	Description
0														
20														
40														
60	Qal / Jb	Sh. red											Blow sand	Qal / Jb
		Sh. gr.												
		S.S. gray		fn-med. gr.										
80														
100														
120														
		S.S. ltgray-w		fn-med. gr. wet										
140														
160														
180														
200														
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe

0% .20% .60

Hole No	Sec	Elevation	Page of Pages	No Insets	Date	Logged by
4500-600 B-29	29-13-9	6911	2 of 3	1	6/~~15~~/56	TCTN

Geology — Taylor, rig 7

Probe — Scaler

Dotted line Graphic Assay Solid Line - Probe (0% … 20% … 60)

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Depth	Reading	Scale	Interval Foot	Assay	Graphic log	Description
260 ~~0~~	Jb	s.s	lt.gry-w	fn-med.gr., wet.				THB 0	5	5				Jb
	Js	sh.	red brn	streaks gr sh & wet brn ss., aren, calc.				503	5					Js
280 ~~20~~														
300 ~~40~~														
320 ~~60~~														
340 ~~80~~														
360 ~~100~~														
380 ~~120~~														
400 ~~140~~														
420 ~~160~~														
440 ~~180~~														
460 ~~200~~														
480 ~~220~~	Js / Jt	sh.	gr.	For detail log See Inset	no count	cored							Js / Jt	
500 ~~240~~	Jt / Jc												Jt / Jc	
	D 503												D 503	
520 ~~260~~														

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
4500-600 B-29	29-13-9	3 / 3	6/15/56	TCTN

Footage From	Footage To	Formation	Geology: Description	Samples
			Taylor, rig 7	
473	473.4	Jt	LS., lt-med gray, slightly re-xxalized, ~~aren.~~, pure, horizontal healed Frac. zone	
473.4	474.6	Jt	LS., med. gray, 60-80% re-xxalized, blk & wh. calc. xtals.,	
474.6	474.9	Jt	LS., med.-drk gray, 20% re-xxalized, calc. xtals, aren.	
474.9	475.3	Jt	Sh., mudstone, poorly cemented, very aren., slightly calc.	
475.3		Jt	LS., med. gray, healed vert. Fracs. Filled with calc. xtals & blk. Fl. (?) xtals, zones of shaly mat. along	
	477		hor. Fracs., LS 40% re-xxalized, stylolites	
477	478.6	Jt	LS. lt. gray, 20% re-xxalized, calc. xtals along healed vert. fracs., hor. tensces of aren. mat.	
478.6		Jt	LS., med. gray, slight re-xxalization, crenulated, very aren., zone partially thru core of pure	
	480.2		lt gray LS. approx. .3 foot wide., limonite (?) stains.	
480.2	480.8	Jt	S.S. brn-red, fn.-med grain, calcareous	
480.8	481.8	Jt	Sh., white, very sandy, calcareous	
481.8	484.8	Jt	LS. lt-gray, very aren., slightly re-xxalized, vert. Frac. zones, crennulated., limonite (?) stains	
484.8	488.2	Jt	LS., med gray, thin bedded with lenses aren. mat. alternating with pure LS., vert Frac.	
488.2	488.7	Jt	LS., med gray, thin bedded with lenses carbon. mat.	
488.7	488.9	Jt	LS., wh., 100% re-xxalized, calc. xtals, lattice struc.	
488.9	493.2	Jt	LS., drk. gray, thin bedded, pure	
493.2	493.4	Jt	LS. wh., 100% re-xxalized, calc. xtals, lattice struc	
493.4	493.7	Jt	LS, drk gry, carbonaceous mat	
493.7	495.6	Jt	LS., lt-med gray, few lenses of sh,	
495.6	496	Jt	LS, med gray, sh. lenses, sandy	
496	502.8	Je	S.S. lt gray-white, purple sh. lenses, fn-med gr.	
502.8	503	Je	S.S., red, fn-med gr.	

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
4000-1000 C-20	29 13-9	6889	1 2	0	6/4/56	RMM

Geology: Hannum, Rig 11

Footage | Formation | Type of Rock | Color | Description | Diagnostic Features | Geiger | Samples Taken | Probe Depth | Probe Reading | Scaler Scale | Foot Interval | Assay | Graphic log | Description

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Qal / Jb ss. ltgy fn. med. gy., moist

Jb ??? Js sh, red-brn aren, calc. toward base, streaks of gn. sh. & brn. wet ss.

Blow Sand

Qal / Jb

Jb ??? Js

Hole No	Sec.	Elevation	Page of	Pages	No Insets	Date	Logged by
4000-1000 C-20	29 13-9	6889	2	2	0	6/4/56	RMM TCTN JAR

Geology — Hannum, Rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scale	Scale Interval	Assay Foot	Graphic Log	Description
260		sh.	red-brn	oren. calc. streaks of gn. sh & wet brn. ss calc. toward base				THB	.18	1 mr/hr.	Fall out?			
								0	.18					
								330	.10					
								350	.05					
								439	.01					
								457	.01					
								458	.03					
								459	.025					
								460	.15					
								461	.08					
								463	.004					
								478.5	.004					
								TDP 478.5						
420		ss	Bn.	fn-med. gr. wet							10 mr/hr.			
440	Js												Js	
	Jt	Ls.	H.gy	50% re-xtallized, oren. wht. calc. xtals									Jt	
		Ls.	H.gy	50% re-xtallized, oren, muddy (gy-gn & clay)										
		Ls.	H.mdgy	20% re-xtallized, clean, pure, ls.										
		Ls.	lt med gy	40% re-xtallized, clean pure ls. calcitic										
		Ls.	med. gy br.	15% re-xtallized, clean pure ls. calcitic										
		Ls.	dk. gy. br.	3% re-xtallized.										
		Sh.	red & gr.	jens.										
460		Ls.	dk. gy. br.	10% re-xtallized. clean pure Ls. calcitic.										
	Jt	Ls.	dk.gy	" " muddy, shaly, ls.							.10 mr/hr.	2' wet cuttings samples		
	Je	Ss	red-brn.	fn-med. gr.									Je	
	TD 480												TD 480'	

Dotted line Graphic Assay Solid Line - Probe

0% 20% 60

240 260 280 300 320 340 360 380 400 420 440 460 480

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
100-1400 D-1	29 13-9	6756'	1 / 1	0	6/13/56	J.F.R.

Geology — Hannum Rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken
0	QAL			brown sand			
80	QAL / Js	gravel & line / SS.	red				
140	Js / JT	LS.	m-gy	50% re-xtallized, Calcitic, slightly aren.			
		LS.	m-gy-grn	80-70% re-xtallized, v. calcitic, aren.			
		LS.	m-gy-dk gy	5% re-xtallized, some grn-sh, aren.			
160	JT / JE	LS. / SS.	m-dk gy / red	50% re-xtallized, very muddy & sandy			
TD. 172'							

Probe — Depth / Reading / Scale

Depth	Reading	Scale
THB 0 ↓	2	.01
172	No count	

Scaler — Foot Interval / Assay

2' cd Mines samples — Pyrite or marker

Graphic log — Description

Dotted line Graphic Assay Solid Line - Probe

0% .20% .60

Depth scale: 0, 20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240, 260

Hole No. 300-1400 D-2 | Sec. 29 T. 13-9 R. 67 58

Taylor Ridge

Date 6/15/56 | Logged by J.A.R.

Depth Scale 1" = 20'

Geologic Profile

Boring Log

Assay

Foot Interval

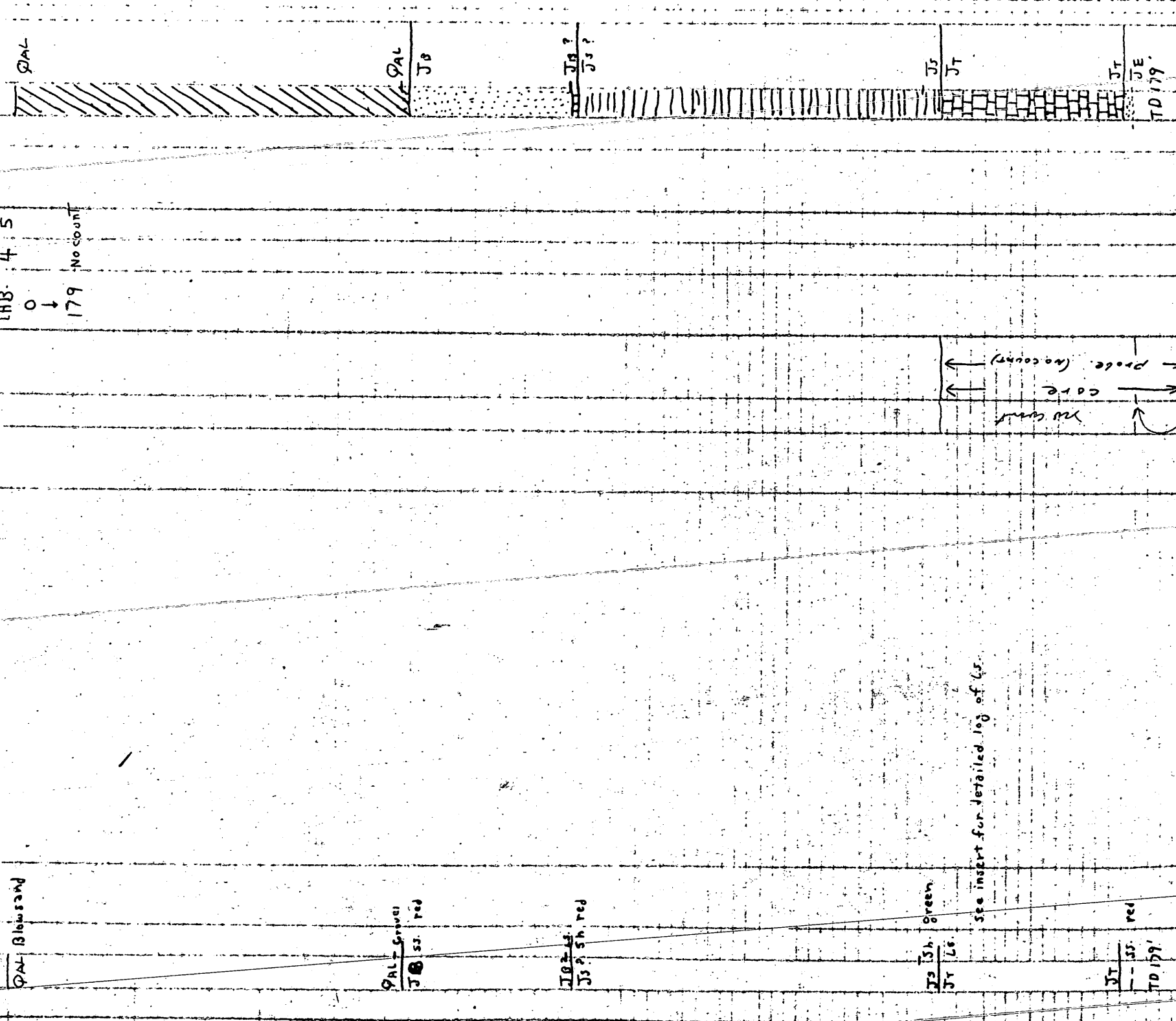
Scale Reading

Depth

Samples Taken

Geiger

Engineering Features



Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
300-1400 D-2	29 13-9	1 / 1	6/15/56	J.A.R.

Taylor Rig 7

Footage From	Footage To	Formation	Geology: Description	Samples
149	151.5	Js	SS. light gray, f-m. grain, nodules of red shale	
151.5	166	JT	Ls, light-med. gray, 80% re-xtallized, some red shale, gren., calcitic, wavy bedding	
166	170.3	JT	Ls., light-med. gray, 30% re-xtallized, calcite in vert. fract, platty, pure, thin bedded.	
170.3	170.5	JT	Calcite, Lattice structure.	
170.5	178.2	JT	Ls, light-med. gray, 20% re-xtallized, partings of black shale, calcitic	
178.2	179	JE	SS., banded, purple, red, & light gray, f-m. grain.	

Drawing No. 793

Hole No.	Elev.	Page	Pages	No. Inserts	Date	Logged by
500-1400 D-3 29 13-9	6760'	1	1	0	6/14/56	J.A.R.

Hannum Rig 11

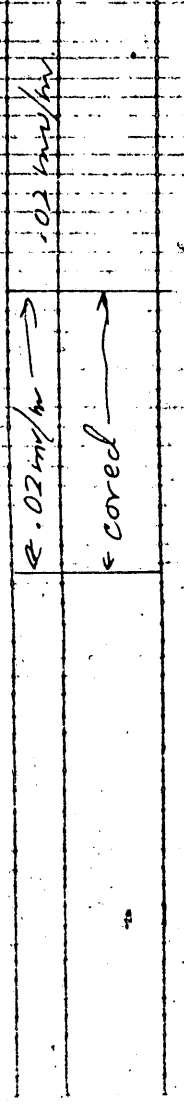
Depth	Lithologic Log	Geologic Age	Sample Number	Sample Depth	Scale Reading	Scale Interval	Assay	Geologic Age	Lithologic Log	Depth
0				T.H.B. 0 ↓ 202'	4 5 No coun					0
	QAL Blowsand							QAL		
20										20
40										40
60										60
80	QAL Gravel / Js Sh & ss., red							QAL		80
100										
120										120
140										140
160										160
180	Js / JT Ls. l-dk.gy., 20% re-xtallized, aren.muddy, calcitic Ls. l-dk.gy. 40% re-xtallized, aren, calcitic Ls. m.gy., 30% re-xtallized, pure-, calcitic								Js / JT	180
	JT / JE Ls. m-dk.gy. 10% re-xtallized, aren. Ls. l.gy., 10% re-xtallized, aren.			No Core ↑ 2' cutting samples ↓					JT / JE	
200	T.D. 202'								T.D. 202'	200
220										220

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
700-1400 B-4	29 / 13-9	6775	1 / 2	2	4/4/56	R Mc

Taylor, Rig 7.

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Scaler Foot	Scaler Assay	Graphic log	Description
0	Qal			Blow sand				THB 0 / 2 / 205	.01 mr/hr / .01 mr/hr / .1 / .01 mr/hr						
20															
40															
60	Qal / Jb			ss fine red-brn fn-med gr.											
80	Jb / Js			sh red-brn arenac											
100															
120															
140															
160															
180	Js / Jt			ss wht fn-med gr. arg. / sh. gy-gr. arenaceous / " / see inset for core log.											
200	Jt / Jc			ss purple fn-med gr.											
220															
240															
260															

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60



Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
700-1400 B-4	29 13-9	2 of 2	6/16/56	12 mm

Footage From	Footage To	Formation	Geology: Description	Samples
176	18.2	Jt	ss. red, gr. & gy. mottled, silty, fn-med. gr. calc. ↑ Transition	
182	183	Jt	ss. lt. gy fn-med. gr. carb. silty ↓	
183	186	Jt	ls. med-v. dk. gy silty re-crystallized dense	
186	191	Jt	ls. dk. gy-brn, highly re-crystallized, thin bedded, irreg. crinulated bedding, muddy, platy	
191	202.3	Jt	ls. lt.-med. gy. thin bedded, platy, muddy, silty re-crystallized	
202.3	203.1	Je	ss, red-purple fn-med-gr.	
203.1	206	Je	ss, red, gy, purple, gn. mottled, fn-med. gr.	

Drawing No.

900-1400 D-5 29-13-9 ~~6779~~ 6751 1 1 0 6/15/56 T.C.T.N.

Hannum, rig 11

THB 0 → 230

.01 mr/hr → .01 mr/hr

Blows sand

Qal

Qal / Js — cong. gravel, sh red-orn. a-cn, calc, streaks gr sh & wet brn. ss.

Js / Jt — L.S. lt-med gry 20% re-xalized, calc. stals, a-cn., massive.

L.S. lt gry. 40% re-xalized, calc. stals, along frac. zones (?), thin bedded

L.S. lt-med gry 20% re-xalized, sholy (a-gill.), thin bedded.

Jt / Jc — S.S. red Fn-med gr.

TD 230

no count

2' wet samples

Js

Jt

Jt

Jc

TD 230

20 40 60 80 100 120 140 160 180 200 220 240 260

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1100-1400 D-6	29 13-9	6761	1 2	1	6/ /56	J.A.R.

Geology — Taylor Rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0	QAL	Blowsand						T.H.B. 0 → 231	2 NO COUNT	.01				QAL
60	QAL / JB	SS	red											QAL / J.B.
80		Sh	red											
100		SS	white											
		SS	brown	wet										
120	Jo? / Js?	Sh	red											Jo? / Js?
200	Js	SS	white											
	JT	LS		(See insert for detailed log)										Js / JT
220	JT / J2													JT / J2
231	TD													TD 231

Dotted line Graphic Assay Solid Line - Probe (0% … 20% … 60)

not cored

Core

Probe: 0/m R/1 scale No count

Dwg No 192

Hole No.

Section

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
1100-1400 D-6	29 13-9	2 2	6/ /56	J.A.R.

Footage From	Footage To	Formation	Geology — Description	Samples
			Taylor Rig	
206	210.8	JT	Ls, m gray, 70% re-xtallized, aren, vert fractures, much calcite in fract., much gray-brown shale in top 7", thin bedded	
210.8	213.3	JT	Ls, l-m gray, 80% re-xtallized, cren bedding, brown-black shale partings, slickensides in partings	
213.3	221.9	JT	Ls, m-dk gray, 20% re-xtallized, partings of brown-black sh., vert. fract. brown calcite in fract.	
221.9	222	JT	calcite lattice structure	
222	225.6	JT	Ls. l-m gray, 20% re-xtallized, partings of brown-black sh. some green sand. Mn dendrites	
225.6	226	JE	SS. -varigated gray, purple, green, f-m. grain, some Mn. dendrites.	

Drawing No. 793

Hole No	Sec	Elevation	Page of Pages	No Insets	Date	Logged by
1300 -1400 D-7	29 13-9	6761'	1 / 1	0	6/15/56	J.A.R.

Geology — Hannum Rig 11

Footage | Formation | Type of Rock | Color | Description | Diagnostic Features | Geiger | Surfaces Taken | Probe Depth | Probe Reading | Scaler Scale | Scaler Interval | Assay Foot | Graphic log | Description | Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)

0 — QAL — Blowsand

T.H.B. 0 → 250 — No count

QAL — Js ? Sm SS. red-brown.

QAL — Js ?

Js — JT — LS. m.gy. 30% re-xtallized, some blk. calcite, aren.
LS. mgy-brn.gry. 30% re-xtallized, calcitic, aren.
LS. lgy-brn.gry., 60% re-xtallized, calcitic, some brn.sh.
LS. l-m.gy. 10% re-xtallized, pore, little calcite.
LS. m-brn.gy. 10% re-xtallized, aren, much brn.sh., calcitic.

JT — LS. mgy. 10% re-xtallized, much red & purple sand.

JT — JE — SS. dk.brn.

T.D. 256

No count — 2' wet cutting sample

Js — JT

JT — JE

T.D. 250'

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1500-1400 D-8	29-13-9	6763	1 / 2	1	6/19/56	TCTN

Taylor, rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
0								TH8	.01	mr/hr				
								258	.01	mr/hr				
	Qal	s.s.	red-brn.	Fn-med gr.									Blowsand	Qal / Jb
20		s.s.	lt. gry	Fn-med gr.										
		ss	brn.	med gr.										
40		sh.	red-brn.											
60	Jb ? Js	s.s.	wh.	Fn-med gr.										Jb ? Js
		sh	red brn	calc., arcn., streaks gr sh & wet. brn. s.s.										
80														
100														
120														
140														
160	?													
180														
200														
220		s.s.	wh.	Fn-med gr.										Js
	Js Jt													Jt
240	Jt Je													Jt Je
260	TD 258													TD 258

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

← no count →
← coined →

Dwg No 1012

Hole No _____
Section _____

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
1500-1400 D-8	29-13-9	2 of 2	6/19/56	T.C.T.N.

Footage From	Footage To	Formation	Geology: Description	Samples
			Taylor, rig 7	
228	230.5	Jt	L.S., lt gray, 60% re-xxalized, calc xtals, healed vert & horiz frac zones, pure	
230.5	232.2	Jt	L.S., med gray, 20% re-xxalized, calc xtals, .1' zones fn. gray sh or mudst.	
232.2		Jt	L.S., med-drk gray, 20% re-xxalized, calc xtals, aren, crenulated, zones of drk	
	237.1		shaly mat. .01-.1' wide, 1 zone .05' very red sh. at base	
237.1	238.0	Jt	L.S., med. gray, slightly re-xxalized, thin bedded, aren	
238.0	242.0	Jt	L.S., med-drk gray, slightly re-xxalized, massive, pure, few lenses shaly mat.	
242.0	242.6	Jt	L.S., lt.-med gray, aren. thin bedded, alternating shaly mat. with L.S.	
242.6	243.1	Jt	L.S., white, 100% re-xxalized, calc. xtals, lattice struc, aren	
243.1	248.2	Jt	L.S., med. gray, very shaly, vert. fracs, limonite (?) stained, small calc. vugs and along vert frac zones	
248.2	249.8	Jt	L.S. lt-gray, very aren	
249.8	250.4	Jt	L.S., lt-gray, alternating with purple ss.	
250.4	252	Je	S.S. alternating lt gray & purple fn-med gr., calc.	
252	255.6	Je	S.S., purple-gr-lt gray, fn-med. gr.	
255.6	258	Je	S.S., red, fn-med gr.	

Drawing No. 793

Hole No.	Sec.	Elevation	Page of Pages	No Insets	Date	Logged by
1700-1400 D-9	29 13-9	6777	1 2	0	June 16, 1956	RMM.

Hannum, Rig 11.

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Foot Assay	Graphic Log	Description	Dotted Line Graphic Assay Solid Line - Probe (0% 20% 60)
0	Qal			blow sand				THB 9	.01 .01	mr/hr.					
20	Qal / Jb	ss	red-brn.	fn-coar. gr.				27.5	.01					Qal / Jb	
40															
60	Jb / Js	sh.	red-brn.	green, calc. toward base.										Jb / Js	
80															
100															
120															
140															
160															
		ss.	lt-gy	argill, green, fn-med.gr.											
	Js / Jt.	ls	med-dk-gy	silty re-crystallized, dense, fn-bedded										Js / Jt	
		ls.	gy-brn.	abund. calc. fragr. re-xtallized massive											
		ls.	dk-gy-brn.	10% re/xtal. + thin bedded, muddy.											

.01 mr/hr. →

2' wet samples →

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1700-1400 D-9	20 139		2 2	0	6/16/56	RMM

Geology — Probe — Scaler

Footage	Formation	Type of Rock	Color	Description (Hannum, Fig. 11)	Diagnostic Features	Geiger	Samples Taken	Depth	Reading	Scale	Foot Interval	Assay	Graphic log	Description
260	Jt	ls.	dk. gyb. n. ill, re-crystallized, thin bedded, mud,											Jt
	Je	ss.	rel. brn. fine grained											Je
280	TD 277													TD 277'
300														
60														
80														
100														
120														
140														
160														
180														
200														
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Hole No _____
Section _____

Dwg No 1932

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2700-1400 D-12	29 13-9	6839	1 2	0	6/20/56	J.A.R.

Geology

Hannum Rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0	ΦAL	Blow Sand						THB 0 ↓ 381	3	.01				ΦAL JB
		SS.	gy											
80		SS	brown											
00	JB? Js?	Sh	red											JB Js

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Dwg No 192

Hole No 2700-1400 D-12
Section 29, 13.9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2700-1400 D-12	29 13-9	6839'	2 2	0	6/20/56	J.A.R.

Geology							Probe			Scaler				
Footage	Formation	Type of Rock	Color	Hannum Rig 11 - Description	Diagnostic Features	Geiger	Samples Taken	Depth	Reading	Scale	Foot Interval	Assay	Graphic log	Description

Dotted line Graphic Assay Solid Line - Probe 0% .20% .60

Depth	Reading	Scale
HB	.01	m/hr
0	.01	m/hr
7	"	"
381	.01	m/hr

Js

Js
Jr
Jr
JE
T.D. 381

JJ LS. m-dk gy 20% re-xtallized, colcitic
LS. m-dk gy 40% re-xtallized, colcitic, aren
LS. dk gy-blk, 10% re-xtallized, shaly + aren.
LS. dk brn-gy, 10% re-xtallized, aren.
LS. m-dk gy 15% re-xtallized, aren.
Jr LS. l-m gy 10% re-xtallized much white red sand
JE SS. red

TD 381

Probe .01 mR/hr Scale
No count
281

Hole No 2700-1400 D-12
Section 29-13-9

Dwg No 692

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
800-2600 G-1	29-13-9	6741	1 1	0	6/6/56	TCTN

Hannun, rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
0								THB .01 0	.01 .01	mr/hr				
								247	.01	mr/hr				
20													Blowsand	
40														
60	Qal / Jb	ss	brn	Fn-med gr										Qal / Jb
80														
100														
120		ss	Bn	wet										
140														
160	Jb ? / Js	sh	red bn											Jb / Js
180														
200		ss	lt gy	argillaceous, calcareous										
220	Js / Jt	LS	med gy	20% re-xxalized, thin bedded, a.rcn. muddy										Js / Jt
		LS	med gy	40% re-xxalized, calc. vetals, thin bed										
		LS	med-dk gy	20% re-xxalized, pure, dense										
		LS	lt-med gy	40% re-xxalized, calc. vr tals, thin bed, some rcn										
240	Jt	LS	med-dk gy	20% re-xxalized, a.rcn. thin bed										
		LS	lt/med gy	red & gn. sh										
	Jc	SS	red	Fn-med gr										Jt / Jc
	TD 247													TD 29
260														

Dotted line Graphic Assay Solid Line - Probe

0% .20% .60

Bio [redacted]

← no circulation

2' boots

2' wet samples →

Drawing No. 792

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1000-2600 G-2	29-139	6742	1 2	1	6/6/56	TCTN

Geology

Footage	Formation	Type of Rock	Color	Description (Woody, rig 5)	Diagnostic Features	Geiger	Samples Taken
0							
20							
40	Qal / Jb	ss.	gy	Fn-med gr.			
60	Jb ? Js	Sh	red-bn	anen., calc., streaks of red, gn sh, & wet bn ss.			
80							
100							
120							
140							
160							
180							
200		Sh	wh-gn				
220	Js / Jt	LS					
240	Jt / Jc	S.S.	Red	Fn-med gr.			
	TD 248						

Probe

Depth	Reading	Scale
THB 0	.01	mr/hr
248	.01	mr/hr

Scaler

Foot Interval	Assay	Graphic log	Description
		Pressure Blowout	
			Qal / Jb
			Jb / Js
			Js / Jt
			Jt / Jc
			TD 248

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

← See Inset for Details

← no count →

← Cored →

Drawing No. 792

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
1000-2600 6-2	29-13-9	2 of 2	6/6/56	TCTN

Footage From	Footage To	Formation	Geology: Description	Samples
218	219	Jt	L.S., med-dk. gray, 10-20% re-xxalized, vert. Frac.,	
219	228	Jt	S.S., calcereous, argillaceous, Few streaks red sh., s.s. lt. gray, Fn-med grain.	
228		Jt	L.S., thin-bedded with red-brown shale interbedded, 40% rexxalized, calc. xxtals, lt-med gray,	
	229.5		vert. Frac.	
229.5	231	Jt	L.S., lt. gray, thin bedded, 40% rexxalized, calc. xxtals, vert. Frac., slightly green.	
231		Jt	L.S., lt. gray, thin bedded, 60% re-xxalized, calc. xxtals, vert. Frac. green., red mudstone interbedded.	
	233		Limonite (?) or Flourite (?) stains along Frac. zones.	
233	233.7	Jt	L.S., very muddy, shaly, lt. gray, calc. xxtals.	
233.7	234.5	Jt	Sh., red-brown	
234.5	235	Jt	L.S, lattice struct., 90% rexxalized, calc xxtals	
235	236.4	Jt	L.S., shaly, sh. red, L.S. lt gray, thin zones carbonaceous (?) matter,	
236.4	238	Jt	L.S. slightly green, lt. gray, some rexxalization, calc. xxtals along vert. Frac. zones	
238	240	Jt	L.S., med-dk gray, thin zones sh or mudstone	
240	240.2	Jt	L.S., pure lattice struc., 90% re-xxalized, bands calc. xxtals, white in color	
240.2	243.	Jt	L.S., lt gray, pure., Few bands up to 2" thick darker, argellaceous L.S.	
243.	243.5	Jt	L.S., bands of red shale	
243.5	248	Je	S.S., calcereous, (red-brown) + white alternating bands of Fn.-med grain.	

Drawing No. 793

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1597-2600	29-13-9	6753	1 / 3	1	6/23/56	TCTN

Geology: Taylor, rig 7

Probe: Depth, Reading, Scale

Scaler: Foot Interval, Assay

Graphic log, Description, Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)

Depth	Reading	Scale
THB	6	V
0		
254	6	V
255.8	14	
257.1	18	
259.5	10	
260.7	28	
262.0	20	
263.6	32	
264.4	18	
265.4	10	
266.0	25	
266.6	50	V
267.2	32	IV
267.5	60	IV
268.8	38	III
268.2	52	
268.5	25	
268.9	45	IV
269.5	22	IV
271.0	20	V
272.2	10	
275.8	22	
276.2	45	V
276.7	30	IV
277.0	60	IV
277.9	30	III
278.2	50	
279.0	20	
279.7	35	
280.1	50	
281.0	45	III
281.5	24	IV
282.3	22	IV
282.8	20	V
283.4	12	
293.0	12	V
301	6	V

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken
0	Qal / Jb	ss	lt gry-brn	Fn.-med. gr.			
20							
40							
60							
80							
100							
120		ss	brn.	Fn-med. gr. moist at base.			
140							
160	Jb ? / Js	sh.	red-brn.	calc., grn., streaks gr. sh. & moist brn. ss.			
180							
200							
220		ss	brn.	Fn-med. gr.			
240							
260	Js / Jt	sh. / ls	green.	Cored, see inset sheet for detail log.			

Graphic log: Blow sand; Qal / Jb; Jb ? / ? Js; Js / Jt

Hole No. _____

Section _____

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1597 - 2600	29-13-9	6753	2 3	1	6/23/56	TCTN

Geology								Probe			Scaler				
Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Depth	Reading	Scale	Foot Interval	Assay	Graphic log	Description	Dotted line Graphic Assay Solid Line - Probe 0% .20% .60
260 ~~0~~		ls.	gy	see inset for core log											260 ~~0~~
						mineralization	core								1.55
280 ~~20~~															280 ~~20~~
	Jt													Jt	
300 ~~40~~	Je													Je	300 ~~40~~
	TD 301												TD 301		
320 ~~60~~															320 ~~60~~
80															80
100															100
120															120
140															140
160															160
180															180
200															200
220															220
240															240
260															260

Dwg No 792

Hole No

Section

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
1597-2600	29-13-9	3 of 3	6/23/56	T.CTN

Footage From	Footage To	Formation	Geology: Description	Samples
256	256.8	Jt	L.S., lt gray, very argill., 40% re-xxalized, healed vert. Fracs.	
256.8	260.7	Jt	Sh., lt green, calc., aren.	
260.7	262.4	Jt	S.S., lt gray-white, Fn. grained, calc., aren	
262.4	~~262.8~~	Jt	L.S., med. gray, 20% re-xxallized, argill, calc. xtals, healed horiz. Fracs, carbon mat	
	262.8		along Frac. zones.	
262.8	263.6	Jt	L.S. lt gray 40% re-xxalized, calc. xtals, shear zone (?)	
263.6	265.8	Jt	L.S., lt-med gray, calc. xtals, carbon (?) mat along healed horiz. Fracs.	
265.8	266.2	Jt	L.S., aren., argill., purplish-gray.	
266.2	~~268.4~~	Jt	L.S., med-drk gray, calc. xtals, limon. (?) stains on vert. Frac. zones, horiz. fracs., slightly	
	268.4		crennulated	
268.4	268.9	Jt	L.S., lt gray, 20% re-xxalized, calc. xtals, aren.	
268.9	269.8	Jt	L.S. lt-med gray, calc. xtals, pyritic, pockets of black carbonaceous mat., argill.	
269.8	271.5	Jt	Siltstone, mottled wh + purple	
271.5	274.0	Jt	S.S., lt-gray, Fn-med grain, calc.	
274.0	276.1	Jt	L.S., med gray, thin bedded, interbedded lenses brn shaly mat., crennulated,	
276.1	277.2	Jt	L.S. med gray, zones of pure calc. xtals,	
277.2	277.4	Jt	L.S., lt gray-brn, thin bedded, interbedded with brn-red sh. mat.	
277.4	277.8	Jt	L.S., lt-med. gray, aren., argill,	
277.8	280.3	Jt	L.S., alternating zones of lt-med gray L.S. with shaly mat.	
280.3	280.5	Jt	L.S., 100% re-xxalized, calc. xtals, white, shear zone (?)	
280.5	283.6	Jt	L.S., alternating zones of med gray, pure L.S. and interbedded sh. mat.	
283.6	284.5	Jt	L.S., lt-med. gray, calc xxtals on healed vert. Frac., pure.	
284.5	285.7	Jt	L.S., med-drk. gray, crennulated.	
285.7	286.0	Jt	L.S. lt gray-red, very aren.	
286.0	293.0	Jt	L.S., med. gray, zones (thin) shaly mat.	
293.0	297.5	Jc	S.S. Fn-med gr., grennish-white calc.	
297.5	301	Jc	S.S., red-brn, Fn-med gr.	

Drawing No. 793

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1600 - 2600	29 13-9	6758	1 2	0	6/6/56	J.A.R.

Geology: Footage | Formation | Type of Rock | Color | Hannum Ri. 11 Description | Diagnostic Features | Geiger | Samples Taken

Probe: Depth | Reading | Scale

Scaler: Foot Interval | Assay

Graphic log | Description | Dotted line . Graphic Assay Solid Line - Probe (0% .20% .60)

0

Qal — Blow sand

Jb — ss. lt. brn. hard, dry fn-med. gr.

20

40

60

80

100

120

ss. brn. moist fn-med. gr.

140

160

Jb? — ? Jb

Js — sh. red aren. — ? Js

180

ss. brn.

200

sh. red aren.

220

240

ss. red fn-med. gr.

260

Hole No	Sec	Elevation	Page of Pages	No. Insets	Date	Logged by
1600 - 2600	29 13-9	6753	2 / 2	0	6/6/56	J.A.R.

Hannum Rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scale	Scaler Foot Interval	Assay	Graphic log	Description
260		ss.	lt. gy	aren. calc.			blgrd .01 mr/hr	TBG	.01 mr/hr					Js
	Js													Js
	Jt	Ls.	lt-mgy	60% re-xtallized aren., calcitic			.01	266'	.2 mr/hr					Jt
		Ls.	lt. gy	20% "			.02							
		Ls.	mgy-lt Brn	40% re-xtallized, calcitic, aren.			.03	274'						
280		Ls.	m. gy	" "			.02							
20							.01	275						
		Ls.	lt-m gy	20% re-xtallized, slightly aren. some gr. sh.	2' cutting samples			276'	.5 mr/hr					
	Jt	Ls.	lt-mdgy	40% re-xtallized aren. calc. some gr. sh, calcite				278'	.25 mr/hr					Jt
		Ls.	m. gy	very muddy & sandy. calcitic										
	Je	SS.	lt Brn	fn-med gr.				280'	.10 mr/hr					Je
300														
40		ss.	red	fn-med-gr.				286	0					
								306						
	TD 306'							TDP					TD306	
320														
60														
80														
100														
120														
140														
160														
180														
200														
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1800 - 2600 G-4	29 13-9	6770	1 3	1	6/5/56	TCTN

Geology								Probe			Scaler				
Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Depth	Reading	Scale	Interval Foot	Assay	Graphic log	Description	Dotted line Graphic Assay Solid Line - Probe 0% .20% .60
0	Qal / Jb	ss.	gy-bn	En-med gr.										Qal / Jb	
20															
40															
60	Jb / Js	Sh	red	aren., streaks gn sh + wel brown ss near base, calc.										Jb / Js	
80															
100															
120															
140															
160															
180															
200															
220															
240															
260															

Hole No

Section

Section

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1800-2600 G-4	29-13-9	6770	2 / 3	1	6/6/56	TCTN

Geology

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken
40	Js	sh	white				
	Jt	LS	lt. gy	50% recrystalized, vest. frac. calc. xstals			
		LS	dk-med gy	crennulated, 20% re-crystalized, red sh.			
60		LS	lt. gy.	lattice struc., calc. xstals, 90% re-crystalized			
		LS	dk gy.	no recrystalization, pure			
		LS	lt-med gy	20% re-crystalized, some calc xstals & red sh			
		LS	lt-brn yellow	a-cen. (red sh & yellow-brn SS.)			
	Jt						
	Jc	SS	red	f-m-med. gr.			
	TD 327						

Core

Probe

Depth	Reading	Scale
THB	.01	m-fac
0	.01	
302	.01	
302	.02	
303	.02	
305	.04	
309	.04	
310	.05	
311	.05	
312	.02	
317	.01	
327	.01	
TDP 327		

Scaler

Foot Interval	Assay

Graphic log

Js

Jt

Jc

TD 327

Description

Dotted line Graphic Assay Solid Line - Probe

0% .20% .60

Depth scale: 260, 280, 300, 320, 340, 360, 380, 0, 20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240, 260

Dv 792

Hole No.

Section

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
1800-2600 G-4	29-13-9	3 3	6/5/56	TCTN

Footage From	Footage To	Formation	Geology: Description	Samples
300	302	Jt	L.S., lt. gray, 50% re-xxalized, vert. fracts. with calc., aren.	
302	305	Jt	L.S., crennulated, zones of red sh., aren., some re-xxalization and calc., dark-med gray.	
305	~~310~~		L.S., dark-med. gray, thin bedded with interbedded red shale, highly re-xxalized, calc. along	
	310	Jt	bedding planes, aren.	
310	310.5	Jt	L.S., lattice structure, ~~100~~ 50% re-xxalized with bands of calc., lt. gray.	
310.5	312	Jt	L.S., lt.-med. gray, thin bedded with interbedded red sh., some calc. xxtals.	
312	313	Jt	L.S., pure, drK. gray, no rexxalization	
313	319	Jt	L.S., lt-med. gray, aren. maddy, red sh.	
319	325	Jt	L.S., red sh + calc. material intermixed, lt gy brown-yellow	
325	327	Je	S.S. red, Fn-med grain	

Drawing No. 793

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2000-2600	13-29-9	6786	1 2	0	6/5/56	JAR

Geology: Footage, Formation, Type of Rock, Color, Description (Hannum Rio II), Diagnostic Features, Geiger, Samples Taken

Probe: Depth, Reading, Scale

Scaler: Foot Interval, Assay

Graphic log, Description

Dotted line Graphic Assay Solid Line - Probe 0% .20% .60

Footage	Formation	Type of Rock	Color	Description
0	Jb	SS	brn.	fn. med. gr.
80	Jb ? ? Js	Sh	red	streaks of grn. wet ss.

Graphic log: Jb; ? Jb ? Js

Footage scale: 0, 20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240, 260

Dwg No. 192

Hol

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2000 - 2600	29 13-9	6786	2 2	0	6/5/56	JAR

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
160	JS	sh	rd	streaks of brn. wet sand				T.H.B. 0 ↓ 350	.01 mr/hr .01 ↓ .01	0	1			JS
180 20														
200 40														
220 60														
240 80														
260 100														
280 120														
300 140		LS. SS.	wt.	f.gr.									Cal.	SS
320 160	JS JT	LS.	mgy-brn.	20% re-xtallized calcitic, thin bd. aren.										JS JT
		"		" 40% re-xtallized " "										
		LS	mgy-brn.	20% re-xtallized. calcitic, dense										
		LS.	lt. gy	pre. 20% re-xtallized, calcitic, dense										
340 180	JT JE	LS SS	lt gy red	40% re-xtallized, much red sh., calcitic, v. mottled fa-med. gr.					.01 mr/hr					JT JE
	TD 350													TD 350
360 200														
220														
240														
260														

Dotted line - Graphic Assay
Solid Line - Probe
0% .20% .60

Hole No. _____
Section _____

Dwg. No. 792

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2200-2600 G-6	29-13-9	6787	1 / 3	1	6/6/56	TCTN

Taylor, rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description	Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)
0				blow sand											
20															
40															
60															
80															
100															
120	Qal / Jb			ss lt.gy fn-med-gr										Qal / Jb	
140															
160															
180	Jb ? / Js			sh red brn green										Jb ? ? ? / Js	
200															
220															
240															
260															

Blowsand

Drawing No. 792

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2200-2600 G-6	29-13-9	6787	2 3	1	6/6/56	TCTN

Taylor, rig 7

Geology

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval Foot	Scaler Assay	Graphic log	Description
260 ~~0~~		sh.	red bn.	aren., calc., streaks gn sh. & wet bn ss.				THB 0	.01	mr/hr				
280 ~~20~~								353	.01	mr/hr				
300 ~~40~~														
320 ~~60~~		sh.	green										Js	
	Js	ls		See inset for details		no count	Cored						Jt	
340 ~~80~~														
	Jt	ls.											Jt	
	Je	ss.	red	Fn-med gr.									Je	
360 ~~100~~	TD 353												TD 353	

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

260 ~~0~~ 280 ~~20~~ 300 ~~40~~ 320 ~~60~~ 340 ~~80~~ 360 ~~100~~ 120 140 160 180 200 220 240 260

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
2200-2600 G-6	29-13-9	3 of 3	6/6/56	TCTN

Footage From	Footage To	Formation	Geology: Description	Samples
326	329	Jt	L.S., lt. gray, bands bk. calc or Fl. & red sh. 80% re-xxalized	
329	331.5	Jt	L.S., lt-med. gray, crenmulated with red sh interbedded, calc. xxtals.	
331.5	335	Jt	L.S., lt.-med. gray, some red sh. interbedded, calc. xxtals, 40% re-xxalized. dense	
335	~~337.5~~ 337.5	Jt	L.S., med. gray, thin bedded. limonite (?) Fl. (?) stains along vert. Frac. zones, some red sh. interbedded.	
337.5	338.5	Jt	L.S., very shaly (red), crenmulated, 40% reexxalized, calc. xxtals.	
338.5	338.8	Jt	Mud stone, brown.	
338.8	339	Jt	L.S., med gray, lower part very shaly (red)	
339	339.4	Jt	L.S. pure, 100% re-xxalized, bands calc. xxtals, lattice struc.	
339.4	344	Jt	L.S., pure (fairly), med. gray, 40% re-xxalized.	
344	344.4	Jt	L.S., Lattice struc., white,	
344.4	348	Jt	L.S., pure, lt. gray, aren. at base.	
348	350.5	Je	S.S., red sh & white ss alternating bands.	
350.5	353	Je	S.S., red - yellow alternating bands	

Drawing No. 793

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2400-2600 G7	29 19-9	6792	2 2	0	6/5/56	JAR

Footage	Formation	Type of Rock	Color	Description (Woody Rio 5)	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
260	Js	Sh.	lt gr br	calc, dren., streaks of gr. sh. lower 6 ft. 35					T.H.B. .01 mr/hr					Js
									NO COUNT					
280 20										0				
										384				
300 40														
320 60														
340 80			Sh. wt.											
	JS													Js
	Jt			LS. m.gr - lt. br. dren, 30% re-xtallized, calcitic										Jt
				LS. mgr - brn. shaly, calcitic, 5% re-xtallized										
				LS. mgr - brn., very sandy, calcitic, 2% re-xtallized										
360 100				" 5% re-xtallized										
	Jt			LS. mgr - lt. brn. v. shaly, calcitic, 15% re-xtallized, dren										
	JE		SS. red	Shaly. f-m. gr.										JE
380 120	T.D. 384			T.D. 384										
140														
160														
180														
200														
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Dwg No. 792

Hole No. 2400-2600
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2600-2600 G-8	29, 3-9	6804	1 / 3	1	6/5/56	R m m.

Taylor, Rig 7.

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0				blow sand										
	Qal													Qal
	Jb	ss	lt gy	fo-med gr.										Jb
20														
40														
60														
80														
100														
120														
		ss.	wht.	fn-med gr. wet										
140		ss.	brn.	fn-med gr.										
160														
180														
200														
	Jb / Js	sh	red-brn.	fr. green, calc. locally, streaks of Br n wet										Jb / Js
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Dwg No 192

Hole No
Section

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2600-2600 6-8	29 13-9	6804	2 3	1	6/5/58	R.H.W.

Geology: Footage | Formation | Type of Rock | Color | Description (Willie, Taylor, Rig 7.) | Diagnostic Features | Geiger | Samples Taken

Probe: Depth | Reading | Scale

Scaler: Interval | Foot | Assay

Graphic log | Description | Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)

Footage	Formation	Type of Rock	Color	Description
260		sh.	red-brn.	Green,
280 20				
300 40				
320 60				
340 80	Js	sh.	gy-gr.	bentonitic, calc.
	Jt	L.S.	med. gy	aren., shaly, vert. frac.
360 100		L.S.	med. gry.	20% recrystalized, vert. frac., aren., some carbonaceous (?) material
		L.S.	med-lt. gy. brn.	20% recrystalized, aren., crenulated bedding
		L.S.	med. gy	crenulated bedding with red sh. alternating with L.S.
		L.S.	lt. gy.	~~lattice structure~~ slightly aren., 40% recrystalized, calc. xstals, vert. frac. thin bedded
380 120		L.S.	lt. gy.	lattice struct.
		L.S.	med. g.y.	pass. veins of calcite, aren. & sh. near base
	Jt			
	Je	S.S.	red	Fn.-med. gr.
	TD 387			
400				
160				
180				
200				
220				
240				
260				

Probe: T.H.B. 0 → 387; .01 mr/hr; 0

Graphic log: .01 mr/hr; core

Description: Js; Jt; Jt; Je; TD 387

Dotted line Graphic Assay Solid Line - Probe: 0% .20% .60

Hole No

Section

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
2600-2600-G-8	29-15-9	3 of 3	6/5/56	

Footage From	Footage To	Formation	Geology: Description	Samples
347	366	Jt	L.S., med. gry. v. aren. (gn & red sh), vert. frac. (100% re-xtalized in frac.) small amounts carbonaceous material.	
366	368	Jt.	Ls. m-d gr.-brn. aren. 10-20% re-xtallized crenulated bed.	
368	370	Jt	Ls. m gr. alternating with red sh. thin bedded. no-re-xtallization. u crenulated bd.	
370	372	Jt.	Ls. slightly aren. lt. gy. ~~s. crenulated bd.~~, 40% re-xtallized, v. calcitic, v. fract. thin bedded.	
373	373.3	Jt	Ls. lattice struct. (marker) calcite	
373	380.8	Jt	Ls. m. gy. pure, veins of pure calcite (vertical) aren & sh near base.	
380.8	387	JE	SS., red, (gr sh & m gy lime near top), f-m. gr. thin yellow iron stained bds.	
				348.5 .01
				" .9 .05
				349 .02
				349.7 .02
				373 .01

Drawing No. 793

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2800-2600 G-9	29-13-9	6809	1 2	0	6/4/56	RMM, TCTN., JAR

Geology

Woody - rig 5

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scaler Scale	Scaler Interval	Scaler Foot	Scaler Assay	Graphic log	Description
0	Qal														Qal
	Jb	SS	lt. gray	Fine - med. grained, moist											Jb
100	Jb ?? Js			sh red-brn. green, streaks of gn sh + brn wet ss., calc. towards base											Jb ? ? ? ? ? Js

Dotted line Graphic Assay Solid Line - Probe

0% 20% 60

0 20 40 60 80 100 120 140 160 180 200 20 0 0

Hole No	Sec.	Elevation	Page of Pages	No Insets	Date	Logged by
2800-2600 G-9	19 13-9	6809	2 2	0	6/4/56	R.MM, TCTM, JAR.

Geology

woody, rig 5

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Scaler Foot	Assay	Graphic log	Description
260 0		sh	red-brn,	a ren, calc towards base, gn sh & wet brn SS.				THB 0	.01 .01	mr/hr mr/hr	THB	.01 m			
280 20								40.2	.01	mr/hr					
300 40															
320 60															
340 80															
360 100															
380 120	Js	sh	white											Js	
	Jt	Ls	med.gy.	20% re-xxalized, calc xxtals, gn & rd sh.										Jt	
		Ls		40% re-xxalized, a ren (gn & h.), calc. xxtals											
		Ls	med.gy.	40% re-xxalized, calc xx tals, clean & pure											
400 140	Jt	Ls	lt. gy.	60% re-xxalized, calc xxtals, a ren (gn & red sh, muddy)										Jt	
	Je	SS	red, brn	Fn - med gr.										Je	
	TD 406													TD 406	
420 160															
440 180															
200															
220															
240															
260															

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

.10 mr/hr

2 wet cuttings samples

Hole No.	Sec	Elevation	Page of	Pages	No. Insets	Date	Logged by
3000-2600 G10	29-13-9	6816	1	3	1	6/4/56	RMM, TCTN,

Geology

Footage	Formation	Lithologic Rock	Color	Description
0				
20	Qal / Jb	SS.	lt. gy	Fine-med. gr., moist
40				
60				
80				
100				
120		SS.	white	
140		SS.	brn.	
160				
180				
200				
220	Jb / Js	Sh.	Red-brn	aren., calc. towards base, streaks of gn. sh & brn. wet. SS.
240				

Probe Operator

Scale Reading

Sampler Interval

Assay Footage

Samples Taken

Geiger

Diagnostic Features

Graphic Log

Description

Blow Sand

Qal / Jb

Jb / Js

Dotted line Graphic Assay Solid Line - Probe

0% 20% 60

0 20 40 60 80 100 120 140 160 180 200 220 240

Hole No.	Base	Elevation	Page of	Pages	No. Cores	Date	Logged by
3000-2600	G-10 29-13-9	6816	2	3	1	6/4/56	RMM, TCTN

Depth	Lithologic Description	Gamma Ray Scale	Interval Velocity	Cores	Probe
260	Sh red. Brn. Gren. calc. towards base, streaks of gn. sh + brn. wet ss.	THB 0 .01 mr/hr; .01; 412 .01; TOP 412			
280					
300					
320					
340					
360					
380	S.S. White				
	Js / Jt — L.S. lt-med brn. zones of re-xxalized, calc xxals, laminated, flourite or bx. calc.				Js
	L.S. med gy. bra-gy re-xxalized zones, calc. xxals, crennulated				Jt
	L.S. dk gy-brn. Fine-gr. dense, pure L.S.				
400	See Inset For core log.	no count; cored			
	Jt / Je — S.S. red-brn. Fn-med gr.				Jt
					Je
420	418 TD 418				TD 418
440					
200					
220					
240					
260					

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
3000 - 2600 G-10	29-13-9	3 3	6/4/56	RMM, TCTN, JAR

Footage From	Footage To	Formation	Geology: Description	Samples
388	395	Jt	L.S., drk gry, 40% re-xxalized, irr. crennulated bedding, silty, bk & wh. calc. xxtals.	
	395		Fl. ?	
395	399	Jt	L.S., drk gry, slight re-xxalized, massive bedding, few fractures	
399	399.2	Jt	Calc. xxals, lattice struc., shear zone (?)	
399.2	406	Jt	L.S. med to drk gry, slighty grn, silty, carbonaceous	
406	408	Jt	L.S. " " " " grn. silty, carbonaceous	
408	408.9	Je	S.S, purple, fn-med gr.	
408.9	414	Je	SS, tan, fn-med. gr.	
414	418		S.S., red, fn-med. gr.	

Drawing No. 793

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1600-1800 E-7	29-13-9	6766	1 2	0	6/5/56	TCTN

Geology: Footage, Formation, Type of Rock, Color, Description, Diagnostic Features, Geiger, Samples Taken. Probe: Depth, Reading, Scale. Scaler: Foot Interval, Assay. Graphic log, Description. Dotted line Graphic Assay Solid Line - Probe 0% .20% .60

Hannum, seg 12

Footage	Formation	Type of Rock	Color	Description
	Qal / Jb	SS	lt. gy	Fn.-med. gr.
	Jb / Js	Sh.	red. br.	green, calc. toward base, streaks gn. sh. & bn. wet SS
	Jt	SS	Br.	wet S.S
	Js / Jt	LS	lt. gy	50% re-xtalized, calc. xtals, slightly oxen, dense
		LS	lt. gy	40% re-xtalized, calc. xtals, oxen., thin bed.

Graphic log: Qal, Jb, Js, Jt

Dwg. No 192

Hole No. 1600-1800

Section 29

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1600 - 1800 E-7	29-13-9	6766	2 2	0	6/5/56	TCTN

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
260 0		LS.	dk-med gy	10% re-xralized, aren, thin bed, red sh.				T.H.B. 0	.01	med				
		LS.	dk-med gy	20% re-xralized, calc. xals, thin bed, ~~aren~~ pure, red sh.				1	.01	1				
								290	.01					
	Jt	LS.	lt-med gy	40% re-xralized, calc. xtals, dense, pure.		Ko. Cmx								Jt
280 20	Je	LS.	med. gr.	40% re-xralized, calc. xtals, thin bed, aren, red & gn sh.										Je
		SS	red-brn.	fn-med. gr.										
	TD 290													T.D 290
300 40														
320 60														
340 80														
100														
120														
140														
160														
180														
200														
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Dwg No. 192

Hole No. 1600-1800
Section 29

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2000-1800 E-9	29-13-9	6796	1 2	0	6/5/56	RMM, TCTN

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Scaler Foot	Scaler Assay	Graphic log	Description
0	Jb	ss	lt. gy	f-med. gy											Jb
20															
40															
60		ss	brn.	fn-med. gr.											
80		sh.	red-brn.	grn.											
		ss.	brn.	fn-med. gy											
100															
120		sh	red-brn.	grn.											
	Jb	ss	brn.	fn-med. gr. wet.											
	7	sh.	red-brn.	calc. grn. streaks of grnish brn. wet ss.											Jb 7 Js
140	Js														
160															
180															
200															
220															
240															
260															

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Dwg No 1792

Hole No 2000-1800
Section 29

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2000-1800 E-9	29 13-9	6796	2 2	0	6-5-56	RMM, TCTN

Geology

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken
260		sh.	rel-brn	green. calc. streaks of gn. sh & brn. ss.			THB
280							
280	Js						
300	Jt	LS	med gy	20% re-xralized, slightly green, calc. xstals, thin bedded			
300		LS	lt. gy	40% re-xralized, slightly green, calc. xstals, thin bed			
		LS	med gy	20% re-xralized, green, few calc. xstals, dense,			
		LS	dk gy	20% " " , pure, calc. xstals, thin bedded			
	Jt	LS	dk gy	20% re-xralized, pure, calc. xstals, thin bedded			
320	Je	LS	med gy	40% re-xralized, green, shaly (red-brn) maddy			
320	Je	SS	red	Fn-med gr.			
340	TD 335						
360							
380							
400							
60							
80							
00							
20							
40							
60							

Probe / Scaler

Depth	Reading	Scale	Foot Interval	Assay
.01	m/h			
0	.01	m/h		
334	.01	m/h		

Graphic log / Description

Js
Jt
Je
TD 335

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Dwg No 102

Hole No 2000-18-00
Section 29

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2400-1800	29-13-9	6816	1 / 2	0	6/7/56	TCTN

Hannum, rig 11

Geology: Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe: Depth	Reading	Scale	Scaler: Foot Interval	Assay	Graphic log	Description	Dotted line Graphic Assay Solid Line - Probe (0% – 20% – 60)
0	Qal / Jb													Qal / Jb	
20															
40															
60															
80															
100															
120															
140															
160	Jb / Js													Jb / Js	
180															
200															
220															
240															
260															

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2400-1800	29-13-9	6816	2 / 2	0	6/7/56	TCTN

Geology: Hannum rig 11

Probe: Depth THB 0 → 357; Reading .01 / .01; Scale mr/hr / mr/hr

Scaler: Foot Interval; Assay

Dotted line Graphic Assay Solid Line - Probe (0% … 20% … 60)

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken
260 Ø		Sh.	red-bn.	green., calc., streaks of wet, barn. s.s.			
280 20							
300 40							
320 60							
340 80	Js / Jt	L.S.	med gy.	slight re-realization, aren., muddy			
		L.s.	ltgy.	40% recrystalized, calc. xtals, aren., thin-bedded			
		L.s.	med. gy.	20% re-crystalized, aren. dense, pure			
360 100	Jt / Je	L.s. / S.S.	med gy / red	40% re-crystalized, aren., thin-bed., pure / Fn.-med. gr.		no count	2' wet samples
	TD 357						
120							
140							
160							
180							
200							
220							
240							

Graphic log: Js, Jt, Jt, Je, TD 357

Footage scale: 260 Ø, 280 20, 300 40, 320 60, 340 80, 360 100

Hole No.	Sec	Elevation	Page of	Pages	No. Insets	Date	Logged by
2800-1800 E8	13-d 29	~~6784~~ 6828	1	2	0	6-1-56	DB

Woody Rig #5

Footage	Formation	Type of Rock	Color	Geology Description	Fractures	Geology	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval Foot	Assay	Graphic Log	Description	Dotted line Graphic Assay Solid Line - Probe 0% 20% 60
0	Qal / Jb							T.H.B. 0	.02	del	impehr.			Qal / Jb	
								396	.02						
60		ss	lt gy brn.	shaly fn. mod. grain											
160	Jb ?? / JS													$J_?b_?$ / JS	
200		sh	red												

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Hole No.	Sec	Elevation	Page of Pages	No. Insets	Date	Logged by
2800 -1800 E8	13-9 29	~~6784~~ 6828	2 2	6	6-1-56	DB

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scale	Scaler Foot Interval	Assay	Graphic log	Description
260 0														
280 20														
300 40														
320 60														
340 80														
360 100														
380 120	Js													Js
	Jt			ls lt.med.gy arenaceous recrystillized										Jt
				ls brn.med.gy. Very dense										
				ls brn.med.gy. stly recrystillized										
	Jt			ls lt.med.gy arenaceous stly recrystillized										Jt
	Je			ss red fn.med grain										Je
400 40	TD	393'												TD 393'

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

no count
2' wet samples taken

Footage	Dotted line Graphic Assay Solid Line - Probe
160	160
180	180
200	200
220	220
240	240
260	260

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION III

RECEIVED
SEP 10 1956

Administrative Audit Difference Statement

[redacted]

Date: [redacted]
Payee's Reference: [redacted]

FINAL DISTRIBUTION

MADE SEP 5 1956

DMEA-3989

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ [redacted]

Difference $ [redacted]

Amount Approved $ [redacted]

The reason for the difference was due to:

[redacted]

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-III-B & F Form No. 4
4-15-52 D

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

RECEIVED
SEP 10 1956

224 New Customhouse
Denver 2, Colorado

August 24, 1956

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region III

Subject: DMEA Docket 3989 (Uranium) Contract Idm-E933, Food Machinery and Chemical Corporation, Westvaco Mineral Products Division (Sec. 29, T13N, R9W) McKinley County, New Mexico - Operator's Monthly Progress Report for the month of July, 1956

Enclosed are the original and four copies each of Forms MF-104 and MF-104A, Operator's Narrative Report, and Engineer's Report for the above period.

Except as otherwise noted it is deemed that the Operator has complied with the intent of the contract, and the work for which payment is recommended is acceptable to the Government. Payment is recommended on the following basis, contingent on your verification of the correctness of applicable rates and arithmetical accuracy of computations.

It has been administratively determined that 10 feet is the maximum allowable penetration into the Entrada sandstone to assure penetration through the entire Todilto limestone interval which overlies the Entrada. Therefore, the excess footage beyond that depth in the following holes is disallowed.

Hole No.	Total Depth	Base of Todilto ls.	Drilling Below Todilto ls.	Excess Footage to be Disallowed Core	Non-core
100-2200	195	180	15	0	5
300-2200	205	192	13	0	3
2100-3000	365	339	26	0	16
2300-1400	350	338	12	0	2
3100-1400	426	406	20	0	10
Total footage to be disallowed- - - - - - -				0	36

Disallow

Disallow 36 feet of non-core drilling at invoice cost plus 2% N.M. School Tax- - - -	$28.46
Disallow incidental allowance for 36 feet at $0.18 per foot- - - - - - - - - - - - - - -	6.48
Total amount to be disallowed	$ 34.94

Withhold an amount of $500.00 pending possible resumption of drilling under Stage II. Stage I drilling was completed during July, 1956

Reconciliation with Amount Reported by the Operator on Form MF-104 for July, 1956

Amount reported on Form MF-104- - - - - - - - - - - - - -	$9,467.87
Amount to be disallowed- - - - - - - - - - - - - - - - - - -	34.94
Total accepted cost for July, 1956- - - - - - - - - - - - -	$9,432.93
Government participation at 75 percent- - - - - - - - - -	$7,074.70
Amount to be withheld- -	500.00
Recommended payment to the Operator- - - - - - - -	$6,574.70

Note:

Approved aggregate core and non-core drilling, Stage I- - - - - - - - - - - - - - - -	43,863
Aggregate Stage I drilling set up in contract- -	43,805
Non-core footage (plus incidental allowance) transferred from Stage II to Stage I- - - - - - - - - - - - - - - - - -	58

Remarks

Date of Report - - - - - - - - - - - - - - - -	July 31, 1956
Date Received in Field Office- - - - -	August 6, 1956
Date Received in Region Office- - - -	August 21, 1956

W. M. TRAVER

W. M. Traver

Enclosures
JDC:jy
cc: MF-104 File E933
Sec. Op. Comm. (2)
Shaw (2)
Hasler w/copy engr's report
Townsend w/copy engr's report
Chron

RECEIVED
SEP 10 1956

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
August 20, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shea
Supervising Mining Engineer

From: W. D. McMillan

Subject: DMEA Docket 3909 (Uranium) Contract Idm-5931, Food Machinery and Chemical Company, Westvaco Mineral Products Division, Sec. 29, T. 13 N., R. 9 W., N.M.P.M., McKinley County, New Mexico -- Progress report for July 1956

An inspection of progress during July 1956 was made on August 9, 1956, accompanied by Russell J. Hayden, project supervisor, and W. S. Cavender, geologist.

Stewart Bros. and Parker Drilling Company logs show 8276 feet of plug bit drilling and 492 feet of core bit drilling in 26 holes, the same as reported on page 2 of the narrative report.

On MF-104A however, the operator reports 8356 feet of plug bit drilling and 412 feet of core bit drilling. Eighty feet of drilling in Holes 1300-2200, 1500-2200 and 2700-2200 (marked by asterisk) is not included, as the operator paid for that additional footage.

Approved costs are 8356 feet of plug bit drilling for which the operator charged $6,247.76 (See memorandum); 412 feet of core drilling at $3.50 a foot or $1442.00; incidental allowances 8768 feet at $0.18 a foot, or $1578.24; and New Mexico 2% school tax $194.37; 13 chemical analyses at $3.50 each, $45.50; a grand total of $9467.87.

It is recommended that 75 percent of the total approved costs or $7100.90 be approved for payment.

The narrative report and accompanying location map and geologic and radiometric logs are adequate. Ore grade uranium was found in two holes and strong uranium mineralization was found in 4 holes. The applicant is preparing a proposal for Stage II drilling.

The copies of drilling contractor's logs are being retained in this office.

W. D. McMillan
Mining Engineer

Encl. Nos. 6, Via mail (Denver)

DMEA
Date Rec'd.

AUG 21 1956

BUREAU OF MINES
Denver, Colorado

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SEP 10 1956

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
August 20, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: Albert S. Konselman

Subject: DMEA Docket 3989 (Uranium) Contract Idm-E933, Food Machinery and Chemical Company, Westvaco Mineral Products Division Sec. 29, T. 13 N., R. 9 W., N.M.P.M., McKinley County, New Mexico -- Progress report for July 1956

In reviewing progress report of July 1956, DMEA Docket 3989, Contract Idm-E933, driller Stewart Bros. and Parker did 8356 feet of plug drilling and properly charges, therefore, $6276.60. This does not include New Mexico school tax.

On Form MF-104A the operator, Food Machinery Chemical Corp., Westvaco Mineral Products Division, charged for 8356 feet of plug drilling the amount of $6402.13. This would include a tax item of $154.37 leaving $6247.76. It appears as though the operator has undercharges in the amount of $28.84.

Albert S. Konselman
Mining Engineer

ASK/mv

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

RECEIVED
SEP 10 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1956 Docket No. DMEA 3989 Contract No. Idm-E933

Operator's Name Food Machinery Chemical Corp. Westvaco Mineral Products Minerals Uranium

Address P.O.Box 250 Pocatello, Idaho

Contract Amount, $ 91,908.00 Government Participation: 75 % Amount, $

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	7,844.13	31,698.06	39,542.19			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	45.50	17.50	63.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): Incidental @.18/ft.	1,578.24	6,348.06	7,926.30			
TOTALS	9,467.87	38,063.62	47,531.49	9,432.93	38,063.62	47,496.55
				4 —	172.72	172.72

I certify that the above bill is correct and just and that payment therefor has not been received.

Date 7/31/56 *Payee Food Machinery Chemical Corp. Westvaco Mineral Products Division

Per Russell J. Hayden Title Project Engineer

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of: 37,890.90 47,323.83

$6,574.70

Signature
(Authorized Certifying Officer)

Date 8/29/56 Vou. No. DMA 57-25

(See other side)

* Previous Disallowance
Note: Withhold 500.00

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. IdM-E932 in accordance with the terms of the contract.

Signature William Mullan (917100.901) WSR Title Min. Engr Date 8/20/56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE

Signature W. M. Lacy Title Executive Officer Date AUG 24 1956

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
SEP 10 1956

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 195 6 Docket No. DMEA 3989 Contract No. Idm-E933

Operator's Name Food Machinery Chemical Corp. Westvaco Mineral Products Minerals Uranium

Address P.O.Box 250 Pocatello, Idaho

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	per ft.	1,442.00	412	7,115.50	2,033	3.50	2,415	3.50
~~Chum~~ plug bit	"	6,402.13	8,356	32,426.69	42,002	.772	57,390	1.25
Auger								
Stripping								
Trenching								
~~Test Pits~~ Analysis	per sample	45.50	13	63.00	18	3.50	80	3.50
Roads and Trails								
Incidental @.18/ft.		1,578.24	8,768	7,926.30	44,035	.18		.18
TOTAL DISTRIBUTED COSTS		9,467.87	8,768	47,531.49				TOTAL COSTS AUTHORIZED BY CONTRACT 91,908.00
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date 7/31/56 Operator Food Machinery Chemical Corp. Westvaco Mineral Products Division

Per Russell J. Hayden Title Project Engineer

REMARKS:

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

(For Government use only)

W. M. Miller

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894

July 31, 1956

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Mr. John F. Shaw
U. S. Bureau of Mines
Room 137, Building 20, Denver Federal Center
Denver 2, Colorado

Re: Progress Report
Docket No. DMEA 3989 (Uranium)
Contract Idm-E933
Food Machinery Chemical Corp.
Westvaco Mineral Products
Sec. 29, T. 13 N. R. 9 W.
McKinley County, New Mexico

Dear Sir:

The drilling program for July continued to the completion of first stage drilling without interruption. A total of 26 holes was drilled, logged radiometrically and all samples were geologically logged, labeled and stored. For data on these holes see Map No. 29-6. Shown on this map are depths of the top and bottom of the Todilto limestone (the ore horizon in this section), total depths of the holes drilled, and whether or not mineralization was encountered. For detailed logs of these holes, see the log sheets enclosed. In those holes in which the limestone was cored, an inset sheet gives a detailed description of the recovered core.

Accompanying this report are the following maps and diagrams:

Drawing No.	Illustrations
29-1 & 29-2	North-south Cross Sections
29-3	Structure Contour Map, Base of Todilto Limestone
29-6	Monthly Progress Map

DRILLING

A total of 8768 feet was drilled in this section during the month

of July, of which 8276 feet was plug drilling and 492 feet was core drilling. Twenty seven drill days were required to complete the 26 holes. All holes were drilled wet through the blow sand, and blown dry in an effort to drill the ore horizon dry in the plug holes. Most of the holes drilled in the month of July encountered water in either the Summerville or at the top of the Todilto limestone, which prevented further dry drilling.

The following holes were completed during the month of July, 1956. Detailed information on the following table is found in the geologic logs accompanying this report.

HOLE CO-ORDINATE	TOTAL DEPTH	FOOTAGE SAMPLED	FOOTAGE CORED	MINERALIZATION
2300-1400	350	26		none
2500-1400	366		26	none
2900-1400	392		30	slt. min.
3100-1400	426	20		none
3300-1400	423		40	none
100-2200	195	23		none
300-2200	205	22		none
500-2200	215	28		none
700-2200	230	24		slt. min.
1100-2200	245		25	none
1300-2200*	249		20	none
1500-2200*	275		30	none
1700-2200	307		30	mineralized
1900-2200	335	34		mineralized (strong)
2100-2200	355		30	mineralized
2300-2200	365	30		mineralized
2500-2200	380		40	ore grade
2700-2200*	395		30	mineralized
2900-2200	412		50	ore grade
1700-3000	300		31	none
2100-3000	365	25		slt. min.
2300-3000	360		40	none
2500-3000	375	18		none
2700-3000	385		20	none
2900-3000	438	limestone absent		none
3100-3000	425		50	none
TOTAL FOOTAGE	8768	250	492	

*These holes were core drilled to provide more lithologic information. The lithologic characteristics of this area were thought to be of sufficient importance to warrant Westvaco defraying the additional expense of core drilling these holes. This additional core totaled 80 feet.

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GEOLOGY:

Items of geologic and economic interest encountered this month are several mineralized holes, including two ore-grade holes and a small structure in the north-east corner of the drilled area. (See Drawings 29-3 and 29-4). The relationships of the structure to the mineralized holes on the 2200 East line are not fully understood at present. There is some evidence of a north-south trending fault roughly along the 2200 East line. This fault might have been the mineralizing channel. The fault evidence consists of a non-mineralized breccia zone in the limestone and a repeated section in hole 1100-2200.

The Todilto ore horizon is completely absent in hole 2900-3000. The projected depth of the limestone was 393 feet and the hole was drilled to 438 feet without encountering the limestone. The limestone thinned appreciably approaching this hole from the south. This evidence leads to the belief that an old erosional surface is responsible for the absence of the limestone.

The results of the two holes containing ore were as follows:

HOLE NO.	FOOTAGE	RADIOMETRIC E U_3O_8	CHEM. % U_3O_8
2900-2200	363-364	0.081	
	369-370	0.017	
	370-371	0.030	
	371-372	0.110	
	374-375	0.122	0.152
	375-376	0.074	0.085
	376-377	0.102	0.118
	377-378	0.023	0.015
	378-379	0.125	0.143

HOLE NO.	FOOTAGE	RADIOMETRIC E U_3O_8	CHEM. % U_3O_8
2900-2200	379-380	0.394	0.484
	380-381	0.598	0.721
	381-382	0.726	0.826
	382-383	core lost	
	383-384	0.909	1.132
	384-385	0.532	0.676
	385-386	0.127	0.161
	386-387	0.043	0.048
	387-388	0.018	0.022
2500-2200	351-352	0.033	
	352-353	0.316	
	353-354	0.308	
	354-355	0.005	

This completes the proposed drilling for the first stage on section 29. It is felt that the favorable results of the drilling along the 2200 east line justifies further exploration and a proposal for a portion of the second stage to further explore this area will be submitted.

Respectfully submitted,

R. J. Hayden

R. J. Hayden, Project Engineer
Food Machinery Chemical Corporation
Westvaco Mineral Products
P. O. Box 250
Pocatello, Idaho

STATEMENT

DATE July 25, 1956 19

NAME Westvaco Mineral Products

ADDRESS Box 24, Star Route

Grants, New Mexico

In Account With

Stewart Bros. & Parker

DRILLING CONTRACTORS

Phone ~~6-6143~~ AT7-4416 P. O. Box ~~3449~~ 154

~~XXXXXXXXXX~~ ODESSA, TEXAS

Grants, New Mexico

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		Amount
Exploration drilling on Section 29 during July, 1956 as follows:		
RIG #5 - SECTION 29		
1,860 feet @ 75¢ per foot	$1,395.00	
38 feet @ 90¢ per foot	34.20	
100 feet core @ $3.50 per foot	350.00	
		$1,779.20
RIG #7 - SECTION 29		
2,204 feet @ 75¢ per foot	$1,653.00	
146 feet core @ $3.50 per foot	511.00	
		2,164.00
RIG #11 - SECTION 29		
4,228 feet @ 75¢ per foot	$3,171.00	
26 feet @ 90¢ per foot	23.40	
166 feet core @ $3.50 per foot	581.00	
		3,775.40
		$7,718.60
2% N. M. School Tax		154.37
TOTAL		$7,872.97

THANKS

STEWART BROS. & PARKER DRILLING CO.

By H. M. Stewart

H. M. Stewart, Partner

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
100-2200 F-1	29 13-9	6741	1 1	0	7/20/56	J.A.R.

Geology — Taylor Rig #11 Description

Probe — Scaler

Footage | Formation | Type of Rock | Color | Description | Diagnostic Features | Geiger | Samples Taken | Depth | Reading | Scale | Interval | Foot | Assay | Graphic log | Description | Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)

0 — QAL Blowsand

Eberline
THB 2 .01
0 ↓ .192 — no count

20

40

60 — QAL
Js sstone sh red

80

100

120

140

Sh green

Js
JT Ls m-dk gy 20% re-xtallized, argill, aren, calcitic

Ls. brn-gy 10% re-xtallized, brn sh part, calcitic

Ls. dk gy 30% re-xtall., brn sh, calcitic, aren

JT Ls. m-dk gy 5% re-xtallized, v aren argill
JE red f-m grain

no count
2' lower
cutt. no sample

TD 195'

160 — QAL
Js
JT

180 — JT
JE

TD 195

200

220

240

260

Dwg No. 192

Hole No. 100-2200
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
300-2200 F-2	29 13-9	6745	1 1	0	7/20/56	JAR

Geology: Footage | Formation | Type of Rock | Color | Hannum Rig #4 Description | Diagnostic Features | Geiger | Samples Taken

Probe: Depth | Reading | Scale

Scaler: Foot Interval | Assay

Graphic log | Description | Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)

Ebey line

THB 1.5 .01

0 → 205

NO COUNT

0 — Qal — Blow-sand

20

40

60 — Qal / Js — Sh red

80

100

120

140

160 — Ss brn wet

Js / Jt — Ls m-dk gy 30% re-xtallized, some brn sh, aren, calcitic

Ls dk gy 30% re-xtallized, s. aren, calcitic

Ls brn gy 30% re-xtallized, aren, calcitic, brn sh

Ls m dk gy "

Jt / Jr — Ls m gry (81) 20% re-xtallized, v aren, some grn sand

180

200

220

240

260

Qal — Js — Jt — Jr — Jb — TD 205

2" wet cuttings sample

Dwg No. 1997

Hole No. 300-2200

Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
300-2200 F-3	29 13-9	6747	1 1	0	7/20/56	J.A.R.

Hanna Rig #11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0	QAL		Blow sand, brown					TH.B. 0	1	91				QAL
								215	no count					
20														
40														
60	QAL / JS		sh. red											QAL / JS
80														
100														
120														
140														
160				ss. brown wet										
180	JS / JT			LS. m-gy., gren. (v. contam. with sand) calcitic LS. m-dk. gy., 40% re-xtallized, calcitic LS. brn-gy. 40% re-xtallized, calcitic, s. gren. LS. brn-gy. 30% re-xtallized, much brn sh, calcitic										JS / JT
200				LS. brn-gy. 10% re-xtallized, brn. sh. s. gren.										
	JT			LS. m-dk. gy. 20% re-xtallized, gren. calcitic										JT
	JE			SS. red f-m. grain										JE
	TD 215'													TD 215'
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

<no core>
2' wet cuttings, no samples

Dwg No 192

Hole No 500-2200
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
700-2200 F-4	29 13-9	6748	1 / 1	0	7/20/56	J.A.R.

Geology — Taylor Ridge #7

Footage | Formation | Type of Rock | Color | Description | Diagnostic Features | Geiger | Samples Taken

Probe: Depth | Reading | Scale (Eberline)

Scaler: Interval | Foot | Assay

Graphic log | Description

Dotted line Graphic Assay, Solid Line – Probe (0% … 20% … 60)

0 — QAL — Blow sand

Probe: THB 0 — 2 — .01

↓ No count

193

194 — 2.5 — .01
194.5 — 3.5 — .01
195 — 4.0 — .01
195.5 — 8.0 — .01
196 — 1.5 — .1
196.5 — 3.0 — .1
197 — 6.0 — .1
197.5 — 5.0 — .1
198 — 3.5 — .1
198.5 — 5.5 — .1
199 — 7.5 — .1
199.5 — 7.0 — .1

40 — QAL — Js. Sh. red

200 — 1.7 — .1
200.5 — 5.0 — .01
201 — 5.0 — .01
201.5 — 3.0 — .01
202 — 2.0 — .01
202.5 — 2.0 — .01
203 — 2.0 — .01
203.5 — 2.0 — .01
204 — 2.0 — .01

↓ No count

224

Graphic log: QAL — Js

60 — Sh. green

Js — JT — Ls. m-dk. gy, aren, 30% re-xtall, calcitic

Ls. m-dk. gy, 20% re-xtall, brown sh, th. bedded, calcitic

Ls. m-dk. gy, 30% re-xtallized, v. aren, calcitic

Ls. dk-brn gy, 25% re-xtallized, v. shaly

Ls. brn-gy, 30% re-xtallized, calcitic

Ls. brn-gy, 20% re-xtallized, v. aren, calcitic

JT — JE — SS. red f-m. grain

TD 230

Graphic log: Js — JT — JE — TD 230

← 1-3/4" core → ← 2" wet poly samples →

Dwg No 792

Hole No 700-2200

Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1100-2200 F-5	29/13/9	6745	1 / 2	1	7/11/56	TN

Hammum, rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0								THB	12	1/2				
								245	12	1/2			Blow sand	
40	Qal / Jb	ss.	brn	Fn-med gr.										Qal / Jb
160	Jb ? Js	sh.	red brn	calc., streaks gr. sh. & wet den. ss.										Jb ? Js
200		ss.	brn	Fn-med gr.										
220	Js Jt	ls.	lt-med gy	see inset Fnc detail log										Jt
240	Jt Jc	ss.	red	Fn-med gr.										Jt Jc
	T.D. 245													T.D. 245

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

← Dead →
← Cored →

Dwg No. 792

Hole No _____
Section _____

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
1100-2200 F-5	29-13-9	2 of 2	7/11/56	TN

Footage From	Footage To	Formation	Geology: Description	Samples
220			L.S. med-dark gray, 40% re-xxalized, calc. xtals. vert. frac. limonite stained	
	221.8		crennulated surface of core, argill.	
221.8	222.8		L.S. lt-med gray, 40% re-xxalized, calc. xtals, vert. frac. limonite stained	
222.8	223.2		Sh. red-brn, limey	
223.2	224.6		L.S., med-dark gray, slightly re-xxalized, calc. xtals argill, vert. frac.	
224.6	225.1		L.S., med gray, 20% re-xxalized, bands of pure calc, vert. frac.	
225.1			L.S., med gray, 40% re-xxalized, calc. xtals, crennulated surface of core,	
	227.4		very argill, thin bedded, vert. frac.	
227.4	230.3		L.S., lt-med gray, healed vert. frac. (stylolites	
230.3	230.5		L.S., lt-gray-white, 100% re-xxalized, Lattice struc.	
230.5	237.4		L.S., lt. gray, slightly re-xxalized, zones black sh. mat.	
237.4	242.3		S.S., white to purple, fn-med. gr.	
242.3	245.0		S.S., red, fn-med. gr.	

Drawing No. 793

Hole No.	Sec	Elevation	Page of Pages	No Insets	Date	Logged by
1300-2200 F-6	28-13-9	6745	1 / 2	1	7/10/56	TN

Geology — Hannum, rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Scaler Foot	Assay	Graphic log	Description
0								THB 0	8	V				Processing	
								249	8	V					
20	Qal / Jb	ss	lt gy												Qal / Jb
40															
60															
80															
100															
120															
140	Jb ? / Js			sh. red bro. aren, calc.; streaks of gr. sh. & incl. brown ss.											Jb ? ? / Js
160															
180															
200															
220		ss	ben.	lt-med. gr.											
240	Js / Jt			LS. lt-med gy. see inset for detail. hg.											Js / Jt
260	Jt / TD 249														Jt / Jc / TD 249

Dotted line — Graphic Assay; Solid Line — Probe. 0% — 20% — 60

Dead ← → Core

Dwg No 792

Hole No. _____

Section _____

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Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
1300 - 2200	29-13-9	2 of 2	7/10/56	TN

Footage From	Footage To	Formation	Geology: Description	Samples
229.0	229.3	Jt	L.S., lt. gray, 20% re-xalized, calc. xtals., vert (healed) Frac's.	
229.3	229.5	Jt	Sh., green and purple	
229.5		Jt	L.S., lt-med gray, 40% re-xalized, calc. xtals massive, sand-sh. lenses up	
	232.8		to .05' thick	
232.8		Jt	L.S., med. gray, thin bedded with interbedded very thin lenses of sh., crenulated	
	236.7		20% re-xalized, calc. xtals.	
236.7	239.4		L.S., med. gray-brn, thin bedded with interbedded lenses of brn sh, calc. xtals	
239.4	239.7		L.S., lt gray-white, lattice stru., 100% re-xalized.	
239.7	243.7		L.S., med. gray, thin bedded, interbedded green & purple sh, some aren. mat.	
243.7	243.9		L.S., lt gray-white, lattice stru., 100% re-xalized	
243.9	247.2		L.S., lt gray, increasingly aren towards base, thin lenses bright green sh.	
247.2	248.6		S.S., white to purple, fn-med grain, Limey	

Drawing No. 793

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Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1500-2200 E	29 13-9	6752	1 of 3	1	7/9/56	J.A.R.

Hannum Rig #11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth (Tomcat)	Probe Reading	Probe Scale	Scaler Interval	Scaler Foot	Scaler Assay	Graphic log	Description
0	QAL	Blowsand						THB	10	5					QAL
	JB	SS		hard				263	no count						JB
20															
40															
60															
80															
100															
120															
140															
160															
180	JB? / Js?	Sh	red	green											JB? / Js?
200															
220		SS	brown	dark											
240	Js / Jt	LS		(see inset for detailed log of LS)											
260															

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Core
1.60 % recovery
no count

Dwg No. 792

Hole No. 1500-2200
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1500-2200 F-7	29 13-9	6752	2 3	1	7/9/56	J.A.R.

Hannum Rig #11

Geology: Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe: Depth	Reading	Scale	Scaler: Foot Interval	Assay	Graphic log	Description	Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)
260	JT	LS.				Inhc cnt	core	1 1/2' 100% recovery						JT	260
	JE	SS.	red-gray											JE	
260 20	TD	275'											T.D.	275	280 20
300 40															300 40
60															60
80															80
00															100
20															120
0															140
0															160
															180
															200
															220
															240
															260

Dwg No. 192

Hole No 1500-2200
Section 29-13-9

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
500-2200	29 3-9	3 3	7/9/56	J.A.R

Footage From	Footage To	Formation	Geology: Hannum Rio #11 — Description	Samples
245	250.7	Js	ss. l-m. gray, v. calcar, f-m. grain, layers of bs., streaks of greenish, mottled appearance	
250.7	253.8	JT	Ls. m-dk gray, 50% re-xtallized, crem-bedding, layers of brn sh	
253.8	263.5	JT	Ls, m-brownish gray, 80% re-xtallized, bands of brn sh, v. fract, arch n are bott. Narrow bands of calcite (lattice struct) at 258.9 & 261.7	
263.5	265	JT	Ls, m-dk gray, 80% re-xtallized, v arena shaly, red sh at bot	
265	265.5	JE	ss. gray-red, f-m. grain	

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1700-2200 F-8	29 13-9	6775'	1 3	1	7/3/56	J.A.R

Geology — Garza Rig #11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scaler Scale	Scaler Interval	Foot Assay	Graphic log	Description
0	QAL / JB	Sandstone	Brown											QAL / JB
60				Sh. red & brn. SS.										
100	JB? / Js?	SS. brn. / Sh. red		Streaks of brn. SS.										JB? / Js?
260														

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Dwg No. 792

Hole No. 1700-2200
Section 29-13-9

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Hole No.	Sec.	Elevation	Page of Pages	No Insets	Date	Logged by
1700-2200 F-8	29 13-9	6775	2 3	1	7/3/56	J.A.R

Geology

Garza Rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken
260	Js	sh	red				
280 / 20	Jt						
300 / 40	Jt / Je	ss	sh red				
TD 307							

Probe

Depth	Reading	Scale
Tom Cat		
THB 0 ↓ 259	No count	9 5
260	30	5
261	30	5
262	25	5
263	18	5
264	15	5
265	10	5
266	20	5
267	15	5
268	20	5
269	25	5
270	25	5
271	35	5
272	30	5
273	50	5
274	25	5
275 ↓ 299	18 No count	5

Scaler: Foot Interval

Assay

Graphic log / Description

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Hole No 1700-2200
Section 29-13-9

Dwg No 192

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Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
1700 2200 F-8	24 13-9	3 of 3	2/3/56	JAR

Garza Rig 11

Footage From	Footage To	Formation	Geology — Description	Samples
267	268.7	Js	Sh, grey calcar, t-m gy, beds of green sh,	
268.7	275.2	Js	SS, l-gy, f-m grain, v calcar, streaks of green & red sh.	
275.2	280.7	JT	LS, m-dk gy, grey, thin bedded, 50% re-xtallized except for top 1', carnotite & yellow	
~~[illegible]~~	~~[illegible]~~	~~JT~~	Calcite at 27', v calcitic v shaly in top 1'	
280.7	283.1	JT	LS, dk gy, 50% re-xtallized, cren bedding, many sh streaks, gren, calcitic	
283.1	296.3	JT	LS, m gy - brn-gy, 30-40% re-xtallized, vert fract, streaks of brn sh, calcite along slippage planes, s grey	
287.7	287.8	JT	Calcite, lattice struct.	
296.3	297	JE	SS, var purple gray, f-m grain.	

Drawing No. 793

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Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1900-2200 F-9	29-13-9	6786	1 2	0	7/19/56	TN

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scaler Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0	Qal			Hannum, rig, 11										Qal
	Jb	s.s.	brn-gy	Fn-med-gr										Jb
20														
40														
60														
80														
100														
120				s.s. brn										Fn-med grain, wet
140	Jb ? Js			sh. red-brn. green, calc., streaks green sh & wet brn. s.s										Jb ? ? Js
160														
180														
200														
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Dwg No. 792

Hole No. 1900-2200
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1900-2200 F-9	29-13-9	6786	2 of 2	0	7/19/56	TN

Hannum, rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken
280		ss	brn.	wet			
300	Js / Jt	LS	gn-gry	very calc.		Mineralization	Jet Samples
320		LS	lt-med gy	green argill., slightly recrystalized			
		LS	lt-dk gy	argill., 20% recrystalized, calc. stals, massive, gr. sh			
	Jt	LS	med gy	slightly recrystalized, calc. stals, massive, pore			
		LS	lt gy	20% recrystalized, calc. stals, thin bed, green			
	Je	SS	red	fine-med gr.			
340	TD 335						

Probe Depth	Probe Reading	Probe Scale
THB	.008	mr/hr
290.0	.008	
291.3	.020	
292.0	.028	
292.5	.040	
293.0	.050	
293.5	.080	
294.0	.070	
294.5	.060	
295.0	.050	
295.5	.025	
296.0	.040	
297.0	.060	
298.0	.240	
298.5	.260	
299.0	.280	
299.5	.100	
300.0	.045	
301.0	.020	
307.0	.020	
307.5	.035	
308.0	.050	
308.5	.100	
309.0	.250	
309.5	.180	
310.0	.150	
310.5	.300	
311.0	.440	
311.5	.130	
312.0	.020	
313.0	.006	
315.5	.006	
316.0	.022	
317.0	.055	
317.5	.200	
318.0	.300	
318.5	.120	
319.0	.080	
319.5	.090	
320.0	.160	
320.5	.160	
321.0	.060	
322.5	.060	
323.0	.006	
335.0	.006	mr/hr

Scaler: Foot Interval, Assay

Graphic log: Js, Jt, Jt, Je, TD 335

Dotted line: Graphic Assay; Solid Line - Probe; 0% 20% 60

Hole No. 1900-2200
Section 29-13-9

Dwg No. 102

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2100-2200 F-10	29-13-9	6800	1 3	1	7/19/56	TN

Footage	Formation	Type of Rock	Color	Geology Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scaler Scale	Foot Interval	Assay	Graphic log	Description	Dotted line Graphic Assay Solid Line - Probe 0% .20% .60
0	Qal / Jb	S.S.	lt. gy-wh	Woody, rig 5 Fn.-med. gr.										Qal. / Jb	
20															
40															
60															
80															
100															
120															
140															
160															
180															
200	Jb ? Js	Sh.	red-brn., grn., calc., streaks red ss											Jb ? Js	
220															
240															
260															

Dwg No 792

Hole No. 1900-2200
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2100-2200 F-10	29-13-9	6800	2 3	1	7/19/56	TN

Geology

Woody, rig 5

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken
260		sh.	red, brn, green, calc. streaks	red ss.			
280 / 20							
300 / 40		sh.	bl. & wh.				
320 / 60	Js / Jt			LS. lt-med gy. see inset for detailed log		min	
340 / 80	Jt / Jc			ss. red fn-med gr.		silt / Concd	
360 / 100	TD 355						

Probe

Depth	Reading	Scale
THB	.008	mr/hr
325.0	.008	
325.5	.010	
326.0	.075	
326.5	.035	
327.0	.020	
328.0	.006	
355.0	.006	mr/hr

Scaler: Interval, Foot, Assay

Graphic log: Js, Jt, Jt, Jc, TD 355

Description: Dotted line Graphic Assay, Solid Line - Probe, 0% 20% 60

Dwg No 792

Hole No. 1900-2200

Section 29-13-9

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Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
2100-2200	29-13-9	3 of 3		TN

Footage From	Footage To	Formation	Geology: Description	Samples
325.0	325.9	Jt	LS, med gray, argill, calc xtals	
325.9	331.0	Jt	LS, dark grey, healed vert frac (calc), calc xtals, massive	
331.0	334.2	Jt	LS, med grey, crennulated argill, 20% re-xxalized, calc xtals	
334.2	337.3	Jt	LS, dark grey, thin bedded with interbedded blk shales	
337.3	337.5	Jt	LS, white, 100% re-xxalized, Lattice struc (calc?)	
337.5	338.6	Jt	LS, dark grey, thin bedded with interbedded blk shales	
338.6	338.8	Jt	LS, white, 100% re-xxalized, Lattice struc	
338.8	342.9	Jt	LS, med-dark grey, zones of sh, calc xtals	
342.9	343.1	Jt	LS, white, 100% rexxalized, calc xtals, Lattice struc	
343.1	345.0	Jt	LS, lt grey, 20% rexxalized, calc xtals, massive, ~~pure~~ aren	
345.0	346.4	Je	SS, white - purple, fn - med gr, calc	
346.4	353.2	Je	SS, white - yellow, fn - med gr	
353.2	355.0	Je	SS, red, fn - med gr	

Drawing No. 793

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Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2300-2200 E-11	29-13-9	6807	1 / 2	0	7/18/56	TN

Hannum, rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0	Qal													Qal
	Jb	SS	wh-ltgy	Fn-med grain										
80	Jb ? Js			sb. red-brn, green calc. streaks gr. sh & wet brn SS									? Jb ? Js ?	
260				s.a. brn. Fn-med. gr., wet										

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Dwg No 192

Hole No 2300-2200
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2300-2200 F-11	29-13-9	6807	2 / 2	0	7/18/56	TN

Hannum, rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Scaler Foot	Scaler Assay	Graphic log	Description
260		sh.	red-brn					THB 0	.008	mr/hr					
								328.0	.008						
								329.0	.028						
								330.0	.030						
								331.0	.027						
								332.0	.032						
								333.0	.047						
								333.5	.100						
								334.0	.105						
								334.5	.080						
								335.0	.052						
								336.0	.046						
								337.0	.038						
								338.0	.030						
								339.0	.025						
								340.0	.018						
								341.0	.010						
		s.s.	brn	fn-med gr., wet											
	Js														Js
	Jt	L.S.	lt gry	20% re-xtalized calc. xtals, massive											Jt
		s.s.	lt gray	fn-med. gr.											
		L.S.	dark gy	massive, green											
		L.S.	gy-brn	aren., massive, re-xtalized calc. xtals											
		L.S.	med gy	massive, pure											Jt
	Jc	s.s.	red	fn-med gr.											Jc
	TD 365														TD 365

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

mineralization
2" wet samples

Dwg No 792

Hole No. 2300-2200
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2500-2200 F-12	29-13-9	6800	1 3	1	7/19/56	TN

Taylor, rig 7

Geology: Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe: Depth	Reading	Scale	Scaler: Foot Interval	Assay	Graphic log	Description
0	Qal / Jb	s.s.	brn	fn-med gr										Qal / Jb
140		s.s.	red	fn-med gr										
160	Jb	s.s.	wh	fn-med gr., moist										Jb
	? Js	Sh	red-brn, aren., calc., streaks gr. sh. / wet brn s.s.											Js

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Dwg. No. 1842

Hole No 2500-2200
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2500-2200 F-12	29-13-9	6810	2 / 3	1	7/19/56	TN

Geology: Taylor, rig 7

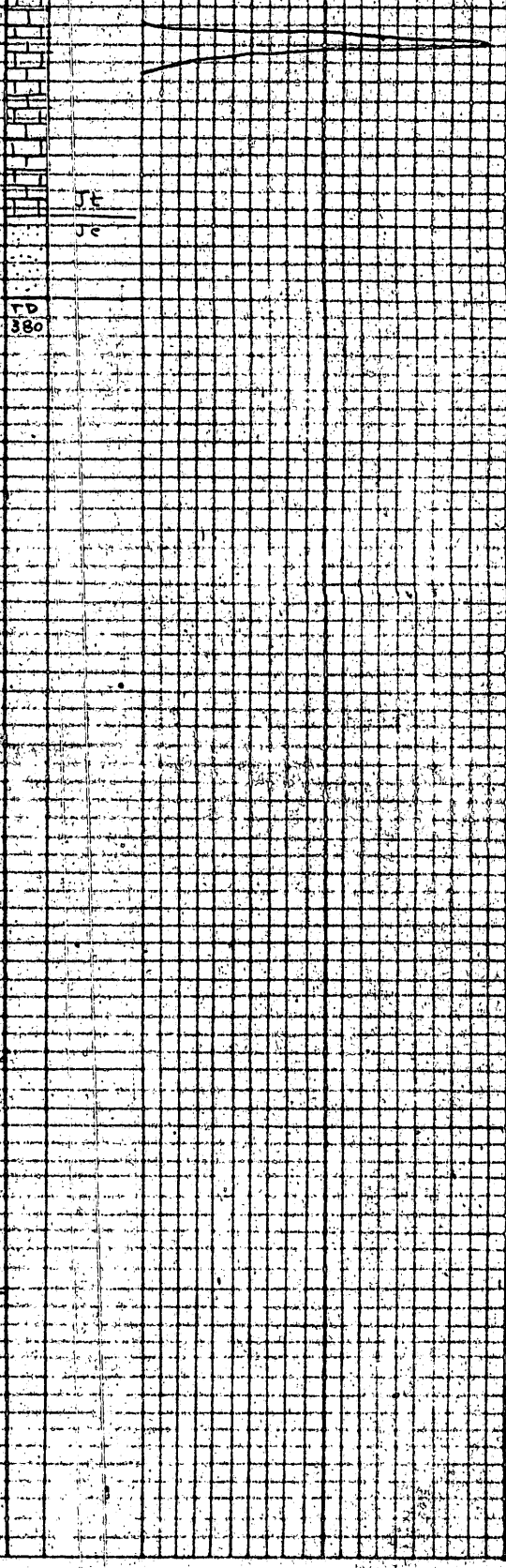
Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken
260		sh.	red-brn				
280 / 20							
300 / 40							
320 / 60							
340 / 80		sh.	gr.				
	Js						
	Jt	LS	lt-med gy	See inset for detailed log			
360 / 100							
	Jt						
	Jc	S.S.	red	Fn-med gr.			
380 / 120	TD 380						
140							
160							
180							
200							
220							
240							
260							

Probe / Scaler

Depth	Reading	Scale
THB	.008	m/hr
0 — c		
334.0	.008	
337.0	.020	
337.5	.027	
338.0	.030	
339.0	.040	
340.0	.048	
341.0	.045	
342.0	.040	
342.5	.180	
343.0	.200	
343.5	.120	
344.0	.100	
345.0	.015	
346.0	.045	
347.0	.045	
348.0	.045	
348.5	.080	
349.0	.180	
349.5	.210	
350.0	.270	
350.5	.380	
351.0	2.90	
351.5	3.30	
352.0	5.50	
352.5	2.70	
353.0	1.20	
353.5	1.00	
354.0	.50	
354.5	.20	
355.0	.10	
355.5	.090	
361.0	.010	
363.0	.026	
364.0	.018	
365.0	.008	

Scaler: Foot Interval, Assay, Graphic log, Description

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60



Dwg No 192

Hole No 2500-2200
Section 29-13-9

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Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
2500-2200 F-12	29-13-4	3 3	7/19/56	KN

Taylor, rig 7

Footage From	Footage To	Formation	Description	Samples
340.0	34	Jt	L.S., lt. grey, slightly re-xxalized few calc xtals, zones of calc xtals. Fracs (vert, healed) filled	
	344.8		with limonite (?)	
344.8	347.2	Jt	L.S. med. grey, crennulated, argill.	
347.2	351.7	Jt	S.S. lt grey, calc., argill (green),	
351.7	354.0	Jt	L.S., dark grey, aren, 20% re-xxalized, calc xtals, flourite (?) xtals	
354.0	355.6	Jt	CORE LOST	
355.6	355.8	Jt	S.S., lt grey, fn-med gr.	
355.8	356.1	Jt	L.S., 40% re-xxalized calc. xtals.	
356.1	359.7	Jt	L.S., med grey, crennulated, argill.	
359.7	363.6	Jt	L.S., dark grey, thinbedded with interbedded blk shales, aren.	
363.6	364.0	Jt	L.S. white 100% re-xxalized calc, Lattice struc	
364.0	368.2	Jt	L.S. dark grey, thinbedded with interbedded shales, aren	
368.2	368.3	Jt	L.S., white, 100% re-xxalized, calc, Lattice struc.	
368.3	372.2	Jt	L.S., med-dark grey, thinbedded, argill, aren.	
372.2	373.8	Je	S.S., white to purple, Fn-med gr	
373.8	378.5	Je	S.S. white to yellow, fn-med gr.	
378.5	380.0	Je	S.S., red, fn-med gr.	

Drawing No. 793

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Hole No.	Sec	Elevation	Page of Pages	No. Insets	Date	Logged by
2700-2200 F-13	29 13-9	6824'	1 of 3	1	7/18/56	JAR

Geology — Woody Rig #5

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scaler Scale	Scaler Interval	Scaler Foot	Assay	Graphic log	Description
0	QAL	Glowsand													QAL
	JB	SS. sand, gray													JB
80	JB ? JS	Shale, red													? JB ? JS

Dotted line — Graphic Assay; Solid Line - Probe

0% 20% 60

Dwg. No 192

Hole No. 2700-2200

Section 29-13-9

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Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2700-2200 F-13	29 13-9	6824'	2 3	1	7/18/56	J.A.R.

Geology: Footage | Formation | Type of Rock | Color | Description (Woody Rig #5) | Diagnostic Features | Geiger | Samples Taken

Probe: Depth | Reading | Scale

Scaler: Foot Interval | Assay

Graphic log | Description | Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)

Depth	Reading	Scale
THB	6	5
0 ↓ 355	No count	
356	20	5
357	20	5
358	20	5
359	18	5
360	19	5
361	16	5
362	15	5
363	25	5
364	20	5
365	25	5
366	28	5
367	30	5
368	25	5
369	48	5
370	20	5
371 ↓ 382	No count	
383	25	5
384	20	5
385 ↓ 395	No count	

Footage: 260, 280, 300, 320, 340, 360, 380, 400, 420, 180, 200, 220, 240, 260

Formation: Js

Type of Rock: sh & sand, red

Color: sh, red

Description: sh, white & green

ss & sh, light-green

Js / Jt — LS (see inset for detailed log)

Jt / JE — ss, red & gy, f-m grain

TD 395

Diagnostic Features: Core

Graphic log: Js, Jt, JE, TD 395

Dotted line Graphic Assay Solid Line - Probe: 0% .20% .60

Dwg No 792

Hole No. 2700-2200

Section 29-13-9

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
2700-2200 F-13	29 13-9	3 / 3	7/18/56	J.A.R.

Geology

Woody Rig #5

Footage From	Footage To	Formation	Description	Samples
365	373.5	Js	SS & Sh, l. gray, some greenish sh, f-m grain Ls, v. calcar stringers of dk. gray ls.	
373.5	379.9	JT	Ls, dk. gray, 40% re-xtallized, s. argill, calcitic, s. wavy bedding.	
379.9	384.8	JT	Ls, m-dk gray, 30% re-xtallized, many brown & black sh partings, near v. fract, calcitic thin-reg. bedding.	
384.8	384.9	JT	Calcite, lattice structure.	
384.9	393	JT	Ls, dk. gray - black, 30% re-xtallized, 100% re-x. in few spots, many bands of brown sh.	
393	395	JE	SS, red in top 2", l. gray below, f-m grain, calcar.	

Drawing No. 793

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Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2900-2200 F-14	29-13-9	6830'	1 of 3	1	7/17/56	J.A.R.

Taylor Rig #7

Geology: Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe: Depth	Reading	Scale	Scaler: Foot Interval	Assay	Graphic log	Description	Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)
0	Qal. / JB	Blowsand / ss.	gray,	f-m. grain, calcar										Qal	
20															
40															
60															
80															
100															
120															
140															
160		Js.		white	f-m. grain.										
180	JB? / Js.		Sh.	red										JB? / Js?	
200															
220															
240															
260															

Hole No 2900-2200

Section 29-13-9

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Hole No.	Sec.	Elevation	Page of Pages	No Insets	Date	Logged by
2900-2200 F-14	29 13-9	6830'	2 3	1	7/16/56	JAR

Taylor Rig #7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Scaler Foot	Assay	Graphic log	Description
260	Js	sh.	red				Scaler	THB	10	5					Js
								0							
								↓	No count						
								361							
280 20								362	10	5					
							.081	363	10	5					
								364	20	5					
								365	20	5					
								366	35	4					
								367	30	3					
								368	28	3					
							.017	369	60	5					
300 40							.030	370	35	5					
							.110	371	50	5					
								372	60	4					
								373	60	3					
							.122	374	25	3					
							.074	375	55	4					
							.102	376	60	4					
							.023	377	60	4					
							.125	378	35	3					
320 60							.394	379	36	2					
							.598	380	50	2					
							.726	381	20	2					
							Last core	382	42	2					
							.909	383	42	3					
							.532	384	40	3					
							.127	385	30	4					
							.043	386	35	5					
							.018	387	35	5					
								388	10	5					
								↓							
340 80								408	No count						
360 100		sh.	green												
		sh & ls.	green-gray												
380 120	Js													Js	
	Jt	ls.	mdh. gray											Jt	
				(see inset for details) (08)											
400 140														Jt	
														Je	
	Jt														
	Je	ss	red-purple, f-m grain												
420 160	TD 412'														

Core

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Dwg No 792

Hole No. 2900-2200
Section 29-13-9

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
2900 - 2200 F-14	29 13-9	3 3	7/16/56	JAR

Taylor Rio #7

Footage From	Footage To	Formation	Geology Description	Samples
362	362.5	Js	Mudstone ssh., green, aren, calcar	
362.5	362.9	Js	Ls, m-gray, argill.	
362.9	364.6	Js	Shass. gray & green,	
364.6	365	Js	Ls., m. gray, aren.,	
365	370.5	Js	Sh., green, crumbly, calcar.	
365	367	Js	2' lost (very friable shale)	
370.5	372	Js	Sh, green, calcar, crumbly	
372	373.8		missing core loss assumed to be green shale	
374	375.5	Js	ss. l. gray-green, f-m grain, streaks of black min. (uraninite ?)	
375.5	375.7	Js	Ls, m-dk. gray, argill., aren,	
375.7	379	Js	Sh, green, v. calcar, streaks of lime, red & black uranium min. (gummite & uraninite ?)	
379	382	JT	Ls. m-dk. gray, 90% re-xtallized, small black specks (uraninite), highly fract. uraninite & calcite sealing fract.	
	384	JT	abundant carnotite in fract.	
	390	JT	stylolite containing uraninite	
390	392		core lost ?	
392	394	JT	Ls, m-dk. gray, v. thin-even bedded, v. argell, slight re-xtallization	
394	397	JT	Ls, dk. gray-brown, slight re-xtallization, thin reg. bedding, v. argill.	
397	410	JT	Ls, gray-brown, slight. re-xtallized, thick bedded, argill.	
410	412	JE	ss, red-purple, f-m. grain, calcar.	

Drawing No. 793

Hole No.	Sec.	Elevation	Page of Pages	No Insets	Date	Logged by
1700-3000 H-1	29 13-9	6761'	1 3	1	7/13/56	J A R

Geology — Hannum Rig # 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scaler Scale	Scaler Interval Foot	Assay	Graphic log	Description
0	PAL	Blow sand												
20														
40	PAL JB	ss	brn.	fn-med. gr.										PAL JB
60														
80														
100														
120														
140														
160														
180	Jb ? Js	Sh	red-brn, green, calc., streaks, gc sb & wet brn ss											Jb ? Js
200														
220														
240				ss brn	fn-med. gr.									
260														

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Dwg No. 792

Hole No. 1700-3000
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
1700-3000 H-1	29-13-9	6761	2 3	1	7/13/56	J.A.R.

Geology: Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe: Depth	Reading	Scale	Scaler: Foot Interval	Assay	Graphic log	Description	Dotted line Graphic Assay Solid Line - Probe 0% .20% .60
240								THB	8						026
	Js / Jt			Ls. lt-med gy. See Inset for detail log.		← Hanna or ↓	↑ Pasco ↓	300						Js / Jt	
280															280 20
300	Jt / Jc		sc. red.	Fn-med gn.										Jt / Jc	300 40
	TD 300													TD 300	
320															320 60

Dwg No 192

Hole No. _____

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Hole No.	Sec.	Page of Pages	Date	Logged by
1700-3000 H-1	29 13-9	3 3	7/13/56	J.A.R.

Footage From	Footage To	Formation	Geology: Hannum R. #21 — Description	Samples
269	270.1	Js	SS., red & gray, f-m. grain, pod of Ls., v. calcar.	
270.1	279.5	Js	SS., l-m. gray, f-m. grain, v. calcar.,	
279.5	284.4	JT	Ls, m. gray, 30% re-xtallized, v. aren. near top, top is v. grad. contact. sol. cavit. at bott. calcitic	
284.4	288	JT	Ls, m. gray, much brown sand, 20% re-xtallized, layers of brown shale, vert veins of calcite.	
288		JT	Ls, m-dk. gray, 80% re-xtallized, cren. bedding, Streaks of dk. brown & red shale	
	291.0		some greenish sand, v. calcitic	
291.0	294.1	JT	L.S., lt-med gray, thin bedded, aren mat in layers	
294.1	299.7	JT	L.S., dense, lt gray, thin lenses gr-grysh aren	
299.7	300.0	Je	S.S., white to purple, Fn-med gr.	

Drawing No. 793

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Hole No.	Sec	Elevation	Page of	Pages	No Inset	Date	Logged by
2100-3000H-2	29 13-9	6771	1	2	0	7/23/56	JAR

Hanson Rig # 11

Footage | Formation | Log | Description | Geologic Contacts | Samples | Probe Depth | Probe Scale Reading | Scaler Interval Foot | Scaler Assay | Geologic Log | Graphic Assay Solid Line - Probe

0% 20% 60

0 — QAL / JB — Blows and ss. sd. f-m. grain

20

40

60

80

100

120

140 — JB ? / Js ? Sh. red

160

180

200

220

240

260

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Hole No	Sec	Elevation	Page of	Pages	No. Insets	Date	Logged by
2100-3000 H-2	29 13-9	6771	2	2	0	7/23/56	J. A. R.

Geology

Hannum Rio #11.

Description

Footage	Formation	Lithologic Tech	Color	Samples Taken	Geiger Observations	Features	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Assay Foot	Graphic Log	Description	Dotted line Graphic Assay Solid Line - Probe 0% 20% 60
260		Js	sh. red				THB	1.5	.01				Js	
							↓ 317	No count						
280 20							318	4	.01					
							318.5	7	.01					
							319	6.5	.01					
							319.5	6	.01					
							320	2	.1					
							320.5	1.5	.1					
							321	1.6	.1					
							321.5	1.5	.1					
							322	1	.1					
							322.5	1.3	.1					
							323	4	.01					
							324	1	.01					
300 40							↓ 327	No count						
							328	2	.01					
							329	3	.01					
							330	2	.01					
							331	3	.01					
							332	6	.01					
							333	6	.1					
							333.5	7	.1					
							334	1.5	.1					
							334.5	2	.01					
							335	1	.01					
							336	.5	.01					
320 60	JS / JT	Ls.	m-dk. gy	20 % re-xtall., aren, calcitic.			↓	No count					JT	
		Ls.	m-dk. gy	40 % re-xtall, s. aren. calcitic. some brn. sh.										
		Ls.	m-dk. gy	70 % re-xtall calcitic										
		Ls.	m-brn. gy	30 % re-xtall, much brn. sh. calcitic v. aren.										
340 80	JT / JE	SS.	red	f-m. grain			350						JT / JE	
360 100														
	TD 365												D 365'	
120														
40														
160														
180														
200														
220														
240														
260														

2' wet cutting samples

260 280 20 300 40 320 60 340 80 360 100 380 120 140 160

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2300-3000 H-3	29-13-9	6778	1 3	1	7/14/56	TN

Hannam; rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0	Jb/Jb	s.s.	brn-gy	In-med-gr.										
160	Jb/Js	Sh	red-brn, ocrn, calc, streaks gr. sh & wet brn. s.s.											

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Dwg No. 792

Hole No. 2300-3000
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2300-3000 H-3	29-13-9	6778	2 3	1	7/14/56	TN

Geology							Probe			Scaler				
Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Depth	Reading	Scale	Foot Interval	Assay	Graphic log	Description
260								THB 0 – 360	8 – 8	V – V				
280 20														
300 40			20	brn.	fn-med gr. wet									
320 60														
340 80	Js / Jt			L.S. lt-med gy. See inset for detail log.									Js / Jt	
360 100	Jt / Je / TD 360			s.s. red	fn-med gr.			no count / core					Jt / Je / TD 360	

Dotted line Graphic Assay
Solid Line = Probe
0% .20% .60

Footage: 260, 280, 300, 320, 340, 360, 120, 140, 160, 180, 200, 220, 240, 260

Dwg No. 1092

Hole No. _____

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Hole No.	Sec.	Page of Pages	Date	Logged by
2300-3000 H-3	29-13-9	3 of 3	7/14/56	TN

Footage From	Footage To	Formation	Geology: Description	Samples
320	320.3	Js	L.S., lt-med gray, shear zone(?), 20% re-xxalization, calc. xtals.	
320.3	324.8	Js	S.S., lt-gray-brn, fn-med gr	
324.8	327.5	Js	L.S., med gray, 20% re-xxalized, calc xtals, aren, argill	
327.5	329.6	Js	L.S., med gray, alternating with .2' thick bands of lt gray-brn S.S.	
329.6	335.2	Js	S.S., lt gray-white, fn grain, limey	
335.2	336.5	Jt	L.S., lt gray, stylolites filled with purple mat.	
336.5	340.3	Jt	L.S., med-dark gray, 20% re-xxalized, calc xtals, argill. crennulated appearence	
340.3	342.8	Jt	L.S., dark gray, argill; slightly re-xxalized	
342.8	343.8	Jt	L.S., dark gray, argill, slightly re-xxalized, healed vert. frac	
343.8	343.9	Jt	L.S., lt gray-white, 100% re-xxalized, Lattice structure	
343.9	350.6	Jt	L.S., med-dark gray, argill,	
350.6	360.0	Je	S.S., purple-white, fn-med gr.	

Drawing No. 793

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Hole No.	Sec.	Elevation	Page of	Pages	No. Insets	Date	Logged by
2500-3000 H-4	29 13-9	6783	1	2	0	7/23/56	J.A.R.

Geology — Taylor Rio #7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Ticken	Samples	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Scaler Foot	Scaler Assay	Graphic log	Description
0	QAL / JB	SS	gy	Blowsand f-m grain												QAL / JB
20																
40																
60																
80																
100																
120				ss. white wet												
140	JB? / Js?			Shred												JB? / Js?
160																
180																
200																
220																
240																
260																

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Dwg. No. 792

Hole No. 2500-3000
Section 29-13-9

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Hole No.	Sec	Elevation	Page of Pages	No Isotopes	Date	Logged by
2500-3000 H-4	29 13-9	6783	2 / 2	0	7/23/56	J.A.R.

Geology

Taylor Rig #7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Scale Reading	Probe Interval Feet	Geiger Assay Feet	Graphic Log	Description	Logged Thru Graphic Assay Gold Line Probe 0% .50% .60
260	Js	sh	red					TH 8	1.5	.01				260
280 20								↓ 372	No count					280
300 40														300
320 60														320
340 80	Js	sh	green									Js		340
	JT	Ls	dk. gy	20% re-xtall, oren.								JT		
		Ls	m-brn. gy	10% re-xtall. oren, calcitic										
360 100		Ls	m-brn. gy	30% re-xtall. some brn sh.			2' wet cutting samples							360
	JT	Ls	m-brn. gy	20% re-xtall, v. oren								JT		
	JE	ss	red	f-m. grain								JE		
380 120	TD 375											TD 375		380
400 140														400
160														160
180														
200														
220														
240														
260														

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2700-3000 H-5	29 13-9	6789'	1 3	1	7/20/56	JAR

Footage	Formation	Type of Rock	Color	Geology: Woody Rig #5 Description	Diagnostic Features	Geiger	Samples Taken	Probe: Depth	Reading	Scale	Scaler: Interval	Foot	Assay	Graphic log	Description	Dotted line Graphic Assay Solid Line - Probe (0% .20% .60)
0	QAL	Blowsand													QAL	
															QAL	
	JB	SS sand, gray													JB	
20																
40																
60																
80																
100																
120																
140																
160																
180																
200																
220																
240																
260																

Dwg No 792

Hole No. 2700-3000
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2700-3000 H-5	29 13-9	6789'	2 3	1	7/20/56	J.A.R.

Geology: Woody Rig #5

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Scaler Foot	Scaler Assay	Graphic log	Description
260	JB	ss-sand, gray						THB 0 ↓ 382	1.5	.01					
	JB? / JS?	Sh-ss	red						No count						JB? / JS?
280 20															
300 40															
320 60															
340 80															
		Sh	white												
360 100															
	JS / JT	Ls		see inset for detailed log											JS / JT
380 120	JT / JE	SS		Purple, f-m grain											JT / JE
	TD 385'														TD 385
400 140															
420 160															
180															
200															
220															
240															
260															

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Core

Dwg No. 192

Hole No. 2700-3000
Section 29-13-9

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
2700-3000 H-5	29 13-9	3 3	7/20/56	J.A.R.

Footage From	Footage To	Formation	Geology — Description	Samples
			Woody Rig #5	
365	369.2	JT	Ls, m-dk gray, 40% re-xtallized, s. arenaceous, s. wavy bedding planes, part. nos of brn. sh.	
369.2	370.3	JT	Ls, m-dk gray, 60% re-xtallized, arenaceous, crev. [illegible]	
370.3	371.8	JT	Ls, m. gray, 20% re-xtallized, pure, vert. fracture	
371.8	373	JT	Ls, brn-gray, 20% re-xtallized, pure, vert. fract. fract. sealed with white & yellow calcite & iron min.	
373	373.8	JT	Ls, brn-gray, 20% re-xtallized, v. fract. sealed with white & yellow calcite, many brn. sh. part.	
373.8	374	JT	Calcite, Lattice struct.	
374	375	JT	Ls, m-dk gray 20% re-xtallized, argill, brn. sh. part.	
376	382.5	JT	Ls, m-dk gray, s. aren, argill, reg. bedding, thin bed., brn. sh. part.	
378.5	378.6	JT	calcite, lattice struct.	
382.5	385	JE	SS, purple in top 5", green-dk gy in next 6", orange-gray below, m-f. grain, calcar.	

Drawing No. 793

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2900-3000 11-6	29 13-9	6798	1 2	0	7/23/56	J.A.R.

Footage	Formation	Type of Rock	Color	Description (Woody Rig #5)	Diagnostic Features	Geiger	Samples Taken	Depth	Reading	Scale	Foot Interval	Assay	Graphic log	Description
0	QAL	Blowsand												
		SS.	gy.	f-m grain										Oil
														Jb

Probe — Scaler

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

0 20 40 60 80 100 120 140 160 180 200 220 240 260

Dwg No. 192

Hole No. 2900-3000
Section 29-13-9

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Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2900-3000 H-6	29 13-9	6798	2 2	0	7/23/56	J.A.R.

Geology — Woody Rig #5

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Scaler Foot	Scaler Assay	Graphic log	Description
260	J_B	ss.	gy.	f-m grain				THB	1	.01					J_B
								↓ 420	NO COUNT						
280 20	J_B? J_S?	ss. & sh.	red												J_B? J_S?
300 40															
320 60															
340 80															
360 100		sh.	red												
380 120	J_S / J_E	ss.	red	f-m grain ← water well at 376'											J_S / J_E
400 140															
420 160															
440 180	J_E / TD 438														TD 438'
200															
220															
240															
260															

Dotted line Graphic - Assay
Solid Line - Probe
0% .20% .60

Dwg No. 792

Hole No. 2900-3000
Section 29-13-9

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Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3100-3000 H-7	29 13-9	6804.	1 3	1	7/ /56	J.T.R.

Geology — Probe — Scaler

Woody Rio #5

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Depth	Reading	Scale	Foot Interval	Assay	Graphic log	Description
0	QAL	Blow sand												QAL
	QAL / JB	SS	gray	f-m. grain										QAL / JB
20														
40														
60														
80														
100														
120														
140														
160														
180														
200														
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Dwg. No 192

Hole No 3100-3000
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3100-3000 H-7	29 13-9	6804	2 3	1	7/156	JTR

Woody Rig #5

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
	JB	ss.	gy	f.m. grain				T.H.B.	1.5	.01				
								↓ 419	no count					
	JB? Js?	ss.	red											
		sh.	red											
	Js Jt	s.		(see inset for detailed log)										
	Jt Je	ss.	reddish	f-m grain										
	TD	425												

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Hole No. 3100-3000
Section 29-13-9

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
3100-3000	29-13-7	3 of 3	9/24/56	J.A.R.

Woody Rig #5

Footage From	Footage To	Formation	Geology: Description	Samples
375	390	Js	ss. mottled brown & gray f-m. grain, calcar, occasional thin lenses of med gray ls.	
~~390~~			few nod. of green shale.	
390	100.5	Js	SS & Ls. interbedded. increas. ls. towards bottom. Ls is med-dk gray 70% re-xtall ss. is med. gray f. grain.	
400.5	101.5	Js	Mudstone, med-gray	
401.5	401.8	Js	SS. med gray, f-med. grain.	
401.8	405	JT	Ls. med-dk. gray, 80% re-xtall, aren. some lenses of gray sand.	
405	416.8	JT	Ls., dk-m. gray, 30% re-xtallized, thin bedded, many layers of brown shale, calcitic, s. aren., calcite cement 410'	
416.8	417	JE	SS, purple, f-m. grain	
417	418.8	JE	SS. red & gray " "	
418.8	422.5	JE	SS, red, gray & brown layered, f-m. grain	
422.5	425	JE	SS. red, f-m. grain	

Drawing No. 793

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Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2300-1400 D-10	29 13-9	6821	1 2	0	7/18/56	J.A.R.

Geology — Hannum Rig #11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0	DAL / JB	SS.	gray											DAL / JB
20														
40														
60														
80														
100														
120		SS	brown	wet										
140	JB ? / ? JS	SS & Sh.	red											JB ? / JS ?
160														
180														
200		Sh	red											
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Dwg No. 1792

Hole No. 2300-1400
Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2300-1400 D-10	29 13-9	6821	2 2	0	7/18/56	J.A.R.

Geology — Hamum Rio #11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Assay	Graphic log	Description
260	Js	sh.	red					THB 0 ↓ 348	8	5				Js
280 20									NO COUNT					
		ss.	brown	damp										
300 40														
320 60	Js / JT	ls.	m-dk. gray, calcitic, 20% re-xtal., oren.											Js / JT
		ls.	l-brn-gray, 40% re-xtallized, calcitic, argill.											
		ls.	m-dk. gray, 20% re-xtallized, oren. calcitic, brn shale lenses.											
		ls.	dk. brn-gray, 20% re-xtallized, very shaly calcitic											
340 80	JT	ls.	dk-brn-gray, 10% re-xtallized, v. oren. calcitic											JT
	JE	ss.	red, f-m. grain, calcar.											JE
	T.D. 350'													TD 350
360 00														
380 20														

Dotted line Graphic Assay · Solid Line - Probe

0% .20% .60

140 160 180 200 220 240 260

DWG NO 192

Hole No 2300-1400

Section 29-13-9

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2500-1400 D-11	29-13-9	6834	1 3	1	7/11/56	TN

Kite, rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Scaler Scale	Scaler Foot Interval	Assay	Graphic log	Description
0	Qal													Qal
	Jb	ss	lt gy-brn	f.n.-med gr.										Jb
40	Jb ?	sh.	red-brn	calc, green, streaks gr. sh & wet brn ss.										? ? Jb ? ? Js
260		ss	red	f.n.-med gr.										

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Dwg No 192

Hole No. _____
Section _____

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2500-1400 D-11	29/13-9	6834	2 3	1	7/11/56	TN

Kite rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
260		S.S	red	Fn-med gr.				THB 0	8	V				
								366	8	V				
280 20														
300 40														
320 60														
340 80	Js													
	Jt	L.S. lt-med gry		See inset for detail log										
360 100	Jt													
	Je	S.S	red	Fn-med gr.										
	TD 366													
380 120														

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Dead → Cored →

Js
Jt
Jt
Je
TD 366

140 160 180 200 220 240 260

Dwg No 792

Hole No. _____
Section _____

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
2500-1400 D-17	29-13-9	3 of 3	7/11/56	TN

Footage From	Footage To	Formation	Geology: Description	Samples
340.0	340.3	Jt	L.S., med. gray, slightly re-xxalized, massive	
340.3		Jt	L.S., lt-med. gray, crennulated appearence, very argill., 20% re-xxalized, calc. xtals., vert.	
	345.4		Fracs, some healed with limonite, easily fractured	
345.4	346.0	Jt	Sh., lt gray-brn.	
346.0	349.2	Jt	L.S., lt. brn., aren.	
349.2	349.5	Jt	L.S., lt. gray-wh., 100% re-xxalized, calc. xtals, Lattice struct	
349.5	352.3	Jt	L.S., dk. gray-brown, little re-xxalization, zones up to 3' thick of brn sh.	
352.3	352.4	Jt	L.S., lt gray-white, 100% re-xxalized, calc. xtals, Lattice struct	
352.4	352.6	Jt	L.S., lt-med gray, very argill., slightly re-xxalized	
352.6	355.2	Jt	L.S., med gray, massive, slight re-xxalization, pure	
355.2		Tt	L.S., lt-med gray, thin bedded, aren & argill mat. interbedded, thin streaks bright green	
	357.2		sh.	
357.2	362.2	Je	S.S., white to purplish, Fn-med. gr.	
362.2	366.0	Je	S.S., red- Fn-med. gr.	

Drawing No. 793

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Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2900-1400 D-13	29-13-9	6841	1 / 3	1	7/9/56	TN

Taylor, rig 7

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Foot Interval	Scaler Assay	Graphic log	Description
0	Qal													Qal
	Jb	ss	lt bra-wh	fn gr										Jb
20														
40														
60														
80														
100														
120														
140														
160		ss	brn	fn-med gr										
		ss	wh	wet, fn-med gr										
180	Jb	Sh	red-brn	green, calc., streaks gr sh & wet brn ss										Jb ? Js ?
200														
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Dwg No 792

Hole No _____
Section _____

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
2900-1400 D-13	20/13/9	6841	2 3	1.	7/9/56	TW

Geology

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken
		ss	brn	fn-med gr, wet			
		sh	gr				
	Js / Jt	LS	lt-med gr	see inset for detail			
	Jt / Jc	ss	red	fn-med gr			
	TD 392						

Probe

Depth	Reading	Scale
THB	6	X
0		
370.0	6	X
371.5	12	X
372.0	30	X
372.5	50	X
373.0	18	X
373.5	6	X
392.0	6	X

Scaler

Foot Interval | Assay | Graphic log | Description

Dotted line Graphic Assay
Solid Line - Probe
0% .20% .60

Slight mineralization

Cored

Js
Jt
t
Jc
TD 392

Dwg No 792

Hole No _____
Section _____

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
2900-1400 D-13	29-13-9	3 of 3	7/9/56	TN

Geology

Footage From	Footage To	Formation	Description	Samples
362.0	362.3	Jt	S.S., lt gray & white, limy, fn-med grain	
362.3	365.2	Jt	L.S., lt-med gray, slightly re-xxalized, calc. xtals (blk & wh.) in healed vert. fracs.	
365.2	369.8	Jt	L.S., med-drk gray, re-xxalized, calc. xtals, aren & argill., crennulated	
369.8	370.0	Jt	L.S., med. gray, interbedded with brn. sh. mat.	
370.0	372.0	Jt	This section of core was lost	
372.0	372.5	Jt	L.S., med gray, interbedded with drk. brn. sh. mat.	
372.5	377.6	Jt	L.S., med-drk gray, healed vert frac., zones of thinbedded L.S-Sh up to .1' thick	
377.6	377.7	Jt	L.S., 100% re-xxalized, lattice struc, white.	
377.7	380.8	Jt	L.S., med-drk gray, aren & argill., bands of re-xxalized L.S. as calc. xtals.	
380.8	380.9	Jt	L.S., 100% re-xxalized, white, lattice struc	
380.9	382.0	Jt	This section of core was lost	
382.0	384.2	Jt	L.S., medium-dark gray, streaks brn. ss., vert frac, increasing aren towards base	
384.2	384.5	Jt	Limey, sandy rock with thin streaks bright green sh.	
384.5	385.9	Je	S.S., wh. to purple, Limey, fn-med gr.	
385.9	388.3	Je	S.S., wh to green, fn-med. gr	
388.3	389.0	Je	S.S. red, fn-med. gr	

Drawing No. 793

Section 3

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Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3100-1460 D-14	29 12-9	6855	1 2	0	7/2/56	J.A.R.

Geology — Garza Rio #11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval Foot	Assay	Graphic log	Description
0	QAL	Blowsand						Tomcat T.H.B. 0 ↓ NO COUNT 426	9	5				QAL
20	QAL / JB	ss. & sh., brn.												QAL / JB
40														
60														
80														
100														
120				ss. brn. streaks of red sh.										
140														
160														
180	JB? / JB?	sl. (tuffs?)	brn.											JD? / JD?
200														
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

DWG No. 1792

Hole No. 3100
Section 3

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Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3100-1400 D-14	29-13-9	6855	2 2	0	7/2/56	J.H.R.

Geology — Garza R.G. #11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Probe Depth	Probe Reading	Probe Scale	Scaler Interval	Scaler Foot	Scaler Assay	Graphic log	Description
260	Js	sh.	red-grn.	aren.				T.H.O. 0 ↓ 426	Jamco I 9 5						Js

Dotted line — Graphic Assay; Solid Line — Probe (0% .20% .60)

Footage	Formation	Description
280 20		
300 40		
320 60		
340 80		
360 100		
380 120		
400 140	Js / JT	LS. m-dk. gy. & aren., calcitic, 20% re-xtallized
		LS. m.gy-brn.gy, 30% re-xtallized, calcitic, aren.
		LS. dk.gy-brn.gy 30% re-xtallized, some brn. sh.
		LS. m.gy-brn. 10% re-xtallized, s. aren. s. calcitic, brn. sh.
	JT / JE	LS. l-m.gy. 20% re-xtallized, aren, calcitic
		SS. brn. & red sh.
420 160		
		T.D. 426
440 180		
460 200		
480 220		
500 240		
520 260		

No cover — 2' wet cuttings 30-40%

Js / JT — JE — T.D. 426

Dwg. No. 793

Hole No. 3100-1400

Section 29-13-9

Drawing No. 793

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Hole No.	Sec.	Elevation	Page of Pages	No Insets	Date	Logged by
3300-1400 D-15	29-13-9	6859	1 / 3	1	7/5/56	TN

Geology | Probe | Scaler

Garza, rig 11

Footage	Formation	Type of Rock	Color	Description	Diagnostic Features	Geiger	Samples Taken	Depth	Reading	Scale	Foot Interval	Assay	Graphic log	Description
0														
20														
40	qal / Jb	ss	brn	Fn-med gr										
60														
80				ss red-wh, fn-med gr, streaks of red sh										
100														
120														
140														
160														
180	Jb ? Js			sh, red-brn, green, calc, streaks of gr sh & wet brn ss										
200														
220														
240														
260														

Dotted line Graphic Assay
Solid Line - Probe
0% 20% 60

Dwg No 792

Hole No. _____
Section _____

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SEP 1 0 1956

Hole No.	Sec.	Elevation	Page of Pages	No. Insets	Date	Logged by
3300-1400 D-15	29-13-9	6859	2 . 3	1	7/5/56	TN

Geology: Footage | Formation | Type of Rock | Color | Description | Diagnostic Features | Geiger | Samples Taken

Probe: Depth | Reading | Scale

Scaler: Foot Interval | Assay

Graphic log | Description | Dotted line Graphic Assay Solid Line - Probe 0% .20% .60

THB 0 — 423

Js / Jt — L.S. lt-med gy. see inset for detail log.

Jt / JB — S.S. red to med gr.

TD 423

no core

core

Js / Jt

Jt / Jc

TD 423

Dwg No 792

Hole No

Section

Inset Sheet

Hole No.	Sec.	Page of Pages	Date	Logged by
3300-1400	29-13-9	3 / 3	7/5/56	TN

Garza, rig 11

Footage From	Footage To	Formation	Geology: Description	Samples
383.	383.3		L.S., lt-med. gray, slight re-xxalized.	
383.3	383.5		S.h., lt gray-wh.	
383.5	384.4		S.S., lt. gray, very argill. Fn-med gr	
384.4	385.7		L.S., lt gray, very argill., slightly aren.	
385.7	386.1		S.S., lt gray, Fn. gr., argill.	
386.1	387.0		L.S., lt gray-brn, 20% re-xxalized, calc. xtals (blk + wh.), vert. Fracs	
387.0	387.2		L.S., dk gray-blk, calc. xtals, 80% re-xxalized	
387.2	388.7		L.S., Lt.-med. gray, calc. xtals, 20% re-xxalized, healed vert. Frac.	
388.7	391.4		S.S., lt. brn, Fn-med. gr. argill + calc towards base, thin L.S. lenses	
391.4	391.8		L.S., lt-med. gray, thinbedded with interbedded sh.	
391.8	392.0		S.S., lt gray, Fn-med gr.	
392.0	393.0		Lost core, unknown	
393.0	398.2		S.S., lt gray-red, Fn-med. gr., argill.	
398.2	401.8		L.S., med. gray, calc. xtals, re-xxalized, vert. Frac. (healed + Fresh), few thin sh. zones	
401.8	403.9		L.S. lt-med gray, argill, crenulated	
403.9	405.2		L.S., med brn, massive, vert Frac.	
405.2	405.5		L.S., med gray interbedded with lt brn sh.	
405.5	407.1		L.S., lt gray-brn, healed vert Frac., massive	
407.1	407.3		L.S., med gray interbedded with blk sh.	
407.3	407.8		L.S., lt gray-wh.-pure	
407.8	407.9		L.S., 100% re-xxalized, Lattice struc.	
407.9	411.0		L.S., lt-med. gray interbedded with drk gray sh., aren. at base,	
411.0	412.9		L.S., med. gray, massive, pure	
412.9	413.0		Sh., bright green.	
413.0	416.2		Limey, sandy rock; lt gray streaks gr sh + purple sh.	
416.2	420.4		S.S., lt brn, Fn-med gr., argill.	
420.4			S.S., red, Fn-med. gr.	

Drawing No. 793

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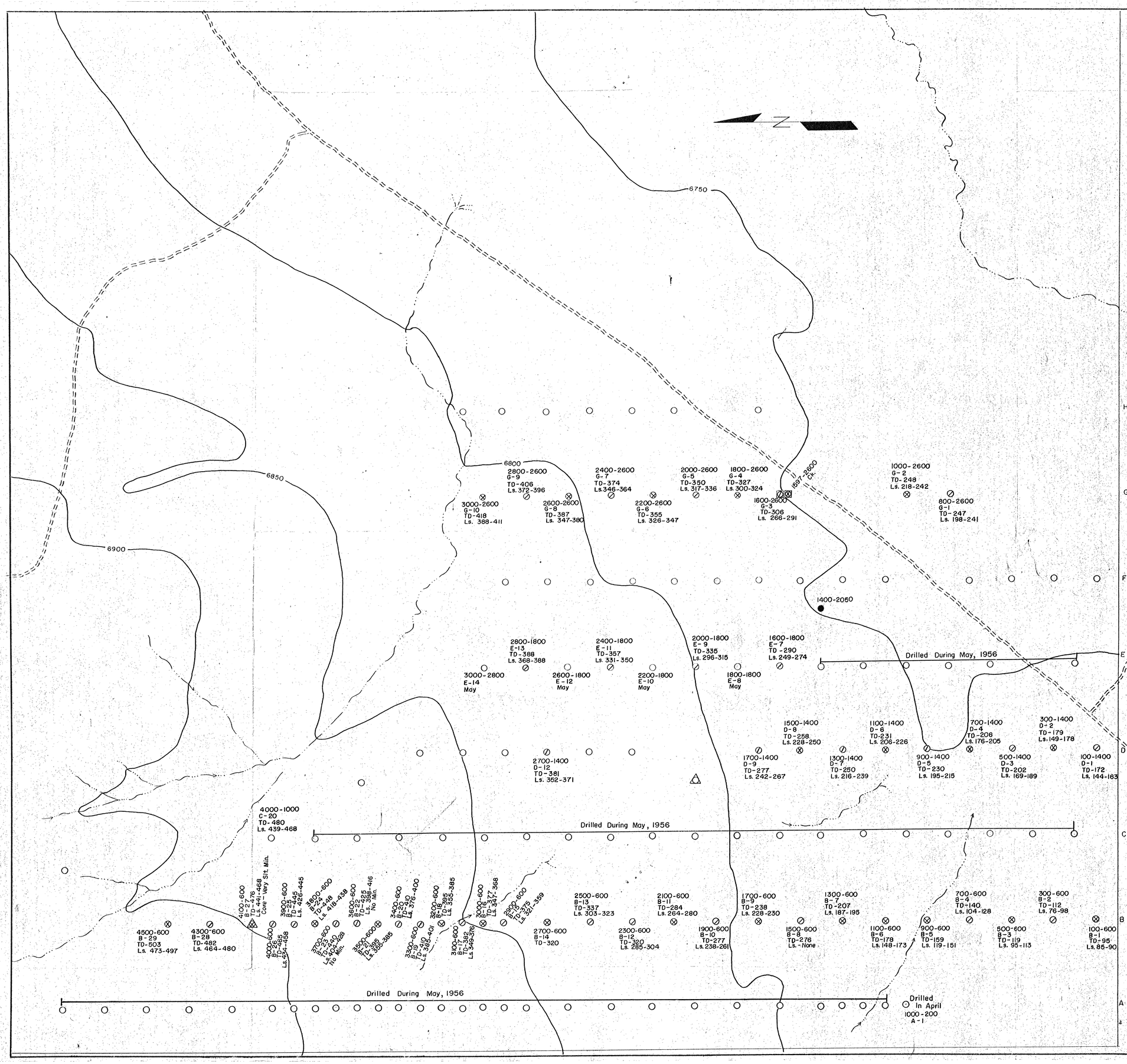
SEP 10 1956



MARK	DESCRIPTION	DATE	BY	CHK.
	REVISIONS			

WESTVACO MINERAL PRODUCTS DIVISION
FOOD MACHINERY & CHEMICAL CORPORATION
MINERAL DEVELOPMENT DEPT. POCATELLO, IDAHO

REFERENCE DRAWINGS

NUMBER	TITLE
936	April Drill Hole Map
936-A	May Drill Hole Map

GRANTS URANIUM
DOCKET NO. D.M.E.A. 3989
Section 29, T.13N., R.9W., NMPM

DRAWN M.D. APPROVED
CHECKED APPROVED
CHARGE
SCALE 1" = 200'
PRINT DATE 5-4-'56
DRAWING NO. 936-B

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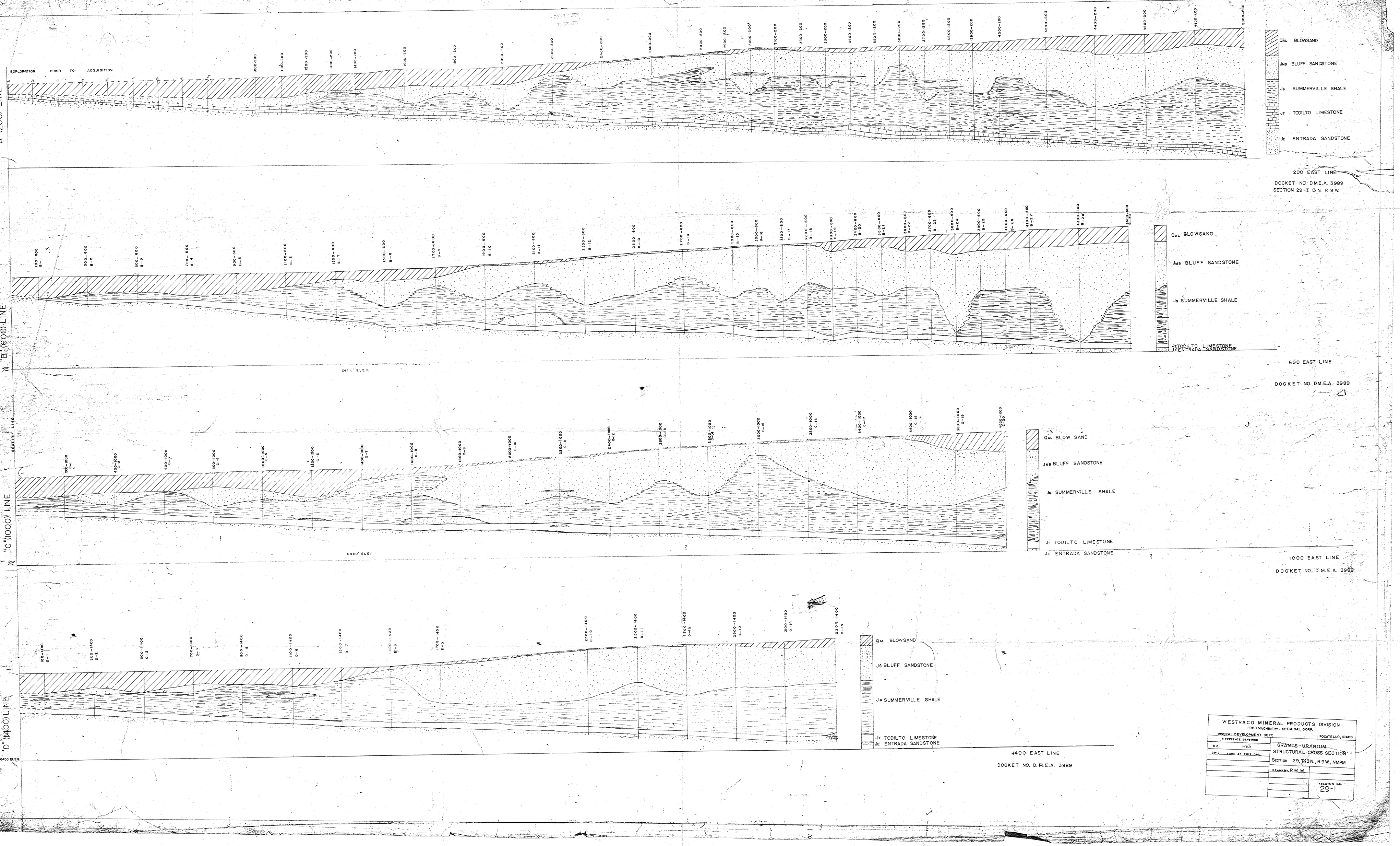
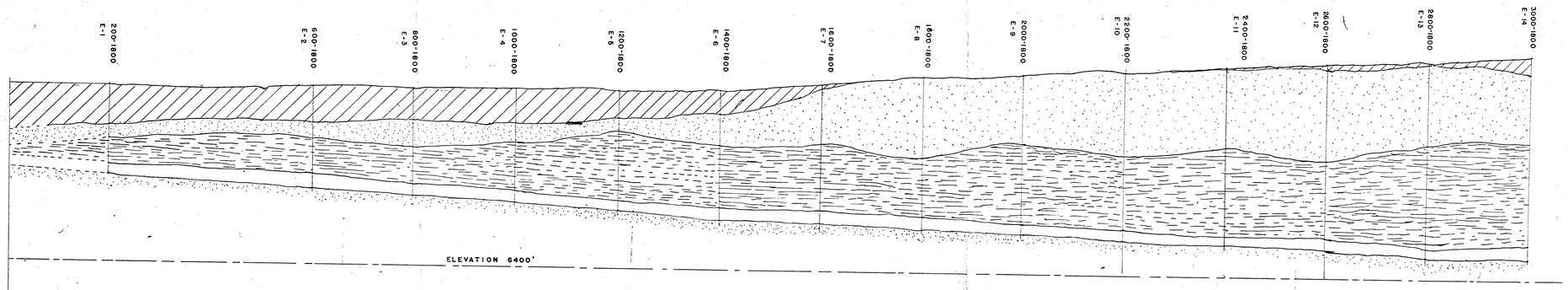
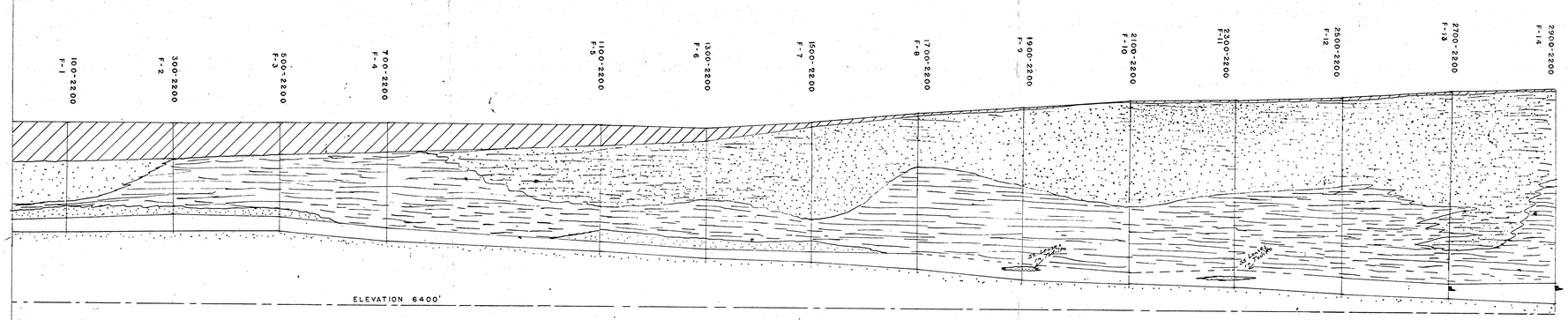
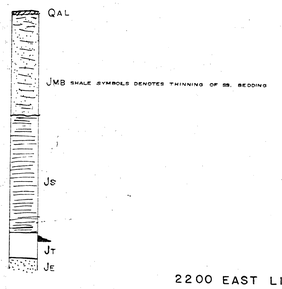

"A" (200) LINE
EXPLORATION PRIOR TO ACQUISITION
QAL BLOWSAND
JMB BLUFF SANDSTONE
JS SUMMERVILLE SHALE
JT TODILTO LIMESTONE
JE ENTRADA SANDSTONE
200 EAST LINE
DOCKET NO. D.M.E.A. 3989
SECTION 29 - T. 13 N. R 9 W.
"B" (600) LINE
QAL BLOWSAND
JMB BLUFF SANDSTONE
JS SUMMERVILLE SHALE
JT TODILTO LIMESTONE
JE ENTRADA SANDSTONE
600 EAST LINE
DOCKET NO. D.M.E.A. 3989
"C" (1000) LINE
6400' ELEV
QAL BLOW SAND
JMB BLUFF SANDSTONE
JS SUMMERVILLE SHALE
JT TODILTO LIMESTONE
JE ENTRADA SANDSTONE
1000 EAST LINE
DOCKET NO. D.M.E.A. 3989
"D" (1400) LINE
6400 ELEV
QAL BLOWSAND
JMB BLUFF SANDSTONE
JS SUMMERVILLE SHALE
JT TODILTO LIMESTONE
JE ENTRADA SANDSTONE
1400 EAST LINE
DOCKET NO. D.M.E.A. 3989
WESTVACO MINERAL PRODUCTS DIVISION
FOOD MACHINERY, CHEMICAL CORP.
MINERAL DEVELOPMENT DEPT.
POCATELLO, IDAHO
REFERENCE DRAWINGS
NO.
TITLE
29-7
SAME AS THIS DRG.
GRANTS URANIUM
STRUCTURAL CROSS SECTION
SECTION 29, T13N., R9W, NMPM
DRAWN BY R.M.M.
DRAWING NO.
29-1



1800 EAST LINE

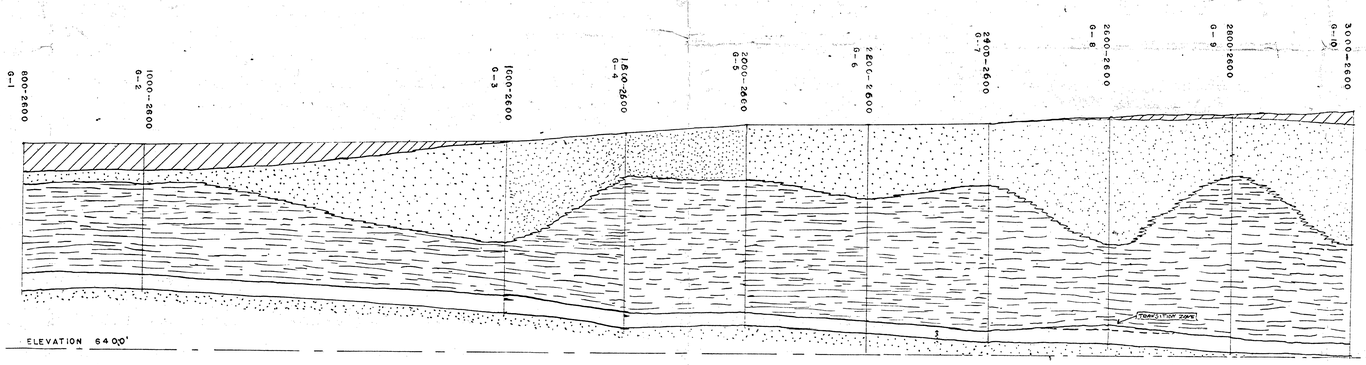
D.M.E.A. DOCKET 3989





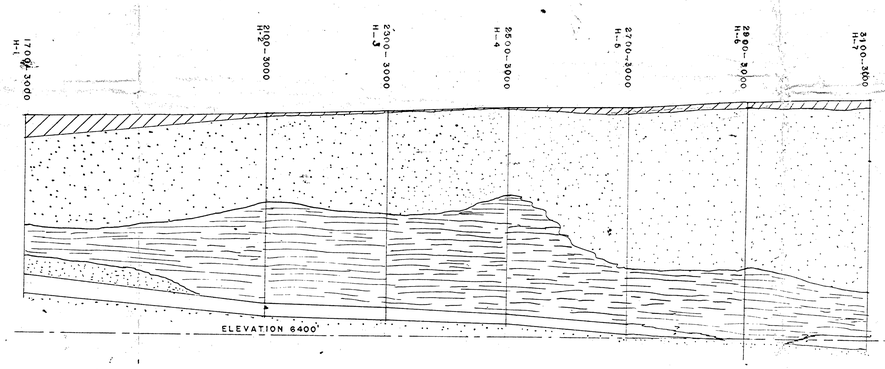
2200 EAST LINE

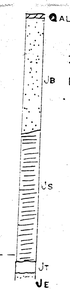
D.M.E.A. DOCKET 3989



2600 EAST LINE

D.M.E.A. DOCKET 3989



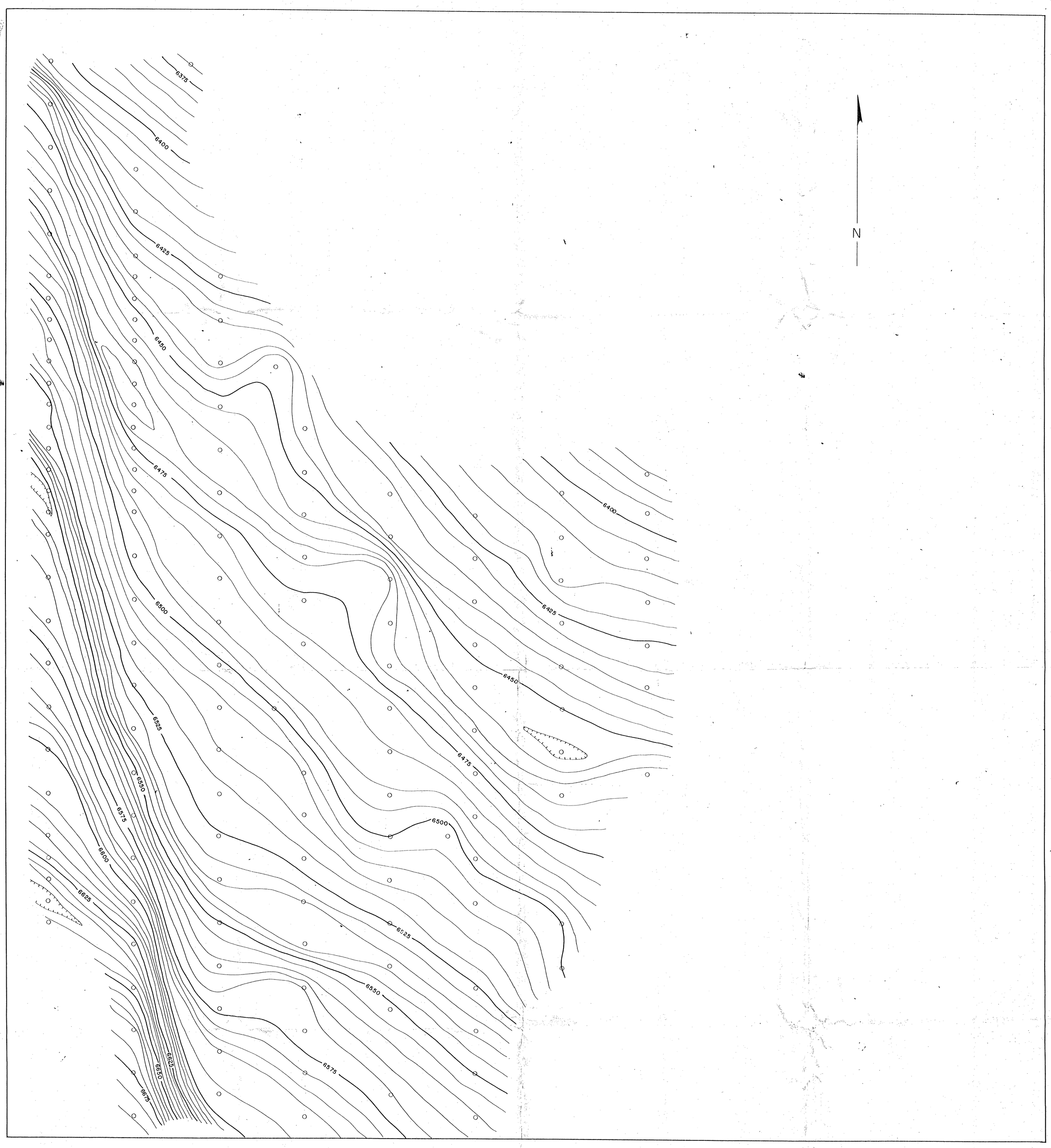


3000 EAST LINE

D.M.E.A. DOCKET NO. 3989

DESCRIPTION	
WESTVACO CHEMICAL DIV. FOOD MACHINERY & CHEMICAL CORP.	
GRANTS URANIUM DIV.	GRANTS, N.M.
REFERENCE DRAWINGS	GRANTS URANIUM
NUMBER / TITLE	STRUCTURAL CROSS SECTION
29-2 GRANTS STRUCTURAL CROSS SECTION	SECTION 29, T13N, R.10W. N.M.P.M.
	DRAWN R.M.M.T.C.J.D.R.
	SCALE 1" = 100'
	DRAFT DATE 6-15-56

29-2



Legend

DRILL HOLES ○

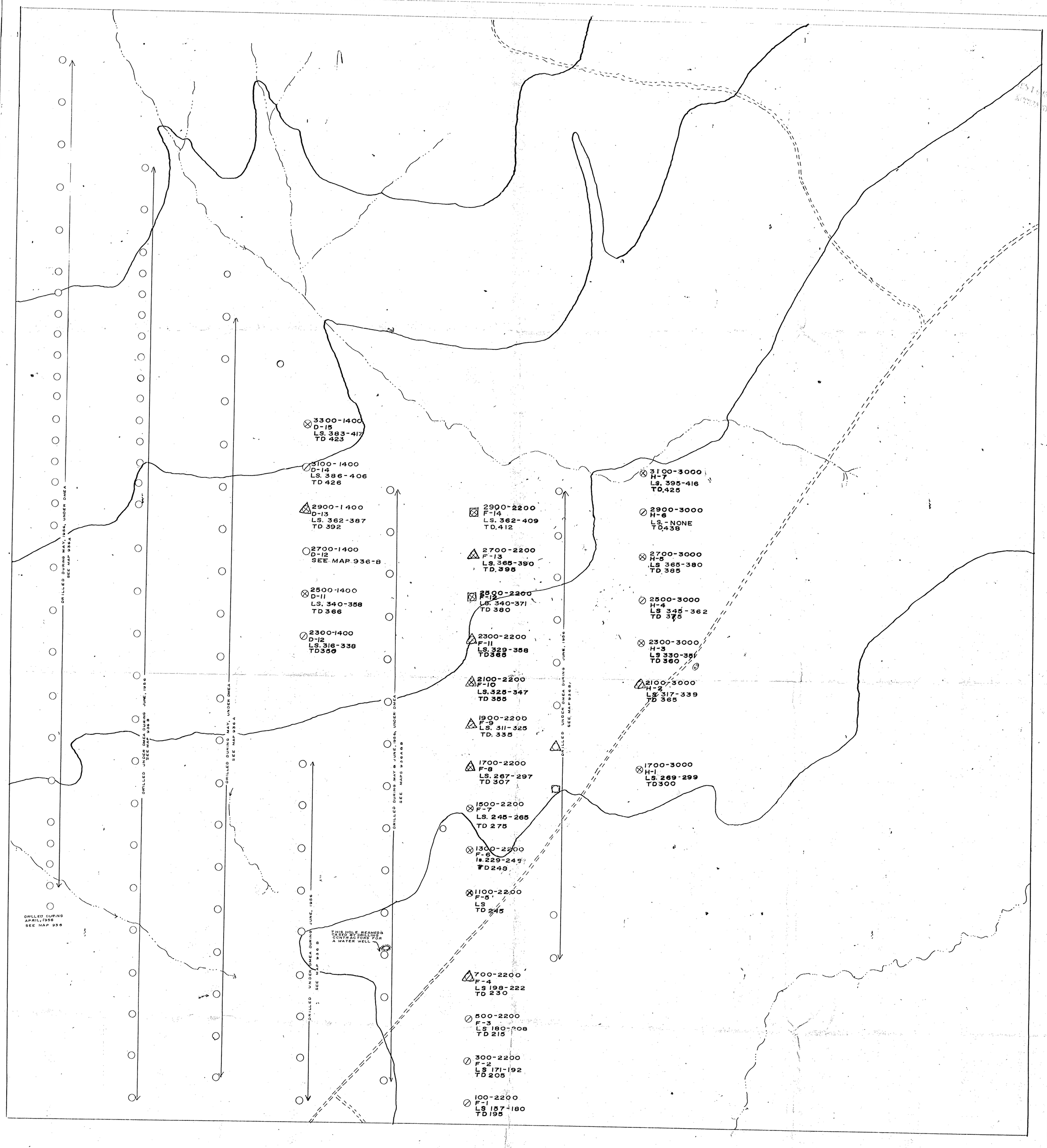
GRANTS URANIUM
Westvaco Mineral Products Division of
Food Mach. & Chem. Corp.

STRUCTURAL CONTOUR MAP, BASE OF TODILTO LMS.

Scale 1" = 200'
C.I. = 5'

DRILLED UNDER DMEA DOCKET
3989

DRAWING 29-3



LEGEND

- BARREN DRILL HOLES
- MINERALIZED HOLES
- ORE HOLES

GRANTS URANIUM
Westvaco Mineral Products Division
Food Mach. & Chem. Corp.

MONTHLY PROGRESS MAP, SEC. 29, T.13N. R9W. FOR JULY

Scale: 1" = 200'

DRILLED UNDER DMEA DOCKET 3989

DRAWING 29-6