ESTERN OIL FIELDS 1 FEDERAL
W SW 31-5S-10E PINAL CO. 15

COUNTY Pinal AREA Florence Field LEASE NO. AR-097

WELL NAME Western Oil Fields #1 Federal

LOCATION SW SW SEC 31 TWP 5S RANGE 10E FOOTAGE 660' FSL 660 FWL ?

STATUS P&A

ELEV ±1665 GR KB SPUD DATE 3-6-53 COMP. DATE 5-15-53 TOTAL DEPTH 5142'

Cactus Forest 7½

CONTRACTOR

CASING SIZE	DEPTH	CEMENT	LINER SIZE & DEPTH
10 3/4"	795'	200 SX	NA

DRILLED BY ROTARY

DRILLED BY CABLE TOOL

PRODUCTIVE RESERVOIR

INITIAL PRODUCTION P&A

FORMATION TOPS	DEPTHS	SOURCE L.L.	SOURCE E.L.	REMARKS
SEE FILE FOR DETAILS				

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS
Geologic Log		

SAMPLE LOG

SAMPLE DESCRP. x

SAMPLE NO. 8-15-55

CORE ANALYSIS T #260

DSTs

P-1647

REMARKS In file: Driller's Log, Photographs of Well, and Geologic report from Geological Well Ser. *Geologic Log included. Well referred to by various names: Western Oil Fields, Florence #1, Well #1 Hines, and Haines W. Reed #1.

APP. TO PLUG x

PLUGGING REP. x

WCMP. REPORT

WATER WELL ACCEPTED BY

BOND CO. American Bonding Company of Baltimore BOND NO. 157-384

BOND AMT. $ 10,000 CANCELLED 11-10-55 DATE ORGANIZATION REPORT

FILING RECEIPT 16495 LOC. PLAT x WELL BOOK x PLAT BOOK x

API NO. 02-021-05005 DATE ISSUED 3-2-53 DEDICATION SW/4 SW/4

PERMIT NUMBER 15

(over)

LAND LAW DEPARTMENT

STATE OF ARIZONA

Form OGG 56

Form Prescribed Under Oil and Gas Conservation Act of 1951

ABANDONMENT AND PLUGGING RECORD

(Within thirty days after the plugging of any well has been accomplished, the owner or operator thereof shall file a report with the Commissioner, setting forth in detail the method used in plugging the well.)

PLUGGING METHOD AND PROCEDURE-- The methods and procedure for plugging a well shall be as follows: (a) The bottom of the hole shall be filled to, or a bridge shall be placed at, the top of each producing formation open to the well bore, and in either event a cement plug not less than fifty (50) feet in length shall be placed immediately above each producing formation open to the well bore when ever possible.

(b) A cement plug not less than fifty (50) feet in length shall be placed at approximately fifty (50) feet below all fresh-water-bearing strata.

(c) A plug shall be placed at or near the surface of the ground in each hole.

(d) The intervals between plugs shall be filled with heavy-mud-laden fluid.

(e) An unused hole shall be filled with heavy mud up to the base of the surface string, at which point a plug of not less than fifty (50) feet of cement shall be placed.

Operator WESTERN OIL FIELDS, INC. Field FLORENCE

Pool Wildcat

County Pinal

Address all correspondence concerning this form to: Hugh A. Wallis

Street: 1327 Grant Street City Denver State Colorado

Lease Name Federal-Ariz. 097 Well No. 1 Sec. 31 Twp. 5S Rge. 10E

Date well was plugged May 15, 1953

Was the well plugged according to regulations of the Commissioner?

Set out method used in plugging well and record of casing pulled:

This well has 10 3/4"-32.75# casing cemented at 795' with 200 sacks. The hole was filled with heavy mud to base of surface casing and 10 sacks cement plug placed in bottom of casing as per verbal approval of U.S.G.S. Engineer

(AFFIDAVIT)

STATE OF ~~ARIZONA~~ COLORADO
City &
COUNTY OF DENVER

WESTERN OIL FIELDS, INC.

By Hugh A. Wallis
(Operator)

Before me, the undersigned authority, on this day personally appeared Hugh A. Wallis, known to me to be the person whose name is Subscribed to the above instrument, who being by me duly sworn on oath states that he is authorized to make this report and has knowledge of the facts stated herein and that said report is true and correct.

Subscribed and sworn to before me this the 19th day of April 1955

J Viola L. Stoops

Notary Public in and for City & County

My commission expires:

March 29, 1956

Denver, Colorado

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STATE LAND DEPARTMENT
STATE OF ARIZONA

Form O&G 55

Form Prescribed Under Oil and Gas Conservation Act 1951
APPLICATION TO ABANDON, PLUG, DEEPEN, SIDETRACK OR PERFORATE

(After Well Has Once Been Completed)

INSTRUCTIONS: -- File in duplicate with Commissioner. One copy will be returned with approval or denial.

FIELD: FLORENCE
OPERATOR: WESTERN OIL FIELDS, INC. ADDRESS 1827 Grant St., Denver, Colorado
LEASE: Fed., Ariz. 097 WELL NO. 1 COUNTY PINAL
SURVEY: G & SRPM SECTION 31 DRILLING PERMIT NO.: 15
LOCATION: SW/4--SW/4 Sec. 31 T. 5S--R 10E

TYPE OF WELL: Dry hole TOTAL DEPTH 5142
(Oil, Gas or Dry Hole)

ALLOWABLE (If Assigned)
LAST PRODUCTION TEST: OIL (Bbls.) WATER Bbls.)
GAS (M.C.F.) DATE OF TEST

PRODUCING HORIZON None PRODUCING FROM: TO

1. COMPLETE CASING RECORD: 10 3/4"-32.75# cemented at 795' with 200 sacks.

2. FULL DETAILS OF PROPOSED PLAN OF WORK:
Fill hole to bottom of surface casing ~~with heavy mud and place 10 sacks~~ cement plug in bottom of surface casing.

If the well is to be deepened to another zone other than that covered by permit, this form shall be accompanied by a certified lease plat as is prescribed on Form No. O&G 51.

If well is to be abandoned, does proposed work conform with requirements of SW Rule 26? _____. If not, outline procedure proposed above.

DATE COMMENCING OPERATIONS: May 15, 1953
NAME OF PARTY DOING WORK: W. E. Swarthout ADDRESS Hobbs, New Mexico
CORRESPONDENCE SHOULD BE SENT TO: WESTERN OIL FIELDS, INC., Denver, Colorado

NAME: [signature]
TITLE: Production Superintendent

APPROVED: 18 DAY OF May 1953.
DENIED: _____ DAY OF _____ 19___.

STATE LAND COMMISSIONER

BY: _____

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WESTERN OIL FIELDS, INC.-- NO. 1 FLORENCE PINAL COUNTY, ARIZONA

Section 31 Center SW SW, T-5S, R-10E

P/N 15

Driller's Log

DATE	DEPTHS	FORMATION	REMARKS
3-6-53			Spudded 8:00 a.m.
	0-140	Surface sand	
	140-313	Water sand	
	313-376	Red beds	
3-7-53	376-402	Red beds	Run 385'-10 3/4" casing. Cemented at 397' w/100 sacks. Plug down at 9:00 p.m.
3-8-53			W.O.C.
3-9-53	402-524	Sand and gravel	9 7/8" bit. Drilled plug at 9:00 p.m. re-cem. surface w/15 sax.
3-10-53	524-610	Sand and gravel	Pulled 10 3/4" csg. and drill ahead.
3-11-53	610-761	Sand and gravel	15" bit.
	761-785	Red beds	
	785-795	Gravel	
3-12-53			W.O. 10 3/4" csg.
3-13-53			W.O. 10 3/4" csg.
3-14-53			Run 808'-10 3/4"-32.75# csg. cem. at 795' w/200 sacks. Plug down at 10:30 a.m.
3-15-53			W.O.C.
3-16-53			W.O.C.
3-17-53	795-925	Sand and gravel	9 7/8" bit.
3-18-53	925-946	Sandy lime	
	946-1115	Sand and shale	
3-19-53	1115-1263	Sand and shale	
3-20-53	1263-1297	Sand and shale	
	1297-1323	Sand	
	1323-1378	Sand and shale	
3-21-53	1378-1433	Sand and lime	
	1433-1520	Sand and shale	
3-22-53	1520-1674	Sand and shale	
3-23-53	1674-1878	Sand and shale	
3-24-53	1878-1948	Sand and shale	
3-25-53	1948-1995	Sand and shale	
3-26-53	1995-2117	See Geological Report 1995 to T.D.	Fishing for D.P.
3-27-53			Fishing
3-28-53	2117-2220		
3-29-53	2220-2331		
3-30-53	2331-2458		
3-31-53	2458-2578		
4-1-53	2578-2678		
4-2-53	2678-2743		
4-3-53	2743-2835		
4-4-53	2835-2936		
4-5-53	2930-3044		
4-6-53	3044-3125		
4-7-53	3125-3221		
4-8-53	3221-3283		
4-9-53	3283-3298		Twisted off-fishing
4-10-53			Fishing
4-11-53	3298-3345		Red. fish.
4-12-53	3345-3408		
4-13-53	3408-3456		Reamed 120' to bottom
4-14-53	3456-3490		
4-15-53	3490-3533		
4-16-53	3533-3570		
4-17-53	3570-3710		
4-18-53	3710-3817		
4-19-53	3817-3970		
4-20-53	3970-4096		
4-21-53	4096-4166		

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WESTERN OIL FIELDS, INC. -- NO. 1 FLORENCE PINAL COUNTY, ARIZONA
31-5S-10E

DATE	DEPTHS	FORMATION	REMARKS
4-22-53	4166-4235		
4-23-53	4235-4313		
4-24-53	4313-4383		
4-25-53	4383-4438		
4-26-53	4438-4506		
4-27-53	4506-4562		
4-28-53	4562-4583		Down 8 hrs. straighten kelley
4-29-53	4583-4609		Down 8 hrs. straighten kelley
4-30-53	4609-4692		
5-1-53	4692-4734		
5-2-53	4734-4778		
5-3-53	4778-4835		
5-4-53	4835-4889		
5-5-53	4889-4926		
5-6-53	4926-4942		Down 8 hrs. lost cones
5-7-53	4942-4942		Fished out cones-reaming
5-8-53	4942-4971		
5-9-53	4971-5003		
5-10-53	5003-5040		
5-11-53	5040-5071		
5-12-53	5071-5090		
5-13-53	5090-5109		
5-14-53	5109-5133		
5-15-53	5132-5142		
5-16-53 to 5-19-53			W.O. Orders
5-19-53 to 5-27-53			Dismantling rig

GEOLOGICAL REPORT OF
FORMATIONS PENETRATED

1995-2005 Sandstone 100%, arkosic, gray, medium to coarse grained, medium soft, loosely consolidated, good intergranular porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut;

2005-2050 Sandstone 100%, arkosic, gray, medium to coarse grained, medium soft, loosely consolidated, angular, red hematite stain, good intergranular porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2050-2115 Sandstone 100%, gray, arkosic, white and pink, medium to very coarse grained feldspar and some quartz, good intergranular porosity; no odor, no stain, no fluorescence, no cut.

2115-2135 Sandstone 100%, arkose, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, good intergranular porosity; no odor, no stain, no fluorescence, no cut.

2135-2155 Sandstone 100%, arkose, white to gray, fine to coarse grained, medium soft, loosely consolidated, angular, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2155-2160 Sandstone 100%, arkose, white to gray to red, fine to coarse grained, medium soft, loosely consolidated, angular, copper and iron staining predominant, traces of free copper imbedded in calcite; no odor, no fluorescence, no carbon tetrachloride cut.

2160-2180 Sandstone 100%, arkose, white to gray, fine to coarse grained, medium soft, loosely consolidated, angular, copper and iron staining predominant, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

WESTERN OIL FIELDS, INC. -- NO. 1 FLORENCE PINAL COUNTY, ARIZONA
31-5S-10E

2180-2275 Sandstone 100%, arkose, clear, white, gray with pink less common, fine to coarse grained, loosely consolidated, angular, probably fairly good intergranular porosity; no odor, no stain, no fluorescence, no cut.

2275-2325 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, angular, loosely consolidated, no odor, no stain, no fluorescence, no cut.

2325-2375 Sandstone 100%, arkose, white, gray to pink, hard, coarse grain, loosely to unconsolidated, no odor, no stain, no fluorescence, no cut.

2375-2550 Sandstone 100%, arkose, white to gray, medium to coarse grained, loosely consolidated, angular, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2550-2660 Sandstone 100%, arkose, gray, white, pink, coarse grained, angular, loosely consolidated, no visible but probable porosity; no odor, no stain, no fluorescence, no cut.

2660-2665 Sandstone 70%, arkose, white, gray, pink, coarse grained, angular, medium soft, fairly well consolidated, serpentine 30%, light green to gray, medium soft, no porosity; no odor, no stain, no fluorescence, no cut.

2665-2670 Sandstone 90%, arkose, white, gray, coarse grained, angular, medium soft, fairly well consolidated, no visible but probable porosity, serpentine 10%, light green, to gray, medium soft, no porosity; no odor, no stain, no fluorescence, no cut.

2670-2765 Sandstone 100%, arkose, white to gray, fine to medium grained, medium soft, loosely consolidated, angular, no odor, no stain, no fluorescence, no cut.

2765-2835 Sandstone 100%, arkose, white, pink to gray, medium to coarse grained, medium soft, angular, loosely consolidated; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2835-2855 Sandstone 100%, arkose, white to gray, medium grain, angular, loosely consolidated, no odor, no stain, no fluorescence, no cut.

2855-2860 Sandstone 100%, arkose, white to light gray with pink less common, coarse to very coarse grained, angular, loosely consolidated; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2860-2880 Sandstone 100%, arkose, white to light gray with pink less common, spotted black with ferro-magnesium minerals, coarse to very coarse grained, angular, loosely consolidated; no odor, no stain, no fluorescence, no cut.

2880-2925 Sandstone 100%, arkose, white to light gray with pink less common, coarse to very coarse grained, angular, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2925-3015 Sandstone 100%, arkose, white to gray, medium to very coarse, angular, no odor, no stain, no fluorescence, no cut, no visible porosity.

3015-3040 Sandstone 100%, arkose, white to light gray with some pink, coarse grained, angular, good intergranular porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3040-3070 Sandstone 100%, arkose, white to gray, coarse grain, loosely consolidated, no odor, no stain, no fluorescence, no cut, no visible porosity.

3070-3090 Sandstone 100%, arkose, white to pink, fine to medium grained, angular, loosely consolidated, medium soft, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3090-3125 Sandstone 100%, arkose, white to light gray, with pink less common, angular, loosely consolidated, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3125-3165 Sandstone 100%, arkose, white to gray, coarse grain, angular, loosely consolidated, no visible porosity; no odor, no stain, no fluorescence, no cut.

3165-3180 Sandstone 100%, arkose, white, gray and pink, medium to coarse grained, medium soft, angular, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3180-3195 Sandstone 100%, arkose, white and gray, medium to coarse grained, angular, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3195-3205 Sandstone 100%, arkose, white to light gray, some pink, coarse grained, angular, loosely consolidate, no odor, no stain, no fluorescence, no cut.

3205-3220 Sandstone 100%, arkose, white, gray, pink, green, black, coarse grained, angular, loosely consolidated, medium soft, no odor, no stain, no fluorescence, no cut.

3220-3260 Sandstone 100%, arkose, white, light gray, coarse grain, angular, loosely consolidated, no visible porosity; no odor, no stain, no fluorescence, no cut.

3260-3275 Sandstone 80%, arkose, gray, white to pink, coarse grained, medium soft, loosely consolidated, angular, no odor, no stain, no fluorescence, no cut.

3275-3290 Sandstone 10%, arkose, white, light gray, green black, some pink and yellow, medium to coarse grained, angular, loosely consolidated, no odor, no stain, no fluorescence, no cut.

3290-3310 Sandstone 100%, arkose, gray to white, medium to coarse grained, loosely consolidated, no odor, no stain, no fluorescence, no cut with carbon tetrachloride cut.

3310-3355 Talus Breccia 100%, diorite, light gray to light pink, with green and black, equi-granular texture, angular fragments, hard, no visible but probably interstitual porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3355-3385 Diorite Breccia 100%, gray to white, some green and black, angular fragments, loosely consolidated, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3385-3390 Siltstone 100%, red and brown, medium soft, dull luster, chunky arenaceous, very micaceous, hematite, slightly calcareous; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3390-3395 Talus breccia 95%, diorite, light gray to white, with green and black ferro-magnesium minerals, angular fragments, hard, loosely consolidated, no visible but probable interstitial porosity; Shale 5%, red, pink and spotted with black ferro-magnesium minerals, siltstone and claystone sized, arenaceous, no odor, no stain, no fluorescence, no cut.

3395-3405 Talus breccia 100%, diorite, light gray, white with some pink, green and black, angular fragments loosely consolidated, no visible but probable interstitial porosity; no odor, no stain, no fluorescence, no cut.

3405-3430 Diorite Breccia 100%, white to gray, medium to coarse grained, some green and black, bright to vitreous luster, angular, loosely consolidated, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3430-3455 Strongly Alterated Feldspar 100%, light to dark gray with some green, pink and black, very micaceous, trace pyritic, medium soft, angular, loosely consolidated, granular; poor interstitial porosity; no odor, no stain, no fluorescence, no cut.

3455-3460 Talus Breccia 100%, white to gray, medium to coarse grained, hard, angular fragments loosely consolidated, no odor, no stain, no fluorescence, no cut.

3460-3510 Talus Breccia 100%, diorite, light gray to white, some pink, green and black, angular fragments, loosely consolidated, hard, no visible but probably interstitial porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3510-3535 Diorite Breccia 100%, white, gray, some pink, medium to coarse grained, some green and black, angular fragments, loosely consolidated, no odor, no stain, no fluorescence, no cut.

3535-3575 Diorite breccia 100%, white and gray, medium to coarse grained, some green and black, hard, angular fragments, no visible porosity; no odor, no stain, no fluorescence, no cut.

3575-3735 Diorite breccia 100%, white and gray, some red, green and black, medium to coarse grained, hard, angular fragments, some iron staining, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3735-4125 Diorite Breccia 100%, white and gray, some green, brown, and black, medium to coarse grained, medium soft, angular fragments, badly decomposed feldspar in appreciable quantity, much iron staining, no odor, no stain, no fluorescence, no cut.

4125-4205 Quartz-Diorite Breccia 100%, white and gray, some green and yellow, hard, angular fragments, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

4205-4225 Breccia 100%, decomposed feldspar and pyroxenes, green, medium soft, dull luster, moderatly calcareous, chunky, angular, minor quantity of diorite breccia; no odor, no stain, no fluorescens, no cut.

4225-4615 Diorite Breccia 100%, green and white, medium hard, angular fragments, no odor, no stain, no fluorescence, no cut.

4615-4635 Syenite Breccia 100%, light salmon pink, some white, gray, green, and black, angular, chunky fragments, no visible porosity; no odor, no stain, no fluorescence, not cut.

4635-4955 Diorite Breccia 100%, white, gray, some pink, black and green, medium hard, angular fragments, no odor, no stain, no fluorescence, no cut.

4955-4960 Shale 90%, gray, green, some red, soft, chunky, dull luster, slightly silty, calcareous, Diorite Breccia 10%, gray, green and white, some black and red, hard, flaky to angular fragments, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

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WESTERN OIL FIELDS, INC. -- NO. 1 FLORENCE PINAL COUNTY, ARIZONA
31-5S-10E

4960-4965 Diorite Breccia 90%, white, pink, some green, black and red, hard, angular, flaky to chunky frags; no visible porosity; no odor, no stain, no fluorescence, no cut.

4965-5125 Diorite Breccia 100%, white, gray, some pink, green, black, red, hard, angular, chunky, no visible porosity; no odor, no stain, no fluorescence, no cut.

5125-5130 Granodiorite Breccia 100%, white, clear, gray, some black, green, pink and red, hard, vitreous luster, angular fragments, no visible porosity; no odor, no stain, no fluorescence, no cut.

5130-5142 Diorite Breccia 100%, white, clear, gray, some black, green, pink and red, hard, angular fragments, no visible porosity; no odor, no stain, no fluorescence, no cut.

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WESTERN OIL FIELDS, INC.--NO. 1 FLORENCE
PINAL COUNTY, ARIZONA
SECTION 31 CENTER SW SW, T-5S, R-10E

DRILLER'S LOG

DATE	DEPTHS	FORMATION	REMARKS
3-6-53			Spudded 8:00 a.m.
	0-140	Surface sand	
	140-313	Water sand	
	313-376	Red beds	
3-7-53	376-402	Red beds	Run 355'-10 3/4" casing. Cemented at 397' w/100 sacks. Plug down at 9:00 p.m.
3-8-53			W.O.C.
3-9-53	402-524	Sand and gravel	9 7/8" bit. Drilled plug at 9:00 p.m. re-cem. surface w/15 sax.
3-10-53	524-610	Sand and gravel	Pulled 10 3/4" csg. and drill ahead.
3-11-53	610-761	Sand and gravel	15" bit.
	761-785	Red beds	
	785-795	Gravel	
3-12-53			W.O. 10 3/4" csg.
3-13-53			W. O. 10 3/4" csg.
3-14-53			Run 808'-10 3/4"-32.75# csg. cem. at 795' w/200 sacks. Plug down at 10:30 a.m.
3-15-53			W.O.C.
3-16-53			W.O.C.
3-17-53	795-925	Sand and gravel	9 7/8" bit.
3-18-53	925-946	Sandy lime	
	946-1115	Sand and shale	
3-19-53	1115-1263	Sand and shale	
3-20-53	1263-1297	Sand and shale	
	1297-1323	Sand	
	1323-1378	Sand and shale	
3-21-53	1378-1453	Sand and lime	
	1453-1520	Sand and shale	
3-22-53	1520-1674	Sand and shale	
3-23-53	1674-1878	Sand and shale	
3-24-53	1878-1948	Sand and shale	
3-25-53	1948-1995	Sand and shale	
3-26-53	1995-2117	See Geological Report 1995 to T.D.	Fishing for D.P.
3-27-53			Fishing
3-28-53	2117-2220		
3-29-53	2220-2331		
3-30-53	2331-2458		
3-31-53	2458-2578		

RECEIVED APR 23 1985 STATE LAND DEPT.

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DATE	DEPTHS	FORMATION	REMARKS
4-1-53	2578-2678		
4-2-53	2678-2743		
4-3-53	2743-2835		
4-4-53	2835-2936		
4-5-53	2930-3044		
4-6-53	3044-3125		
4-7-53	3125-3221		
4-8-53	3221-3283		
4-9-53	3283-3298		Twisted off-fishing
4-10-53			Fishing
4-11-53	3298-3345		Red. fish.
4-12-53	3345-3408		
4-13-53	3408-3456		Reamed 120' to bottom
4-14-53	3456-3490		
4-15-53	3490-3533		
4-16-53	3533-3570		
4-17-53	3570-3710		
4-18-53	3710-3817		
4-19-53	3817-3970		
4-20-53	3970-4096		
4-21-53	4096-4166		
4-22-53	4166-4235		
4-23-53	4235-4313		
4-24-53	4313-4383		
4-25-53	4383-4438		
4-26-53	4438-4506		
4-27-53	4506-4562		
4-28-53	4562-4583		Down 8 hrs. straighten kelley
4-29-53	4583-4609		Down 8 hrs. straighten kelley
4-30-53	4609-4692		
5-1-53	4692-4734		
5-2-53	4734-4778		
5-3-53	4778-4835		
5-4-53	4835-4889		
5-5-53	4889-4926		
5-6-53	4926-4942		Down 8 hrs. lost cones
5-7-53	4942-4942		Fished out cones-reaming
5-8-53	4942-4971		
5-9-53	4971-5003		
5-10-53	5003-5040		
5-11-53	5040-5071		
5-12-53	5071-5090		
5-13-53	5090-5109		
5-14-53	5109-5133		
5-15-53	5133-5142		
5-16-53 to 5-19-53			W. O. Orders
5-19-53 to 5-27-53			Dismantling rig

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WESTERN OIL FIELDS, INC.--NO. 1 FLORENCE

PINAL COUNTY, ARIZONA

SECTION 31 CENTER SW SW, T-5S, R-10E

GEOLOGICAL REPORT OF
FORMATIONS PENETRATED

1995-2005 Sandstone 100%, arkosic, gray, medium to coarse grained, medium soft, loosely consolidated, good intergranular porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut;

2005-2050 Sandstone 100%, arkosic, gray, medium to coarse grained, medium soft, loosely consolidated, angular, red hematite stain, good intergranular porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2050-2115 Sandstone 100%, gray, arkosic, white and pink, medium to very coarse grained feldspar and some quartz, good intergranular porosity; no odor, no stain, no fluroescence, no cut.

2115-2135 Sandstone 100%, arkose, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, good intergranular porosity; no odor, no stain, no fluorescence, no cut.

2135-2155 Sandstone 100%, arkose, white to gray, fine to coarse grained, medium soft, loosely consolidated, angular, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2155-2160 Sandstone 100%, arkose, white to gray to red, fine to coarse grained, medium soft, loosely consolidated, angular, copper and iron staining predominant, traces of free copper imbedded in calcite; no odor, no fluorescence, no carbon tetrachloride cut.

2160-2180 Sandstone 100%, arkose, white to gray, fine to coarse grained, medium soft, loosely consolidated, angular, copper and iron staining predominant, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2180-2275 Sandstone 100%, arkose, clear, white, gray with pink less common, fine to coarse grained, loosely consolidated, angular, probably fairly good intergranular porosity; no odor, no stain, no fluorescence, no cut.

2275-2325 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, angular, loosely consolidated, no odor, no stain, no fluorescence, no cut.

2325-2375 Sandstone 100%, arkose, white, gray to pink, hard, coarse grain, loosely to unconsolidated, no odor, no stain, no fluorescence, no cut.

2375-2550 Sandstone 100%, arkose, white to gray, medium to coarse grained, loosely consolidated, angular, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2550-2660 Sandstone 100%, arkose, gray, white, pink, coarse grained, angular, loosely consolidated, no visible but probable porosity; no odor, no stain, no fluorescence, no cut.

2660-2665 Sandstone 70%, arkose, white, gray, pink, coarse grained, angular, medium soft, fairly well consolidated, serpentine 30%, light green to gray, medium soft, no porosity; no odor, no stain, no fluorescence, no cut.

2665-2670 Sandstone 90%, arkose, white, gray, coarse grained, angular, medium soft, fairly well consolidated, no visible but probable porosity, serpentine 10%, light green, to gray, medium soft, no porosity; no odor, no stain, no fluorescence, no cut.

2670-2765 Sandstone 100%, arkose, white to gray, fine to medium grained, medium soft, loosely consolidated, angular, no odor, no stain, no fluorescence, no cut.

2765-2835 Sandstone 100%, arkose, white, pink to gray, medium to coarse grained, medium soft, angular, loosely consolidated; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2835-2855 Sandstone 100%, arkose, white to gray, medium grain, angular, loosely consolidated, no odor, no stain, no fluorescence, no cut.

2855-2860 Sandstone 100%, arkose, white to light gray with pink less common, coarse to very coarse grained, angular, loosely consolidated; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2860-2880 Sandstone 100%, arkose, white to light gray with pink less common, spotted black with ferro-magnesium minerals, coarse to very coarse grained, angular, loosely consolidated; no odor, no stain, no fluorescence, no cut.

2880-2925 Sandstone 100%, arkose, white to light gray with pink less common, coarse to very coarse grained, angular, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

2925-3015 Sandstone 100%, arkose, white to gray, medium to very coarse, angular, no odor, no stain, no fluorescence, no cut, no visible porosity.

3015-3040 Sandstone 100%, arkose, white to light gray with some pink, coarse grained, angular, good intergranular porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3040-3070 Sandstone 100%, arkose, white to gray, coarse grain, loosely consolidated, no odor, no stain, no fluorescence, no cut, no visible porosity.

3070-3090 Sandstone 100%, arkose, white to gray, fine to medium grained, angular, loosely consolidated, medium soft, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3090-3125 Sandstone 100%, arkose, white to light gray, with pink less common, angular, loosely consolidated, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3125-3165 Sandstone 100%, arkose, white to gray, coarse grain, angular, loosely consolidated, no visible porosity; no odor, no stain, no fluorescence, no cut.

3165-3180 Sandstone 100%, arkose, white, gray and pink, medium to coarse grained, medium soft, angular, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3180-3195 Sandstone 100%, arkose, white and gray, medium to coarse grained, angular, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3195-3205 Sandstone 100%, arkose, white to light gray, some pink, coarse grained, angular, loosely consolidated, no odor, no stain, no fluorescence, no cut.

3205-3220 Sandstone 100%, arkose, white, gray, pink, green, black, coarse grained, angular, loosely consolidated, medium soft, no odor, no stain, no fluorescence, no cut.

3220-3260 Sandstone 100%, arkose, white, light gray, coarse grain, angular, loosely consolidated, no visible porosity; no odor, no stain, no fluorescence, no cut.

3260-3275 Sandstone 80%, arkose, gray, white to pink, coarse grained, medium soft, loosely consolidated, angular, no odor, no stain, no fluorescence, no cut.

3275-3290 Sandstone 10%, arkose, white, light gray, green, black, some pink and yellow, medium to coarse grained, angular, loosely consolidated, no odor, no stain, no fluorescence, no cut.

3290-3310 Sandstone 100%, arkose, gray to white, medium to coarse grained, loosely consolidated, no odor, no stain, no fluorescence, no cut with carbon tetrachloride cut.

3310-3355 Talus Breccia 100%, diorite, light gray to light pick, with green and black, equi-granular texture, angular fragments, hard, no visible but probably interstitual porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3355-3385 Diorite Breccia 100%, gray to white, some green and black, angular fragments, loosely consolidated, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3385-3390 Siltstone 100%, red and brown, medium soft, dull luster, chunky arenaceous, very micaceous, hematite, slightly calcareous; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3390-3395 Talus breccia 95%, diroite, light gray to white, with green and black ferro-magnesium minerals, angular fragments, hard, loosely consolidated, no visible but probable interstitial porosity; Shale 5%, red, pink and spotted with black ferro-magnesium minerals, siltstone and claystone sized, arenaceous, no odor, no stain, no fluorescence, no cut.

3395-3405 Talus breccia 100%, diorite, light gray, white with some pink, green and black, angular fragments loosely consolidated, no visible but probable interstitial porosity; no odor, no stain, no fluorescence, no cut.

3405-3430 Diorite Breccia 100%, white to gray, medium to coarse grained, some green and black, bright to vitreous luster, angular, loosely consolidated, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3430-3455 Strongly Alterated Feldspar 100%, light to dark gray with some green, pink and black, very micaceous, trace pyritic, medium soft, angular, loosely consolidated, granular; poor interstitial porosity; no odor, no stain, no fluorescence, no cut.

3455-3460 Talus Breccia 100%, white to gray, medium to coarse grained, hard, angular fragments loosely consolidated, no odor, no stain, no fluorescence, no cut.

3460-3510 Talus Breccia 100%, diorite, light gray to white, some pink, green and black, angular fragments, loosely consolidated, hard, no visible but probably interstitial porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3510-3535 Diorite Breccia 100%, white, gray, some pink, medium to coarse grained, some green and black, angular fragments, loosely consolidated, no odor, no stain, no fluorescence, no cut.

3535-3575 Diorite breccia 100%, white and gray, medium to coarse grained, some green and black, hard, angular fragments, no visible porosity; no odor, no stain, no fluorescence, no cut.

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3575-3735 Diorite breccia 100%, white and gray, some red, green and black, medium to coarse grained, hard, angular fragments, some iron staining, no odor, no stain, no fluorescence, no carbon tetrachloride cut.

3735-4125 Diorite Breccia 100%, white and gray, some green, brown, and black, medium to coarse grained, medium soft, angular fragments, badly decomposed feldspar in appreciable quantity, much iron staining, no odor, no stain, no fluorescence, no cut.

4125-4205 Quartz-Diorite Breccia 100%, white and gray, some green and yellow, hard, angular fragments, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

4205-4225 Breccia 100%, decomposed feldspar and pyroxenes, green, medium soft, dull luster, moderately calcareous, chunky, angular, minor quantity of diorite breccia; no odor, no stain, no fluorescence, no cut.

4225-4615 Diorite Breccia 100%, green and white, medium hard, angular fragments, no odor, no stain, no fluorescence, no cut.

4615-4635 Syenite Breccia 100%, light salmon pink, some white, gray, green, and black, angular, chunky fragments, no visible porosity; no odor, no stain, no fluorescence, not cut.

4635-4955 Diorite Breccia 100%, white, gray, some pink, black and green, medium hard, angular fragments, no odor, no stain, no fluorescence, no cut.

4955-4960 Shale 90%, gray, green, some red, soft, chunky, dull luster, slightly silty, calcareous; Diorite Breccia 10%, gray, green and white, some black and red, hard, flaky to angular fragments, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

4960-4965 Diorite Breccia 90%, white, pink, some green, black and red, hard, angular, flaky to chunky frags; no visible porosity; no odor, no stain, no fluorescence, no cut.

4965-5125 Diorite Breccia 100%, white, gray, some pink, green, black, red, hard, angular, chunky, no visible porosity; no odor, no stain, no fluorescence, no cut.

5125-5130 Granodiorite Breccia 100%, white, clear, gray, some black, green, pink and red, hard, vitreous luster, angular fragments, no visible porosity; no odor, no stain, no fluorescence, no cut.

5130-5142 Diorite Breccia 100%, white, clear, gray, some black, green, pink and red, hard, angular fragments, no visible porosity; no odor, no stain, no fluorescence, no cut.

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2-6185
2-8355
2-9934

GEOLOGIC REPORT

WESTERN OIL FIELDS, INCORPORATED—NO. 1 FLORENCE

PINAL COUNTY, ARIZONA

GEOLOGICAL WELL SERVICE CO.
"Geo-Service"
WHITE BLDG. • ABILENE, TEXAS • U. S. A. • PHONES: 2-8996
2-6185
2-8355
2-9934

RECOMMENDATION

We do not recommend further drilling or testing on this lease. The tremendous amount of recent valley fill plus absence of possible oil and gas producing formations and penetration of almost 100% detrital grano-diorite (quartz diorite) consisting of quartz, plagioclase feldspar, ferromagnesian minerals, (biotite, hornblende, and pyroxene) indicates basement complex or close proximity to basement complex which rules out the possibility of penetrating a sedimentary section necessary for oil and gas accumulation.

Dan Kralis
Co-Owner
Geologist-in-charge

32 ×

MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5130-31-52 minutes; 31-32-49 minutes; 32-33-38 minutes; 33-34-59 minutes; 34-35-66 minutes.

Mud Analysis: (3:00 A.M. May 15, 1953) viscosity 33, weight 8.6, water loss 18.8, filter cake 1/32, pH 7, salt content--nil.

Drilling weight 30,000#.

Round trip at 5136'; stopped drilling 3:43 A.M.

6:00 A.M. May 15, 1953.

Ran bit # 79, Hughes OWSR-7 7/8"; on bottom and drilling at 8:20 a.m.

Connection at 5140'; down from 12:37 p.m. to 12:44 p.m.

5135-5140 Diorite Breccia 100%, gray and white, some black, green, and red, hard, subvitreous to vitreous luster, angular to subrounded fragments, calcareous, 60% plagioclase, 15% orthoclase, 10% biotite, 10% quartz, 5% talc, trace of chlorite and hematite, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5135-36-59 minutes; 36-37-83 minutes; 37-38-75 minutes; 38-39-83 minutes; 39-40-48 minutes.

Round trip at 5141'; out of hole at 4:02p.m.; on bottom and drilling; total time elapsed: 4 hours, 1 minute; bit # 80, Hughes W7R.

Stopped drilling at 8:36 p.m.; waiting for orders.

Depth--5142'; Depth correction 5141' (trip)--5142'.

Total Depth ----- 5142'.

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Mud Analysis: (3:00 A.M. May 14, 1953) viscosity 31, weight 8.6, water loss 20.4, filter cake 1/32, pH 7, salt content--nil.

5110-5115 Diorite Breccia 90%, gray, white, some pink, black, and red, hard, subvitreous to vitreous luster, angular to subangular fragments, 40% plagioclase, 20% orthoclase, 10% talc, 10% serpentine, 5% chlorite, 5% quartz; shale 10%, gray, gray green, some red, fissile, flaky to chunky, soft to medium hard, slightly calcareous, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%, Drilling time: 5110-11-76 minutes; 11-12-37 minutes; 12-13-28 minutes; 13-14-47 minutes; 14-15-48 minutes.

6:00 A.M. May 14, 1953

5115-5120 Diorite Breccia 100%, gray and white, some black, green and red, medium hard, vitreous luster, angular to subrounded fragments, calcareous, 60% plagioclase, 15% biotite, 15% orthoclase, 10% talc, traces of quartz and shale; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%; Drilling time: 5115-16-46 minutes; 16-17-40 minutes; 17-18-80 minutes; 18-19-41 minutes; 19-20-45 minutes.

Drilling weight 25,000#.

Round trip at 5122'; out of hole 10:00 A.M.; reamed 45' to bottom; on bottom and drilling 3:10 P.M.; total time 5 hours 10 minutes.

Ran Bit #78, Hughes, W7R, 7 7/8".

5120-5125 Diorite Breccia 100%, gray and white, some black, green and red, medium hard, vitreous luster, angular to subrounded fragments, calcareous, 60% plagioclase, 15% orthoclase, 10% biotite, 10% talc, 5% hematite and limonite; traces shale and quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5120-21-56 minutes; 21-22-23 minutes; 22-23-29 minutes; 23-24-21 minutes; 24-25-51 minutes.

6:00 P.M. May 14, 1953

Down from 6:23 to 6:46 P.M.; jet pits.

5125-5130 Granodiorite Breccia 100%, white, clear, gray, some black, green, pink and red, hard, vitreous luster, angular fragments, calcareous, 40% plagioclase, 20% orthoclase, 20% quartz, 10% biotite, 5% chlorite, 5%, talc; traces of hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5125-26-45 minutes; 26-27-40 minutes; 27-28-49 minutes; 28-29-56 minutes; 29-30-45 minutes.

5130-5135 Diorite Breccia 100%, white, clear, gray, some black, green, pink and red, vitreous luster, hard, angular fragments, calcareous, 50% plagioclase, 15% orthoclase, 10% quartz, 10% biotite; 10% talc, 5% chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut;

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No. 1 Florence

Geological Well Service Company

6:00 A.M. May 13, 1953

Ran Bit #76, Hughes, W7R, 7 7/8".

On bottom and drilling 9:40 A.M.

5090-5095 Diorite Breccia 100%, gray and black, some green, red and pink, medium hard, subvitreous to vitreous luster, angular to subrounded fragments, 60% plagioclase, 25% biottie, 10% orthoclase, 5% talc, trace quartz and chlorite, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5090-91-43 minutes; 91-92-53 minutes; 92-93-54 minutes; 93-94-38 minutes; 94-95-37 minutes.

5095-5100 Diorite Breccia 100%, gray and black, some pink and red, medium hard, subvitreous to vitreous luster, angular to subrounded fragments, 70% plagioclase, 20% biotite, 10% orthoclase, trace quartz and talc, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5095-96-29 minutes; 96-97-20 minutes; 97-98-25 minutes; 98-99-43 minutes; 99-5100-25 minutes.

Mud Analysis: viscosity 29, weight 8.5, water loss 21, filter cake 1/32, pH 7.

Down from 2:40 P.M. to 2:55 P.M. to repair pump.

Down from 3:20 P.M. to 3:30 P.M. to repair pump.

5100-5105 Diorite Breccia 100%, gray and black, some pink and red, medium hard, subvitreous to vitreous luster, angular to subrounded fragments, 70% plagioclase, 20% biotite, 10% orthoclase, trace quartz and talc, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5100-01-25 minutes; 01-02-33 minutes; 02-03-50 minutes; 03-04-65 minutes; 04-05-23 minutes.

Round trip at 5108'; out of hole 5:40 P.M.

6:00 P.M.

Ran Bit #77, Hughes, W7R, 7 7/8".

On bottom and drilling 11:10 P.M.; reamed 20' to bottom.

Connection at 5110'; down from 12:03 A.M. to 12:11 A.M.

5105-5110 Diorite Breccia 100%, white gray, some pink, black and red, medium hard, subvitreous to vitreous luster, angular fragments, 70% plagioclase, 10% biotite, 10% orthoclase, 10% talc, trace of quartz and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5105-06-23 minutes; 06-07-40 minutes; 07-08-45 minutes; 08-09-57 minutes; 09-10-76 minutes.

32 ×

6:00 a.m. 5-12-53

5075-5080 Diorite Breccia 100%, gray, some white, black, red, pink and green, medhard, subvitreous to vitreous luster, angular to trace of subrounded fragments, calcareous, 50% plagioclase, 15% orthoclase, 10% biotite, 5% chlorite, 5% talc, 5% hematite, trace quartz and shale, no visible porosity; no odor, no stain no fluorescence, no cut; FGA Methane 0.0%, FGA Ethane 0.0%; MGA Methane 0.0%, MGA Ethane 0.0%; CGA Methane 0.0%, CGA Ethane 0.0%; Drilling time: 5075-76-38 minutes; 76-77-39 minutes; 77-78-37 minutes; 78-79-20 minutes; 79-80-37 minutes.

Drilling weight 25,000#.

Round trip at 5083', out of hole at 8:15 a.m., repaired chain.

Ran Bit #75, Hughes W7R 7 7/8. Also ran reamer and junk basket, reamed 65' to bottom, on bottom and drilling at 4:56 p.m.

Mud Analysis: Viscosity 30, Weight 8.5, Water Loss 18, Filter cake 1/32, pH 7.

6:00 p.m. 5-12-53

Connection at 5086', down from 6:28 to 6:56 p.m.

5080-5085 Diorite Breccia 100%, white, gray, some black, pink and green; hard, subvitreous to vitreous luster, angular to some subrounded, fragments of calcareous; 50% plagioclase; 10% orthoclase; 20% quartz; 5% serpentine; 5% chlorite; 5% biotite; 5% talc; traces of hematite; good trace of shale; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, FGA Ethane 0.0%; BMGA Methane 0.0%, BMGA Ethane 0.0%; CGA Methane 0.0%, CGA Ethane 0.0%; Drilling time: 5080-81-29 minutes; 81-82-53 minutes; 82-83-41 minutes; 83-84-18 minutes; 84-85-25 minutes.

Drilling weight 30,000#.

5085-5090 Diorite Breccia 100%, white, some gray, black, pink and green, hard, subvirteous to vitreous luster, angular fragments, calcareous, 40% plagioclase; 10% orthoclase; 25% quartz; 15% talc; 5% biotite, 5% chlorite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, FGA Ethane 0.0%; BMGA Methane 0.0%, BMGA Ethane 0.0%; CGA Methane 0.0%, CGA Ethane 0.0%; Drilling time: 5085-86-50 minutes; 86-87-80 minutes; 87-88-78 minutes; 88-89-64 minutes; 89-90-70 minutes.

Round trip at 5095', stopped drilling at 3:51 a.m..

6:00 a.m. 5-13-53.

Drilling weight 35,000#.

Down from 2:47 A.M. to 3:37 A.M.; broken chain.

5070-5075 Diorite Breccia 100%, white, gray, pink, some green, black, hard, subvitreous to vitreous luster, angular to subangular fragments, 60% plagioclase, 10% orthoclase, 10% quartz, 10% talc, 5% biotite, 5% chlorite; trace of shale and granite wash; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5070-71-31 minutes; 71-72-32 minutes; 72-73-25 minutes; 73-74-24 minutes; 74-75-43 minutes.

Connection at 5079'; down from 5:30 A.M. to 5:36 A.M.

6:00 A.M. May 12, 1953.

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6:00 A.M. May 11, 1953

Down from 6:25 A.M. to 7:00 A.M. to repair chain.

5045-5050 Diorite Breccia 100%, gray and white, some black, pink and green, hard, subvitreous to vitreous luster, angular fragments, 60% plagioclase, 10% orthoclase, 10% talc, 10% biotite, 5% chlorite, 5% quartz, trace hematite and shale, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5045-46-35 minutes; 46-47-34 minutes; 47-48-24 minutes; 48-49-25 minutes; 49-50-29 minutes.

Drilling weight 30,000#.

5050-5055 Diorite Breccia 100%, gray and white, some black, pink and green, hard, subvitreous to vitreous luster, angular fragments, 60% plagioclase, 10% orthoclase, 10% talc, 10% biotite, 5% chlorite, 5% quartz, trace hematite and shale, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5050-51-36 minutes; 51-52-30 minutes; 52-53-40 minutes; 53-54-34 minutes; 54-55-30 minutes.

5055-5060 Diorite Breccia 100%, gray and white, some black, pink and green, hard, subvitreous to vitreous luster, angular fragments, 60% plagioclase, 10% orthoclase, 10% talc, 10% biotite, 5% chlorite, 5% quartz, trace hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5055-56-31 minutes; 56-57-37 minutes; 57-58-21 minutes; 58-59-31 minutes; 59-60-36 minutes.

Drilling weight 30,000#.

Round trip at 5065'; stopped drilling 2:22 P.M.

Bit #74, Hughes W7R.

6:00 P.M. May 11, 1953.

Resumed drilling 9:25 P.M.; elapsed time 7 hours 03 minutes.

5060-5065 Diorite Breccia 100%, white, gray, some black, pink, green, hard, subvitreous to vitreous luster, angular to subangular fragments, 40% plagioclase, 10% orthoclase, 10% biotite, 15% quartz, 10% chlorite, 10% talc, 5% hematite; trace of shale and granite wash, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5060-61-38 minutes; 61-62-29 minutes; 62-63-29 minutes; 63-64-32 minutes; 64-65-11 minutes.

5065-5070 Diorite Breccia 100%, white, gray, pink, some green, black, hard, subvitreous to vitreous luster, angular to subangular fragments, 40% plagioclase, 20% orthoclase, 20% quartz, 5% biotite, 5% chlorite, 10% talc; strong trace of shale, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5065-66-30 minutes; 66-67-36 minutes; 67-68-36 minutes; 68-69-25 minutes; 69-70-32 minutes.

32 x

minutes; 41-42-39 minutes; 42-43-44 minutes; 43-44-30 minutes; 44-45-27 minutes.

Connection at 5048'; down from 4:33 to 4:45 A.M.; jet pits; down from 5:40 to 5:55 A.M.; total down time 27 minutes.

6:00 A.M. May 11, 1953.

Mud Analysis: (5:30 A.M.) viscosity 30, weight 8.5, water loss 20.4, filter cake 1/32, pH 7, salt content--nil.

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5015-5020 Diorite Breccia 100%, white and gray, some green and black, medium hard, angular fragments, subvitreous to vitreous luster, calcareous, 70% plagioclase, 10% orthoclase, 10% talc, 5% chlorite, 5% biotite, trace quartz and shale; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5015-16-15 minutes; 16-17-36 minutes; 17-18-47 minutes; 18-19-25 minutes; 19-20-30 minutes.

Drilling weight 25,000#.

5020-5025 Diorite Breccia 100%, white and gray, some green and black, medium hard, angular fragments, subvitreous to vitreous luster, calcareous, 70% plagioclase, 10% orthoclase, 10% talc, 5% chlorite, 5% biotite, trace quartz, muscovite and shale, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5020-21-27 minutes; 21-22-28 minutes; 22-23-50 minutes; 23-24-52 minutes; 24-25-37 minutes.

5025-5030 Diorite Breccia 100%, white and gray, some green and black, medium hard, angular fragments, subvitreous to vitreous luster, calcareous, 70% plagioclase, 10% orthoclase, 10% talc, 5% chlorite, 5% biotite, trace quartz and muscovite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5025-26-25 minutes; 26-27-26 minutes; 27-28-49 minutes; 28-29-35 minutes; 29-30-36 minutes.

6:00 P.M. May 10, 1953

5030-5035 Diorite Breccia 100%, white and gray, some green and black, medium hard, angular, some subangular fragments, subvitreous to vitreous luster, calcareous, 70% plagioclase, 10% orthoclase, 10% talc, 5% chlorite, 5% biotite, trace quartz, trace of shale, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5030-31-35 minutes; 31-32-34 minutes; 32-33-22 minutes; 33-34-21 minutes; 34-35-27 minutes.

Round trip at 5037'; stopped drilling 7:35 P.M.; resumed drilling 11:38 P.M.; total time 4 hours 3 minutes.

Bit #73, W7R.

5035-5040 Diorite Breccia 100%, white, gray, some green and black, medium hard, angular fragments, subvitreous to vitreous luster, calcareous, 60% plagioclase, 10% orthoclase, 10% talc, 10% chlorite, 5% quartz, 5% biotite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0;0%, Ethane 0.0%; Drilling time: 5035-36-27 minutes; 36-37-22 minutes; 37-38-34 minutes; 38-39-19 minutes; 39-40-19 minutes.

5040-5045 Diorite Breccia 100%, white, gray, some green, black and red, medium hard, medium grain, angular fragments, subvitreous to vitreous luster, calcareous, 70% plagioclase, 10% orthoclase, 5% biotite, 5% talc, 5% quartz, 5% hematite; trace of gray and red shale; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5040-41-16

Drilling time: 4990-91-19 minutes; 91-92-21 minutes; 92-93-32 minutes; 93-94-22 minutes; 94-95-30 minutes.

4995-5000 Diorite Breccia 100%, gray, green, some black, red, dull to vitreous luster, medium hard, angular to subangular fragments, decomposed, plagioclase, orthoclase, biotite, hornblende and pyroxenes, with alteration products, chlorite, serpentine, talc; trace of shale and granite wash, trace of quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4995-96-33 minutes; 96-97-43 minutes; 97-98-50 minutes; 98-99-28 minutes; 99-5000-24 minutes.

Round trip at 5003'; stopped drilling at 10:25 P.M.; resumed drilling 2:35 A.M. May 10, 1953; total time 4 hours 10 minutes.

Bit #72, Hughes, W7R.

5000-5005 Diorite Breccia 100%, gray, green, white, some black, pink, and red, medium hard, medium grain, angular, fragments, very calcareous, 50% plagioclase, 10% orthoclase, 30% chlorite, 5% biotite, 5% talc; trace of granite wash and shale; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5000-01-26 minutes; 01-02-22 minutes; 02-03-25 minutes; 03-04-16 minutes; 04-05-13 minutes.

5005-5010 Diorite Breccia 100%, gray, green, white, some black, pink, and red, medium hard, medium grain, angular fragments, very calcareous, decomposed, 40% plagioclas , 10% orthoclase, 30% chlorite and alteration products, 5% biotite, 5% talc, trace of quartz and hematite; trace of granite wash and shale; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5005-06-13 minutes; 06-07-11 minutes; 07-08-12 minutes; 08-09-13 minutes; 09-10-25 minutes,

Drilling weight 30,000#.

Mud Analysis: (5:45 A.M. May 10, 1953) viscosity 29, weight 8.6, water loss 18.4, filter cake 1/32, pH 7, salt content--nil.

6:00 A.M. May 10, 1953

Connection at 5017'; down from 8:06 A.M. to 8:15 A.M.

5010-5015 Diorite Breccia 100%, gray, green, white, some black and red, medium hard, angular fragments, very calcareous, decomposition products, 40% decomposed feldspar, 30% plagioclase, 10% orthoclase, 10% talc, 5% biotite, 5% quartz, trace of hematite and shale, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4010-11-32 minutes; 11-12-43 minutes; 12-13-40 minutes; 13-14-27 minutes; 14-15-36 minutes.

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6:00 A.M.

Ran Bit #71, Hughes, W7R, 7 7/8".

Reamed 15' to bottom; on bottom and drilling 8:25 A.M.

4970-4975 Diorite Breccia 100%, gray and white, some green, black and red, hard, 50% angular and 50% subrounded to rounded fragments, subvitreous to vitreous luster, calcareous, 50% plagioclase, 10% orthoclase, 10% biotite, 10% chlorite, 10% talc, 5% quartz, 5% hematite; strong trace shale; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4970-71-61 minutes; 71-72-72 minutes; 72-73-65 minutes; 73-74-45 minutes; 74-75-24 minutes.

4975-4980 Diorite Breccia 100%, gray and white, some green, black and red, hard, angular, trace of subrounded fragments, subvitreous to vitreous luster, calcareous, 65% plagioclase, 10% orthoclase, 15% biotite, 5% chlorite, 5% talc, trace quartz and shale, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4975-76-25 minutes; 76-77-30 minutes; 77-78-34 minutes; 78-79-35 minutes; 79-80-33 minutes.

Drilling weight 25,000#.

4980-4985 Diorite Breccia 90%, gray and white, some green and black, hard, angular, trace of subrounded fragments, subvitreous to vitreous luster, calcareous, 70% plagioclase, 10% orthoclase, 10% talc, 5% biotite, 5% chlorite, no visible porosity; shale 10%, red, green and gray, soft, dull luster, platy and chunky, slightly silty, slightly calcareous; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4980-81-30 minutes; 81-82-18 minutes; 82-83-12 minutes; 83-84-26 minutes; 84-85-34 minutes.

Connection at 4987'; down from 1:50 P.M. to 1:57 P.M.

4985-4990 Diorite Breccia 100%, green, badly decomposed feldspar, medium hard, dull to subvitreous luster, angular to subrounded fragments, highly calc, trace shale and talc, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4985-86-39 minutes; 86-87-31 minutes; 87-88-24 minutes; 88-89-19 minutes; 89-90-31 minutes.

Drilling weight 25,000#.

6:00 P.M.

4990-4995 Diorite Breccia 100%, green, gray, some black, pink, dull to subvitreous to vitreous luster, medium hard to hard, angular fragments, badly decomposed feldspar, amphiboles, and pyroxenes, 30% plagioclase and orthoclase, 50% chlorites, biotite, hornblende, and pyroxenes, 15% quartz, 5% talc, strong trace of subrounded granite wash; trace of shale, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%;

Down from 8:06 p.m. to 8:25 p.m. to jet mud pits.

4965-4970 Diorite Breccia 100%, white, gray, some pink, green, black, red, hard, angular, chunky, subvitreous to vitreous luster, calcareous, 50% plagioclase, 10% orthoclase, 15% quartz, 10% talc, 5% biotite, 5% chlorite, 5% hornblende; trace hematite; trace of maroon and gray shale; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, EMGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 4965-66-43 minutes; 66-67-45 minutes; 67-68-47 minutes; 68-69-54 minutes; 69-70-54 minutes.

Round trip at 4973'; stopped drilling at 3:30 a.m.

Weight on bit: 30,000#.

Mud Analysis: (3:00 a.m. May 9, 1953) Viscosity 8.7, Water loss 14, Cake 1/32, pH 7, Salt, none.

6:00 a.m. May 9, 1953.

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4940-4945 Diorite Breccia 100%, white, gray, green, red, hard, earthy to subvitreous luster, angular fragments, calcareous, 40% plagioclase, 10% orthoclase, 15% limonite and hematite; 10% chlorite, 10% quartz, 10% talc, 5% biotite; no odor, no stain, no fluorescence, no cut; FGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4940-41-25 minutes; 41-42-31 minutes; 42-43-44 minutes; 43-44-57 minutes; 44-45-37 minutes.

6:00 a.m. May 8, 1953.

4945-4950 Diorite Breccia 100%, green and gray, some white and black and red, hard, flaky, to angular fragments, dull earthy to vitreous luster, calcareous, plagioclase 50%, chlorite 15%, biotite 10%, orthoclase 10%, talc 10%, hematite 5%, trace quartz; no visible porosity, no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4945-46-42 minutes; 46-47-52 minutes; 47-48-41 minutes; 48-9-45 minutes; 49-50-65 minutes.

Weight on bit: 20,000#.

4950-4955 Diorite Breccia 100%, green and gray, some white, pink, black and red, hard, flaky to angular fragments, dull earthy to vitreous luster, calcareous, plagioclase 40%; chlorite 15%, hornblende 10%, biotite 10%, orthoclase 10%, talc 10%, hematite 5%, trace quartz, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4950-51-36 minutes; 51-52-40 minutes; 53-54-29 minutes; 54-55-24minutes.

Mud Analysis: Viscosity 35, Weight 8.7, Water loss 13.5, Filter cake 1/32, pH 7.

4955-4960 Shale 90%, gray, green, some red, soft, chunky, dull luster, slightly silty, calcareous; Diorite Breccia 10%, gray, green and white, some blackand red, hard, flaky to angular fragments, dull earthy to vitreous luster, calcareous, plagioclase 60%, chlorite 15%, biotite 15%, talc 5%, hematite 5%, trace orthoclase, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4955-56-25 minutes; 56-57-30 minutes; 57-58-18 minutes; 58-59-12 minutes; 59-60-20 minutes.

Weight on bit: 20,000#.

Round tip at 4963'; out of hole at 1:04 p.m.; ran bit # 70, OWC, 7 7/8"; reamed 60' to bottom; on bottom and drilling at 4:41 p.m.

6:00 p.m.

4960-4965 Diorite Breccia 90%, white, pink, some green, black and red, hard, angular, flaky to chunky frags; subvitreous to vitreous luster, calcareous, plagioclase 30%, orthoclase 10%, talc 20%, hematite 10%, quartz 10%, Biotite 5%, hornblende 5%; Shale10%, maroon, some gray, chunky, dull earthy luster; soft, silty, calcareous; strong traces of subrounded to rounded; grainite wash; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4960-61-25 minutes; 61-62-4 minutes; 62-63-22minutes; 63-64-16 minutes; 64-65-47 minutes.

32 x

6:00 a.m. May 6, 1953.

Connection at 4930'; down from 6:42 a.m. to 6:50 a.m.

4925-4930 Diorite Breccia 100%, gray and white, some black and green, medium hard, subvitreous to vitreous luster, angular fragments, calcareous, 70% plagioclase, 15% talc, 15% biotite, 5% chlorite; traces of orthoclase, quartz; no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4925-26-31 minutes; 26-27-30 minutes; 27-28-19 minutes; 28-29-26 minutes; 29-30-22 minutes.

Weight on bit: 32,000#.

4930-4935 Diorite Breccia 100%, green, black and gray, some white and red, medium hard, subvitreous to vitreous luster, angular fragments, calcareous, 5% plagioclase, 20% chlorite, 15% biotite, 10% talc, 5% orthoclase; trace of hematite; no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4930-31-42 minutes; 31-32-30 minutes; 32-33-26 minutes; 33-34-34 minutes; 34-35-16 minutes.

4935-4940 Diorite Breccia 100%, green, dark gray, gray, some white and red, medium hard, subvitreous to vitreous luster, angular fragments, calcareous, 50% plagioclase, 25% chlorite, 10% biotite, 10% talc, 5% orthoclase; trace hematite and quartz, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA,MGA, CGA Methane 0.0%, Ethane 0.0%;Drilling time: 4935-36-18 minutes; 36-37-37 minutes; 37-38-18 minutes; 38-39-16 minutes; 39-40-20 minutes.

Weight on bit: 30,000#.

Round trip at 4942'; out of hole at 12:05 p.m.; repaired clutch; lost cone in hole; shutting down overnight to get "spider."

6:00 p.m.

6:00 a.m.

Round trip at 4927'; stopped drilling at 12:29 a.m.; resumed drilling at 5:39 a.m.; elapsed time: 5 hours, 10 minutes; bit # 68, Hughes W7R.

Mud Analysis: (5:30 a.m.) Viscosity 33, Weight 8.6, Water loss 17.2, Cake 1/32, pH 7, Salts, none.

6:00 a.m. May 6, 1953.

Went into hole to recover cone; recovered cone at 1:10 p.m.; ran bit # 70, W7R, 7 7/8"; operations halted at 3:30 p.m.; waiting for orders; 6:00 p.m.

On bottom and drilling at 12:45 a.m. May 8, 1953.

Mud Analysis: (1:00 a.m.) Viscosity 32, Weight 8.6, Water loss 16.8, Cake 1/32, pH 7, Chlorides,none.

NO. 1 Florence, Geological Well Service Company

4920-4925 Diorite breccia 100%, white, gray, some black, green, hard, angular, chunky fragments, medium coarse, sub-vitreous to vitreous luster, calcareous, 80% plagioclase, 10% quartz, 5% biotite, 5% talc, trace of chlorite, strong iron staining; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4920-21-27 minutes; 21-22-36 minutes; 22-23-41 minutes; 23-24-44 minutes; 24-25-37 minutes;

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NO. 1 Florence Geological Well Service Company

6:00 a.m., May 5, 1953

Pipe Correction: Round trip at 4898'. Ran #67, Hughes, W7R, 7 7/8. Reamed 30' to bottom. Pulled up to make connection and pipe stuck in hole 8' off bottom. Trying to jar loose. Mixed mud and circulated from 11:12 a.m. to 12:30 p.m., jarred loose.

Connection at 4898', down from 12:35 p.m. to 12:42 p.m.; resumed drilling at 12:42 p.m.

4895-4900 Diorite breccia 100%, green, black, gray, some red and white, medium hard, dull earthy to vitreous luster, chunky, to angular fragments, cale, 50% plagioclase, 20% chlorite, 20% biotite, 5% hematite, 5% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4895-96-28 minutes; 96-97-23 minutes; 97-98-28 minutes; 98-99-24 minutes; 99-4900-24 minutes;

Mud analysis: viscosity 34, weight 8.7, water loss 16, filter cake 1/32, ph 7.

4900-4905 Diorite breccia 100%, green, gray, black, some red and white, medium hard, dull earthy to vitreous luster, chunky to angular fragments, calcareous, 50% plagioclase, 20% chlorite, 15% talc, 10% biotite, 5% hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4900-01-16 minutes; 01-02-29 minutes; 02-03-32 minutes; 03-04-22 minutes; 04-05-24 minutes;

4905-4910 Diorite breccia 100%, gray, white and black, some green, medium hard, angular, sub-vitreous to vitreous luster, calcareous, 70% plagioclase, 15% biotite, 10% talc, 5% chlorite, traces of orthoclase and quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4905-06-19 minutes; 06-07-18 minutes; 07-08-10 minutes; 08-09-15 minutes; 10-10-12 minutes;

Drilling weight 30,000#

6:00 p.m.

4910-4915 Diorite breccia 100%, white, gray, some black, some green, hard, angular, chunky, fragments, medium coarse, sub-vitreous luster, calcareous, 70% plagioclase, 10% biotite, 10% quartz, 5% chlorite, 5% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4910-11-10 minutes; 11-12-32 minutes; 12-13-19 minutes; 13-14-21 minutes; 14-15-27 minutes;

4915-4920 Diorite breccia 100% white, gray, some black, hard, angular, chunky fragments, medium coarse, sub-vitreous to vitreous luster, calc, 80% plagioclase, 10% biotite, 10% quartz, trace of talc, and chlorite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4915-16-24 minutes; 16-17-39 minutes; 17-18-25 minutes; 18-19-15 minutes; 19-20-17 minutes;

Round trip at 4882'; out of hole at 1:16 p.m.; ran bit # 66, Hughes W7R, 7 7/8"; reamed 90' to bottom; on bottom and drilling at 8:10 p.m.

4875-4880 Diorite Breccia 100%, white and gray, some green and black and pink; hard, angular fragments, chunky, subvitreous to vitreous luster, calcareous; 60% plagioclase; 10% orthoclase, 10% chlorite, 10% talc, 5% quartz, 5% biotite, augite, hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, BMGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 4875-76-20 minutes; 76-77-22 minutes; 77-78-18 minutes; 78-79-14 minutes; 79-80-11 minutes.

Weight on bit: 30,000#.

4880-4885 Diorite Breccia 100%, white, some gray, pink, black, hard, angular, chunky frags; subvitreous to vitreous luster; calcareous; 60% plagioclase; 15% talc, 10% quartz; traces of biotite, augite, chlorite, hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4880-81-14 minutes; 81-82-22 minutes; 82-83-25 minutes; 83-84-22 minutes; 84-85-34 minutes.

4885-4890 Diorite Breccia 100%, gray, white, green, black, hard, angular, chunky fragments; subvitreous to vitreous luster; calcareous; 40% plagioclase; 10% orthoclase, 20% augite and pyroxenes; 10% chlorite; 10% biotite; 5% quartz, 5% talc; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4885-86-29 minutes; 86-87-27 minutes; 87-88-27 minutes; 88-89-23 minutes; 89-90-23 minutes.

4890-4895 Diorite Breccia 100%, gray, black, green, white, hard, angular, chunky frags; subvitreous to vitreous luster, calcareous; 20% plagioclase, 50% augite and pyroxene, 10% chlorite, 10% biotite, 5% quartz, 5% talc; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4890-91-29 minutes; 91-92-24 minutes; 92-93-28 minutes; 93-94-27 minutes; 94-95-19 minutes.

Round trip at 4900'; stopped drilling at 4:05 a.m.

6:00 a.m. May 5, 1953.

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4845-4850 Diorite Breccia 100%, gray, black, white, green; medium grain; subvitreous to vitreous luster; angular; chunky frags; calcareous; 60% plagioclase; 15% talc; 10% biotite; 10% pyroxens, 5% quartz; trace of chlorite and orthoclase; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4845-46-15 minutes; 46-47-9 minutes; 47-48-16 minutes; 48-49-24 minutes; 49-50-21 minutes.

Weight on bit: 30,000#.

6:00 a.m. May 4, 1953.

4850-4855 Diorite Breccia 100%, white, some pink and black, medium grained, medium soft, subvitreous to vitreous luster, flaky to angular fragments; 85% plagioclase, 5% orthoclase, 5% chlorite, 5% quartz, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4850-51-30 minutes; 51-52- 22 minutes; 52-53-12 minutes; 53-54-10 minutes; 54-55-12 minutes.

4855-4860 Diorite Breccia 100%, white, some pink and green, medium grained, medium soft, subvitreous to vitreous luster, flaky to angular fragments; 85% plagioclase, 5% orthoclase, 5% talc, 5% chlorite; trace quartz, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4855-56-9 minutes; 56-57-15 minutes; 57-58-8 minutes; 58-59-8 minutes; 59-60-11 minutes.

Mud Analysis: Viscosity 36, Weight 8.7, Water loss 18, Filter cake 1/32, pH 7.

4860-4865 Diorite Breccia 100%, gray, white, some green, black and red, medium soft, subvitreous to vitreous luster, angular fragments, calcareous; 60% plagioclase, 15% talc, 10% chlorite, 10% orthoclase, 5% hematite; no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drillihg time: 4860-61-9 minutes; 61-62-14 minutes; 62-63-15 minutes; 63-64-18 minutes; 64-65-25 minutes.

Connection at 4869'; down from 9:16 a.m. to 9:21 a.m.; repaired pump clutch from 9:21 a.m. to 9:43 a.m.

4865-4870 Diorite Breccia 100%, gray and white, some black, green and red, medium soft, angular fragments, subvitreous to vitreous luster, calcareous, 60% plagioclase, 15% talc, 10% orthoclase, 5% chlorite, 5% quartz, 5% hematite; no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4865-66-14 minutes; 66-67-15 minutes; 67-68-14 minutes; 68-69-16 minutes; 69-70-13 minutes.

Weight on bit: 30,000#.

4870-4875 Diorite Breccia 100%, gray and white, some black, green and red, medium soft, angular fragments, subvitreous to vitreous luster, calcareous, 60% plagioclase, 15% talc, 10% orthoclase, 5% chlorite, 5% quartz, 5% hematite; no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4870-71-16 minutes; 71-72-11 minutes; 72-73-12 minutes; 73-74-22 minutes; 74-75-22 minutes.

4815-4820 Diorite Breccia 100%, gray, dark gray, white and black, some green, medium grained, medium hard, subvitreous to vitreous luster, angular, calcareous, 50% plagioclase, 20% augite, 15% biotite, 10% talc, 5% quartz, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4815-16-16 minutes; 16-17-19 minutes; 17-18-16 minutes; 18-19-16 minutes; 19-20-14 minutes.

Weight on bit: 30,000#.

4820-4825 Diorite Breccia 100%, gray, dark gray, black and white, some green, medium grained, medium hard, subvitreous to vitreous luster, angular, calcareous, 50% plagioclase, 20% biotite, 10% augite, 10% talc, 5% chlorite, 5% quartz; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4820-21-15 minutes; 21-22-14 minutes; 22-23-18 minutes; 23-24-13 minutes; 24-25-13 minutes.

6:00 p.m.

4825-4830 Diorite Breccia 100%, gray, dark gray, white and black, some green, medium grain, subvitreous to vitreous luster, angular frags, calcareous, 60% plagioclase, 10% biotite, 10% augite, 10% quartz, 5% talc, 5% chlorite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4825-26-15 minutes; 26-27-23 minutes; 27-28-19 minutes; 28-29-16 minutes; 29-30-35 minutes.

Down from 6:48 to 7:05 to jet pits; round trip at 4836'; stopped drilling at 8:10 p.m.; resumed drilling at 12:58 a.m.; time: 4 hours, 48 minutes; bit # 65, Hughes W7R.

4830-4835 Diorite Breccia 100%, gray, black, white, green; medium grained, subvitreous to vitreous luster, angular frags, calcareous; 60% plagioclase, 10% biotite; 10% pyroxenes; 10% chlorite; 5% talc, 5% quartz; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4830-31-15 minutes; 31-32-23 minutes; 32-33-19 minutes; 33-34-16 minutes; 34-35-19 minutes.

4835-4840 Diorite Breccia 100%, gray, black, white, green, medium grain, subvitreous to vitreous luster, angular frags; calcareous, 60% plagioclase, 20% biotite, 10% augite, 5% chlorite, 5% talc; trace of quartz and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4835-36-19 minutes; 36-37-20 minutes; 37-38-12 minutes; 38-39-16 minutes; 39-40-11 minutes.

Weight on bit: 30,000#.

Mud Analysis: (5:15 a.m. May 4, 1953) Viscosity 32, Weight 8.6, Water loss 13.4, Cake 1/32, pH 7, Salts, none.

4840-4845 Diorite Breccia 100%, gray, black, white, green, medium grain; subvitreous to vitreous luster, angular, chunky frags; calcareous; 60% plagioclase, 15% talc, 10% biotite, 10% pyroxene, 5% quartz; trace of chlorite; quartz; talc; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, BMGA, CGA MEthane 0.0%, Ethane 0.0%; Drilling time: 4840-41-14 minutes; 41-42-13 minutes; 42-43-13 minutes; 43-44-12 minutes; 44-45-18 minutes.

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6:00 a.m. May 3, 1953.

4785-4790 Diorite Breccia 100%, dark gray, black, green, gray, medium grained, medium hard, earthy and vitreous luster, tabular to angular fragments, calcareous, 40% plagioclase, 30% augite, 10% hematite, 5% quartz, 5% talc, no odor, no visible porosity; no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, Ethane 0.0%;MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4785-86-40 minutes; 86-87-47 minutes; 87-88-12 minutes; 88-89-8 minutes; 89-90-12 minutes.

Weight on bit: 30,000#.

4790-4795 Diorite Breccia 100%, dark gray, black, green, gray, medium grained, medium hard, earthy and vitreous luster, tabular to angular fragments; calcareous; 50% plagioclase, 20% augite, 10% hematite, 10% biotite; 5% quartz, 5% talc, no visible porosity; no odor, no stain, no fluorescence,no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%,Ethane 0.0%; Drilling time: 4790-91-9 minutes; 91-92-7 minutes; 92-93-10minutes; 93-94-13 minutes; 94-95-9 minutes.

4795-4800 Diorite Breccia 100%, dark gray, green, black, gray, medium grained, medium hard, earthy to vitreous luster, tabular to angular fragments; calcareous, 40% plagioclase, 30% augite, 10% hematite, 10% biotite; 5% quartz; 5% talc; no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4795-96-12 minutes; 96-97-10 minutes; 97-98-10 minutes; 98-99-13 minutes; 99-00-10 minutes.

4800-4805 Diorite Breccia 100%, dark gray, green, black, medium grained, medium hard, earthy and vitreous luster, chunky to angular fragments, calcareous, 60% augite, 20% plagioclase, 10% biotite; 5% talc, 5% hematite; no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4800-01-8 minutes; 01-02-15 minutes; 02-03-13 minutes; 03-04-11 minutes; 04-05-11 minutes.

Connection at 4811'; down from 1:00 p.m. to 1:10 p.m.

4805-4810 Diorite Breccia 100%, gray and white, some green and black; medium grained, medium hard, subvitreous to vitreous luster, angular, calcareous, 70% plagioclase, 10% augite, 10% orthoclase, 10% talc; no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4805-06-13 minutes; 06-07-15 minutes; 07-08-11 minutes; 08-09-9 minutes; 09-10-7 minutes.

Weight on bit: 30,000#.

4810-4815 Diorite Breccia 100%, gray and white and black; some green, medium grained, medium hard, subvitreous to vitreous luster, angular, calcareous, 70% plagioclase, 15% biotite, 10% talc, 5% augite, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4810-11-8 minutes; 11-12-9minutes; 12-13-9 minutes; 13-14-11 minutes; 14-15-13 minutes.

Drilling weight 25,000#

4760-4765 Diorite breccia 100%, gray, white, green, red and black, medium grain, earthy to vitreous luster, angular fragments, calcareous, 60% plagioclase, 15% hematite and limonite, 15% chlorite, 5% biotite, 5% talc, trace of orthoclase and quartz; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4760-61-8 minutes; 61-62-30 minutes; 62-63-2 minutes; 63-64-25 minutes; 64-65-19 minutes;

4765-4770 Diorite breccia 100% gray, black, white, some greena and red, medium grain, earthy to vitreous luster, angular fragments, calcareous, 30% plagioclase, 40% hornblende, 20% biotite, 5% talc, 5% chlorite, trace of hemotite, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4765-66-19 minutes; 66-67-30 minutes; 67-68-21 minutes; 68-69-17 minutes; 69-70-22 minutes;

Drilling weight 25,000#

4770-4775 Diortie breccia 100% gray, black, some white, green and red, medium grain, earthy to vitreou luster, angular fragments, calcareous, 20% plagioclase, 40% hornblende or augite, 20% hematite, 10% biotite, 5% chlorite, 5% talc, trace of quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4770-71-26 minutes; 71-72-11 minutes; 72-73-10 minutes; 73-74-17 minutes; 74-75-7 minutes;

Connection at 4781', down from 12:46 to 12:55 a.m.

4795-4780 Diorite breccial 100% white, gray, black, some green and red, medium grained, earthy to vitreous luster, angular fragments, calc, 65% plagioclase, 20% hornblende or augite, 5% chlorite, 5%, biotite, 5% talc, strong trace of quartz and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4775-76-5 minutes; 76-77-7 minutes; 77-78-12 minutes; 78-79-23 minutes; 79-80-15 minutes;

Drilling weight 25,000#

4780-4785 Diorite breccia 100% gray, black, white, some green and red, medium grain, earthy to vitreous luster, angular fragments, calc, 20% plagioclase, 50% hornblende or augite, 10% hematite, 10% quartz, 5% biotite, 5% chlorite, trace of talc, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4780-81-16 minutes; 81-82-12 minutes; 82-83-17 minutes; 83-84-38 minutes; 84-85-48 minutes;

Round trip at 4786.9', stopped drilling at 4:15 a.m.

6:00 a.m., May 3, 1953

NO. 1 Florence (Geological Well (vice Company

6:00 a.m., May 2, 1953

4735-4740 Diorite breccia 100%, gray and white, some green and black, medium hard, medium grained, sub-vitreous to vitreous luster, angular fragments, calcareous, 70% plagioclase, 15% biotite, 10% chlorite, 5% talc, trace quartz and hematite; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4735-36-14 minutes; 36-37-51 minutes; 37-38-43 minutes; 38-39-42 minutes; 39-40-32 minutes;

Drilling weight 30,000#

Repaired liner in pump; down from 7:15 a.m. to 8:00 a.m.

4740-4745 Diorite breccia 100%, dark gray, white, black, some green and red, medium hard, medium grained, sub-vitreous to vitreous luster, angular fragments, clacareous, 60% plagioclase, 25% biotite, 10% chlorite, 5% talc, trace orthoclase, quartz and hematite; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4740-41-33 minutes; 41-42-35 minutes; 42-43-26 minutes; 43-44-22 minutes; 44-45-19 minutes;

Connection: 4753' (t 5' of reamer) down from 11:22 a.m. to 11:28 a.m.

4745-4750 Diorite breccia 100%, dark gray, white, some green, medium hard, medium grained, sub-vitreous to vitreous luster, angular fragments, highly calcareous, 50% plagioclase, 25% biotite, 15% of talc, 10% chlorite, trace orthoclase and quartz; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4745-46-12 minutes; 46-47-38 minutes; 47-48-21 minutes; 48-49-16 minutes; 49-50-18 minutes;

Drilling weight 30,000#

4750-4755 Diorite 100%, dark gray, black, white, some green, medium hard, medium grained, sub-vitreous to vitreous luster, angular fragments, highly clacareous, 50% plagioclase, 25% biotite, 15% talc, 10% chlorite, trace orthoclase and quartz; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4550-51-11 minutes; 51-52-13 minutes; 52-53-13 minutes; 53-54-21 minutes; 54-55-26 minutes;

Round trip at 4761', out of hole at 1:46 p.m.

6:00 p.m., May 2, 1953

Resumed drilling at 6:38 p.m., elapsed time 4 hours and 52 minutes; Bit #63 Hughes OWSR

4755-4760 Diorite breccia 100%, dark gray, black, green, white, medium grain, earthy to sub-vitreous to vitreous luster, angular fragments, calcareous, 50% plagioclase, 30% hematite or limonite, 10% chlorite, 5% biotite, 5% talc, trace of orthoclase and quartz; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4755-56-18 minutes; 56-57-17 minutes; 57-58-23 minutes; 58-59-18 minutes; 59-60-9 minutes;

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4725-4730 Diorite Breccia 100%, gray and white, some green and black, medium grained, medium hard, subvitreous to vitreous luster, angular fragments, calcareous; 70% plagioclase, 10% biotite, 10% chlorite, 10% talc; trace of quartz; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4725-26-18 minutes; 26-27-15 minutes; 27-28-16 minutes; 28-29-22 minutes; 29-30-20 minutes.

Round trip at 4734'; stopped drilling at 8:16; resumed drilling at 2:59 a.m.; elapsed time: 6 hours, 43 minutes; bit # 62, Hughes OWSR; reamed 180' of hole with Little Oscar Reamer.

4730-4735 Diorite Breccia 100%, gray, white, some green and black, medium grained, hard, subvitreous to vitreous luster, angular frags; calcareous; 70% plagioclase, 15% chlorite, 10% talc, 5% biotite; trace of quartz, hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4730-31-16 minutes; 31-32-12 minutes; 32-33-16 minutes; 33-34-17 minutes; 34-35-16 minutes.

Weight on bit: 30,000#.

6:00 a.m. May 2, 1953.

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6:00 a.m. May 1, 1953.

Reamed 90' to bottom; on bottom and drilling at 10:36 a.m.

4700-4705 Diorite Breccia 100%, gray and white, some green and black, medium hard, medium grained, subvitreous to vitreous luster, angular fragments, calcareous, 70% plagioclase, 10% orthoclase, 10% biotite, 5% chlorite, 5% talc; trace quartz, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4700-01-12 minutes; 01-02-17 minutes; 02-03-26 minutes; 03-04-15 minutes; 04-05-13 minutes.

4705-4710 Diorite Breccia 100%, gray and white, some green and black, medium hard, medium grained, subvitreous to vitreous luster, angular fragments, calcareous, 60% plagioclase, 15% biotite, 10% chlorite, 10% talc, 5% orthoclase; trace quartz; no visible porosity; no odor, no stain, no fluorescence; no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4705-06-15 minutes; 06-07-15minutes; 07-08-18 minutes; 08-09-14 minutes; 09-10-25 minutes.

Weight on bit: 25,000#.

4710-4715 Diorite Breccia 100%, gray and white, some green and black, medium hard, medium grained, subvitreous to vitreous luster, angular fragments, calcareous, 60% plagioclase, 15% biotite, 10% chlorite, 10% talc, 5% orthoclase, trace quartz and hematite; no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4710-11-12 minutes; 11-12-21 minutes; 12-13-18 minutes; 13-14- 18 minutes; 14-15-17 minutes.

Connection at 4718'; down from 2:45 p.m. to 2:51 p.m.

4715-4720 Diortie Breccia 100%, gray and white, some green and black, medium hard, medium grained, subvitreous to vitreous luster, angular fragments, calcareous, 60% plagioclase, 15% biotite, 10% chlorite, 10% talc, 5% orthoclase; trace quartz and hematite, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4715-16-18 minutes; 16-17-23 minutes; 17-18-19 minutes; 19-20-20 minutes..

4720-4725 Diorite Breccia 100%, gray and white, some green and black, medium grained, medium hard, subvitreous to vitreous luster, angular fragments, calcareous, 70% plagioclase, 15% biotite, 10% chlorite, 5% talc; trace orthoclase and quartz, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4720-21-22 minutes; 21-22-19 minutes; 22-23-21 minutes; 23-24-19 minutes; 24-25-18 minutes.

6:00 p.m.

Down from 6:20 to 6:40 p.m. to jet pits.

4690-91-12 minutes; 91-92-19 minutes; 92-93-20 minutes; 93-94-22 minutes; 94-95-18 minutes.

Drilling weight 30,000#.

4695-4700 Diorite Breccia 100%, white, gray, green, some black, medium grain, angular fragments, chunky, subvitreous to vitreous luster, calcareous, some badly decomposed fragments, 60% plagioclase, 25% chlorite, 10% talc, 5% biotite, trace of quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4695-96-23 minutes; 96-97-22 minutes; 97-98-18 minutes; 98-99-24 minutes; 99-4700-22 minutes.

Round trip at 4703'; stopped drilling 3:42 A.M.

Bit #61, Hughes W7R.

6:00 A.M. May 1, 1953.

Drilling time: 4660-61-10 minutes; 61-62-9 minutes; 62-63-9 minutes; 63-64-9 minutes; 64-65-9 minutes.

6:00 P.M.

Jetted pits; down from 6:35 to 6:55 P.M.

4665-4670 Diorite Breccia 100%, white and gray, some green and black, medium grained, medium hard, angular fragments, subvitreous to vitreous luster, calcareous, 80% plagioclase, 10% biotite, 10% talc, trace of chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4665-66-10 minutes; 66-67-11 minutes; 67-68-18 minutes; 68-69-14 minutes; 69-70-18 minutes.

4670-4675 Diorite Breccia 100%, white and gray, some green and black, medium grained, medium hard, angular fragments, subvitreous to vitreous luster, calcareous, 80% plagioclase, 10% biotite, 10% talc, trace of chlorite and quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4670-71-15 minutes; 71-72-10 minutes; 72-73-10 minutes; 73-74-10 minutes; 74-75-5 minutes.

Drilling weight 25,000#.

4675-4680 Diorite Breccia 100%, white and gray, some green and black, medium grain, angular fragments, subvitreous to vitreous luster, calcareous, 80% plagioclase, 15% biotite, 5% talc, traces of chlorite, hematite and talc; no odor, no sta in, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Etha ne 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4675-76-12 minutes; 76-77-14 minutes; 77-78-13 minutes; 78-79-9 minutes; 79-80-17 minutes.

4680-4685 Diorite Breccia 100%, white and gray, some green and black, medium grain, angular fragments, subvitreous to vitreous luster, calcareous, 80% plagioclase, 10% talc, 5% chlorite, 5% biotite, trace of hematite and quartz; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4680-81-16 minutes; 81-82-17 minutes; 82-83-16 minutes; 83-84-19 minutes; 84-85-18 minutes.

Connection at 4689'; down from 10:53 to 11:00 P.M.

4685-4690 Diorite Breccia 100%, white and gray, some green and black, medium grain, angular fragments, chunky, subvitreous to vitreous luster, calcareous, 80% plagioclase, 10% talc, 5% chlorite, 5% biotite; trace of quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Metha ne 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4685-86-11 minutes; 86-87-12 minutes; 87-88-12 minutes; 88-89-14 minutes; 89-90-12 minutes.

4690-4695 Diorite Breccia 100%, white, gray, green, some black, medium grain, angular fragments, chunky, subvitreous to vitreous luster, calcareous, some badly decomposed fragments, 50% plagioclase, 30% chlorite, 15% talc, 5% biotite, trace of quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time:

4635-4640 Diorite Breccia 100%, white, gray, some pink, black and green, medium hard, subvitreous to vitreous luster, angular fragments, calcareous, 60% plagioclase, 10% orthoclase, 10% biotite, 10% talc, 10% chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4635-36-25 minutes; 36-37-18 minutes; 37-38-20 minutes; 38-39-12 minutes; 39-40-18 minutes.

Drilling weight 25,000#.

Round trip at 4645'; out of hole from 8:03 A.M.; reamed 40' to bottom; also ran reamer and junk basket; on bottom and drilling at 1:33 P.M.

Ran Bit #60, Hughes, W7R, 7 7/8".

4640-4645 Diorite Breccia 100%, white and gray, some pink, black and green, medium hard, subvitreous to vitr ous luster, angular fragments, calcareous, 70% plagioclase, 10% orthoclase, 10% biotite, 5% talc, 5% chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4640-41-14 minutes; 41-42-13 minutes; 42-43-19 minutes; 43-44-9 minutes; 44-45-10 minutes.

4645-4650 Diorite Breccia 100%, white and gray, some pink, green and black, medium hard, subvitreous to vitreous luster, angular fragments, calcareous, 70% plagioclase, 10% orthoclase, 10% biotite, 5% talc, 5% chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4645-46-15 minutes; 46-47-8 minutes; 47-48-10 minutes; 48-49-9 minutes; 49-50-9 minutes.

Drilling weight 25,000#.

4650-4655 Diorite Breccia 100%, white and gray, some pink, green and black, medium hard, medium grained, angular fragments, subvitreous to vitreous luster, calcareous, 80% plagioclase, 10% talc, 5% orthoclase, 5% biotite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4650-51-9 minutes; 51-52-9 minutes; 52-53-8 minutes; 53-54-8 minutes; 54-55-13 minutes.

Connection at 4659.5'; down from 4:07 P.M. to 4:13 P.M.

4655-4660 Diorite Breccia 100%, white and gray, some green and black, medium grained, medium hard, angular fragments, subvitreous to vitreous luster, calcareous, 80% plagiocla se, 10% biotite, 5% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4655-56-13 minutes; 56-57-14 minutes; 57-58-13 minutes; 58-59-14 minutes; 59-60-8 minutes.

4660-4665 Diorite Breccia 100%, white and gray, some green and black, medium grained, medium hard, angular fragments, subvitreous to vitreous luster, calcareous, 80% plagioclase, 10% biotite, 5% orthoclase, 5% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%;

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4605-4610 Diorite Breccia 100%, black, green, white and gray, medium grain, subvitreous to vitreous luster, angular, chunky fragments, calcareous, 30% plagioclase, 30% Fe and Mg material (augite or hornblende), 20% chlorite, 10% biotite, 10% talc; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4605-06-18 minutes; 06-07-35 minutes; 07-08-27 minutes; 08-09-28 minutes; 09-10-26 minutes.

Drilling weight 30,000#.

4610-4615 Diorite Breccia 100%, white, gray, some green and black, medium grain, subvitreous to vitreous luster, angular, chunky fragments, calcareous; 80% plagioclase, 10% talc, 5% chlorite, 5% biotite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4610-11-27 minutes; 11-12-11 minutes; 12-13-10 minutes; 13-14-5 minutes; 14-15-3 minutes.

4615-4620 Syenite Breccia 100%, light salmon pink, some white, gray, green, and black, subvitreous to vitreous luster, angular, chunky fragments, calcareous, 80% orthoclase, 20% plagioclase, trace of chlorite, talc and biotite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4615-16-5 minutes; 16-17-4 minutes; 17-18-5 minutes; 18-19-6 minutes; 19-20-17 minutes.

Connection at 4626'; down from 2:50 to 3:00 A.M.

4620-4625 Syenite Breccia 100%, light salmon pink, some white, gray, green and black, subvitreous to vitreous luster, angular, chunky fragments, calcareous, 80% orthoclase, 20% plagioclase, trace of chlorite, talc, and biotite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4620-21-25 minutes; 21-22-17 minutes; 22-23-4 minutes; 23-24-3 minutes; 24-25-2 minutes.

4625-4630 Syenite Breccia 100%, light salmon pink, some white, gray, green and black, subvitreous to vitreous luster, angular, chunky fragments, calcareous, 80% orthoclase, 20% plagioclase, trace of chlorite, talc and biotite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4625-26-4 minutes; 26-27-16 minutes; 27-28-13 minutes; 28-29-9 minutes; 29-30-21 minutes.

6:00 A.M. April 30, 1953.

4630-4635 Felsite Breccia 100%, salmon pink, some white, gray, green, and black, subvitreous to vitreous luster, angular, chunky, angular fragments, calcareous, 100% orthoclase, trace plagioclase, chlorite, biotite, talc, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4630-31-16 minutes; 31-32-11 minutes; 32-33-28 minutes; 33-34-21 minutes; 34-35-19 minutes.

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6:00 A.M. April 29, 1953

On bottom and drilling 3:18 P.M.

4580-4585 Diorite Breccia 100%, white and gray, some green, black and red, medium hard, medium grained, subvitreous to vitreous luster, angular fragments, calcareous, 65% plagioclase, 15% biotite, 10% talc, 5% chlorite, 5% muscovite, minor quantities of hematite, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4580-81-27 minutes; 81-82-30 minutes; 82-83-26 minutes; 83-84-12 minutes; 84-85-6 minutes.

4585-4590 Diorite Breccia 100%, green, black, some white and gray, medium hard, medium grained, subvitreous to vitreous luster, angular to chunky fragments, calcareous, 50% decomposed feldspar with chlorite inclusions, 30% plagioclase, 10% biotite, 5% talc, 5% chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4585-86-12 minutes; 86-87-19 minutes; 87-88-18 minutes; 88-89-15 minutes; 89-90-21 minutes.

Drilling weight 25,000#.

6:00 P.M.

Connection at 4696.7'; down from 6:26 to 6:35 P.M.

4590-4595 Diorite Breccia 100%, black, green, white and gray, medium grain, subvitreous to vitreous luster, angular, chunky fragments, calcareous; 30% Fe and Mg material (augite or hornblende), 20% biotite, 30% plagioclase, 15% chlorite, 5% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4590-91-19 minutes; 91-92-12 minutes; 92-93-13 minutes; 93-94-10 minutes; 94-95-13 minutes.

4595-4600 Diorite Breccia 100%, black, green, white and gray, medium grain, subvitreous to vitreous luster, angular, chunky fragments, calcareous, 40% plagioclase, 30% Fe and Mg material (augite or hornblende), 10% biotite, 15% chlorite, 5% talc, trace of hematite, fragments of gray shale with inclusions of fine rounded quartz grains, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4595-96-13 minutes; 96-97-20 minutes; 97-98-16 minutes; 98-99-22 minutes; 99-4600-16 minutes.

Drilling weight 25,000#.

4600-4605 Diorite Breccia 100%, black, green, white and gray, medium grain, subvitreous to vitreous luster, angular, chunky fragments, calcareous, 40% plagioclase, 30% Fe and Mg material (augite or hornblende), 10% biotite, 15% chlorite, 5% talc, trace of hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4600-01-23 minutes; 01-02-26 minutes; 02-03-25 minutes; 03-04-26 minutes; 04-05-35 minutes.

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6:00 a.m, April 28, 1953

Connection at 4572'; down from 7:10 a.m. to 7:17 a.m.

4565-4570 Diorite breccia 100%, white and gray, some red and black, medium grained, medium hard, angular fragments, cale, sub-vitreous to vitreous luster, 70% plagioclase, 10% biotite, 10% hematite, 5% talc, 5% chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4565-55-27 minutes; 66-67-20 minutes; 67-68-21 minutes; 68-69-19 minutes; 69-70-15 minutes;

Drilling weight 20,000#

4570-4575 Diorite breccia 100%, white, dark gray, gray, some black and green, medium grained, medium hard, angular to tabular fragments, sub-vitreous to vitreous luster, 60% plagioclase, 15% biotite, 15% talc, 5% chlorite, 5% hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4570-71-21 minutes; 71-72-16 minutes; 72-73-18 minutes; 73-74-19 minutes; 74-75-17 minutes;

4575-4580 Diorite breccia 100%, white, dark gray, gray, some black and green, medium grained, medium hard, angular fragments, sub-vitreous luster, 75% plagioclase, 15% talc, 5% biotite, 5% chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4575-76-21 minutes; 76-77-19 minutes; 77-78-26 minutes; 78-79-23 minutes; 79-80-23 minutes;

Round trip at 4583'; out of hole at 11:35 a.m.; ran bit # 59, Hughes, W7R, 7 7/8'; bent kelly while going into hole, waiting to have it straightened.

6:00 p.m.

Waiting for Kelly to arrive;

6:00 a.m., Apeil 29, 1953

32 × 1

minutes; 36-37-11 minutes; 37-38-14 minutes; 38-39-11 minutes; 39-40-10 minutes;

Drilling weight 25,000#

4540-4545 Diorite breccia 100%, white and gray, some green and black, medium soft, medium grained, sub-vitreous to vitreous luster, angular fragments, calc, 50% plagioclase, 20% talc, 10% chlorite, 10% biotite, trace muscovite and hematite, no visible porosity; no odor, no stain no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4540-41-7 minutes; 41-42-7 minutes; 42-43-9 minutes; 43-44-16 minutes; 44-45-13 minutes;

Round trip at 4584' out of hole at 1:50 p.m.; ran bit # 58, Hughes, W7R, 7 7/8; reamed 150' to bottom;

6:00 p.m., April 27, 1953

Resumed drilling at 8:26 p.m.; elapsed time 6 hours and 36 minutes;

4545-4550 Diorite breccia 100%, white and gray, some green and black, medium soft, medium grain, sub-vitreous to vitreous luster, angular fragments, calc, 60% plagioclase, 20% talc, 10% chlorite, 10% biotite, trace of muscovite, hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4545-46-10 minutes; 46-47-14 minutes; 47-48-28 minutes; 48-49-22 minutes; 49-50-7 minutes;

Drilling weight 25,000#

4550-4555 Diorite breccia 100%, white, gray, some green, and black, medium soft, medium grain, sub-vitreous to vitreous luster, angular fragments, calc, 70% plagioclase, 15% chlorite, 10% talc, 5% biotite, trace of muscovite, hemotite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%; Drilling time: 4550-51-6 minutes; 51-52-10 minutes; 52-53-10 minutes; 53-54-12 minutes; 54-55-10 minutes;

Down from 11:25 to 3:31 a.m. to repair pump.

4555-4560 Diorite breccia 100%, white, gray, some green and black, medium grain, sub-vitreous to vitreous luster, angular fragments, calc, 70% plagioclase, 10% chlorite, 10% biotite, 10% talc, trace of muscovite, hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4555-56-24 minutes; 56-57-24 minutes; 57-58-15 minutes; 58-59-19 minutes; 59-60-24 minutes;

4560-4565 Diorite breccia 100%, white, dark gray, some green, and black, medium grain, dull to vitreous, angular fragments, calc, 60% plagioclase, 10% chlorite, 10% biotite, 10% talc, 10% hematite, trace of muscovite; no visible porosity;no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4560-61-24 minutes; 61-62-22 minutes; 62-63-24 minutes; 63-64-20 minutes; 64-65-19 minutes;

minutes; 11-12-16 minutes; 12-13-35 minutes; 13-14-27 minutes; 14-15-24 minutes;

Drilling weight 25,000#

Down from 5:21 to 5:45 a.m. to jet pits;

6:00 a.m, Apeil 27, 1954

4515-4520 Diorite breccia 100%, gray and white, some green and black, medium hard, sub-vitreous to vitreous luster, angular fragments, calcareous cement, 80% plagioclase, 10% biotite, 10% talc, minor quantities of chlorite and orthoclase; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4515-16-33 minutes; 16-17-31 minutes; 17-18-18 minutes; 18-19-22 minutes; 19-20-16 minutes;

4520-4525 Diorite breccia 100%, gray and white, some green, and black, medium hard, sub-vitreous to vitreous luster, angular fragments, calcareous cement, 80% plagioclase, 10% biotite, 10% talc, minor quantities of chlorite and orthoclase; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4520-21-22 minutes; 21-22-20 minutes; 22-23-23 minutes; 23-24-18 minutes; 24-25-20 minutes;

Mud analysis; viscosity 30, weight 8.5, water loss 19, filter cake 1/32, ph 7;

4525-4530 Diorite breccia 100%, gray, green and white, medium soft, earthy to vitreous luster, angular to platy fragments, calcareous cement, 70% plagioclase, 25% talc with disenminated chlortie, 5% biotite; no odor,no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4525-26-16 minutes; 26-27-21 minutes; 27-28-16 minutes; 28-29-23 minutes; 29-30-16 minutes;

Drilling weight 20,000#

Connection at 4536'; down from 10:01 a.m. to 10:08 a.m.

4530-4535 Diorite breccia 100%, white and gray, some green, medium soft, medium grained, sub-vitreous to vitreous luster, angular fragments, calcareous, 70% plagioclase, 10% chlorite, 10% biotite, 10% talc, trace muscovite, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4530-31-14 minutes; 31-32-11 minutes; 32-33-11 minutes; 33-34-12 minutes; 34-35-8 minutes;

Down from 10:35 to 11:35 a.m. to pepair clutch.

4535-4540 Diorite breccia 100%, white and gray, some green and black, medium soft, medium grained, sub-vitreous to vitreous luster, angular fragments, calcareous, 60% plagioclase, 20% talc, 10% chlorite, 10% biotite, trace muscovite, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4535-36-12

fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4485-86-20 minutes; 86-87-15 minutes; 87-88-20 minutes; 88-89-22 minutes; 89-90-17 minutes;

4490-4495 Diorite breccia 100%, dark gray, green, black and white, medium grained, medium hard, bright to vitreous luster, angular to tabular fragments, 50% plagioclase with chlorite and biotite inclusions, 20% biotite, 15% chlorite, 15% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4490-91-21 minutes; 91-92-21 minutes; 92-93-16 minutes; 93-94-18 minutes; 94-95-16 minutes;

6:00 p.m.

4495-4500 Diorite breccia 100%, dark gray, white, green, black, medium grained, wub-vitreous to vitreous luster, angular fragments, 60% plagioclase, 20% biotite, 15% talc, 5% chlorite; trace of quartz and gabbro; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4495-96-22 minutes; 96-97-23 minutes; 97-98-23 minutes; 98-99-16 minutes; 99-4500-26 minutes;

Drilling weight 20,000#

Down from 6:43 to 6:50 p.m.

Stopped drilling at 7:42 p.m.; round trip at 4504'; resumed drilling at 11:55; slapsed time 4 hours and 13 minutes; Bit #57, OWS-R;

Connection at 4506', down from 12:11 to 12:20 a.m.

4500-4505 Diorite breccia 100%, white, green, black, dark gray, medium grain, sub-vitreous to vitreous luster, angular fragments, 50% plagioclase, 20% chlorite, 20% biotite, 10% talc, trace of calcite, quartz, and muscovite; no visible porosity, no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4500-01-28 minutes; 01-02-38 minutes; 0-203-13 minutes; 03-04-20 minutes; 04-05-34 minutes;

4505-4510 Diorite breccia 100%, white, green, black, dark gray, medium grain, sub-vitreous to vitreous luster, angular fragments, 70% plagioclase, 15% chlorite, 5% talc, 10% biotite, trace of calcite, muscovite and quartz; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4505-06-10 minutes; 06-07-7 minutes; 07-08-10 minutes; 08-09-14 minutes; 09-10-18 minutes;

Down from 2:22 to 2:26 a.m.

4510-4515 Diorite breccia 100%, white, gray, green, black, some pink, medium grain, hard, sub-vitreous to vitreous luster, angular fragments, 50% plagioclase, 20% orthoclase, 15% biotite, 10% chlorite, 5% talc, traces of calcite, miscovite and quartz; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0% Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4510-11-19

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6:00 a.m., April 26, 1953

4460-4465 Diorite breccia 100%, white and gray, medium grained, medium hard, sub-vitreous to vitreous luster, calcareous cement, angular to tabular fragments, 60% plagioclase, 10% orthoclase, 10% muscovite, 10% biotite, 10% chlorite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4460-61-15 minutes; 61-62-16 minutes; 62-63-19 minutes; 63-64-24 minutes; 64-65-9 minutes;

4465-4470 Diorite breccia 100%, gray, green and white, medium grained, medium hard, bright to vitreous luster, calcareous cement, angular to tabular fragments, 40% plagioclase, 40% decomposed feldspar heavily colored with chlorite, 10% miscovite, 5% biotite, 5% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4465-66-10 minutes; 66-67-13 minutes; 67-68-10 minutes; 68-69-13 minutes; 69-70-12 minutes;

Drilling weight 20,000#

Connection at 4475'; down from 8:47 a.m. to 8:54 a.m.

4470-4475 Diorite breccia 100%, green, gray and white, medium grained, medium hard, bright to vitreous luster, calcareous cement, angular to tabular fragments, 60% decomposed feldspar heavy with chlorite, 20% plagioclase, 10% muscovite, 5% biotite, 5% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4470-71-14 minutes; 71-72-15 minutes; 72-73-17 minutes; 73-74-16 minutes; 74-75-10 minutes;

4075-4080 Diorite breccia 100%, dark gray, green, black and white, medium grained, medium hard, bright to vitreous luster, calcareous cement, angular to tabular fragments, 60% plagiboclase heavy white chlorite and biotite, 15% biotite, 15% chlorite, 10% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4475-76-13 minutes; 76-77-21 minutes; 77-78-26 minutes; 78-79-18 minutes; 79-80-19 minutes;

Drilling weight 20,000#

4480-4485 Diorite breccia 100%, dark gray, green, black and white, medium grained, medium hard, bright to vitreous luster, angular to tabular fragments, 50% plagioclase with chlorite and biotite inclusions, 20% biotite, 15% chlorite, 15% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4480-81-20 minutes; 81-82-18 minutes; 82-83-25 minutes; 83-84-24 minutes; 84-85-28 minutes;

4485-4490 Diorite breccia 100%, dark gray, green, black and white, medium grained, medium hard, bright to vitreous luster, angular to tabular, fragments, 50% plagioclase with chlorite and biotite inclusions, 20% biotite, 15% chlorite, 15% talc, no visible porosity; no odor, no stain, no

no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4430-31-13 minutes; 31-32-13 minutes; 32-33-18 minutes; 33-34-22 minutes; 34-35-14 minutes;

Connection at 4444', down from 1:06 to 1:15 p.m.

4435-4440 Diorite breccia 100%, white, gray, green, black, medium grain, sub-vitreous to vitreous luster, angular fragments, 70% plagioclase, 20% chlorite, 10% biotite, trace of talc and quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4435-36-11 minutes; 36-37-12 minutes; 37-38-10 minutes; 38-39-10 minutes; 39-40-10 minutes;

4440-4445 Diorite breccia 100%, white, gray, black, green, medium grain, sub-vitreous to vitreous luster, angular fragments, 70% plagioclase, 15% chlorite, 15% biotite, trace of talc and quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4440-41-12 minutes; 41-42-7 minutes; 42-43-8 minutes; 43-44-6 minutes; 44-45-12 minutes;

4445-4450 Diorite breccia 100% white, gray, black, green, medium grain, sub-vitreous to vitreous luster, angular fragments, 70% plagioclase, 15% chlorite, 10% biotite, 5% quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4445-46-16 minutes; 46-47-9 minutes; 47-48-8 minutes; 48-49-13 minutes; 49-50-16 minutes;

4450-4455 Diorite breccia 100%, white, gray, black, green, medium grain, sub-vitreous luster, angular fragments, 70% plagioclase, 20% biotite, 5% chlorite, 5% quartz, trace of talc, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4450-51-15 minutes; 51-52-24 minutes; 52-53-20 minutes; 53-54-18 minutes; 54-55-29 minutes;

Mud analysis 5:00 a.m.; viscosity 31, weight 8.6#, water loss 18.4, cake filter 1/32, ph 7, salt content none.

4455-4460 Diorite breccia 100%, white, gray, black, green, medium grain, angular fragments, calcareous cement, 70% plagioclase, 10% chlorite, 10% biotite, 5% talc, 5% quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4455-56-18 minutes; 56-57-15 minutes; 57-58-8 minutes; 58-59-12 minutes; 59-60-11 minutes;

6:00 a.m, April 26, 1953

32 x

Drilling weight 25,000#

Connection at 4415', down from 11:30 a.m. to 11:38 a.m.

4410-4415 Diorite breccia 100%, dark gray, black and green, some white, medium grained, maedium hard, clacareous cement, sub-vitreous to vitreous luster, angular and tabular fragments, 60% plagioclase, 25% biotite, 15% chlorite, minor quantities of talc and quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4410-11-11 minutes; 11-12-11 minutes; 12-13-11 minutes; 13-14-10 minutes; 14-15-13 minutes;

4415-4420 Diorite breccia 100%, dark gray, black and green, some white, fine and medium grained, medium hard, calcareous cement, sub-vitreous to vitreous luster, angular and tabular fragments, trace of sub-rounded fragments, 60% plagioclase, 25% biotite, 15% chlorite, minor quantities, of talc, and quartz, no visible porosity; no odor, no stain, no fluorescence, no cut;FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4415-16-14 minutes; 16-17-15 minutes; 17-18-15 minutes; 18-19-26 minutes; 19-20-31 minutes;

Drilling weight 20,000#

Note: drilling with one motor white 2nd motot is being overhauled; started overhauling motor at 4418'.

Round trip at 4426'; out of hole at 3:58 p.m.

6:00 p.m., April 25, 1953

Resumed drilling at 9:23;

Bit #56, Hughes W-7R

4420-4425 Diorite breccia 100%, gray, white, black and green fine to medium grain, medium hard, sub-vitreous to vitreous luster, angular fragments, trace of sub-angular fragments, calcareous cement, 60% plagioclase, 25% biotite, 15% chlorite, trace of talc and quartz; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4420-21-38 minutes; 21-22-30 minutes; 22-23-31 minutes; 23-24-13 minutes; 24-25-37 minutes;

4425-4430 Diorite breccia 100%, white, green, gray, black, medium grain, sub-vitreous to vitreous luster, angular fragments, 50% plagioclase, 50% chlorite, 10% biotite, trace of talc and quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4425-26-14 minutes; 26-27-11 minutes; 27-28-11 minutes; 28-29-13 minutes; 29-30-12 minutes;

4430-4435 Diorite breccia 100% white, green, gray, black, medium grain, sub-vitreous to vitreous luster, angular fragments, 50% plagioclase, 40% chlorite, 10% biotite, trace ot talc and quartz; no visible porosity;

32 x

NO. 1 Florence Geological Well Service Company

6:00 a.m.

4380-4385 Diorite breccia 100%, white and gray, some green and red, coarse grained, angular fragments, sub-vitreous to vitreous luster, calcareous cement, 70% plagioclase, 10% orthoclase, 10% chlorite, 10% talc, minor quantities of muscovite, quartz and biotite, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4380-81-18 minutes; 81-82-10 minutes; 82-83-20 minutes; 83-84-24 minutes; 84-85-14 minutes;

4385-4390 Diorite breccia 100%, white and gray, some green and black, medium grained, angular fragments, sub-vitreous to vitreous luster, calcareous cement, 70% plagioclase, 10% orthoclase, 10% chlorite, 10% talc, minor quantities of muscovite, quartz and bitite, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4385-86-16 minutes; 86-87-10 minutes; 87-88-9 minutes; 88-89-19 minutes; 89-90-15 minutes;

Drilling weight 25,000#

4390-4395 Diorite breccia 100%, white and gray, some green and black, medium grained, angular fragments, sub-vitreous to vitreous luster, calcareous cement, 70% plagioclase, 10% orthoclase 10% talc, 10% chlorite, minor quantities of muscovite, biotite and quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4390-91-8 minutes; 91-92-14 minutes; 92-93-12 minutes; 93-94-15 minutes; 94-95-14 minutes;

4395-4400 Diorite breccia 100%, white and gray, some green and black, medium grained, angular fragments, sub-vitreous to vitreous luster, calc cement, 80% plagioclase, 10% orthoclase, 5% chlorite, 5% talc, minor quantities of muscovite and biotite, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4395-96-10 minutes; 96-97-12 minutes; 97-98-8 minutes; 98-99-11 minutes; 99-4300-10 minutes;

4400-4405 Diorite breccia 100%, gray and white, some green and black, medium grained, medium hard, clacareous cement, sub-vitreous to vitreous luster, angular fragments, 80% plagioclase, 10% orthoclase, 5% chlorite, 5% talc, minor quantities of muscovite and biotite, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4400-01-9 minutes; 01-02-6 minutes; 02-03-9-minutes; 03-04-15 minutes; 04-05-13 minutes;

4405-4410 Diorite breccial 100%, dark gray and green, some white and black, medium grained, medium hard, very calcareous, sub-vitreous to vitreous luster, angular fragments, 60% plagioclase, 20% chlorite, 20% biotite, minor quantities fo talc and hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4405-06-9 minutes; 06-07-9 minutes; 07-08-10 minutes; 08-09-7 minutes; 09-10-9 minutes;

32 x

4370-4375 Diorite Breccia 100%, white and gray, some green, coarse grain, angular fragments, slightly calcareous, subvitreous to vitreous luster, oily luster, 70% plagioclase, 10% chlorite, 10% talc, 5% serpentine, 5% quartz, strong trace of muscovite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4370-71-13 minutes; 71-72-17 minutes; 72-73-17 minutes; 73-74-17 minutes; 74-75-20 minutes.

4375-4380 Diorite Breccia 100%, white and gray, some green, coarse grain, angular fragments, slightly calcareous, subvitreous to vitreous luster, 80% plagioclase, 5% orthoclase, 5% chlorite, 5% talc, 5% quartz, trace of muscovite, serpentine, and biotite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4375-76-23 minutes; 76-77-23 minutes; 77-78-19 minutes; 78-79-19 minutes; 79-80-22 minutes.

Stopped drilling at 12:04 A.M. for round trip at 4385'; resumed drilling 5:49 A.M.; total time 5 hours 45 minutes.

Bit #55, W7R.

6:00 A.M. April 25, 1953.

32 × 1

4345-4350 Diorite Breccia 100%, white and gray, some green and red, medium hard, calcareous cement, angular fragments, subvitreous to vitreous luster, 70% plagioclase, 10% chlorite, 10% orthoclase, 10% talc, minor quantity of hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4345-46-19 minutes; 46-47-18 minutes; 47-48-20 minutes; 48-49-11 minutes; 49-50-10 minutes.

4350-4355 Diorite Breccia 100%, white and gray, some green and red, medium hard, smaller fragments than above, angular fragments, subvitreous to vitreous luster, 70% plagioclase, 10% chlorite, 10% orthoclase, 10% talc, minor quantity of hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4350-51-9 minutes; 51-52-5 minutes; 52-53-6 minutes; 53-54-7 minutes; 54-55-7 minutes.

Mud Analysis: viscosity 32, weight 8.6, water loss 16, filter cake 1/32, pH 7.

4355-4360 Diorite Breccia 100%, white and gray, some green, medium hard, angular fragments, calcareous cement, subvitreous to vitreous luster, 60% plagioclase, 15% muscovite, 15% chlorite, 10% orthoclase, minor quantities talc and biotite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4355-56-11 minutes; 56-57-10 minutes; 57-58-11 minutes; 58-59-21 minutes; 59-60-16 minutes.

Drilling weight 25,000#.

6:00 P.M. April 24, 1953

4360-4365 Diorite Breccia 100%, white and gray, some green, coarse grain, angular fragments, slightly calcareous or calcitic, subvitreous to vitreous to oily to glossy luster, 70% plagioclase, 10% orthoclase, 10% serpentine, 5% chlorite, 5% talc, strong trace of muscovite mica; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4360-61-16 minutes; 61-62-17 minutes; 62-63-11 minutes; 63-64-12 minutes; 64-65-14 minutes.

Down from 6:34 to 6:50 P.M. to jet pit.

Down from 7:24 to 7:45 P.M. to jet pit.

4365-4370 Diorite Breccia 100%, white and gray, some green, coarse grain, angular fragments, slightly calcareous or calcitic, subvitreous to vitreous to glossy (white and gray), oily (green) luster, 60% plagioclase, 10% orthoclase, 10% chlorite, 10% serpentine, 5% quartz, 5% talc; strong trace of muscovite, slight traces of vein minerals; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4365-66-14 minutes; 66-67-12 minutes; 67-68-15 minutes; 68-69-26 minutes; 69-70-16 minutes.

Drilling weight 25,000#.

32 x

4320-4325 Diorite Breccia 100%, white and gray, some green and pink, coarse grains, angular fragments, calcareous cement, subvitreous to vitreous luster, 80% plagioclase, 10% orthoclase, 10% chlorite, strong trace of talc, olivine, hematite, quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4320-21-11 minutes; 21-22-11 minutes; 22-23-22 minutes; 23-24-12 minutes; 24-25-14 minutes.

4325-4330 Diorite Breccia 100%, white and gray, some green and pink, coarse grain, angular fragments, calcareous cement, subvitreous to vitreous luster, 70% plagioclase, 10% orthoclase, 15% chlorite, 5% Fe and Mg igneous alteration product; traces of talc, olivine, and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4325-26-12 minutes; 26-27-27 minutes; 27-28-28 minutes; 28-29-9 minutes; 29-30-10 minutes.

6:00 A.M. April 24, 1953.

4330-4335 Diorite Breccia 100%, gray and green, medium hard, bright to vitreous luster, angular fragments, calcareous cement, 50%, decomposed feldspar and pyroxene, 40% plagioclase, 10% orthoclase, minor quantities of muscovite and talc; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4330-31-16 minutes; 31-32-19 minutes; 32-33-9 minutes; 33-34-10 minutes; 34-35-11 minutes.

4335-4340 Diorite Breccia 100%, gray and green, medium hard, bright to vitreous luster, angular fragments, calcareous cement, 40% plagioclase, 30% decomposed feldspar and pyroxene, 10% orthoclase, 10% chlorite, 10% talc, minor quantity of muscovite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4335-36-10 minutes; 36-37-10 minutes; 37-38-23 minutes; 38-39-31 minutes; 39-40-11 minutes.

Drilling weight 25,000#.

4340-4345 Diorite Breccia 100%, white and gray, some green, bright to vitreous luster, medium hard, angular fragments, calcareous cement, 70% plagioclase, 10% talc, 10% orthoclase, 10% chlorite, minor quantity of muscovite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4340-41-19 minutes; 41-42-20 minutes; 42-43-15 minutes; 43-44-18 minutes; 44-45-16 minutes.

Round trip at 4349'; out of hole 9:50 A.M.; reamed 35' to bottom; on bottom and drilling at 2:24 P.M.

Ran Bit #54, Hughes, W7R, 7 7/8".

Connection at 4355'; down from 3:00 P.M. to 3:06 P.M.

4295-4300 Diorite Breccia 100%, gray and white, some green and buff, medium hard, angular fragments, subvitreous to vitreous luster, calcareous cement, 60% plagioclase, 10% decomposed feldspar, 10% orthoclase, 10% chloride, 10% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4295-96-6 minutes; 96-97-3 minutes; 97-98-10 minutes; 98-99-8 minutes; 99-4300-12 minutes.

Drilling weight 25,000#.

4300-4305 Diorite Breccia 100%, white and gray, some green and pink, medium hard, angular fragments, calcareous cement, subvitreous to vitreous luster, 60% plagioclase, 20% chlorite, 10% talc, 10% orthoclase, minor quantities of hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0 %, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4300-01-14 minutes; 01-02-7 minutes; 02-03-7 minutes; 03-04-12 minutes; 04-05-13 minutes.

6:00 P.M.

4305-4310 Diorite Breccia 100%, white and gray, some green and pink, coarse grain, angular fragments, calcareous cement, subvitreous to vitreous luster, 75% plagioclase, 10% orthoclase, 10% chlorite, 5% talc; trace of hematite; no visible porosity; no odor, stain fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4305-06-15 minutes; 06-07-22 minutes; 07-08-26 minutes; 08-09-18 minutes; 09-10-22 minutes.

Round trip at 4313'; stopped drilling at 8:40 P.M.; resumed drilling 12:15 A.M.; total time 3 hours 35 minutes.

Bit #53, Hughes OWS-R.

Drilling weight 22,000#.

4310-4315 Diorite Breccia 100%, white and gray, some green and pink, coarse grain, angular fragments, calcareous cement, subvitreous to vitreous luster, 70% plagioclase, 10% orthoclase, 10% chlorite, 10% talc, trace of olivene and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4310-11-22 minutes; 11-12-25 minutes; 12-13-10 minutes; 13-14-22 minutes; 14-15-22 minutes.

4315-4320 Diorite Breccia 100%, white and gray, some green and pink, coarse grain, angular fragments, calcareous cement, subvitreous to vitreous luster, 70% plagioclase, 10% orthoclase, 10% chlorite, 10% talc, trace of olivine and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4315-16-9 minutes; 16-17-18 minutes; 17-18-10 minutes; 18-19-16 minutes; 19-20-12 minutes.

Connection at 4324'; down from 2:53 to 3:03 A.M.

32 x

Drilling weight 25,000#.

4270-4275 Diorite Breccia 100%, gray, white, and green, some pink and red, medium hard, subvitreous to vitreous luster, angular fragments, calcareous cement, 60% plagioclase, 30% decomposed feldspar, 5% orthoclase, 5% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4270-71-10 minutes; 71-72-8 minutes; 72-73-18 minutes; 73-74-12 minutes; 74-75-17 minutes.

4275-4280 Diorite Breccia 100%, gray, white and green, some buff and red, medium hard, subvitreous to vitreous luster, angular fragments, calcareous cement, 50% plagioclase, 30% decomposed feldspar, 10% orthoclase, 10% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4275-76-10 minutes; 76-77-7 minutes; 77-78-7 minutes; 78-79-8 minutes; 79-80-7 minutes.

Drilling weight 25,000#.

4280-4285 Diorite Breccia 100%, gray and white, some buff and green, medium, subvitreous to vitreous luster, angular fragments, calcareous cement, 70% plagioclase, 10% decomposed feldspar, 10% orthoclase, 10% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4280-81-6 minutes; 81-82-8 minutes; 82-83-10 minutes; 83-84-13 minutes; 84-85-25 minutes.

4285-4290 Diorite Breccia 100%, gray and white, some green and buff, medium hard, angular fragments, subvitreous to vitreous luster, calcareous cement, 70% plagioclase, 10% decomposed feldspar, 10% orthoclase, 10% talc, minor quantities to hematite and chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4285-86-12 minutes; 86-87-8 minutes; 87-88-7 minutes; 88-89-7 minutes; 89-90-7 minutes.

Drilling weight 25,000#.

Round trip 4294'; out of hole 9:36 A.M.; reamed 60' to bottom; on bottom and drilling at 3:37 P.M.

Ran Bit #52, Hughes, W7R, 7 7/8"; also ran little oscar reamer and junk basket. Totco 3°.

4290-4295 Diorite Breccia 100%, gray and white, some green and buff, medium hard, angular fragments, subvitreous to vitreous luster, calcareous cement, 60% plagioclase, 10% decomposed feldspar, 10% orthoclase, 10% chloride, 10% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4290-91-8 minutes; 91-92-16 minutes; 92-93-15 minutes; 93-94-8 minutes; 94-95-11 minutes.

32 × 8

Drilling time: 4240-41-3 minutes; 41-42-3 minutes; 42-43-5 minutes; 43-44-5 minutes; 44-45-5 minutes.

4245-4250 Diorite Breccia 100%, green and white, coarse grain, angular fragments, calcareous cement, subvitreous to vitreous luster, 40% plagioclase, 40% Fe and Mg igneous alteration product, 10% orthoclase, 10% talc; trace of chlorite and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4245-46-4 minutes; 46-47-7 minutes; 47-48-5 minutes; 48-49-5 minutes; 49-50-8 minutes.

Drilling weight 25,000#.

4250-4255 Diorite Breccia 100%, green and white, coarse grain, angular fragments, calcareous cement, subvitreous to vitreous luster, 40% plagioclase, 40% Fe and Mg igneous alteration product, 10% orthoclase, 10% talc, trace of chlorite and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4250-51-7 minutes; 51-52-7 minutes; 52-53-9 minutes; 53-54-7 minutes; 54-55-7 minutes.

4255-4260 Diorite Breccia 100%, green and white, coarse grain, angular fragments, calcareous cement, subvitreous to vitreous luster, 40% plagioclase, 40% Fe and Mg igneous alteration product, 10% orthoclase, 10% talc; trace of chlorite and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4255-56-6 minutes; 56-57-7 minutes; 57-58-6 minutes; 58-59-7 minutes; 59-60-10 minutes.

Drilling weight 25,000#.

4260-4265 Diorite Breccia 100%, green and white, coarse grain, angular fragments, calcareous cement, subvitreous to vitreous luster, 40% plagioclase, 40% Fe and Mg igneous alteration product, 10% orthoclase, 10% talc, trace of chlorite and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4260-61-15 minutes; 61-62-24 minutes; 62-63-16 minutes; 63-64-18 minutes; 64-65-6 minutes.

Connection at 4269'; down from 5:07 to 5:16 A.M.

6:00 A.M. April 23, 1953

4265-4270 Diorite Breccia 100%, gray, white and green, some pink and red, medium hard, subvitreous to vitreous luster, angular fragments, calcareous cement, 60% plagioclase, 30% decomposed feldspar, 5% orthoclase, 5% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4265-66-8 minutes; 66-67-11 minutes; 67-68-25 minutes; 68-69-10 minutes; 69-70-9 minutes.

Mud Analysis: viscosity 32, weight 8.6, water loss 12, filter cake 1/32, pH 7.

4220-4225 Breccia 100%, decomposed feldspar and pyroxene, green, medium hard, dull luster, moderately calcareous, angular, minor quantities of iron-stained feldspar, diorite, talc, and hematite; no odor, no stain, no fluorescence, no cut; MGA methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4220-21-9 minutes; 21-22-12 minutes; 22-23-12 minutes; 23-24-10 minutes; 24-25-10 minutes.

4225-4230 Diorite Breccia 100%, green and white, medium hard, angular fragments, calcareous cement, dull to vitreous luster, 40% plagioclase, 40% decomposed material, 10% orthoclase, 10% talc; trace chlorite and hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4225-26-7 minutes; 26-27-12 minutes; 27-28-12 minutes; 28-29-9 minutes; 29-30-17 minutes.

Drilling weight 25,000#.

Round trip at 4234'; out of hole 1:15 P.M.; reamed to bottom 240'; on bottom and drilling at 11:55 P.M.

6:00 P.M.

Ran Bit #51, Hughes, OWS-R, 7 7/8"; also ran little oscar reamer, 7 7/8".

4230-4235 Diorite Breccia 100%, green and white, medium hard, angular fragments, calcareous cement, dull to vitreous luster, 40% plagioclase, 40% Fe and Mg alteration product; 10% orthoclase, 10% talc; trace of chlorite and hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4230-31-16 minutes; 31-32-17 minutes; 32-33-12 minutes; 33-34-12 minutes; 34-35-9 minutes.

4235-4240 Diorite Breccia 100%, green and white, medium hard, angular fragments, calcareous cement, subvitreous to vitreous luster, 60% plagioclase, 20% Fe and Mg igneous alteration product, 10% orthoclase, 10% talc; trace of chlorite and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4235-36-10 minutes; 36-37-5 minutes; 37-38-6 minutes; 38-39-5 minutes; 39-40-3 minutes.

Connection 4239'; down from 12:34 to 12:43 A.M.

Mud Analysis: (1:30 A.M. April 23, 1953) viscosity 34, weight 8.6, water loss 22.4, filter cake 2/32, pH 7, salt content--nil.

4240-4245 Diorite Breccia 100%, green and white, medium coarse to coarse grain, angular fragments, calcareous cement, subvitreous to vitreous luster, 60% plagioclase, 30% Fe and Mg igneous alteration product, 10% orthoclase, 10% talc; trace of chloride and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%;

6:00 A.M. April 22, 1953

4190-4195 Diorite Breccia 100%, gray, green and white, some red, medium hard, angular fragments, subvitreous to vitreous luster, calcareous cement, some fragments of decomposed feldspar very calcareous, 50% plagioclase, 30% decomposed feldspar, 10% orthoclase, 10% talc, traces of hematite, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4190-91-12 minutes; 91-92-11 minutes; 92-93-12 minutes; 93-94-15 minutes; 94-95-13 minutes.

Connection at 4204'; down from 7:43 A.M. to 7:50 A.M.

4195-4200 Diorite Breccia 100%, gray, green and white, some red, medium hard, angular fragments, subvitreous to vitreous luster, calcareous cement, some fragments very calcareous, 50% plagioclase, 30% decomposed feldspar, 10% orthoclase, 10% talc, traces of hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4195-96-15 minutes; 96-97-11 minutes; 97-98-15 minutes; 98-99-10 minutes; 99-4200-11 minutes.

Drilling weight 25,000#.

4200-4205 Diorite Breccia 100%, green, gray, white, pink, some red, medium hard, angular fragments, subvitreous to vitreous luster, calcareous cement, 40% plagioclase, 40% decomposed feldspar, 10% orthoclase, 10% talc, trace of hematite; no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4200-01-13 minutes; 01-02-9 minutes; 02-03-13 minutes; 03-04-11 minutes; 04-05-13 minutes.

4205-4210 Breccia 100%, decomposed feldspar and pyroxenes, green, medium soft, dull luster, moderately calcareous, chunky, angular, minor quantity of diorite breccia; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4205-06-11 minutes; 06-07-14 minutes; 07-08-11 minutes; 08-09-11 minutes; 09-10-11 minutes.

Drilling weight 25,000#.

4210-4215 Breccia 100%, decomposed feldspar and pyroxene, green, medium hard, dull luster, moderately calcareous, angular, minor quantity of diorite and hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4210-11-12 minutes; 11-12-10 minutes; 12-13-13 minutes; 13-14-10 minutes; 14-15-10 minutes.

4215-4220 Breccia 100%, decomposed feldspar and pyroxene, green, medium hard, dull luster, moderately calcareous, angular, minor quantity of iron-stained feldspar, diorite breccia, talc, and hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4215-16-11 minutes; 16-17-10 minutes; 17-18-10 minutes; 18-19-13 minutes; 19-20-12 minutes.

4160-4165 Breccia 100% Pyroxenite and Diorite, green, white, gray, angular fragments, subvitreous to vitreous luster, calcareous cement, 20% plagioclase, and orthoclase, 80% mixture of chlorite, pyroxene, olivine, and calcite; trace of quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4160-61-9 minutes; 61-62-7 minutes; 62-63-10 minutes; 63-64-9 minutes; 64-65-6 minutes.

4165-4170 Breccia 100%, Pyroxenite and Diorite, green, white, gray, angular fragments, subvitreous to vitreous luster, calcareous cement, 20% plagioclase and orthoclase, 80% mixture of chlorite, pyroxene, olivine and chlorite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4165-66-10 minutes; 66-67-7 minutes; 67-68-5 minutes; 68-69-7 minutes; 69-70-5 minutes.

Connection at 4175'; down from 1:20 to 1:28 P.M.

4170-4175 Breccia 100%, Pyroxenite and Diorite, green, white, gray, angular fragments, subvitreous to vitreous luster, calcareous cement, 20% plagioclase and orthoclase, 80% mixture of chlorite, pyroxene, olivine, and chlorite; trace of quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4170-71-9 minutes; 71-72-9 minutes; 72-73-12 minutes; 73-74-11 minutes; 74-75-11 minutes.

Drilling weight 24,000#.

4175-4180 Breccia 100%, Pyroxenite and Diorite, green, white, gray, angular fragments, subvitreous to vitreous luster, calcareous cement, 10% plagioclase, 90% mixture of chlorite, pyroxine, olivine, and chlorite; trace of quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4175-76-11 minutes; 76-77-16 minutes; 77-78-16 minutes; 78-79-15 minutes; 79-80-8 minutes.

4180-4185 Breccia 100%, Pyroxenite and Diorite, green, white, gray, angular fragments, subvitreous to vitreous luster, calcareous cement, 10% plagioclase, 90% mixture of chlorite, pyroxene, olivine, and calcite; trace of quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4180-81-11 minutes; 81-82-10 minutes; 82-83-10 minutes; 83-84-7 minutes; 84-85-11 minutes.

4185-4190 Breccia 100%, Pyroxentite and Diorite, green, white, gray, angular fragments, subvitreous to vitreous luster, calcareous cement, 20% plagioclase, 80% mixture of chlorite, pyroxene, olivine, and calcite; trace of quartz; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4185-86-12 minutes; 86-87-13 minutes; 87-88-18 minutes; 88-89-15 minutes; 89-90-14 minutes.

Stopped drilling 5:41 A.M. to jet pits; resumed drilling 5:55 A.M.

6:00 A.M. April 22, 1953

Drilling time: 4130-31-13 minutes; 31-32-9 minutes; 32-33-13 minutes; 33-34-13 minutes; 34-35-16 minutes.

4135-4140 Quartz-Diorite Breccia 100%, white and gray, some green and yellow, hard, angular fragments, subvitreous to vitreous luster, calcareous cement, 70% plagioclase, 10% chlorite, 10% orthoclase, 10% quartz, minor quantities of talc and olivine, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4135-36-20 minutes; 36-37-13 minutes; 37-38-13 minutes; 38-39-18 minutes; 39-40-13 minutes.

Connection at 4145'; down from 4:43 P.M. to 4:47 P.M.

Round trip at 4147.5'; out of hole 5:25 P.M.; resumed drilling 9:00 P.M.; total time 3 hours 35 minutes.

Bit #50, OWS.

4140-4145 Quartz-Diorite Breccia 70%, white and gray, some green and yellow, angular fragments, subvitreous to vitreous luster, calcareous cement, 80% plagioclase, 10% orthoclase, 10% quartz; Pyroxenite Breccia 30%, green, coarse grain, mixture of pyroxene, olivine, and chlorite, strongly calcitic; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4140-41-18 minutes; 41-42-12 minutes; 42-43-17 minutes; 43-44-7 minutes; 44-45-7 minutes.

Drilling weight 25,000#.

4145-4150 Breccia 100%, Quartz-Diorite and Pyroxenite, white, gray, green, angular fragments, subvitreous to vitreous luster, calcareous cement, strongly calcitic, 40% plagioclase, 10% orthoclase, 5% quartz, 55% mixture of pyroxene, chlorite, olivine, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4145-46-6 minutes; 46-47-19 minutes; 47-48-20 minutes; 48-49-15 minutes; 49-50-15 minutes.

4150-4155 Breccia 100%, Quartz-Diorite and Pyroxenite, green, white and gray, angular fragments, subvitreous to vitreous luster, calcareous cement, 35% plagioclase, 10% orthoclase, 5% quartz, 55% mixture of chlorite, pyroxene, olivine and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%; Drilling time: 4150-51-5 minutes; 51-52-11 minutes; 52-53-10 minutes; 53-54-9 minutes; 54-55-9 minutes.

4155-4160 Breccia 100%, Pyroxenite and Diorite, green, white, gray, angular fragments, subvitreous to vitreous luster, calcareous cement, 60% plagioclase, 5% orthoclase, 5% quartz, 30% mixture of chlorite, pyroxene, olivine, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4155-56-9 minutes; 56-57-8 minutes; 57-58-10 minutes; 58-59-9 minutes; 59-60-8 minutes.

Drilling weight 25,000#.

6:00 A.M. April 21, 1953

Ran Bit #49, Hughes, OWS, 7 7/8"; reamed 40' to bottom; on bottom and drilling at 9:35 A.M.

4105-4110 Diorite Breccia 100%, white and gray, some green, red, medium hard, angular fragments, subvitreous to vitreous luster, calcareous cement, 70% plagioclase, 10% chlorite, 10% orthoclase, 10% talc, mihor quantities of quartz and hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4105-06-14 minutes; 06-07-14 minutes; 07-08-11 minutes; 08-09-12 minutes; 09-10-10 minutes.

Drilling weight 25,000#.

4110-4115 Diorite Breccia 100%, white and gray, some green and red, medium hard, angular fragments, subvitreous to vitreous luster, calcareous cement, 70% plagioclase, 10% chlorite, 10% orthoclase, 10% talc, minor quantities of quartz, muscovite, and hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4110-11-14 minutes; 11-12-8 minutes; 12-13-4 minutes; 13-14-8 minutes; 14-15-7 minutes.

4115-4120 Diorite Breccia 100%, white and gray, some green and red, medium hard, angular fragments, subvitreous to vitreous luster, calcareous cement, 70% plagioclase, 10% chlorite, 10% orthoclase, 10% talc, minor quantities of quartz, muscovite and hematite, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4115-16-11 minutes; 16-17-8 minutes; 17-18-11 minutes; 18-19-13 minutes; 19-20-12 minutes.

4120-4125 Diorite Breccia 100%, white and gray, some green and black, medium hard, angular fragments, subvitreous to vitreous luster, calcareous cement, 70% plagioclase, 10% orthoclase, 10% chlorite, 10% talc, minor quantities of quartz, and hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4120-21-14 minutes; 21-22-20 minutes; 22-23-18 minutes; 23-24-9 minutes; 24-25-14 minutes.

4125-4130 Quartz-Diorite Breccia 100%, white and gray, some green and yellow, hard, angular fragments, subvitreous to vitreous luster, calcareous cement, 70% plagioclase, 10% chlorite, 10% orthoclase, 10% quartz, minor quantities of talc and olivine, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4125-26-12 minutes; 26-27-13 minutes; 27-28-9 minutes; 28-29-10 minutes; 29-30-12 minutes.

4130-4135 Quartz-Diorite Breccia 100%, white and gray, some green and yellow, hard, angular fragments, subvitreous to vitreous luster, calcareous cement, 70% plagioclase, 10% chlorite, 10% orthoclase, 10% quartz, minor quantities of talc and olivine, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%;

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Connection at 4084'; down from 7:28 to 8:05 P.M.

4080-4085 Diorite Breccia 100%, white, gray, little green, coarse grain, vitreous luster, 90% plagioclase, 10% orthoclase; trace of talc, quartz, and chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4080-81-12 minutes; 81-82-11 minutes; 82-83-14 minutes; 83-84-8 minutes; 84-85-10 minutes.

Mud Analysis: (9:30 P.M.) viscosity 34, weight 8.6, water loss 24.4, filter cake 2/32, pH 7, salt content-nil.

Drilling weight 24,000#.

4085-4090 Diorite Breccia 100%, white, gray, little green, coarse grain, vitreous luster, 90% plagioclase, 10% orthoclase; trace of talc, chlorite, and quartz; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4085-86-11 minutes; 86-87-9 minutes; 87-88-13 minutes; 88-89-16 minutes; 89-90-20 minutes.

4090-4095 Diorite Breccia 100%, white, gray, little green, coarse grain, vitreous luster, 90% plagioclase, 10% orthoclase; trace of talc, chlorite, and quartz; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4090-91-22 minutes; 91-92-14 minutes; 92-93-21 minutes; 93-94-17 minutes; 94-95-18 minutes.

Down from 11:45 P.M. to 12:51 A.M. to service rig.

4095-4100 Diorite Breccia 100%, white, gray, little green and dark gray, vitreous luster, 90% plagioclase, 10% orthoclase; trace of talc, chlorite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4095-96-15 minutes; 96-97-13 minutes; 97-98-14 minutes; 98-99-13 minutes; 99-4100-10 minutes.

4100-4105 Diorite Breccia 100%, white, gray, little green, and dark gray, vitreous luster, hematitic and calcitic cement, 90% plagioclase, 10% orthoclase; trace of talc and chlorite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4100-01-13 minutes; 01-02-11 minutes; 02-03-19 minutes; 03-04-14 minutes; 04-05-21 minutes.

Round trip at 4110.9'; stopped drilling at 2:35 A.M.

6:00 A.M. April 21, 1953.

Drilling weight 25,000#.

4050-4055 Diorite Breccia 90%, white and gray, some green and black, medium soft, angular fragments, bright to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 10% orthoclase, 10% chlorite, 10% talc, no visible porosity; shale 10%, red, medium soft, chunky to platy, compact, well indurated, dull earthy luster, slightly calcareous; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4050-51-6 minutes; 51-52-7 minutes; 52-53-6 minutes; 53-54-7 minutes; 54-55-9 minutes.

Round trip at 4061'; out of hole 11:00 A.M.; on bottom at 4:35 P.M.

Ran Bit #48, Hughes, OWS-R, 7 7/8".

4055-4060 Diorite Breccia 100%, white and gray, some green, red and black, medium soft, angular fragments, vitreous luster, calcareous and hematitic cement, 90% plagioclase, 10% orthoclase, minor quantities of chlorite and biotite; trace shale; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4055-56-13 minutes; 56-57-10 minutes; 57-58-13 minutes; 58-59-20 minutes; 59-60-13 minutes.

4060-4065 Diorite Breccia 100%, white and gray, some green, red, black, medium soft, angular fragments, vitreous luster, calcareous and hematitic cement, 90% plagioclase, 10% orthoclase, minor quantities of chlorite and biotite; trace shale; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4060-61-12 minutes; 61-62-8 minutes; 62-63-6 minutes; 63-64-6 minutes; 64-65-6 minutes.

6:00 P.M.

4065-4070 Diorite Breccia 100%, white and gray, some green, red, black, medium hard, angular fragments, vitreous luster, calcareous and hematitic cement, 90% plagioclase, 10% orthoclase, minor quantities of chlorite and talc; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4065-66-6 minutes; 66-67-6 minutes; 67-68-10 minutes; 68-69-10 minutes; 69-70-7 minutes.

4070-4075 Diorite Brecci 100%, white, gray, some green, medium to coarse grain, angular fragments, vitreous luster, calcareous and hematitic cement, 90% plagioclase, 10% orthoclase, minor quantities of talc, chlorite and biotite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4070-71-8 minutes; 71-72-5 minutes; 72-73-8 minutes; 73-74-7 minutes; 74-75-7 minutes.

4075-4080 Diorite Breccia 100%, white, gray, some green, coarse grain, medium hard to hard, brittle, vitreous luster, 90% plagioclase, 10% orthoclase, trace of chlorite, talc, quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%; Drilling time: 4075-76-8 minutes; 76-77-8 minutes; 77-78-10 minutes; 78-79-13 minutes; 79-80-13 minutes.

6:00 A.M. April 20, 1953

4020-4025 Diorite Breccia 100%, white and gray, some green, red, and black, angular fragments, bright to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 20% chlorite, 10% orthoclase, no visible porosity; trace hematite, talc; no odor, no stain, no fluorescence, no carbon tetrachlorite cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4020-21-6 minutes; 21-22-7 minutes; 22-23-7 minutes; 23-24-5 minutes; 24-25-7 minutes.

4025-4030 Diorite Breccia 100%, white and gray, some green, red and black, angular fragments, bright to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 20% chlorite, 10% orthoclase, no visible porosity; trace talc and hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4025-26-10 minutes; 26-27-7 minutes; 27-28-8 minutes; 28-29-7 minutes; 29-30-7 minutes.

Drilling weight 25,000#.

4030-4035 Diorite Breccia 100%, white and gray, some green, red and black, angular fragments, bright to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 10% chlorite, 10% orthoclase, 10% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4030-31-8 minutes; 31-32-7 minutes; 32-33-7 minutes; 33-34-8 minutes; 34-35-8 minutes.

4035-4040 Diorite Breccia 100%, white and gray, some green, red and black, angular fragments, bright to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 10% orthoclase, 10% chlorite, 10% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4035-36-7 minutes; 36-37-7 minutes; 37-38-6 minutes; 38-39-8 minutes; 39-40-8 minutes.

Drilling weight 25,000#.

4040-4045 Diorite Breccia 100%, white and gray, some green and red, medium soft, angular fragments, bright to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 10% orthoclase, 10% chlorite, 10% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4040-41-12 minutes; 41-42-10 minutes; 42-43-15 minutes; 43-44-10 minutes; 44-45-12 minutes.

Connection at 4054'; down from 9:23 A.M. to 9:28 A.M.

4045-4050 Diorite Breccia 90%, white and gray, some green and red, medium soft, angular fragments, bright to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 10% orthoclase, 10% chlorite, 10% talc, no visible porosity; shale 10%, red, medium soft, chunky to platy, dull earthy luster, slightly calcareous; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4045-46-9 minutes; 46-47-8 minutes; 47-48-8 minutes; 48-49-9 minutes; 49-50-8 minutes.

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4015-4020 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite, traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4015-16-5 minutes; 16-17-4 minutes; 17-18-7 minutes; 18-19-5 minutes; 19-20-5 minutes.

Connection at 4023'; down from 5:07 to 5:20 A.M.

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3985-3990 Diorite Breccia 100%, white, gray, some green and red, medium to coarse grains, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite; traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3985-86-5 minutes; 86-87-8 minutes; 87-88-6 minutes; 88-89-6 minutes; 89-90-5 minutes.

Connection at 3994'; down from 1:58 to 2:08 A.M.

3990-3995 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement; traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3990-91-5 minutes; 91-92-5 minutes; 92-93-7 minutes; 93-94-4 minutes; 94-95-8 minutes.

3995-4000 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, plagioclase 70%, orthoclase 25%, chlorite 5%; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3995-96-6 minutes; 96-97-5 minutes; 97-98-6 minutes; 98-99-5 minutes; 99-4000-6 minutes.

4000-4005 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 20% orthoclase, 10% chlorite; traces of calcite, talc, and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4000-01-7 minutes; 01-02-5 minutes; 02-03-8 minutes; 03-04-5 minutes; 04-05-4 minutes.

4005-4010 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite; traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4005-06-5 minutes; 06-07-7 minutes; 07-08-8 minutes; 08-09-5 minutes; 09-10-5 minutes.

4010-4015 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite, traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4010-11-8 minutes; 11-12-7 minutes; 12-13-6 minutes; 13-14-4 minutes; 14-15-6 minutes.

Drilling weight 20,000#.

3955-3960 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite, traces of talc, hematite, and calcite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3955-56-5 minutes; 56-57-5 minutes; 57-58-5 minutes; 58-59-4 minutes; 59-60-4 minutes.

3960-3965 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite, traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3960-61-5 minutes; 61-62-4 minutes; 62-63-5 minutes; 63-64-4 minutes; 64-65-6 minutes.

3965-3970 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite, traces of talc, hematite and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3965-66-5 minutes; 66-67-7 minutes; 67-68-5 minutes; 68-69-4 minutes; 69-70-4 minutes.

Drilling weight 20,000#.

3970-3975 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite; traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3970-71-7 minutes; 71-72-6 minutes; 72-73-4 minutes; 73-74-5 minutes; 74-75-6 minutes.

3975-3980 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 20% orthoclase, 10% chlorite, traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3975-76-5 minutes; 76-77-4 minutes; 77-78-5 minutes; 78-79-5 minutes; 79-80-5 minutes.

3980-3985 Diorite Breccia 100%, white, gray, some green and red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 20% orthoclase, 10% chlorite, traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3980-81-5 minutes; 81-82-5 minutes; 82-83-5 minutes; 83-84-5 minutes; 84-85-7 minutes.

Drilling weight 20,000#.

3955-3960 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite, traces of talc, hematite, and calcite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3955-56-5 minutes; 56-57-5 minutes; 57-58-5 minutes; 58-59-4 minutes; 59-60-4 minutes.

3960-3965 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite, traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3960-61-5 minutes; 61-62-4 minutes; 62-63-5 minutes; 63-64-4 minutes; 64-65-6 minutes.

3965-3970 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite, traces of talc, hematite and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3965-66-5 minutes; 66-67-7 minutes; 67-68-5 minutes; 68-69-4 minutes; 69-70-4 minutes.

Drilling weight 20,000#.

3970-3975 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite; traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3970-71-7 minutes; 71-72-6 minutes; 72-73-4 minutes; 73-74-5 minutes; 74-75-6 minutes.

3975-3980 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 20% orthoclase, 10% chlorite, traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3975-76-5 minutes; 76-77-4 minutes; 77-78-5 minutes; 78-79-5 minutes; 79-80-5 minutes.

3980-3985 Diorite Breccia 100%, white, gray, some green and red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 20% orthoclase, 10% chlorite, traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3980-81-5 minutes; 81-82-5 minutes; 82-83-5 minutes; 83-84-5 minutes; 84-85-7 minutes.

Drilling weight 20,000#.

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3925-3930 Diorite Breccia 100%, white, gray, some green and red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 70% plagioclase, 10% orthoclase, 10% chlorite, 10% talc, trace of hematite, calcite, and quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3925-26-4 minutes; 26-27-4 minutes; 27-28-4 minutes; 28-29-4 minutes; 29-30-4 minutes.

3930-3935 Diorite Breccia 100%, white, gray, some green, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 5% chlorite, 5% talc, trace of calcite, quartz, and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3930-31-4 minutes; 31-32-4 minutes; 32-33-4 minutes; 33-34-4 minutes; 34-35-4 minutes.

3935-3940 Diorite Breccia 100%, white, gray, some green, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 5% chlorite, 5% talc, trace of calcite, quartz, and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3935-36-3 minutes; 36-37-3 minutes; 37-38-6 minutes; 38-39-5 minutes; 39-40-5 minutes.

3940-3945 Diorite Breccia 100%, white, gray, some green, and black, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite and biotite; trace of talc, calcite, and hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3940-41-8 minutes; 41-42-9 minutes; 42-43-8 minutes; 43-44-5 minutes; 44-45-5 minutes.

3945-3950 Diorite Breccia 100%, white, gray, some green and red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 10% chlorite and biotite; trace of talc, calcite and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3945-46-5 minutes; 46-47-5 minutes; 47-48-5 minutes; 48-49-5 minutes; 49-50-5 minutes.

3950-3955 Diorite Breccia 100%, white, gray, some green, red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 80% plagioclase, 10% orthoclase, 5% chlorite, 5% talc; trace of hematite and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3950-51-5 minutes; 51-52-4 minutes; 52-53-5 minutes; 53-54-4 minutes; 54-55-4 minutes.

Drilling weight 25,000#.

Connection at 3965'; down from 11:01 to 11:15 P.M.; jetted pits.

Connection at 3907'; down from 1:20 P.M. to 1:27 P.M.

3900-3905 Diorite breccia 100%, gray, white and green, some red and black, coarse grained, medium soft, angular fragments, bright to vitreous luster, calcareous and hematitic cement, 60% plagioclase, 20% chlorite, 10% orthoclase, 10% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3900-3901-6 minutes; 01-02-6 minutes; 02-03-6 minutes; 03-04-5 minutes; 04-05-6 minutes.

3905-3910 Diorite breccia 100%, gray, white and green, some red and black, coarse grained, medium soft, angular fragments, bright to vitreous luster, calcareous and hematitic cement, 60% plagioclase, 20% chlorite, 10% orthoclase, 10% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3905-06-6 minutes; 06-07-7 minutes; 07-08-7 minutes; 08-09-7 minutes; 09-10-8 minutes.

Drilling weight 25,000#.

3910-3915 Diorite breccia 100%, gray, white and green, some red and black, coarse grained, medium soft, angular fragments, bright to vitreous luster, calcareous and hematitic cement, 60% plagioclase, 20% chlorite, 10% orthoclase, 10% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3910-11-8 minutes; 11-12-8 minutes; 12-13-10 minutes; 13-14-10 minutes; 14-15-11 minutes.

Round trip at 3922'; out of hole 3:45 P.M.; resumed drilling 7:30 P.M. Reamed 24 feet.

Bit #47, Hughes OWS-R.

3915-3920 Diorite breccia 100%, white, gray, some green and red, medium to coarse grain, angular fragments, bright to vitreous luster, calcareous and hematitic cement, 60% plagioclase, 10% orthoclase, 20% chlorite, 10% talc, no visible porosity; trace of hematite, calcite, and quartz; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3915-16-12 minutes; 16-17-7 minutes; 17-18-9 minutes; 18-19-7 minutes; 19-20-8 minutes.

3920-3925 Diorite breccia 100%, white, gray, some green, and red, medium to coarse grain, angular fragments, subvitreous to vitreous luster, calcareous and hematitic cement, 60% plagioclase, 10% orthoclase, 20% chlorite, 10% talc, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3920-21-10 minutes; 21-22-6 minutes; 22-23-4 minutes; 23-24-4 minutes; 24-25-4 minutes.

Connection at 3936'; down from 8:14 P.M. to 8:29 P.M.

3870-3875 Diorite breccia 100%, white and gray, some green, red, and dark gray, medium to coarse, medium soft, bright to vitreous luster, angular fragments, calcareous and hematitic cement, 70% plagioclase, 20% chlorite, 10% orthoclase, no visible porosity; trace decomposed feldspar, hematite and talc; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3870-71-4 minutes; 71-72-6 minutes; 72-73-5 minutes; 73-74-6 minutes; 74-75-4 minutes.

3875-3880 Diorite breccia 100%, white and gray, some green, red, and dark gray, medium to coarse, medium soft, bright to vitreous luster, angular fragments, 70% plagioclase, 10% chlorite, 10% orthoclase, 10% talc, no visible porosity; trace decomposed feldspar and hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3875-76-5 minutes; 76-77-5 minutes; 77-78-6 minutes; 78-79-6 minutes; 79-80-6 minutes.

3880-3885 Diorite breccia 100%, white and gray, some red, black, and green, coarse grained, bright to vitreous luster, angular fragments, calcareous and hematitic cement, 60% plagioclase, 20% talc, 10% orthoclase, 10% chlorite, no visible porosity; trace hematite and decomposed feldspar; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3880-81-10 minutes; 81-82-7 minutes; 82-83-9 minutes; 83-84-9 minutes; 84-85-9 minutes.

3885-3890 Diorite breccia 100%, white, gray, green, some red, brown and black, coarse grained, bright to vitreous luster, angular fragments, calcareous and hematitic cement, 60% plagioclase, 20% chlorite, 10% talc, 10% orthoclase, no visible porosity; trace hematite and biotite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3885-86-7 minutes; 86-87-8 minutes; 87-88-7 minutes; 88-89-9 minutes; 89-90-8 minutes.

Drilling weight 25,000#.

3890-3895 Diorite breccia 100%, white, gray, green, some red, brown and black, coarse grained, bright to vitreous luster, angular fragments, calcareous and hematitic cement, 60% plagioclase, 20% chlorite, 10% talc, 10% orthoclase, no visible porosity; trace hematite and biotite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3890-91-5 minutes; 91-92-5 minutes; 92-93-6 minutes; 93-94-6 minutes; 94-95-5 minutes.

3895-3900 Diorite breccia 100%, gray, white and green, some red and black, coarse grained, medium soft, angular fragments, bright to vitreous luster, calcareous and hematitic cement, 60% plagioclase, 20% chlorite, 10% orthoclase, 10% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3895-96-7 minutes; 96-97-5 minutes; 97-98-6 minutes; 98-99-5 minutes; 99-3900-5 minutes.

Drilling weight 25,000#.

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6:00 A.M. April 19, 1953

3845-3850 Diorite breccia 100%, white and gray, some green, red, and dark gray, medium to coarse grained, medium soft, bright to vitreous luster, angular fragments, calcareous and hematitic cement, minor quantity of badly decomposed fledspar, 60% plagioclase, 20% orthoclase, 10% badly decomposed feldspar, 10% chlorite, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3845-46-11 minutes; 46-47-5 minutes; 47-48-11 minutes; 48-49-16 minutes; 49-50-9 minutes.

3850-3855 Diorite breccia 100%, white and gray, some green, red, and dark gray, medium to coarse grained, medium soft, bright to vitreous luster, angular fragments, calcareous and hematitic cement, minor quantity of badly decomposed feldspar, 60% plagioclase, 20% orthoclase, 10% badly decomposed feldspar, 10% chlorite, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3850-51-20 minutes; 51-52-9 minutes; 52-53-11 minutes; 53-54-9 minutes; 54-55-8 minutes.

3855-3860 Diorite breccia 100%, white and gray, some green, red, and dark gray, medium to coarse grained, medium soft, bright to vitreous luster, angular fragments, calcareous and hematitic cement, 60% plagioclase, 20% orthoclase, 10% badly decomposed feldspar, 10% chlorite, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3855-56-9 minutes; 56-57-9 minutes; 57-58-9 minutes; 58-59-6 minutes; 59-60-9 minutes.

Drilling weight 25,000#.

Mud Analysis: viscosity 33, weight 8.7, water loss 12, filter cake 1/32, pH 7.

3860-3865 Diorite breccia 100%, white and gray, some green, red, and dark gray, medium to coarse grained, medium soft, bright to vitreous luster, angular fragments, calcareous and hematitic cement, 60% plagioclase, 20% orthoclase, 10% badly decomposed feldspar, 10% chlorite, no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3860-61-5 minutes; 61-62-5 minutes; 62-63-6 minutes; 63-64-7 minutes; 64-65-6 minutes.

3865-3870 Diorite breccia 100%, white and gray, some green, red, and dark gray, medium to coarse, medium soft, bright to vitreous luster, angular fragments, calcareous and hematitic cement, 70% plagioclase, 10% orthoclase, 10% decomposed feldspar, 10% chlorite, no visible porosity; trace biotite and hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3865-66-6 minutes; 66-67-10 minutes; 67-68-8 minutes; 68-69-5 minutes; 69-70-6 minutes.

Drilling weight 25,000#.

Connection at 3876'; down from 9:49 A.M. to 9:55 A.M.

3825-3830 Diorite Breccia 100%, grsy to white, some green, pink, red, medium to coarse grained, subvitreous to vitreous luster, calcareous, hematite, cement, angular frags; 70% plagioclase; 15% orthoclase; 5% chlorite, 5% talc, 5% hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA, MGA, BMGA Methane 0.0%, Ethane 0.0%; Drilling time: 3825-26-17 minutes; 26-27-13 minutes; 27-28-7 minutes; 28-29-8 minutes; 29-30-5 minutes.

3830-3835 Diorite Breccia 100%, gray to white, some green, pink and red; medium to coarse grains, subvitreous to vitreous luster, calcareous and hematitic cement, angular frags; 70% plagioclase, 15% orthoclase; 10% chlorite; 5% hematite; trace of talc; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3830-31-12 minutes; 31-32-18 minutes; 32-33-11 minutes; 33-34-12 minutes; 34-35-15 minutes.

Weight on bit: 20,000#.

3835-3840 Diorite Breccia 100%, gray to white, some green, pink, red and dark gray, medium to coarse grained, subvitreous to vitreous luster, calcareous to hematitic cement, angular frags; trace of badly weathered feldspar; 50% plagioclase; 30% orthoclase, 15% chlorite, 5% hematite; trace of talc; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3835-36-12 minutes; 36-37-16 minutes; 37-38-14 minutes; 38-39-12 minutes; 39-40-13 minutes.

Connection at 3847'; down from 5:17 to 5:42 a.m.

3840-3845 Diorite Breccia 100%, gray, white, some green, pink, red and dark gray; medium to coarse grained, subvitreous to vitreous luster, calcareous and hematitic cement, angular frags; trace of badly weathered feldspar; plagioclase, orthoclase, chlorite; traces of hematite and talc; no visible porosity; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; Drilling time: 3840-41-12 minutes; 41-42-12 minutes; 42-43-11 minutes; 43-44-13 minutes; 44-45-14 minutes.

6:00 a.m. April 19, 1953.

32 × 8

3810-3815 Diorite Breccia 100%, dark gray, white, gray, some green and pink, coarse grain, dull to vitreous luster, calcareous cement, angular fragments, badly weathered feldspar in part, 60% plagioclase, 20% orthoclase, 10% chlorite, 10% talc; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3810-11-7 minutes; 11-12-6 minutes; 12-13-7 minutes; 13-14-7 minutes; 14-15-9 minutes.

Drilling weight 20,000#.

Connection at 3817'; down from 10:48 to 11:07 P.M.

3815-3820 Diorite Breccia 100%, gray, white, some dark gray, green, and pink, medium to coarse grain, dull to vitreous luster, calcareous cement, angular fragments, badly weathered feldspar in part, 50% plagioclase, 20% orthoclase, 15% chlorite, 10% talc, 5% hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3815-16-4 minutes; 16-17-7 minutes; 17-18-6 minutes; 18-19-4 minutes; 19-20-8 minutes.

3820-3825 Diorite Breccia 100%, gray, white, some dark gray, green, red, and pink, medium to coarse grain, dull to vitreous luster, calcareous and hematitic cement, angular fragments, badly weathered feldspar in part, 50% plagioclase, 20% orthoclase, 10% chlorite, 10% talc, 10% hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3820-21-10 minutes; 21-22-13 minutes; 22-23-16 minutes; 23-24-16 minutes; 24-25-17 minutes.

Drilling weight 20,000#.

32 x

from 3788.15 to 3787.15'; jetted pits.

3780-3785 Diorite Breccia 100%, gray, white, some green, medium to coarse grain, dull to vitreous luster, calcareous and hematitic cement, angular fragments, 60% plagioclase, 20% orthoclase, 20% chlorite and talc, no visible porosity; trace of hematite, calcite and olivine; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3780-81-9 minutes; 81-82-6 minutes; 82-83-8 minutes; 83-84-6 minutes; 84-85-8 minutes.

Down from 7:21 to 7:27 P.M.; jetted pits.

3785-3790 Diorite Breccia 100%, white to gray, some green, medium to coarse grain, subvitreous to vitreous luster, calcareous and hematitic cement, angular fragments, 70% plagioclase, 20% orthoclase, 10% chlorite and talc; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3785-86-7 minutes; 86-87-8 minutes; 87-88-6 minutes; 88-89-7 minutes; 89-90-7 minutes.

3790-3795 Diorite Breccia 100%, white to gray, some green, medium to coarse grain, red, subvitreous to vitreous luster, calcareous and hematitic cement, angular fragments, 70% plagioclase, 20% orthoclase, 10% chlorite and talc; trace of hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3790-91-6 minutes; 91-92-8 minutes; 92-93-7 minutes; 93-94-9 minutes; 94-95-9 minutes.

Drilling weight 20,000#.

3795-3800 Diorite Breccia 100%, white to gray, some green, red, medium to coarse grain, subvitreous to vitreous luster, calcareous and hematitic cement, angular fragments, 70% plagioclase, 20% orthoclase, 10% chlorite and talc; trace of hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3795-96-10 minutes; 96-97-10 minutes; 97-98-9 minutes; 98-99-9 minutes; 99-3800-7 minutes.

3800-3805 Diorite Breccia 100%, white to gray, some green, red, medium to coarse grain, subvitreous to vitreous luster, calcareous and hematitic cement, angular fragments, 70% plagioclase, 20% orthoclase, 10% chlorite and talc; trace of hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3800-01-8 minutes; 01-02-7 minutes; 02-03-8 minutes; 03-04-7 minutes; 04-05-8 minutes.

3805-3810 Diorite Breccia 100%, dark gray, white, gray, some green and pink, coarse grain, dull to subvitreous luster, calcareous cement, angular fragments, badly weathered feldspar in part, plagioclase 60%, orthoclase 20%, chlorite 10%, talc 10%; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3805-06-7 minutes; 06-07-8 minutes; 07-08-11 minutes; 08-09-7 minutes; 09-10-8 minutes.

3755-3760 Diorite Breccia 100%, dark gray, white, gray, some green, red and brown, medium to coarse grained, medium soft, calcareous and hematitic cement, dull to vitreous luster, angular fragments, badly decomposed feldspar in lesser quantity, 60% plagioclase, 20% badly decomposed feldspar, 10% orthoclase, 5% chlorite, 5% talc; trace hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3755-56-9 minutes; 56-57-8 minutes; 57-58-7 minutes; 58-59-7 minutes; 59-60-8 minutes.

Drilling weight 25,000#.

3760-3765 Diorite Breccia 100%, dark gray, white, gray, some green, red and brown, medium to coarse grained, dull to vitreous luster, calcareous and hematitic cement, angular fragments, badly decomposed feldspar in minor quantity, 60% plagioclase, 20% badly decomposed feldspar, 10% orthoclase, 5% chlorite, 5% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3760-61-7 minutes; 61-62-9 minutes; 62-63-10 minutes; 63-64-12 minutes; 64-65-10 minutes.

3765-3770 Diorite Breccia 100%, dark gray, white, gray, some green, red and brown, medium to coarse grained, dull to vitreous luster, calcareous and hematitic cement, angular fragments, badly decomposed feldspar in minor quantity, 60% plagioclase, 20% badly decomposed feldspar, 10% orthoclase, 5% chlorite, 5% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3765-66-11 minutes; 66-67-8 minutes; 67-68-7 minutes; 68-69-10 minutes; 69-70-12 minutes.

Drilling weight 25,000#.

3770-3775 Diorite Breccia 100%, dark gray, white, gray, some green, red and brown, medium to coarse grained, dull to vitreous luster, calcareous and hematite cement, angular fragments, badly decomposed feldspar in minor quantities, 60% plagioclase, 20% badly decomposed feldspar, 10% orthoclase, 5% chlorite, 5% talc, no visible porosity; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3770-71-8 minutes; 71-72-7 minutes; 72-73-9 minutes; 73-74-9 minutes; 74-75-8 minutes.

6:00 P.M. April 18, 1953

3775-3780 Diorite Breccia 100%, dark gray, white, gray, some green, red and brown, medium to coarse grained, dull to vitreous luster, calcareous and hematitic cement, angular fragments, badly decomposed feldspar in part, 60% plagioclase, 10% orthoclase, 15% chlorite, 5% talc, no visible porosity; trace of hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3775-76-9 minutes; 76-77-6 minutes; 77-78-8 minutes; 78-79-8 minutes; 79-80-7 minutes.

Connection at 3787.15'; down from 6:43 to 7:05 P.M.; 1' depth correction

32 x

No. 1 Florence

Geological Well Service Company

6:00 A.M. April 18, 1953

Ran Bit #45, Hughes, OWS-R, 7 7/8".

On bottom and drilling at 9:25 A.M.

3735-3740 Diorite Breccia 100%, white and gray, some green, brown, and black, medium to coarse grained, medium soft, calcareous and hematitic cement, bright to vitreous luster, angular fragments, badly decomposed feldspar in appreciable quantity, much iron staining, 60% plagioclase, 20% orthoclase, 10% badly decomposed feldspar, 10% chlorite; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3735-36-28 minutes; 36-37-28 minutes; 37-38-24 minutes; 38-39-20 minutes; 39-40-16 minutes.

Drilling weight 25,000#.

Mud Analysis: viscosity 33, weight 8.6, water loss 14, filter cake 1/32, pH 7.

3740-3745 Diorite breccia 100%, gray, white and dark gray, some green, brown and red, medium to coarse grained, medium soft, calcareous and hematitic cement, dull to bright luster, angular fragments, badly decomposed feldspar in majority, much iron staining, 50% badly decomposed feldspar, 20% plagioclase, 10% orthoclase, 10% chlorite, 10% talc; trace hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3740-41-5 minutes; 41-42-5 minutes; 42-43-6 minutes; 43-44-8 minutes; 44-45-8 minutes.

Overhaul pump; down from 10:47 A.M. to 1:23 P.M.

3745-3750 Diorite Breccia 100%, dark gray, white, gray, some green, brown, and red, medium to coarse grained, medium soft, calcareous and hematitic cement, dull to bright luster, angular fragments, badly decomposed feldspar in majority, much iron staining, 60% badly decomposed feldspar, 15% plagioclase, 15% chlorite, 5% orthoclase, 5% talc; trace hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3745-46-8 minutes; 46-47-7 minutes; 47-48-8 minutes; 48-49-9 minutes; 49-50-8 minutes.

Drilling weight 25,000#.

Connection at 3758'; down from 2:24 P.M. to 2:30 P.M.

3750-3755 Diorite Breccia 100%, dark gray, white, gray, some green, brown, and red, medium to coarse grained, medium soft, calcareous and hematitic cement, dull to bright luster, angular fragments badly decomposed feldspar in majority, much iron staining, 40% badly decomposed feldspar, 30% plagioclase, 10% orthoclase, 10% chlorite, 10% talc; trace hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3750-51-6 minutes; 51-52-8 minutes; 52-53-9 minutes; 53-54-8 minutes; 54-55-8 minutes.

3730-3735 Diorite Breccia 100%, white, light to dark gray, some pink, green, medium coarse, angular fragments, subvitreous to vitreous luster, calcitic, hematitic, and siliceous cement, 50% light plagioclase, 20% dark gray plagioclase, 20% orthoclase, 10% chlorite, traces of talc, hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3730-31-25 minutes; 31-32-18 minutes; 32-33-27 minutes; 33-34-27 minutes; 34-35-25 minutes.

Stopped drilling at 5:15 A.M. for round trip at 3739'.

6:00 A.M.

32 × 1

3695-3700 Diorite Breccia 100%, white, gray, some pink, green, medium coarse, angular fragments, subvitreous to vitreous luster, loosely consolidated, 70% plagioclase, 20% orthoclase, 10% chlorite, trace of hematite and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3695-96-2 minutes; 96-97-2 minutes; 97-98-2 minutes; 98-99-2 minutes; 99-3700-2 minutes.

3700-3705 Diorite Breccia 100%, white, light gray, some pink, green, medium coarse, angular fragments, subvitreous to vitreous luster, loosely consolidated, 70% plagioclase, 20% orthoclase, 10% chlorite; trace of hematite, and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3700-01-3 minutes; 01-02-3 minutes; 02-03-5 minutes; 03-04-3 minutes; 04-05-5 minutes.

3705-3710 Diorite Breccia 100%, white, light gray, some pink, green, medium coarse, angular fragments, subvitreous to vitreous luster, loosely consolidated, 70% plagioclase, 20% orthoclase, 10% chlorite; trace of hematite and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3705-06-5 minutes; 06-07-5 minutes; 07-08-5 minutes; 08-09-5 minutes; 09-10-4 minutes.

Drilling weight 30,000#.

3710-3715 Diorite Breccia 100%, white, light gray, some pink, green, medium coarse, angular fragments, subvitreous to vitreous luster, loosely consolidated, 70% plagioclase, 20% orthoclase, 10% chlorite, traces of talc, hematite, calcite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3710-11-3 minutes; 11-12-4 minutes; 12-13-4 minutes; 13-14-3 minutes; 14-15-4 minutes.

3715-3720 Diorite Breccia 100%, white, light gray, some pink, green, medium coarse, angular fragments, subvitreous to vitreous luster, loosely consolidated, 70% plagioclase, 20% orthoclase, 10% chlorite, traces of talc, hematite, calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3715-16-4 minutes; 16-17-4 minutes; 17-18-4 minutes; 18-19-5 minutes; 19-20-3 minutes.

3720-3725 Diorite Breccia 100%, white, light gray, some pink, green, medium coarse, angular fragments, subvitreous to vitreous luster, loosely consolidated, 70% plagioclase, 20% orthoclase, 10% chlorite; calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3720-21-6 minutes; 21-22-5 minutes; 22-23-7 minutes; 23-24-5 minutes; 24-25-5 minutes.

3725-3730 Diorite Breccia 100%, white, light to dark gray, some pink, green, medium coarse, angular fragments, subvitreous to vitreous luster, calcitic, hematitic, and siliceous cement, 60% light plagioclase, 10% dark gray plagioclase, 20% orthoclase, 10% chlorite; traces of talc, hematite, calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 5725-26-8 minutes; 26-27-8 minutes; 27-28-5 minutes; 28-29-9 minutes; 29-30-13 minutes.

3665-3670 Diorite Breccia 100%, white, gray, pink, some green and black, medium coarse to coarse grain, angular fragments, subvitreous to vitreous luster, loosely consolidated, 50% plagioclase, 35% orthoclase, 15% chlorite, biotite, and talc, trace of hematite, no visible porosity; no odor, no stain, no fluoreseence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3665-66-2 minutes; 66-67-2 minutes; 67-68-3 minutes; 68-69-3 minutes; 69-70-2 minutes.

3670-3675 Diorite Breccia 100%, white, gray, some pink, green and black, medium coarse to coarse grain, angular fragments, subvitreous to vitreous luster, loosely consolidated, 60% plagioclase, 20% orthoclase, 20% chlorite, biotite, and talc; trace of hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3670-71-2 minutes; 71-72-2 minutes; 72-73-3 minutes; 73-74-3 minutes; 74-75-3 minutes.

3675-3680 Diorite Breccia 100%, white, gray, some pink, green, and black, medium coarse to coarse grain, angular fragments, subvitreous to vitreous luster, loosely consolidated, 60% plagioclase, 20% orthoclase, 20% chlorite, biotite, and talc; trace of hematite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3675-76-3 minutes; 76-77-3 minutes; 77-78-2 minutes; 78-79-2 minutes; 79-80-2 minutes.

Drilling weight 30,000#.

Connection at 3698'; down from 8:16 to 8:24 A.M.

3680-3685 Diorite Breccia 100%, white, gray, some pink, green and black, medium coarse to coarse grain, angular fragments, subvitreous to vitreous luster, loosely consolidated, 60% plagioclase, 20% orthoclase, 20% chlorite, biotite, and talc; trace of hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3680-81-2 minutes; 81-82-1 minute; 82-83-2 minutes; 83-84-2 minutes; 84-85-3 minutes.

3685-3690 Diorite Breccia 100%, white, gray, some pink, green, and black, medium coarse to coarse grain, angular fragments, subvitreous to vitreous luster, loosely consolidated, 60% plagioclase, 20% orthoclase, 20% chlorite, biotite, and talc; trace of hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3685-86-2 minutes; 86-87-2 minutes; 87-88-2 minutes; 88-89-2 minutes; 89-90-3 minutes.

3690-3695 Diorite Breccia 100%, white, gray, some pink, green, black, medium coarse grain, angular fragments, subvitreous luster to vitreous, loosely consolidated, 60% plagioclase, 20% orthoclase, 20% chlorite, biotite, and talc; trace of hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3690-91-2 minutes; 91-92-2 minutes; 92-93-4 minutes; 93-94-3 minutes; 94-95-3 minutes.

32 x

3635-3640 Diorite breccia 100%, white, gray, some pink, green, medium coarse grained, angular fragments, vitreous luster, calcareous and hematitic cement, loosely consolidated, 70% plagioclase, 20% orthoclase, 10% chlorite; olivine, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3635-36-4 minutes; 36-37-4 minutes; 37-38-5 minutes; 38-39-5 minutes; 39-40-6 minutes.

3640-3645 Diorite breccia 100%, white, gray, some pink, green, medium coarse grained, angular fragments, vitreous luster, calcareous and hematitic cement, 60% plagioclase, 30% orthoclase, 10% chlorite; strong trace of hematite, calcite, and olivine; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3640-41-5 minutes; 41-42-5 minutes; 42-43-5 minutes; 43-44-5 minutes; 44-45-8 minutes.

3645-3650 Diorite Breccia 100%, white, pink, gray, some green and black, medium coarse to coarse grain, angular fragments, subvitreous to vitreous luster, loosely consolidated, 40% plagioclase, 40% orthoclase, 20% chlorite, biotite, and talc; strong trace of hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3645-46-4 minutes; 46-47-2 minutes; 47-48-5 minutes; 48-49-5 minutes; 49-50-5 minutes.

3650-3655 Diorite Breccia 100%, white, pink, gray, some green and black, medium coarse grain, angular fragments, subvitreous to vitreous luster, loosely consolidated, 50% plagioclase, 35% orthoclase, 15% chlorite, biotite, and talc; trace of hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3650-51-2 minutes; 51-52-2 minutes; 52-53-6 minutes; 53-54-3 minutes; 54-55-3 minutes.

3655-3660 Diorite Breccia 100%, white, gray, pink, some green and black, medium coarse to coarse grain, angular fragments, subvitreous to vitreous luster, loosely consolidated, 50% plagioclase, 35% orthoclase, 15% chlorite, biotite, and talc; trace of hematite, pyrite, calcite, and quartz, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3655-56-2 minutes; 56-57-2 minutes; 57-58-1 minute; 58-59-1 minute; 59-60-2 minutes.

Connection at 3668'.

Drilling weight 30,000#.

3660-3665 Diorite breccia 100%, white, gray, pink, some green and black, medium coarse to coarse grain, angular fragments, subvitreous to vitreous luster, loosely consolidated, 50% plagioclase, 35% orthoclase, 15% chlorite, biotite, and talc; trace of hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3660-61-2 minutes; 61-62-2 minutes; 62-63-1 minutes; 63-64-3 minutes; 64-65-3 minutes.

32 x

3605-3610 Diorite breccia 100%, white and gray, some green, and pink, fine to medium grained, angular fragments, bright to vitreous luster, calcareous cement, much iron staining, 70% plagioclase, 20% orthoclase, 10% chlorite; trace calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3605-06-6 minutes; 06-07-5 minutes; 07-08-6 minutes; 08-09-5 minutes; 09-10-6 minutes.

3610-3615 Diorite breccia 100%, white, gray, pink, some green, medium to coarse grained, angular fragments, bright to vitreous luster, calcareous cement, much iron staining, 60% plagioclase, 30% orthoclase, 10% chlorite, no visible porosity; trace calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3610-11-5 minutes; 11-12-6 minutes; 12-13-4 minutes; 13-14-5 minutes; 14-15-5 minutes.

6:00 P.M.

3615-3620 Diorite breccia 100%, white, gray, pink, some green, medium coarse to coarse grain, anguler fragments, bright to vitreous luster, calcareous and hematic cement, 60% plagioclase, 30% orthoclase, 10% chlorite; trace of magnetite and calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3615-16-11 minutes; 16-17-9 minutes; 17-18-5 minutes; 18-19-5 minutes; 19-20-6 minutes.

3620-3625 Diorite breccia 100%, white, gray, pink, some green, black, medium coarse to coarse grained, angular fragments, vitreous luster, calcareous and hematic cement, loosely consolidated, 60% plagioclase, 20% orthoclase, 10% chlorite; trace of calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3620-21-5 minutes; 21-22-3 minutes; 22-23-5 minutes; 23-24-5 minutes; 24-25-7 minutes.

Mud Analysis: (6:30 P.M. April 17, 1953) viscosity 29, weight 8.6, water loss 16.8, filter cake 1/32, pH 7, salt content--nil.

3625-3630 Diorite breccia 100%, white, gray, some pink, green, medium coarse grained, angular fragments, vitreous luster, calcareous and hematic cement, loosely consolidated, 70% plagioclase, 20% orthoclase, 10% chlorite; trace of calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3625-26-6 minutes; 26-27-4 minutes; 27-28-4 minutes; 28-29-5 minutes; 29-30-5 minutes.

3630-3635 Diorite breccia 100%, white, gray, some pink, green, medium coarse grained, angular fragments, vitreous luster, calcareous and hematic cement, loosely consolidated, 70% plagioclase, 20% orthoclase, 10% chlorite; trace of calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3630-31-4 minutes; 31-32-5 minutes; 32-33-5 minutes; 33-34-7 minutes; 34-35-5 minutes.

Connection at 3639'; down from 7:09 to 7:25 P.M.; jetted pits.

3575-3580 Diorite breccia 100%, white and gray, some red, green and black, medium to coarse grained, hard, bright to vitreous luster, calcareous and siliceous cement, angular fragments, some iron staining, 80% plagioclase, 10% chlorite, 10% orthoclase; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3575-76-45 minutes; 76-77-40 minutes; 77-78-32 minutes; 78-79-5 minutes; 79-80-5 minutes.

Round trip to add on five more drill collars; at 3587'; out of hole at 10:45 A.M.; on bottom and drilling at 1:55 P.M.

3580-3585 Diorite breccia 100%, white and gray, some red, green and black, fine to medium grained, medium soft, bright to vitreous luster, calcareous and siliceous cement (more calcareous than previously noted), angular fragments, some iron staining, 70% plagioclase, 20% chlorite, 10% orthoclase, no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane0.0%; Drilling time: 3580-81-5 minutes; 81-82-5 minutes; 82-83-8 minutes; 83-84-9 minutes; 84-85-10 minutes.

3585-3590 Diorite breccia 100%, white and gray, some red, green, and black, fine to medium grained, medium soft, bright to vitreous luster, calcareous cement, angular fragments, some iron staining, 70% plagioclase, 20% chlorite, 10% orthoclase, no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3585-86-14 minutes; 86-87-11 minutes; 87-88-8 minutes; 88-89-6 minutes; 89-90-5 minutes.

Drilling weight 25,000#.

3590-3595 Diorite breccia 100%, white and gray, green, black, some red, fine to medium grained, angular fragments, bright to vitreous luster, calcareous cement, some iron staining, 70% plagioclase, 20% chlorite, 10% orthoclase, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3590-91-3 minutes; 91-92-5 minutes; 92-93-8 minutes; 93-94-6 minutes; 94-95-6 minutes.

3595-3600 Diorite breccia 100%, white and gray, green, black, some red, and pink, fine to medium grained, angular fragments, bright to vitreous luster, calcareous cement, some iron staining, 60% plagioclase, 20% chlorite, 20% orthoclase, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3595-96-9 minutes; 96-97-8 minutes; 97-98-8 minutes; 98-99-10 minutes; 99-3600-8 minutes.

Drilling weight 25,000#.

Connection at 3610'; down from 4:25 P.M. to 4:30 P.M.

3600-3605 Diorite breccia 100%, white and gray, green, black, some pink, fine to medium grained, angular fragments, bright to vitreous luster, calcareous cement, much iron staining, 60% plagioclase, 20% chlorite, 20% orthoclase, no visible porosity; trace calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3600-01-7 minutes; 01-02-7 minutes; 02-03-6 minutes; 03-04-7 minutes; 04-05-6 minutes.

3555-3560 Diorite breccia 100%, white and gray, medium to coarse grained, bright to vitreous luster, hard, calcareous and siliceous cement, some green and black, 60% plagioclase, 20% chlorite, 20% orthoclase, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3555-56-20 minutes; 56-57-18 minutes; 57-58-28 minutes; 58-59-30 minutes; 59-60-12 minutes.

Drilling weight 15,000#.

3560-3565 Diorite breccia 100%, white and gray, medium to coarse grained, bright to vitreous luster, hard, calcareous and siliceous cement, some green and black, 60% plagioclase, 20% chlorite, 20% orthoclase, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%, Drilling time: 3560-61-5 minutes; 61-62-22 minutes; 62-63-21 minutes; 63-64-13 minutes; 64-65-16 minutes.

12:00 Midnight April 17, 1953

3565-3570 Diorite breccia 100%, white and gray, medium to coarse grained, bright to vitreous luster, hard, calcareous and siliceous cement, 60% plagioclase, 20% orthoclase, 20% chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3565-66-19 minutes; 66-67-9 minutes; 67-68-9 minutes; 68-69-12 minutes; 69-70-36 minutes.

Drilling weight 16,000#.

Down from 11:53 to 12:08 A.M. to service rig; down from 12:38 A.M. to 1:27 A.M. to mix mud.

Mud Analysis: (12:30 A.M. April 17, 1953) viscosity 28, weight 8.7, water loss 16.4, filter cake 1/32, pH 7, salt content--nil.

3570-3575 Diorite breccia 100%, white and gray, medium to coarse grained, bright to vitreous luster, hard, calcareous and siliceous cement, 60% plagioclase, 20% orthoclase, 20% chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3570-71-54 minutes; 71-72-48 minutes; 72-73-44 minutes; 73-74-16 minutes; 74-75-24 minutes.

Stopped drilling 5:28 A.M. for round trip at 3577'.

6:00 A.M. April 17, 1953

Ran Bit #44, Hughes, OWS-R, 7 7/8".

On bottom and drilling 9:03 A.M.

Connection at 3582'; down from 9:43 A.M. to 9:52 A.M.

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No. 1 Florence Geological Well Service Company

8:00 A.M. April 16, 1953

On bottom and drilling at 8:28 A.M.

Repaired pump; down from 8:40 A.M. to 9:20 A.M.

3530-3535 Diorite breccia 100%, white and gray, fine to medium grained, some green and black, hard, bright to vitreous luster, calcareous and siliceous cement, angular fragments, 70% plagioclase, 20% chlorite, 10% orthoclase, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3530-31-14 minutes; 31-32-18 minutes; 32-33-19 minutes; 33-34-10 minutes; 34-35-12 minutes.

3535-3540 Diorite breccia 100%, white and gray, medium to coarse grained, some green and black, hard, bright to vitreous luster, calcareous and siliceous cement, angular fragments, 70% plagioclase, 20% chlorite, 10% orthoclase, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3535-36-11 minutes; 36-37-16 minutes; 37-38-20 minutes; 38-39-15 minutes; 39-40-15 minutes.

3540-3545 Diorite breccia 100%, white and gray, medium to coarse grained, some green and black, hard, bright to vitreous luster, calcareous and siliceous cement, angular fragments, 70%, plagioclase, 20% chlorite, 10% orthoclase, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3540-41-13 minutes; 41-42-13 minutes; 42-43-10 minutes; 43-44-10 minutes; 44-45-13 minutes.

Drilling weight 15,000#.

Connection at 3552'; down from 1:58 P.M. to 2:04 P.M.; repaired pump; down from 2:04 P.M. to 3:08 P.M.

3545-3550 Diorite breccia 100%, white and gray, medium to coarse grained, bright to vitreous luster, hard, calcareous and siliceous cement, some green and black, 60% plagioclase, 30% orthoclase, 10% chlorite, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3545-46-19 minutes; 46-47-15 minutes; 47-48-13 minutes; 48-49-16 minutes; 49-50-30 minutes.

Repaired pump; down from 4:04 P.M. to 5:13 P.M.

Repaired pump; down from 5:30 P.M. to 6:08 P.M.

Repaired pump; down from 6:15 P.M. to 6:43 P.M.

Repaired pump; down from 7:00 P.M. to 7:30 P.M.

3550-3555 Diorite breccia 100%, white and gray, medium to coarse grained, bright to vitreous luster, hard, calcareous and siliceous cement, some green and black, 60% plagioclase, 20% chlorite, 20% orthoclase, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3550-51-19 minutes; 51-52-16 minutes; 52-53-21 minutes; 53-54-17 minutes; 54-55-12 minutes.

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No. 1 Florence Geological Well Service Company

8:00 a.m. April 14, 1953

3510-3515 Diorite Breccia 100%, white, gray, some pink, medium to coarse grained, some green and black, angular fragments, loosely consolidated, bright to vitreous luster, 70% plagioclase, 20% chlorite, 10% orthoclase; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3510-11-21 minutes; 11-12-15 minutes; 12-13-10 minutes; 13-14-8 minutes; 14-15-10 minutes.

Connection 3523', down from 9:16 a.m. to 9:20 a.m., jetted mud pits, down from 9:20 a.m. to 9:35 a.m.

3515-3520 Diorite Breccia 100%, white, gray, some pink, medium to coarse grained, some green and black, angular fragments, loosely consolidated, bright to vitreous luster, 70% plagioclase, 20% cholrite, 10% orthoclase; no odor, no stain, no fluorescence, no cut; FGA, MGA, CGA Methane 0.0%, Ethene 0.0%; Drilling time: 3515-16-11 minutes; 16-17-8 minutes; 17-18-8 minutes; 18-19-9 minutes; 19-20-8 minutes.

Drilling weight: 25,000#

3520-3525 Diorite Breccia 100%, white, gray, some pink medium to coarse grained, some green and black, angular fragments, loosely consolidated, bright to vitreous luster, 70% plagioclase, 20% chlorite, 10% orthoclase; no odor, no stain, no fluorescence, no cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3520-21-8 minutes; 21-33-9 minutes; 22-23-9 minutes; 23-24-8 minutes; 24-25-10 minutes.

3525-3530 Diorite Breccia 100%, white, gray, some pink, medium to coarse grained, some green and black, angular, loosely consolidated, bright to vitreous luster, 70% plagioclase, 30% chlorite, 10% orthoclase; no odor, no stain, no fluorescence, no cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3525-26-9 minutes; 26-27-19 minutes; 27-28-16 minutes; 28-29-18 minutes; 29-30-18 minutes.

Twist-off at 3533', out of hole at 12:00 noon, left three collars in hole, waiting on overshot.

4:00 p.m., April 15, 1953

Waiting on over slips for fishing job.

12:00 midnight April 15, 1953

Fishing successful; r covered drill collars

Bit #43 Hughes OWSR

8:00 a.m. April 16, 1953

32 x

3495-3500 Talus Breccia Diorite 100%, gray to white, speckled with pink, green, black, angular fragments, loosely consolidated, hard, subvitreous luster; 80% plagioclase, 10% orthoclase, 10% chlorite, biotite; trace of olivene, hematite, calcite, limonite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3495-96-25 minutes; 96-97-26 minutes; 97-98-20 minutes; 98-99-22 minutes; 99-00-21 minutes.

3500-3505 Talus Breccia Diorite 100%, gray to white, speckled with pink, green and black; angular fragments, loosely consolidated, hard, subvitreous luster; 80% plagioclase, 10% orthoclase, 10% chlorite and biotite; trace of olivene, hematite, limonite, calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3500-01-27 minutes; 01-02-33 minutes; 02-03-21 minutes; 03-04-13 minutes; 04-05-21 minutes.

3505-3510 Talus Breccia Diorite 100%, gray to white, speckled with pink, green and black, angular fragments, loosely consolidated, hard, subvitreous luster; 80% plagioclase, 10% orthoclase, 10% chlorite and biotite; trace of olivene, hematite, limonite and calcite; no odor, no visible porosity, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3505-06-21 minutes; 06-07-21 minutes; 07-08-24 minutes; 08-09-23 minutes; 09-10-21 minutes.

8:00 a.m. April 15, 1953.

32 × 8

3465-3470 Talus Breccia 100%, diorite, light gray to white, some pink, green and black, angular fragments, loosely consolidated, hard, subvitreous luster; 80% plagioclase, 10% orthoclase, 10% chlorite and biotite; trace olivene, hematite, calcite and quartz; no odor, no visible but probably interstitial porosity; no stain, no fluorescence, no cut; no gas; Drilling time: 3465-66-20 minutes; 66-67-17 minutes; 67-68-20 minutes; 68-69-18 minutes; 69-70-14 minutes.

Round trip at 3475'; stopped drilling at 6:49 p.m.; resumed drilling at 8:58 p.m.; total time: 2 hours, 8 minutes; bit # 42, Hughes OWSR, 7 7/8"; hole reduced to 7 7/8".

3470-3475 Talus Breccia 100%, diorite, light gray to white, some pink, green and black, angular fragments, loosely consolidated, hard, subvitreous luster; 80% plagioclase, 10% orthoclase, 10% chlorite and biotite; trace of olivene, hematite, calcite and quartz; no visible but probable interstitial porosity; no odor, no stain, no fluorescence, no cut; No gas; Drilling time: 3470-71-23 minutes;71-72-23 minutes; 72-73-12 minutes; 73-74-23 minutes; 74-75-26minutes.

3475-3480 Talus Breccia 100%, diorite, light gray to white, some pink, green and black, angular fragments, loosely consolidated, hard, subvitreous luster; 80% plagioclase, 10% orthoclase, 10% chlorite and biotite; trace olivene, hematite, calcite, quartz; no visible but probable porosity; no odor, no stain, no fluorescence, no cut; no gas; Drilling time: 3475-76-17 minutes; 76-77-8 minutes; 77-78-12 minutes; 78-79-8 minutes; 79-80-11 minutes.

Weight on bit: 25,000#.

3480-3485 Talus Breccia 100%, diorite, light gray to white, some pink, green and black, angular fragments, loosely consolidated, hard, subvitreous luster; 80% plagioclase, 10% orthoclase, 10% chlorite and biotite; trace of olivene, hematite, calcite, quartz; no visible but probable porosity; no odor, no stain, no cut, no fluorescence; no gas; Drilling time: 3480-81-8 minutes; 81-82-9 minutes; 82-83-8 minutes; 83-84-6 minutes; 84-85-4 minutes.

Midnight, April 14, 1953.

3485-3490 Talus Breccia Diorite 100%, gray to white, flecked with pink, green and black; angular, loosely consolidated, subvitreous luster, hard, 80% plagioclase, 5% orthoclase, 10% chlorite, biotite; 10% hematite; limonite, olivene, calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3485-86-7 minutes; 86-87-8 minutes; 87-88-9 minutes; 88-89-9 minutes; 89-90-9 minutes.

Connection at 3492'; down from 12:00 to 12:22 a.m.

3490-3495 Talus Breccia Diorite 100%, gray to white, flecked with pink, green, and black, angular, loosely consolidated, subvitreous luster, hard; 80% plagioclase, 10% orthoclase, 10% chlorite, biotite; strong trace of olivene, hematite, limonite, calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3490-91-8 minutes; 91-92-25 minutes; 92-93-18 minutes; 93-94-25 minutes; 94-95-26 minutes.

32 × 6

3435-3440 Diorite Breccia 100%, white and gray, medium to coarse grained, medium hard, bright to vitreous luster, angular fragments, loosely consolidated, 70% plagioclase, 20% chlorite, 10% chlorite; trace biotite, shale; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA,MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3435-36-14 minutes; 36-37-17 minutes; 37-38-14 minutes; 38-39-14 minutes; 39-40-17 minutes.

3440-3445 Diorite Breccia 100%, white and gray, medium to coarse grained, medium hard, bright to vitreous luster, angular fragments, loosely consolidated, 70% plagioclase, 20% chlorite, 10% chlorite; trace of biotite, shale; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3440-41-11 minutes; 41-42-11 minutes; 42-43-12 minutes; 43-44-11 minutes; 44-45-15 minutes.

3445-3450 Diorite Breccia 100%, white and gray, medium to coarse grained, medium hard, bright to vitreous luster, angular fragments, loosely consolidated, 70% plagioclase, 20% chlorite, 10% orthoclase; trace biotite and shale; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 3445-46-17 minutes; 46-47-16 minutes; 47-48-12 minutes; 48-49-17 minutes; 49-50-18 minutes.

Weight on bit: 30,000#.

3450-3455 Diorite Breccia 100%, white and gray, medium to coarse grained, medium hard, bright to vitreous luster, angular fragments, loosely consolidated, 70% plagioclase, 20% chlorite, 10% orthoclase; trace biotite, shale; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3450-51-16 minutes; 51-52-11 minutes; 52-53-11 minutes; 53-54-12 minutes; 54-55-10 minutes.

12:00 midnight; connection at 3459'; down from 12:17 to 12:53; April 14, 1953.

3455-3460 Talus Breccia 100%, white to gray, medium to coarse grained, hard, subvitreousluster, angular fragments loosely consolidated; 70% plagioclase, 20% orthoclase, 10% chlorite, biotite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 3455-56-13 minutes; 56-57-16 minutes; 57-58-20 minutes; 58-59-15 minutes; 59-60-20 minutes.

Down from 1:53 to 2:44 a.m. to mix mud; stopped drilling at 2:59 a.m.; round trip at 3463'.

8:00 a.m.; ran bit # 41, Smith V-4, 8 5/3"; reamed 40' to bottom; lost fish again; Fishing! Recovered fish, put new liners in pump; on bottom and drilling at 3:15 p.m.

Mud Analysis: Viscosity 35, Weight 8.7, Water loss 16, Filter cake 1/32, pH 7. 4:00 p.m. April 14, 1953.

3460-3465 Talus Breccia 100%, diorite, light gray to white, some pink, green and black, angular fragments, loosely consolidated, hard, subvitreous luster, 80% plagioclase, 10% orthoclase, 10% chlorite and biotite; trace olivene, hematite, calcite and quartz; no visible but probably interstitial porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; No gas; Drilling time: 3460-61-25 minutes; 61-62-27 minutes; 62-63-34 minutes; 63-64-28 minutes; 64-65-20 minutes.

Weight on bit: 25,000#.

8:00 a.m. April 13, 1953.

Ran bit # 39, Smith, 4-11-22, 8 5/8"; on bottom and drilling at 8:03 a.m.

3405-3410 Diorite Breccia 100%, white to gray, medium to coarse grained, some green and black, bright to vitreous luster, angular, loosely consolidated, 60% plagioclase, 20% chlorite, 10% orthoclase, 10% biotite; trace magnetite; olivene; siltstone; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3405-06-9 minutes; 06-07-19 minutes; 07-08-30 minutes; 08-09-8 minutes; 09-10-12 minutes.

3410-3415 Diorite Breccia 100%, white to gray, medium to coarse grained, some green and black, bright to vitreous luster, angular, loosely consolidated, 60% plagioclase, 20% chlorite, 10% orthoclase, 10% biotite; trace magnetite, olivene, siltstone; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3410-11-12 minutes; 11-12-10 minutes; 12-13-10 minutes; 13-14-8 minutes; 14-15-11 minutes.

3415-3420 Diorite Breccia 100%, white to gray, medium to coarse grained, some green and black, bright to vitreous luster, angular, loosely consolidated, 60% plagioclase, 20% chlorite, 10% orthoclase, 10% biotite; trace siltstone; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3415-16-15 minutes; 16-17-18 minutes; 17-18-13 minutes; 18-19-10 minutes; 19-20-9 minutes.

Weight on bit: 24,000#.

3420-3425 Diorite Breccia 100%, white to gray, medium to coarse grained, some green and black, bright to vitreous luster, angular, loosely consolidated, 60% plagioclase, 20% chlorite, 10% orthoclase, 10% biotite; trace siltstone, no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3420-21-14 minutes; 21-22-9 minutes; 22-23-11 minutes; 23-24-11 minutes; 24-25-12 minutes.

Connection at 3430'; down from 1:03 p.m. to 1:07 p.m.

3425-3430 Diorite Breccia 100%, white to gray, medium to coarse grained, some green and black, bright to vitreous luster, angular, loosely consolidated, 60% plagioclase, 20% chlorite, 10% orthoclase, 10% biotite; trace siltstone; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3425-26-14 minutes; 26-27-10 minutes; 27-28-20 minutes; 28-29-16 minutes; 29-30-23 minutes.

Weight on bit: 30,000#.

3430-3435 Strongly Alterated Feldspar 100%, light to dark gray with some green, pink and black, very micaceous, trace pyritic, medium soft, angular, loosely consolidated, granular; poor interstitial porosity; no odor, no stain, no fluorescence, no cut; no gas; Drilling time: 3430-31-16 minutes; 31-32-15 minutes; 32-33-20 minutes; 33-34-11 minutes; 34-35-12minutes.

4:00 p.m. April 13, 1953.

Round trip at 3443'; out of hole at 4:05 p.m.; ran bit # 40, Smith V-1, 8 5/8"; on bottom at 8:17 p.m. and drilling.

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NO. 1 Florence Geological Well Service Company

4:00 p.m., April 12, 1953

Stopped drilling at 4:10 p.m., greasing rig; resumed drilling at 4:18 p.m.

3390-3395 Talus breccia 95%, diroite, light gray to white, with green and black ferro-magnesium minerals, angular fragmencs, subvitreous luster, hard, loosely consolidated, 80% plagioclas, 15% orthoclase, 5% chlorite, biotite, hornblend, trace olivene, no visible but probable interscitial porosity; Shale 5%, red, pink and spotted with black ferro-magnesium minerals, siltstone and claystone sized, arenaceous, slightly calcareous, very micaceous, hematitic, medium hardness; no odor, nostain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3390-91-16 minutes; 91-92-7 minutes; 92-93-19 minutes; 93-94-16 minutes; 94-95-19 minutes;

Drilling weight 20,000#

3395-3400 Talus breccia 100%, diorite, light gray, white with some pink, green and black, angular fragments loosely consolidated, subvitreous luster, hard, 35% plagioclase, 10% orthoclose, 5% chlorite and biotite, trace olivene and red shale; no visible but probable interstitial porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3395-96-16 minutes; 96-97-20 minutes; 97-98-23 minutes; 98-99-17 minutes; 99-3400-19 minutes;

Stopped drilling at 7:27 p.m.; connection at 3401'; resumed drilling at 7:39 p.m.

3400-3405 Talus breccia 100%, diorite, light gray, white with pink, green and black less common, angular fragments loosely consolidated, subvitreous luster, hard, very poor intersititial calcite cementing, 85% plagioclose, 5% orthocllase, 5%, chlorite and biotite, 5% talc (?), trace shale, olivene and calcite; no visible but probable intersititial porosity; no odor, no stain, no fluorescnce, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%; Ethane 0.0%; Drilling time: 3400-01-14 minutes; 01-02-18 minutes; 02-03-19 minutes; 03-04-19 minutes; 04-05-17 minutes;

Mud analysis 9:30 p.m., viscosity 33, cake filter 1/32, ph 7, weight 8.7, water loss 17, salt content, none.

Stopped drilling at 9:31 p.m.; round-trip at 3408'

12:00 midnight

Started reaming at 1:45 a.m., April 13, 1953

8:00 a.m., April 13, 1953

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FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3365-66-8 minutes; 66-67-6 minutes; 67-68-16 minutes; 68-69-15 minutes; 69-70-13 minutes.

Weight on bit: 24,000#.

3370-3375 Diorite Breccia 100%, white to gray, angular fragments, loosely consolidated, bright to vitreous luster, some green and black, 60% plagioclase, 20% chlorite, 10% orthoclase, 10% biotite; trace of hornblende and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 3370-71-13 minutes; 71-72-12 minutes; 72-73-13 minutes; 73-74-13 minutes; 74-75-13 minutes.

3375-3380 Diorite Breccia 100%, white to gray, angular fragments, medium to coarse grained, bright to vitreous luster, some green and black; 60% plagioclase, 20% chlorite; 10% orthoclase, 10% biotite; trace talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3375-76-9 minutes; 76-77-5 minutes; 77-78-5 minutes; 78-79-6 minutes; 79-80-6 minutes.

3380-3385 Diorite Breccia 90%, gray and white, medium to coarse grained, loosely consolidated, angular fragments, bright to vitreous luster, 70% plagioclase, 20% chlorite; 10% orthoclase; Siltstone 10%, red and brown, medium soft, dull luster, chunky, arenaceous, very micaceous, hematite; slightly calcareous; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 3380-81-6 minutes; 81-82-7 minutes; 82-83-6 minutes; 83-84-8 minutes; 84-85-9 minutes.

3385-3390 Siltstone 100%, red and brown, medium soft, dull luster, chunky, arenaceous, very micaceous, hematite, slightly calcareous; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3385-86-8 minutes; 86-87-10 minutes; 87-88-9 minutes; 88-89-8minutes; 89-90-20minutes.

4:00 p.m. April 12, 1953.

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No. 1 Florence Geological Well Service Company

3340-3345 Talus Breccia 100%, diorite, light gray, pink, white, with some green and black, equi-granular texture, subvitreous luster, angular fragments, subvitreous luster, hard, 75% plagioclase, 15% orthoclase, 10% chlorite, trace talc (?), biotite and hornblende; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3340-41-12 minutes; 41-42-10 minutes; 42-43-11 minutes; 43-44-9 minutes; 44-45-11 minutes.

3345-3350 Talus Breccia 100%, diorite, light gray, white, with some green, equigranular texture, subvitreous luster, angular, hard, loosely cemented; 75% plagioclase, 15% orthoclase, 10% chlorite and biotite; trace of talc and hornblende; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3345-46-21 minutes; 46-47-36 minutes; 47-48-42 minutes; 48-49-23 minutes; 49-50-15 minutes.

Weight on bit: 20,000#.

3350-3355 Talus Breccia 100%, diorite, light gray, white, with some green equigranular texture, subvitreous luster, angular fragments loosely cemented, hard; 75% plagioclase, 15% orthoclase, 10% chlorite and biotite; trace of talc and hornblende; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3350-51-9 minutes; 51-52-10 minutes; 52-53-15 minutes; 53-54-10 minutes; 54-55-17 minutes.

Down from 1:15 to 1:27 a.m. for repairs; down from 2:45 to 3:48 a.m. for repairs.

Stopped drilling at 5:58 a.m. at 3359' for round trip.

8:00 a.m. April 12, 1953.

Ran bit # 38, H. C. Smith, 4-11-22-8 5/8"; (note the smaller size bit; hold being reduced); on bottom and drilling at 10:43 a.m.

3355-3360 Diorite Breecia 100%, gray to white, some green and black, angular fragments, bright to vitreous luster, loosely consolidated, 60% plagioclase, 20% orthoclase, 10% biotite, 10% chlorite; trace of hornblende and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3355-56-16 minutes; 56-57-13 minutes; 57-58-31 minutes; 58-59-39 minutes; 59-60-18 minutes.

3360-3365 Diorite Breccia 100%, gray to white, some green and black, angular fragments, bright to vitreous luster, loosely consolidated, 60% plagioclase, 20% orthoclase, 10% biotite, 10% chlorite; trace hornblende and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3360-61-11 minutes; 61-62-8 minutes; 62-63-8 minutes; 63-64-8 minutes; 64-65-8 minutes.

Connection at 3372'; down from 1:03 p.m. to 1:09 p.m.

3365-3370 Diorite Breccia 100%, white to gray, angular fragments, loosely consolidated, bright to vitreous luster, some green and black, 60% plagioclase, 20% chlorite, 10% orthoclase, 10% biotite; no odor, trace hornblende and talc, no stain, no fluorescence, no carbon tetrachloride cut.

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3310-3315 Talus Breecia 100%, diorite, light gray to light pink, with green and black, subvitreous luster, equi-granular texture, angular fragments, hard, poor calcite interstitual cementing; 65% plagioclase, 20% orthoclase; 15% chlorite, trace hornblende; no visible but probably interstitual porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3310-11-12 minutes; 11-12-11 minutes; 12-13-26 minutes; 13-14-25 minutes; 14-15-17 minutes.

Mud Analysis: (6:00 p.m.) Viscosity 30, Weight 8.6, Water loss 16, Cake 1/32, pH 7, Salt, none.

3315-3320 Talus Breecia 100%, diorite, light gray to light pink, with some green and black, equi-granular texture, subvitreous luster, angular fragments, hard, poor calcite interstitial cementing, 70% plagioclase, 15% orthoclase, 15% chlorite, trace biotite, olivene and hornblende; no visible porosity, but probably interstitial porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3315-16-17 minutes; 16-17-14 minutes; 18-19-29 minutes; 19-20-19 minutes.

Weight on bit: 20,000#.

3320-3325 Talus Breecia 100%, diorite, light gray to pink, with green and black, equi-granular texture, subvitreous luster, angular fragments, hard, 65% plagioclase, 20% orthoclase, 10% chlorite and biotite; 5% olivene; trace talc (?); red and black shale; no visible but probably interstitual porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut, no gas; Drilling time: 3320-21-18 minutes; 21-22-7 minutes; 22-23-13 minutes; 23-24-7 minutes; 24-25-7 minutes.

3325-3330 Talus Breecia 100%, diorite, light gray to pink, with green and black, equi-granular texture, subvitreous luster, angular fragments, hard, 50% plagioclase, 35% orthoclase, 10% chlorite and biotite; 5% olivene; trace talc(?) and red and black shale; no visible but probable interstitial porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; Drilling time: 3325-26-10 minutes; 26-27-10 minutes; 27-28-12 minutes; 28-29-11 minutes; 29-30-11 minutes.

Weight on bit: 20,000#.

3330-3335 Talus Breecia 100%, diorite, light gray, pink, white with some green and black, equi-granular texture, subvitreous luster, angular fragments, hard, 70% plagioclase, 20% orthoclase, 10% chlorite, trace talc (?), biotite and shale; no visible but probably interstitial porosity; no gas, no odor, no stain, no fluorescence, no carbon tetrachloride cut; Drilling time: 3330-31-13 minutes; 31-32-14 minutes; 32-33-14 minutes; 33-34-12 minutes; 34-35-15 minutes.

3335-3340 Talus Breecia 100%, diorite, light gray, pink, white with some green and black, equigranular texture, subvitreous luster, angular fragments, hard, 70% plagioclase, 20% orthoclase, 10% chlorite; trace talc (?) and biotite; no visible but probable interstitual porosity; no odor, no gas, no stain, no fluorescence, no carbon tetrachloride cut; Drilling time: 3335-36-16 minutes; 36-37-21 minutes; 37-38-17 minutes; 38-39-13 minutes; 39-40-11 minutes.

Stopped drilling at 10:40 p.m.; connection at 3343'; resumed drilling at 10:47 p.m.

8:00 a.m. April 9, 1953.

Repaired motor; resumed drilling at 11:40 a.m.; round trip at 3296'; out of hole at 12:37 p.m.; ran bit # 36, Hughes W7R, 8 3/4"; reamed 45' to bottom; on bottom and drilling at 4:00 p.m.

Twist off!

12:00 midnight; waiting for orders; fish still in hole.

8:00 a.m. April 10, 1953.

Fishing! 8:00 a.m. April 11, 1953.

Recovered fish; ran bit # 37, Hughes W7R, 8 3/4"; reamed 70' to bottom; resumed drilling at 12:40 p.m.; also laid down and picked up 13 pipe joints.

3290-3295 Sandstone 100%, arkose, gray to white, medium to coarse grained, loosely consolidated, bright to vitreous luster, angular, 60% plagioclase, 20% orthoclase, 10% chlorite, 10% biotite; no odor, no stain, no fluorescence, no cut with carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3290-91-31 minutes; 91-92-20 minutes; 92-93-31 minutes; 93-94-24 minutes; 94-95-19 minutes.

3295-3300 Sandstone 100%, arkose, gray and white, medium to coarse grained, loosely consolidated, bright to vitreous luster, angular, 60% plagioclase, 20% orthoclase, 10% biotite, 10% chlorite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, CGA, MGA Methane 0.0%, Ethane 0.0%; Drilling time: 3295-96-11 minutes; 96-97-9 minutes; 97-98-9 minutes; 98-99-13 minutes; 99-00-10 minutes.

Weight on bit: 20,000#.

3300-3305 Sandstone 100%, arkose, gray and white, medium to coarse grained, loosely consolidated, bright to vitreous luster, angular, 70% plagioclase, 10% orthoclase, 10% biotite, 10% chlorite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3300-01-11 minutes; 01-02-12 minutes; 02-03-16 minutes; 03-04-12 minutes; 04-05-10 minutes.

Connection at 3312' with a plus 4' correction; down from 3:05 p.m. to 3:18 p.m.

3305-3310 Sandstone 100%, arkose, gray and white, medium to coarse grained, bright to vitreous luster, angular, loosely consolidated; 70% plagioclase, 10% orthoclase, 10% biotite, 10% chlorite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3305-06-12 minutes; 06-07-10 minutes; 07-08-11 minutes; 08-09-12 minutes; 09-10-10 minutes.

Weight on bit: 24,000#.

4:00 p.m. April 11, 1953.

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Stopped drilling 2:55 A.M.; working on motors; resumed drilling 3:30 A.M.

Stopped drilling 3:34 A.M.; working on motors; resumed drilling 3:57 A.M.

12:00 Midnight April 9, 1953

3280-3285 Sandstone 100%, white to gray, trace of black, green, coarse grained, angular, loosely consolidated, 50% plagioclase, 30% orthoclase, 20% biotite and chlorite; traces of talc, olivene, and hornblende, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3280-81-22 minutes; 81-82-24 minutes; 82-83-25 minutes; 83-84-35 minutes; 84-85-13 minutes.

Drilling weight 16,000#.

3285-3290 Sandstone 100%, white to gray, trace of black, green, coarse grained, angular, loosely consolidated, 50% plagioclase, 30% orthoclase, 20% biotite and chlorite; traces of talc, olivene, and hornblende, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3285-86-21 minutes; 86-87-16 minutes; 87-88-26 minutes; 88-89-41 minutes; 89-90-29 minutes.

Stopped drilling 8:32 A.M. to service rig.

8:00 A.M. April 9, 1953.

32 ×

No. 1 Florence Geological Well Service Company

8:00 A.M. April 8, 1953

3260-3265 Sandstone 80%, arkose, gray, white to pink, coarse grained, medium soft, bright to vitreous luster, loosely consolidated, angular, orthoclase 50%, plagioclase 40%, chlorite 10%; talc 20%, white, soft, earthy luster, chunky, mineralized; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3260-61-17 minutes; 61-62-16 minutes; 62-63-11 minutes; 63-64-12 minutes; 64-65-14 minutes.

3265-3270 Sandstone 70%, arkose, gray, white to pin, coarse grained, medium soft, bright to vitreous luster, loosely consolidated, angular, orthoclase 45%, plagioclase 45%, chlorite 10%; talc 30%, white, soft, earthy luster, chunky, mineralized; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3265-66-17 minutes; 66-67-14 minutes; 67-68-16 minutes; 68-69-11 minutes; 69-70-9 minutes.

Drilling weight 20,000#.

3270-3275 Sandstone 90%, arkose, gray, white to pin, coarse grained, medium soft, bright to vitreous luster, angular, orthoclase 50%, plagioclase 30%, hornblende 10%, chlorite 10%; talc 10%, white soft, earthy luster, chunky, mineralized, minor quantities of biotite and serpentine; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3270-71-8 minutes; 71-72-8 minutes; 72-73-15 minutes; 73-74-20 minutes; 74-75-20 minutes.

Connection: 3276'; down from 11:15 A.M. to 11:23 A.M.

Round trip 3278'; out of hole 12:01 P.M.; reamed 30' to bottom; on bottom 5:38 P.M. April 8, 1953; total time 5 hours 37 minutes.

Ran Bit #35, Hughes, W7R, 8 3/4".

Stopped drilling 5:45 P.M.; putting in new spark plugs in motors; resumed drilling 6:04 P.M.

Stopped drilling 6:42 P.M.; working on motors; resumed drilling 6:54 P.M.

3275-3280 Sandstone 10%, arkose, white, light gray, green, black, some pink and yellow, medium to coarse grained, angular, loosely consolidated, 50% plagioclase, 40% orthoclase, 10% chlorite; trace serpentine, shale, and olivene; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3275-76-32 minutes; 76-77-21 minutes; 77-78-32 minutes; 78-79-21 minutes; 79-80-23 minutes.

Drilling weight 20,000#.

Stopped drilling 7:25 P.M.; working on motors; resumed drilling 7:41 P.M.

Stopped drilling 8:10 P.M.; working on motors; resumed drilling 9:28 P.M.

Stopped drilling 9:55 P.M.; working on motors; resumed drilling 2:43 A.M. April 9, 1953.

32 x 8

Drilling time: 3250-51-11 minutes; 51-52-15 minutes; 52-53-20 minutes; 53-54-22 minutes; 54-55-14 minutes.

Down from 6:30 to 6:50 A.M. to work on pump.

3255-3260 Sandstone 100%, arkose, white to gray, coarse grain, angular, loosely consolidated, subvitreous luster, 60% plagioclase, 20% orthoclase, 20% chlorite, biotite; trace of talc, hornblende, and olivine; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3255-56-11 minutes; 56-57-13 minutes; 57-58-18 minutes; 58-59-15 minutes; 59-60-7 minutes.

Mud Analysis: (5:30 A.M. April 8, 1953), viscosity 32, weight 8.7, water loss 17.4, filter cake 1/32, pH 7, chlorides--nil.

8:00 A.M. April 8, 1953.

32 × 1

3220-3225 Sandstone 100%, arkose, white, light gray, coarse grain, angular, loosely consolidated, subvitreous luster, 70% plagioclase, 10% orthoclase, 20% chlorite, biotite and hornblende, trace of talc and olivine; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3220-21-14 minutes; 21-22-17 minutes; 22-23-14 minutes; 23-24-10 minutes; 24-25-17 minutes.

3225-3230 Sandstone 100%, arkose, white, gray, coarse grained, angular, loosely consolidated, subvitreous luster, 70% plagioclase, 10% orthoclase, 20% chlorite, biotite, and hornblende, trace of talc and olivine, no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3225-26-15 minutes; 26-27-16 minutes; 27-28-9 minutes; 28-29-4 minutes; 29-30-5 minutes.

3230-3235 Sandstone 100%, arkose, white, gray, coarse grained, angular, loosely consolidated, subvitreous luster, 70% plagioclase, 10% orthoclase, 20% chlorite, biotite and hornblende, trace of talc and olivine; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3230-31-4 minutes; 31-32-5 minutes; 32-33-7 minutes; 33-34-8 minutes; 34-35-5 minutes.

3235-3240 Sandstone 100%, arkose, white to gray, coarse grain, angular, loosely consolidated, subvitreous luster, 70% plagioclase, 10% orthoclase, 20% chlorite, biotite and hornblende, trace of talc and olivine; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3235-36-7 minutes; 36-37-10 minutes; 37-38-11 minutes; 38-39-12minutes; 39-40-9 minutes.

Connection: 3246'; down from 3:19 to 3:42 A.M.

3240-3245 Sandstone 100%, arkose, white to gray, coarse grain, angular, loosely consolidated, subvitreous luster, plagioclase 60%, orthoclase 20%, 20% chlorite, biotite; trace of talc, hornblende and olivine; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3240-41-16 minutes; 41-42-12 minutes; 42-43-10 minutes; 43-44-9 minutes; 44-45-7 minutes.

Drilling weight 20,000#.

3245-3250 Sandstone 100%, arkose, white to gray, coarse grain, angular, loosely consolidated, subvitreous luster, 60% plagioclase, 20% orthoclase, 20% chlorite, biotite; trace of talc, hornblende, and olivine; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3245-46-8 minutes; 46-47-6 minutes; 47-48-10 minutes; 48-49-8 minutes; 49-50-9 minutes.

3250-3255 Sandstone 100%, arkose, white to gray, coarse grain, angular, loosely consolidated, subvitreous luster, 60% plagioclase, 20% orthoclase, 20% chlorite, biotite; trace of talc, hornblende, and olivine; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%;

32 x

Round trip: 3200'; out of hole 1:52 P.M.

4:00 P.M. April 7, 1953

New Bit #34, Hughes OWC; totco 11°.

On bottom 8:52 P.M.; total time 6 hours for trip and reaming.

3195-3200 Sandstone 100%, arkose, white to light gray, some pink, coarse grained, angular, vitreous to subvitreous luster, loosely consolidated, 60% plagioclase, 30% orthoclase, 10% chlorite, trace biotite and talc; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3195-96-8 minutes; 96-97-10 minutes; 97-98-8 minutes; 98-99-13 minutes; 99-3200-17 minutes.

Drilling weight 20,000#.

3200-3205 Sandstone 100%, arkose, white, gray and pink, coarse grained, angular, loosely consolidated, vitreous to subvitreous luster, medium soft, 45% plagioclase, 40% orthoclase, 15% chlorite and talc; trace biotite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3200-01-10 minutes; 01-02-10 minutes; 02-03-14 minutes; 03-04-8 minutes; 04-05-11 minutes.

3205-3210 Sandstone 100%, arkose, white, gray, pink, green, black, coarse grained, angular, loosely consolidated, vitreous to subvitreous luster, medium soft, 55% plagioclase, 30% orthoclase, 15% chlorite and talc, trace biotite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3205-06-9 minutes; 06-07-11 minutes; 07-08-8 minutes; 08-09-8 minutes; 09-10-9 minutes.

Drilling weight 20,000#.

3210-3215 Sandstone 100%, arkose, white, gray, pink, green, black, medium to coarse grained, angular, loosely consolidated, vitreous to subvitreous luster, medium soft, 75% plagioclase, 10% orthoclase, 15% chlorite and talc, trace biotite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3210-11-8 minutes; 11-12-10 minutes; 12-13-7 minutes; 13-14-7 minutes; 14-15-9 minutes.

Stopped drilling 10:10 P.M.; connection 3216'; resumed drilling 10:17 P.M.

3215-3220 Sandstone 100%, arkose, white, light gray, pink, dark green, black, medium to coarse grained, angular, loosely consolidated, vitreous to subvitreous luster, medium soft, 75% plagioclase, 10% orthoclase, 15% chlorite, trace biotite and talc; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3215-16-4 minutes; 16-17-5 minutes; 17-18-5 minutes; 18-19-9 minutes; 19-20-8 minutes.

12:00 Midnight

8:00 A.M. April 7, 1953

3165-3170 Sandstone 100%, arkose, white, gray and pink, medium to coarse grained, medium soft, angular, bright to vitreous luster, loosely consolidated, 65% plagioclase, 20% orthoclase, 15% chlorite, minor quantities biotite and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3165-66-13 minutes; 66-67-12 minutes; 67-68-13 minutes; 68-69-9 minutes; 69-70-8 minutes.

Drilling weight 22,000#.

3170-3175 Sandstone 100%, arkose, white, gray and pink, medium to coarse grained, medium soft, angular, bright to vitreous luster, loosely consolidated, 65% plagioclase, 20% orthoclase, 15% chlorite, minor quantities biotite and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3170-71-8 minutes; 71-72-7 minutes; 72-73-8 minutes; 73-74-8 minutes; 74-75-8 minutes.

Mud Analysis: viscosity 32, weight 8.7, water loss 19, filter cake 1/32, pH 7.

3175-3180 Sandstone 100%, arkose, white, gray and pink, medium to coarse grained, medium soft, angular, bright to vitreous luster, loosely consolidated, 75% plagioclase, 15% orthoclase, 10% chlorite, minor quantities of talc; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3175-76-12 minutes; 76-77-9 minutes; 77-78-8 minutes; 78-79-7 minutes; 79-80-8 minutes.

Drilling weight 22,000#.

Connection: 3186'; down from 10:53 A.M. to 11:00 A.M.

3180-3185 Sandstone 100%, arkose, white and gray, medium to coarse grained, angular, bright to subvitreous luster, 60% plagioclase, 20% orthoclase, 20%, chlorite; trace of biotite and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3180-81-12 minutes; 81-82-6 minutes; 82-83-12 minutes; 83-84-9 minutes; 84-85-15 minutes.

3185-3190 Sandstone 100%, arkose, white and gray, medium to coarse grained, angular, bright to subvitreous luster, 60% plagioclase, 20% orthoclase, 20% chlorite; trace of biotite and talc; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3185-86-11 minutes; 86-87-11 minutes; 87-88-13 minutes; 88-89-14 minutes; 89-90-15 minutes.

Drilling weight 22,000#.

3190-3195 Sandstone 100%, arkose, white and gray, medium to coarse grained, angular, bright to subvitreous luster, 60% plagioclase, 20% orthoclase, 20% chlorite; trace of biotite and talc; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3190-91-18 minutes; 91-92-14 minutes; 92-93-15 minutes; 93-94-10 minutes; 94-95-9 minutes.

35% orthoclase, 15% chlorite, biotite, hornblende; trace talc, hematite, biotite, calcite, soapstone; no visible porosity; no odor, no stain, nofluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3130-31-9 minutes; 31-32-7 minutes; 32-33-20 minutes; 33-34-15 minutes; 34-35-20 minutes.

3135-3140 Sandstone 100%, arkose, white to gray, coarse grained, angular, loosely consolidated, subvitreous to vitreous luster, 50% plagioclase; 35% orthoclase; 15% chlorite; biotite; hornblende; trace talc; hematite; biotite; calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3135-36-13 minutes; 36-37-12 minutes; 37-38-10 minutes; 38-39-11 minutes; 39-40-11 minutes; Weight on bit: 20,000#.

3140-3145 Sandstone 100%, arkose, white to gray, coarse grain, angular, loosely consolidated, subvitreous to vitreous luster; 50% plagioclase; 35% orthoclase; chlorite; biotite; hornblende; trace talc, hematite; biotite, calcite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3140-41-9 minutes; 41-42-8 minutes; 42-43-11 minutes; 43-44-12 minutes; 44-45-11 minutes.

3145-3150 Sandstone 100%, arkose, white to gray, angular, coarse grain; loosely consolidated, subvitreous to vitreous luster; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3145-46-8 minutes; 46-47-7 minutes; 47-48-9 minutes; 48-49-13 minutes; 49-50-9 minutes.

Mud Analysis: (5:00a.m.) Viscosity 33, Weight 8.7, Water loss 17.6, Cake 1/32, pH 7, Salt, none.

Connection at 3157'; down from 5:20 to 5:45 a.m.

3150-3155 Sandstone 100%, arkose, white to gray, angular, coarse grain, loosely consolidated, subvitreous to vitreous luster; orthoclase 35%, 50% plagioclase; 15% chlorite, biotite, hornblende; trace hematite; talc, olivene; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3150-51-8 minutes; 51-52-8 minutes; 52-53-8 minutes; 53-54-10 minutes; 54-55-13 minutes; Weight on bit: 20,000#.

3155-3160 Sandstone 100%, arkose, white to gray, angular, coarse grain, loosely consolidated, subvitreous to vitreous luster, 60% plagioclase, 30% orthoclase; 10% chlorite, biotite, hornblende; trace hematite, talc, olivene; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3155-56-9 minutes; 56-57-11 minutes; 57-58-10minutes; 58-59-13 minutes; 59-60-11 minutes.

3160-3165 Sandstone 100%, arkose, white to gray, angular, subvitreous to vitreous, loosely consolidated, coarse grain; 60% plagioclase; 30% orthoclase; 10% chlorite, biotite, hornblende; trace of talc, hematite; olivene; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; Drilling time: 3160-61-15 minutes; 61-62-12 minutes; 62-63-12 minutes; 63-64-15 minutes; 64-65-17 minutes.

Weight on bit: 20,000#.

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MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3100-01-10 minutes; 01-02-6 minutes; 02-03-8 minutes; 03-04-13 minutes; 04-05-14 minutes.

3105-3110 Sandstone 100%, arkose, white to light gray with some pink, angular, loosely consolidated, vitreous to subvitreous luster; 70% plagioclase, 20% orthoclase; 10% chlorite; olivene; biotite; trace hematite; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3105-06-13 minutes; 06-07-12 minutes; 07-08-11 minutes; 08-09-10 minutes; 09-10-12 minutes.

Weight on bit: 23,000#.

Stopped drilling at 7:10 p.m.; working on pump;resumed drilling at 8:33 p.m.

3110-3115 Sandstone 100%, arkose, white to light gray with some pink, angular, medium to coarse grained, loosely consolidated, vitreous to subvitreous luster; 40% plagioclase, 40% orthoclase, 15% soapstone; 5% chlorite, olivene, biotite, calcite; trace hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3110-11-14 minutes; 11-12-11 minutes; 12-13-13 minutes; 13-14-14 minutes; 14-15-14 minutes. Weight on bit: 23,000#.

Mud Analysis: (11:00 p.m.) Viscosity 31, Weight 8.7, Water loss 14, Cake 1/32, pH 7, Salt, none.

3115-3120 Sandstone 100%, arkose, white to light gray and pink, medium to predominantly coarse grained, angular, loosely consolidated, vitreous to subvitreous luster; 40% orthoclase, 40% plagioclase, 20% chlorite; biotite and soapstone; trace hematite and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling Drilling time: 3115-16-12 minutes; 16-17-11 minutes; 17-18-13 minutes; 18-19-9 minutes; 19-20-10 minutes.

3120-3125 Sandstone 100%, arkose, white to light gray and pink, coarse grained, angular, loosely consolidated, vitreous to subvitreous luster, 45% orthoclase, 40% plagioclase, 15% chlorite, biotite and soapstone; trace hematite and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane0.0%, Ethane0.0%; Drilling time: 3120-21-18 minutes; 21-22-15 minutes; 22-23-11 minutes; 23-24-7 minutes; 24-25-13 minutes.

Weight on bit: 23,000#.

Stopped drilling at 11:14 p.m.; connection at 3126'; resumed drilling at 11:26.

12:00 midnight.

3125-3130 Sandstone 100%, arkose, white to gray, coarse grain, angular, loosely consolidated, subvitreous to vitreous luster; 70% plagioclase; 20% orthoclase; 10% chlorite, biotite and hornblende; trace talc, hematite, biotite and calcite; soapstone; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3125-26-12 minutes; 26-27-13 minutes; 27-28-13 minutes; 28-29-13 minutes; 29-30-13 minutes.

3130-3135 Sandstone 100%, arkose, white to gray, coarse grain, angular, loosely consolidated, subvitreous to vitreous luster, 50% plagioclase.

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8:00 a.m. April 6, 1953.

3070-3075 Sandstone 100%, arkose, white to gray, fine to medium grained, angular, bright to vitreous luster, loosely consolidated, medium soft, 50% plagioclase; 30% orthoclase, 10% chlorite; 10% biotite; no visible porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGAMethane 0.0%, Ethane 0.0%; Drilling time: 3070-71-12 minutes; 71-72-6 minutes; 72-73-12 minutes; 73-74-9 minutes; 74-75-10 minutes.

Down from 8:40 a.m. to 1:50 p.m. to repair rods and liners in pump.

3075-3080 Sandstone 100%, arkose, white to gray, fine to medium grained, angular, bright to vitreous luster, loosely consolidated, medium soft, 60%plagioclase, 20% orthoclase; 20%chlorite; no visible porosity; trace biotite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3075-76-7 minutes; 76-77-6 minutes; 77-78-6 minutes; 78-79-4 minutes; 79-80-5 minutes.

3080-3085 Sandstone 100%, arkose, white to gray, medium to coarse grained, angular, bright to vitreous luster; loosely consolidated, medium soft, 50% plagioclase, 30% orthoclase, 20% chlorite, no visible porosity; trace biotite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3080-81-5 minutes; 81-82-6 minutes; 82-83-10 minutes; 83-84-8 minutes; 84-85-9 minutes.

3085-3090 Sandstone 100%, arkose, white to gray, medium to coarse grained, angular, bright to vitreous luster, loosely consolidated, medium soft, 60% plagioclase, 20% orthoclase; 20% chlorite, no visible porosity; trace biotite;no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethahe 0.0%; Drilling time: 3085-86-9 minutes; 86-87-9 minutes; 87-88-10 minutes; 88-89-8 minutes; 89-90-4 minutes.

Connection at 3095'; down from 3:47 p.m. to 3:55 p.m.; 4:00 p.m. April 6, 1953.

3090-3095 Sandstone 100%, arkose, white to light gray, with pink less common, angular, loosely consolidated, vitreous to subvitreous luster, poorly cemented in part with calcite; 70% plagioclase, 25% orthoclase; 5% chlorite; mica and olivene; trace hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA,CGA Methahe 0.0%, Ethane 0.0%; Drilling time: 3090-91-6 minutes; 91-92-5 minutes; 92-93-12 minutes; 93-94-6 minutes; 94-95-4 minutes.

Stopped drilling at 3:47 p.m.; connection at 3095'; resumed drilling at 3:54.

3095-3100 Sandstone 100%, arkose, white to light gray with some pink, angular, loosely consolidated, vitreous to subvitreous luster, poorly cemented in part with calcite, 70% plagioclase, 20% orthoclase, 10% chlorite, mica and olivene; trace hematite; chert; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3095-96-10 minutes; 96-97-15 minutes; 97-98-16 minutes; 98-99-8 minutes; 99-00-6 minutes.

3100-3105 Sandstone 100%, arkose, white to light gray with some pink, angular, loosely consolidated, vitreous to subvitreous luster, poorly cemented in part with calcite, 70% plagioclase, 15% orthoclase, 15% chlorite, olivene and biotite; trace hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut.

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10% chlorite, biotite and hornblende; trace soapstone, hematite and olivene; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3060-61-8 minutes; 61-62-7 minutes; 62-63-7 minutes; 63-64-7 minutes; 64-65-8 minutes.

Down from 6:04 a.m. to 7:27 a.m.; worked on pump.

3065-3070 Sandstone 100%, arkose, white to gray, coarse grained, loosely consolidated, angular, subvitreous luster, 70% plagioclase; 20% orthoclase; 10% chlorite; biotite; hornblende; trace soapstone, hematite; olivene; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3065-66-5 minutes; 66-67-8 minutes; 67-68-9 minutes; 68-69-12 minutes; 69-70-10 minutes.

8:00 a.m. April 6, 1953.

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3035-3040 Sandstone 100%, arkose, white to light gray and pink, coarse to very coarse grained, loosely consolidated, subvitreous luster, angular, medium hard, 50% orthoclase,45% plagioclase, 5% chlorite and biotite; trace soapstone; hematite; talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 3035-36-13 minutes; 36-37-14 minutes; 37-38-18minutes; 38-39-28 minutes; 39-40-30 minutes.

12:00 midnight.

Resumed drilling at 1:30 a.m. April 6, 1953; total elapsed trip time: 3 hours, 35 minutes; bit # 32, W7R.

3040-3045 Sandstone 100%, arkose, white to gray, coarse grain, loosely consolidated, subvitreous luster, angular, 70% plagioclase, 20% orthoclase, 10% chlorite, biotite and hornblende; trace of soapstone, hematite; olivene; no odor, no stain, no fluorescence, no cut, no visible porosity; MGA, BMGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 3040-41-13 minutes; 41-42-19 minutes; 42-43-27 minutes; 43-44-30 minutes; 44-45-16 minutes.

Weight on bit: 23,000#.

3045-3050 Sandstone 100%, arkose, white to gray, coarse grain, loosely consolidated, angular, subvitreous luster; 70% plagioclase; 20% orthoclase; 10% chlorite, biotite and hornblende; trace soapstone, hematite; no odor, no stain, no fluorescence, no cut; no visible porosity; MGA, BMGA, CGA Methane0.0%, Ethane0.0%; Drilling time: 3045-46-11 minutes; 46-47-8 minutes; 47-48-8 minutes; 48-49-11 minutes; 49-50-10 minutes.

3050-3055 Sandstone 100%, arkose, white to gray, coarse grain, loosely consolidated, angular, subvitreous luster, 70% plagioclase; 20% orthoclase; 10% chlorite, biotite and hornblende; trace of soapstone; hematite and olivene; no odor, no stain, no fluorescence, no cut; no visible porosity; MGA, BMGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 3050-51-17 minutes; 51-52-14 minutes; 52-53-8 minutes; 53-54-5 minutes; 54-55-7 minutes.

Weight on bit: 23,000#.

3055-3060 Sandstone 100%, arkose, white to gray, coarse grained, loosely consolidated, angular, subvitreous luster, 70% plagioclase; 20% orthoclase; 10% chlorite, biotite and hornblende; trace of soapstone, hematite and olivene; no odor, no stain, no fluorescence, no cut; no visible porosity; MGA, Methane0;0%, Ethane 0.0%; BMGA Methane0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane0.0%; Drilling time: 3055-56-13 minutes; 56-57-10 minutes; 57-58-15 minutes; 58-59-13 minutes; 59-60-8 minutes.

Connection at 3065'; down from 4:58 to 5:06.

3060-3065 Sandstone 100%, arkose, white to gray, coarse grained, loosely consolidated, angular, subvitreous luster; 70% plagioclase; 20% orthoclase.

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No carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%,Ethane0.0%; Drilling time: 3005-06-3 minutes; 06-07-8 minutes; 07-08-3 minutes; 08-09-3 minutes; 09-10-6 minutes.

3010-3015 Sandstone 100%, arkose, white to gray, fine to medium grained, soft, angular, loosely consolidated, bright to vitreous luster; 60% plagioclase; 30% chlorite; 10% orthoclase, good intergranular porosity; minor quantities biotite and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane0.0%, Ethane0.0%; Drilling time: 3010-11-3 minutes; 11-12-3 minutes; 12-13-5 minutes; 13-14-8 minutes; 14-15-9 minutes.

4:00 p.m.

3015-3020 Sandstone 100%, arkose, white to light gray with some pink, coarse grained, angular, loosely consolidated, vitreous to subvitreous luster; medium soft, 50% plagioclase, 40% orthoclase; 10% chlorite; hornblende, biotite; trace olivene and gypsum; good intergranular porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA,BMGA, CGA Methane0.0%,Ethane0.0%; Drilling time: 3015-16-9 minutes; 16-17-7 minutes; 17-18-7 minutes; 18-19-7 minutes; 19-20-7 minutes.

3020-3025 Sandstone 100%, arkose, white to light gray with some pink, coarse grained, angular, loosely consolidated, vitreous to subvitreous luster, medium soft, 60% plagioclase, 30% orthoclase; 10% chlorite and biotite; trace gypsum, olivene, calcite; good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 3020-21-6 minutes; 21-22-7 minutes; 22-23-8 minutes; 23-24-6 minutes; 24-25-10minutes.

Mud Analysis: (5:30 p.m.) Viscosity 35, Weight 8.7, Water loss 12, Cake 1/32, pH 7, Salt none.

3025-3030 Sandstone 100%, arkose, white to light gray with some pink, coarse grained, angular, loosely consolidated, vitreous to subvitreous luster, medium soft, 65% plagioclase, 30% orthoclase, 5% chlorite and biotite; trace gypsum, olivene and calcite; good intergranular porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 3025-26-11 minutes; 26-27-13 minutes; 27-28-11 minutes; 28-29-12 minutes; 29-30-13 minutes.

Stopped drilling at 6:22 p.m.; connection at 3034.8'; serviced rig; resumed drilling at 6:37 p.m.

3030-3035 Sandstone 100%, arkose, white to light gray with some pink, coarse grained, angular, loosely consolidated, vitreous to subvitreous luster, medium soft, 65% plagioclase, 30% orthoclase, 5% chlorite and biotite; trace olivene and calcite; good intergranular porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 3030-31-12 minutes; 31-32-7 minutes; 32-33-8 minutes; 33-34-7 minutes; 34-35-11 minutes.

Weight on bit: 23,000#.

2975-2980 Sandstone 100%, arkose, white to gray, fine to medium grained, soft, loosely consolidated, angular, bright to vitreous luster; 70% plagioclase, 15% chlorite, 15% orthoclase; good intergranular porosity; minor quantities of biotite and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.2%, Ethane 0.06%; MGA,CGA Methane0.0%, Ethane 0.0%; Drilling time: 2975-76-2 minutes; 76-77-2 minutes; 77-78-2 minutes; 78-79-5 minutes; 79-80-4 minutes.

2980-2985 Sandstone 100%, arkose, white to gray, fine to medium grained, soft, loosely consolidated, angular, bright to vitreous luster, 70% plagioclase, 15% chlorite, 15% orthoclase; good intergranular porosity; minor quantities of biotite and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA,MGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 2980-81-6 minutes; 81-82-3 minutes; 82-83-5 minutes; 83-84-5 minutes; 84-85-7 minutes.

2985-2990 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, angular, bright to vitreous luster, loosely consolidated, 80% plagioclase; 10% orthoclase; 10% chlorite; minor quantities talc and biotite: no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2985-86-6 minutes; 86-37-4 minutes; 87-88-6 minutes; 88-89-8 minutes; 89-90-7 minutes.

2990-2995 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, angular, bright to vitreous luster, loosely cemented, 70% plagioclase, 20% orthoclase, 10% chlorite; minor quantities talc and biotite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane0.0%, Ethane0.0%;Drilling time: 2990-91-7 minutes; 91-92-8 minutes; 92-93-8 minutes; 93-94-11 minutes; 94-95-10 minutes.

Connection at 3005'; down from 2:18 p.m. to 2:24 p.m.

2995-3000 Sandstone 100%, arkose, white to gray, fine to coarse grained, soft, angular, bright to vitreous luster, loosely cemehted; 60% plagioclase; 20% chlorite; 20% orthoclase; minro quantities talc and biotite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA,CGA Methane0.0%, Ethane 0.0%; Drilling time: 2995-96-9 minutes; 96-97-8 minutes; 97-98-6 minutes; 98-99-7 minutes; 99-00-5 minutes.

Down from 2:50 p.m. to 2:58 p.m.; jetted mud pits and mixed new mud.

3000-3005 Sandstone 100%, arkose, white to gray, fine to medium grained, soft, angular, bright to vitreous luster, loosely cemented; 60% plagioclase; 25% chlorite, 15% orthoclase; good intergranular porosity; minor quantities of talc and biotite; trace shale; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 3000-01-5 minutes; 01-02-2 minutes; 02-03-3 minutes; 03-04-3 minutes; 04-05-4 minutes.

3005-3010 Sandstone 100%, arkose, white to gray, fine to medium grained, soft, angular, loosely consolidated, bright to vitreous luster, 60% plagioclase; 30% chlorite; 10% orthoclase; good intergranular porosity; minor quantities of talc, biotite and shale; no odor, no stain, no fluorescence.

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2945-2950 Sandstone 100%, arkose, white to gray, medium to very coarse grain, angular, subvitreous luster, loosely consolidated; 70% plagioclase; 10% orthoclase; 20% chlorite, biotite and hornblende; trace calcite, olivene; no odor, no stain, no fluorescence, no cut; no visible porosity; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2945-46-8 minutes; 46-47-11 minutes; 47-48-15 minutes; 48-49-13 minutes; 49-50-14 minutes.

Trip at 2951' at 4:20 a.m. April 5, 1953.

Ran bit # 32, Hughes OWS-R, 8 3/4"; repaired rotary chain and motors; reamed 10' to bottom; on bottom and drilling at 8:15 a.m.

2950-2955 Sandstone 80%, arkose, white to gray, medium grained, bright to vitreous luster, loosely consolidated, angular, 80% plagioclase; 10% orthoclase; 10% chlorite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2950-51-15 minutes; 51-52-8 minutes; 52-53-9 minutes; 53-54-6 minutes; 54-55-6 minutes.

2955-2960 Sandstone 80%, arkose, white to gray, medium grained, bright to vitreous luster, loosely consolidated, angular; 80% plagioclase; 10% orthoclase; 10% chlorite; minor quantities of biotite and hornblende; Talc 20%, white, very soft, bright luster, chunky; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane0.0%, Ethane0.0%; Drilling time: 2955-56-12 minutes; 56-57-10 minutes; 57-58-7 minutes; 58-59-6 minutes; 59-60-7 minutes.

2960-2965 Sandstone 100%, arkose, white to gray, medium grained, bright to vitreous luster, loose sand, angular, soft, 60% plagioclase, 30% orthoclase; 10% orthoclase; minor quantities of biotite and hornblende and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%; FGA Methane 0.3%, Ethane 0.06%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2960-61-5 minutes; 61-62-6 minutes; 62-63-5 minutes; 63-64-4 minutes; 64-65-6 minutes.

Connection at 2975'; down from 10:38 a.m. to 10:47 a.m.; down from 10:47 a.m. to 11:25 a.m.; repair rig.

2965-2970 Sandstone 100%, arkose, white to gray, fine to medium grained, soft, loosely consolidated, angular, bright to vitreous luster, 60% plagioclase, 30% chlorite, 10% orthoclase; good intergranular porosity; minor quantities of biotite and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.3%, Ethane 0.0%; MGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2965-66-5 minutes; 66-67-5 minutes; 67-68-3 minutes; 68-69-4 minutes; 69-70-4 minutes.

2970-2975 Sandstone 100%, arkose, white to gray, fine to medium grained, soft, loosely consolidated, angular, bright to vitreous luster, 70% plagioclase; 30% chlorite; 10% orthoclase; good intergranular porosity; minor quantities of biotite and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane0.0%, Ethane0.0%; Drilling time: 2970-71-4 minutes; 71-72-5 minutes; 72-73-4 minutes; 73-74-5 minutes; 74-75-5 minutes.

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Stopped drilling at 8:25 p.m.; connection at 2916'; resumed drilling at 8:31 p.m.

2915-2920 Sandstone 100%, arkose, white to light gray and pink, coarse to very coarse, angular, vitreous to subvitreous luster, loosely consolidated, 80% plagioclase, 10% orthoclase, 10% chlorite, trace biotite; gypsum, olivene and hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane0.0%, Ethane0.0%; Drilling time: 2915-16-8 minutes; 16-17-5 minutes; 17-18-7 minutes; 18-19-20 minutes; 19-20-15 minutes.

Weight on bit: 23,000#.

Stopped drilling at 9:07 p.m.; packer in pump replaced; resumed drilling at 9:36 p.m.

2920-2925 Sandstone 100%, arkose, white to light gray and pink, coarse to very coarse, angular, vitreous to subvitreous luster, loosely consolidated, 80% plagioclase, 10% orthoclase, 10% chlorite, trace biotite, gypsum, olivene and hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2920-21-23 minutes; 21-22-21 minutes; 22-23-10 minutes; 23-24-13 minutes; 24-25-13 minutes.

12:00 midnight.

2925-2930 Sandstone 100%, arkose, white to gray, medium to very coarse, angular, vitreous luster, loosely consolidated; 80% plagioclase; 10% orthoclase; 10% chlorite and hornblende; trace biotite; calcite; olivene; no odor, no stain, no fluorescence, no cut, no visible porosity; MGA, BMGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 2925-26-17 minutes; 26-27-5 minutes; 27-28-13 minutes; 28-29-8 minutes; 29-30-8 minutes.

2930-2935 Sandstone 100%, arkose, white to gray, medium to very calcareous; angular, vitreous luster; loosely consolidated; 80% plagioclase;10% orthoclase; 10% chlorite and hornblende; trace biotite; calcite; olivene; no odor, no stain, no fluorescence, no cut, no visible porosity; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2930-31-8 minutes; 31-32-11 minutes; 32-33-10 minutes; 33-34-8 minutes; 34-35-8 minutes.

2935-2940 Sandstone 100%, arkose, white to gray, medium to very coarse, angular, subvitreous luster, loosely consolidated; 80% plagioclase; 10% orthoclase; 10% chlorite and hornblende; trace biotite, calcite, olivene; no odor, no stain, no fluorescence, no cut; no visible porosity; MGA, BMGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 2935-36-16 minutes; 36-37-15 minutes; 37-38-14 minutes; 38-39-21 minutes; 39-40-15 minutes.

2940-2945 Sandstone 100%, arkose, white to gray, medium to very coarse, angular, subvitreous luster, loosely consolidated; 80% plagioclase; 10% orthoclase; 10% chlorite, biotite, hornblende;trace calcite, olivene, talc; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2940-41-8 minutes; 41-42-13 minutes; 42-43-7 minutes; 43-44-17 minutes; 44-45-9 minutes.

Connection at 2945'.

Drilling time: 2880-81-5 minutes;81-82-6 minutes; 82-83-6 minutes; 83-84-7 minutes; 84-85-9 minutes.

Stopped drilling at 1:45 p.m.; connection at 2886'; resumed drilling at 1:53 p.m.

2885-2890 Sandstone 100%, arkose, white to light gray with pink less common, coarse to very coarse grained, angular, loosely consolidated, 85% plagioclase, 15% orthoclase, 5% chlorite, trace biotite, olivene; hematite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2885-86-19 minutes; 86-87-12 minutes; 87-88-13 minutes; 88-89-16 minutes; 89-90-17 minutes.

Weight on bit: 22,000#.

2890-2895 Sandstone 100%, arkose, white to light gray with some pink, coarse to very coarse grained, angular, loosely consolidated; 85% plagioclase, 10% orthoclase; 5% chlorite; trace biotite, olivene and hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2890-91-18 minutes; 91-92-19 minutes; 92-93-17 minutes; 93-94-15 minutes; 94-95-19 minutes.

4:00 p.m. April 4, 1953.

2895-2900 Sandstone 100%, arkose, white to light gray with some pink, coarse to very coarse grained, angular, loosely consolidated, 85% plagioclase, 10% orthoclase, 5% chlorite, trace biotite, olivene, hematite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2895-96-15 minutes; 96-97-13 minutes; 97-98-13 minutes; 98-99-13 minutes; 99-00-15 minutes.

Weight on bit: 22,000#.

2900-2905 Sandstone 100%, arkose, white to light gray with pink, coarse to very coarse grained, angular, loosely consolidated, 70% plagioclase, 25% orthoclase, 5% chlorite, trace biotite, olivene and hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut;MGA, BMGA, CGA Methane 0.0%,Ethane 0.0%;Drilling time: 2900-01-13 minutes; 01-02-11 minutes; 02-03-12 minutes; 03-04-7 minutes; 04-05-10 minutes.

2905-2910 Sandstone 100%, arkose, white to light gray and pink, coarse to very coarse grained, angular, loosely consolidated, 70% plagioclase, 25% orthoclase; 5% chlorite; trace biotite, olivene and hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA,CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2905-06-9 minutes; 06-07-7 minutes; 07-08-7 minutes; 08-09-17 minutes; 09-10-17 minutes.

2910-2915 Sandstone 100%, arkose, white, to light gray and pink, coarse to coarse grained, angular, loosely consolidated, 70% plagioclase, 25% orthoclase; 5% chlorite; trace biotite; olivene and hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2910-11-13 minutes; 11-12-14 minutes; 12-13-9 minutes; 13-14-9 minutes; 14-15-9 minutes.

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No. 1 Florence Geologic Well Service Company

8:00 a.m. April 4, 1953.

Stopped drilling at 8:00 a.m.; connection at 2857'; 1' correction; resumed drilling at 8:06 a.m.

2855-2860 Sandstone 100%, arkose, white to light gray with pink less common, coarse to very coarse grained, angular, loosely consolidated and poorly cemented with calcite, medium hardness; 80% plagioclase, 15% orthclase; 5% chlorite, trace serpentine, olivene and biotite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2855-56-7 minutes; 56-57-11 minutes; 57-58-11 minutes; 58-59-8 minutes; 59-60-16 minutes.

Weight on bit: 20,000#.

2860-2865 Sandstone 100%, arkose, white to light gray with pink less common, spotted black with ferro-magnesium minerals, coarse to very coarse grained, angular, loosely consolidated and poorly cemented with calcite; medium hardness, 80% plagioclase, 15% orthoclase, 5% chlorite, trace biotite; olivene; soapstone and hematite; MGA,BMGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2860-61-7 minutes; 61-62-11 minutes; 62-63-11 minutes; 63-64-8minutes; 64-65-16 minutes.

Mud Analysis: (10:00 a.m.) Viscosity 30, Weight 8.6, Water loss 16, Cake 1/32. pH 6, Salt, none.

2865-2870 Sandstone, 100%, arkose, white to light gray, some pink, spotted black with ferro-magnesium minerals, coarse to very coarse grained, angular, loosely consolidated and poorly cemented with calcite, medium hardness; 80% plagioclase, 15% orthoclase, 5% chlorite; trace biotite, olivene and hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA,BMGA,CGA Methane 0.0%, Ethane0.0%; Drilling time: 2865-66-12 minutes; 66-67-24 minutes; 67-68-16 minutes; 68-69-13 minutes; 69-70-12 minutes.

2870-2875 Sandstone 100%, arkose, white to light gray, with pink less common, spotted black with ferro-magnesium minerals, coarse to very coarse grained, angular, loosely consolidated and poorly cemented with calcite, medium hardness; 80% plagioclase, 15% orthoclase; 5% chlorite; trace biotite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2870-71-12 minutes; 71-72-13 minutes; 72-73-15 minutes; 73-74-14 minutes; 74-75-9 minutes.

2875-2880 Sandstone 100%, arkose, white to light gray with pink less common, spotted black with ferro-magnesium minerals, coarse to very coarse grained, angular, loosely consolidated, 80% plagioclase, 15% orthoclase; 5% chlorite; trace biotite; olivene and hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 2875-76-6 minutes; 76-77-7 minutes;77-78-13 minutes; 78-79-21 minutes; 79-80-19 minutes.

2880-2885 Sandstone 100%, arkose, white to light gray with pink less common, coarse to very coarse grained, angular, loosely consolidated, 80% plagioclase; 15% orthoclase, 5% chlorite; trace biotite; olivene and hematite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane0.0%, Ethane0.0%.

32 x

2840-2845 Sandstone 100%, arkose, white to gray, medium grain, angular, loosely consolidated; 85% plagioclase, 10% orthoclase; 5% chlorite; trace of biotite and olivene; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2840-41-12 minutes; 41-42-9 minutes; 42-43-8 minutes; 43-44-12 minutes; 44-45-11 minutes.

2845-2850 Sandstone 100%, arkose, white to gray, medium grain, angular, loosely consolidated, 85% plagioclase; 10% orthoclase; 5% chlorite; trace biotite and olivene; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 2845-46-7 minutes; 46-47-3 minutes; 47-48-10 minutes; 48-49-9 minutes; 49-50-8 minutes.

2850-2855 Sandstone 100%, arkose, white to gray, medium grains, angular, loosely consolidated, 85% plagioclase, 10% orthoclase; 5% chlorite; trace biotite and olivene; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane0.0%, Ethane0.0%; Drilling time: 2850-51-12 minutes; 51-52-9 minutes; 52-53-5 minutes; 53-54-6 minutes; 54-55-5 minutes.

8:00 a.m. April 4, 1953.

32 × 1

2800-2805 Sandstone 100%, arkose, white to gray and pink, medium to coarse grained, angular, bright to vitreous luster, loosely consolidated, 60% plagioclase, 20% orthoclase; 20% chlorite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane0.0%, Ethane0.0%; Drilling time: 2800-01-19 minutes; 01-02-12 minutes; 02-03-8 minutes; 03-04-11 minutes; 04-05-9 minutes. 4:00 p.m. April 3, 1953.

2805-2810 Sandstone 100%, arkose, white to gray, some pink, coarse grained, angular, subvitreous to vitreous luster, loosely consolidated, 70% plagioclase, 15% orthoclase, 15% chlorite; trace biotite; gypsum and olivene; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane0.0%, Ethane0.0%; Drilling time: 2805-06-12 minutes; 06-07-18 minutes; 07-08-13 minutes; 08-09-12 minutes; 09-10-9 minutes. Weight on bit: 20,000#.

2810-2815 Sandstone 100%, arkose, white to gray, some pink, coarse grained, angular, subvitreous to vitreous, loosely consolidated, cemented with calcite, 60% plagioclase, 25% orthoclase, 15% chlorite, trace biotite, hematite and olivene; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 2810-11-14 minutes; 11-12-15 minutes; 12-13-12 minutes; 13-14-10 minutes; 14-15-16 minutes.

2815-2820 Sandstone 100%, arkose, white to gray, some pink, coarse grained, angular, subvitreous to vitreous, loosely consolidated, cemented with calcite, 80% plagioclase; 15% orthoclase, 5% chlorite, trace biotite; hematite; olivene and gypsum; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2815-16-20 minutes; 16-17-24 minutes; 17-18-14 minutes; 18-19-15 minutes; 19-20-15 minutes.

2820-2825 Sandstone 100%, arkose, white to light gray with pink less common, medium to coarse grained, angular, poorly cemented with calcite, loosely consolidated, medium hardness, 85% plagioclase, 10% orthoclase, 5% chlorite, trace biotite and olivene; no visible porosity, but probable porosity due to the conglomeritic nature of the rock; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane0.0%, Ethane0.0%; Drilling time: 2820-21-20 minutes; 21-22-29 minutes; 22-23-13 minutes; 23-24-13 minutes; 24-25-7 minutes.

2825-2830 Sandstone 100%, arkose, white to light gray, some pink, medium to predominantly coarse grained, angular, loosely consolidated and cemented with calcite, medium hardness, 85% plagioclase, 10% orthoclase, 5% chlorite, trace biotite and olivene; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA,CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2825-26-10 minutes; 26-27-14 minutes; 27-28-14 minutes; 28-29-8 minutes; 29-30-7 minutes.

2830-2835 Sandstone 100%, same as above.

Stopped drilling at 10:27 p.m.; trip at 2836'; 12:00 midnight; resumed drilling at 4:10 a.m.; total trip time: 5 hours, 37 minutes; bit # 32, Hughes W7R.

2835-2840 Sandstone 100%, arkose, white to gray, medium grain, angular, loosely consolidated, 85% plagioclase; 10% orthoclase; 5% chlorite; trace biotite and olivene; no odor, no stain, no fluorescence, no cut; MGA, CGA, BMGA Methane 0.0%, Ethane 0.0%; Drilling time: 2835-36-19 minutes; 36-37-14 minutes; 37-38-22 minutes; 38-39-17 minutes; 39-40-14 minutes.

32 × 8

2770-2775 Sandstone 100%, arkose, white, pink to gray, medium to coarse grained, medium soft, angular, bright to vitreous luster, loosely consolidated, 50% plagioclase, 20% orthoclase, 10% hornblende, 10% chlorite, 10% biotite; minor quantities of calcite and magnetite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2770-71-5 minutes; 71-72-6 minutes; 72-73-9 minutes; 73-74-10 minutes; 74-75-9 minutes.

2775-2780 Sandstone 100%, arkose, white, pink to gray, medium to coarse grained, medium soft, angular, bright to vitreous luster, loosely consolidated, 50% plagioclase, 20% orthoclase, 10% hornblende, 10% chlorite, 10% biotite; minor quantities of calcite, magnetite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane0.0%; 2775-76-8 minutes; 76-77-9 minutes; 77-78-12 minutes; 78-79-8 minutes; 79-80-10 minutes.

Mud Analysis: Viscosity 34, Weight 8.8, Water loss 20, Filter cake 1/32, pH 8, Weight on bit: 20,000#.

2780-2785 Sandstone 100%, arkose, white, gray and pink, medium to coarse grained, angular, medium soft, loosely consolidated, bright to vitreous luster; 60% plagioclase, 20% orthoclase, 20% chlorite; no odor, no stain, no fluorescence, no carbon tetrachloride cut;MGA, FGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2780-81-16 minutes; 81-82-9 minutes; 82-83-11 minutes; 83-84-8 minutes; 84-85-7 minutes.

2785-2790 Sandstone 100%, arkose, white, gray and pink, medium to coarse grained, angular, medium soft, loosely consolidated, bright to vitreous luster; 60% plagioclase, 20% orthoclase, 20% chlorite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2785-86-9 minutes; 86-87-10 minutes; 87-88-8 minutes; 88-89-12 minutes; 89-90-10 minutes.

Weight on bit:22,000#.

2790-2795 Sandstone 100%, arkose, white, gray and pink, medium to coarse grained, angular, medium soft, loosely consolidated, bright to vitreous luster, 60% plagioclase, 20% orthoclase, 20% chlorite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2790-91-12minutes; 91-92-7 minutes; 92-93-15 minutes; 93-94-18 minutes; 94-95-22 minutes.

Connection at 2798'; down from 1:10 p.m. to 1:17 p.m.; jetted mud pits; on bottom at 1:31 p.m.

2795-2800 Sandstone 100%, arkose, white, gray, pink, medium to coarse grained, angular, medium soft, loosely consolidated, bright to vitreous luster, 60% plagioclase, 20% orthoclase, 20% chlorite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2795-96-16 minutes; 96-97-14 minutes; 97-98-14 minutes; 98-99-16 minutes; 99-00-17 minutes.

Weight on bit: 22,000#.

32 x

2735-2740 Sandstone (?) 100%, arkose, white to gray, with pink less common, coarse grained, loosely consolidated, angular, 85% plagioclase, 5% orthoclase, 10% chlorite, biotite and hornblende; strong trace calcite, hematite and talc; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Meth ne0.0%, Ethane 0.0%; Drilling time: 2735-36-22 minutes; 36-37-21 minutes; 37-38-20 minutes; 38-39-19 minutes; 39-40-10 minutes.

Weight on bit: 23,000#. 12:00 midnight.

Stopped drilling at 10:32 p.m.; round trip at 2743'; resumed drilling at 1:10 a.m.; total trip time: 3 hours, 38 minutes; bit # 31, Hughes W7R.

2740-2745 Sandstone 100%, arkose, white to gray, coarse grained, angular, loosely consolidated; 85% plagioclase, 10% chlorite, biotite and hornblende; 5% orthoclase; trace calcite, talc, and hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA,BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2740-41-30 minutes; 41-42-35 minutes; 42-43-31 minutes; 43-44-9 minutes; 44-45-9 minutes.

2745-2750 Sandstone 100%, arkose, white to gray, coarse grain, angular, loosely consolidated, highly compact, hard; 85% plagioclase, 10% chlorite, biotite, hornblende; 5% orthoclase; traces of calcite, talc, hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2745-46-10 minutes; 46-47-13 minutes; 47-48-17 minutes; 48-49-6 minutes; 49-50-16 minutes.

2750-2755 Sandstone 100%, arkose, white to gray, coarse grains, angular, loosely consolidated, highly compacted, hard; 85% plagioclase, 10% chlorite, biotite and hornblende; 5% orthoclase; trace of calcite talc, hematite; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA,CGA Methane 0.0%, Ethane0.0%; Drilling time: 2750-51-10 minutes; 51-52-11 minutes; 52-53-17 minutes; 53-54-18 minutes; 54-55-18 minutes.

2755-2760 Sandstone 100%, arkose, white to gray, medium grain, angular, loosely consolidated, highly compact, poorly cemented; 85% plagioclase; 10% chlorite, biotite and hornblende; 5% orthoclase; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, BMGA,CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2755-56-24 minutes: 56-57-26 minutes; 57-58-20 minutes; 58-59-32 minutes; 59-60-18 minutes.

2760-2765 Sandstone 100%, arkose, white to gray, fine to medium grain, angular, loosely consolidated, poorly cemented; 85% plagioclase; 10% chlorite; biotite and hornblende; magnetite; 5% orthoclase; no visible porosity; no odor, no stain, no fluorescence, no cut; MGA, CGA, BMGA Methane 0.0%, Ethane 0.0%; Drilling time: 2760-61-19 minutes; 61-62-10 minutes; 62-63-10 minutes; 63-64-15 minutes; 64-65-14 minutes.

Connection at 2763'; down from 7:20 to 7:50; worked on engine; 8:00 a.m. 3rd.

2765-2770 Sandstone 100%, arkose, white, pink to gray, medium to coarse grained, medium soft, angular, bright to vitreous luster, loosely consolidated; 60% plagioclase; 20% orthoclase; 10% hornblende, 10% chlorite; minor quantities of biotite; calcite; magnetite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane0.0%, Ethane0.0%; Drilling time: 2765-66-14 minutes; 66-67-8 minutes; 67-68-7 minutes; 68-69-8 minutes; 69-70-10 minutes. Weight on bit: 20,000#.

No. 1 Florence Geological Oil Service Company

Round trip at 2713'; out of hole at 9:23 a.m.; ran bit # 30, Hughes MS-R; 8 3/4"; reamed 7' to bottom; on bottom and drilling at 12:37 p.m.

2710-2715 Sandstone 100%, arkose, white to gray, coarse grained, medium soft, angular, bright to subvitreous luster, loosely consolidated, 70% plagioclase, 20% orthoclase, 5% hornblende, 5% chlorite; minor quantities of calcite, serpentine, biotite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2710-11-25 minutes; 11-12-15 minutes; 12-13-13 minutes; 13-14-18 minutes; 14-15-20 minutes.

2715-2720 Sandstone 100%, arkose, white to gray, coarse grained, medium soft, angular, bright to subvitreous luster, loosely consolidated, 60% plagioclase, 20% orthoclase, 10% hornblende, 10% chlorite; minor quantities of calcite, serpentine and biotite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2715-16-24 minutes; 16-17-21 minutes; 17-18-5 minutes; 18-19-15 minutes; 19-20-18 minutes.

4:00 p.m.

2720-2725 Sandstone (?) 100%, arkose, white to gray, pink, coarse grained, angular, subvitreous luster, loosely consolidated, 50% plagioclase, 30 % orthoclase; 10% quartz, 10% hornblende, chlorite and biotite; trace calcite, hematite and serpentine; no odor, no stain, no fluorescence, no carbon tetrachloride cut;MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2720-21-34 minutes; 21-22-23 minutes; 22-23-20 minutes; 23-24-22 minutes; 24-25-23 minutes.

Weight on bit: 25,000#.

2725-2730 Sandstone 100%, arkose, white, gray, coarse grained, angular, subvitreous to vitreous, loosely consolidated, 70% plagioclase, 20% orthoclase, 10% hornblend, chlorite and biotite; trace calcite, hemitite, serpentine; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2725-26-13 minutes; 26-27-16 minutes; 27-28-17 minutes; 28-29-15 minutes; 29-30-18 minutes.

2730-2735 Sandstone (?) 100%, arkose, white to gray, coarse grained, angular, loosely consolidated, 80% plagioclase, 10% orthoclase, 10%hornblende, chlorite and biotite; strong trace calcite, hematite and talc; no odor, no stain, no fluorescence, no carbon tetrachloride cut;MGA, BMGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2730-31-17 minutes; 31-32-11 minutes; 32-33-20 minutes; 33-34-20 minutes; 34-35-20 minutes.

Weight on bit: 23,000#.

Stopped drilling at 8:11 p.m.; connection at 2737'; resumed drilling at 8:17.

Mud Analysis: (9:30 p.m.) Viscosity 30, Water loss 14, pH 6, Weight 8.6, Cake 1/32, Salt none.

32 x 1

2675-2680 Sandstone 100%, arkose, white to gray, medium grained, loosely consolidated, poorly cemented, angular, predominantly plagioclase; strong trace of quartz, chlorite, talc, hematite, serpentine; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2675-76-23 minutes; 76-77-17 minutes; 77-78-16 minutes; 78-79-13 minutes; 79-80-19 minutes.

2680-2685 Sandstone 100%, arkose, white to gray, medium grain, loosely consolidated, poorly cemented, angular, predominantly plagioclase; strong trace of quartz, chlorite, talc, serpentine, hematite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 2680-81-20 minutes; 81-82-13 minutes; 82-83-8 minutes; 83-84-10 minutes; 84-85-18 minutes.

Weight on bit: 20,000#.

2685-2690 Sandstone 100%, arkose, white to gray, medium grain, angular, loosely consolidated, poorly cemented, predominantly plagioclase; strong trace of quartz, chlorite, serpendtine, talc, hematite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2685-86-20 minutes; 86-87-15 minutes; 87-88-21 minutes; 88-89-21 minutes; 89-90-17 minutes.

Weight on bit: 20,000#.

2690-2695 Sandstone 100%, arkose, white to gray, medium grains, angular, loosely consolidated, poorly cemented, predominantly plagioclase; strong trace of quartz, chlorite, serpentine, talc, hematite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane0.0%, Ethane0.0%; Drilling time: 2690-91-16 minutes; 91-92-10 minutes; 92-93-20 minutes; 93-94-19 minutes; 94-95-19 minutes.

Weight on bit: 20,000#.

2695-2700 Sandstone 100%, arkose, white to gray, medium grain, angular, consolidated, poorly cemented, predominantly plagioclase; strong trace of quartz, chlorite, serpentine, talc, hematite, calcite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2695-96-12 minutes; 96-97-18 minutes; 97-98-10 minutes; 98-99-17 minutes; 99-00-13 minutes.

2700-2705 Sandstone 100%, arkose, white to gray, medium grain, angular, loosely consolidated, poorly cemented, predominantly plagioclase; strong trace of quartz, chlorite, serpentine, talc, hematite, calcite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2700-01-15 minutes; 01-02-15 minutes; 02-03-13 minutes; 03-04-11 minutes; 04-05-8 minutes.

8:00 a.m.

2705-2710 Sandstone 100%, arkose, white to gray, medium to coarse grained, angular, loosely consolidated, poorly consolidated, bright to subvitreous luster, 90% plagioclase, 10% chlorite, minor quantities of orthoclase; serpentine, hematite and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2705-06-11 minutes; 06-07-11 minutes; 07-08-8 minutes; 08-09-11 minutes; 09-10-16 minutes.

32 x 8

Stopped drilling 2:07 P.M.; working on pump; resumed drilling 2:24 P.M.

2660-2665 Sandstone 70%, arkose, white, gray, pink, coarse grained, angular, vitreous to subvitreous luster, medium soft, fairly well consolidated, and cemented with calcareous cement, predominantly plagioclase, strong trace chlorite and mica, probable porosity; serpentine 30%, light green to gray, very calcareous, soapy luster, medium soft, spotted with mica and chlorite, no porosity; no odor, no stain, no fluorescence, no cut; MGA methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2660-61-12 minutes; 61-62-12 minutes; 62-63-13 minutes; 63-64-11 minutes; 64-65-11 minutes.

2665-2670 Sandstone 90%, arkose, white, gray, coarse grained, angular, vitreous to subvitreous luster, medium soft, fairly well consolidated and cemented with lime cement, predominantly plagioclase, no visible but probable porosity, strong trace chlorite and mica; serpentine 10%, light green, to gray, very calcareous, soapy luster, medium soft, spotted with mica and chlorite, no porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2665-66-12 minutes; 66-67-11 minutes; 67-68-17 minutes; 68-69-19 minutes; 69-70-11 minutes.

4:00 P.M.

Round trip at 2673'; out of hole 4:17 P.M.; laid down two drill collars; Reamed 55' to bottom; on bottom and drilling at 10:45 P.M.

Ran Bit #29, Hughes, OWC, 8 5/8".

2670-2675 Sandstone 100%, arkose, white to gray, fine to medium grained, medium soft, bright to subvitreous luster, loosely consolidated, angular, 60% plagioclase, 20% chlorite, 10% orthoclase, 10% biotite; trace calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2670-71-9 minutes; 71-72-13 minutes; 72-73-19 minutes; 73-74-13 minutes; 74-75-23 minutes.

12:00 A.M.

32 × 6

2630-2635 Sandstone 100%, arkose, gray, white and pink, medium to coarse grained, angular, medium soft, loosely consolidated, bright to subvitreous luster, 40% plagioclase, 40% orthoclase, 10% chlorite, 10% biotite; trace of calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2630-31-11 minutes; 31-32-13 minutes; 32-33-12 minutes; 33-34-14 minutes; 34-35-11 minutes.

2635-2640 Sandstone 100%, arkose, gray, white and pink, medium to coarse grained, angular, medium soft, loosely consolidated, bright to subvitreous luster, 60% plagioclase, 20% orthoclase, 10% chlorite, 10% biotite; trace calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2635-36-9 minutes; 36-37-11 minutes; 37-38-11 minutes; 38-39-11 minutes; 39-40-8 minutes.

Drilling weight 22,000#.

Connection 2647'; down from 10:47 A.M.

2640-2645 Sandstone 100%, arkose, white, pink and gray, medium to coarse grained, medium soft, bright to subvitreous luster, angular, 35% plagioclase, 35% orthoclase, 15% chlorite, 10% biotite, minor quantity of calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2640-41-11 minutes; 41-42-7 minutes; 42-43-9 minutes; 43-44-11 minutes; 44-45-12 minutes.

2645-2650 Sandstone 100%, arkose, white, gray, pink, coarse grained, angular, vitreous to subvitreous luster, medium soft, loosely consolidated and poorly cemented with lime, 50% plagioclase, 40% orthoclase, 10% chlorite and biotite; trace calcite and olivene; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2645-46-12 minutes; 46-47-5 minutes; 47-48-9 minutes; 48-49-8 minutes; 49-50-9 minutes..

Drilling weight 20,000#.

Stopped drilling 10:47 A.M.; connection 2647'; resumed drilling 10:53 A.M.

2650-2655 Sandstone 100%, arkose, white, gray, pink, coarse grained, angular, vitreous to subvitreous luster, medium soft, loosely consolidated and poorly cemented with lime, 50%, plagioclase, 40% orthoclase, 10% chlorite and biotite; trace calcite and olivene; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2650-51-9 minutes; 51-52-8 minutes; 52-53-10 minutes; 53-54-12 minutes; 54-55-12 minutes.

2655-2660 Sandstone 100%, arkose, white, gray, pink, coarse grained, angular, vitreous to subvitreous luster, medium soft, loosely consolidated and poorly cemented with lime, 50% plagioclase, 40% orthoclase, 10% chlorite and biotite; trace calcite and olivene; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2655-56-10 minutes; 56-57-11 minutes; 57-58-12 minutes; 58-59-14 minutes; 59-60-17 minutes.

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2605-2610 Sandstone 100%, arkose, gray, white, pink, angular, loosely consolidated, poorly cemented, subvitreous luster, 50% plagioclase, 30% orthoclase, 10% quartz, 10% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2605-06-9 minutes; 06-07-12 minutes; 07-08-7 minutes; 08-09-11 minutes; 09-10-8 minutes.

Mud Analysis: (5:00 A.M. April 1, 1953) viscosity 31, weight 8.7, water loss 24, filter cake 1/32, pH 8, salt--nil.

2610-2615 Sandstone 100%, arkose, gray, white, pink, angular, loosely consolidated, poorly cemented, subvitreous luster, 50% plagioclase, 30% orthoclase, 10% quartz, 10% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2610-11-12 minutes; 11-12-8 minutes; 12-13-15 minutes; 13-14-9 minutes; 14-15-13 minutes.

Connection 2617'; down from 5:49 to 6:00 A.M.

2615-2620 Sandstone 100%, arkose, gray, white, pink, angular, loosely consolidated, poorly cemented, with lime and silica, subvitreous luster, 50% plagioclase, 30% orthoclase, 10% quartz, 10% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2615-16-17 minutes; 16-17-10 minutes; 17-18-14 minutes; 18-19-6 minutes; 19-20-6 minutes.

2620-2625 Sandstone 100%, arkose, gray, white, pink, angular, loosely consolidated, poorly cemented, with lime and silica, subvitreous luster, 50% plagioclase, 30% orthoclase, 10% quartz, 10% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2620-21-11 minutes; 21-22-11 minutes; 22-23-6 minutes; 23-24-12 minutes; 24-25-11 minutes.

8:00 A.M.

2625-2630 Sandstone 100%, arkose, gray to pink to white, medium to coarse grained, angular, medium soft, loosely consolidated, bright to subvitreous luster, 40% plagioclase, 40% orthoclase, 10% chlorite, 10% biotite; trace of calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2625-26-11 minutes; 26-27-17 minutes; 27-28-13 minutes; 28-29-7 minutes; 29-30-7 minutes.

Drilling weight 22,000#.

Mud Analysis: viscosity 34, weight 8.8, water loss 17, filter cake 1/32, pH 8, salt--nil.

32 ×

73-74-6 minutes; 74-75-7 minutes.

12:00 Midnight

2575-2580 Sandstone 100%, arkose, gray, white, pink, coarse grained, angular, loosely consolidated, poorly cemented with lime and silica, subvitreous luster, 50% plagioclase, 35% orthoclase, 10% quartz, 5% chlorite and biotite; trace of olivene, calcite, and hematite; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2575-76-9 minutes; 76-77-10 minutes; 77-78-18 minutes; 78-79-15 minutes; 79-80-14 minutes.

2580-2585 Sandstone 100%, arkose, gray to white to pink, coarse grained, angular, loosely consolidated, poorly cemented with lime and silica, subvitreous luster, 50% plagioclase, 35% orthoclase, 10% quartz, 5% chlorite and biotite, trace of olivine, calcite and hematite; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2580-81-21 minutes; 81-82-7 minutes; 82-83-14 minutes; 83-84-14 minutes; 84-85-12 minutes.

Connection at 2587'; down from 1:53 A.M. to 2:03 A.M.

2585-2590 Sandstone 100%, arkose, gray to white to pink, coarse grained, angular, loosely consolidated, poorly cemented with lime and silica, subvitreous luster, 50% plagioclase, 30% orthoclase, 10% quartz, 10%, chlorite and biotite; trace of olivine, calcite, and hematite; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2585-86-9 minutes; 86-87-4 minutes; 87-88-7 minutes; 88-89-4 minutes; 89-90-5 minutes.

2590-2595 Sandstone 100%, arkose, gray to white to pink, coarse grained, angular, loosely consolidated, poorly cemented with lime and silica, subvitreous luster, 50% plagioclase, 30% orthoclase, 10% quartz, 10% chlorite and biotite; trace of olivine, calcite, and hematite; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2590-91-7 minutes; 91-92-5 minutes; 92-93-4 minutes; 93-94-6 minutes; 94-95-7 minutes.

2595-2600 Sandstone 100%, arkose, gray, white, pink, angular, loosely consolidated, poorly cemented, subvitreous luster, 50% plagioclase, 30% orthoclase, 10% quartz, 10% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2595-96-5 minutes; 96-97-5 minutes; 97-98-4 minutes; 98-99-6 minutes; 99-2600-4 minutes.

Drilling weight 20,000#.

2600-2605 Sandstone 100%, arkose, gray, white, pink, angular, loosely consolidated, poorly cemented, subvitreous luster, 50% plagioclase, 30% orthoclase, 10% quartz, 10% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2600-01-4 minutes; 01-02-3 minutes; 02-03-4 minutes; 03-04-7 minutes; 04-05-8 minutes.

Drilling weight 20,000#.

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4:00 P.M. March 31, 1953

Stopped drilling 4:26 P.M.; round trip at 2555'; on bottom 8:02 P.M.; total time for trip and reaming: 3 hours 36 minutes.

New Bit #28, Hughes OWS-R.

2550-2555 Sandstone 100%, arkose, gray, white, pink, coarse grained, angular, loosely consolidated, poorly cemented with lime, vitreous to subvitreous luster, 50% orthoclase, 35% plagioclase, 10% quartz, 5% chlorite and olivene; trace calcite and hematite; no visible but probable porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2550-51-20 minutes; 51-52-19 minutes; 52-53-18 minutes; 53-54-13 minutes; 54-55-12 minutes.

Drilling weight 25,000#.

Stopped drilling 8:35 P.M.; connection at 2557' with a -1½' correction; resumed drilling 8:42 P.M.

2555-2560 Sandstone 100%, arkose, gray, white, pink, coarse grained, angular, loosely consolidated, poorly cemented with lime, vitreous to subvitreous luster, 50% orthoclase, 35% plagioclase, 10% quartz, 5% chlorite and olivene; trace calcite and hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2555-56-9 minutes; 56-57-5 minute ; 57-58-9 minutes; 59-60-7 minutes.

Drilling weight 16,000#.

2560-2565 Sandstone 100%, arkose, gray, white, pink, coarse grained, angular, loosely consolidated, poorly cemented with lime, vitreous to subvitreous luster, 50% orthoclase, 35% plagioclase, 10% quartz, 5% chlorite and olivene; trace calcite and hematite; probably porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2560-61-16 minutes; 61-62-13 minutes; 62-63-5 minutes; 63-64-17 minutes; 64-65-7 minutes.

Drilling weight 20,000#.

2565-2570 Sandstone 100%, arkose, gray, white, pink, coarse grained, angular, loosely consolidated, poorly cemented with lime, vitreous to subvitreous luster, 50% orthoclase, 35% plagioclase, 10% quartz, 5% chlorite and olivene; trace calcite and hematite; probable porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2565-66-9 minutes; 66-67-7 minutes; 67-68-9 minutes; 68-69-7 minutes; 69-70-9 minutes.

2570-2575 Sandstone 100%, arkose, gray, white, pink, coarse grained, angular, loosely consolidated, poorly cemented with lime, vitreous to subvitreous luster, 50% orthoclase, 35% plagioclase, 10% quartz, 5% chlorite and olivene; trace calcite and hematite; probable porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2570-71-9 minutes; 71-72-9 minutes; 72-73-15 minutes;

32 x

2520-2525 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, bright to subvitreous luster, angular, loosely consolidated; 60% plagioclase with free copper incrustation; 30% chlorite; 10% orthoclase; minor quantities of biotite and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2520-21-8 minutes; 21-22-4 minutes; 22-23-4 minutes; 23-24-4 minutes; 24-25-5 minutes.

Connection at 2528'; down from 10:23 a.m. to 10:30 a.m.

2525-2530 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, angular, loosely cemented, bright to subvitreous luster; 60% plagioclase; 30% chlorite; 10% orthoclase; minor quantities of calcite and biotite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2525-26-5 minutes; 26-27-5 minutes; 27-28-6 minutes; 28-29-6 minutes; 29-30-8 minutes.

Weight on bit: 20,000#.

2530-2535 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, angular, loosely cemented, bright to subvitreous luster; 60% plagioclase; 30% chlorite; 10% orthoclase; minor quantities of calcite and biotite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane0.0%, Ethane0.0%; Drilling time: 2530-31-9 minutes; 31-32-7 minutes; 32-33-11 minutes; 33-34-13 minutes; 34-35-17 minutes.

2535-2540 Sandstone 90%, arkose, white to gray, medium to coarse grained, medium soft, angular, loosely cemented, bright to subvitreous luster; 80% plagioclase; 10% chlorite; 10% orthoclase; minor quantities of biotite; Calcite 10%; white, soft, chunky, bright luster, mineral stained; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA. CGA Methane 0.0%, Ethane0.0%; Drilling time: 2535-36-10 minutes; 36-37-9 mirutes; 37-38-10 minutes; 38-39-15 minutes; 39-40-11 minutes.

2540-2545 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, angular, loosely cemented, bright to subvitreous luster; 80% plagioclase; 10% chlorite; 10% orthoclase; minor quantities of biotite and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, CGA, FGA Methane 0.0%, Ethane 0.0%; Drilling time: 2540-41-11 minutes; 41-42-10 minutes; 42-43-17 minutes; 43-44-26 minutes; 44-45-15 minutes.

Weight on bit: 20,000#.

2545-2550 Sandstone 100%, arkosic, gray to white, medium to coarse grained, bright to subvitreous luster, medium soft, angular, loosely consolidated; 70% plagioclase; 10% chlorite; 10% orthoclase; 10% olivine; minor quantities of biotite and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2545-46-16 minutes; 46-47-13 minutes 47-48-10 minutes; 48-49-12 minutes; 49-50-18 minutes.

Weight on bit: 20,000#.

4:00 p.m.

32 x

2490-2495 Sandstone 100%, arkose, white to gray, coarse grain, loosely consolidated and poorly cemented with lime and silica; subvitreous luster; 70% plagioclase; 20% orthoclase; 5% quartz; 5% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2490-91-17 minutes; 91-92-17 minutes; 92-93-6 minutes; 93-94-7 minutes; 94-95-10 minutes.

Connection at 2497.9'; down from 6:50 to 7:13 a.m.; greased rig.

2495-2500 Sandstone 100%, arkose, white to gray, coarse grain, loosely consolidated and poorly cemented with lime and silica; subvitreous luster; 70% plagioclase; 20% orthoclase; 5% quartz; 5% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2495-96-13 minutes; 96-97-13 minutes; 97-98-6 minutes; 98-99-5 minutes; 99-00-6 minutes.

Weight on bit: 20,000#.

8:00 a.m.

2500-2505 Sandstone 100%, arkose, white to gray, medium to coarse grained, loosely consolidated, poorly cemented, bright to subvitreous luster, angular, 70% plagioclase, 20% orthoclase; 10% chlorite; minor quantities of biotite and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2500-01-10 minutes; 01-02-9 minutes; 02-03-9 minutes; 03-04-6 minutes; 04-05-6 minutes.

2505-2510 Sandstone 100%, arkose, white to gray, medium to coarse grained, loosely consolidated, poorly cemented, bright to subvitreous luster, angular, 70% plagioclase; 20% orthoclase; 10% chlorite; minor quantities of biotite and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2505-06-8 minutes; 06-07-8 minutes; 07-08-8 minutes; 08-09-9 minutes; 09-10-9 minutes.

Weight on bit: 20,000#.

2510-2515 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, bright to subvitreous luster, angular, loosely consolidated, loosely cemented; 70% plagioclase; 20% chlorite; 10% orthoclase; minor quantities of biotite and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2510-11-5 minutes; 11-12-5 minutes; 12-13-4 minutes; 13-14-5 minutes; 14-15-6 minutes.

2515-2520 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, bright to subvitreous luster, angular, loosely consolidated; 60% plagioclase with free copper incrustions; 30% chlorite; 10% orthoclase; minor quantities of biotite and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2515-16-5 minutes; 16-17-4 minutes; 17-18-8 minutes; 18-19-7 minutes; 19-20-8 minutes.

32 x

2455-2460 Sandstone 100%, arkose, white, gray to pink, coarse grain, angular, loosely consolidated and poorly cemented with lime and silica; subvitreous luster; 60% plagioclase; 30% orthoclase; 15% quartz; 5% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2455-56-14 minutes; 56-57-11 minutes; 57-58-12 minutes; 58-59-7 minutes; 59-60-10 minutes.

Weight on bit: 20.000#.

2460-2465 Sandstone 100%, arkose, white, gray, coarse grain, angular, loosely consolidated and poorly cemented with lime and silica; subvitreous luster; 60% plagioclase; 30% orthoclase; 15% quartz; 5% chlorite and biotite; no odor, no stain, no fluorescence, no cut; porosity indeterminable; Drilling time: 2460-61-18 minutes; 61-62-14 minutes; 62-63-6 minutes; 63-64-6 minutes; 64-65-6 minutes.

2465-2470 Sandstone 100%, arkose, white, gray, coarse grain, angular, loosely consolidated and poorly cemented with lime and silica; subvitreous luster; 60% plagioclase; 30% orthoclase; 5% quartz; 5% chlorite and biotite; no odor, no stain, no fluorescence, no cut; no apparent visible porosity; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2465-66-8 minutes; 66-67-7 minutes; 67-68-6 minutes; 68-69-12 minutes; 69-70-12 minutes.

Weight on bit: 20,000#.

2470-2475 Sandstone 100%, arkose, gray, coarse grain, angular, loosely consolidated and cemented (poorly) with lime and silica; subvitreous luster; 60% plagioclase; 30% orthoclase; 5% quartz; 5% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2470-71-18 minutes; 71-72-13 minutes; 72-73-21 minutes; 73-74-17 minutes; 74-75-12 minutes.

2475-2480 Sandstone 100%, arkose, white to gray, coarse grain, loosely consolidated and poorly cemented with lime and silica; 60% plagioclase; 30% orthoclase; 5% quartz; 5% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2475-76-12 minutes; 76-77-14 minutes; 77-78-12 minutes; 78-79-8 minutes; 79-80-9 minutes.

2480-2485 Sandstone 100%, arkose, white, gray, coarse grain, loosely consolidated and poorly cemented with lime and silica; 60% plagioclase; 25% orthoclase; 5% quartz; 10% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2480-81-8 minutes; 81-82-4 minutes; 82-83-5 minutes; 83-84-5 minutes; 84-85-5 minutes.

2485-2490 Sandstone 100%, arkose, white to gray, coarse grain, loosely consolidated and poorly cemented with lime and silica; 60% plagioclase, 25% orthoclase; 5% quartz; 10% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2485-86-7 minutes; 86-87-5 minutes; 87-88-8minutes; 88-89-11 minutes; 89-90-13 minutes.

Mud Analysis: (5:45 a.m.) Viscosity 32, Weight 8.7, Water loss 22, Cake 1/32, pH 8, Salt, none.

32 x

2425-2430 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, bright to subvitreous luster, angular, loosely consolidated; 70% plagioclase; 10% biotite; 10% orthoclase; 10% chlorite; minor quantities of calcite and hornblende; no odor, no stain, no fluorescence, no carbon FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2425-26-7 minutes; 26-27-6 minutes; 27-28-8 minutes; 28-29-9 minutes; 29-30-8 minutes.

4:00 p.m. March 30, 1953.

2430-2435 Sandstone 100%, arkose, white, gray, medium to coarse grained, angular, loosely consolidated and poorly cemented with calcareous and siliceous cement, subvitreous luster; 80% plagioclase; 15% orthoclase; 5% chlorite and hornblende; trace calcite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2430-31-8 minutes; 31-32-6 minutes; 32-33-10 minutes; 33-34-11 minutes; 34-35-10 minutes.

Stopped drilling at 4:44 p.m.; trip at 2437'; new bit # 27, Hughes OWC; on bottom at 8:35 p.m.; total time for trip and reaming; 3 hours, 51 minutes.

2435-2440 Sandstone 100%, arkose, white, gray, medium to very coarse grained, angular, loosely consolidated, poorly cemented with lime and siliceous cement; subvitreous luster; 80% plagioclase; 10% orthoclase; 5% quartz; 5% chlorite and biotite; trace hematite and olivene; probably porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2435-36-9 minutes;36-37-11 minutes; 37-38-9 minutes; 38-39-8 minutes; 39-40-5 minutes.

2440-2445 Sandstone 100%, arkose, white, gray, very coarse grained, angular, loosely consolidated and poorly cemented with lime and siliceous cement, subvitreous luster; 60% plagioclase; 30% orthoclase; 5% quartz; 5% chlorite; biotite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2440-41-15 minutes; 41-42-13 minutes; 42-43-12 minutes; 43-44-8 minutes; 44-45-7 minutes.

Weight on bit: 20,000#.

2445-2450 Sandstone 100%, arkose, white, gray, coarse grained, angular, loosely consolidated and poorly cemented with lime and siliceous cement, subvitreous luster; 60% plagioclase; 30% orthoclase; 5% quartz; 5% chlorite; biotite; no odor, no stain, no fluorescenne, no carbon tetrachloride cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2445-46-3 minutes; 46-47-12 minutes; 47-48-10 minutes; 48-49-7 minutes; 49-50-9 minutes.

Mud Analysis: (11:00 p.m.) Viscosity 31, Water loss 23, pH 8, Weight 8.7, Cake 1/32, Salt none.

2450-2455 Sandstone 100%, arkose, white, gray, coarse grained, angular, loosely consolidated and poorly cemented with lime and siliceous cement; subvitreous; 60% plagioclase; 30% orthoclase; 5% quartz; 5% chlorite and biotite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2450-51-6 minutes; 51-52-9 minutes; 52-53-7 minutes; 53-54-15 minutes; 54-55-13 minutes.

12:00 midnight.

32 x

2390-2395 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, bright to subvitreous luster, loosely consolidated, 80% plagioclase with chlorite and hornblende phenocrysts; 10% orthoclase; 10% chlorite; minor quantities of biotite, hornblende and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2390-91-7 minutes; 91-92-4 minutes; 92-93-8 minutes; 93-94-10 minutes; 94-95-6 minutes.

2395-2400 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, bright to subvitreous luster, loosely consolidated; 80% plagioclase with chlorite and hornblende phenocrystals; 10% orthoclase; 10% chlorite; minor quantities of biotite, hornblende, and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2395-96-5 minutes; 96-97-7 minutes; 97-98-7 minutes; 98-99-5minutes; 99-00-7 minutes.

Connection at 2407'; down from 12:20 p.m. to 12:28 p.m.

2400-2405 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, bright to subvitreous luster, loosely consolidated; 70% plagioclase, 10% chlorite; 10% orthoclase; 10% biotite; minor quantities of hornblende and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; Drilling time: 2400-01-8 minutes; 01-02-8 minutes; 02-03-8 minutes; 03-04-11 minutes; 04-05-12 minutes.

2405-2410 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, bright to subvitreous luster, loosely consolidated; 70% plagioclase; 10% chlorite; 10% orthoclase; 10% biotite; minor quantities of hornblende and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane0.0%; Drilling time: 2405-06-6 minutes; 06-07-6 minutes; 07-08-8 minutes; 08-09-12 minutes; 09-10-10 minutes.

2410-2415 Sandstone 90%, arkose, white to gray, medium to coarse grained, medium soft, bright to subvitreous luster, loosely consolidated; 60% plagioclase; 20% biotite; 10% orthoclase; 10% chlorite; minor quantity of hornblende; Calcite 10%, white, soft, bright luster, chunky, good mineral developement of chlorite and biotite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, FGA, CGA Methane0.0%, Ethane 0.0%; Drilling time: 2410-11-9 minutes; 11-12-5 minutes; 12-13-8 minutes; 13-14-12 minutes; 14-15-12 minutes.

2415-2420 Sandstone 90%, arkose, white to gray, medium to coarse grained, medium soft, bright to subvitreous luster, loosely consolidated; 60% plagioclase; 20% biotite, 10% orthoclase; 10% chlorite; minor quantities of hornblende; Calcite 10%, white, soft, bright luster, chunky, chloute and biotite inclusions; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2415-16-8 minutes; 16-17-9 minutes; 17-18-8 minutes; 18-19-6 minutes; 19-20-7 minutes.

2420-2425 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, bright to subvitreous luster, loosely consolidated; 60% plagioclase; 20% biotite; 10% orthoclase; 10% chlorite; minor quantities of hornblende; calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, CGA, MGA Methane 0.0%, Ethane 0.0%; Drilling time: 2420-21-7 minutes; 21-22-5 minutes; 22-23-7 minutes; 23-24-8 minutes; 24-25-8 minutes.

32 × 1

2365-2370 Sandstone 100%, arkose, white, gray to pink, coarse grain feldspar; subvitreous luster, loosely to unconsolidated, siliceous and limey cement; 60% plagioclase; 20% orthoclase; 10% quartz; 10% chlorite; biotite, hornblende, 4 other minerals; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2365-66-7 minutes; 66-67-10 minutes; 67-68-13 minutes; 68-69-13 minutes; 69-70-11 minutes.

Mud Analysis: (7:00 a.m. March 30, 1953) Viscosity 33, Weight 8.6, Water loss 18, Cake 1/32, pH 7.

2370-2375 Sandstone 100%, arkose, white, pink to gray, coarse grain feldspar, subvitreous luster, loosely to unconsolidated, siliceous and limey cement; 60% plagioclase; 20% orthoclase; 10% quartz; 10% chlorite, biotite, hornblende and 4 other minerals; no odor, no stain, no fluorescence, no stain; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2370-71-14 minutes; 71-72-7 minutes; 72-73-7 minutes; 73-74-10 minutes; 74-75-7 minutes.

Weight on bit: 20,000#.

Connection at 2377'; down from 7:30 to 7:45 a.m.; jetted pits.

8:00 a.m.

Down from 8:15 a.m. to 8:32 a.m. to repair pump.

2375-2380 Sandstone 100%, arkose, white to gray, medium to coarse grained, loosely consolidated, angular, bright to subvitreous luster; 60% plagioclase with chlorite phenocrystals; 20% chlorite; 10% orthoclase; 10% quartz; minor quantities of hornblende; olivine, biotite and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; FGA Methane 0.0%, Ethane 0.0%; Drilling time: 2375-76-10 minutes; 76-77-7 minutes; 77-78-7 minutes; 78-79-14 minutes; 79-80-10 minutes.

Down from 9:02 a.m. to 9:21 a.m. to repair rotary chain.

2380-2385 Sandstone 100%, arkose, white to gray, medium to coarse grained, loosely consolidated, angular, bright to subvitreous luster; 60% plagioclase with chlorite phenocrypts; 20% chlorite; 10% orthoclase; 10% quartz; minor quantities of hornblende, olivine, biotite and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA, Methane 0.0%, Ethane 0.0%; FGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2380-81-5 minutes; 81-82-7 minutes; 82-83-9 minutes; 83-84-9 minutes; 84-85-7 minutes.

2385-2390 Sandstone 100%, arkose, white to gray, medium to coarse grained, loosely consolidated, angular, bright to subvitreous luster; 60% plagioclase with chlorite; 10% orthoclase; 10% quartz; minor quantities of hornblende, olivin , biotite and calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA, MGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2385-86-8 minutes; 86-87-8 minutes; 87-88-8 minutes; 88-89-8 minutes; 89-90-9 minutes.

Mud Analysis: Viscosity 33, Weight 8.7, Water loss 22, Filter cake 1/32, pH 8, Salts 1650 ppm.

32 × 8

Stopped drilling at 3:52 p.m.; trip at 2330'; new bit # 26, OWS-R; working on pump for 5 hours, 30 minutes; on bottom at 12:30 a.m.; total time: 6 hours, 22 minutes.

2330-2335 Sandstone 100%, arkose, white, gray to pink, hard, coarse grain, subvitreous luster, loosely to unconsolidated, siliceous and limey cement; 70% plagioclase, 20% orthoclase, 10% quartz; abundant, chlorite, biotite, hornblende; hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2330-31-7 minutes; 31-32-9 minutes; 32-33-7 minutes; 33-34-8 minutes; 34-35-7 minutes.

2335-2340 Sandstone 100%, arkose, white, gray to pink, hard, coarse grains, subvitreous luster, loosely to unconsolidated, siliceous and limey cement; 70% plagioclase; 20% orthoclase; 10% quartz; abundant chlorite; biotite, hornblend and hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2335-36-7 minutes; 36-37-10 minutes; 37-38-7 minutes; 38-39-6 minutes; 39-40-9 minutes.

2340-2345 Sandstone 100%, arkose, white, gray to pink, hard, coarse grain, subvitreous luster, loosely to unconsolidated, siliceous and limey cement; 70% plagioclase; 20% orthoclase; 10% quartz; abundant chlorite; biotite, hornblende and hematite; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2340-41-5 minutes; 41-42-7 minutes; 42-43-4 minutes; 43-44-5 minutes; 44-45-8 minutes.

Connection at 2347'; down from 2:29 to 2:38.

2345-2350 Sandstone 100%, arkose, white, pink to gray; coarse grain, hard, feldspar; loosely to unconsolidated; siliceous and limey cement; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2345-46-6 minutes; 46-47-5 minutes; 47-48-8 minutes; 48-49-10 minutes; 49-50-6 minutes.

2350-2355 Sandstone 100%, arkose, white, gray to pink; hard, coarse grain feldspar; loosely to unconsolidated; siliceous and limey cement; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2350-51-17 minutes; 51-52-13 minutes; 52-53-15 minutes; 53-54-15 minutes; 54-55-11 minutes.

2355-2360 Sandstone 100%, arkose, white, gray to pink; hard, coarse grain feldspar; loosely to unconsolidated; siliceous and lime cement; no odor, no stain, no fluorescence, no cut; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2355-56-6 minutes; 56-57-5 minutes; 57-58-5 minutes; 58-59-6 minutes; 59-60-6 minutes.

2360-2365 Sandstone 100%, arkose, white, gray to pink; hard, coarse grain feldspar; loosely to unconsolidated, siliceous to limey cement; subvitreous luster; 60% plagioclase; 20% orthoclase; 10% quartz; 10% chlorite, biotite, hornblende; MGA, BMGA, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2360-61-13 minutes; 61-62-13 minutes; 62-63-10 minutes; 63-64-11 minutes; 64-65-10 minutes.

32 ×

16-17-6 minutes; 17-18-5 minutes; 18-19-7 minutes; 19-20-14 minutes;

2320-2325 Sandstone 100%, ardose, gray and white, medium soft, medium coarse grained, bright to sub-vitreous luster, loosely consolidated, siliceous and cacareous cement, 75% plagioclase with chlorite phenocrystals, 15% chlorite, 10% orthoclase, minor quantities biotile, calcite and hornblende, red staining commmon; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2320-21-15 minutes; 21-22-21 minutes; 22-23-18 minutes; 23-24-18 minutes; 24-25-12 minutes;

5:00 p.m.

2290-2295 Sandstone 100%, arkose, gray and white, medium soft, medium to coarse grained, bright to subvitreous luster, loosely consolidated, siliceous and calcarious cement, 80% plagioclase with chlorite phenocripts, 10% chlorite, 10% artheclase, minor quantities hornblende and biotite, trace red shale and calcite; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2290-91-7 minutes; 91-92-7 minutes; 92-93-8 minutes; 93-94-10 minutes; 94-95-5 minutes.

2295-2300 Sandstone 100%, arkose, gray and white, medium soft to medium to coarse grained, bright to subvitreous luster, loosely consolidated, siliceous and calcareous cement, 80% plagioclase with chlorite phenocrysts, 10% chlorite, 10% arthoclase, minor quantites hornblende, and biotite, trace red shale and calcite; no odor, no stain. no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2295-96-4 minutes; 96-97-4 minutes; 97-98-5 minutes; 98-99-7 minutes; 99-2300-5 minutes.

2300-2305 Sandstone 100%, arkose, gray and white, medium soft, medium to coarse grained, bright to subvitreous luster, loosely consolidated, siliceous and calcareous cement, 70% plagioclase with chlorite and hornblende phenocrysts, 20% orthoclase, 10% chlorite, minor quantities biotite, shale and calcite; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2300-01-4 minutes; 01-02-6 minutes; 02-03-7 minutes; 03-04-4 minutes; 04-05-5 minutes.

2305-2310 Sandstone 100%, arkose, gray and white, medium soft, medium to coarse grained, bright to subvitreous luster, loosely consolidated, siliceous and calcareous cement, 70% plagioclase with chlorite and hornblende pheno crysts, 20% arthoclase, 10% chlorite, minor quantities biotite, shale and calcite, red benatitic staining, common to feldspars; no odor, no stain, nofluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2305-06-6 minutes; 06-07-5 minutes; 07-08-6 minutes; 08-09-10 minutes; 09-10-6 minutes.

2310-2315 Sandstone 100%, arkose, gray and white, medium soft, medium to coarse grained, bright to subvitreous luster, loosely consolidated, siliceous and calcareous cement, 80% plagioclase with chlorite and hornblende phenocrysts, 10% arthoclase, 10% chlorite, minor quantities biotite calcite, red staining common; no odor, no stain, no fluorescence, no cut; FGA Methane 0.0%, Ethane 0.0%, MGA, CGA, Methane 0.0%, Ethane 0.0%; Drilling time: 2310-11-9 minutes; 11-12-9 minutes; 12-13-12 minutes; 13-14-13 minutes; 14-15-12 minutes.

Connection 2317', Down from 1:03 p.m. to 1:10 p.m.

2315-2320 Sandstone 100%, ardose, gray and white, medium soft, medium to coarse grained, bright to sub-vitreous luster, loosely consolidated, siliceous and calcareous cement, 60% , plagioclase with chlorite pheno-crystal, 25% chlorite, 15%, orthoclase, minor quantities biotite, horn-blende, and clacite, red staining common; no odor, no stain, no fluorescen ce, no cut; FGA Methane 0.0%, Ethane 0.0%; MGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2315-16-16 minutes;

81-82-10 minutes; 82-83-9 minutes; 83-84-13 minutes; 84-85-10 minutes.

2285-2290 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, angular, loosely consolidated, bright to subvitreous luster, siliceous and calcareous cement, 80% plagioclase with chlorite phenocrysts, 10% chlorite 10% orthoclase, minor quantities of biotite, hornblende, and calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2285-86-11 minutes; 86-87-10 minutes; 87-88-9 minutes; 88-89-12 minutes; 89-90-8 minutes.

32 ×

2255-2260 Sandstone 100%, arkose, white, gray to pink, coarse grained feldspar, angular, subvitreous luster, loosely to unconsolidated, siliceous to limy cement, 40% orthoclase, 40% plagioclase, 10% quartz, 10% chlorite, biotite and hornblend; no odor, no stain, no fluorescence, no cut; probable fair intergranular porosity; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2255-56-8 minutes; 56-57-12 minutes; 57-58-10 minutes; 58-59-9 minutes; 59-60-9 minutes.

2260-2265 Sandstone 100%, arkose, white, gray to pink, coarse grained, angular, feldspar, loosely to unconsolidated, siliceous to limy cement, 50% orthoclase, 30% plagioclase, 10% quartz, 10% chlorite, biotite, hornblend and other minerals; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2260-61-10 minutes; 61-62-8 minutes; 62-63-13 minutes; 63-64-13 minutes; 64-65-14 minutes.

2265-2270 Sandstone 100%, arkose, white, gray to pink, coarse grained, angular, feldspar, loosely to unconsolidated, siliceous to limy, 40% orthoclase, 40% plagioclase, 10% quartz, 10% chlorite, biotite, hornblend, hematite and calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2265-66-14 minutes; 66-67-13 minutes; 67-68-10 minutes; 68-69-6 minutes; 69-70-7 minutes.

Drilling weight 20,000#.

Mud Analysis: (7:30 A.M.) viscosity 32, weight 8.7, water loss 20, filter cake 1/32, pH 6.

2270-2275 Sandstone 100%, arkose, white, gray to pink, coarse grained, angular, feldspar, loosely to unconsolidated, siliceous and limy, 50% orthoclase, 30% plagioclase, 10% quartz, 10% chlorite, biotite, hornblend, hematite and calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2270-71-10 minutes; 71-72-12 minutes; 72-73-8 minutes; 73-74-9 minutes; 74-75-4 minutes.

8:00 A.M. March 29, 1953

2275-2280 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, angular, loosely consolidated, bright to subvitreous luster, siliceous and calcareous cement, 80% plagioclase with chlorite phenocrysts, 10% chlorite, 10% orthoclase, minor quantities of biotite, quartz and hornblend, iron staining predominant; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2275-76-4 minutes; 76-77-2 minutes; 77-78-2 minutes; 78-79-3 minutes; 79-80-5 minutes.

Connection at 2287'; down from 8:58 A.M. to 9:08 A.M.

2280-2285 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, angular, loosely consolidated, bright to subvitreous luster, siliceous and calcareous cement, 80% plagioclase with chlorite and magnetite inclusions, 10% chlorite, 10% orthoclase, minor quantities of biotite, quartz, and hornblende, iron staining predominant; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2280-81-7 minutes;

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Connection at 2226.9'; down from 12:20 P.M. to 1:00 A.M.; greased rig and worked on pump.

2225-2230 Sandstone 100%, arkose, white, gray to pink, coarse grained feldspar, angular, subvitreous, loosely to unconsolidated, siliceous and limey cement, 40% orthoclase, 50% plagioclase, 10% quartz, strong trace of chlorite, biotite, hornblende; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2225-26-6 minutes; 26-27-6 minutes; 27-28-6 minutes; 28-29-5 minutes; 29-30-7 minutes.

2230-2235 Sandstone 100%, arkose, white, gray to pink, coarse grained feldspar, angular, subvitreous luster, loosely to unconsolidated, siliceous and limey cement, 40% orthoclase, 40% plagioclase, 10% quartz, 10% chlorite and biotite and hornblend; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2230-31-8 minutes; 31-32-6 minutes; 32-33-8 minutes; 33-34-10 minutes; 34-35-8 minutes.

2235-2240 Sandstone 100%, arkose, white, gray to pink, coarse grained feldspar, angular, subvitreous luster, loosely to unconsolidated, siliceous and limy cement, 60% orthoclase, 20% plagioclase, 10% quartz, 10% chlorite, biotite and hornblende; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%; Drilling time: 2235-36-8 minutes; 36-37-8 minutes; 37-38-9 minutes; 38-39-6 minutes; 39-40-8 minutes.

2240-2245 Sandstone 100%, arkose, white, gray to pink, coarse grained, feldspar, angular, subvitreous luster, loosely to unconsolidated, siliceous and limy cement, 60% orthoclase, 20% plagioclase, 10% quartz, 10% chlorite, biotite, and hornblend; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2240-41-7 minutes; 41-42-9 minutes; 42-43-8 minutes; 43-44-8 minutes; 44-45-11 minutes.

2245-2250 Sandstone 100%, arkose, white, gray to pink, coarse grained feldspar, angular, subvitreous luster, loosely to unconsolidated, siliceous and limy cement, 50% orthoclase, 20% plagioclase, 10% quartz, 20% chlorite, biotite and hornblend; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2245-46-7 minutes; 46-47-3 minutes; 47-48-2 minutes; 48-49-2 minutes; 49-50-3 minutes.

2250-2255 Sandstone 100%, arkose, white, gray to pink, coarse grained feldspar, angular, subvitreous luster, loosely to unconsolidated, siliceous and limy cement, 50% orthoclase, 30% plagioclase, 10% quartz, 10% chlorite, biotite and hornblend; no odor, no stain, no fluorescence, no cut, probable good intergranular porosity; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2250-51-6 minutes; 51-52-6 minutes; 52-53-4 minutes; 53-54-5 minutes; 54-55-7 minutes,

Drilling weight 20,000#.

Connection 2257'; down from 4:24 to 4:33 A.M.

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2190-91-9 minutes; 91- 92-11 minutes; 92-93-7 minutes; 93-94-8 minutes; 94-95-8 minutes.

2195-2200 Sandstone 100%, arkose, white, gray, pink, fine to coarse grained, loosely consolidated, siliceous and carbonaceous cement, angular, subvitreous luster, 60% orthoclase, 30% plagioclase, 5% quartz, 5% chlorite and biotite, probably fairly good porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2195-96-8 minutes; 96-97-10 minutes; 97-98-8 minutes; 98-99-12 minutes; 99-2200-11 minutes.

Stopped drilling 7:06 P.M.; connection at 2202'; resumed drilling 7:12 P.M.

2200-2205 Sandstone 100%, arkose, white, gray, pink, fine to coarse grained, loosely consolidated, siliceous and carbonaceous cement, angular, subvitreous luster, 50% orthoclasey 45% plagioclase, 5% biotite and chlorite, probably fairly good porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2200-01-7 minutes; 01-02-7 minutes; 02-03-7 minutes; 03-04-7 minutes; 04-05-8 minutes.

Weight on bit 20,000#.

2205-2210 Sandstone 100%, arkose, white, gray, pink, fine to coarse grained, loosely consolidated, siliceous and carbonaceous cement, angular, subvitreous luster, 45% orthoclase, 40% plagioclase, 10% quartz, 5% biotite and hornblend, and chlorite, probably fairly good porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2205-06-10 minutes; 06-07-7 minutes; 07-08-5 minutes; 08-09-7 minutes; 09-10-7 minutes.

2210-2215 Sandstone 100%, arkose, white, gray, pink, fine to coarse grained, loosely consolidated, siliceous and carbonaceous cement, angular, subvitreous luster, 50% orthoclase, 35% plagioclase, 10% quartz, 5% hornblend, chlorite and biotite, probably fairly good porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2210-11-8 minutes; 11-12-6 minutes; 12-13-5 minutes; 13-14-6 minutes; 14-15-6 minutes.

Stopped drilling 9:05 P.M.; trip at 2220'; resumed drilling 11:48 P.M.

New Bit #25, Hughes OWS; reduced hole to 8 3/4".

2215-2220 Sandstone 100%, arkose, white, gray to pink, fine to coarse grained, loosely to unconsolidated, angular, subvitreous luster, 40% orthoclase, 50% plagioclase, 10% quartz, strong trace of hornblend, chlorite and biotite, porosity undeterminable; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2215-16-5 minutes; 16-17-4 minutes; 17-18-7 minutes; 18-19-7 minutes; 19-20-9 minutes.

2220-2225 Sandstone 100%, arkose, white, gray to pink, fine to coarse grained, loosely to unconsolidated, angular, subvitreous luster, siliceous and limy cement, 40% orthoclase, 50% plagioclase, 10% quartz, strong trace of hornblend, chlorite and biotite, probably fairly good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2220-21-4 minutes; 21-22-5 minutes; 22-23-2 minutes; 23-24-3 minutes; 24-25-9 minutes.

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MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2165-66-7 minutes; 66-67-9 minutes; 67-68-4 minutes; 68-69-6 minutes; 69-70-8 minutes.

Down from 2:15 P.M. to 3:05 P.M.; totco 5°.

2170-2175 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, loosely consolidated, angular, bright to subvitreous luster, siliceous and calcareous cement, 80% plagioclase with chlorite phenocrysts, iron staining predominant, 10% chlorite, 10% hornblende, trace calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2170-71-4 minutes; 71-72-6 minutes; 72-73-11 minutes; 73-74-13 minutes; 74-75-16 minutes.

4:00 P.M. March 28, 1953

2175-2180 Sandstone 100%, arkose, clear, white, gray with pink less common, fine to coarse grained, loosely consolidated, siliceous and calcareous cement, angular, vitreous to subvitreous luster, 60% plagioclase, 25% quartz, 10% orthoclase, 5% mica and chlorite, probably fairly good intergranular porosity; strong trace clear calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2175-76-8 minutes; 76-77-10 minutes; 77-78-7 minutes; 78-79-6 minutes; 79-80-9 minutes.

Weight on bit 20,000#.

2180-2185 Sandstone 100%, arkose, clear, white, gray with pink less common, fine to coarse grained, loosely consolidated, siliceous and calcareous,cement, angular, vitreous to subvitreous luster, 70% plagioclase, 20% quartz, 5% orthoclase, 5% mica and chlorite, probably fairly good intergranular porosity; trace clear calcite strong; hematite stain present; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2180-81-12 minutes; 81-82-13 minutes; 82-83-13 minutes; 83-84-12 minutes; 84-85-9 minutes.

2185-2190 Sandstone 100%, arkose, white, pink, gray, medium to coarse grained, loosely consolidated, siliceous and calcareous cement, angular, subvitreous luster, 50% plagioclase, 40% orthoclase, 5% quartz, 5% chlorite and mica, probably fairly good porosity; trace calcite crystals and hematite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2185-86-11 minutes; 86-87-13 minutes; 87-88-12 minutes; 88-89-8 minutes; 89-90-11 minutes.

Weight on bit 20,000#.

Mud Analysis: (6:00 P.M.) viscosity 30, weight 8.6, water loss 24, filter cake 1/32, salt--none, pH 6.

2190-2195 Sandstone 100%, arkose, white, gray, pink, fine to coarse grained, loosely consolidated, siliceous and calcareous cement, angular, subvitreous luster, 60% orthoclase, 30% plagioclase, 5% quartz, 5% mica and chlorite and hornblend, probably fairly good porosity; strong trace calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time:

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Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2135-36-12 minutes; 36-37-8 minutes; 37-38-9 minutes; 38-39-5 minutes; 39-40-6 minutes.

2140-2145 Sandstone 100%, arkose, white, to gray, fine to medium grained, medium soft, loosely consolidated, angular, bright to subvitreous luster, siliceous and calcareous cement, 80% plagioclase, 10% orthoclase, 5% quartz, 5% chlorite, minor quantities of calcite and hornblende, plagioclase shows advance decomposition; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2140-41-5 minutes; 41-42-5 minutes; 42-43-5 minutes; 43-44-8 minutes; 44-45-8 minutes.

2145-2150 Sandstone 100%, arkose, white to gray, fine to medium grained, medium soft, loosely consolidated, angular, bright to subvitreous luster, siliceous and calcareous cement, 80% plagioclase, 10% orthoclase, 5% quartz, 5% chlorite, minor quantities of calcite and hornblende (hematitic staining predominant), advanced decomposition in feldspars; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2145-46-7 minutes; 46-47-8 minutes; 47-48-10 minutes; 48-49-9 minutes; 49-50-9 minutes.

2150-2155 Sandstone 100%, arkose, white to gray, fine to coarse grained, medium soft, loosely consolidated, angular, bright to subvitreous luster, siliceous and calcareous cement, 80% plagioclase with chlorite phenocrysts, copper and iron staining predominant, 10% quartz, 10% chlorite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 4150-51-17 minutes; 51-52-8 minutes; 52-53-7 minutes; 53-54-7 minutes; 54-55-10 minutes.

2155-2160 Sandstone 100%, arkose, white to gray to red, fine to coarse grained, medium soft, loosely consolidated, angular, bright to subvitreous luster, siliceous and calcareous cement, 80% plagioclase with heavily laden chlorite phenocrysts, copper and iron staining predominant, traces of free copper imbedded in calcite; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2155-56-10 minutes; 56-57-10 minutes; 57-58-11 minutes; 58-59-11 minutes; 59-60-5 minutes.

2160-2165 Sandstone 100%, arkose, white to gray, fine to coarse grained, medium soft, loosely consolidated, angular, bright to subvitreous luster, siliceous and calcareous cement, 80% plagioclase with chlorite phenocrysts, copper and iron staining predominant, 15% chlorite, 5% quartz, trace of calcite and red shale; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2160-61-6 minutes; 61-62-5 minutes; 62-63-7 minutes; 63-64-7 minutes; 64-65-8 minutes.

Connection 2172'; down from 1:08 P.M. to 1:15 P.M.

2165-2170 Sandstone 100%, arkose, white to gray, medium to coarse grained, medium soft, loosely consolidated, angular, bright to subvitreous luster, siliceous and calcareous cement, 90% plagioclase with chlorite phenocrysts, iron staining predominant, 10% chlorite, trace quartz, trace calcite and shale; no odor, no stain, no fluorescence, no carbon tetrachloride cut;

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No. 1 Florence

Geological Well Service Company

12:01 A.M. March 26, 1953

Stopped drilling 2:05 A.M.; trip at 2117'; began reaming at 4:12 A.M. and pipe twisted off at 5:10 A.M. while still reaming.

Bit #23, Hughes OWS at 2117'.

Drill Pipe recovered on bottom and drilling 5:10 A.M. March 28, 1953; total down time 51 hours 04 minutes.

New Bit #24, Hughes OWS.

2115-2120 Sandstone 100%, arkose, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, subvitreous to vitreous luster, hard, siliceous and limey cement, 70% plagioclase, 20% orthoclase, 10% quartz, abundant trace of chlorite, hornblende, biotite, good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%, Drilling time: 2115-16-11 minutes; 16-17-8 minutes; 17-18-13 minutes; 18-19-8 minutes; 19-20-5 minutes.

2120-2125 Sandstone 100%, arkose, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, subvitreous to vitreous luster, hard, siliceous and limey cement, 60% plagioclase, 20% orthoclase, 20% quartz, trace of hornblende, chlorite, good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2120-21-9 minutes; 21-22-14 minutes; 22-23-10 minutes; 23-24-9 minutes; 24-25-8 minutes.

2125-2130 Sandstone 100%, arkose, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, subvitreous to vitreous luster, hard, siliceous and limey cement, 60% plagioclase, 20% orthoclase, 20% quartz, trace of hornblende, chlorite, good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2125-26-8 minutes; 26-27-4 minutes; 27-28-5 minutes; 28-29-5 minutes; 29-30-5 minutes.

2130-2135 Sandstone 100%, arkose, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, subvitreous to vitreous luster, hard, siliceous and limy cement, 60% plagioclase, 20% orthoclase, 10% quartz, 10% hornblende, traces of chlorite and calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2130-31-9 minutes; 31-32-10 minutes; 32-33-7 minutes; 33-34-11 minutes; 34-35-15 minutes.

8:00 A.M.

Connection at 2142'; down from 8:40 A.M. to 9:05 A.M.; also greased rig.

2135-2140 Sandstone 100%, arkose, white to gray, fine to coarse grained, medium soft, loosely consolidated, angular, bright to subvitreous luster, siliceous and calcareous cement, 80% plagioclase, 10% orthoclase, 5% quartz, 5% chlorite, minor quantities of calcite and hornblende, plagioclase fragments show advanced decomposition to clay minerals; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%,

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No. 1 Florence Geological Well vice Company

12:01 A.M. March 26, 1953

Stopped drilling 2:05 A.M.; trip at 2117'; began reaming at 4:12 A.M. and pipe twisted off at 5:10 A.M. while still reaming.

Bit #23, Hughes OWS at 2117'.

Drill Pipe recovered on bottom and drilling 5:10 A.M. March 28, 1953; total down time 51 hours 04 minutes.

New Bit #24, Hughes OWS.

2115-2120 Sandstone 100%, arkose, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, subvitreous to vitreous luster, hard, siliceous and limey cement, 70% plagioclase, 20% orthoclase, 10% quartz, abundant trace of chlorite, hornblende, biotite, good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2115-16-11 minutes; 16-17-8 minutes; 17-18-13 minutes; 18-19-8 minutes; 19-20-5 minutes.

2120-2125 Sandstone 100%, arkose, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, subvitreous to vitreous luster, hard, siliceous and limey cement, 60% plagioclase, 20% orthoclase, 20% quartz, trace of hornblende, chlorite, good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2120-21-9 minutes; 21-22-14 minutes; 22-23-10 minutes; 23-24-9 minutes; 24-25-8 minutes.

2125-2130 Sandstone 100%, arkose, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, subvitreous to vitreous luster, hard, siliceous and limey cement, 60% plagioclase, 20% orthoclase, 20% quartz, trace of hornblende, chlorite, good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2125-26-8 minutes; 26-27-4 minutes; 27-28-5 minutes; 28-29-5 minutes; 29-30-5 minutes.

2130-2135 Sandstone 100%, arkose, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, subvitreous to vitreous luster, hard, siliceous and limy cement, 60% plagioclase, 20% orthoclase, 10% quartz, 10% hornblende, traces of chlorite and calcite; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2130-31-9 minutes; 31-32-10 minutes; 32-33-7 minutes; 33-34-11 minutes; 34-35-15 minutes.

8:00 A.M.

Connection at 2142'; down from 8:40 A.M. to 9:05 A.M.; also greased rig.

2135-2140 Sandstone 100%, arkose, white to gray, fine to coarse grained, medium soft, loosely consolidated, angular, bright to subvitreous luster, siliceous and calcareous cement, 80% plagioclase, 10% orthoclase, 5% quartz, 5% chlorite, minor quantities of calcite and hornblende, plagioclase fragments show advanced decomposition to clay minerals; no odor, no stain, no fluorescence, no carbon tetrachloride cut; MGA Methane 0.0%,

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NO. 1 Florence Geological Well Service Company

2095-2100 Sandstone 100%, arkose, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, subvitreous to vitreous luster, siliceous, limey cement, 60% plagioclase, 30% orthoclase, 10% quartz, strong trace chlorite and hornblend, good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2095-96-8 minutes; 96-97-13 minutes;97-98-9 minutes; 98-99-5 minutes; 99-2100-7 minutes;

2100-2105 Sandstone 100%, arkose, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, subvitreous to vitreous luster, siliceous, limey cement, 60% plagilclase, 30% orthoclase, 10% quartz, strong trace of chlorite and hornblend, good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2100-01-6 minutes; 01-02-6 minutes; 02-03-5 minutes; 03-04-4 minutes; 04-05-4 minutes;

2105-2110 Sandstone 100%, arksoe, white, gray to pink, very coarse grain feldspar, loosely to unconsolidated, angular, subvitreous luster, siliceous, limey cement, 60% plagioclase, 30% orthoclase, 10% quartz; strong trace of chlorite and hornblende, good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2105-06-5 minutes; 06-07-5 minutes; 07-08-6 minutes; 08-09-7 minutes; 09-10-5 minutes;

2110-2115 Sardstone 100%, arkose, white, gray to pink, very coarse grain, feldspar, loosely to unconsolodiated, anuglar, subvitreous to vitreous luster, limey, silicerou cement; 60% plagilclase, 30% orthoclase, 10% quartz, strong trace of chlorite and hornblende, good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2110-11-6 minutes; 11-12-6 minutes; 12-13-5 minutes; 13-14-7 minutes; 14-15-8 minutes;

Twisted off pipe at 2117' at 2:06 a.m., waiting on overshot;

';00 a.m., still waiting on overshot to arrive.

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NO. 1 Florence Geological Well Service Company

2070-2075 Sandstone 100%, arkose, white, gray and pink, very coarse grained feldspar, angular, subvitreous to vitreous luster, siliceous lime cement, 50% plagioclase and 50% orthoclase, good intergranular porosity, strong trace chlorite and hornblend; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2070-71-4 minutes; 71-72-5 minutes; 72-73-5 minutes; 73-74-6 minutes; 74-75-4 minutes;

2075-2080 Sandstone 100%, ardose, white, gray and pink, very coarse grained feldspar, loosely consolidated, angular, subvitreous to vitreous luster, siliceous lime cement, 50% orthoclase, 50% plagioclase, good intergranular porosity, strong trace chlorite and hornblend; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2075-76-3 minutes; 76-77-2 minutes; 77-78-2 minutes; 78-79-4 minutes; 79-80-4 minutes;

Weight on bit 25,000#

Stopped drilling at 10:13 p.m.; connection at 2082.2'; resumed drilling at 10:21 p.m.

Mud analysis 10:30 p.m.; viscosity 30, weight 8.7#, water loss 16, cake filter 1/32, ph 8, salt content 1600 ppm

2080-2085 Sandstone 100%, ardose, white, gray and pink, very coarse grained feldspar, loosely consolidated, angular, subvitreous to vitreous luster, silicerous lime cement, 70% plagioclase, 30% arthoclase and trace intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2080-81-3 minutes; 81-82-4 minutes; 82-83-5 minutes; 83-84-5 minutes; 84-85-5 minutes;

2085-2090 Sandstone 100%, arkose, white, gray and pink, very coarse grained, feldspar, loosely consolidated, angular, subvitreous to vitreous luster, siliceous lime cement, 60% plagioclase, 40% orthoclase, 10% quartz, strong trace chlorite and hornblend, good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane 0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2085-86-7 minutes; 86-87-5 minutes; 87-88-9 minutes; 88-89-6 minutes; 89-90-5 minutes;

2090-2095 Sandstone 100%, arkose, white, gray, pink, very coarse grained feldspar, loosely consolidated, angular, subvitreous to vitreous luster, siliceous lime cement, 60% plagioclase, 40% orthoclase, 10% quartz, strong trace chlorite and hornblend, good intergranular porosity; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%; BMGA Methane 0.0%, Ethane0.0%; CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2090-91-5 minutes; 91-92-4 minutes; 92-93-5 minutes; 93-94-7 minutes; 94-95-7 minutes;

32 x

trace chlorite, biotite and hornblend; good intergranular porosity; no odor, no stain, no fluorescence, no cut with carbon tetrachloride; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, OGA Methane 0.0%, Ethane 0.0%; Drilling time: 2065-66-4 minutes; 66-67-4 minutes; 67-68-5 minutes; 68-69-5 minutes; 69-70-3 minutes.

32 × 8

2040-2045 Sandstone 100%, arkosic, gray to white, medium to very coarse grained feldspar, angular, subvitreous to vitreous luster, siliceous lime cement, 90% plagioclase, 10% orthoclase; strong trace chlorite, biotite, hornblend and hematite; good intergranular porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2040-41-12 minutes; 41-42-15 minutes; 42-43-6 minutes; 43-44-7 minutes; 44-45-8 minutes.

Weight on bit 20,000#.

2045-2050 Sandstone 100%, arkosic, gray to white, medium to very coarse grained feldspar, angular, subvitreous to vitreous luster, siliceous lime cement, 90% plagioclase, 10% orthoclase; strong trace chlorite, biotite, hornblend and hematitic; good intergranular porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2045-46-6 minutes; 46-47-6 minutes; 47-48-8 minutes; 48-49-7 minutes; 49-50-6 minutes.

Stopped drilling 6:57 P.M.; connection at 2053'; resumed drilling 7:03 P.M.

2050-2055 Sandstone 100%, gray, arkosic, white and pink, medium to very coarse grained feldspar and some quartz, subvitreous to vitreous luster, siliceous lime cement, 50% plagioclase, 40% orthoclase, 10% quartz, good intergranular porosity; strong trace chlorite, biotite, hornblend; no odor, no stain, no fluorescence, no cut; MGA Methane 0.0%, Ethane 0.0%, FGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2050-51-6 minutes; 51-52-5 minutes; 52-53-6 minutes; 53-54-7 minutes; 54-55-7 minutes.

2055-2060 Sandstone 100%, arkosic, gray, white and pink, very coarse grained feldspar and some quartz, angular, subvitreous to vitreous luster, siliceous lime cement, 50% plagioclase, 40% orthoclase, 10% quartz, good intergranular porosity; strong trace chlorite, biotite and hornblend; no odor, no stain, no fluorescence, no cut with carbon tetrachloride; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2055-56-12 minutes; 56-57-17 minutes; 57-58-11 minutes; 58-59-9 minutes; 59-60-8 minutes.

Weight on bit 25,000#.

2060-2065 Sandstone 100%, arkosic, white, pink and gray, very coarse grained feldspar and some quartz, angular, subvitreous to vitreous luster, siliceous lime cement, 60% plagioclase, 30% orthoclase, 10% quartz; strong trace chlorite, biotite and hornblend; good intergranular porosity; no odor, no stain, no fluorescence, no cut with carbon tetrachloride; FGA Methane 0.0%, Ethane 0.0%, BMGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2060-61-9 minutes; 61-62-13 minutes; 62-63-14 minutes; 63-64-14 minutes; 64-65-7 minutes.

2065-2070 Sandstone 100%, arkosic, white, gray and pink, very coarse grained feldspar and some quartz, angular, subvitreous to vitreous luster, siliceous lime cement, 50% plagioclase, 40% orthoclase, 10% quartz; strong

32 x

Out of hole to repair fly wheel on pump; down from 12:52 P.M. to 1:40 P.M.

2015-2020 Sandstone 100%, arkosic, gray, medium to coarse grained, medium soft, loosely consolidated, angular, bright to vitreous luster, siliceous cement, 80% plagioclase, 10% orthoclase, 10% chlorite, minor quantities of quartz, olivine and biotite, red hematitic stain predominant, good intergranular porosity; trace of caliche; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2015-16-7 minutes; 16-17-7 minutes; 17-18-8 minutes; 18-19-4 minutes; 19-20-7 minutes.

2020-2025 Sandstone 100%, arkosic, gray, medium to coarse grained, medium soft, loosely consolidated, angular, bright to vitreous luster, siliceous cement, 80% plagioclase, 10% orthoclase, 10% chlorite, minor quantities of quartz, olivine and biotite, red hematitic stain predominant, good intergranular porosity; trace of caliche; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2020-21-9 minutes; 21-22-7 minutes; 22-23-4 minutes; 23-24-4 minutes; 24-25-8 minutes.

2025-2030 Sandstone 100%, arkosic, gray, fine to coarse grained, medium soft, loosely consolidated, angular, bright to vitreous luster, siliceous cement, 80% plagioclase, 10% orthoclase, 10% chlorite, minor quantities of olivine and biotite, red hematitic staining predominant, good intergranular porosity; trace of caliche; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2025-26-9 minutes; 26-27-16 minutes; 27-28-16 minutes; 28-29-12 minutes; 29-30-5 minutes.

Stopped drilling 3:41 P.M.; greasing rig; resumed drilling 3:51 P.M.

4:00 P.M.

2030-2035 Sandstone 100%, arkosic, gray to white, medium to very coarse grained, poorly consolidated, angular grains of feldspar and some quartz, subvitreous to vitreous luster, siliceous lime cement, 70% plagioclase, 20% quartz, 5% orthoclase, 5% chlorite and other ferro-magnesium minerals, good intergranular porosity; no odor, no stain, no fluorescence, no cut with carbon tetrachloride; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2030-31-7 minutes; 31-32-13 minutes; 32-33-8 minutes; 33-34-8 minutes; 34-35-10 minutes.

Weight on bit 20,000#.

2035-2040 Sandstone 100%, arkosic, gray to white, angular, medium to very coarse grained feldspar and some quartz, subvitreous to vitreous luster, siliceous lime cement, 80% plagioclase, 20% quartz; strong trace chlorite, biotite, hornblend and hematite; good intergranular porosity; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%; Drilling time: 2035-36-12 minutes; 36-37-14 minutes; 37-38-12 minutes; 38-39-13 minutes; 39-40-12 minutes.

32 × 8

WESTERN OIL FIELDS, INC.--NO. 1 FLORENCE

PINAL COUNTY, ARIZONA

SECTION 31 CENTER SW SW, T-5S, R-10E

FGA Flowline Gas Analysis
MGA Mud Gas Analysis
CGA Cuttings Gas Analysis

1995-2000 Sandstone 100%, arkosic, gray, medium to coarse grained, medium soft, loosely consolidated, 60% plagioclase, 10% orthoclase, angular, 10% quartz, 20% chlorite, minor quantities of olivine, biotite and muscovite, hematitic stain on 20% of feldspar fragments, siliceous cement, bright to vitreous luster, good intergranular porosity; trace of caliche; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 1995-96-10 minutes; 96-97-9 minutes; 97-98-8 minutes; 98-99-9 minutes; 99-2000-9 minutes.

2000-2005 Sandstone 100%, arkosic, gray, medium to coarse grained, medium soft, loosely consolidated, angular fragments, bright to vitreous luster, siliceous cement, 70% plagioclase, 10% orthoclase, 5% quartz, 15% chlorite, minor quantities of olivine, biotite and muscovite, hematitic stain on 50% of feldspar fragments, good intergranular porosity; trace of caliche; no odor, no stain, no fluorescence, no cut with carbon tetrachloride; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2000-01-9 minutes; 01-02-5 minutes; 02-03-8 minutes; 03-04-10 minutes; 04-05-13 minutes.

Round trip at 2009'; out of hole 9:45 A.M.; on bottom and drilling at 11:43 A.M.

Ran Bit #22, Hughes OWS, 9 7/8".

2005-2010 Sandstone 100%, arkosic, gray, medium to coarse grained, medium soft, loosely consolidated, angular, bright to vitreous luster, siliceous cement, 80% plagioclase, 10% orthoclase, 10% chlorite, minor quantities of olivine, biotite, 75% of sample has hematite stain, good intergranular porosity; trace of caliche; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2005-06-10 minutes; 06-07-11 minutes; 07-08-11 minutes; 08-09-17 minutes; 09-10-8 minutes.

2010-2015 Sandstone 100%, arkosic, gray, medium to coarse grained, medium soft, loosely consolidated, angular, bright to vitreous luster, siliceous cement, 80% plagioclase, 10% orthoclase, 10% chlorite, minor quantities of quartz, olivine and biotite, red hematitic stain predominant, good intergranular porosity; trace of caliche; no odor, no stain, no fluorescence, no carbon tetrachloride cut; FGA Methane 0.0%, Ethane 0.0%, MGA Methane 0.0%, Ethane 0.0%, CGA Methane 0.0%, Ethane 0.0%; Drilling time: 2010-11-10 minutes; 11-12-5 minutes; 12-13-4 minutes; 13-14-5 minutes; 14-15-4 minutes.

32 x

B. 15-13

STATE LAND DEPARTMENT
STATE OF ARIZONA

Form OG 51

Form Prescribed Under Oil and Gas Conservation Act of 1951

NOTICE OF INTENTION TO DRILL NEW WELL

This notice and surety bond must be filed and permit must be granted before drilling begins

Ariz. February 12 19 53

State Land Commissioner

In compliance with Statewide Rule 3, notice is hereby given that it is our intention to commence the work of drilling well No. 1 Sec. 31,

T. 5S., R. 10 E., B. & M., FLORENCE Field,

PINAL County.

Legal description of lease Federal Lease, Ariz. 097, 1021.84 Acres.
(Attach map or plat to scale)

Location of Well: C SW SW SECTION 31
(Give exact footage from section corners or other legal subdivisions or streets)

Proposed drilling depth 7,000 feet. Acres in drilling unit 21,000+. Has surety bond been filed? _____. Is location a regular or exception to spacing rule? Regular.

Elevation of ground above sea level _____ feet.

All depth measurements taken from top of D.F.
(Derrick, floor, Rotary Table or Kelly Bushing) which is 10 feet above the ground.

PROPOSED CASING PROGRAM

Size of Casing Inches A.P.I.	Weight	Grade and Type	Top	Bottom	Cementing Depths
Plan to set 300 Ft. of surface casing. Casing program from that point will be determined as needed.					

Intended Zone or Zones of completion:

Name	Perforated Interval
Unknown	

AFFIDAVIT:

I hereby certify under the penalty of perjury, that the information contained and statements herein made are to the best of my knowledge and belief, true, correct and complete.

WESTERN OIL FIELDS, INC.
(Applicant)
By R. M. Barnholt, Jr.

Application approved this 2 day of MARCH 1953

Permit NO. 15

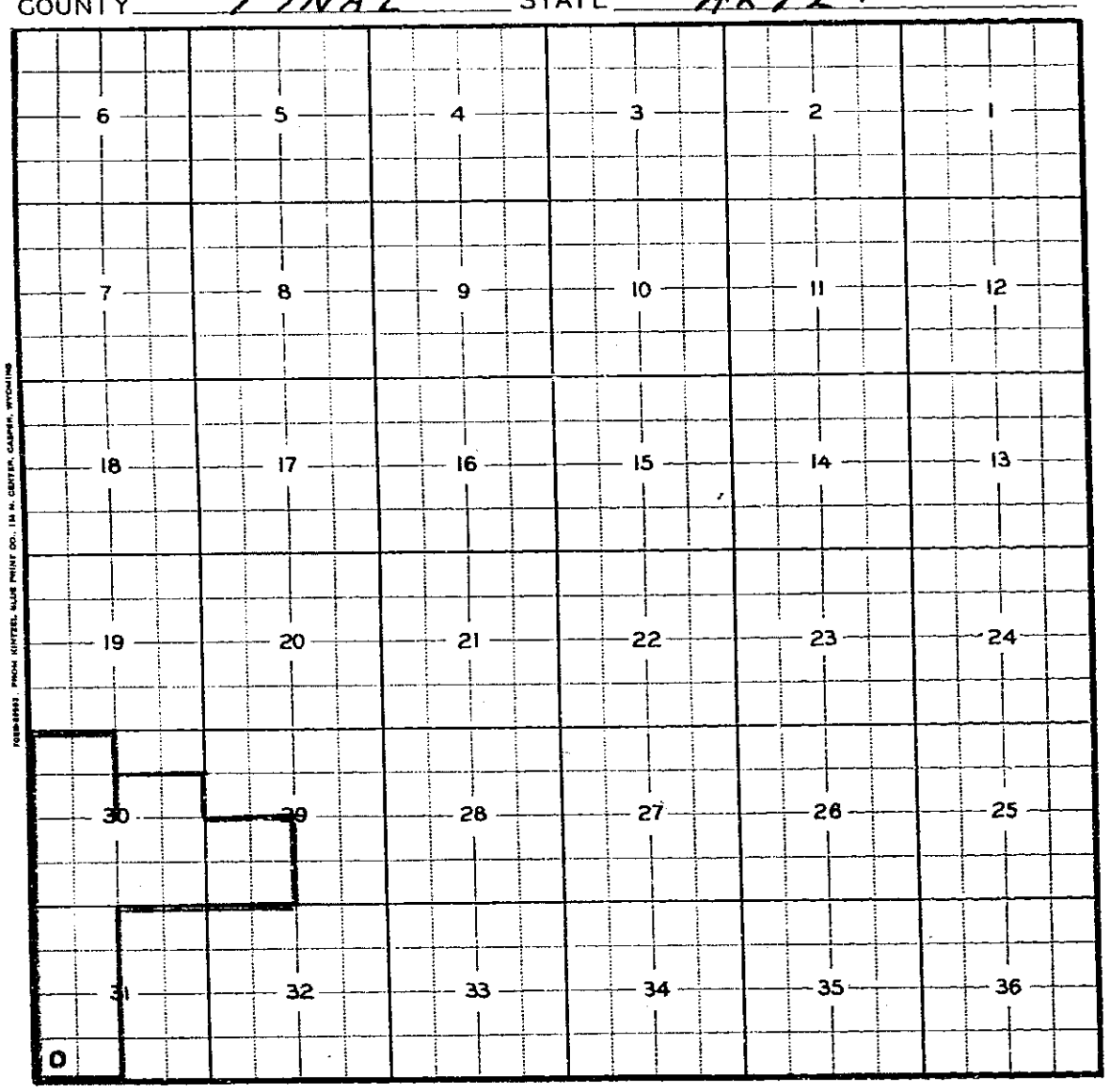
DEPUTY State Land Commissioner

RECEIVED
FEB 16 1957
STATE LAND
DEPT.

32 x

TOWNSHIP 5 S. RANGE 10 E.

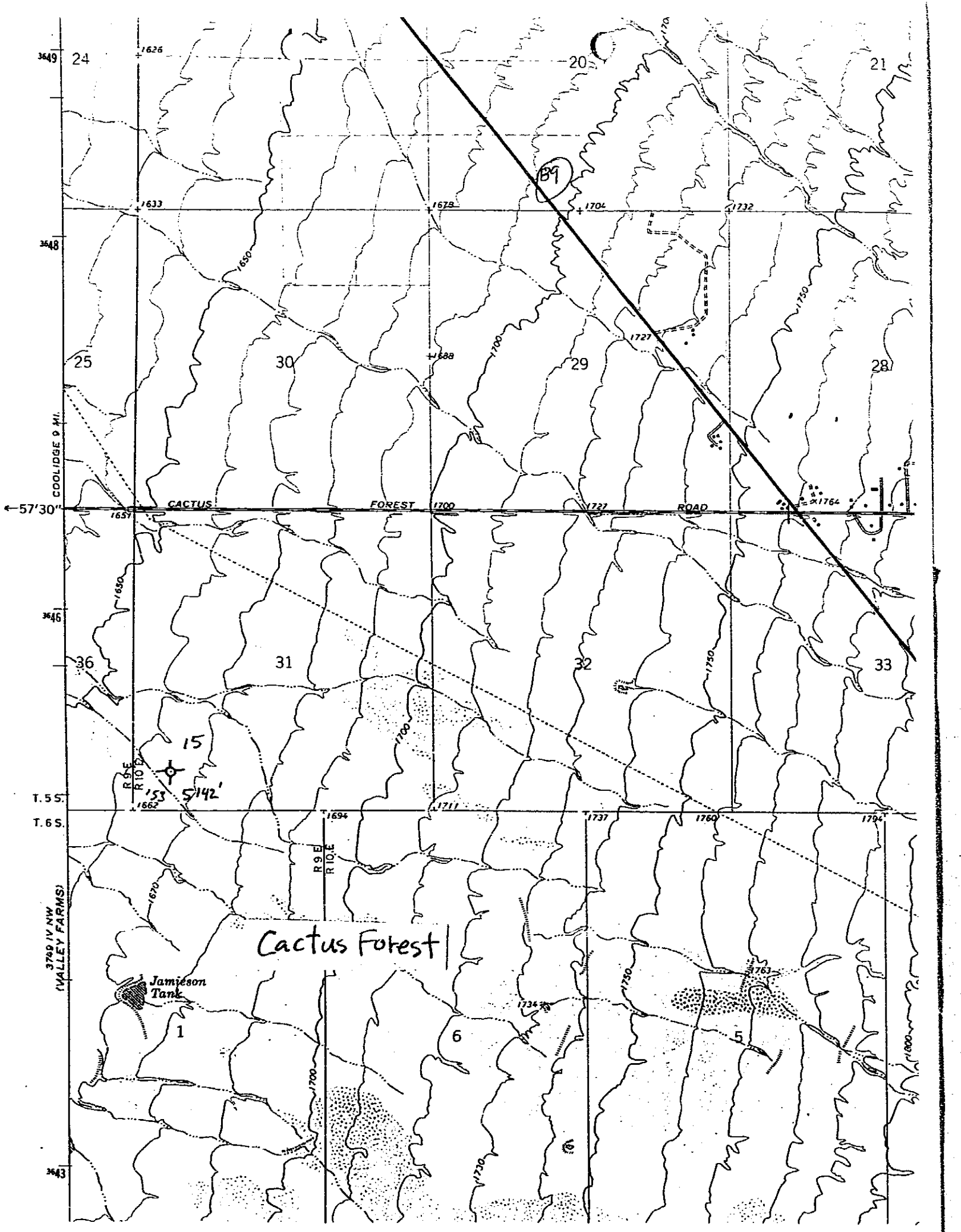
COUNTY PINAL STATE ARIZ.



FEDERAL, ARIZ. 097
1021.84 acres

32 × 8

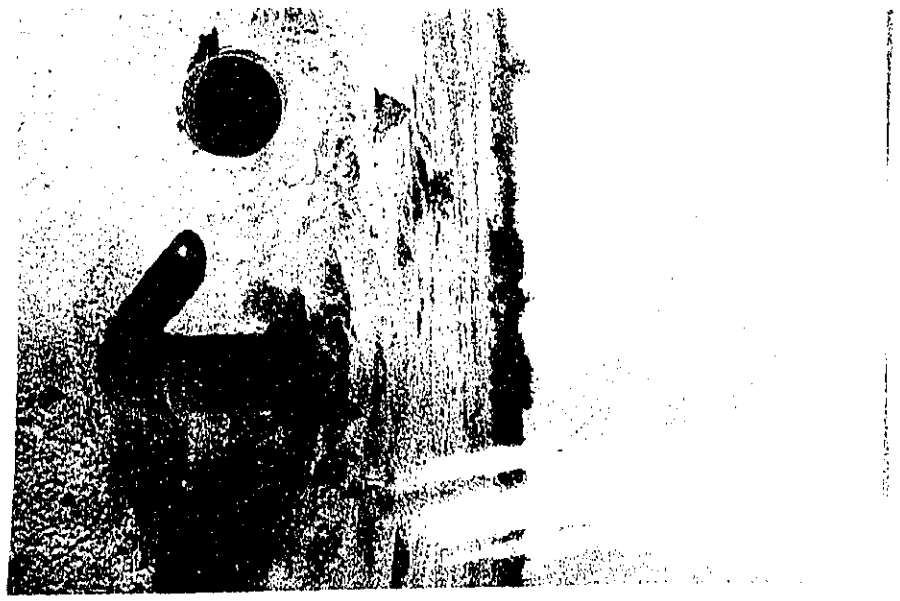
RECEIVED
FEB 25
STATE LAND
DEPT.



24
20
21
25
30
29
28
36
31
32
33
1
6
5
B9
15
153
5142'
CACTUS FOREST ROAD
←57'30"
COOLIDGE 9 MI.
T. 5 S.
T. 6 S.
R 9 E
R 10 E
3749 IV NW (VALLEY FARMS)
Jamieson Tank
Cactus Forest

32 ×

PHOTOS WESTERN OIL FIELDS



RECEIVED
DEC 3 1954
STATE LAND
DEPT.

32 ×

Western Oil Fields Inc. - Fol 41
10/54

RECEIVED
DEC 3 1954
STATE LAND
DEPT.

32 × 11

STOCK..... Common DIVIDEND .....
PRICE (Approx.). 3¼-3⅜ YIELD .....
EARNINGS (Year, December 31, 1953)—$0.13.
*Initial dividend $0.05, payable in stock March 15, 1954.

COMMENT (12/30/54) COMMON

Company's progress to date warrants confidence in management's ability to capitalize to the fullest on its production and acreage holdings. Shares are speculative in quality but reasonably appraised.

CONSIDERABLE PROGRESS INDICATED

Current Developments—The company continues its intensive exploration and development program and has broadened the field of its activity with its entry into the uranium mining field. In order to further step up its exploration and development program it has recently merged its acquisitions, with the result that on Dec. 1, 1954, it held an interest in more than 112 producing oil and gas wells, 14 drilling rigs and operations in New Mexico, Texas, Wyoming, North Dakota and Canada, with 255 proven locations, which are expected to raise its gross income in current year to over $2 *million*.

Uranium Mining—In the latter part of 1954, the company acquired 24 uranium claims aggregating 480 acres in northeastern Wyoming, directly offsetting Homestake Mining Co.'s "Multi-Million Dollar Hill" discovery and adjoining the Homestake open pit and Little Mining Co.'s pit mining operations, where unconfirmed reports give average values of 1.34% uranium worth $200 a ton. It also acquired in the same area options on 1,000 additional claims aggregating 20,000 acres also bordering holdings of Homestake Mining Co. Besides, the company has two group of claims in the Uravan Mineral Belt on the Colorado Plateau, for the development of which Defense Minerals Exploration loans have been applied for: Five "Binder Claims" totaling 100 acres, in the Anderson Mesa district, Little Gypsum Valley, Montrose County, Colorado, adjoining Vanadium Corp.'s Raven Mine which has produced over $1 million in ore to date; and 4 claims aggregating 80 acres on Mineral Mountain in the Ham Canyon area. The company has purchased portable core drilling equipment, trucks and field trailer houses to expedite the exploratory work and has sold a part interest in these holdings to Rio Grande Western Uranium Co., a new concern.

Acquisitions—In February, 1954, the company acquired 23 shallow wells in the Artesia and Turkey Track fields of Eddy County, New Mexico, and in August, 1954, the entire capital stock of Donnell Drilling Co. of Dallas, Texas, and

DEC 2, COLORADO
650 17th Street

WESTERN OIL FIELDS, INC.—(U-1556 C)

(Over-the-Counter)

CAPITALIZATION (December 31, 1953)—
Long-Term Debt: $266,624. 2,300,000 approx
Common Stock ($1.25 par), 1,847,912 shares.

Donnell Drilling Co., Ltd., of Canada, owning interests in 38 producing wells in West Texas and New Mexico, 4,000 acres of leases and oil field equipment for deep drilling. It also had 3 contracts for the drilling of a total of 130 wells.

1953 Report—Sales, etc., during 1953 totaled $452,483. Net operating income amounted to $241,283. Net income of $234,933 equaled $0.13 per share.

Operations Comment—Seven wells were completed during 1953, and an additional 5 wells were drilling or in the process of being placed on production at year's end. The only failure was the wildcat project in Pinal County, Arizona, which did not affect the financial position of the company inasmuch as the entire cost of the well was paid by other interests, and company's drilling equipment earned the cost of the 20% interest retained in the prospect by the company. It farmed out a lease in the Byron Field area of Wyoming to the Delhi Oil Co., retaining an overriding royalty and an oil payment, and the test well drilled by Delhi was dry; another well is projected in this transaction. Also, the company contributed $1,000 dry-hole money to a test well by the Sohio Oil Co. on the Geary Dome prospect in Wyoming where Western has 320 acres in close proximity, and this attempt was abandoned.

Exploration—The "deep-rights" play in Eddy County, N. M., was one of the major highlights of 1953 discoveries of great importance in these lower 'stratas' were made by The Continental Oil Co., Skelly Oil Co., Stanolind Oil & Gas Co., and others. The importance of this situation to the company cannot be over-emphasized.

Square Lake property and the recently acquired Artesia and Turkey Track properties are very well located, and give the company a good spread in Eddy County, with a good potential in prospect. The latest Stanolind discovery is between the Turkey Track and Artesia tracts. A Skelly discovery is just to the south of Square Lake. The Continental Oil Co. established a deep field to the northeast of Square Lake. Stanolind has a major strike adjoining Artesia to the north. It has had a substantial cash offer from a major company for the deep rights to acreage it owns in Eddy County.

Gas Contracts—Company has reported that a contract has been signed with the Gulf Oil Corp. to purchase the Bradenhead gas from oil zones in the Drinkard Field.

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32 x 8

STOCK..... **Common** DIVIDEND ..... *
PRICE (Approx.). 3¼-3⅞ YIELD ..... *
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650 17th Street
DENVER 2, COLORADO

A gas contract has been signed with the El Paso Natural Gas Co. and the No. 2 well at Drinkard is presently being "hooked-up" to commence delivery against this contract. This well in tests on August 27 and 28 on a one-half-inch choke produced 4 million cf. of gas per day with approximately 150 barrels of distillate per day. Posted price for distillate is $2.90 per bbl. and the price of the gas starts at 9½ cents per mcf., and is increased every 5 years. In addition, bonuses are paid for the gasoline, butane, propane, etc., content of the gas.

New Acreage Acquired—In October, 1953, company acquired a lease on an additional 120 acres in the Clareton Field, bringing its total in that area to 1,680 acres. This latest property has several offset wells, and should prove to be very valuable. Company reported entering purchase contract for properties in Eddy County, N. M., which was expected to be completed by the end of October. This transaction includes 16 shallow wells, and about 3,000 acres. It will add from 150 to 200 barrels per day to company's production.

Reverse Split—In September, 1953, company effected a reverse split, by changing 4.01 shares for one new share of common stock. The par value of the stock was changed from one cent to $1.25 par value per share.

CORPORATE ACTIVITIES—Incorporated in Colorado, in January, 1949. Company is primarily in the business of crude oil production. Other sources of revenue include drilling and lease-operating profits, sale of leases and royalties, sale of services, and royalty income. The company has interest in 95,620 acres of speculative leases, some of which seem to have excellent possibilities, such as the Byron, Little Pole-Cat and Spence Dome fields of the Big Horn Basin, Wyoming, Fiddler Creek and Clareton Fields, Weston County, Wyoming, the Greasewood Flats field of Weld County, Colorado, the Denver-Julesburg Basin, and South Glenrock, Converse County, Wyoming, most of which are worthy of testing by the drill. Company completed 5 wells in the Drinkard Pool, N. Mex., has 10 wells in the Square Lake Oil field, N. Mex. and 6 wells in the Simpson Ridge Creek Field, Wyo. In addition, company owns a royalty interest on 600 acres in South Cole Creek field, Converse County, Wyo., on which five wells have been completed. Company holdings comprise an interest in 75 wells in Wyoming and New Mexico. Widespread lease-holdings in 37 areas assure continuous development situations. Western owns a 50% working interest in one well operated by Continental in the Big Muddy field, Converse County, Wyo. Company acquired 640 acres in Maljamar field, Lee County, N. M. Western owns rotary drilling machines, clean-out units, lease houses, car, trucks and sundry lease equipment. Company ground surface acres total 14,460. Proven acres total 13,180. In 1954, acquired Donnell Drilling Co. of Dallas, Tex., and of Canada.

FINANCIAL CONDITION (December 31, 1953)—Fair. Current ratio 1.73 to 1.

OFFICE—1327 Grant St., Denver, Colorado.

OFFICERS—R. M. Barnholt, Sr., Pres.; R. R. Haskins, V.P.; R. M. Barnholt, Jr., Secy.-Treas.

DIRECTORS—R. M. Barnholt, Sr., R. M. Barnholt, Jr., C. L. Cole, R. R. Haskins, W. B. Middlemist.

REGISTRAR AND TRANSFER AGENT—Company's office.

ANNUAL INCOME ACCOUNT AND BALANCE SHEET

Comparative Consolidated Income Account

(Official)	Yr. end Dec. 31,'53 $	2-Years Dec. 31,'52 $
Sales, etc.	452,433	385,733
Oper. expenses, etc.	173,806	260,590
Deprec. & deplet.	37,394	69,934
Net oper. income	241,283	65,214
Interest	6,350	16,163
Net income	234,933	39,051
Earned on com.	0.13	*0.02

*Giving effect to 1-for-4 reverse split in September, 1953.

Comparative Consolidated Balance Sheet

as of Dec. 31:	1953 $	1952 $
Assets		
Prop. & equip. (net)	1,178,693	1,055,716
Apprec. in value of leaseholds	26,326,787	6,368,947
Deferred chrgs., etc.	38,566	37,624
Current Assets:		
Cash	45,288	16,859
Special deposits	5,709	2,000
Accts. receivables	80,384	25,862
Inventories	447,878	69,906
Total curr. assets	559,159	123,427
Total assets	27,903,205	7,585,714
Liabilities		
Com. stk. (par $1.25)	2,399,890	†66,554
Treas. stk. subscr.	26,971	1,005
Long-term debt	69,612	88,266
Capital surplus	25,005,205	7,019,059
Earned surplus	294,456	59,552
Current Liabilities:		
Accts. payable	50,236	13,541
Notes payable	149,529	27,626
Royalties payable	777	5,063
Accruals	6,470	5,139
Total curr. liabil.	207,011	51,278
Total liabilities	27,903,205	7,585,714
Working capital	152,148	72,149
Ratio C.A. to C. L.	1.73 to 1	2.41 to 1
Equity per share	14.78	*4.48

*Giving effect to 1-for-4 reverse split in September, 1953.

†Par $0.01.

While the information herein is believed to be correct, the publisher, The Fitch Publishing Co., Inc., disclaims all legal responsibility.

STATE OF ARIZONA

STATE LAND DEPARTMENT

BOND FOR DRILLING OIL OR GAS WELL

RECEIVED FEB 16 1953 STATE LAND DEPT.

State of Arizona)
)
County of Maricopa)

KNOW ALL MEN BY THESE PRESENTS:

That we, WESTERN OIL FIELDS, INC.,

hereinafter called Principal, and AMERICAN BONDING COMPANY OF BALTIMORE, hereinafter called the Surety, are held and firmly bound unto the State of Arizona in the sum of Ten Thousand Dollars ($10,000) for the payment of which the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas the Principal has obtained a permit from the State Land Commissioner to drill a well in search of oil or gas, and whereas said Principal is required by provisions of the Oil and Gas Conservation Act of 1951 to deposit with the said Commissioner a good and sufficient bond:

Now, therefore, the condition of the foregoing obligation is such that if the Principal shall drill, case and plug all wells drilled by said Principal in such manner as to prevent the escape of oil or gas from one stratum to another and to prevent the intrusion of water into an oil or gas stratum from a separate stratum, and to prevent the pollution of fresh water supplies by oil, gas or salt water and in such manner as to prevent waste, and shall make reports to the Commissioner showing the location of all oil and gas wells drilled by said Principal, and shall file all logs and drilling records kept by said Principal within six (6) months from the time of the completion or abandonment of any well drilled for oil or gas and shall plug each dry or abandoned well in the manner provided by the rules and regulations adopted by said Commissioner, then this obligation to be null and void, otherwise to be and remain in full force and effect.

Witness our hands and seals this 12th day of February, 1953.

WESTERN OIL FIELDS, INC.

By: R. M. Barnhold Sr.
Principal

AMERICAN BONDING COMPANY OF BALTIMORE

By: Cosby D. Thomas
Cosby D. Thomas ~~Surety~~ Attorney-in-Fact

Canceled 1955
Nov 10

Approved this 2 day of March, 1953.

James B. Berger
State Land Commissioner
B-15 Permit Number

ARIZONA STATE LAND DEPARTMENT		
Noted by	To	Date
Ans. by		Date

32 × 1

This Power of Attorney limits the act of those named therein to the bonds and undertakings specifically named therein and they have no authority to bind the Company except in the manner and to the extent therein stated

L1419—20M, 4-48 *31146*
General Ctf.

POWER OF ATTORNEY

American Bonding Company of Baltimore

HOME OFFICE: BALTIMORE, MD.

KNOW ALL MEN BY THESE PRESENTS:

That the AMERICAN BONDING COMPANY OF BALTIMORE, a corporation of the State of Maryland, by Wm. H. C. Griffith Vice-President, and D. L. Buckler, Assistant Secretary, in pursuance of authority granted by Article VI, Section 2, of the By-Laws of said Company, which reads as follows:

SECTION 2. "The President, the First Vice-President, or any of the additional Vice-Presidents specially authorized so to do by the Board of Directors or by the Executive Committee, shall have power, by and with the concurrence of the Secretary or any one of the Assistant Secretaries, to appoint Resident Vice-Presidents, Resident Assistant Secretaries, and Attorneys-in-Fact as the business of the Company may require, or to authorize any person or persons to execute on behalf of the Company any bonds, undertakings, recognizances, stipulations, policies, contracts, agreements, deeds, and releases and assignments of judgments, decrees, mortgages and instruments in the nature of mortgages, and also all other instruments and documents which the business of the Company may require, and to affix the seal of the Company thereto."

does hereby nominate, constitute and appoint Cosby D. Thomas, of Denver, Colorado

its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: any and all bonds and undertakings

And the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in Baltimore, Maryland, in their own proper persons. This power of attorney revokes that issued on behalf of Cosby D. Thomas, dated June 3, 1947.

The said Assistant Secretary does hereby certify that the aforegoing is a true copy of Article VI, Section 2, of the By-Laws of said Company, and is now in force.

IN WITNESS WHEREOF, the said Vice-President and Assistant Secretary have hereunto subscribed their names and affixed the Corporate Seal of the said AMERICAN BONDING COMPANY OF BALTIMORE, this 13th day of January, A.D. 19 48

ATTEST: **AMERICAN BONDING COMPANY OF BALTIMORE**

(SIGNED) D. L. Buckler — *Assistant Secretary*

By Wm. H. C. Griffith — *Vice-President*

(SEAL)

STATE OF MARYLAND
CITY OF BALTIMORE } ss:

On this 13th day of January, A.D. 19 48 before the subscriber, a Notary Public of the State of Maryland, in and for the City of Baltimore, duly commissioned and qualified, came the above-named Vice-President and Assistant Secretary of the AMERICAN BONDING COMPANY OF BALTIMORE, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and they each acknowledged the execution of the same, and being by me duly sworn, severally and each for himself deposeth and saith, that they are the said officers of the Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and that the said Corporate Seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal, at the City of Baltimore, the day and year first above written.

(SIGNED) Anna B. Nau — *Notary Public*

(SEAL)

My Commission Expires May 2, 1949.

CERTIFICATE

I, N. A. WAGNER, Assistant Secretary of the AMERICAN BONDING COMPANY OF BALTIMORE, do hereby certify that the attached Power of Attorney dated January 13, 48 in behalf of Cosby D. Thomas of Denver, Colorado is a true and correct copy and that same has been in full force and effect since the date thereof and is in full force and effect on the date of this certificate; and I do further certify that the said Wm. H. C. Griffith and D. L. Buckler, who executed the attached Power of Attorney as Vice-President and Assistant Secretary respectively, were on the date of the execution of the attached Power of Attorney the duly elected Vice-President and Assistant Secretary of the AMERICAN BONDING COMPANY OF BALTIMORE, and that the said Wm. H. C. Griffith was one of the additional Vice-Presidents specially authorized by the Board of Directors to appoint any Attorney-in-Fact or to authorize any person or persons to execute on behalf of the Company any bonds, recognizances, stipulations, undertakings, deeds, releases of mortgages, contracts, agreements and policies, and to affix the seal of the Company thereto as provided in said Article VI, Section 2 of the By-Laws of the AMERICAN BONDING COMPANY OF BALTIMORE.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the said Company, this 12th day of February, 1953

Nathan A. Wagner
Assistant Secretary

RECEIVED
FEB 16 1953
STATE LAND
DEPT.

32 × 1

Phoenix, Ar

February 24, 1956

Mr. James A. Evers, Manager
American Bonding Company of Baltimore
306-311 Security Building
Denver 2, Colorado

Re: Bond #157 384 - Western Oil Fields, Inc.
$5,000 Bond of Oil and Gas Lease Operator

Dear Mr. Evers:

Your letter of February 17th requesting date upon which the above mentioned bond may be terminated has been received by this Department. We wish to advise you that the only bond filed with this office was for a blanket bond in the amount of $10,000, which was cancelled under date of November 10, 1955.

If we can be of further assistance, please call on us.

Very truly yours,

Louis C. Duncan

Louis Duncan,
Office Manager

LD:mb

COPY

32 × 6

American Bonding Company

HOME OFFICE OF BALTIMORE BALTIMORE 3, MD.

FIDELITY AND SURETY BONDS

BURGLARY AND GLASS INSURANCE

JAMES A. EVERS
MANAGER
F. HUGH WILEY
ASSISTANT MANAGER
ROBERT B. SCHOLL
SPECIAL REPRESENTATIVE

306-311 SECURITY BUILDING
PHONES: ACOMA 2-1826, 1827
DENVER 2

CLAIM OFFICE
JOHN R. HICKISCH
CLAIMS ATTORNEY
804 EQUITABLE BUILDING
MAIN 3-1245

February 17, 1956

State Land Department
State of Arizona
Phoenix, Arizona

RE: Bond #157 384 - Western Oil Fields, Inc.
$5,000 Bond of Oil and Gas Lease Operator

Gentlemen:

We have been advised that the captioned bond is no longer needed as this operation is completed.

Will you please advise us the date upon which we may consider our liability under this bond terminated.

Thank you for your advices.

Very truly yours,

James A. Evers
Manager

rp

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RECEIVED
FEB 20 1956
STATE LAND DEPT.

15

November 10, 1955

COPY

Mr. Cody D. Thomas
Assistant Manager
American Bonding Company of Baltimore
306-11 Security Building
Denver 2, Colorado

Dear Mr. Thomas:

The bond in the amount of $10,000.00 was issued on February 12th, 1953 to cover the well for drilling of oil and gas in the State of Arizona by Mr. R. M. Barnholt of Eastern Oil Fields, Inc., as principal, and the American Bonding Company of Baltimore as surety, which bond was conditioned upon the drilling, casing and plugging of all oil and gas wells drilled to prevent the escape of oil or gas from one stratum to another, to prevent intrusion of water into an oil or gas stratum from a separate stratum, to prevent the pollution of fresh water supplies by oil, gas or salt water and to prevent waste.

In addition said bond was conditioned upon the submission of all reports required by the Oil and Gas Conservation Act of 1951 of the State of Arizona, and the Rules and Regulations of the State Land Department, such logs, drilling records, and the receipt of samples as are required by said Rules and Regulations of the Oil and Gas Conservation Law of Arizona.

The records of the Department indicate that with respect to the well drilled by Mr. R. M. Barnholt of Western Oil Fields, Inc., located in Section 31, Township 5 South, Range 10 East, Pinal County, Arizona, that all requirements as contained in said Oil and Gas Conservation Law of Arizona and the Rules and Regulations of the State Land Department, have been met and fully complied with by said R. M. Barnholt, Jr., of Western Oil Fields, Inc., and therefore, the bond heretofore described may be terminated as of November 10th, 1955.

Very truly yours,

Roger Ernst,
State Land Commissioner

RE:rmb
cc - R.M.Barnholt,Jr., R.H.Hilburn, John A. Frost, P.W.Johnson,
Earl H. Johnson,

November 10, 1955

COPY

Mr. R. H. Barnhalt, Jr.,
Western Oil Fields, Inc.,
1636 Stout Street
Denver 2, Colorado

Dear Mr. Barnhalt:

We are inclosing herewith completed copies for your files of our forms OGO 55 and 56 covering the drilling operation of the well located in Section 31, Township 5 South, Range 10 East, Pinal County, Arizona.

We have as of this date cancelled the bond which was issued on February 12th, 1953 in the amount of $10,000.00 by the American Bonding Company of Baltimore, copy of our letter to Mr. Cosby D. Thomas is inclosed. We are also sending copies of this correspondence to all other interested parties in order that they may be advised of this cancelation.

May we thank you for all your past cooperation and for the effort made to enable us to close our files.

Sincerely yours,

Roger Ernst,
State Land Commissioner

Rlmb
cc: D. H. Williams
Earl H. Johnson
John A. Frost
F. W. Johnson
Cosby D. Thomas

Enclosures (2)

15

John H. Page & Company
LAND ATTORNEYS
PUBLIC LANDS—STATE LANDS—SCRIP
SUITE 516 LUHRS BUILDING
P. O. BOX 3706
TELEPHONE {AL 3-6216 / AL 3-7729
Phoenix, Arizona

JOHN H. PAGE
D. B. MORGAN
EDWARD E. WILLIAMS
ANDREW L. BETTWY

October 14, 1955

Mr. Roger Ernst
State Land Commissioner
State Land Department
Phoenix, Arizona

Dear Mr. Ernst:

Heretofore considerable correspondence and conversation has been had with your Department regarding Western Oil Fields, Inc. Federal No. 1 Exploratory Test Well located in Sec. 31, T. 5-S., R. 10-E., Pinal County, Arizona.

In behalf of Mr. Haines W. Reed, the grazing lessee of that federal land, we had been dealing with the Western Oil Fields, Inc. to acquire their interest in the well. Now, after much work in this matter, we are advised by Mr. E. I. Rowland that the said Western Oil Fields, Inc. forfeited all of their interests in that well. Therefore, if that be true, Mr. Reed is in no position to accept any responsibility for the well.

Very truly yours,

JOHN H. PAGE & COMPANY

By A. L. Bettwy
Andrew L. Bettwy

B/cl

RECEIVED
OCT 15 1955
STATE LAND DEPT.

15

32 ×

OIL · GAS

WESTERN OIL FIELDS, INC.

1827 GRANT STREET
POST OFFICE BOX 1139 DENVER, COLORADO
TELEPHONE MAIN 3-0226

August 11, 1955

State Land Department
State of Arizona
Phoenix, Arizona

Re: Western Oil Fields, Inc. # 1
Pinal County, Arizona

Attention: Mr. Phillip W. Johnson

Gentlemen:

We are mailing today the samples from the above-captioned well, and as you will discover, they are from 2,000' to 5,010'. The samples from the surface to 2,000' were lost when the rig was moved; however, we were informed by the geologist in charge that there was no change in the lithology from the surface to 5,000'.

We trust this is enough information to allow the bond to be released.

Yours truly,

Earl H. Johnson

Earl H. Johnson

EHJ/jr
Separate Cover

Samples Received 8/15/55 In Vault MB

10/31/55 Geologist took samples

RECEIVED AUG 13 1955 STATE LAND DEPT.

9663

15

John H. Page & Company
LAND ATTORNEYS
PUBLIC LANDS STATE LANDS SCRIP
SUITE [illegible] [illegible] BUILDING
P. O. BOX 5706
TELEPHONE AL 3-[illegible]
AL 3-7725

Phoenix, Arizona

JOHN H. PAGE
D. B. MORGAN
EDWARD E. WILLIAMS
ANDREW L. BETTWY

June [illegible], 1955

Mr. Earl P. Johnson
Western Oil Fields, Inc.
1827 Grant Street
P. O. Box 1139
Denver, Colorado.

Re: Western Oil Fields, Inc.
Federal No. 1 Exploratory Oil
Test, Sec. 21, T. 5-S., R.10-E.,
Pinal County, Arizona

Dear Mr. Johnson:

I have finally been able to acquire the instruments which I think you need to proceed with the assignment of Western Oil Fields, Inc. right to Haines W. Reed for your Federal No. 1 Well in Pinal County, Arizona. Those instruments are enclosed herewith, and they are a Bill of Sale from your company to Mr. Reed and an Affidavit from Mr. Reed assuming responsibility for this well. The Affidavit is conditioned upon your assignment to Mr. Reed. Upon receipt of the Bill of Sale we will promptly have it recorded in Pinal County and will submit duplicate copies of the bill of sale and the acceptance affidavit to the State Land Department.

Very truly yours,

JOHN H. PAGE & COMPANY

By Andrew L. Bettwy

E/cl
encls.

cc - Mr. Robert Ernst
State Land Commissioner
State Land Dept., Phoenix

32 × [illegible]

John H. Page & Company
LAND ATTORNEYS
PUBLIC LANDS—STATE LANDS—SCRIP
SUITE 516 LUHRS BUILDING
P. O. BOX 3706
TELEPHONE {AL 3-6216 / AL 3-7729
Phoenix, Arizona

JOHN H. PAGE
D. B. MORGAN
EDWARD E. WILLIAMS
ANDREW L. BETTWY

COPY

June 9, 1955

Mr. Earl H. Johnson
Western Oil Fields, Inc.
1827 Grant Street
P. O. Box 1139
Denver, Colorado.

Re: Western Oil Fields, Inc.
Federal No. 1 Exploratory Oil
Test, Sec. 31, T. 5-S., R.10-E.,
Pinal County, Arizona

Dear Mr. Johnson:

I have finally been able to acquire the instruments which I think you need to proceed with the assignment of Western Oil Fields, Inc. right to Haines W. Reed for your Federal No. 1 Well in Pinal County, Arizona. Those instruments are enclosed herewith, and they are a Bill of Sale from your company to Mr. Reed and an Affidavit from Mr. Reed assuming responsibility for this well. The Affidavit is conditioned upon your assignment to Mr. Reed. Upon receipt of the Bill of Sale we will promptly have it recorded in Pinal County and will submit duplicate copies of the bill of sale and the acceptance affidavit to the State Land Department.

Very truly yours,

JOHN H. PAGE & COMPANY

By Andrew L. Bettwy

B/cl
encls.

CC - Mr. Roger Ernst
State Land Commissioner
State Land Dept., Phoenix

15

May 6, 1955

Mr. Earl H. Johnson
Legal Division
Western Oil Fields, Inc.,
P. O. Box 1139
Denver, Colorado

Dear Mr. Johnson:

We wish to acknowledge receipt of your letter dated April 20th, 1955, as well as our forms O&G 55, 56, and drilling log in connection with the Western Oil Fields Well #1, Pinal County, Arizona, and for which we wish to thank you.

We have delayed our reply pending the outcome of your search for the samples on this well, which we trust will be successful. We also would like to advise you that when we receive the above samples, as well as the letter of acceptance on conversion of this well to a water well the bond in question may then be terminated.

Very truly yours,

Phillip W. Johnson,
Geologist

By: _____
Secretary

COPY

cc - PWJohnson

15

Mailed

April 26, 1955

Mr. B. H. Hilburn
1514 Mercantile Securities Bldg.
Dallas 1, Texas

Dear Mr. Hilburn:

Thank you very much for your letter concerning Western Oil Fields, Inc., Federal No. 1. I am sure that your frank comments to Mr. Barnholt will assist us in bringing the matter to a close.

We, along with you and Mr. Braden and Mr. Woods, were disappointed in the unsatisfactory results of the drilling in Yuma County. It can certainly be said that those individuals concerned received the best of service and cooperation from you, and if anyone could have obtained any oil from those two holes you could have done it. I only hope that at some future date those who sacrificed capital in their attempts to "prove up" that area may have an opportunity to successfully engage in oil production in Arizona.

Thank you again for your interest and reply.

Sincerely,

Roger Ernst
State Land Commissioner

RE:kb

15

OFFICE OF
State Land Department
STATE OF ARIZONA
Phoenix, Arizona

April 26, 1955

ROGER ERNST
STATE LAND COMMISSIONER

JAH .....
LAH .....
PWJ .....
CAA .....
MBB .....
OJC .....
MFH .....
MAK .....
CTP .....
NDW .....
PHX .....
FILE .....

Mr. Phillip W. Johnson
P. O. Box 2270
Tucson, Arizona

Dear Phil:

Inclosed please find correspondence regarding Western Oil Fields and copies of our forms 55 and 56 for your approval or any comments. Would you check them over and return same to me? Also, would you please answer their question regarding samples?

Mr. E. Wa[illegible] (Compact) [illegible]

Mr. Jack Frost was in the office recently and remarked that he had heard that the lease for Western Oil had been cancelled. I checked with the Phoenix office and was told that it had been as of June, 1954, but that Mr. Reed still held grazing rights. They are still holding federal bond until all papers have been filed, including geological data, etc.

Of course, the only thing this Department is concerned with is the filing of samples and the "letter of responsibility".

I am also inclosing a mimeographed copy of "Four Corners Sample Cut," and "News for Compact Comments". Regards.

Sincerely,

Muriel

Muriel R. Bates

That's for the State Land Commissioner to answer. I believe under the law we don't have a leg to stand on. All that is required is a set of samples if saved. They could say they didn't save those we are missing. (over)

RECEIVED
APR 27 1955
WATER RESOURCES DIVISION
U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH

mb
Encl.

15

I would say lets wait and see. I dont really think the samples are worth much but its the principal of the thing. Right!,

Phil.

32 × 1

WESTERN OIL FIELDS, INC.
1827 GRANT STREET
POST OFFICE BOX 1139 DENVER, COLORADO
TELEPHONE MAIN 3-0226

LEGAL DIVISION

RECEIVED APR 22 1955 STATE LAND DEPT.

4943

April 20. 1955

RE: Western Oil Fields, Inc.
Well #1 - Pinal County,
Arizona.

Mr. Roger Ernst
State Land Commission
State Land Department
State of Arizona
Phoenix, Arizona

Dear Mr. Ernst:

As you requested, I am enclosing the following which relate to the above captioned well:

1. Form O & G 55
2. Form O & G 56
3. Drilling log

We are presently trying to locate the samples, and if we find them they will be forwarded immediately. However, we would appreciate your advising us as to the procedure if we are unable to locate the samples.

We shall follow your suggestion and contact Mr. Andrew Bettery regarding conversion to a water well. We are sure something can be worked out.

Please let us know if there is anything further you desire in relation to this matter.

Yours truly,

Earl H. Johnson

Earl H. Johnson

EHJ/nw
Encls.

TELEPHONE C-7654

OIL OPERATOR
DRILLING CONTRACTOR

B. H. HILBURN
609-10-11 GULF STATES BLDG.
DALLAS 1, TEXAS

1514 Mercantile Securities Building

April 14, 1955

Mr. Roger Ernst
State Land Commissioner
Phoenix, Arizona.

Dear Mr. Ernst:

Am in receipt of copy of letter dated April 8, 1955 directed to Mr. R. M. Barnholt,Jr., of Denver, Colorado reference the plugging of Western Oil Fields Inc., Federal No. 1 in Section 31, Township 5 South, Range 10 East, Pinal County, Arizona.

It seems to me you boys have been very lenient with Mr. Barnholt and the writer is quite surprised they have not done something a little more definite before now. Of course, I can understand their attitude in believing that Mr. Reed might want to use this well for a water well, but someone whose responsibility it is should do something about it right away. The writer, of course, has no interest in this project, merely looking after the affairs of the late Mr. Harry Hines and Mr. John B. Mills, who owned the Western Oil & Gas Company and I do appreciate your advising me the latest in this regard.

Have today written Mr. Barnholt reference your letter, copy of which is attached hereto.

The writer has returned to Dallas as you are aware as both the wells we drilled at Yuma were dry, but there is certainly a soft place in my heart for Arizona, particularly the fine folks I met in Yuma. There aren't any finer people in the world than Frosty Braden, Sid Woods, et al and am very sorry am not closer so can keep my acquaintances up with them and you.

With best regards, remain

Yours very truly,

B. H. HILBURN

BHH/hs
enc.

RECEIVED
APR 16 1955
STATE LAND
DEPT.

4660

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WESTERN OIL FIELDS, INC.
1827 GRANT STREET
POST OFFICE BOX 1139 DENVER, COLORADO
TELEPHONE MAIN 3-0226

LEGAL DIVISION

April 13, 1955

Mr. Roger Ernst
State Land Commissioner
State Land Department
State of Arizona
Phoenix, Arizona

Dear Sir:

In answer to your letter of April 8, 1955, regarding our well in Pinal County, we wish to advise that we are taking immediate steps to bring this matter to a conclusion.

Our engineer, Mr. Red Wallis, Pet. Engr. EAK will arrive in Hobbs, New Mexico, on the 16th or 17th of this month, and will obtain from our Drilling Superintendent the information necessary to complete both the State and Federal forms. Therefore, within ten days you should have all the necessary forms and information to approve the well as "Plugged and Abandoned".

We are extremely sorry for the trouble caused, and will definitely bring the matter to a desirable conclusion within a very short time.

Yours truly,

WESTERN OIL FIELDS, INC.

By Earl H. Johnson

Earl H. Johnson

EHJ/nw

4617

RECEIVED APR 15 STATE LAND DEPT.

15

April 8, 1955

Mr. R. N. Barnholt, Jr.,
Western Oil Fields, Inc.,
P. O. Box 1139
Denver, Colorado

Dear Mr. Barnholt:

We have been concerned for some time about the Western Oil Fields, Inc., Federal #1 exploratory oil test, located in Section 31, Township 5 South, Range 10 East, Pinal County, Arizona. We definitely wish to bring the matter to a desirable conclusion for all parties concerned, but if this is not possible we must take whatever steps are necessary to plug and abandon this well in accordance with the State law.

A check of our files on this well shows that we have not received OGC 55 and 56, although we have sent four or five sets requesting that they be properly filled in and returned. Our file further shows that we are missing samples from the surface down to 1930' and a driller's log. We are once again enclosing OGC forms 55 and 56 in order that they may be completed and returned to this office for processing. We will appreciate receiving the above data and samples on this well. As you have been informed, State law requires that samples, well logs, and drilling records must be filed with this Department within six months after completion or abandonment of any well drilled for oil or gas.

It has been mentioned that this well was to be converted to a water well and that Mr. Haines Reed, the federal leaseholder, was interested in obtaining it for this purpose. We have pursued this and from information received in this office from Mr. Andrew Battay of John H. Page and Company, representing Mr. Haines W. Reed, federal lessee, we find that Mr. Reed still wishes to use this well for stock watering purposes, provided the owner of the well will abandon his interests to the federal lessee, Mr. Reed, in order that he may maintain peaceful possession of the aforementioned well.

May we suggest that you contact Mr. Andrew Bettay of John H. Page and Company, P. O. Box 3706, Phoenix, Arizona, concerning this matter and that upon completion of transfer of title, duplicate copies of all release and acceptance affidavits be filed in this office. It should be pointed out that conversion of this well to a water well, or transfer of ownership, does not relinquish your responsibility in complying with the State Law concerning the data not yet received.

If and when all requirements by this Department have been met and complied with, we shall be in a position to close our files and terminate the bond in the amount of $10,000.00 issued by the American Bonding Company of Baltimore on February 12, 1953.

Very truly yours,

Roger Ernst,
State Land Commissioner

RHarb
Encl. (4)-554 562

cc - Mr. B. H. Hilburn
Mr. Andrew Bettay
Mr. John A. Frost
Mr. P. W. Johnson

15

January 28, 1955

Mr. Ernst:

Please note letter signed by Mr. Andrew L. Bettwy in regard to Western Oil Fields. Mr. Johnson suggests that you write to Western Oil asking that the necessary steps be taken in order that we might close this file.

In order to acquaint you with the present status of this well, I would like to list the following information:

We are missing samples from surface to 1930'. Total depth was 5142'.

We have analysis, but do not have driller's log nor do we have any knowledge of the condition of the hole.

We have sent them abandonment papers for signature, etc. To date we have not received them.

Case Away B.
June 25, 1954
Haven't paid rental
to Federal -
Return have any
rights to assign

15

32 × 8

John H. Page & Company
LAND ATTORNEYS
PUBLIC LANDS—STATE LANDS—SCRIP
SUITE 516 LUHRS BUILDING
P. O. BOX 3706
TELEPHONE { AL 3-6216 / AL 3-7729
Phoenix, Arizona

STATE LAND DEPARTMENT
JAN 28 3 42 PM 1955

JOHN H. PAGE
D. B. MORGAN
EDWARD E. WILLIAMS
ANDREW L. BETTWY

January 26, 1955

Mr. Roger Ernst
State Land Commissioner
State Land Department
Phoenix, Arizona

Re: Haines W. Reed, Federal Leasee
(Western Oil Fields, Inc.)

Dear Mr. Ernst:

In reply to your letter dated December 9, 1954, we wish to advise that Mr. Reed would be willing to accept the responsibility of the abandoned oil prospect well located near the center of the SW¼SW¼, Sec. 31, T. 5-S., R. 10-E., if the lessee and owner of that prospect well will abandon his interests either to the State of Arizona or to Mr. Reed. Mr. Reed realizes that certain obligations will be incumbent upon him to see that a safe condition exists to that well and he does not wish to undertake the expense that will be incurred unless he can enjoy the peaceful possession of the well for livestock watering purposes.

Very truly yours,

JOHN H. PAGE & COMPANY

By Andrew L. Bettwy
Andrew L. Bettwy

B/cl

15

32 ×

OFFICE OF
State Land Department
STATE OF ARIZONA
Phoenix, Arizona

ROGER ERNST
STATE LAND COMMISSIONER

File noted
[illegible]

RECEIVED
DEC 11 1954
STATE LAND
DEPT.

December 9, 1954

Mr. Andrew L. Bettwy
John H. Page & Company
P. O. Box 3706
Phoenix, Arizona

Re: Haines W. Reed, Federal Leasee
(Western Oil Fields, Inc.,)

Dear Mr. Bettwy:

We wish to acknowledge receipt of your letter dated December 8th, 1954 in reference to the above well and sincerely appreciate your prompt attention in the matter.

Insofar as the lease in question is on federal owned land, the State Land Department is only concerned in the matter of complying with State rules and regulations. The correct procedure for abandoning any well, drilled for oil and gas in the State of Arizona, is the filing of abandonment papers, properly signed and executed. When a well is going to be converted into a water well, then we must have a written statement to the effect that the owner of the land will assume all liability for the well.

So far, we have been unsuccessful in our attempt to obtain abandonment papers from Mr. R. M. Barnholt, and are doing all we can to bring this matter to a close. If Mr. Reed wishes to send us a letter in triplicate, accepting full responsibility for the well, we will be most happy to contact the other parties involved regarding the filing of proper abandonment papers, logs and samples.

Thank you very much for your cooperation in this matter.

Very truly yours,

Roger Ernst,
State Land Commissioner

15

RE:mb
cc - P. W. Johnson

John H. Page & Company
LAND ATTORNEYS
PUBLIC LANDS—STATE LANDS—SCRIP
SUITE 516 LUHRS BUILDING
P. O. BOX 3706
TELEPHONE {AL 3-6216 / AL 3-7729
Phoenix, Arizona

RECEIVED DEC 9 1954 STATE LAND DEPT.

11633

JOHN H. PAGE
D. B. MORGAN
EDWARD E. WILLIAMS
ANDREW L. BETTWY

December 8, 1954

Mr. Phillip W. Johnson
Geologist
State Land Department
Phoenix, Arizona

Re: Haines W. Reed - #1 Well
SW¼SW¼ Sec. 31, T.5-S., R.10-E.

Dear Mr. Johnson:

In reply to your letter dated November 24, 1954, addressed to Mr. Haines W. Reed, we wish to advise that Mr. Reed would be very happy to undertake the responsibility for the above mentioned well if he can be assured of the interest in the well and its use for livestock and domestic watering purposes. If you can advise us in what manner Mr. Reed might proceed to so acquire this interest and to be recognized before the Bureau of Land Management as the owner of this well, we will be most appreciative.

As we understand the status of the land upon which said well is located, the surface and minerals are both owned by the United States Government and the interests of the State of Arizona lies principally in the manner of capping, plugging, etc. of abandoned wells. If this status has changed, will you please advise us; also in what manner Mr. Reed should proceed to be recognized as the owner of the well before the State Land Department.

Very truly yours,

JOHN H. PAGE & COMPANY

By Andrew L. Bettwy
Andrew L. Bettwy

B/cl

15

32 × 1

November 24, 1954

Mr. Haines W. Reed
% John H. Page & Company
P. O. Box 3706
Phoenix, Arizona

Dear Mr. Reed:

Your name was given to me by the Bureau of Land Management as the Federal lease holder for the land on which the Western Oil Fields, Inc., drilled their Federal #1 well located in the center SW¼SW¼, Section 31, Township 5S., Range 10E. From information gathered by this office, this hole was drilled to a depth of 5142'. It was reported to have been plugged back to an unknown depth and that negotiations were in progress to convert this to a water well for stock purposes.

Efforts have been made to secure from Western Oil Fields, Inc., the proper completed forms and well data required by the State under law, which to date have not been forthcoming. A recent visit to the well site shows the location cleared and the well casing protruding above the ground about 3 feet. This casing is not permanently capped, but is covered over with an old pail.

In recent correspondence with Western Oil Fields, Inc., we were told that you wanted this well as a water well. If this is true, we would like to receive from you a letter in triplicate, to the effect that you have accepted full responsibility for the well. On the other hand, if you are not interested in the well, we would appreciate this information in order that we can take further steps to properly plug the well.

Very truly yours,

Phillip W. Johnson,
Geologist

PWJ:mb

10/15/54

Western Oil Fields, Inc.
Sec. 31, T. 5S., R. 10E. (C - SWSW)

Federal Lessee:

Mr. Haines W. Reed
% John H. Page & Co.
P. O. Box 3706
Phoenix, Arizona

Information secured from:
Federal Land Office & Grazing Service

Sal 3-7201.

Sal. 3-4824

15

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 187
Artesia, New Mexico

September 20, 1954

Mr. R. M. Barnholt, Jr.
Box 1139
Denver, Colorado

Re: Oil & Gas Lease
Arizona 097

Dear Sir:

Receipt is acknowledged of your letter of September 13, concerning dilatory operations on your well No. 1 Hines, section 31, T T. 5 S., R. 10 E., G&SRPM, Pinal County, Arizona.

By letters of June 25, and August 18, 1953, and subsequent telephone conversations with your Mr. Swarthout of Hobbs, New Mexico, we requested submission of all delinquent reports as follows:

(1) Subsequent report of cementing 13-3/8 inch casing.
(2) Notice of intention to plug and abandon.
(3) Subsequent report of abandonment.
(4) Drillers log, our form 9-330, submitted in triplicate.
(5) Sample description from shoe of 13-3/8 inch casing to total depth.
(6) Approval to drill called for the saving of a set of samples for the Arizona State Geologist.

You should also contact Mr. Phillip Johnson, Arizona State Geologist, Box 2270, Tucson, Arizona, and furnish that office with all reports required by the State of Arizona.

If and when, all reports have been furnished and approved, we will be in a position to close the files on the well and recommend termination of liability under the $5,000 oil and gas lease bond.

Very truly yours,

(Orig. Sgd.) JOHN A. FROST

John A. Frost
District Engineer

RECEIVED
SEP 23 1954
WATER RESOURCES DIVISION
U. S. GEOLOGICAL SURVEY
GROUND WATER BRANCH

JAF:mm
Copy to: Phillip Johnson
Box 2270
Tucson, Arizona

OFFICE OF
State Land Department
STATE OF ARIZONA
Phoenix, Arizona

ROGER ERNST
O[redacted]AMS
STATE LAND COMMISSIONER

Cofy

September 17, 1954

Mr. R. M. Barnholt, Jr.
Western Oil Fields, Inc.
P. O. Box 1139
Denver, Colorado

Dear Mr. Barnholt:

Thank you very much for your letter dated September 13, 1954 making reference to the status of the well in your name in Section 31, T. 5 S., R. 10 E. Apparently our field representative was unaware of the arrangement to make use of the abandoned hole for water well purposes. Your letter gives me the first information concerning such an understanding that this office has received to date.

It is assumed that perhaps your representative had contact with a U.S.G.S. man, since our field personnel are not aware of any such arrangement.

Inasmuch as you have brought the above to our attention we will investigate it thoroughly and will refrain from pursuing the fulfilment of abandonment requirements on the part of the driller until we know more about the water well arrangement. Of course, I will keep you advised.

We appreciate your offer of cooperation, and assure you that we will do everything possible to bring the matter to a conclusion in the near future in order to allow you to be released from your bond.

Thank you again for your attention to this matter.

Very truly yours,

Roger Ernst
State Land Commissioner

RE:kb
cc Mr. B. H. Hilburn 609 Gulf State Bldg. Dallas 1, Texas
cc Mr. John B. Mills
cc Phil Johnson

15

OIL · GAS

WESTERN OIL FIELDS, INC.
1827 GRANT STREET
POST OFFICE BOX 1139 DENVER, COLORADO
TELEPHONE MAIN 3-0226

September 13, 1954

State Land Department
State of Arizona
Phoenix, Arizona

Attention: Mr. Roger Ernst.

Gentlemen:

Please refer to your letter of September 3, 1954, with regard to status of the well in Sec. 31, T. 5 S., R. 10 E.

We realize that we are at fault in some way here, but do not know just how at this date. When the well was abandoned, a surface owner in the vicinity wanted the hole as a water well; consequently it was left with 600-700 ft. of casing with the understanding that such use would be made of it. This office understood that an "official" gave verbal approval of such procedure to our drilling superintendent, but we do not know if the official was a State or U.S.G.S. man.

Now, of course, without an operation anywhere in the area it is rather difficult for us to accomplish anything. We do, however, wish to comply and cooperate with you in any way we can.

Will you kindly advise us, therefore, what is necessary to be done on our part to complete this file and we shall proceed to get it done.

Very truly yours,

R. M. Barnholt, Jr.

R. M. Barnholt, Jr.

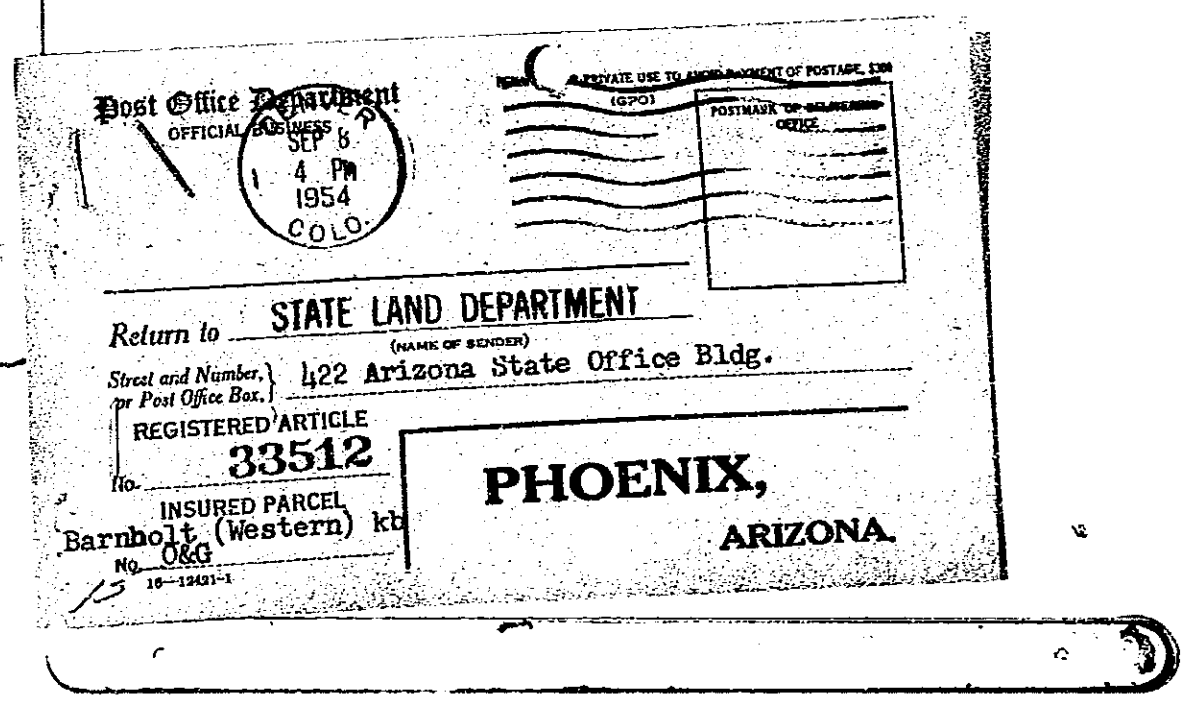
RMBJr/nw

cc: B. H. Hilburn

RECEIVED
SEP 15 1954
STATE LAND DEPT.

15

32 ×


Post Office Department
OFFICIAL BUSINESS
SEP 6
4 PM
1954
COLO.
PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300
(GPO)
POSTMARK OF DELIVERING OFFICE
Return to STATE LAND DEPARTMENT
(NAME OF SENDER)
Street and Number, or Post Office Box, 422 Arizona State Office Bldg.
REGISTERED ARTICLE
No. 33512
INSURED PARCEL
Barnholt (Western) kb
No. O&G
15 16—12421-1
PHOENIX,
ARIZONA

Form 3811
Rev. 1-52

RETURN RECEIPT

Received from the Postmaster the Registered or Insured Article, the number of which appears on the face of this Card.

1 R. M. Barnhill, Jr.
(Signature or name of addressee)

2 [illegible]
(Signature of addressee's agent—Agent should enter addressee's name on line ONE above)

Date of delivery SEP 8 1954, 19

September 7, 1954.

Mr. R. M. Barnholt, Jr
Western Oil Fields, Inc.
1636 Stout Street
Denver 2, Colorado

Dear Mr. Barnholt:

Am in receipt of carbon copy of a letter to you from the State Land Department in Phoenix, Arizona dated September 3rd.

The writer is not acquainted with what these gentlemen are talking about, but it sounds to me like they might be serious. Am just wondering if you failed to file your well log, or what the trouble is all about. Would appreciate your advising and if there is anything we can do to help let us know.

As you know, the writer was not too well acquainted with this operation and with Mr. Hines being gone it is impossible for me to know what to do in this regard, but will attempt to help you in any manner.

Yours very truly,

B. H. HILBURN

8447

BHH/hs

cc: Mr. John B. Mills
Hotel Westward Ho
Phoenix, Arizona.

RECEIVED SEP 9 1954 STATE LAND DEPT.

OFFICE OF
State Land Department
STATE OF ARIZONA
Phoenix, Arizona

ROGER ERNST
O. C. WILLIAMS
STATE LAND COMMISSIONER

September 3, 1954

Office Copy

Mr. R. M. Barnholt, Jr.
Western Oil Fields, Inc.
1636 Stout Street
Denver 2, Colorado

Dear Mr. Barnholt:

The files of this Department and also a field check of the Western Oil Fields Federal No. 1 Well, located in Sec. 31, T. 5 S., R. 10 E., indicate to us that our letter dated July 22, 1953, signed by Phillip W. Johnson, Geologist, has been ignored to date. Also, a subsequent letter dated March 4, 1954 addressed to Mr. Cosby D. Thomas has not produced any results which allow this Department to show that the state law has been complied with.

At this time it is felt that we must serve notice on you that unless immediate action is indicated by you it will be necessary for us to proceed under Secs. 11-1725 and 11-1727 of the Arizona Code and take formal action in an effort to enforce compliance.

If there is any sound and logical reason why the Department is being ignored, we would certainly like to hear your side of the story prior to taking such action.

Very truly yours,

Roger Ernst
State Land Commissioner

RE:kb
cc Mr. Cosby D. Thomas
cc Mr. Harry Hines
RKG.
cc Phil Johnson

COPY

15

March 4, 1954

Mr. Cosby D. Thomas,
Assistant Manager,
American Bonding Company of Baltimore
306-11 Security Building
Denver 2, Colorado

Re: #157 370 - Western Oil Fields, Inc., $10,000
Oil or Gas Well Drilling Bond to
State of Arizona
#157 384 - Western Oil Fields, Inc., $5,000
Bond of Oil and Gas Lease Operator

Dear Mr. Thomas:

Reference is made to your letter of March 1st, 1954, requesting termination of the above mentioned bonds. For your information, we are enclosing a copy of a letter sent to Mr. R. M. Barnholt, Jr., of the Western Oil Fields, Inc., requesting that he comply with State Regulations regarding this well.

Until such time as we receive the proper papers and approval is granted by this Department, we can not release the bonds. This office must also be in receipt of a letter of agreement of the acceptance of the well as a water well, signed by Mr. Reed, in which he assumes full responsibility for said well.

We must also be in receipt of the missing samples from the top to a depth of 1930' and from about 4300' to the bottom of the hole, as well as the logs on this well.

We greatly appreciate having your full cooperation in this matter.

Sincerely yours,

Roger Ernst,
State Land Commissioner

RE:mb
cc - P. W. Johnson

15.

COPY

American Bonding Company

HOME OFFICE OF BALTIMORE BALTIMORE 3, MD.

FIDELITY AND SURETY BONDS

BURGLARY AND GLASS INSURANCE

R. O. McKENZIE
MANAGER
COSBY D. THOMAS
ASSISTANT MANAGER
RAY J. NOONE
ASSOCIATE
ROBERT E. WILLIAMS
SPECIAL REPRESENTATIVE

306-11 SECURITY BUILDING
PHONES ACOMA 1826, 1827
DENVER 2

CLAIM OFFICE
JOHN R. HICKISCH
CLAIMS ATTORNEY
804 EQUITABLE BUILDING
MAIN 1245

March 1, 1954

State Land Commissioner
Phoenix
Arizona

Re: #157 370 - Western Oil Fields, Inc., $10,000 Oil or Gas Well Drilling Bond to State of Arizona
#157 384 - Western Oil Fields, Inc., $5,000 Bond of Oil and Gas Lease Operator

Dear Sir:

We have been informed by our principal, the Western Oil Fields, Inc., that it is in order to cancel both of the above bonds.

In accordance with the terminology of the instruments, we desire to cancel both obligations.

We would appreciate hearing from you as to when we can consider our liability at an end.

For your convenience in replying, we are attaching a stamped, addressed envelope.

Very truly yours,

Cosby D. Thomas
Assistant Manager

1948

RECEIVED MAR 3 1954 STATE LAND DEPT.

CDT:bp

CC: Western Oil Fields, Inc.

15

July 22, 1953

Mr. R. M. Barnholt, Jr.,
Western Oil Fields Inc.,
1636 Stout Street
Denver 2, Colorado

Dear Mr. Barnholt:

A recent visit to the Western Oil Fields, Federal #1 well in Section 31, T. 5S., R. 10E., Pinal County, Arizona has disclosed that the rig has been dismantled, and according to Mr. Easton, your driller, the hole has been plugged by placing two bridges. One 500' off bottom, the other at the bottom of the surface casing and that mud has been pumped between the bridges. I am also told that the surface pipe is to remain in the hole and that the well was sold to Mr. Reed, the federal leaseholder, for a water well.

All this activity has been carried on without any notification to our office, and according to State regulations it is necessary that we be notified concerning any plugging or abandonment operation in this State. Therefore, I am enclosing two copies of our oil and gas forms 55 and 56 which I would request that you complete and return to this office for approval by the State Land Commissioner, whereupon a signed copy will be returned to you. It is also required by the State that you furnish or have furnished to us a copy of the agreement of the acceptance of the well as a water well signed by Mr. Reed in which he resumes full responsibility for said well.

I should like to call your attention that State regulations provide that a complete set of samples and copies of logs, electric or otherwise, be submitted to the State Land Commissioner. From time to time I have been securing samples at the well, but we are missing samples from the top to a depth of 1930' and from about 4300' to the bottom of the hole. I would appreciate it if you would see that we receive these missing samples, as well as any logs or geologging data which you have on the well.

Very truly yours,

Phillip W. Johnson, Geologist,
State Land Department

PWJ:mb
Encl.
cc - Mr. Harry Hines - 609 Gulf States Bldg., Dallas, Texas

WESTERN OIL FIELDS, INC.
1636 STOUT STREET
TELEPHONE MAIN 0226
DENVER 2, COLORADO

February 27, 1953

State Land Commission
Phoenix,
Arizona

Gentlemen:

We are in receipt of your letter of February 24, 1953, in regard to surface casing on the subject well in Pinal County.

We wish to advise that subsequent to filing of the Notice of Intention to Drill we have been geologically informed it will be necessary to run 10-inch casing to a depth of 1,100 or 1,200 feet. Accordingly we expected some such intermediate casing program, and the 300 feet of surface casing that we listed should have been designated as conductor casing.

In light of this recent information we may not run as much as 300 feet of conductor casing, but we are planning on the required amount of 10-inch and you may rest assured that we will carry same to whatever depth water may be found.

It will be greatly appreciated if you will expedite approval of our application.

Very truly yours,

WESTERN OIL FIELDS, INC.

R. M. Barnholt, Jr.

R. M. Barnholt, Jr.

RMBJr/nw

RECEIVED
MAR 1 1953
STATE LAND DEPT.

ARIZONA
STATE LAND DEPARTMENT

Noted by	To	Date
Ans. by		Date

15

32 ×

February 24, 1953

Western Oil Fields, Inc.
1636 Stout Street
Denver 2, Colorado

Attention: Mr. R. M. Bernholt, Jr.

Gentlemen:

We are in receipt of your notice of intention to drill an oil well together with a bond and the necessary filing fees.

However, we note that your present plans call for only 300 ft. of surface casing with the program from that point on to be determined by need. Our geology information indicates that surface water in the area where you propose to drill extends to a depth of approximately 325 ft. In view of this fact, before any action can be taken on your application we would like to obtain a statement from you to the effect that your surface casing program will extend to a minimum of 350 ft. and will be carried on below this depth if lower stratas of water are found.

Pending receipt of your reply your application will be held in abeyance.

Very truly yours,

W. W. Lane
State Land Commissioner

WWL:JRB:kb

15

OFFICE OF
State Land Department
STATE OF ARIZONA
Phoenix, Arizona

W. W. LANE
STATE LAND COMMISSIONER

February 24, 1953

Mr. James R. Burger
Deputy State Land Commissioner
State Land Department
407 Capitol Annex
Phoenix, Arizona

Dear Mr. Burger:

I am returning this Intention to Drill form with the recommendation of a minimum of 350 feet of surface casing as per our telephone conversation.

Very truly yours,

Phillip W. Johnson

Phillip W. Johnson
State Geologist

PWJ/pj

Enclosure

ARIZONA STATE LAND DEPARTMENT		
Noted by	To	Date
Ans. by		Date

RECEIVED
FEB 25 1953
STATE LAND DEPT.

15

February 16, 1953

Mr. Phillip W. Johnson
c/o U. S. Geological Survey
P. O. Box 2270
Tucson, Arizona

Dear Phil:

Enclosed herewith is a notice of intention to drill a new well, which we ask that you review and give us your comments on as to whether the surface protection program is adequate in the area where the applicant proposes to drill.

Your attention is directed to the fact that all of the form is not filled in, but as to whether the spaces not completed are material or not is a matter which we wish you would comment on when returning the copy of this form to us.

Very truly yours,

James R. Burger
Deputy State Land Commissioner

JRB:kb
encl.

February 16, 1953

Western Oil Fields, Inc.
1636 Stout Street
Denver 2, Colorado

Attention: Mr. R. M. Barnholt, Jr.

Gentlemen:

We are in receipt of your notice of intention to drill an oil or gas well in Sec. 31, T. 5 S., R. 10 E., together with a bond as required by the rules and regulations. However, you failed to include the drilling application fee in the amount of $25.00.

Upon receipt of the above sum, this office can then proceed with the processing of your notice and bond.

Very truly yours,

James R. Burger
Deputy State Land Commissioner

JRB:kb

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STATE LAND DEPARTMENT

PHOENIX, ARIZONA

STATEMENT

You are hereby advised that RENTAL will be due and payable at this office on your Lease as shown by this statement. IF SAID RENTAL IS NOT RECEIVED ON OR BEFORE THE DUE DATE, PENALTY AND INTEREST WILL BE ADDED.

WESTERN OIL FIELDS INC
1636 STOUT ST
DENVER COLO

LEASE NO. B .15

	MO.	DAY	YR.
DATE	3	0 4	.53
DATE RENT DUE			

SHEET ____ OF ____ SHEETS

GR.	DESCRIPTION	SEC.	TWP.	RANGE	C. C.	RATE	ACREAGE		AMOUNT
	SWSW	31	5 S	10 E					
	DRILLING PERMIT FEE								25.00
									25.00T
							TOTAL DUE		25.00G