FILE NOTATIONS

Entered in NID File .....✓

Location Map Pinned .....✓

Card Indexed .....✓

Checked by Chief .....

Approval Letter 7-12-72

Disapproval Letter .....

COMPLETION DATA:

Date Well Completed 10-9-72

Location Inspected .....

OW..... WW..... TA.....

GW..... OS..... PA.....✓

Bond released

State or Fee Land .....

LOGS FILED

Driller's Log.....✓

Electric Logs (No.) .....✓

E..... I..... Dual I Lat..... GR-N..... Micro.....

BHC Sonic GR..... Lat..... MLL-L..... Sonic.....

CBLog..... CCLog..... Others.....

Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: Utah 0147476

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

7. UNIT AGREEMENT NAME:

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER SINGLE ZONE [X] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME: Federal-Armstrong

2. NAME OF OPERATOR: Union Texas Petroleum, A Division of Allied Chemical Corporation

9. WELL NO.: 1

3. ADDRESS OF OPERATOR: Suite 788, 1860 Lincoln Street, Denver, Colorado 80203

10. FIELD AND POOL, OR WILDCAT: Wildcat

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: NE NE Section 10-T24S-R14E (660' FNL, 660' FEL) C NENE
At proposed prod. zone: Same

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 10-T24S-R14E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approximately 25 miles southwest of Green River, Utah

12. COUNTY OR PARISH: Emery

13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 660'

16. NO. OF ACRES IN LEASE: 2560

17. NO. OF ACRES ASSIGNED TO THIS WELL: 80

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: None

19. PROPOSED DEPTH: 7000

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 4308 GL

22. APPROX. DATE WORK WILL START*: August 1, 1972

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#	1450	+600 sx (circulate)
8-3/4"	7"	20-23-26#	7000	350 sx

Subject well to be drilled to an approximate total depth of 7000 ft. to test the Mississippian formation. Surface casing will be set as shown above. Run Laterolog, Micro-Laterolog and Compensated Neutron Formation Density logs at total depth. Drill stem test as shows warrant. If productive, casing program outlined above will be run and productive zones selectively perforated and stimulated.

Surface casing and blowout preventer will be tested prior to drilling out cement. Blowout preventer equipment will be tested once each day and such test logged in the in the daily drilling log.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED: W. A. Lukering TITLE: Senior Production Engineer DATE: July 5, 1972

(This space for Federal or State office use)

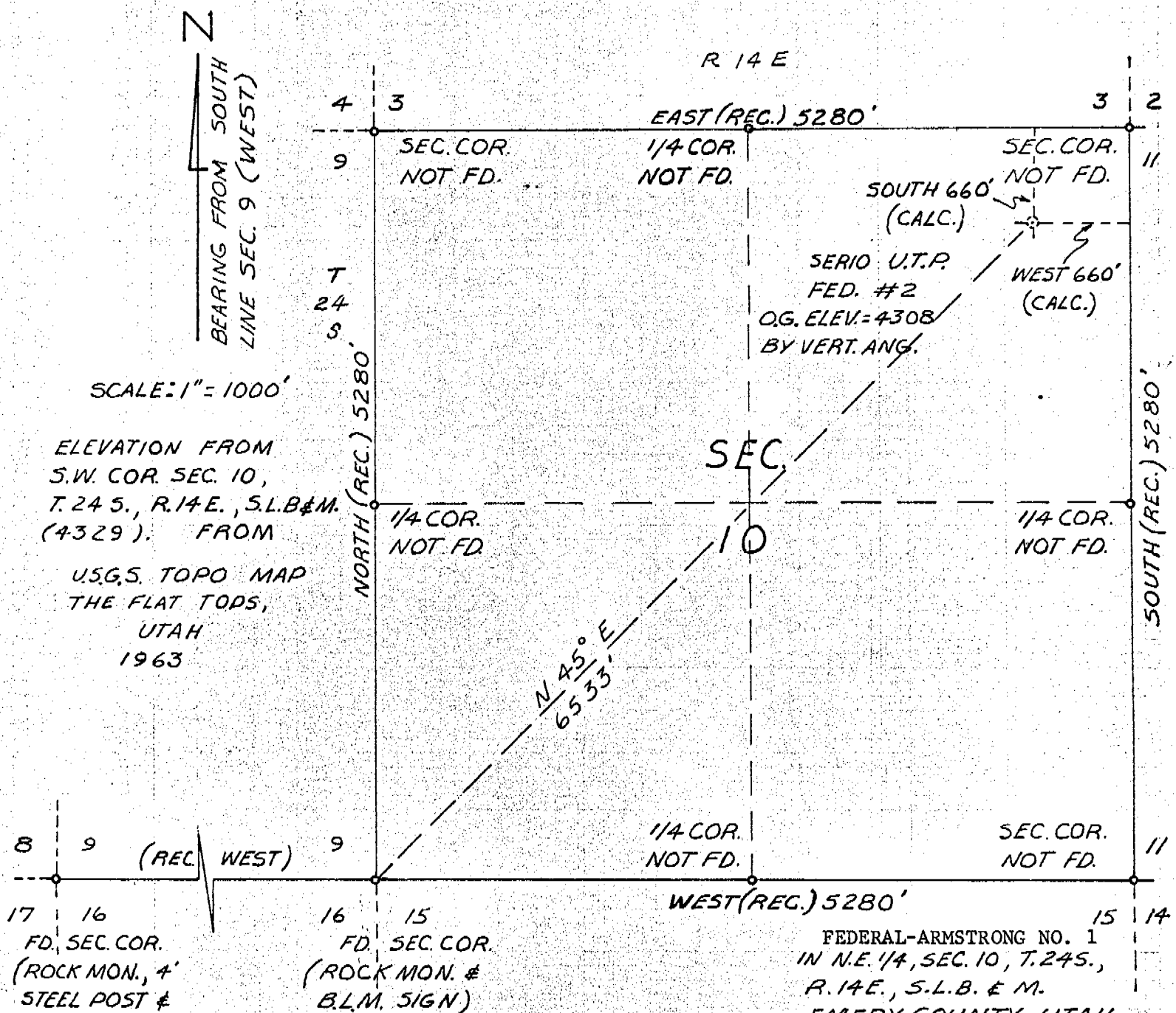
PERMIT NO. 43-015-30011 APPROVAL DATE

APPROVED BY TITLE DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

WELL LOCATION PLAT



FEDERAL-ARMSTRONG NO. 1
IN N.E. 1/4, SEC. 10, T. 24 S., R. 14 E., S.L.B. & M.
EMERY COUNTY, UTAH
FOR:
UNION TEXAS PETROLEUM

JUNE 14, 1972

STADIA SURVEY

John E. Keogh
UTAH REGD. L.S. No. 1963

FORM OGC-8-X
FILE IN QUADRUPLICATE

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS CONSERVATION
1588 West North Temple
Salt Lake City, Utah 84116

REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number Federal-Armstrong #1

Operator Union Texas Petroleum Address 788 Lincoln Tower Bldg. Denver, Colorado 80203 Phone 303-534-8221

Contractor Pioneer Drilling Co., Inc. Address P. O. Box 3035 Casper, Wyoming 82601 Phone 307-237-9527

Location NE 1/4 NE 1/4 Sec. 10 T. 24 ~~N~~ S R. 14 E ~~W~~ Emery County, Utah.

Water Sands:

	Depth: From-	To-	Volume: Flow Rate or Head-	Quality: Fresh or Salty-
1.	6120	6353	4283 Ft.	Salty
2.				
3.				
4.				
5.				

(Continue on reverse side if necessary)

Formation Tops:

Entrada	Surface	Chinle	1378	Paradox	4998
Navajo	280	Moenkopi	1751	Molas	6038
Kayenta	630	Cedar Mesa	2433	Mississippian	6102
Wingate	878	Hermosa	3912	Devonian	6819
				Cambrian	7178

Remarks:

Logs indicate sand from surface to 1750 ft. could produce fresh water. Only water recovered from this well was from the Mississippian.

NOTE: (a) Upon diminishing supply of forms, please inform this office.
(b) Report on this form as provided for in Rule C-20, General Rules and Regulations and Rules of Practice and Procedure, (See back of this form)
(c) If a water analysis has been made of the above reported zone, please forward a copy along with this form.

Union Texas Petroleum Division
ALLIED CHEMICAL CORPORATION
SUITE 708 LINCOLN TOWER • 1860 LINCOLN STREET • DENVER, COLORADO 80203 • (303) 534-8221

July 5, 1972

United States Geologic Survey
8416 Federal Building
Salt Lake City, Utah 84111

Attention: Mr. Gerald R. Daniels

Re: Application for Permit to Drill
Federal-Armstrong No. 1
NE NE Section 10-T24S-R14E
Emery County, Utah

Gentlemen:

Enclosed for approval is Application for Permit to Drill (Form 9-331C), and supporting material.

This location in the San Rafael Desert is approximately eight miles from Utah State Highway 24 and can be reached from an existing dirt road which is shown on the enclosed Flat Tops Quadrangle. Approximately one-half (1/2) mile of new road will have to be constructed from this existing dirt road to the location.

The upper portion of the well will be drilled using fresh water which will be obtained from the San Rafael River which runs approximately three miles east of the location. Salt Water for the lower portion of the well will be hauled by truck from the Moab Utah Area.

Since this is a wildcat well we have no other well locations at this time. In the event the well is productive we will contact your office in regard to the battery and flow line locations. At the present time we have no plans for a camp or airstrip.

The location layout will be a standard one as shown on the enclosed plat with variations as to the drilling company's requirements. The reserve pit will be located southeast of the location which is downhill.

Waste will be disposed of by burying near the reserve pit. The location and surrounding area will be kept clean at all times with trash being burned in the burn pit.

The topography of the area is generally flat with some ridges and buttes. The vegetation is mainly cactus and sage brush with very little grass. The soil is very sandy with many small sand dunes and drifts. During my visit to the location the access road was blocked in several places due to sand drifts. These drifts will be removed from the road during drilling operations by a grader so that vehicles will be able to get to and from the rig.

In the event the well is plugged and abandoned, the surface pits will be backfilled and the entire location seeded to keep it from eroding.

Your early consideration and approval of this permit would be greatly appreciated, as we plan to start work on or about August 1, 1972. Please advise if any further information is required.

Yours very truly,

D. H. PICKERING
Senior Production Engineer

Copies:
Utah Oil and Gas Conservation Comm., 348 East South Temple, Suite 301, Salt Lake City, Utah 84111 (1 cc letter, 2 cc each location plat and Form 9-331C)
Mr. Gordon Saathoff, Serio Exploration Co., P. O. Box 1207, Natchez, Mississippi 39120 (1 cc each letter, location plat and Form 9-331C)
Encl.
DHP:rw

July 10, 1972

Union Texas Petroleum Company
Suite 788
1860 Lincoln Street
Denver, Colorado 80203

Re: Federal-Armstrong #1
Sec. 10, T. 24 S, R. 14 E,
Emery County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

PAUL W. BURCHELL - Chief Petroleum Engineer
HOME: 277-2890
OFFICE: 328-5771

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation with respect to completing this form will be greatly appreciated.

The API number assigned to this well is 43-015-30011.

Very truly yours,

DIVISION OF OIL & GAS CONSERVATION

CLEON B. FEIGHT
DIRECTOR

CBF:sd
cc: U.S. Geological Survey

Branch of Oil and Gas Operations
8416 Federal Building
Salt Lake City, Utah 84111

July 21, 1972

Mr. D. H. Pickering
Union Texas Petroleum
Suite 788, 1860 Lincoln Street
Denver, Colorado 80203

Re: Well No. 1 Federal-Armstrong
NE¼NE¼ sec. 10, T. 24 S., R. 14 E., S.L.M.
Emery County, Utah
lease Utah 0147476

Dear Mr. Pickering:

Enclosed is your copy of the Application for Permit to Drill the referenced well which was approved by this office on July 21, 1972.

The blowout preventer should be at least API series 900 double ram construction.

The Bureau of Land Management is very interested in the possibility of fresh water wells in this area if the well is a dry hole or failure. We anticipate that all prospective fresh water zones will be encountered above your surface casing setting point. Therefore, this is to request that you save a sample (about 1 quart) of any water you encounter above 1450'. If you will advise the BLM District Manager when or if you have samples, I am sure he will pick them up.

We have misplaced the Designation of Operator in favor of Union Texas Petroleum by Allied Chemical Corporation. Please send us three more copies.

Sincerely,

(ORIG. SGD.) G. R. DANIELS

Gerald R. Daniels
District Engineer

Enclosure

cc: State Div. O&G Cons.
BLM, Price
Casper

FORM OGC-8-X
FILE IN QUADRUPLICATE

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS CONSERVATION
1588 West North Temple
Salt Lake City, Utah 84116

REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number Federal-Armstrong No. 1

Operator Union Texas Petroleum Address Suite 788, 1860 Lincoln St. Denver, CO 80203 Phone 303-534-8221

Contractor Pioneer Drilling Co., Inc Address P. O. Box 3035 Casper, Wyoming 82601 Phone 307-237-9527

Location NE 1/4 NE 1/4 Sec. 10 T. 24 ~~N~~ S R. 14 E ~~W~~ Emery County, Utah.

Water Sands:

	Depth: From-	To-	Volume: Flow Rate or Head-	Quality: Fresh or Salty-
1.	6120	6353	4283'	Salty
2.				
3.				
4.				
5.				

(Continue on reverse side if necessary)

Formation Tops:

Chinle	1373	Wolfcamp	3188	Paradox	5732	Ouray	6912
Moenkopi	1751	Hermosa	3805	Molas	5986	Log TD	7282
Coconino	2431	Ismay	5319	Mississippian	6102	Driller's TD	7284

Remarks:

NOTE: (a) Upon diminishing supply of forms, please inform this office.
(b) Report on this form as provided for in Rule C-20, General Rules and Regulations and Rules of Practice and Procedure, (See back of this form)
(c) If a water analysis has been made of the above reported zone, please forward a copy along with this form.

RULE C-20 REPORTING OF FRESH WATER SANDS:

It shall be the duty of any person, operator or contractor drilling an oil or gas well or drilling a seismic, core or other exploratory hole to report to this office all fresh water sands encountered; such report shall be in writing and give the location of the well or hole, the depth at which the sands were encountered and the thickness of such sands, and the rate of flow of water if known.

If no fresh water sands are encountered, it is requested that a negative report to that effect be filed.

24 1973

4

ORAL APPROVAL TO PLUG BACK AND TEST

Company: UNION TEXAS PETROLEUM Representative: DON PICKERING

Well No. 1 Located NE ¼ NE ¼ Sec. 10 Twp. 24S Range 14E

Lease No. Utah 0147476 Field W.C. Emery Co. State Utah

Water Sand Required Depth None Date of fresh water sands —

T.D. 7284 Size hole and Fill per Sack ___" Mud Weight and Top

Casing Size	Set At	Top of Cement	To Be Pulled	Plugging Instructions From	To	Sacks Cement
				Have been attempting to test zone		
				from 6250 - 6270 w/ hook wall straddle		
Formation	Top	Base	Shows	packers - unsuccessful. Will spot 200'		
Mississippian	6150			plug from 6450 to 6250 drill out to about		
Ouray	6900			6275 and attempt to test.		
Elbert	7150					

Remarks

DST's, lost circulation zones, water zones, etc. looks like a good sand zone from about 280-1300 (from neutron log) but no estimate of water content or quality

Daniel 10-5-72 11:30 P.M.

FOR STATE

Union Texas Petroleum

Don Pickering

9 5/8" cc 1505'

8 3/4" Hole P.B. 6353

Well 1 NENE 10 24S 14E
Utah 0147478

Tops:

Moenkopi	1751
Cocomino	2431
Rico	3188
Hermosa	3805
Ismay	5319
Paradox	5732
Molas	5986
Mississippian	6102

6100 up w/35sx
5700 up w/35sx
3000 up w/35sx
1500 up w/35sx
Surface 10sx w/marker.

Still testing zone at 6250-70 if production indicated will run 5 1/2" production casing.
If not productive will P&A as above.

Approved 10-7-72 6:00 p.m.

G R Daniels

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.
Utah 0147476

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

RECEIVED
NOV 29 1972
U.S. GEOLOGICAL SURVEY
SALT LAKE CITY, UTAH

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER Dry hole

7. UNIT AGREEMENT NAME

2. NAME OF OPERATOR
Union Texas Petroleum, A Division of Allied Chemical Corporation

8. FARM OR LEASE NAME
Federal-Armstrong

3. ADDRESS OF OPERATOR
Suite 788, 1860 Lincoln Street, Denver, Colorado 80203

9. WELL NO.
1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
NE NE Section 10-T24S-R14E (660' FNL, 660' FEL)

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 10-T24S-R14E

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
4308 GL, 4322 KB

12. COUNTY OR PARISH
Emery

13. STATE
Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	X	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	X
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			
(Other)							

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Set cement plugs as follows: 35 sx 6000-6100
35 sx 5600-6700
35 sx 2900-3000
35 sx 1400-1500
10 sx top of surface casing

Plugged and abandoned October 9, 1972.

Verbal approval to plug given by Mr. Gerald R. Daniels at 10:00 P.M., October 7, 1972.

18. I hereby certify that the foregoing is true and correct

SIGNED [signature], TITLE District Landman DATE November 22, 1972

(This space for Federal or State office use)

APPROVED BY [signature] TITLE DISTRICT ENGINEER DATE JUN 3 1974

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424

5. LEASE DESIGNATION AND SERIAL NO.: Utah 0147476

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1. OIL WELL ☐ GAS WELL ☐ OTHER Dry hole

7. UNIT AGREEMENT NAME:

2. NAME OF OPERATOR: Union Texas Petroleum, A Division of Allied Chemical Corporation

8. FARM OR LEASE NAME: Federal-Armstrong

3. ADDRESS OF OPERATOR: Suite 788, 1860 Lincoln Street, Denver, Colorado 80203

9. WELL NO.: 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface

NE NE Section 10-T24S-R14E (660' FNL, 660' FEL)

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 10-T24S-R14E

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 4308 GL, 4322 KB

12. COUNTY OR PARISH: Emery

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Plugging back			X
(Other) Plug back			X	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The following cement plug was set in order to drill stem test the top of the Mississippian formation:

70 sx 6297-6504

Verbal permission for this plug was given by Mr. Gerald R. Daniels on October 15, 1975.

RECEIVED
BR. OF OIL & GAS OPERATIONS
NOV 29 1972
U.S. GEOLOGICAL SURVEY
SALT LAKE CITY, UTAH

18. I hereby certify that the foregoing is true and correct

SIGNED [signature] TITLE District Landman DATE November 22, 1972

(This space for Federal or State office use)

APPROVED BY [signature] TITLE DISTRICT ENGINEER DATE DEC

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

DEC 4 - 1972
DENVER

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*
(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: Utah 0147476

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Federal-Armstrong

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Section 10-T24S-R14E

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other Dry hole

2. NAME OF OPERATOR: Union Texas Petroleum, A Division of Allied Chemical Corporation

3. ADDRESS OF OPERATOR: Suite 788, 1860 Lincoln Street, Denver, Colorado 80203

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: NE NE Section 10-T24S-R14E (660' FNL, 660' FEL)
At top prod. interval reported below: Same
At total depth: Same

14. PERMIT NO.:
DATE ISSUED: 7/21/72

12. COUNTY OR PARISH: Emery
13. STATE: Utah

15. DATE SPUDDED: 8/14/72
16. DATE T.D. REACHED: 10/5/72
17. DATE COMPL. (*Ready to prod.*): P & A 10/9/72
18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*: 4308 BL, 4322 KB
19. ELEV. CASINGHEAD:

20. TOTAL DEPTH, MD & TVD: 7284
21. PLUG, BACK T.D., MD & TVD:
22. IF MULTIPLE COMPL., HOW MANY*:
23. INTERVALS DRILLED BY: →
ROTARY TOOLS: Surface to total depth
CABLE TOOLS:

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: None

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: Dual Induction Laterolog, Microlog, Neutron Formation Density Log

27. WAS WELL CORED: No

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	48#	27'	17-1/2"	50 sx	None
9-5/8"	36#	1505'	12-1/4"	700 sx	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (*Interval, size and number*)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.* PRODUCTION

DATE FIRST PRODUCTION: PLUGGED AND ABANDONED OCTOBER 9, 1972
PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*):
WELL STATUS (*Producing or shut-in*):

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*):
TEST WITNESSED BY:

35. LIST OF ATTACHMENTS: Mud Log (other logs previously furnished)

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED [signature] TITLE District Landman DATE November 22, 1972

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.
If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.
Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.
Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.
Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.
Item 29: *"Sacks Cement":* Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.
Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
DST #1:	2157	2277	(Moenkopi), open 10 min., SI 30 min., open 60 min., SI 120 min., very weak blow throughout, recovered 175' mud. IHP 983, FHP 983, IFP 13-26, ISIP 909, FFP 54-107, FSIP 909.
DST #2:	4606	4661	(Hermosa), open 5 min., SI 30 min., open 60 min., SI 120 min., opened w/very weak blow, increasing slightly at end of test, recovered 195' SWCM. IHP 2371, IFP 52, FFP 63, ISIP 241, IFP 100, FFP 116, FSIP 1569, FHP 2355.
DST #3:	6240	6280	(Mississippian), hookwall, misrun.
DST #4:	6228	6275	(Mississippian), hookwall misrun.
DST #5:	6120	6353	(Mississippian), open 5 min., SI 30 min., open 120 min., SI 180 min., strong blow throughout. Recovered 1530' slightly MCSW, 2753' black SW. IHP 3490, IFP 587, FFP 587, ISIP 2806, IFP 613, FFP 2068, FSIP 2780, FHP 3490, BHT 110° F.

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
Log tops:		
Chinle	1383	
Moenkopi	1751	
Coconino	2431	
Wolfcamp	3188	
Hermosa	3805	
Ismay	5319	
Paradox	5732	
Molas	5986	
Mississippian	6102	
Ouray	6912	Elev + ~ 7150'
Log TD	7282	
Driller's TD	7284	

Union Texas Petroleum Division
ALLIED CHEMICAL CORPORATION
SUITE 788 LINCOLN TOWER • 1860 LINCOLN STREET • DENVER, COLORADO 80203 • (303) 534-8221

November 27, 1972

U. S. Department of the Interior
Geological Survey
Branch of Oil and Gas Operations
8416 Federal Building
Salt Lake City, Utah 84111

Re: Federal-Armstrong #1
NE NE Section 10-T24S-R14E
Moon Wash Area
Emery County, Utah
Lease Utah 0147476

Gentlemen:

Enclosed is the following material relative to the subject well:

2 copies	Well Completion or Recompletion Report and Log (Form 9-330)
3 "	Sundry Notice re. plugging back (Form 9-331)
3 "	Sundry Notice re. abandonment (Form 9-331)
1 "	Underwood Well Logging Service mud log

We believe this will complete your requirements in regard to this well.

Yours very truly,

JOHN F. WELCH
District Landman

Copies of Form 9-330 to the following:
Utah Oil and Gas Conservation Comm., 348 East South Temple, Suite 301, Salt Lake City, Utah 84111
Mr. Gordon Saathoff, Serio Exploration Co., P. O. Box 1207, Natchez, Mississippi 39120
Mr. Bill Holmes, Houston Office
Encl.
rw

BARTLESVILLE PETROLEUM RESEARCH CENTER
OILFIELD BRINE RESEARCH LABORATORY
BARTLESVILLE, OKLAHOMA

INFORMATION TO BE RETURNED WITH EACH SAMPLE OF WATER

(Please type or print as much as possible of the following information, using this sheet)

Marks on sample container None Field Wildcat

Farm or lease Federal Armstrong Well No. 1 in the NE/4

of Section 10 Township 24S Range 14E

County Emery State Utah Operator Union Texas Petroleum

Operator's address (main office) 1860 Lincoln St., Suite 788, Denver, Colorado 80203

Sample obtained by D. H. Pickering Date 10-7-72

Address 1860 Lincoln Suite 277, Denver, Colo. 80203 Representing Union Texas Petroleum

Sample obtained from (lead line, separatory flow tank, etc. Drill Pipe - DST

Completion date of well _____ Elevation of well 4322

Name of productive zone from which sample is produced Mississippian

Sand ____ Shale ____ Lime X Other _____

Name of productive formation Mississippian Names of formations well passes through _____

Depths: Top of formation 6102 Bottom of formation 6900

Top of producing zone 6120 Bottom of producing zone 6353

Total depth drilled 7284 Present depth 6353 PBTP

Bottom hole pressure and date of pressure _____

Bottom hole temperature 150

Date of last workover _____ Are any chemicals added to treat well? _____ If yes, what? _____

Well production:	Initial	Present	Casing service record:
Oil, barrels/day			
Water, barrels/day			
Gas, cubic feet/day			

Method of Production (Primary or Secondary) _____

Remarks: (Such as casing leaks, communication, or other pays in same well, lease, or in field)

RECEIVED
DEC 22 1972
DENVER

BUREAU OF MINES
U. S. DEPARTMENT OF THE INTERIOR
BARTLESVILLE PETROLEUM RESEARCH CENTER
OILFIELD WATER RESEARCH LABORATORY

72186 Sample Date: 12-12-72

Specific gravity at 60°/60° F 1.032 Analyst

Resistivity in Ohm-meters at 80° F pH 4.3

CATION	mg/l	mg/me	me/l	ANION	mg/l	mg/me	me/l
Sodium Na	13300	23.0	578	Chloride Cl	26,800	35.5	755
Calcium Ca	2260	20.0	113	Bromide Br	N.D.	79.9	
Magnesium Mg	263	12.2	21.6	Iodide I	N.D.	126.9	
Strontium Sr	352	43.8	8.04	Fluoride F		19.0	
Barium Ba	86	68.7	1.24	Sulfate SO_4	74	48.0	1.54
Potassium K	84	39.1	2.14	Bicarbonate HCO_3	0	61.0	
Lithium Li	9.	6.9	1.2	Carbonate CO_3	0	30.0	
Rubidium Rb		85.5		Hydroxide OH		17.0	
Cesium Cs		132.9					
Iron Fe	50	27.9	1.81				
Manganese Mn	12	27.5	.44				
Boron B		3.6					
Copper Cu	1	63.5					
Zinc Zn	4	32.7	.1				
Nickel Ni		29.4					
Ammonium		18.0					

Na = (me/1 Anions - me/1 Cations) x 23.0 mg/me - mg Na/1
Total Dissolved Solids = Σ (mg Anions/1 + mg Cations/1).

FORMATION
STATE
COUNTY
FIELD
COMPANY
WELL
LOCATION
LEASE

Insufficient sample

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U. S. DEPARTMENT OF THE INTERIOR
BARTLESVILLE PETROLEUM RESEARCH CENTER
OILFIELD WATER RESEARCH LABORATORY

File
Fed Armstrong

72 182 Sample Date: 12-12-72

Specific gravity at 60°/60° F 1.083 Analyst

Resistivity in Ohm-meters at 80° F pH 7.7

CATION	mg/l	mg/me	me/l	ANION	mg/l	mg/me	me/l
Sodium Na	43800	23.0	1904	Chloride Cl	73400	35.5	2067.68
Calcium Ca	1540	20.0	77	Bromide Br	4	79.9	
Magnesium Mg	292	12.2	23.9	Iodide I	7	126.9	
Strontium Sr	21	43.8		Fluoride F		19.0	
Barium Ba	87	68.7	1.27	Sulfate SO_4	2.630	48.0	54.79
Potassium K	951	39.1	24.3	Bicarbonate HCO_3	2.12	61.0	3.48
Lithium Li	2	6.9		Carbonate CO_3		30.0	
Rubidium Rb		85.5		Hydroxide OH		17.0	
Cesium Cs		132.9					
Iron Fe	4	27.9					
Manganese Mn	2	27.5					
Boron B		3.6					
Copper Cu	.43	63.5					
Zinc Zn	.29	32.7					
Nickel Ni		29.4					
Ammonium		18.0					

Na = (me/l Anions - me/l Cations) x 23.0 mg/me - mg Na/l
Total Dissolved Solids = Σ (mg Anions/l + mg Cations/l)

FORMATION Mississippian
STATE Utah
COUNTY Emery
FIELD
COMPANY
WELL Fed. #1 Wildcat
LOCATION 10-24S-14E
LEASE

RECEIVED
DEC 22 1972
DENVER

FLUID SAMPLE DATA

Sampler Pressure ____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas ____
cc. Oil ____
cc. Water 2600
cc. Mud ____
Tot. Liquid cc. 2600
Gravity ____ ° API @ ____ °F.
Gas/Oil Ratio ____ cu. ft./bbl.

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water	.685	@ 39	°F.	33,123 ppm
Recovery Mud		@	°F.	
Recovery Mud Filtrate		@	°F.	ppm
Mud Pit Sample		@	°F.	
Mud Pit Sample Filtrate		@	°F.	ppm
Mud Weight	10.4 vis	42 cp		

Date 10-7-72 Ticket Number 458443
Kind of Job OPEN HOLE Halliburton District FARMINGTON
Tester MR. DAVIS Witness MR. PICKERING
Drilling Contractor PIONEER DRILLING COMPANY, INC. BC S

EQUIPMENT & HOLE DATA

Formation Tested Mississippian
Elevation ____ Ft.
Net Productive Interval 233' Ft.
All Depths Measured From Rotary Kelly Bushing
Total Depth 6353' Ft.
Main Hole/Casing Size 8 3/4"
Drill Collar Length 305' I.D. 2½"
Drill Pipe Length 5849' I.D. 3.826"
Packer Depth(s) 6115' - 6120' Ft.
Depth Tester Valve 6083' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke 3/4"ADJ. Bottom Choke 3/4"

Recovered 4283 Feet of Fluid
Recovered 1530 Feet of Slightly mud cut water
Recovered 2753 Feet of Black salt water
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks Set tool on plugback and went into cement 15'.
Tool opened for a 5 minute first flow with a good blow. Closed tool for 29 minute first closed in pressure. Reopened tool for 120 minute second flow with a good blow. No gas to surface. Closed tool for 181 minute second closed in pressure.

TEMPERATURE	Gauge No. 2032 Depth: 6091' Ft.		Gauge No. 2033 Depth: 6349' Ft.		Gauge No. Depth: Ft.		TIME	
	24 Hour Clock		24 Hour Clock		Hour Clock		Tool Opened 1540	A.M. P.M.
Est. °F.	Blanked Off No		Blanked Off Yes		Blanked Off			
Actual 110 °F.	Pressures		Pressures		Pressures		Tool Closed 2115	A.M. P.M.
	Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic	3353	3335	3491	3470				
First Period Flow Initial	?	207	587	747			—	—
First Period Flow Final	?	371	587	608			5	5
First Period Closed in	?	2685	2807	2813			30	29
Second Period Flow Initial	133	392	614	650 Q			—	—
Second Period Flow Final	1904	1935	2069	2087			120	120
Second Period Closed in	2669	2687	2780	2803			180	181
Third Period Flow Initial							—	—
Third Period Flow Final								
Third Period Closed in								
Final Hydrostatic	3353	3318	3491	3450			—	—

Q = Questionable

Legal Location Sec. - Twp. - Rng. 10 - 24S - 14E
Lease Name ARMSTRONG FEDERAL
Well No. 1
Test No. 4
Field Area WILDCAT
Tested Interval 6120' - 6353'
County EMERY
State UTAH
Lease Owner/Company Name UNION TEXAS PETROLEUM

Gauge No. 2032			Depth 6091'					Clock No. 2290			24 hour	Ticket No. 458443			
	First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0	.0000	207	.0000		371	.0000	392	.0000		1935					
1	.0038	240	.0067		2425*	.0652	788	.0428		2571**					
2	.0076	277	.0167		2594	.1303	1104	.0823		2607					
3	.0114	303	.0267		2631	.1955	1367	.1218		2627					
4	.0152	335	.0367		2650	.2606	1591	.1613		2740					
5	.0190	371	.0467		2661	.3258	1776	.2008		2650					
6			.0567		2669	.3910	1935	.2403		2658					
7			.0667		2675			.2798		2664					
8			.0767		2679			.3193		2669					
9			.0867		2682			.3588		2673					
10			.0970		2685			.3983		2677					
11								.4378		2679					
12								.4773		2682					
13								.5168		2685					
14								.5563		2686					
15								.5960		2687					

Gauge No. 2033					Depth 6349'			Clock No. 9756			24 hour				
0	.0000	747	.0000		608	.0000	650 Q	.0000		2087					
1	.0034	675	.0064		2649*	.0647	976	.0424		2687**					
2	.0068	652	.0160		2728	.1293	1284	.0815		2720					
3	.0102	612	.0256		2761	.1940	1537	.1206		2741					
4	.0136	608	.0352		2779	.2586	1749	.1597		2754					
5	.0170	608	.0448		2789	.3233	1932	.1988		2763					
6			.0544		2796	.3880	2087	.2379		2771					
7			.0640		2803			.2770		2778					
8			.0736		2808			.3161		2783					
9			.0832		2811			.3552		2787					
10			.0930		2813			.3943		2791					
11								.4334		2793					
12								.4725		2796					
13								.5116		2799					
14								.5507		2801					
15								.5900		2803					
Reading Interval		1			3		20		12						Minutes

REMARKS: *Interval = 2 minutes **Interval = 13 minutes Q = Questionable

10

SPECIAL PRESSURE DATA

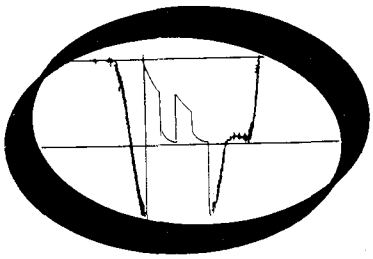
	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub				
Water Cushion Valve				
Drill Pipe	4½"	3.826"	5849'	
Drill Collars	6½"	2½"	305'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	4'	6083'
Multiple CIP Sampler	5"	-	4'	
Extension Joint	5"	1"	4'	
AP Running Case	5"	-	4'	6091'
Hydraulic Jar	5"	1"	5'	
VR Safety Joint	5"	1"	2'	
Pressure Equalizing Crossover				
Packer Assembly	2½"	1.3"	5'	6115'
Distributor				
Packer Assembly	7½"	1.3"	5'	6120'
Flush Joint Anchor	5 3/4"	2½"	23.40'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars	6½"	2½"	199.37'	
Anchor Pipe Safety Joint				
Packer Assembly				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor	5 3/4"	2½"	6.75'	
Blanked-Off B.T. Running Case	5 3/4"	-	4'	6349'

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
D.R.	= Damage Ratio	—
El	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h_1	= Net Pay Thickness	Feet
K	= Permeability	md
K_1	= Permeability (From Net Pay Zone h_1)	md
m	= Slope Extrapolated Pressure Plot (Psi^2/cycle Gas)	psi/cycle
OF_1	= Maximum Indicated Flow Rate	MCF/D
OF_2	= Minimum Indicated Flow Rate	MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_F	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

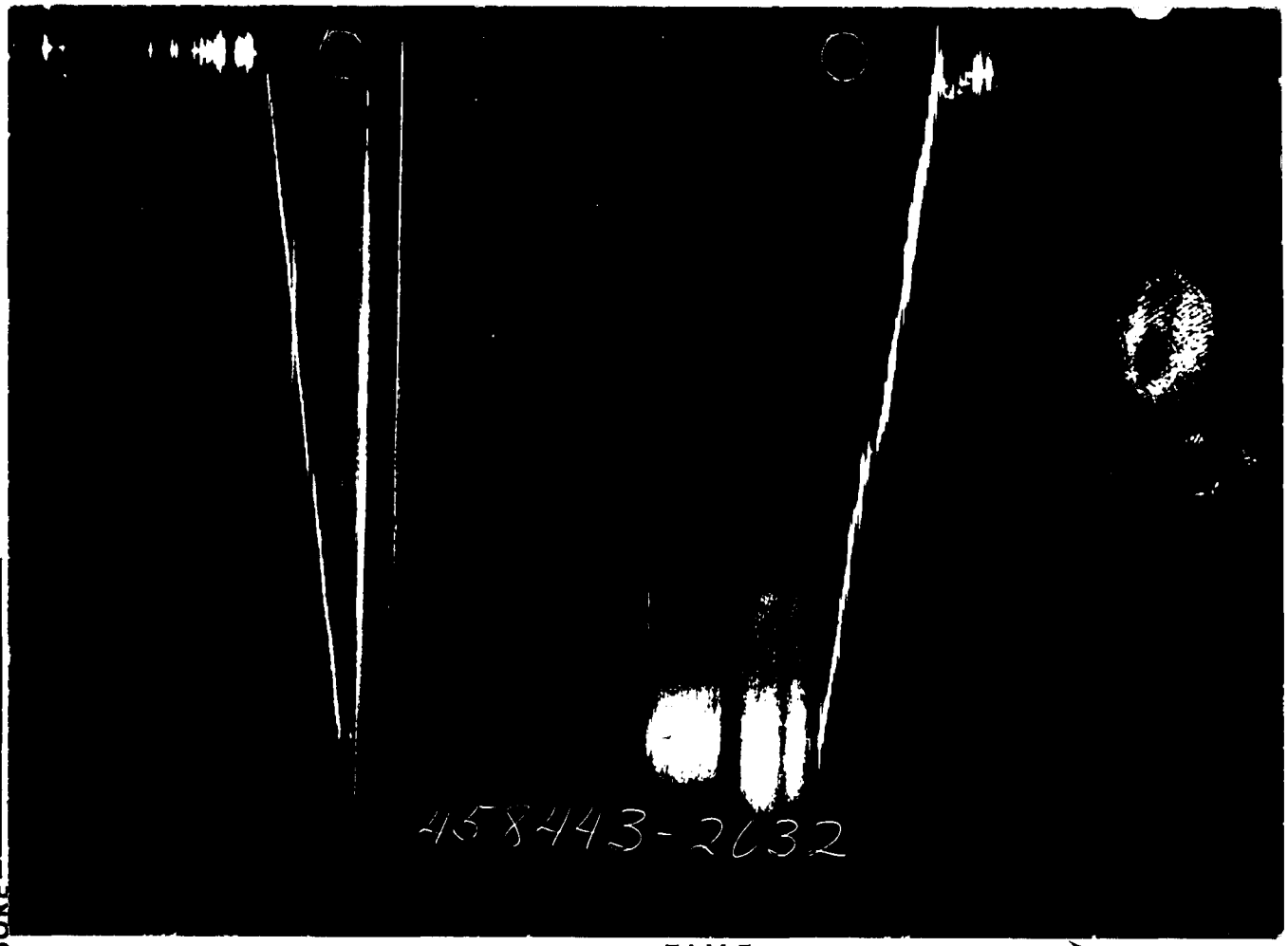
* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.

Formation Testing Service Report



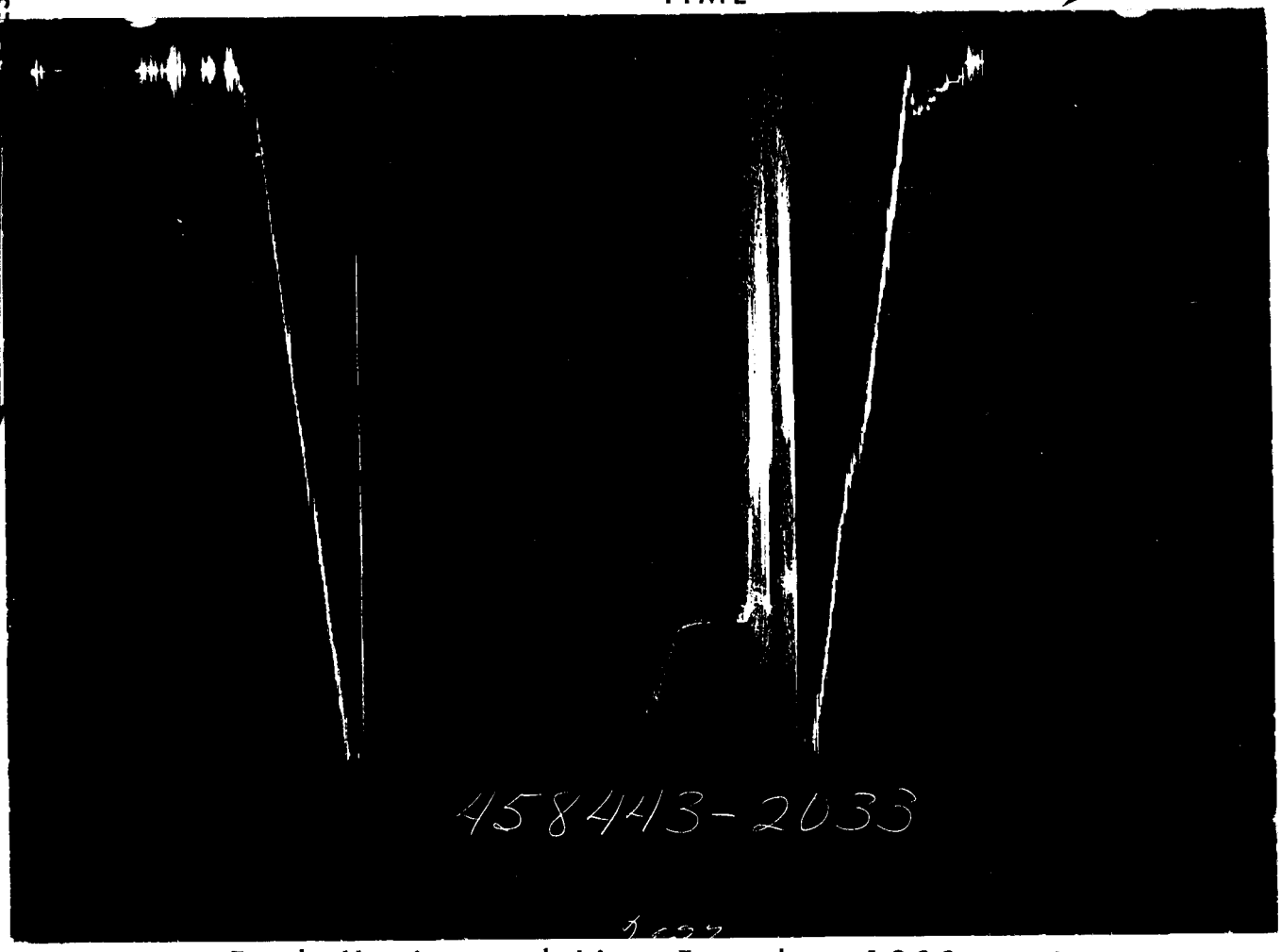
HALLIBURTON SERVICES

DUNCAN, OKLAHOMA



PRESSURE

TIME



Each Horizontal Line Equal to 1000 p.s.i.