

WELL NOTATIONS

Entered in NID File ✓
Location Map Pinned ✓
Card Indexed ✓

Checked by Chief *RWB*
Approval Letter *11-70-73*
Disapproval Letter

COMPLETION DATA:

Date Well Completed *3-11-74*

Location Inspected

OW..... WJ..... TA..... ✓

Bond released

GW..... OS..... PA..... ✓

State or Fee Land

LOGS FILED

Driller's Log..... ✓

Electric Logs (No.)

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

BHC Sonic GR..... Lat..... Mi-L..... Sonic.....

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
 DRILL DEEPEN PLUG BACK

b. TYPE OF WELL
 OIL WELL GAS WELL OTHER
 SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
 Willard Pease Oil & Gas Company

3. ADDRESS OF OPERATOR
 P. O. Box 548, Grand Junction, Colorado 81501

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
 At surface SE.SW.Sec.3,T.14 S.,R.10 E.,S.L.M.
 At proposed prod. zone 1980' fr.W-line & 966' fr.S-line

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 About two miles north of Price, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
 966'

16. NO. OF ACRES IN LEASE
 640 ac.

17. NO. OF ACRES ASSIGNED TO THIS WELL
 160

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
 2 miles

19. PROPOSED DEPTH
 4900'

20. ROTARY OR CABLE TOOLS
 Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 Grd.:5958'; K.B.:5968'

22. APPROX. DATE WORK WILL START*
 Dec.1,1973

23. PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|--------------|----------------|-----------------|---------------|--------------------|
| 12" | 9 5/8" | 36.00# | 350' ✓ | 85 sks ✓ |
| 8 3/4" | | | | |

It is planned to drill a well at the above location to test the natural gas potential of the Mancos, Dakota, Morrison, and Entrada formations. Surface casing (9 5/8") will be set at approx.350' (at least below all possible surface water zones) and cemented with returns to the surface. The upper part of the hole will be drilled with air, at least down thru the Ferron sandstone member of the Mancos. The Ferron should be encountered at about 1700'. It will probably be necessary to convert to mud soon after the Dakota is drilled at around 2200'. All shows of hydrocarbons will be tested when drilled. A blow-out preventor and rotating head will be installed on the top of the surface casing to provide well control. In case commercial production is obtained below the Ferron, 5 1/2" casing will be set and cemented. It may be desirable to set 7" casing thru the Ferron, if a sizable flow of gas is obtained; in which case a 6 1/4" hole will be drilled below the intermediate casing. This will have to be determine by the results.

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 H. Don Gingley TITLE Consulting Geologist DATE Nov.16,'73

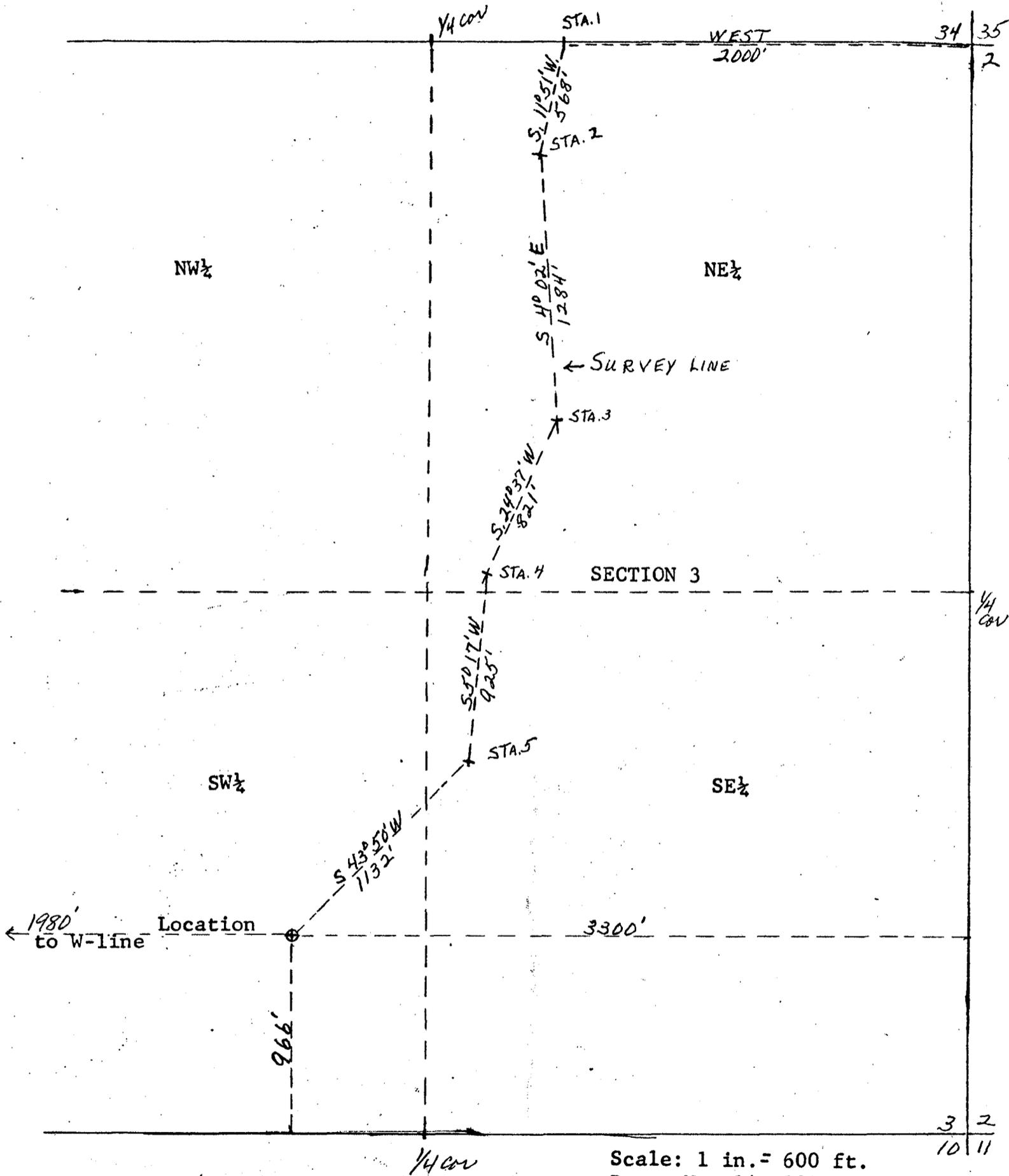
(This space for Federal or State office use)

PERMIT NO. 43-007-30022 APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:
See instructions on reverse side

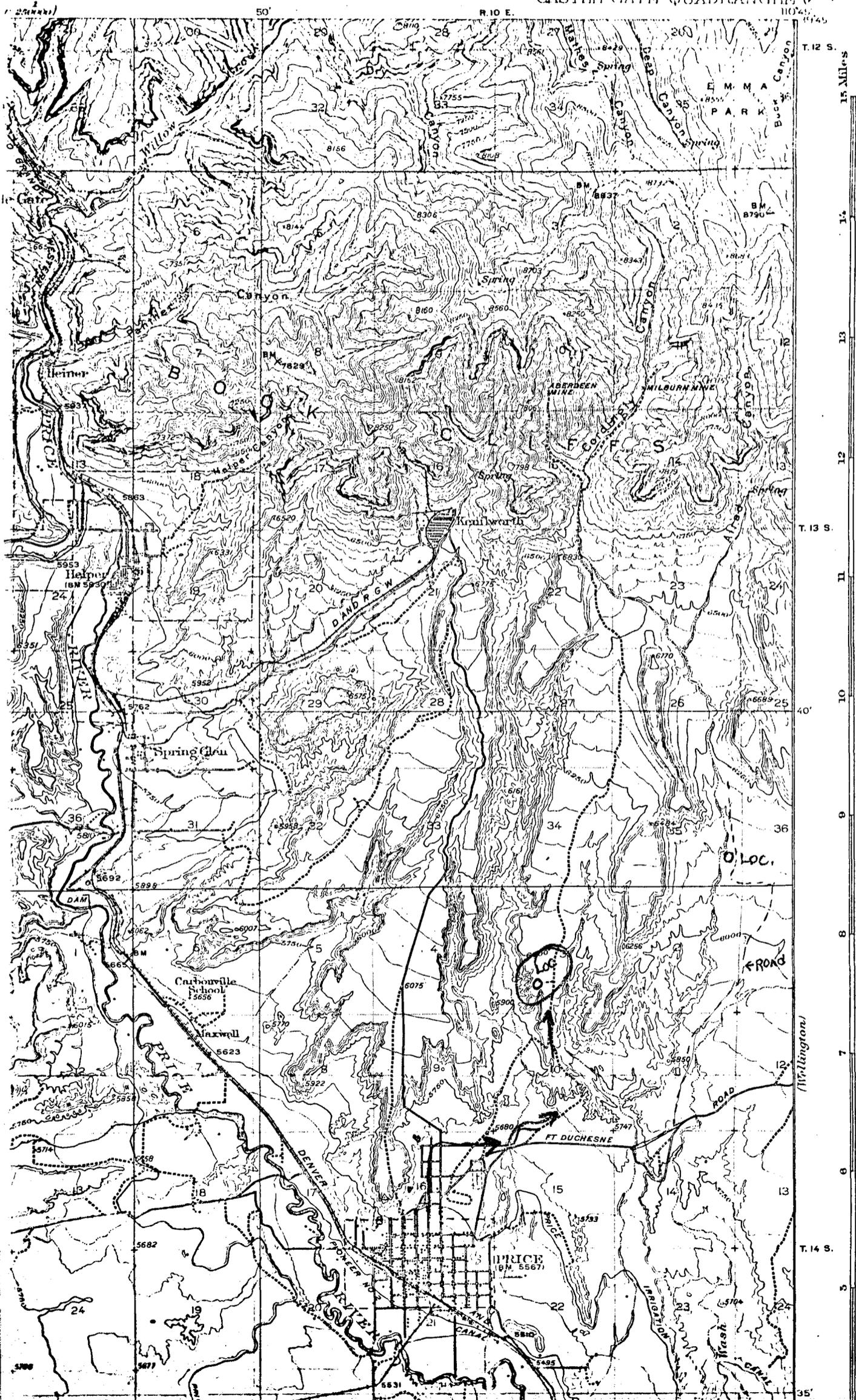
LOCATION PLAT
FOR
WILLARD PEASE OIL & GAS CO.
PRICE # 1 WELL
SE.SW.SEC.3, -14S.-10E.
CARBON COUNTY, UTAH
Elev.: 5958' grd.



Scale: 1 in. = 600 ft.
 Date: Nov. 14, 1973
 Surveyed by: W. Don Quigley

W. DON... ET
Consulting Geologist
814 NEWHOUSE BLDG.

UTAH SALT LAKE CITY
(CARBON COUNTY)
CASTLE GATE QUADRANGLE



Jack,

I will send the "Designation
of Operator" as soon as I
get them back from Beard
Oil Co. in Oklahoma City, Okla.

Don.

November 20, 1973

Willard Pease Oil & Gas Company
Box 548
Grand Junction, Colorado 81501

Re: Well No. Price State #2,
Sec. 3, T. 14 S, R. 10 E,
Carbon County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted in accordance with Rule C-3(c), General Rules and Regulations and Rules of Practice and Procedure.

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

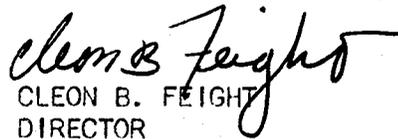
PAUL W. BURCHELL - Chief Petroleum Engineer
HOME: 277-2890
OFFICE: 328-5771

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

The API number assigned to this well is 43-007-30022.

Very truly yours,

DIVISION OF OIL & GAS CONSERVATION


CLEON B. FEIGHT
DIRECTOR

CBF:sd
cc: Division of State Lands

STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION

SUBMIT IN TRIPPLICATE*
(Other instructions on reverse side)

PHB

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.)

| | | |
|---|---|--|
| <p>1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER</p> <p>2. NAME OF OPERATOR <u>Willard Pease Oil & Gas Company</u></p> <p>3. ADDRESS OF OPERATOR <u>P. O. Box 548, Grand Junction, Colorado 81501</u></p> <p>4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface <u>SE.SW.SEC.3,T.14 S.,R.10 E.,S.L.M.</u> <u>1980' fr. W-line & 966' fr.S-line</u></p> | | <p>5. LEASE DESIGNATION AND SERIAL NO. <u>ML-28212-A</u></p> <p>6. IF INDIAN, ALLOTTEE OR TRIBE NAME</p> <p>7. UNIT AGREEMENT NAME</p> <p>8. FARM OR LEASE NAME <u>State</u></p> <p>9. WELL NO. <u>Price #2</u></p> <p>10. FIELD AND POOL, OR WILDCAT <u>Wildcat</u></p> <p>11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA <u>SE.SW.SEC.3-14S-10E</u> <u>S.L.M.</u></p> <p>12. COUNTY OR PARISH <u>Carbon</u></p> <p>13. STATE <u>Utah</u></p> |
| <p>14. PERMIT NO.</p> | <p>15. ELEVATIONS (Show whether DF, RT, OR, etc.) <u>Grd.:5958'; K.B.:5968'</u></p> | |

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

| NOTICE OF INTENTION TO: | | SUBSEQUENT REPORT OF: | |
|--|---|---|--|
| TEST WATER SHUT-OFF <input type="checkbox"/> | PULL OR ALTER CASING <input type="checkbox"/> | WATER SHUT-OFF <input type="checkbox"/> | REPAIRING WELL <input type="checkbox"/> |
| FRACTURE TREAT <input type="checkbox"/> | MULTIPLE COMPLETE <input type="checkbox"/> | FRACTURE TREATMENT <input type="checkbox"/> | ALTERING CASING <input type="checkbox"/> |
| SHOOT OR ACIDIZE <input type="checkbox"/> | ABANDON* <input checked="" type="checkbox"/> | SHOOTING OR ACIDIZING <input type="checkbox"/> | ABANDONMENT* <input type="checkbox"/> |
| REPAIR WELL <input type="checkbox"/> | CHANGE PLANS <input type="checkbox"/> | (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.)*

The above well was drilled to a total depth of 4602', which was 50 ft. into the Entrada formation, and found to be unproductive of commercial amounts of natural gas. It is therefore planned to plug and abandon the well in the following manner:

1. Place a 30-sk cement plug from 3400'-3300'; across the Morrison sands.
2. Place a 40-sk cement plug from 2700'-2550', across the top of the Cedar Mt. formation and thru the Dakota formation.
3. Place a 70-sk cement plug from 2220'-1920', thru the Ferron member and over all the coal zones.
4. Place a 25-sk plug from 250'-150', across the bottom of the surface casing.
5. Place a 10-sk plug at the top of the surface casing with a well marker.
6. Clean and level the location and fold in the pits.

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

SIGNED *H. How Gungley* TITLE Consulting Geologist DATE Mar. 10, 1974

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

4

3/11/74

Don Quigley
Stab - Prec #2 Sec 3 T14S R10E
Willard Pearce O & H.

Dakota @ 2575

4600' - 50' into Entada } No SS developed - shal
1900' - Morrison to Entada } + siltstone
Quartzite + shal
steep - No ϕ

Backhorn or Cedar Mtn - SS - Test - Gas + salt water
228' of $\frac{5}{8}$

① 30 ab - 3400 to 3300 - across top of Morrison
and across Backhorn sand at base of Cedar Mtn - had gas show

② 40 ab - 2700 to 2550 - Through the Dakota

③ 70 ab - 2220 to 1920 - Covers Ferron SS + Coal
Ferron @ 1962 to 2200

④ 25 ab - 250 to 150 at base of ferron

⑤ 10 ab / marker / mud between plugs.

PWB

STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION

(See other instructions on reverse side)

ML-28212-A

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

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 _____

2. NAME OF OPERATOR
Willard Pease Oil & Gas Company

3. ADDRESS OF OPERATOR
P. O. Box 548 Grand Junction, Colorado 81501

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface **SE.SW.SEC.3,T.14 S.,R.10 E.,S.L.M.**
At top prod. interval reported below **1980'** from W-line & **966'** from S-line.
At total depth _____

5. LEASE DESIGNATION AND SERIAL NO.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
State

9. WELL NO.

Price #2

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
Sec.3-14S-10E S.L.M.

14. PERMIT NO. _____ DATE ISSUED _____

12. COUNTY OR PARISH
Carbon

13. STATE
Utah

15. DATE SPUDDED **2-3-1974** 16. DATE T.D. REACHED **3-8-1974** 17. DATE COMPL. (Ready to prod.) **P & A 3-11-'74** 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* **Grd.:5958';K.B.:5968'** 19. ELEV. CASINGHEAD **5959'**

20. TOTAL DEPTH, MD & TVD **4602'** 21. PLUG, BACK T.D., MD & TVD _____ 22. IF MULTIPLE COMPL., HOW MANY* **none** 23. INTERVALS DRILLED BY _____ ROTARY TOOLS _____ 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, gamma-density-neutron; gamma-sonic-F-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 |
|---------------|-----------------|----------------|----------------|------------------|---------------|
| 8 5/8" | 24.00# | 228' | 12 1/4" | 150 sks. | none |
| | | | | | |
| | | | | | |

29. LINER RECORD

| SIZE | TOP (MD) | BOTTOM (MD) | SACKS CEMENT* | SCREEN (MD) |
|------|----------|-------------|---------------|-------------|
| | | none | | |

30. TUBING RECORD

| SIZE | DEPTH SET (MD) | PACKER SET (MD) |
|------|----------------|-----------------|
| | none | |

31. PERFORATION RECORD (Interval, size and number)

none

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

| DEPTH INTERVAL (MD) | AMOUNT AND KIND OF MATERIAL USED |
|---------------------|----------------------------------|
| | none |

33.* PRODUCTION

| DATE FIRST PRODUCTION | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) | WELL STATUS (Producing or shut-in) |
|-----------------------|--|------------------------------------|
| none | | D&A |

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

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

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
XXXXXX

TEST WITNESSED BY _____

35. LIST OF ATTACHMENTS
Detailed Drilling History & Geologic Report

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

SIGNED *H. Now Gungley* TITLE Consulting Geologist DATE Mar. 26, 1974

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

DRILLING HISTORY
AND
GEOLOGIC REPORT
ON
WILLARD PEASE OIL & GAS CO.
PRICE #2 WELL
CARBON COUNTY, UTAH

March 27, 1974

By

W. Don Quigley
Consulting Geologist
Salt Lake City, Utah

DRILLING HISTORY
OF
PEASE OIL & GAS CO.
PRICE #2 WELL
CARBON COUNTY, UTAH

Operator: Willard Pease Oil and Gas Company
P.O. Box 548, Grand Junction, Colo. 81501

Contractor: Willard Pease Drilling Co.
P.O. Box 548, Grand Junction, Colo. 81501

Location: SE. SW. Sec. 3, T. 14S., R. 10E., S.L.M.,
Carbon County, Utah (1980' fr. W-line and
966' fr. S-line)

Elevations: Grd. 5958'; K.B. 5968'

Spudded-in: February 3, 1974

Finished Drlg: March 8, 1974

Surface Casing: 8⁵/₈" , 24.00#, J-55 set at 228' and cemented
with 150 sks.

Production Casing: None

Total Depth: 4602'

Production Zones: None

Plugged and Abandoned: March 11, 1974

History

Feb. 1, 1974: Moving-in rig.
Feb. 2: Rigging-up.

- Feb. 3: Finished rigging-up. Drilled rat hole. Drilled mouse hole. Began drilling surface hole. Drilled 12½" hole to 42' with air.
- Feb. 4: Drilled 42' to 230' (188'). Encountered water at 150' and rigged up for air-mist drilling. Hole tight; had to work pipe up and down to clean hole. Survey at 216' was 1½°.
- Feb. 5: Worked pipe to clean hole; but finally mixed mud and circulated hole with mud. Cleaned out hole and prepared to run surface casing. Ran 7 jts. of 8⁵/₈" , 24.00#, J-55, casing and landed at 228'. Cemented with 150 sks. cement (2% CaCl) with returns to surface. Waited on cement and began nipping-up.
- Feb. 6: Drilled 230' to 614' (384'). Finished nipping-up; tested blow-out preventer. Blew water out of casing and drilled ahead with air and 7⁷/₈" bit. Encountered water just below bottom of casing so began air-mist drilling.
- Feb. 7: Drilled 614' to 1070' (456'). Drilling ahead in marine sand and shale of Mancos. Drilling at rate of approx. 15 ft./hr.
- Feb. 8: Drilled 1070' to 1973' (903'). Made rd.-trip at 1070' for Bit #3. Bit #2 (Reed - Y21G-J) made 840' (230' to 1070') in 31³/₄ hrs. Drilled at avg. rate of 26 ft. per hr. in Mancos shale. Survey at 1070' was 1½°. Had reverse drilling break at 1962'. This is probable top of Ferron member.
- Feb. 9: Drilled 1973' to 2197' (224'). Made rd.-trip at 2022' for Bit #4. Bit #3 (Reed - YS1G) made 952' in 19³/₄ hrs. Drilled at avg. rate of 48 ft/hr. Drilling in sand, shale, and coal beds of Ferron. A coal bed at 2078' to 2086' (8') was good quality coal. Had good gas flare (5 ft.) at 2130'.

- Feb. 10: Drilled 2197' to 2622' (425'). Drilling ahead in sand, shale, and coal at approx. 30 to 40 ft./hr. Had drilling break at 2238 to 2272' and a good gas flare (10ft.) on connection at 2256'.
- Feb. 11: Drilled 2622' to 2688' (66'). Hole got tight and sticky at about 2600' and had trouble making connections. Couldn't get beyond 2688' so had to mud-up and circulate. A thick bentonite bed at 2590' to 2680' would not stay open with air-mist. Probable top of Dakota formation is at about 2590'. Hit a hard tight sand at 2635' to 2650'. Top of Cedar Mt. probably at about 2655'.
- Feb. 12: Drilled 2688' to 2744' (56'). Conditioning hole and drilling ahead very slowly. Made rd.-trip at 2744' for Bit #5. Bit #4 (HTC - X44) made 722' (2022' to 2744') in 55 hrs. Drilled at avg. rate of 13 ft/hr.
- Feb. 13: Drilled 2744' to 2794' (50'). Drilling slow and having lots of trouble keeping bit clean. Numerous bentonite beds keep bit 'balled-up'. Some thin hard quartzitic sandstone beds and chert are interspersed with the bentonite beds. Drilling at about 6 ft/hr.
- Feb. 14: Drilled 2794' to 2924' (130'). Drilling slow. Had drilling break from 2872' to 2914' (42'), which was quartzitic sand, varicolored siltstone and shale, with lots of chert. Still having trouble with bentonite beds 'balling-up' the bit. Bit #5 is a button bit and doesn't drill the soft beds very well.
- Feb. 15: Drilled 2924' to 3032' (108'). Made rd.-trip at 2955' for Bit #6. Bit #5 (Reed - FP52, button bit) made 211' (2744' to 2955') in 42 hrs. Drilled at avg. rate of 5 ft/hr. in bentonite, varicolored bent. sh., siltst., and hd. thin-bedded, quartzitic ss. Went back in hole with a tooth-bit (HTC - OW4)

and it is drilling much faster. Drilling at an avg. rate of 7 to 12 ft/hr.

- Feb. 16: Drilled 3032' to 3157' (125'). Made rd.-trip at 3093' for Bit #7. Bit #6 (HTC - OW4J) made 138' (2955' to 3093') in 16 hrs. Drilled at avg. rate of 9 ft/hr. Installed gas detector on hole at 8 P.M. this date. Had 30 units of gas in mud immediately and fairly steady.
- Feb. 17: Drilled 3157' to 3245' (88'). Started out of hole at 3245' for Bit #8. Hole very tight and pulled hard and slow for first 7 stds. Torque Converter broke down with 22 stds. out. Had to shut down for parts and repairs. Waiting on mechanic and repairs. Bit #7 (HTC - OSC1G) made 152' (3093' to 3245') in 21 hrs. Drilled at avg. rate of 7 ft/hr. Had a gas kick of 120 units at about 3230 ft. Samples don't have any shows and contain hard, tight, bent. to quartzitic ss. along with shale and siltstone.
- Feb. 18 and 19: Waiting on parts. Repaired and assembled torque converter. Came out of hole. Cut drilling line and found several bad spots. Waiting on new drilling line.
- Feb. 20: Drilled 3245' to 3263' (18'). Installed new drilling line. Started back in hole at 2 P.M. Mud is very gas cut - Ran over pits. Over 3600 units on gas detector. Contains heavy fractions of ethane butane and pentane. Had to drill tight spots and fill-up for 7 stds. off bottom. Mud very heavy and clobbered on bottom. Began drilling ahead at about 9 P.M.
- Feb. 21: Drilled 3263' to 3300' (27'). Encountered more sand in section. Some of the ss is conglomeratic. Gas background very high - avg. about 100 units. Had a gas kick at 3292' (170 units total with heavy fractions). Mud still highly gas cut. Mud pump

gets gas-locked and loses pressure. Decided to test total interval from 3130' to 3300'. Began circulating at 9:30 A.M. and conditioning mud. Circulated for 2 $\frac{3}{4}$ hrs. and got mud in good shape (65 sec./qt. Viscosity, and 5 cc. water loss). Started out of hole at noon. Pulled three stds and pipe got tight. Tried to pull thru tight spot and got stuck. (Probably stuck in bentonite zone at 2580' to 2700'). Worked pipe, but couldn't get loose; so called Dowell for pump truck.

- Feb. 22: Drilled 3300' to 3329' (29'). Connected Dowell pump truck up and pumped stuck pipe loose (Pumped up to 5000# press. and pulled 140,000# before pipe finally came loose.) Lost no mud into formation. Got free at 5 A.M., put kelly on and washed back to bottom. Began drilling ahead at 8 A.M. Gas indicator registered 120 units when circulation was resumed; levelled out at about 60 units. Decided not to try testing further due to tightness of formation. Encountered a chert bed at 3310'. Bit gave out at 3316'. Made rd-trip for Bit #9. Bit #8 (Reed - YS4G) made 71' (3245' to 3316') in 17 $\frac{1}{2}$ hrs. Drilled at avg. rate of 4 ft/hr. Had only one tight spot on way out of hole. Went back in hole with button bit (rerun) and only had one small tight spot. Built mud viscosity up to 70 sec./qt. Gas detector registered about 100 units when circulation was commenced.
- Feb. 23: Drilled 3329' to 3426' (97'). Encountered a ss-quartzite bed at 3330' to 3358' and had drilling break. Drilled at rate of 15 feet/hr. Gas detector was down at this time but zone was quite tight and had no shows in samples. Gas detector has levelled - off at about 50 units. Made rd-trip at 3426' for Bit #10. Bit #9 (Reed - FP52J button) and a rerun, drilled 110' (3316' to 3426') in 24 hrs. Drilled at avg. rate of 4 $\frac{1}{2}$ ft. per hr. (Had no trouble making trip).

- Feb. 24: Drilled 3426' to 3531' (105'). Trip gas registered 550 units and levelled off at about 50 units after 3 hrs. drilling. Drilling in red shale and siltstone at 3430'. Drilling at avg. rate of 5 to 6 ft/hr. Samples suggest a change at about 3370' which could be the Morrison section.
- Feb. 25: Drilled 3531' to 3647' (116'). Encountered a green, glauc. sh. and ss. at 3550'. Drilling at rate of about 5 ft. per hr. Gas reading steady at 60 to 75 units. Mud Vis. is 45 to 50 sec. per qt. and weight is 9.2#/gal.
- Feb. 26: Drilled 3647' to 3753' (106'). Drilling slowly at avg. rate of 4 ft/hr. in lms., hd. vfg. ss., and varicolored sh. Encountered a lt. brn lms. at 3650' which might be (?) the top of the Entrada. Gas reading is steady at about 50 units.
- Feb. 27: Drilled 3753' to 3862' (111'). Drilling slowly in lms., qtzitic ss., and dol. sh. Drilling at avg. rate of 4 ft/hr. Gas reading steady at about 50-60 units.
- Feb. 28: Drilled 3862' to 3924' (62'). Decided to log hole and check bit at 3882', so conditioned mud and came out of hole. One cone on bit was gone. Bit #10 (Smith F-4) drilled 455' (3427' to 3882') in 95 hrs. Drilled at avg. rate of about 4½ ft/hr. Ran Dual - induction log on hole and found that top of Entrada is probably 600' to 650' deeper. (Log tops to date are: Ferron - 1958'; Dakota - 2590'; Cedar Mt. - 2654'; and Morrison - 3365'). Finished logging at 1:00 P.M. and went back in hole with button bit. Had over 2000 units of trip gas.
- Mar. 1: Drilled 3924' to 4025' (101'). Drilling in qtzitic ss., silic. sh. and slst. at rate of 4 ft./hr. Mud was suddenly cut and tanks overflowed at 3987' but there was no increase in gas readings. Mud was frothy and Vis. dropped from 58 to 38 and wt. dropped from 9.4 to 9.2. No evidence of chlorides in mud. Mud finally smoothed out and returned to normal.

- Mar. 2: Drilled 4025' to 4151' (126'). Drilling rate picked up at 4055' to 4078' in a red bent. sh. and siltstone. Drilling at rate of 6 ft/hr., decreasing to 4 ft/hr. Possible top of Summerville at about 4055'.
- Mar. 3: Drilled 4151' to 4298' (147'). Drilling rate at 4204' to 4294' was 7 to 8 ft/hr. in a red, calc. ark. ss. and slst. Drilling rate decreased to 4 ft/hr. after 4294'.
- Mar. 4: Drilled 4298' to 4369' (71'). Made rd-trip at 4331' for Bit #12. Bit #11 (Reed F-52 button) made 449' (3882' to 4331') in 86½ hrs. Drilled at avg. rate of 5 ft/hr. Bit #12 (Tooth-bit) is drilling at rate of 4 ft/hr.
- Mar. 5: Drilled 4369' to 4429' (60'). Had a reverse drilling break at 4360'. Drilling rate decreased from 12 min/ft. to 20 min/ft. Drilling in red, hard, calc. siltstone. Encountered a hard v.f.g. green qtztc. mica. glauc., calc. ss. with black specks at 4410'. This is probably the top of the Curtis ss. Made rd-trip at 4414' for Bit #13. Bit #12 (HJG - a rerun) made 83' (4331' to 4414') in 23½ hrs.
- Mar. 6: Drilled 4429' to 4484' (55'). Drilling rate is very slow - about 2 to 3 ft/hr. Made rd-trip at 4484' for Bit #14. Bit #13 (HTC-X-44) (a rerun) made 70' (4414' to 4484') in 23½ hrs. Drilled at avg. rate of about 3 ft/hr. in green glauconitic v.f.g. ss. Had to ream 60 ft. to get back to bottom.
- Mar. 7: Drilled 4484' to 4545' (61'). Made rd-trip at 4545' for Bit #15. Bit #14 (HTC-WD7) made 61 ft. (4484' to 4545') in 20½ hrs. Drilled at avg. rate of 3 ft/hr.

Interval: 2795' to 2825' (30')

No initial open or shut-in period

Open: 45 minutes

Shut-in: 90 minutes

Blow: Very weak blow - dead in 10 min.

Remark: Top packer didn't hold on the first setting, so had to reset tool; thus some mud entered drill stem before zone was tested.

Rec.: 500' of drilling mud due to misset - slightly cut by water. (Water tested 2000 ppm. chlorides and .5 ohms at 60°.

M F E Tool: 75# pressure; 2200 cc of drilling mud.

| | | |
|------------|-------------|-------------|
| Pressures: | IHP = 1404# | FHP = 1389# |
| | FFP = 175# | BHT = 99°F. |
| | FSIP = 231# | |

-Went in hole with test tool and straddle packers to run DST #3:

Interval: 2030' to 2060' (30')

Initial open: 15 minutes

Initial shut-in: 45 minutes

Final open: 60 minutes

Final shut-in: 90 minutes

Blow: Very weak blow initially and continuing until end of test.

Rec.: 60' of drilling mud.

| | | |
|------------|--------------------------|--------------------------|
| Pressures: | IHP = 1122# | FHP = 1111# |
| | IFP = 118# | FFP = 118#-152# |
| | ISIP = 767# and building | FSIP = 536# and building |
| | BHT = 95° F. | |

M F E Tool: 2300 cc. of drilling mud; no pressures.

Mar. 11: Went in hole with test tool and straddle packers to run DST #4:

Interval: 2050' to 2201' (151')

Initial open: 15 minutes

Initial shut-in: 1 hour

Final open: 1 hour

Final shut-in: 2 hours

Blow: Strong blow immediate - increasing gradually thru-out test. Gas to surface in 50 min. Volume too small to measure.

Rec.: 1442' of fluid: 186' of slightly water and heavily gas cut mud, 1256' of highly gas cut water. Water has 5000 ppm chlorides and .38 ohms resistivity at 60°F.

M F E Tool: Pressure 400#; .63 cubic ft. of gas; 2090 cc. of water (5250 ppm and .30 ohms)

| | | |
|------------|-----------------|-----------------|
| Pressures: | IHP = 1115# | FHP = 1105# |
| | IFP = 146#-259# | FFP = 276#-558# |
| | ISIP = 882# | FSIP = 896# |
| | BHT = 99°F. | |

Laid down test tool and ran drill collars in hole.
Laid down drill collars, and went in hole open-ended with drill pipe to plug well.

Placed cement plugs as follows:

- Plug #1 - 30 sacks at 3400' to 3300'
- Plug #2 - 40 sacks at 2700' to 2550'
- Plug #3 - 70 sacks at 2220' to 1920'
- Plug #4 - 25 sacks at 250' to 150'
- Plug #5 - 10 sacks at surface with well marker.

Mar. 12-13: Rigged down and moved rig.

GEOLOGIC REPORT
ON
PEASE OIL & GAS CO. - PRICE #2 WELL
CARBON COUNTY, UTAH

General Geology

The Willard Pease Oil & Gas Company Price #2 well was located as near the crest of the Price Anticline as the acreage block would permit. The location (like the Price #1 well) still was on the north flank of the structure; but the well was about 300 ft higher structurally than the Price #1 well. This location was chosen so as to be as high on the structure as possible for an Entrada test.

The results of the Price #1 well indicated that natural gas in unknown amounts would probably be present in the Ferron member of the Mancos in the #2 well, but since no production or indications of hydrocarbons had ever been obtained in the Entrada formation in any of the wells in the area (closest well is about 12 miles to the south), it was deemed advisable to select the best known structural position for the committed Entrada test. It was also assumed that if mud had to be used as a circulating medium to drill the well from the Ferron down to the Entrada that there would be little chance of reclaiming economically any gas found in the Ferron initially.

The Price anticline is located at the base of the Book Cliffs to the north and the Wasatch Plateau to the west. The Clear Creek gas field, producing from the Ferron sandstone, is located on the east flank of the Wasatch Plateau, about 25 miles west of the structure. The very small and shallow (500' to 1200') Miller Creek gas field is located about 10 miles to the south. This field has a number of small shut-in gas wells in the Ferron and Tununk members. The Farnham Dome structure and CO₂ gas field is located about 14 miles to the southeast of the Price anticline. Natural gas is quite possible in the area and therefore any prospective structure has merit and potential. To date, only the Ferron sandstone has been

productive in the area and is, therefore, the principle objective. No natural gas has been developed or found in the area thus far in the Dakota, Cedar Mountain, Morrison, or Entrada formations which are productive in the Book Cliffs area of eastern Utah in Grand County. Thus these deeper formations below the Ferron were highly speculative and were definitely secondary until some definite shows of hydrocarbons were found. The Pennsylvanian - Manning Canyon formation, however, had shows in deep tests at Miller Ck. and at Hiawatha (North Springs) south of the Price structure; in fact, the North Springs well was later completed as a producing gas well (IPF 3440 MCFGPD) from the Manning Canyon formation. The Sinbad section also contained gas (80% to 50% non - combustible) in the North Springs, Miller Creek, and Gordon Creek wells. Thus there are deeper hydrocarbon prospects in the area which have potential.

Prior to the drilling of the Price #2 well, the stratigraphic section beneath the Price anticline was quite uncertain and speculative. It was assumed that the sequence and lithology would not be comparable to that found in wells located along the Book Cliffs east of the San Rafael Swell. For instance, the Cedar Mt. - Morrison section found at Gordon Creek, which is just 12 miles west of the anticline, was 2100 feet thick (from the base of the Dakota to the top of the Entrada). This is compared to the 600 to 700 ft. section found farther east. The Entrada in the Gordon Creek well was about 1100 feet thick compared to the normal 400 feet. The Carmel was 1200 ft. thick. The Navajo, Kayenta, Wingate, Chinle, Moenkopi, and Kaibab were approximately normal in thickness. It was assumed that the thickness of the Dakota to Navajo section under the Price anticline would be somewhat less than the 4400 ft. found at Gordon Creek; but how much less was unknown. This same section was 3360 ft. thick in the North Springs well and about 3000 ft. thick in the Miller Creek wells. The Cedar Mt. - Entrada section was 1850 feet and 1800 feet thick in these wells respectively. The Entrada found in these wells was mostly red silty sandstone, siltstone, and shale and had little prospects of favorable reservoir zones. It was estimated, prior to drilling the Price #2 well, that the depth to the Entrada might be about 4550' (4850' at the Price #1 location); but this was little more than wild speculation at the time.

As noted above, the Price #2 well was about 300 ft. higher structurally than the Price #1 well. This is an average plunge of 150 ft. per mile in a northeast direction or somewhat less than 2° dip in this direction. The top of the structure is about 2 miles southwest of the Price #2 location. Section 16 of 14S - 10E is the approximate top of the structure.

Drilling History and Techniques

A complete daily drilling history of the Price #2 well precedes this section. It was unfortunate that water was encountered at 250' necessitating air-mist drilling thru the Ferron section; thereby preventing an accurate indication and test of the amount of natural gas in this zone.

Like the Price #1 well, the thick section of bentonite and bentonitic shales in the Dakota formation and in the top of the Cedar Mountain formation prevented further drilling with air-mist and it was necessary to convert to mud-drilling at 2680 feet. The remainder of the hole to total depth (4602') was drilled with mud. This caused considerable damage to the gas zones in the Ferron and prevented any further gas flows from coming to the surface. Consequently, a mud-logging unit with gas detection equipment was put on the hole at about 3125 ft. to monitor any future gas flows into the mud stream. The mud-drilling decreased the drilling-rate drastically and much of the hole from 3200 ft. to 4600 ft. was drilled at the rate of 3 to 6 ft/hr. The occasional gas flow, especially on trips, kept the mud 'gassed-up' and a high viscosity had to be maintained until the mud weight reached 9.4 lbs/gal. The 9.4# mud provided sufficient hydrostatic pressure on the Ferron gas zone to prevent the gas entering the mud stream. On occasions before the mud wt. reached 9.4#/gal., the gas detector registered over 3600 units after a shut-down period.

The well was logged at a depth of 3880' to determine the exact position in the stratigraphic section. A red shale and siltstone section from 3420' to 3550' was similar in character to the normal Summerville section; a green glauconitic shale

and sandstone section from 3550' to 3750' was similar to the normal Curtis formation; and a light brown sandy limestone and sandstone section from 3800' to 3880' was somewhat similar to the expected Entrada section in the area. However, the log when correlated with the closest wells revealed that the bottom of the hole at 3880' was near the approximate base of the Morrison formation; and the Summerville, Curtis, and Entrada were still deeper. It was estimated at this point that the top of the Entrada would be below 4500'.

After the total depth of 4602' was reached and the well was logged the second time, it was found that the top of the Entrada was at 4552' and that the formation had been penetrated by exactly 50 ft. The logs also indicated two prospective gas zones in the Cedar Mt. formation; and it was deemed advisable to test these zones between straddle packers, since casing was so expensive and difficult to obtain. These two zones; a basal sand in the Cedar Mt. at 3330' to 3360', and an upper Cedar Mt. sand at 2810' to 2828', were therefore tested, along with two different zones in the Ferron member. The detailed results of these four drill-stem-tests are listed in the 'Drilling History' section of this report on Mar. 9, 10, and 11. The general results of the tests failed to indicate any economical flows of natural gas; and the well was plugged and abandoned.

Stratigraphy Of Well

Only the Mancos shale formation is exposed at the surface around the area of the well site. The Castlegate sand and Mesaverde rocks are exposed around the edges of the cliffs to the north and west of the well.

The well penetrated the rest of the Mancos formation, the Dakota formation, the Cedar Mountain formation, the Morrison formation, the Summerville formation, the Curtis formation, and the top 50 feet of the Entrada formation. Perhaps it should be noted here that there is some confusion about the Cedar Mountain - Morrison section in the area. This whole interval has often been referred to as only the Morrison section; however, it is properly divided into the Cedar Mt.

formation on top with the Morrison formation below. The type section for the Cedar Mt. formation is at Cedar Mountain which is located about 30 miles southeast of Price, Utah. The Miller Creek, North Springs and Gordon Creek wells all had a well defined Cedar Mountain section and an equally well defined Morrison section.

The formations with their tops, thicknesses, and datum points which were encountered in the Price #2 well, as determined from the electric logs, are as follows:

| <u>Formation</u> | <u>Depth to Top</u> | <u>Thickness</u> | <u>Datum</u> |
|------------------|---------------------|------------------|--------------|
| Mancos (Upper) | Surface | 1958' | 5968' K.B. |
| (Ferron Member) | 1958' | 280' | 4010' |
| (Tununk Member) | 2238' | 352' | 3730' |
| Dakota | 2590' | 64' | 3378' |
| Cedar Mountain | 2654' | 711' | 3314' |
| Morrison | 3365' | 725' | 2603' |
| Summerville | 4090' | 326' | 1878' |
| Curtis | 4416' | 136' | 1552' |
| Entrada | 4552' | — | 1416' |
| Total Depth | 4602' | — | — |

Comparisons of the thicknesses of the formations as indicated by the electric logs of the other wells in the area which have been drilled into the Entrada formation are as follows:

| <u>Formation</u> | <u>Price #2 Well</u> | <u>Miller Ck. Well</u> | <u>North Springs Well</u> | <u>Gordon Ck. Well</u> |
|------------------|----------------------|------------------------|---------------------------|------------------------|
| Dakota | 64' | 38' | 43' | 80' |
| Cedar Mountain | 711' | 643' | 784' | 800' |
| Morrison | 725' | 668' | 598' | 773' |
| Summerville | 326' | 338' | 296' | 433' |
| Curtis | 136' | 138' | 174' | 130' |
| Total Thickness | 1962' | 1825' | 1895' | 2216' |

It is obvious from the above comparisons that the section from the top of the Dakota formation to the top of the Entrada formation in the Price #2 well was only 250 ft. thinner than the one found at Gordon Creek; and was thicker than the same section found in either the Miller Creek or North Springs wells.

This section apparently thickens from the east to the west and possibly to the north.

A detailed description and sample log of the cuttings from the well are attached hereto.

Gas Zones

Since the upper part of the hole (0' to 2688') was drilled with air-mist, any natural gas encountered in the well was soon or immediately observed at the surface. However, there was still a certain amount of immediate damage to the reservoir rocks with the water and an uninhibited flow of the gas from a potential reservoir was not possible.

The first flow of gas observed in the well was found in the Ferron member at 2130' and a second good flow was observed at 2150'. These flows were obviously coming from thin stringer sands between the coal beds. A thick sandstone was drilled from 2160' to 2200', but no immediate increase in the gas volume was observed; in fact, there appeared to be an increase in the flow of water into the hole, and a later drill-stem-test (DST#4) of this sand recovered over 1400 ft. of slightly saline water in one hour. A fair flow of gas (10 ft. flare out a 7" blooey-line) was observed on a connection at 2256', but it was believed that this gas was coming from zones penetrated previously.

One other zone (3330' to 3360'), a basal sand in the Cedar Mountain formation, gave up some gas on a drill-stem-test; about 4,000 cubic feet per day, plus a small amount of salt water. This zone is obviously an objective in future wells and should be considered in further drilling programs in the area.

Conclusion and Recommendations

The drilling of the Price #2 well revealed several interesting facts which were not too well known previously.

- A. The Cedar Mountain-Morrison-Summerville-Curtis section is approximately 1800 to 1900 feet thick in the area.

- B. The basal sand (Buckhorn equivalent farther to the east) in the Cedar Mountain formation is a likely prospect for hydrocarbon (natural gas) accumulations in the area.
- C. The Morrison formation, below the Cedar Mountain, is not a likely prospect for hydrocarbon accumulations.
- D. The Entrada formation is not a likely prospect for hydrocarbon accumulations. It is primarily shale and siltstone, and very-fine-grained quartzitic sandstone, which is quite dissimilar to the Entrada farther to the east.
- E. The Dakota formation is primarily composed of bentonitic shales and bentonitic sandstone and has only minor chances of hosting natural gas accumulations in the area.
- F. The Ferron member of the Mancos formation is the most likely gas-bearing zone in the area, but there are certain limitations to the reservoir sands and to the compatibility of the zone for extended productivity. The gas is probably originating from the coal beds and is accumulated in the thin sandstone beds between the coal beds. The massive sandstone bed at the base of the Ferron member is apt to contain water. (This latter fact was also evident in the Price #1 well). The amount of gas that can be obtained out of the Ferron is still unknown. It is anticipated that each well might have an initial open flow rate of 250 to 750 MCFGPD. The life and deliverability of the wells are also unknown factors.

The shallow and deeper natural gas prospects in the area should be developed separately. The Ferron gas zone is quite shallow (2000' to 4000') thruout most of the area, which permints development in a fairly inexpensive manner. Since the thickness of the interbedded sands are thin and erratic, the sands do not lend themselves economically to selective

perforating and fracture treatment. Thus the proper development program should provide for setting casing on the top of the Ferron member and drilling the gas zones with air; being very careful not to penetrate the basal water sand.

In most cases, if wells are drilled below the Dakota formation in the area, it will be necessary to mud-up and this would normally preclude any chance of reclaiming the gas in the Ferron member economically. Therefore tests of the potential basal sand of the Cedar Mountain formation should be conducted separately. The shallow Ferron sands could be developed on a 160' acre spacing pattern, and a Morrison test could be drilled near the center of each section initially.

It is quite essential that a test and indication of the possible productivity of the Ferron gas wells be obtained in the area before any extensive drilling program is initiated. It is possible that the volume of gas from the Ferron might be quite small and short-lived. This would have a considerable bearing on any future development plan for the area. The reverse is also true.

The electric logging program accomplished on the Price #2 well was far more detailed than necessary and was ridiculously expensive. Electric logs have become extremely expensive in recent months and it is a terrible waste of money to run more logs than necessary. Only minimum logs should be considered; a dual-induction laterlog and a gamma-density-neutron log is generally more than adequate.

W. Don Quigley

W. Don Quigley
Consulting Geologist
Salt Lake City, Utah
A A P G Cert. #1296

Pose Oil & Gas Co - Bore #2 Well

SE 5th Sec. 3 14S-11E
Carbon County, Utah
Elev. 5465' N.R.

800' to 1600'

800

DK. gray calc. breccia ag. ss. & silty gray calc. sh.

DK. gray. fg. breccia ag. ss. w/ ang. qtz grains.

900

DK. gray. fg. breccia ag. ss. & dk. gray silty sh.

DK. gray silty calc. sh. & siltst.

1000

Some brown silty ms. & dk. gray silty calc. sh. & siltst.

A Some argillite

A blk. calc. sh. & ms.

1100

A

A

A

A

DK. gray calc. sh. w/ (conchoidal) cleav. & argillite

1200

A

A

A

A

1300

DK. gray ^{to blk} calc. silty micr. sh.

1400

b

DK. gray sil. calc. massive sh. & dk. gray micr. bent.

b

DK. gray sil. calc. silty micr. sh. & arg. ss.

b

b

b

1500

A

DK. gray to blk. calc. sh. & bent.

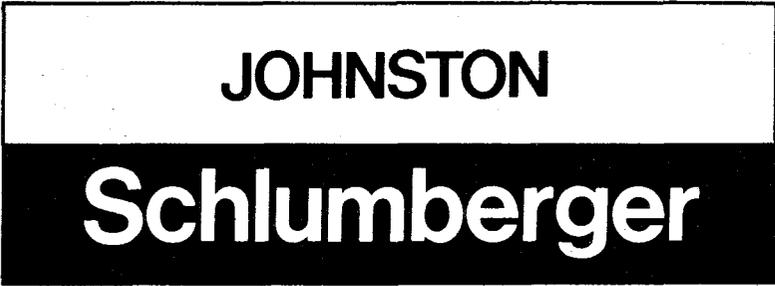
b

blk. calc. sh. w/ conch. cl.

1600

5

COMPANY _____ PEASE OIL AND GAS COMPANY _____ WELL _____ PRICE #2 _____ TEST NO. 1 _____ COUNTY _____ CARBON _____ STATE UTAH



technical report



PRESSURE LOG*

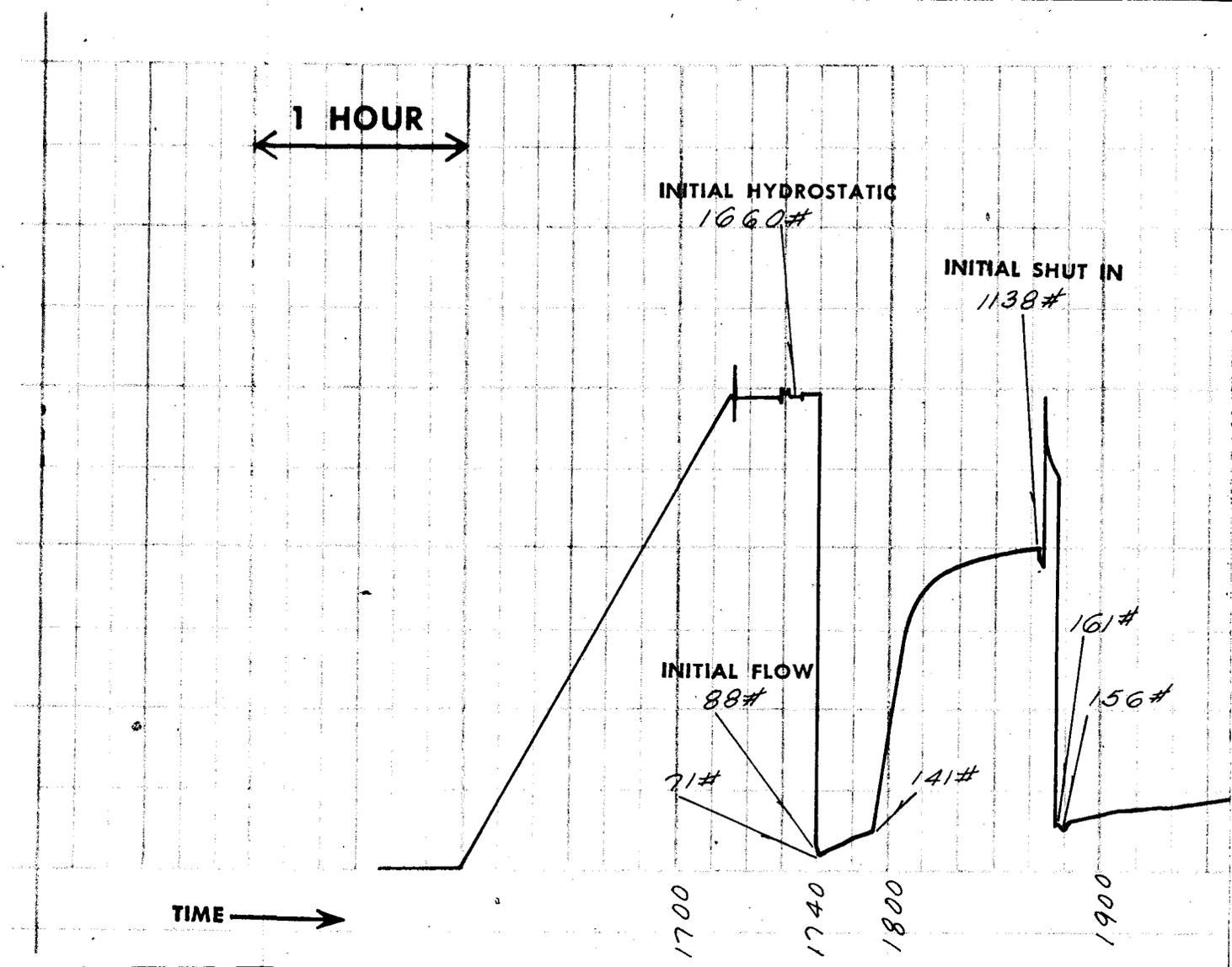
Field Report No. 03447C

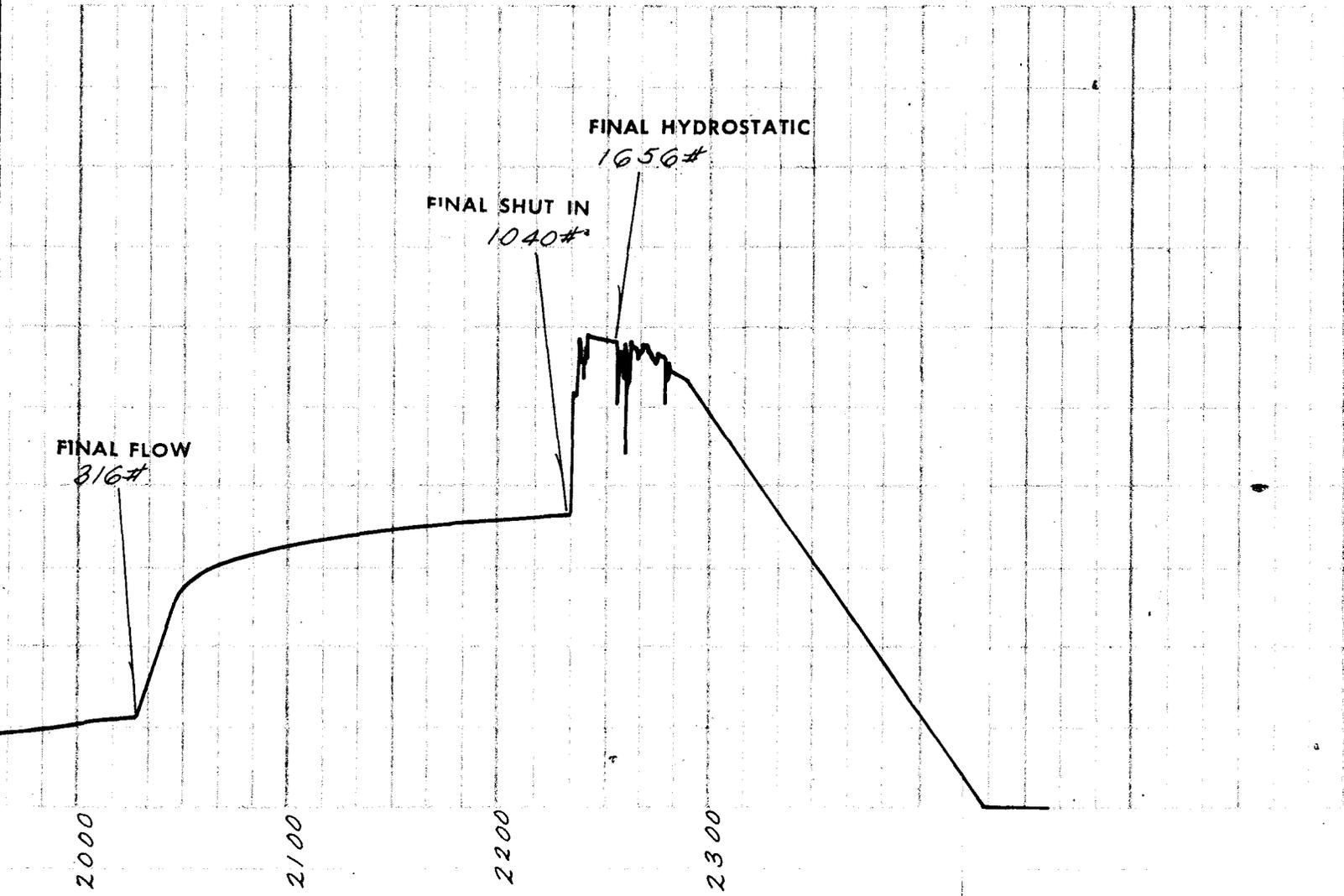
Instrument:
Number J-029

Capacity 2800 p.s.i.

Depth 3320 ft.

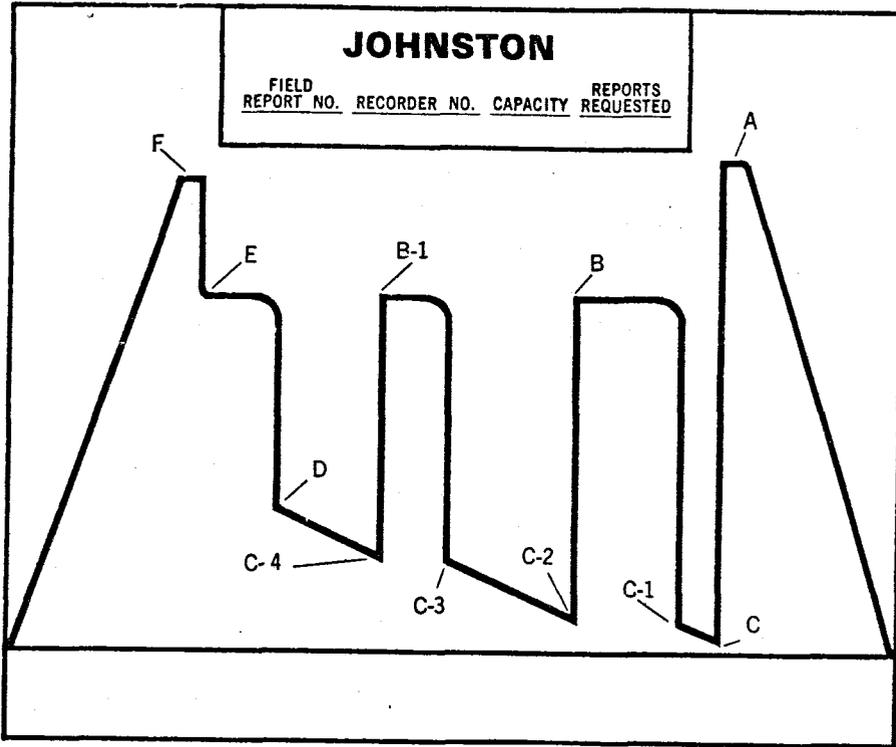
*a continuous tracing of the original chart





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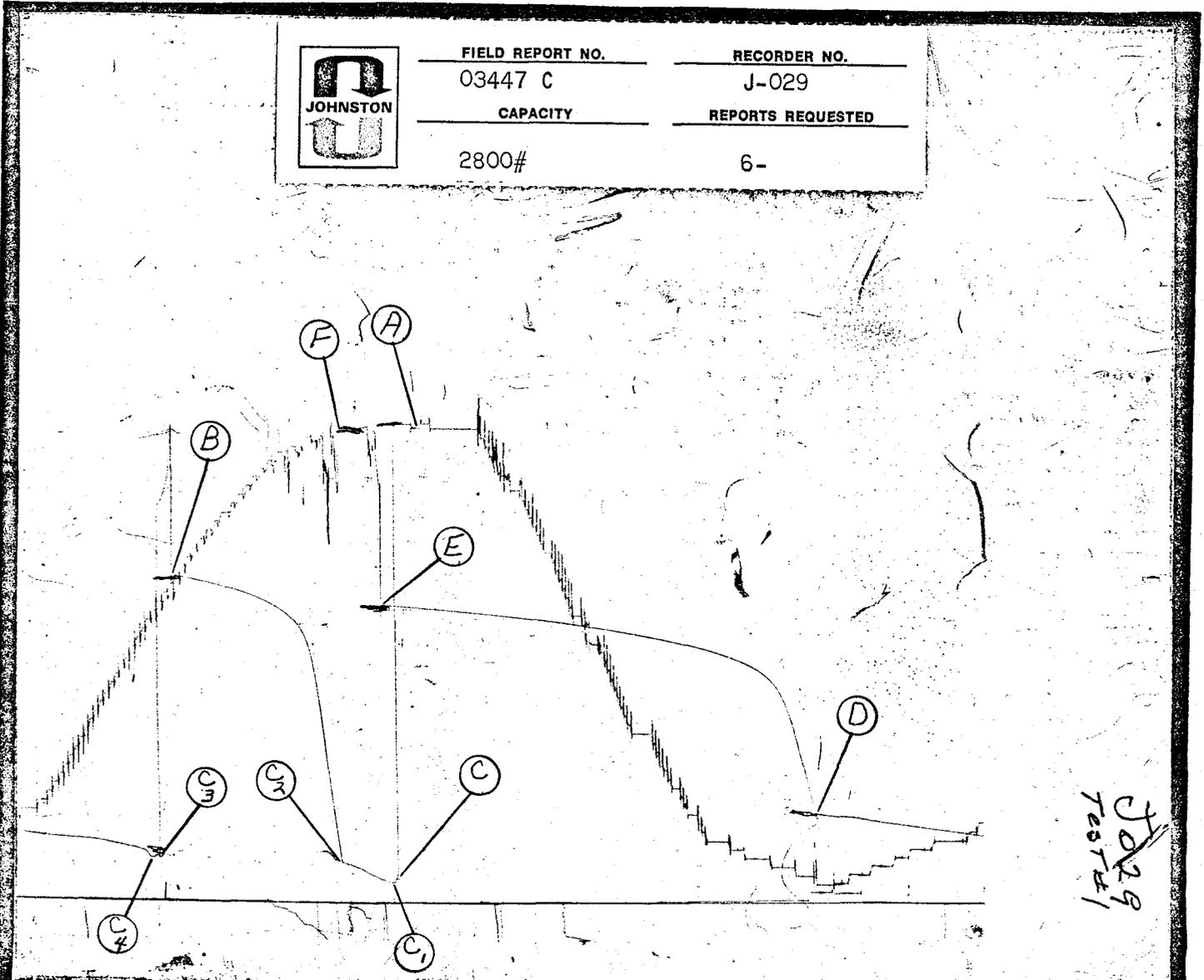
GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS



- A. Initial Hyd. Mud
- B. Initial Shut-in
- C. Initial Flow
- D. Final Flow
- E. Final Shut-in
- F. Final Hyd. Mud

The following points are either fluctuating pressures or points indicating other packer settings, (testing different zones).

- A-1, A-2, A-3, etc. Initial Hyd. Pressures
- B-1, B-2, B-3, etc. Subsequent Shut-in Pressures
- C-1, C-2, C-3, etc. Flowing Pressures
- D-1, D-2, D-3, etc. Subsequent Final Flow Pressures
- E-1, E-2, E-3, etc. Subsequent Final Shut-in Pressures
- F-1, F-2, F-3, etc. Final Hyd. Mud Pressures
- Z — Special pressure points such as pumping pressure recorded for formation breakdown.





SURFACE INFORMATION

| Description (Rate of Flow) | Time | Pressure (P.S.I.G.) | Surface Choke |
|----------------------------|------|---------------------|---------------|
| Opened Tool | 1740 | - | - |
| STRONG BLOW | | | |
| CLOSED FOR INITIAL SHUT-IN | 1756 | - | - |
| BURNABLE GAS TO SURFACE | 1801 | - | - |
| FINISHED SHUT-IN | 1842 | - | - |
| RE-OPENED TOOL | 1847 | - | - |
| MEDIUM BLOW | | | |
| GAS 3.92 MCF/DAY | 1902 | 2 | 1/8" |
| GAS 4.84 MCF/DAY | 2015 | 3 | " |
| CLOSED FOR FINAL SHUT-IN | 2017 | - | " |
| PULLED PACKER LOOSE | 2220 | - | - |

EQUIPMENT & HOLE DATA

| | | | |
|--------------------------|----------------------------------|-------------|-----|
| Type Test | M. F. E. SELECTIVE ZONE STRADDLE | | |
| Formation Tested | CEDAR MOUNTAIN / OPEN HOLE | | |
| Elevation | 5968 | | Ft. |
| Net Productive Interval | 18 | | Ft. |
| Estimated Porosity | 10 | | % |
| All Depths Measured From | KELLY BUSHING | | |
| Total Depth | 4620 | | Ft. |
| Main Hole/Casing Size | 7 7/8" | | |
| Rat Hole/Liner Size | - | | |
| Drill Collar Length | 418' | I.D. 2.5" | |
| Drill Pipe Length | 2860' | I.D. 2.764" | |
| Packer Depth(s) | 3308, 3315, 3355 Ft. | | |

**MULTI-FLOW EVALUATOR
FLUID SAMPLE DATA**

| | | |
|-----------------------|------------|---------------------|
| Sampler Pressure | 240 | P.S.I.G. at Surface |
| Recovery: Cu. Ft. Gas | .50 | |
| cc. Oil | - | |
| cc. Water | 1800 | |
| cc. Mud | - | |
| Tot. Liquid cc. | 1800 | |
| Gravity | - °API @ - | °F. |
| Gas/Oil Ratio | - | cu. ft./bbl. |

RESISTIVITY CHLORIDE CONTENT

| | | |
|-------------------------|--------------|----------|
| Recovery Water | .24 @ 60 °F. | 1500 ppm |
| Recovery Mud | - @ - °F. | |
| Recovery Mud Filtrate | - @ - °F. | - ppm |
| Mud Pit Sample | .60 @ 60 °F. | |
| Mud Pit Sample Filtrate | .85 @ 60 °F. | 500 ppm |

| | | | |
|--------------|--------|----------|-------------------|
| Cushion Type | Amount | Pressure | Bottom Choke Size |
| | - | | 3/4" |

MUD DATA

| | | | |
|------------------|---------------------|-------------|-------------|
| Mud Type | FRESH WATER AND GEL | Wt. | 9.4 |
| Viscosity | 45 | Water Loss | 8.4 C.C. |
| Resist: of Mud | .60 @ 60 °F; | of Filtrate | .85 @ 60 °F |
| Chloride Content | 500 | | PPM |

| RECOVERY DESCRIPTION | FEET | BARRELS | % OIL | % WATER | % OTHERS | API GRAVITY | RESISTIVITY | CHL. PPM |
|-----------------------|------|---------|-------|---------|----------|-------------|-------------|----------|
| GAS AND WATER CUT MUD | 312 | 2.31 | | | | @ °F. | @ °F. | |
| MUDDY WATER | 418 | 2.55 | | | | @ °F. | @ °F. | |
| | | | | | | @ °F. | @ °F. | |
| | | | | | | @ °F. | @ °F. | |
| | | | | | | @ °F. | @ °F. | |
| | | | | | | @ °F. | @ °F. | |
| | | | | | | @ °F. | @ °F. | |
| | | | | | | @ °F. | @ °F. | |

Remarks: _____

Address: BOX 548; GRAND JUNCTION, COLORADO 81501

Company: PEASE OIL AND GAS COMPANY Field: WILD CAT

Well: PRICE #2 Location: SE-SW-SEC.3-14S-10E

Test Interval: 3315' TO 3355' Test #: 1 Date: 3-9-74

County: CARBON State: UTAH Field Report No.: 03447 C

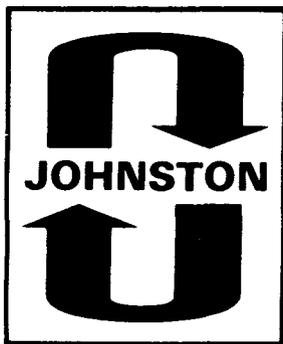
Technician: GUFFEY (VERNAL) Test Approved By: MR. W. DON QUIGLEY No. Reports Requested: 6 (5x's)

COMPANY _____ PEASE OIL AND GAS COMPANY _____ WELL _____ PRICE #2 _____ TEST NO. 2 _____ COUNTY _____ CARBON _____ STATE UTAH

JOHNSTON

Schlumberger

technical
report



PRESSURE LOG*

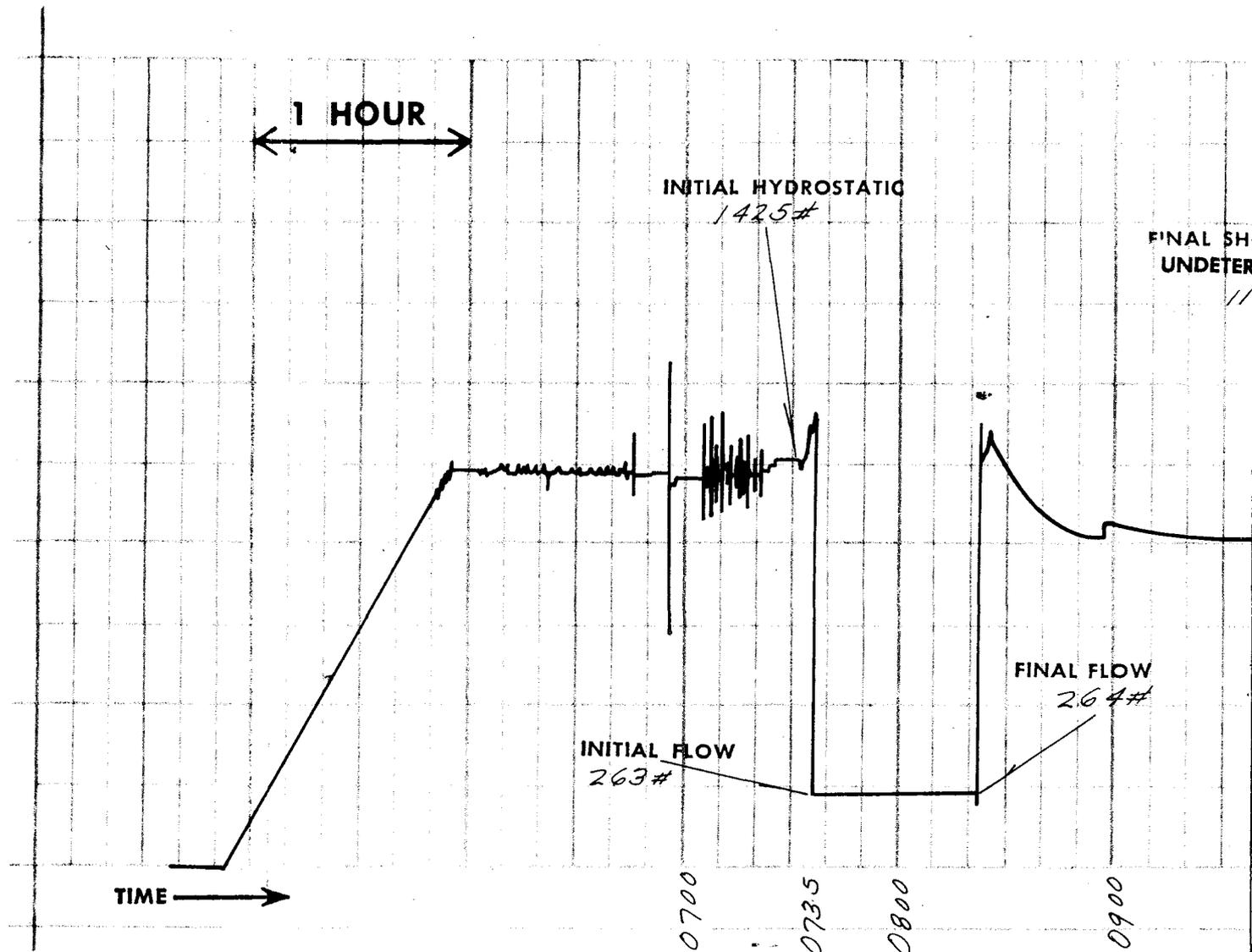
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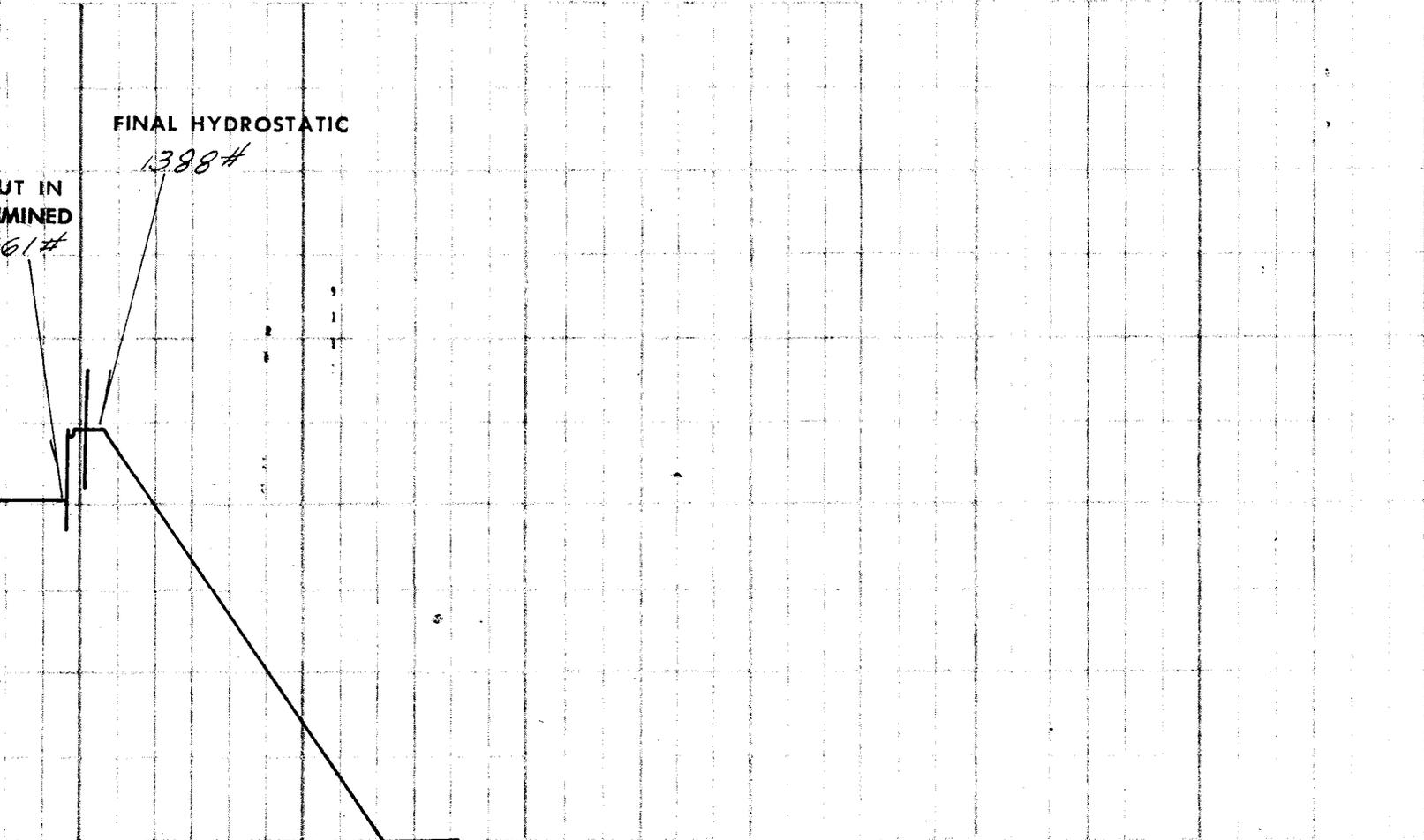
Instrument:
Number J-029

Capacity 2800 p.s.i.

Depth 2775 ft.

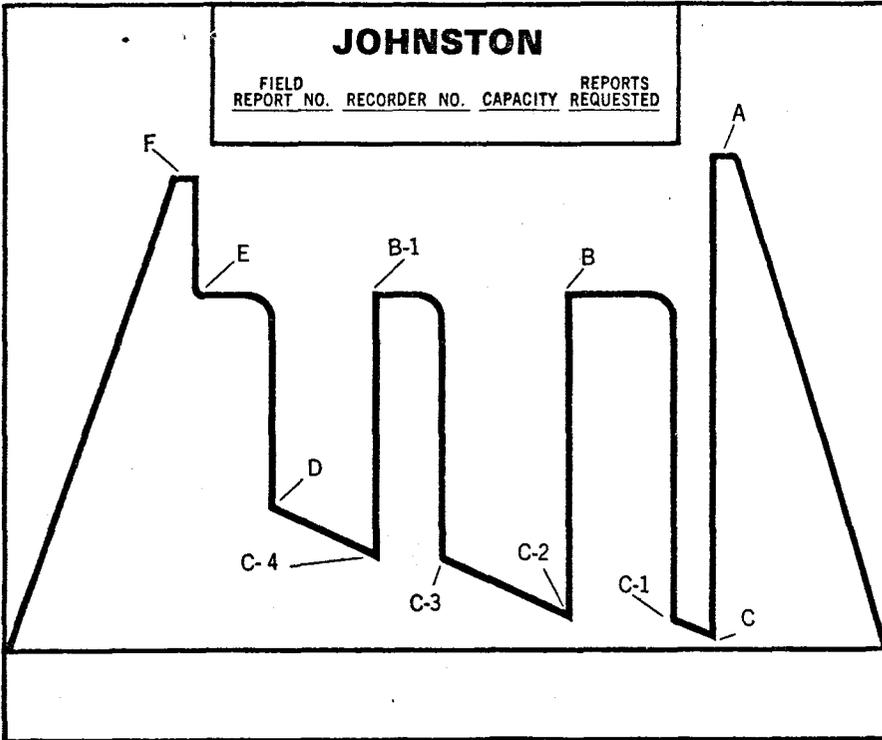
*a continuous tracing of the original chart





← 1 HOUR →

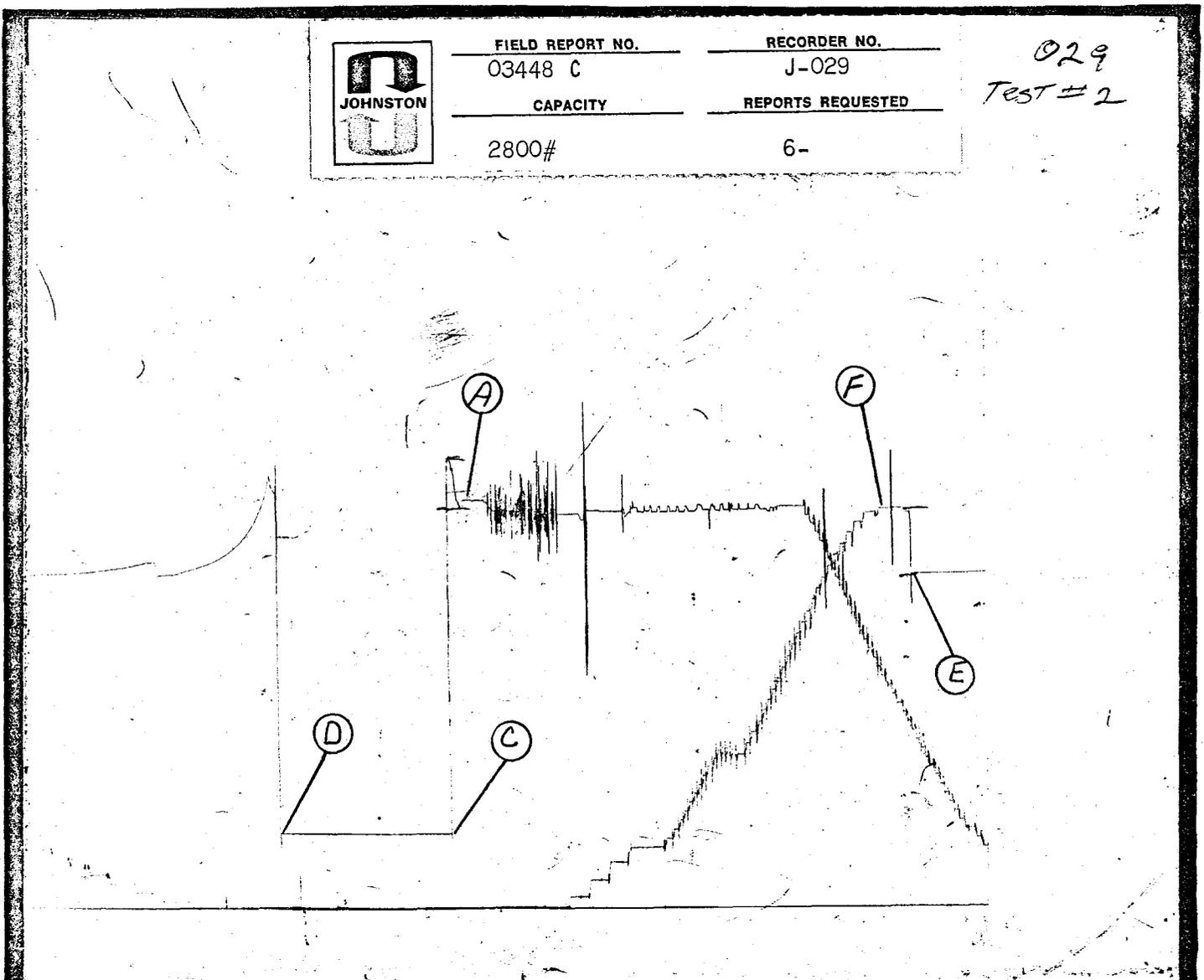
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- C-1, C-2, C-3, etc. Flowing Pressures
- D-1, D-2, D-3, etc. Subsequent Final Flow Pressures
- E-1, E-2, E-3, etc. Subsequent Final Shut-in Pressures
- F-1, F-2, F-3, etc. Final Hyd. Mud Pressures
- Z — Special pressure points such as pumping pressure recorded for formation breakdown.



5

Pink

COMPANY _____ PLEASE OIL AND GAS COMPANY _____ WELL _____ PRICE #2 _____ TEST NO. 3 _____ COUNTY _____ CARBON _____ STATE UTAH

JOHNSTON
Schlumberger

technical report



PRESSURE LOG*

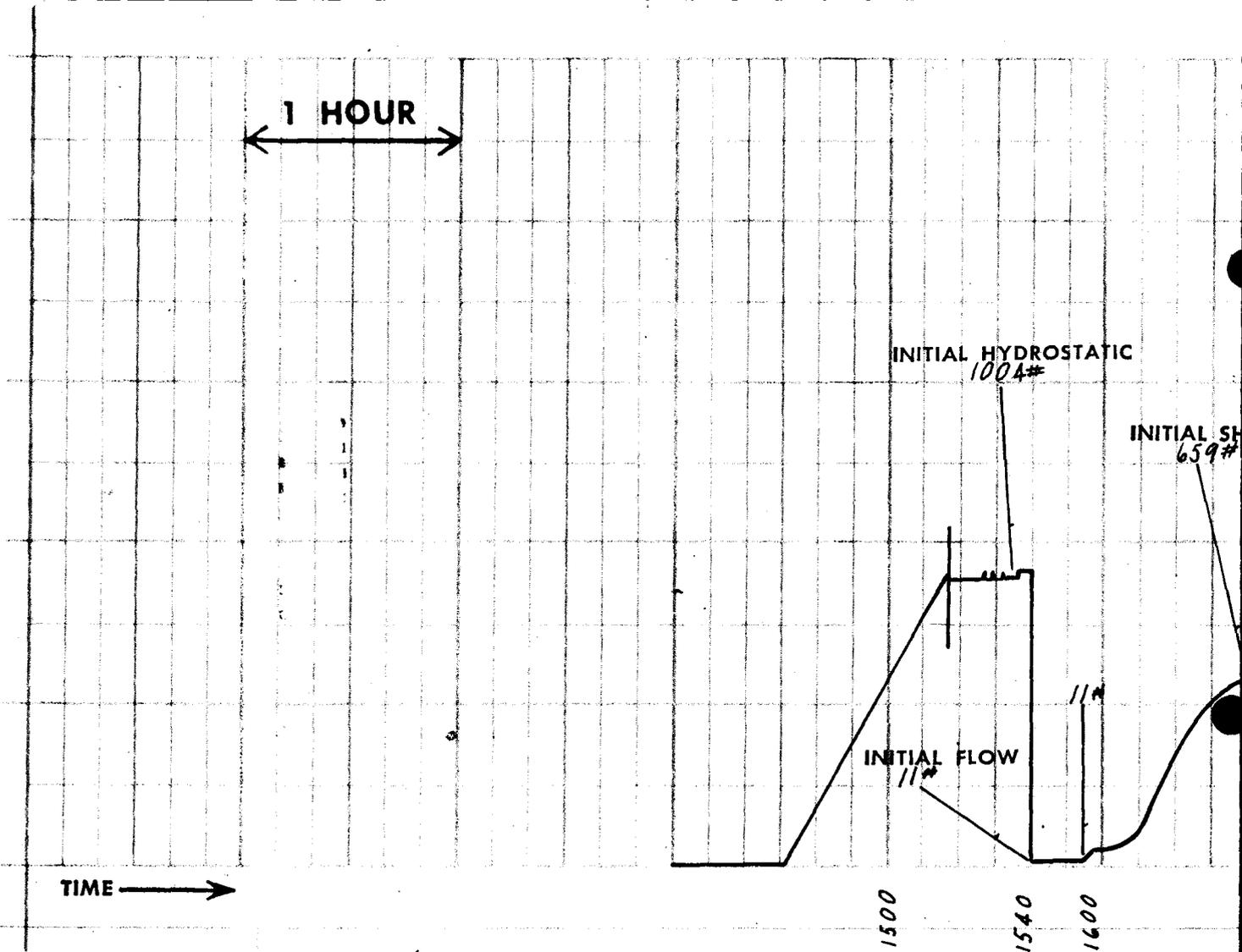
Field Report No. 03449C

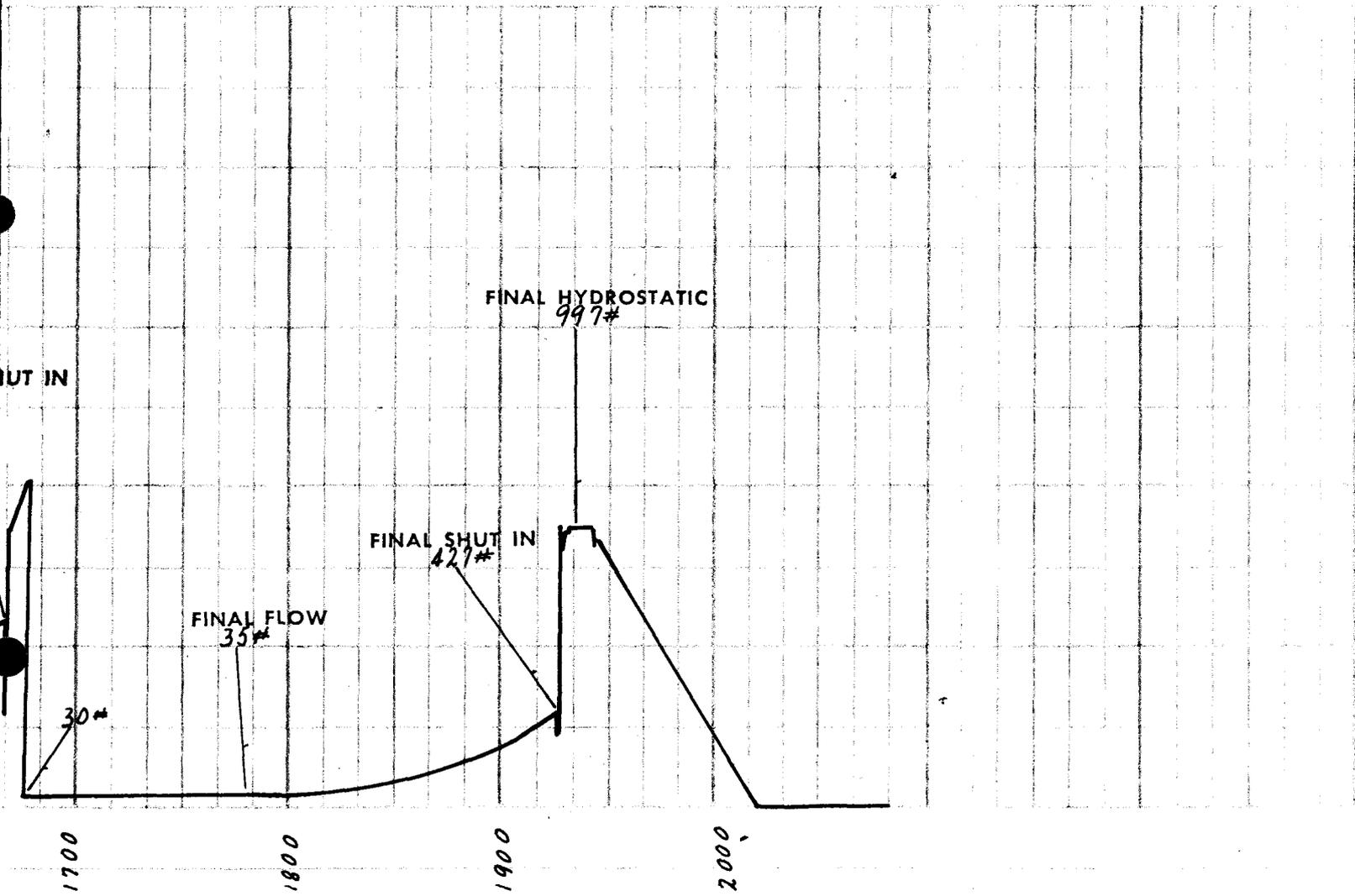
Instrument:
Number J-029

Capacity 2800 p.s.i.

Depth 2030 ft.

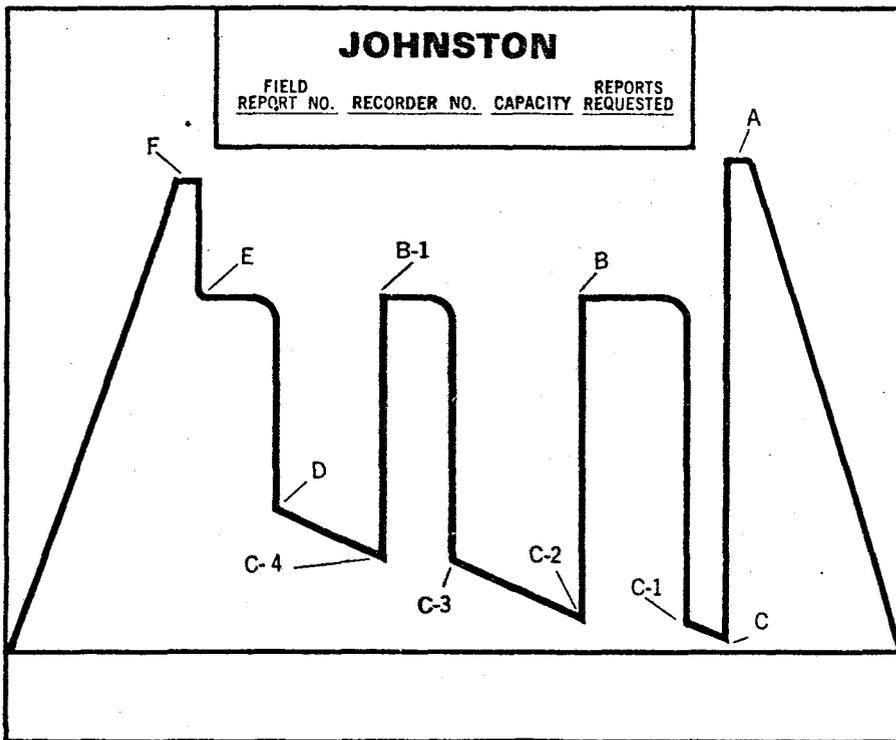
*a continuous tracing of the original chart





1 HOUR

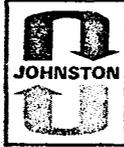
GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS

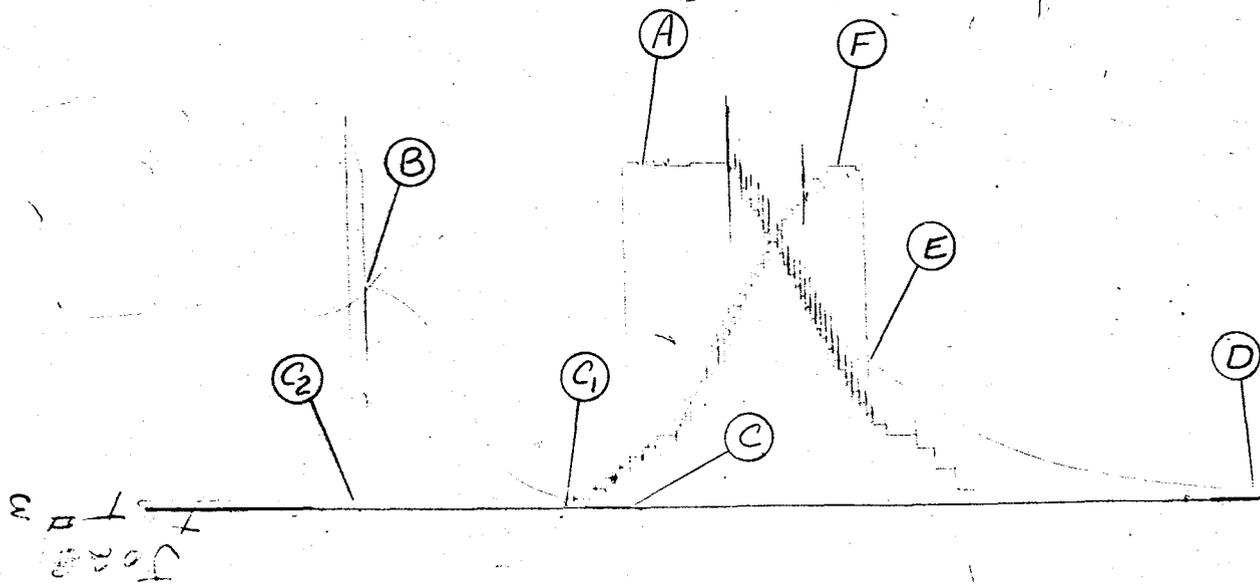


- A. Initial Hyd. Mud
- B. Initial Shut-in
- C. Initial Flow
- D. Final Flow
- E. Final Shut-in
- F. Final Hyd. Mud

The following points are either fluctuating pressures or points indicating other packer settings, (testing different zones).

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- F-1, F-2, F-3, etc. Final Hyd. Mud Pressures
- Z— Special pressure points such as pumping pressure recorded for formation breakdown.

| | | |
|--|------------------|-------------------|
|  | FIELD REPORT NO. | RECORDER NO. |
| | 03449 C | J-029 |
| | CAPACITY | REPORTS REQUESTED |
| | 2800# | 6- |



COMPANY _____ PLEASE OIL AND GAS COMPANY _____ WELL _____ PRICE #2 _____ TEST NO. 4 _____ COUNTY _____ CARBON _____ STATE UTAH

JOHNSTON

Schlumberger

technical
report



PRESSURE LOG*

Field Report No. 03450C

Instrument:
Number J-029

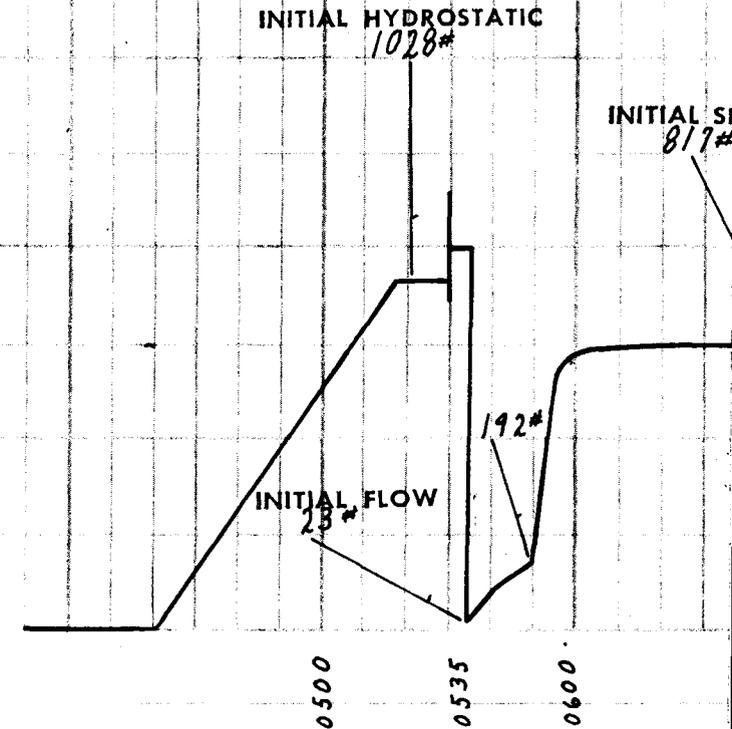
Capacity 2800 p.s.i.

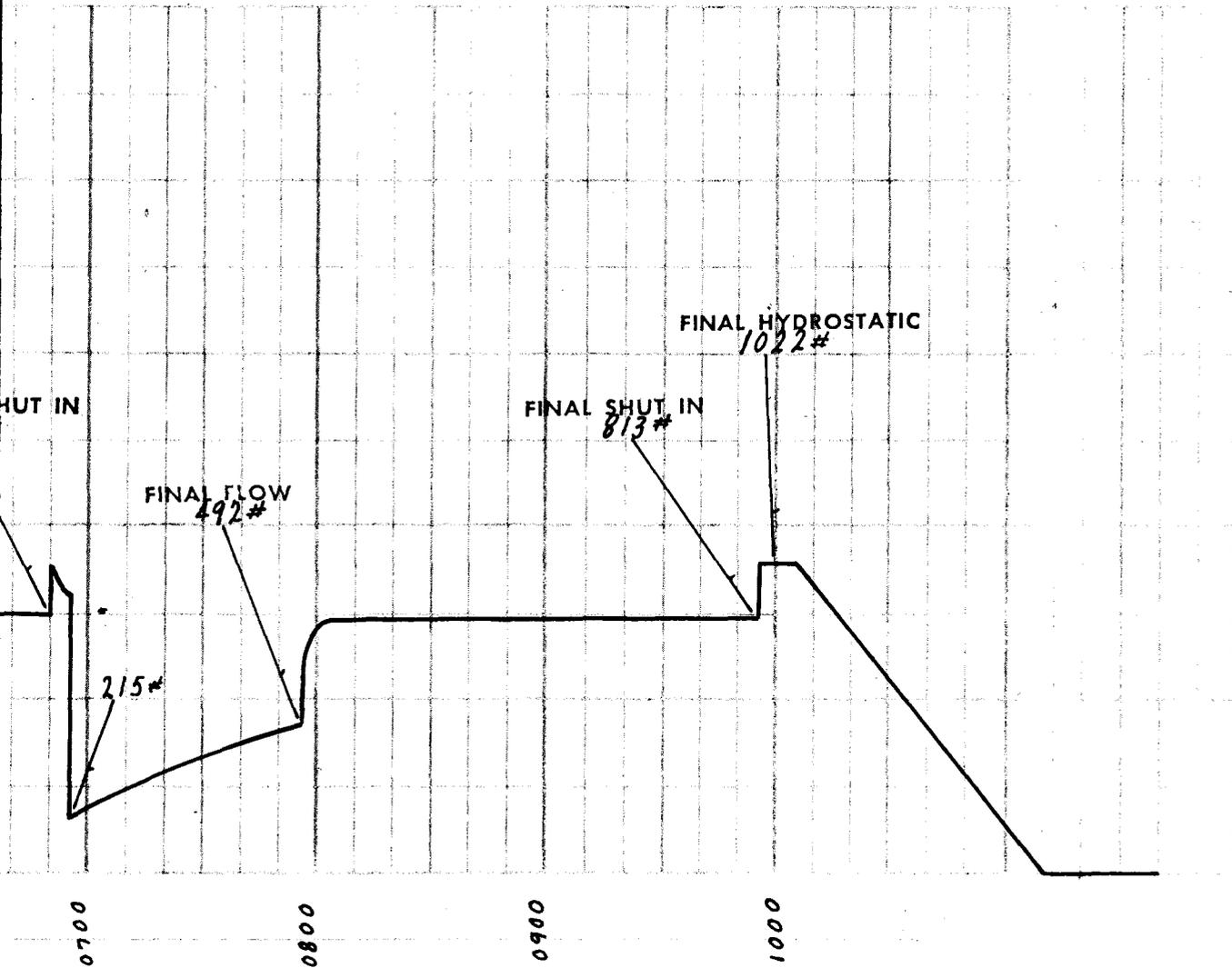
Depth 2031 ft.

*a continuous tracing of the original chart

1 HOUR

TIME →





1 HOUR



SURFACE INFORMATION

| Description (Rate of Flow) | Time | Pressure (P.S.I.G.) | Surface Choke |
|----------------------------|------|---------------------|---------------|
| Opened Tool | 0535 | - | - |
| STRONG BLOW IMMEDIATELY | | | |
| CLOSED FOR INITIAL SHUT-IN | 0550 | - | - |
| FINISHED SHUT-IN | 0650 | - | - |
| RE-OPENED TOOL | 0655 | - | - |
| STRONG BLOW INCREASING | | | |
| DURING BALANCE OF TEST. | | | |
| GAS TO SURFACE | 0745 | - | - |
| TOO SMALL TO MEASURE | | | |
| CLOSED FOR FINAL SHUT-IN | 0755 | - | - |
| PULLED PACKER LOOSE | 0955 | - | - |

| Cushion Type | Amount | Pressure | Bottom Choke Size |
|--------------|--------|----------|-------------------|
| | | | 3/4" |

MUD DATA

| | | | |
|------------------|---------------------|-------------|-------------|
| Mud Type | FRESH WATER AND GEL | Wt. | 9.4 |
| Viscosity | 45 | Water Loss | 8.4 C.C. |
| Resist: of Mud | .60 @ 60 °F; | of Filtrate | .85 @ 60 °F |
| Chloride Content | 500 | | PPM |

EQUIPMENT & HOLE DATA

| | |
|--------------------------|----------------------------------|
| Type Test | M. F. E. SELECTIVE ZONE STRADDLE |
| Formation Tested | FENNON / OPEN HOLE |
| Elevation | 5968 Ft. |
| Net Productive Interval | 30 Ft. |
| Estimated Porosity | 10 % |
| All Depths Measured From | KELLY BUSHING |
| Total Depth | 4620 Ft. |
| Main Hole/Casing Size | - |
| Rat Hole/Liner Size | - |
| Drill Collar Length | 299' I.D. 2.5" |
| Drill Pipe Length | 1739' I.D. 2.764" |
| Packer Depth(s) | 2044, 2050, 2201 Ft. |

MULTI-FLOW EVALUATOR FLUID SAMPLE DATA

| | |
|-----------------------|-------------------------|
| Sampler Pressure | 400 P.S.I.G. at Surface |
| Recovery: Cu. Ft. Gas | .63 |
| cc. Oil | - |
| cc. Water | 2090 |
| cc. Mud | - |
| Tot. Liquid cc. | 2090 |
| Gravity | - °API @ - °F. |
| Gas/Oil Ratio | - cu. ft./bbl. |

RESISTIVITY

CHLORIDE CONTENT

| | | |
|-------------------------|--------------|----------|
| Recovery Water | .30 @ 65 °F. | 5250 ppm |
| Recovery Mud | - @ - °F. | |
| Recovery Mud Filtrate | - @ - °F. | - ppm |
| Mud Pit Sample | .60 @ 60 °F. | |
| Mud Pit Sample Filtrate | .85 @ 60 °F. | 500 ppm |

| RECOVERY DESCRIPTION | FEET | BARRELS | % OIL | % WATER | % OTHERS | API GRAVITY | RESISTIVITY | CHL. PPM |
|------------------------|------|---------|-------|---------|----------|-------------|--------------|----------|
| SLIGHTLY WATER CUT MUD | 186 | 1.38 | | | | @ °F. | .65 @ 60 °F. | 800 |
| HEAVILY GAS CUT WATER | 1256 | 8.99 | | | | @ °F. | .38 @ 60 °F. | 5000 |
| | | | | | | @ °F. | @ °F. | |
| | | | | | | @ °F. | @ °F. | |
| | | | | | | @ °F. | @ °F. | |
| | | | | | | @ °F. | @ °F. | |
| | | | | | | @ °F. | @ °F. | |

Remarks: _____

Address BOX 548; GRAND JUNCTION, COLORADO 81501

Company PEASE OIL AND GAS COMPANY Field WILD CAT

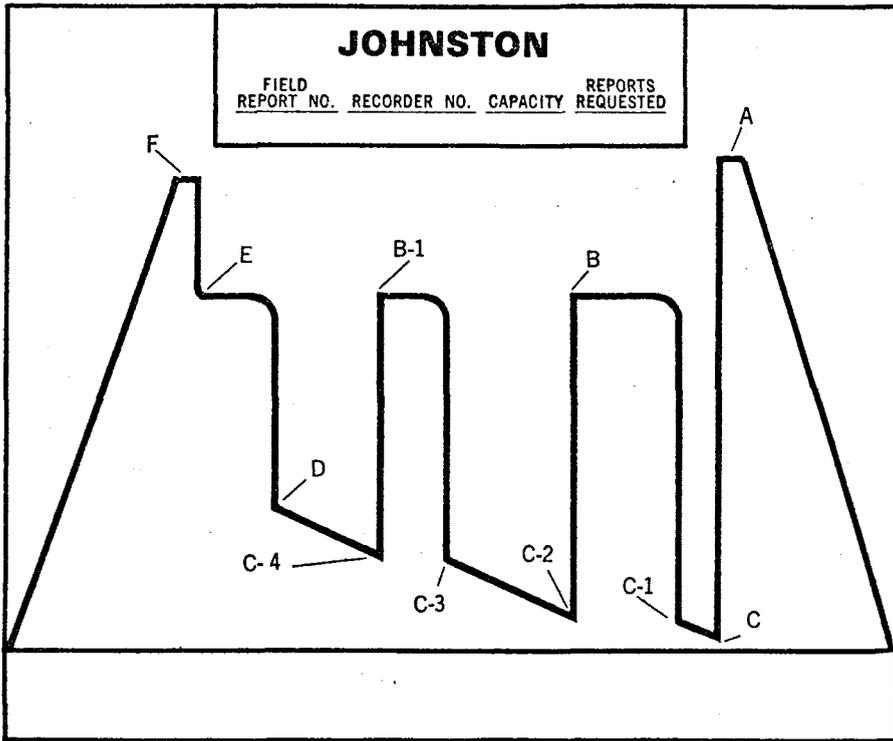
Well PRICE #2 Location SE-SW-SEC.3-14s-10E

Test Interval 2050' TO 2201' Test # 4 Date 3-11-74

County CARBON State UTAH Field Report No. 03450 C

Technician GUFFEY (VERNAL) Test Approved By MR. W. DON QUIGLEY No. Reports Requested 6 (5x's)

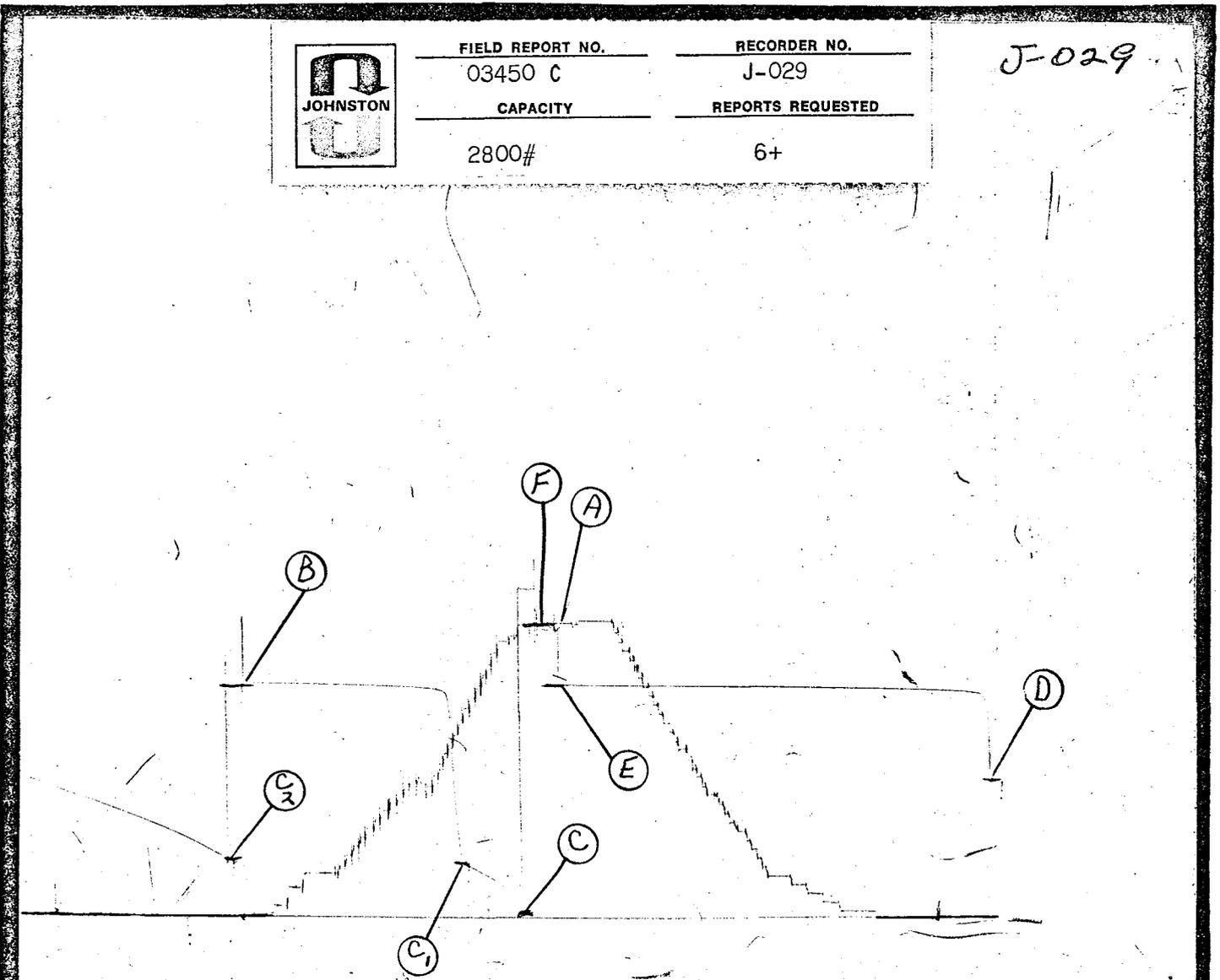
GUIDE TO IDENTIFICATION OF DRILL STEM TEST PRESSURE CHARTS



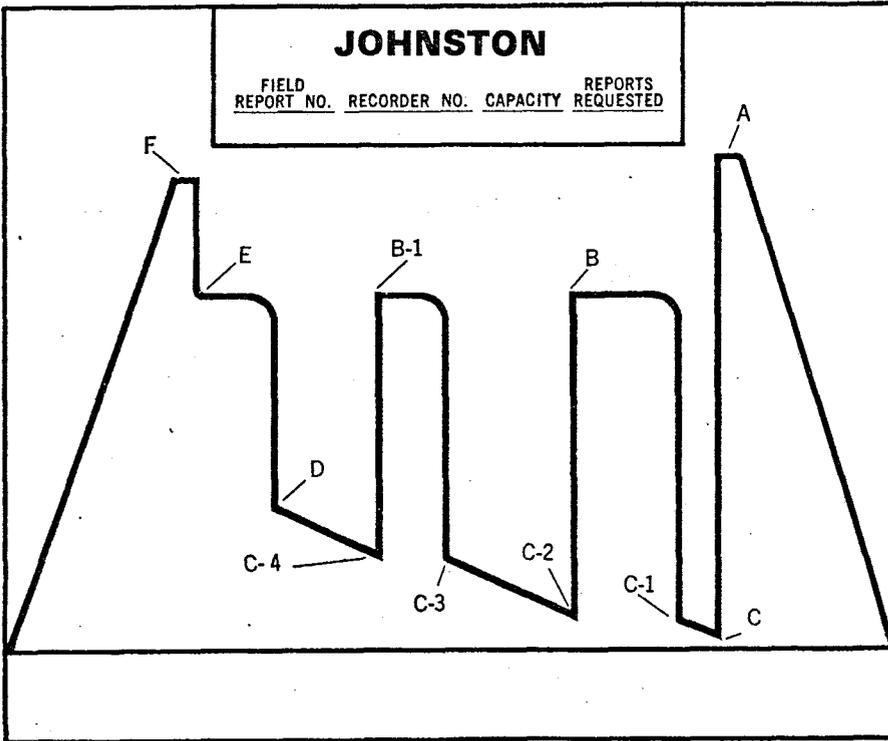
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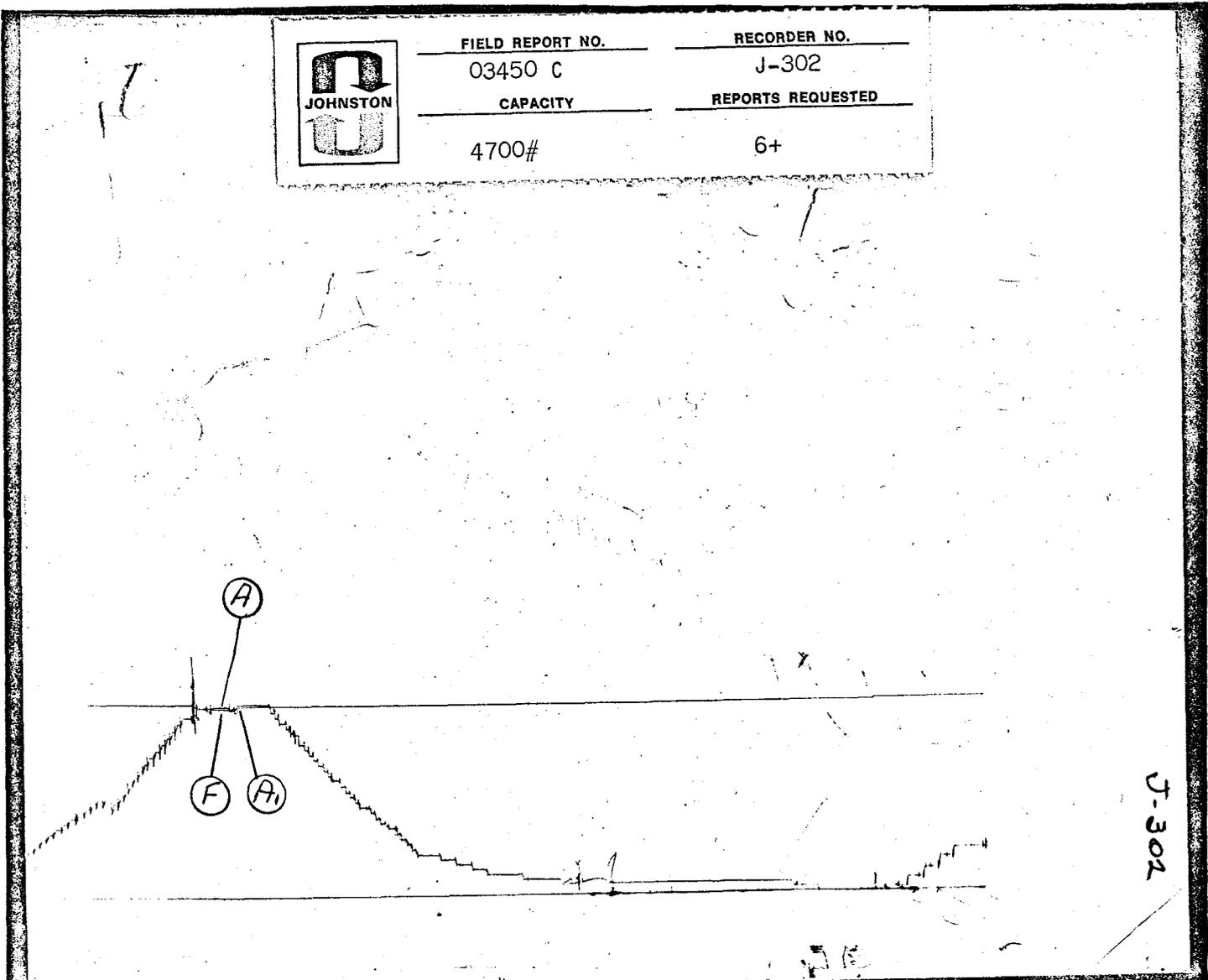
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| | | |
|--|------------------|-------------------|
|  | FIELD REPORT NO. | RECORDER NO. |
| | 03450 C | J-302 |
| | CAPACITY | REPORTS REQUESTED |
| 4700# | 6+ | |

J-302