1686

Form 2
Original—Permit

NEVADA OIL AND GAS CONSERVATION COMMISSION
Box C, University Station
Reno, Nevada

RECEIVED
NOV
NEVADA BUREAU OF MINES

RECEIVED
NOV 1 - 1977
NEVADA BUREAU OF MINES

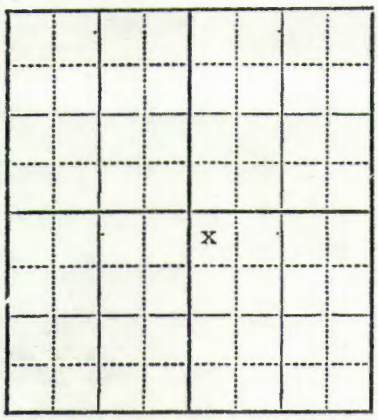
APPLICATION FOR PERMIT TO DRILL

(Applications must be accompanied by $50 permit fee.)

Company or Operator Shell Oil Company

Send permit to:
Street or P. O. Box 1700 Broadway City Denver State Colorado 80290

Lease name Federal well number 1 in



Sec. 30, T. 38N, R. 61E M.D.B.M.

Pool Wildcat, County Elko

The well is 2000 feet from (N) (S) line and 2600 feet from (E) (W) line of the section. (Give location from section line, cross out wrong directions.)

If patented land, fee owner is

Address

If government land, lease serial number is 13263

Address 309 Federal Bldg., Bakersfield, California

Lessee is U. S. Government

Address 309 Federal Bldg., Bakersfield, California

Section 30

Locate well correctly.

It is proposed to drill the well to 11700 foot depth using (cable tool) (rotary) rig. The elevation is 5503 feet above sea level.

If this is a wildcat well, attach plat by licensed surveyor showing location.

The status of a bond for this well in conformance with Rule 103 of the Commission is: Nationwide Bond 1055990

If bond posted with U. S. Government, what is name of surety company?

Bond number?

I certify that I have personal knowledge of the facts above stated and that they are true, correct, and complete.

Signed R. T. Plantz

Position Division Operations Engineer

Date August 30, 19 77

Permit number 220
API number 27-007-05211
Approval date October 14, 1977

By William J. Newman
William J. Newman
Acting Administrator

(Applicants requiring more than one copy of permit for well may submit additional copies as needed for approval.)

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.: 13263

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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 [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME:

2. NAME OF OPERATOR: Shell Oil Company

8. FARM OR LEASE NAME: Mary's River Federal

3. ADDRESS OF OPERATOR: 1700 Broadway, Denver, Colorado 80290

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: 2600' FEL & 2000' FSL Section 30

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: NW4 SE4 Section 30-T38N-R61E

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5503 GR

12. COUNTY OR PARISH: Elko

13. STATE: Nevada

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)			
(Other) Sidetrack Hole			[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.) *

Verbally discussed 3/31/78 - Mr. John Wagner & Mr. Tom Brown

Csg: 20" @ 27'
13-3/8" @ 669'
9-5/8" @ 2806'
TD 12,125
Unable to recover 3285' fish
Top of fish 8840'
Set cement plug - base @ 8840'
Kickoff point to be approx 8500'
New TD est 9800'

GEOLOGICAL SURVEY
RECEIVED
APR 07 1978
BAKERSFIELD

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

SIGNED L. Plauty TITLE Div. Opers. Engr. DATE 4/4/78

(This space for Federal or State office use)

APPROVED BY J. P. Wagner TITLE District Engineer DATE April 7, 1978

CONDITIONS OF APPROVAL, IF ANY:

SEE ATTACHED CONDITIONS AND REQUIREMENTS

cc: DIvision of Water Resources
Carson City, NV

*See Instructions on Reverse Side

SHELL OIL CO.
RM-62 (Rev. 8-72)

CASING AND CEMENTING

Field Mary's River Well Federal #1

Job: 9-5/8 " O.D. Casing/Liner. Ran to 2805 feet (KB) on 12/13/ , 1977

Jts.	Wt.	Grade	Thread	New	Feet	From	To
						KB CHF	
					CHF 14.00		
36	36	K-55	ST&C	New	1462.29		1476.29
Halliburton DV pkr tool					4.00		1480.29
29	36	K-55	ST&C	New	1198.24		2678.53
1	36	K-55	ST&C	New	40.25		2718.78
1	36	K-55	ST&C	New	44.27		2763.05
1	36	K-55	ST&C	New	41.50		2804.55
Regular Halliburton Guide Shoe					1.10		2805.65

Casing Hardware:

Float shoe and collar type Reg Halliburton GS w/2 inserts & plug catcher

Centralizer type and product number Halliburton latch-on

Centralizers installed on the following joints 10' above shoe, one each jt to 2436', one top & btm of DV tool.

Other equipment (liner hanger, D.V. collar, etc.) Halliburton pkr set DV tool w/baskets below same

Cement Volume:

Caliper type - . Caliper volume 50% excess ft^3 + excess over caliper 234.9 ft^3 + float collar to shoe volume 55.1 ft^3 + liner lap - ft^3 + cement above liner - ft^3 = 1474 ft^3 (Total Volume).

Cement:

Preflush–Water 20 bbls, other - Volume - bbls

First stage, type and additives Class "G", .2% HR4, 1/4#/sx flocele, .5% CFR2 . Weight 15.8 lbs/gal, yield 1.15 ft^3/sk, volume 645 sx. Pumpability 4 hours at 170 °F.

Second stage, type and additives Halliburton lite w/1/4#/sx flocele . Weight 12.4 lbs/gal, yield 1.97 ft^3/sk, volume 360 sx. Pumpability 4 hours at 170 °F.

Cementing Procedure:

Rotate/reciprocate Reciprocated 1st stage before pkr was set

Displacement rate 8 B/M

Percent returns during job 100%

Bumped plug at 4:00 ~~AM~~/PM with 2000 psi. Bled back 2-1/2 bbls. Hung csg with 160,000 lbs on slips.

Remarks:

Circ'd out approx 50 bbls cmt after 1st stage was cmt'd & bomb drop'd. Had cmt returns to sfc on 2nd stage. Placed plug catcher on top of 3rd jt from btm. Top of plug back @ 2678', top DV Tool @ 1476 & Shoe @ 2805.

Drilling Foreman C. Grady

Date 12/15/77

NEW [ ] WORK [ ] DEEP- [ ] PLUG [ ] DIFF. [ ] D&A S. FARM OR LEASE NAME

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.: 13263

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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 [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME:

2. NAME OF OPERATOR: Shell Oil Company

8. FARM OR LEASE NAME: Mary's River Federal

3. ADDRESS OF OPERATOR: 1700 Broadway, Denver, Colorado 80290

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4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 2600' FEL & 2000' FSL Section 30

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: NW/4 SE/4 Section 30-T38N-R61E

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5503 GL

12. COUNTY OR PARISH: Elko

13. STATE: Nevada

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.) *

Verbal approval to abandon obtained 5/6/78

Status:
TD 9800 - sidetrack
13-3/8" csg @ 669
9-5/8" csg @ 2806
Plugged well as follows (mud 9.8):
Plug #1 3172-3402 (475 cu ft Class G)
WOC 8 hrs
Plug #2 across base of surface (100 cu ft Class G). Bottom of plug 2876.

INSTALLED ABANDONMENT MARKER - P&A COMPLETE 5/8/78

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

SIGNED R. Plaudy TITLE Div. Opers. Engr. DATE 5/22/78

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

NEW WELL PLUGGED AND ABANDONED — MARY'S RIVER

SHELL OIL COMPANY | LEASE FEDERAL | WELL NO. #1
DIVISION WESTERN | ELEV 5503 GL
FROM: 11/22/77 - 5/8/78 | COUNTY ELKO | STATE NEVADA

NEVADA
MARY'S RIVER

Shell-Federal #1
(WC)
11,700' Elko Test
EL 5503' GR

"FR" MI. Located 2000' FSL & 2600' FEL, NW/4 SE/4 Section 30-T38N-R61E, Elko County, Nevada. Shell's Working Interest: 100%.

NOV 22 1977

Shell-Federal #1
(WC)
11,700' Elko Test
EL 5503' GR

MI. Estimated spud date November 26, 1977.

NOV 23 1977

Shell-Federal #1
(WC)
11,700' Elko Test
EL 5503' GR

MI&RU.

NOV 28 1977

Shell-Federal #1
(WC)
11,700' Elko Test
EL 5503' GR

MI&RU.

NOV 29 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR

MI&RU.

NOV 30 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR

MI&RU.

DEC 01 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR

MI&RU.

DEC 02 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR

12/3: MI&RU.
12/4: 360/77/1/360. Drlg. Spudded 9:30 a.m. 12/3/77. Drld to 77' & lost full returns. Drld w/no returns.
Dev: 1/2 deg @ 309'.
Mud: (.442) 8.5 x 36
12/5: 669/77/2/309. Run'g 13-3/8" csg. Dev: 3/4 deg @ 654'.
Mud: Water

DEC 05 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 700'

700 (corr depth)/77/3/0. NU. Ran 16 jts 13-3/8" 48#, K55, ST&C csg dressed w/4 cents, Howco Plain GS & Howco FC @ 659'. Displ'd to float; no returns. Cmt'd w/100 sx top job; no returns. CIP 11:45.
Mud: Water

DEC 06 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'

1300 (corr'd depth)/77/4/640. Drlg. Dev: 1-1/4 deg @ 1220'. (Note: depth @ which csg set S/B 669')
Mud: (.624) 12 x 32

DEC 07 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'

2132/77/5/832. Trip'g. Dev: 1-1/4 deg @ 1220' & 1-1/2 deg @ 1880'.
Mud: (.457) 8.8 x 33 x 22.8

DEC 08 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'

2815/77/6/683. Log'g. Ran DIL/GR/SD. Dev: 3 deg @ 2472' & 3-1/2 deg @ 2815'.
Mud: (.483) 9.3 x 33 x 18.6

DEC 09 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'

12/12: 2815/77/9/0. Completing DST #1. Details of test & repts for 12/10 & 12/11 will be rept'd later.

DEC 12 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'

12/10: 2815/77/7/0. Prep to test. Ran FDC/CNL/GR/Cal, BHC Sonic/GR/Cal, Proximity Log & 110 SWC (rec'd 81, misfired 5, lost 14).
Mud: (.483) 9.3 x 33 x 18.6
12/11: 2815/77/8/0. WO tester. RIH & circ'd off btm.
Mud: (.483) 9.3 x 34 x 15.6
12/12: 2815/77/9/0. Completing DST #1. DST #1 - Humbolt 2165-2211: rec'd 1500' wtr & 1700 cc wtr in smpl chamber.
Mud: (.483) 9.3 x 34 x 15.6
12/13: 2815/77/10/0. Run'g 9-5/8" csg. RIH & circ & cond mud for csg. Drop'd Eastman multishot survey: 2791'/ 3-1/4 deg/S70E.

DEC 13 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

2815/77/11/0. NU BOP's. Ran 69 jts 9-5/8", 36#, K55, ST&C csg. Shoe @ 2806, FC @ 2679 & DV collar @ 1503. Ran 2 self-fill inserts & plug catcher on top of 3rd jt. Cmt'd 1st stage w/645 sx Class "G" w/.2% HR4 & 1/4#/sx flocele & .5% CFR2. CIP 1:30 p.m. Drop'd bomb & set DV pkr & circ'd hole clean thru DV tool. Circ'd out approx 50 bbls cmt. Cmt'd 2nd stage w/360 sx Hal lite w/1/4#/sx flocele. Bumped plug w/2000#. Plug in place 4 p.m. 12/13. Had full returns during both jobs.
Mud: (.488) 9.2 x 33

DEC 14 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

2815/77/12/0. WO spool. Tried to locate chk spool; BOP stack on rig is 8" too long. Removed 10" 3000# chk spool from below preventers to replace w/new spool.
Mud: (.488) 9.2 x 33

DEC 15 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

2815/77/13/0. NU BOP's. WO 10" 3000# chk spool. Set hyd on stack & NU same. PU spool & started NU on chk spool @ 8 p.m. NU BOP's; installing ring valves on chk side of BOP.
Mud: (.478) 9.2 x 33 DEC 16 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

12/17: 2815/77/14/0. Repairing preventer. Tested rams, lines, chk manifold & all valves to 3000 psi & hyd to 1500 psi. Tried to retrieve test plug. Could not get hyd to open fully. Pulled rotary table to chk hyd.
Mud: (.478) 9.2 x 33
12/18: 2815/77/15/0. Drlg cmt. Chng'd rubber on preventer. Found hard mud & cmt on backside of rubber. Installed top prt of preventer & retested to 1500 psi. DO DV collar @ 1474'. RIH to top of FC @ 2678.
Mud: (.483) 9.3 x 35
12/19: 2900/77/16/85. SD due to boiler failure. Drld cmt & tested csg @ 2790' to 2500 psi 15 mins. DO shoe @ 2806 & circ'd btms up @ 2815. Drld 30' to 2845; no show. Drld to 2900'; gas show from 2845-2900. Circ'd btms up. Had 10-180 units gas. Circ'd & WO test tools. POOH; boiler down. Dev: 2-1/2 deg @ 2900'. DEC 19 1977
Mud: (.473) 9.1 x 36 x 10.6

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

2900/77/17/0. SD for boiler repairs.
Mud: (.473) 9.1 x 32 x 15.6
DEC 20 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

2900/77/18/0. SD for boiler repairs.
Mud: (.473) 9.1 x 34 x 15.8
DEC 21 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

2900/77/19/0. Thaw'g rotary hose. RIH w/DST #2; Humbolt interval 2845-2900. Set pkr @ 2845'. IF 5 mins, ISI 45 mins, FF 60 mins, FSI 120 mins. Rec'd 190' (24 bbls) wtr. Pulled tool & rev circ'd. RIH to shoe w/core bbl.
Mud: (.473) 9.1 x 36 x 15.2 DEC 22 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

12/23: 3170/77/20/270. Drlg. Pulled core.
Mud: (.478) 9.2 x 33 x 14.6.
12/24: 3370/77/21/200. Prep to run DST #3.
12/25: 3370/77/22/0. Cleaning Out. DST #3. Packer Set @ 3225'. Rec 30.26 bbls H_2O. Reversed out. Reamed & washed, 55' fill.
Mud: (.478) 9.2 x 35 x 10.6.
12/26: 3500/77/23/130. Building mud. Reamed to bottom. Cored 3370 to 3415. Dev: 4-1/2 deg @ 3390'.
Mud: (.473) 9.1 x 35 x 9.6.
12/27: 3594/77/24/94. Testing. DST #4 straddle test 3515 & 3545.
Mud: (.478) 9.2 x 35 x 42.5. DEC 27 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

3594/77/25/0. SD for repairs. DST #4 - straddle tested interval Indian Wells 3515-45. Times: IF 10 - ISI 60 - FF 90 - FSI 180. Gas to surface in 16 min. FF 13 psi after 21 min 5 psi, held. Avg. flow rate 31.5 MCF/day. Rec 2000 cc gas cut mud. Two gas cylinders taken 5 min apart during FF. IHP 1705, FHP 1684, IFP 74-74, FFP 95-137, ISIP 1056, FSIP 1338.
Mud: (.478) 9.2 x 35 x 12.5

DEC 2 6 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

3594/77/26/0. Repairing rig.
Mud: (.478) 9.2 x 35 x 8.4.

DEC 2 9 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

4300/77/27/706. Drlg.
Mud: (.488) 9.4 x 38 x 8.

DEC 3 0 1977

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

JAN 3 1978

12/31: 4855/77/28/555. Coring. Dev: 4-1/2 deg @ 4840'.
Mud: (.483) 9.3 x 36 x 8.8.
1/1: 4919/77/29/64. Pulling Core #5. Cored 4841 to 4919'. 100% recovery.
Mud: (.488) 9.4 x 36 x 8.2.
1/2: 5520/77/30/601. Drlg.
Mud: (.488) 9.4 x 34 x 9.6.
1/3: 6244/77/31/724. Circ - Prep to Core
Mud: (.473) 9.1 x 34 x 9.3.

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

6244.5/77/32/.5. RIH w/bit. Cored 2.5 hrs & rec'd 6".
Dev: 1-3/4 deg @ 6244'.
Mud: (.473) 9.1 x 34 x 8.6

JAN 0 4 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

6635/77/33/390.5. Drlg.
Mud: (.488) 9.4 x 35 x 8

JAN 0 5 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

7230/77/34/595. Drlg.
Mud: (.488) 9.4 x 37 x 8.2

JAN 0 6 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

1/7: 7251 (corr'd depth)/77/35/27. POOH. Circ'd btms up. POOH to core @ 7224. PU core bbl & bit & RIH. Drop'd ball & cored. Dev: 2 deg @ 7224'.
Mud: (.488) 9.4 x 36 x 8.8
1/8: 7265/77/36/14. POOH w/Core #8. POOH w/Core #7; rec'd 27'. RIH w/Core #8; bbl jam'd. POOH w/Core #8 @ 7265'.
Mud: (.483) 9.3 x 35 x 8.6
1/9: 7271/77/37/6. WO welder. POOH w/Core #8; rec'd 13'. RIH w/Core #9. Washed to btm & drop'd ball. Cored 6' & bbl jam'd. POOH; rec'd 6'. PU test tools & DC's & RIH. Made up Johnston hd on top sgl; 2" collar backed off thrd.
Mud: (.488) 9.4 x 35 x 8.4

JAN 09 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

7290/77/38/19. Drlg. Opened test #5 @ 7:15 a.m. for 10 mins; very light blw. SI 60 mins. FF 105 mins. Tried to close tool & pipe stuck; worked loose. Did not get FSI. Pulled to 4300 & rev circ'd. Top smpl was mud. POOH & LD test tools. RIH w/bit & BHA. Note: Btm pkr set @ 7215'.
Mud: (.483) 9.3 x 34 x 7.6

JAN 10 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

7365/77/39/75. Test'g. Drld to 7365 & circ'd for DST. RIH w/Test #6 @ 7365. Btm pkr set @ 7206. Opened tool @ 5 a.m. Opened tool - 10-min flw (possibly 20-min flw). SI 40 mins. Dev: 1-1/4 deg @ 7365'.
Mud: (.483) 9.3 x 41 x 7.2

JAN 11 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

7426/77/40/61. Drlg. Fin'd SI 20 mins. FF 90 mins, FSI 80. Tried to pull tool loose; pipe stuck. Worked on stuck pipe; came free. Pulled to 3540 & rev'd out. Had 9.4 mud to sfc; est 230' rise (3 bbls). POOH & LD test tools. RIH w/bit & BHA. Washed & cleaned 92' to btm & circ'd.
Mud: (.478) 9.2 x 35 x 8

JAN 12 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

7591/77/41/165. Drlg.
Mud: (.473) 9.1 x 37 x 8.2

JAN 13 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

1/14: 7800/77/42/209. Drlg.
Mud: (.473) 9.2 x 38 x 5.6.
1/15: 7916/77/43/116. Drlg.
Mud: (.478) 9.2 x 36 x 5.2
1/16: 8015/77/44/99. Logging. POOH. RU & Run Dual Induct. Log. Dev: 3-1/4 deg @ 8015'.
Mud: (.478) 9.2 x 36 x 5.6.

JAN 16 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8015/77/45/0. Running Sidewall Core Gun.
24 Hrs logging. Ran FDC C&L Sonic & Dip Meter.
Attempted 34 side wall cores. Rec 23, lost 2 in hole.
Mud: (.478) 9.2 x 38 x 5.6. JAN 17 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8017/77/46/2. RIH w/core bbl. Attempted 18 side wall cores & rec'd 17. RD log'rs & tested BOP's.
Mud: (.473) 9.1 x 36 x 6 JAN 18 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8065 (corr'd depth)/77/47/31. Drlg. Core #10 - 8034-8048; cut 14' & rec'd 9'. RIH w/Bit #10 & drld from 8048-8065. (Made 17' correction - pipe meas from 8015-8032.)
Mud: (.478) 9.2 x 37 x 5.6
JAN 19 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8105/77/48/40. WO tester. Dev: 3-1/2 deg @ 8105'.
Mud: (.473) 9.1 x 40 x 4.6
JAN 20 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

1/21: 8105/77/49/0. Test'g.
Mud: (.473) 9.1 x 38 x 4.4
1/22: 8173/77/50/68. Drlg.
Mud: (.473) 9.1 x 39 x 4.8
1/23: 8373/77/51/200. Drlg.
Mud: (.478) 9.2 x 44 x 4.9 JAN 23 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8491/77/52/118. Drlg.
Mud: (.478) 9.2 x 38 x 4.8
JAN 24 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8680/77/53/189. Drlg.
Mud: (.483) 9.3 x 37 x 4.4
JAN 25 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8815/77/54/135. Drlg. Dev: 5-1/2 deg @ 8800'.
Mud: (.478) 9.2 x 35 x 4.8
JAN 26 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9015/77/55/200. Drlg.
Mud: (.473) 9.1 x 36 x 5.2

JAN 27 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

1/28: 9035/77/56/20. POOH. Made up core bbl & ran to 5933' & stop'd. Reamed to 5960, ran to 6410 & reamed to 6470. Hit another tight spt @ 8177, then ran to btm.
Dev: 5-1/4 deg @ 9035'.
Mud: (.473) 9.1 x 36 x 4.9
1/29: 9035/77/57/0. Coring. RIH to 9035', circ'd & POOH w/bit. PU core bbl w/hyd jars on top core bbl & RIH to 8985'; reamed to 9035. Stuck core bbl several times while reaming.
Mud: (.483) 9.3 x 40 x 5.6
1/30: 9044/77/58/9. Cond hole to test. Reamed 8945-9035; tight from 9005-9035. Cored from 9035-9044 & rec'd 7'. POOH & found btm guide on bbl broken off & core hd worn off smooth into wtr courses. RIH; no tight spts.
Mud: (.483) 9.3 x 39 x 5.2 JAN 3 0 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9054/77/59/10. Test'g. Circ & cond hole for DST #8. RIH & opened tool @ 5:28 a.m. Pkr set @ 8953'. Opened tool 10 mins & closed tool.
Mud: (.483) 9.3 x 37 x 4.8 JAN 3 1 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9054/77/60/0. Circ'g for DST #9. Closed DST #8 60 mins. Opened tool for initial flw; pkrs failed. Pmp'd 43 bbls in hole before tool SI. Pulled 16 stds to fluid. Rev'd out smpl; rec'd drlg mud. POOH w/test'r & found pkr rubbers damaged. LD same, test tools & 1 bad DC. PU jars, RIH & reamed 130'. Circ & cond hole for DST #9.
Mud: (.478) 9.2 x 37 x 4.6 FEB 0 1 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9054/77/61/0. Prep to pull DST #9. Circ'd for test & magnafluxed BHA. LD 2 bad DC's & 1 stab. PU test tools & RIH. Set pkrs & opened tool @ 5:45 a.m.; pkrs failed. Displ'd hole w/approx 41 bbls mud. Closed tool & prep to POOH.
Mud: (.478) 9.2 x 38 x 4.6 FEB 0 2 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9115/77/62/61. Drlg. Pulled 26 stds to fluid. Rev'd out smpl & rec'd drlg fluid. POOH & LD test tools. PU BHA & CO 93' to btm.
Mud: (.478) 9.2 x 36 x 5.2 FEB 0 3 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

2/4: 9304/77/63/189. Drlg.
Mud: (.478) 9.2 x 35 x 4.8
2/5: 9433/77/64/129. Drlg. Had gas show for 10 mins @ 9410' (450 units in show).
Mud: (.483) 9.3 x 40 x 5.2
2/6: 9450/77/65/17. Test'g. RIH for DST #10. Set pkr @ 9311'. Opened tool @ 6:15 a.m. for 10 mins. Had very good blow. Closed tool for 60-min SI.
Mud: (.483) 9.3 x 41 x 5 FEB 0 6 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9450/77/66/0. GIH. Closed tool for 60-min SI. Opened tool for FF - 135 mins; very good blow. Closed for FSI - 135 mins. Pulled 25 stds & drop'd 2 bars; could not open rev tool. Pmp'd 71 bbls mud to open tool. Rev circ'd @ 7135'. Had 1366' fluid rise & rec'd gas cut mud. Lost mud to frm while rev'g. Pulled 2 stds & circ'd & blt mud vol. Pulled pipe to shoe & circ'd. POOH & LD test tools. PU BHA & started in hole. FEB 07 1978
Mud: (.483) 9.3 x 39 x 5.6

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9450/77/67/0. Test'g BOP's. RIH to shoe & cut drl line. Ream hole from 9007-9224. Reamed hard from 9224-9425. Circ'd gas cut mud & fin'd ream'g to 9450'. Circ'd btms up. POOH for Core #12. Dev: 7-1/2 deg @ 9450'.
Mud: (.483) 9.3 x 39 x 5.2 FEB 08 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9462/77/68/12. GIH w/bit. Tested BOP's, hyd, pipe & blind rams, kill line, chk manifold & all valves. Made up core bbl & RIH. Circ'd, drop'd ball & cored from 9450-9462; bbl jam'd. Strap'd out of hole (ok). Rec'd 12' of core. FEB 09 1978
Mud: (.483) 9.3 x 44 x 5

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9606/77/69/144. Drlg. Reamed from 9368-9462.
Mud: (.483) 9.3 x 38 x 4.8 FEB 10 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

2/11: 9750/77/70/144. Drlg.
Mud: (.483) 9.3 x 41 x 4.6
2/12: 9820/77/71/70. Drlg. Dev: 6-1/2 deg @ 9750'.
Mud: (.483) 9.3 x 44 x 5.2
2/13: 9875/77/72/55. Drlg. Drop'd multishot & pulled from 9775-7425. Circ'd & resurveyed from 9775-8835.
Survey: 9775'/17-3/4 deg/S59W.
Mud: (.483) 9.3 x 44 x 5.6 FEB 13 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9908/77/73/33. Reaming. Hit tight spt @ 9698'. Dev: 19 deg @ 9846' & 19 deg @ 9885'. FEB 14 1978
Mud: (.483) 9.3 x 46 x 5.2

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

10,025/77/74/117. Drlg.
Mud: (.483) 9.3 x 39 x 5.6
FEB 15 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

10,145/77/75/120. Drlg. Dev: 19 deg @ 10,025'.
Mud: (.483) 9.3 x 42 x 5.4
FEB 16 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

10,242/77/76/97. Drlg. Dev: 19 deg @ 10,157'.
Mud: (.483) 9.3 x 42 x 5.4

FEB 17 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

2/18: 10,304/77/77/62. Coring. Washed from 10,197-10,302. Dev: 21 deg @ 10,302'.
Mud: (.488) 9.4 x 40 x 5.6
2/19: 10,325/77/78/21. Drlg. Cored to 10,314 & bbl jam'd. Pulled core & RIH w/HWDP.
Mud: (.483) 9.3 x 39 x 5.4
2/20: 10,403/77/79/78. Drlg.
Mud: (.483) 9.3 x 39 x 5.6
2/21: 10,482/77/80/79. Circ'g btms up. Dev: 20 deg @ 10,415'.
Mud: (.488) 9.4 x 38 x 5.8

FEB 21 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

10,603/77/81/121. Drlg. Dev: 19 deg @ 10,513'.
Mud: (.494) 9.5 x 37 x 6

FEB 22 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

10,678/77/82/75. POOH. Dev: 17 deg @ 10,645'.
Mud: (.488) 9.4 x 34 x 6.4

FEB 23 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

10,681/98/83/3. Drlg & cond mud. POOH; lost cone off bit. Ran & reamed to 10,175; stuck pipe, but worked loose. Reamed to btm (475').
Mud: (.488) 9.4 x 38 x 5.8

FEB 24 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

2/25: 10,683 (corr'd depth)/98/84/0. Drlg on cone.
Mud: (.494) 9.5 x 38 x 5.8
2/26: 10,683/98/85/0. Coring. POOH w/empty junk sub. RIH w/magnet & junk sub & worked magnet; POOH. RIH.
Mud: (.494) 9.5 x 43 x 6.2
2/27: 10,702/98/86/19. Drlg. Fin'd coring; cut & rec'd 10'. Reamed from 10,633-693; stuck pipe & worked loose. Stuck core bbl & bit @ 10,690' also.
Mud: (.494) 9.5 x 37 x 5.8

FEB 27 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

10,788/98/87/86. Drlg.
Mud: (.488) 9.4 x 42 x 5.8

FEB 28 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

10,860/98/88/72. Drlg. Dev: 16 deg @ 10,793'.
Mud: (.483) 9.3 x 38 x 6

MAR 01 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

10,935/98/89/75. Drlg.
Mud: (.483) 9.3 x 37 x 5.8

MAR 0 2 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

10,962/98/90/27. GIH. Dev: 16 deg @ 10,942'.
Mud: (.483) 9.3 x 36 x 6.6

MAR 0 3 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

3/4: 11,062/98/91/100. Drlg.
Mud: (.488) 9.4 x 36 x 6.4
3/5: 11,175/98/92/113. Drlg.
Mud: (.483) 9.3 x 43 x 6
3/6: 11,305/98/93/130. Drlg.
Mud: (.483) 9.3 x 38 x 5.8

MAR 0 6 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

11,405/98/94/100. Drlg.
Mud: (.488) 9.4 x 38 x 5.8

MAR 0 7 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

11,520/98/95/115. Circ'g smpls off btm @ 11,520'.
Mud: (.488) 9.4 x 41 x 5.6

MAR 0 8 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

11,567/98/96/47. Pull'g BHA. Circ'd smpls off btm & unloaded 4-1/2" 16.6# DP.
Mud: (.488) 9.4 x 46 x 5.8

MAR 0 9 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

11,585/98/97/18. Drlg. PU 4-1/2" Grade # 16.6# DP (7421') & RIH strap'g pipe. Reamed tight spt @ 9940 & ran to 11,423. Reamed from 11,423-11,490 & stuck pipe @ 11,490. Worked pipe free to 11,423 & cond mud. Reamed from 11,423-11,567.
Mud: (.488) 9.4 x 41 x 6

MAR 1 0 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

3/11: 11,726/98/98/141. Drlg.
Mud: (.483) 9.3 x 41 x 5.6
3/12: 11,813/98/99/87. Drlg.
Mud: (.483) 9.3 x 39 x 5.2
3/13: 11,909/98/100/96. Drlg.
Mud: (.483) 9.3 x 38 x 4.8

MAR 1 3 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

11,917/98/101/8. Cut'g Core #15. Circ'd smpls off btm @ 11,912 & POOH. PU core bbl & TIH. Dev: 11 deg @ 11,913'.
Mud: (.488) 9.4 x 38 x 5.2

MAR 1 4 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

11,940/98/102/23. Drlg. Core #15 - 11,913-11,923; cut & rec'd 10'.
Mud: (.488) 9.4 x 36 x 5.6
MAR 15 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

12,013/98/103/73. Drlg.
Mud: (.488) 9.4 x 37 x 5.2
MAR 16 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

12,091/98/104/78. Drlg.
Mud: (.483) 9.3 x 39 x 6
MAR 17 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

3/18: 12,125 (corr'd depth)/98/105/44. POOH; table went out.
Mud: (.483) 9.3 x 39 x 6
3/19: 12,125/98/106/0. Down for rotary table.
Mud: (.483) 9.3 x 40 x 6
3/20: 12,125/98/107/0. GIH w/mill. All 3 cones off bit gone.
Mud: (.483) 9.3 x 42
MAR 20 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

12,125/98/108/0. GIH w/bit. Circ'd & reamed to btm. Milled 4-1/2 hrs. Dev: 9 deg @ 12,125'.
Mud: (.488) 9.4 x 42 x 5.6
MAR 21 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

12,125/98/109/0. Run'g magnet. Reamed 12,005-12,125 & ran on cones. POOH. Chng'd tools, PU jars & RIH.
Mud: (.483) 9.3 x 41 x 5.2
MAR 22 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

12,125/98/110/0. GIH w/overshot. Worked magnet. POOH & rec'd 1 piece of cone. Reamed 90' to btm. Ran on junk & twisted off leaving 2100'± in hole. POOH & made up 3 DC's & overshot. (Left in hole - bit, junk sub, bit sub, 1 DC, button reamer, 4 DC's, stab, 18 jts HWDP, xover sub & 4-1/2 DP.)
Mud: (.483) 9.3 x 42 x 5.2
MAR 23 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

3/24: 12,125/98/111/0. CO. Worked stuck pipe @ 5000'. Pipe unscrewed & drop'd to btm. Tag'd fish, PU new CO assy & CO to 5400'.
Mud: (.483) 9.3 x 43 x 5.2
3/25: 12,125/98/112/0. Work'g stuck pipe. GIH to 6146 & tag'd fish w/bit. RIH w/2 4-1/2" sgls, bumper sub, 3 DC's w/stab on top to 6146' & screwed into fish. Pulled to 345,000# max; didn't move. Ran Dialog; stop'd @ 8923. Tried to release overshot, but couldn't.
Mud: (.488) 9.4 x 42 x 5.6
3/26: 12,125/98/113/0. LD DP. Ran Dialog to drive junk down; couldn't get down. Tried to back off @ 9100', but couldn't turn. Backed off @ 8852'; rec'd 2706' of bent 4-1/2" DP. Pulled & LD fish.
Mud: (.488) 9.4 x 42 x 5.6
3/27: 12,125/98/114/0. Jar'g. PU 165 jts 20# 4-1/2" DP. Circ'd & screwed into fish @ 8852'. Jar'd w/325,000# & prep to run freept.
Mud: (.483) 9.3 x 40 x 6

MAR 27 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

12,125/98/115/0. Jar'g on fish. Ran Dialog freept; could not get below 9339. Tools get very tight below 8952'.
Mud: (.483) 9.3 x 40 x 6

MAR 28 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

12,125/98/116/0. Circ'g hole for WP. Ran Dialog freept & attempted to back off @ 8944; mud flw'g back in DP. Circ'd unbalanced mud. Ran Dialog & backed off @ 8852 (WL meas). POOH. Worked pipe thru tight spt @ 4167 & fin'd POOH. RIH to top of fish & circ'd.
Mud: (.483) 9.3 x 38

MAR 29 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

12,125/98/117/0. Chng'g brkn bands. Circ'd hole clean for WP. POOH; had tight hole for 3 stds @ 4167'. PU 3 jts WP & tools & RIH. Washed over fish from 8840-8858 (DP meas); could not wash any deeper. POOH; broke tongs. Pulled to DC's & chng'd out broken bands while WO tongs.
Mud: (.483) 9.3 x 39 x 5.6

MAR 30 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

12,125/98/118/0. Pull'g Dialog. Chngd brk bands & RIH OE w/4-1/2 DP to top of fish. Circ'd & Dialog screwed into fish @ 8840. Tried to work shot thru DP. Had very close tolerance & bent pipe; could not get down. Backed off fish @ 8840 & pulled Dialog.
Mud: (.483) 9.3 x 40 x 5.2

MAR 31 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

4/1: 8400/98/119/0. POOH. RIH to top of fish @ 8840'. RU Hal & set kickoff plug w/200 sx Class G w/20# sd/sx w/3/4 of 1% CFR2 w/.15% HR4 mixed to 17 ppg. CIP @ 5 a.m. 4/1/78. Approx top of cmt @ 8400.
Mud: (.483) 9.3 x 40
4/2: 8400/98/120/0. Repairing rotary clutch. Pulled DP & rotary clutch.
Mud: (.483) 9.3 x 40
4/3: 8530/98/121/0. Drlg cmt. Installed rotary clutch. RIH from shot to top of cmt @ 8530. Drlg contaminated cmt.

APR 03 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8860/98/122/0. RU cmt'rs. CO cmt from 8469-8860; cmt not hard enough to kick off. Circ'd hole clean. Strap'd out of hole; found tight spt @ 5900. RIH OE to top of fish. Circ'd & WO Hal cmt'rs. APR 04 1978
Mud: (.488) 9.4 x 46 x 8.6

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8504/98/123/0. Drlg cmt. Cmt'd w/273 cu ft (260 sx) cmt w/10# sd/sx w/1% CFR2 & .2% HR4 using 17.3 ppg slurry. Tested pipe & blind rams to 3000 psi, hyd to 2000 psi & kill & chk manifold to 3000 psi. PU bit & BHA & RIH to shoe. WOC. Tag'd top of cmt @ 8434; drlg hard cmt @ 8504'.
Mud: (.488) 9.4 x 49 APR 05 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8472 (corr'd depth)/98/124/2. Drlg w/dyna drl. Found top of cmt @ 8341. Kicked off @ 8470. Circ'd hole clean & POOH. Dyna drld from 8470-8472. Having trbl keep'g wt on bit; seems to be drag'g up hole. APR 06 1978
Mud: (.483) 9.3 x 42 x 7

Shell-Federal #1
(Wc) Dual #3
11,700' Elko Test
El 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8499/98/125/27. Dyna drlg. Dyna drilled to 8496. Found samples to be mostly cement. RIH w/dyna drill. CO 40' of fill + circ'd hole clean. Hole very tight. APR 07 1978
Mud: (.448) 9.4 x 40 x 6.8

Shell Federal #1
(WC) Dual #3
11,700' Elko Test
El 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

4/8: 8542/98/126/43. RIH w/drlg assy. Dyna drld to 8542 & circ'd hole. POOH for BHA.
Mud: (.483) 9.3 x 40 x 5.6
4/9: 8558/98/127/16. Drilling. Drld to 8548 & POOH to chng BHA. LD jars. PU 3 DC's & remainder of BHA & RIH to shoe. Cut drl line & fin'd in hole. Reamed 40' to btm. Dev: 6 deg @ 5.8
Mud: (.483) 9.3 x 37 x 5.8
4/10: 8705/98/128/147. Drilling. Survey: 8645'/6 deg 45'/N85W.
Mud: (.483) 9.3 x 35 x 6.2 APR 10 1978

Shell Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8848/98/129/143. Drilling. Survey: 8834'/6 deg/N88W.
Mud: (.483) 9.3 x 37 x 5.0 APR 11 1978

Shell Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

8972/98/130/124. Drilling.
Mud: (.483) 9.3 x 40 x 4.6

APR 12 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9074/98/131/102. Drlg.
Mud: (.483) 9.3 x 38 x 5.2

APR 13 1978

Shell-Federal #19
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9100/98/132/26. TIH w/DST tools. Drld to 9100' & circ'd & cond for DST. Made up DST tools & TIH @ 6 a.m.
Survey: 9080'/5 deg 30'/585W.
Mud: (.483) 9.3 x 38 x 4.8 APR 14 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

4/15: 9100/98/133/0. TIH w/fish'g tools. TIH w/Johnston DST tools. Set top pkr @ 8944 & btm pkr @ 8952. Tested interval 8952-9100. Opened tool @ 7:53 a.m. & final test @ 1:37 a.m. Released tool w/apparent fluid (2481'). Drop'd bar after pull'g up 1 std & rev'd out fluid. TOOH w/DST tools; left DST tools & 3 DC's in hole (186' fish). Made up fish'g tools & TIH.
Mud: (.483) 9.3 x 38 x 5
4/16: 9115/98/134/15. Drlg. TIH w/fish'g tools & worked over fish. Pulled free & TOOH & LD fish & tools. TIH w/drlg assy & reamed last 120'. Circ'd clean.
Mud: (.483) 9.3 x 42 x 5.8
4/17: 9188/98/135/73. Drlg.
Mud: (.483) 9.3 x 40 x 5.6

APR 17 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9220/98/136/32. Coring. Dev: 5-1/2 deg @ 9220'.
Mud: (.483) 9.3 x 40 x 5.2

APR 18 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9248/98/137/28. Cond'g mud. Core #16 - 9220-9248; had 100% rec.
Mud: (.483) 9.3 x 38 x 9.2

APR 19 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9248/98/138/0. Run'g DST #13. DST #13 - 9105-9097. Top pkr set @ 9097 & btm @ 9105. Opened tool @ 4:20 a.m. w/10 min open hydrostatic press equalizing only. SI 1 hr 10 mins & left on final flw - dead.
Mud: (.488) 9.4 x 38 x 4.8

APR 20 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9275/98/139/27. POOH. Cored 9248-75
(Corr to rept of 4/20/78: S/B DST #2 (redrill #1) - 9105-9248: rec'd 225' sli oil cut mud. Smpl chmbr - 50 psi w/.05 scfg & 2150 cc mud. IH 4702, FH 4688, IF 95-95, ISI 2157, FF 130-167, FSI 3281.)
Mud: (.488) 9.4 x 38 x 5

APR 21 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

4/22: 9293/98/140/18. Drlg.
Mud: (.488) 9.4 x 38 x 5.2
4/23: 9361/98/141/68. Drlg.
Mud: (.483) 9.3 x 38 x 4.8
4/24: 9397/98/142/36. Coring.
Mud: (.483) 9.3 x 38 x 4.8

APR 24 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9430/98/142/33. Drlg. Core #3 - Redrl #1; 9395-9425 - cut & rec'd 30'.
Mud: (.483) 9.3 x 38 x 4.8

APR 25 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9542/98/143/112. Drlg.
(.483) 9.3 x 38 x 4.8

APR 26 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9643/98/144/101. Drlg.
Mud: (.483) 9.3 x 36 x 5.2

APR 27 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9698/98/144/55. Drlg. Lost pmp press. Found washout betwn #8 & #9 DC's & DC box cracked & washed out. LD 2 DC's & TIH. Had 160 units frm gas. APR 28 1978
Mud: (.488) 9.4 x 38 x 4.8

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

4/29: 9800/98/146/102. Circ'g.
Mud: (.483) 9.3 x 36 x 4.6
4/30: 9800/98/147/0. Log'g. Ran DIL/FDC/CNL/GR.
Mud: (.483) 9.3 x 39 x 4.6
5/1: 9800/98/148/0. Circ & cond for logs. Ran BHC Sonic/HDT/PML.
Mud: (4.83) 9.3 x 43 x 5.0 MAY 01 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9800/98/149/0. Log'g. Shot 60 SWS: rec'd 39, lost 3, misfired 16 & pulled off 2. MAY 02 1978
Mud: (.483) 9.3 x 40 x 4.8

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9800/98/150/0. TOOH. Shot 100 SWS: rec'd 77, lost 6, 3 empty, misfired 14.
Mud: (.483) 9.3 x 39 x 4.8 MAY 03 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9800/98/151/0. TIH w/DST tools. Circ & cond mud.
Mud: (.483) 9.3 x 39 x 5.

MAY 04 1978

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

9800/98/152/0. Run'g DST. DST #3 (Redrl #1): top pkr @ 4155 & btm pkr @ 4220. Had 1/4" blw after 30 secs & pkrs failed in 2 mins. Tried to reset pkrs w/o success; btm pkr rubbers ruptured. Circ & cond hole. Made up DST assy & TIH w/DST set'g tool @ 6 a.m. Top pkr @ 4150 & btm pkr @ 4215. MAY 05 1978
Mud: (.483) 9.3 x 41 x 4.8

Shell-Federal #1
(WC) Dual #3
11,700' Elko Test
EL 5503' GR
13-3/8" csg @ 669'
9-5/8" csg @ 2806'

5/6: 9800/98/153/0. LD DP. DST #3A (Redrl #1): IF 10 mins. Tool opened 7:42 a.m. w/1/2" blw & incr'd to 2" @ 7:52 a.m. ISI 60 mins. FF 90 mins. Tool opened @ 8:52 a.m. w/1/2" blw, incr'd to 4" in 35 mins & 4-1/2" in 70 mins w/a decr to 3" in 90 mins. FSI @ 1:32 p.m. for 180 mins. Jar'd on tool 1 hr to release. Drop'd bar & rev circ'd. Had 1240' fluid rec; 100' wtr cushion & 1140' drlg mud. Chained out & brk down tools. Smpls were drlg fluid. Made up drlg assy & TIH. Circ & cond & TOOH LD DP.
Mud: (.483) 9.8 x 38 x 5
5/7: 9800/98/154/0. P&A well. With OE DP @ 3402', BJ pmp'd 20 BW ahead 475 cu ft Class "G" neat cmt & 1 BW behind. Displ'd w/38 bbls mud for Plug #1. Pulled 10 stds & circ'd clean. WOC 8 hrs. Tag'd top of cmt plug @ 3172. CIP 7:15 p.m. With OE DP @ 2876' for Plug #2, BJ pmp'd 20 BW ahead 100 cu ft Class "G" neat cmt & 1 BW behind. Displ'd w/36 bbls mud. CIP 4:30 a.m. Pulled 5 stds & circ'd clean. TOOH LD DP.
5/8: 9800/98/155/0. WELL PLUGGED & ABANDONED. Rig released 3 p.m. 5/7/78. Installed abandonment marker 5/8/78.
FINAL REPORT

July 1, 1983

R. Planty
Shell Oil Company
1700 Broadway
Denver, Colorado 80290

Re: Mary's River Federal #1, Permit No. 220
Howell No. 42-1, Permit No. 236

Dear Mr. Planty:

In a recent review of Shell Oil Company's cuttings, the Nevada Bureau of Mines and Geology and the Nevada Division of Mineral Resources have found that no cuttings have been received for the two following wells:

1. Mary's River Federal #1, Permit No. 220
2. Howell No. 42-1, Permit No. 236

The cuttings collected at 10-foot intervals should be cleaned, dried, and sent pre-paid to the Nevada Bureau of Mines and Geology, University of Nevada Reno, Reno, Nevada 89507: Attn: Larry Garside. PLEASE NOTE THAT THESE CUTTINGS ARE NOT TO BE SENT TO THE DIVISION OF MINERAL RESOURCES.

Please see that the requested cuttings are forwarded to the Bureau as soon as possible to remain in compliance with the Nevada Revised Statutes and the Rules and Regulations of Practice and Procedure of the Division. Thank you for your cooperation.

Sincerely,

Kathy Campbell
Management Assistant

/kc
cc: Bureau of Mines and Geology

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF MINERAL RESOURCES
Capitol Complex
201 South Fall Street
Carson City, Nevada 89710

NORMAN HALL, *Director*

Address Reply to
Capitol Complex
Nye Bldg., 201 S. Fall Street
Carson City, Nevada 89710
Telephone (702) 885-4380

October 14, 1977

NOTICE

State Permits for the drilling of oil and gas wells have been issued by the Division of Mineral Resources for the following wells.

Permit 219 (API No. 27-023-05255) was issued on October 6, 1977 for the Trap Spring No.19 Well by the Northwest Exploration Company, P. O. Box 90, Farmington, New Mexico 87401. The Trap Spring No.19 Well to be located in the center of the SE 1/4 NW 1/4 of Section 23, T.9N, R.56E, MDM., Nye County, Nevada. The elevation is 4,764 feet and the proposed depth is 5,000 feet.

Permit 220 (API No. 27-007-05211) was issued on October 14, 1977 for the Federal No.1 Well by the Shell Oil Company, 1700 Broadway, Denver, Colorado 80290. The Federal No.1 Well is to be located in the NW 1/4 SE 1/4 of Section 30, T.38N, R.61E, MDM., at a point 2,000 feet from the south boundary and 2,600 feet from the east boundary, Elko County. The elevation is 5,503 feet and the proposed depth is 11,700 feet.

William J. Newman
Acting Administrator

WJN/nd

FORELAND
CORPORATION

Union Terrace Office Building
12596 West Bayaud, Suite 300
Lakewood, Colorado 80228
(303) 988-3122
Fax (303) 988-3234

August 21, 1995

Mr. David Davis
Nevada Bureau of Mines and Geology
Mail Stop 178
Reno, Nevada 89557-0088

Dear David,

During our last visit to NBMG to copy files from oil and gas wells, we inadvertently included an original along with our copies. It is a mudlog for the Shell Mary's River Federal No. 1 well in Section 30, T38N-R61E, in Elko County. Could you please place it back in it's file? Thanks, and sorry about the mistake.

Sincerely,

Jerry Hansen

Jerry Hansen

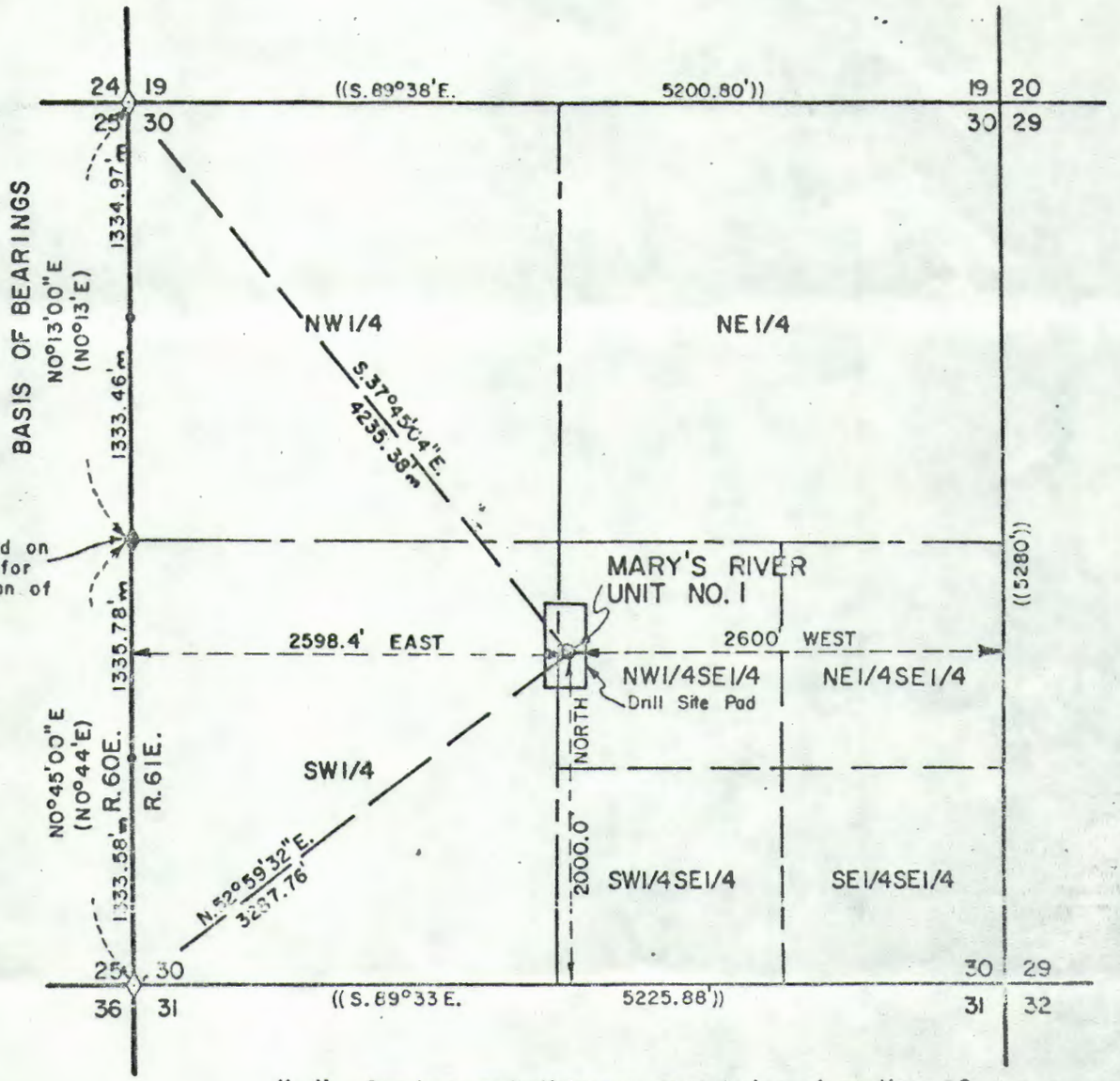
JH/cg

encl.

WELL LOCATION MAP

SHELL OIL COMPANY - MARY'S RIVER UNIT NO.1

LOCATED IN SECTION 30, T38N., R.61E., M.D.B.&M



(( )) Bearings and distances on exterior of section 30, are from U.S. Government Plat of T.38N., R.61E. M.D.B.&M. approved November 9, 1870.

( ) Bearings from U.S. Government Dependent Resurvey Plat of T.38N., R.60E. M.D.B.&M. approved April 7, 1964.

REGISTERED LAND SURVEYOR - STATE OF NEVADA
WILLIAM F. MUELLER
3535

I, William F. Mueller, Registered Land Surveyor No. 3535, do hereby certify that this is a true and accurate map of land surveyed under my supervision and direction on the 3rd. day of August, 1977, and that this Survey is fully and correctly designated hereon.

N

1" = 1000'

LEGAL DESCRIPTION

The Well is located in the NW1/4 of the SE1/4 of Section 30, at a point being N52°59'32"E 3286' from the [illegible] of Section 30 and S37°45'04"E 4235.38' from the NW corner of Section 30, all in Township 38 North, Range 61 East, Mount Diablo Baseline and Meridian.

CHILTON ENGINEERING
421 COURT STREET ELKO, NEVADA

DRAWN BY M.M. APPROVED BY WFM
JOB NO. 3193-03 DATE 8/77

77067 1/4

D-154

Shell Oil Co Marys River Federal No. 1

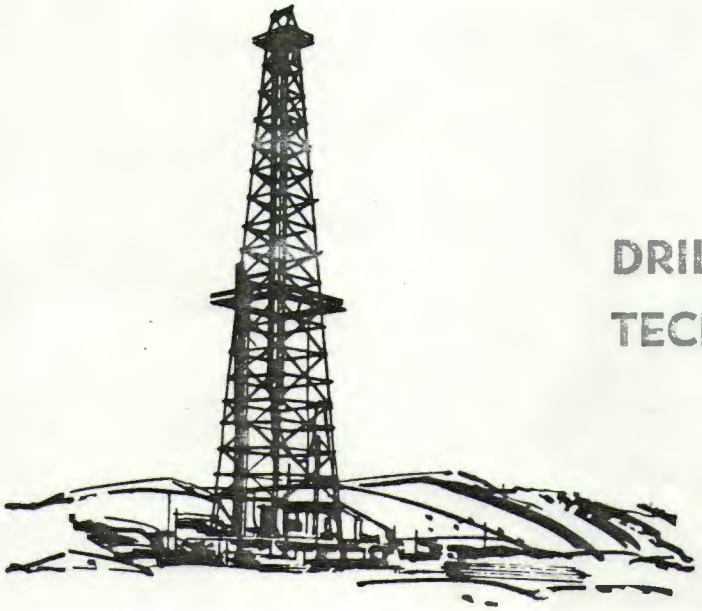
DST 1

SP

LYNES

BRIGHT NAME IN THE OIL PATCH

Inflatable and Conventional Packer Tools



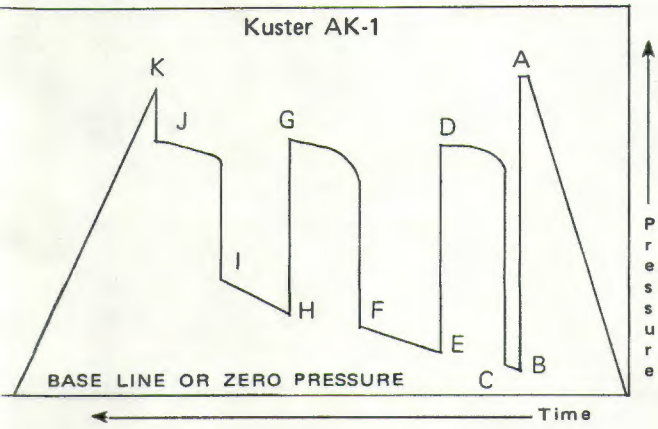
DRILL STEM TEST
TECHNICAL SERVICE REPORT

LYNES

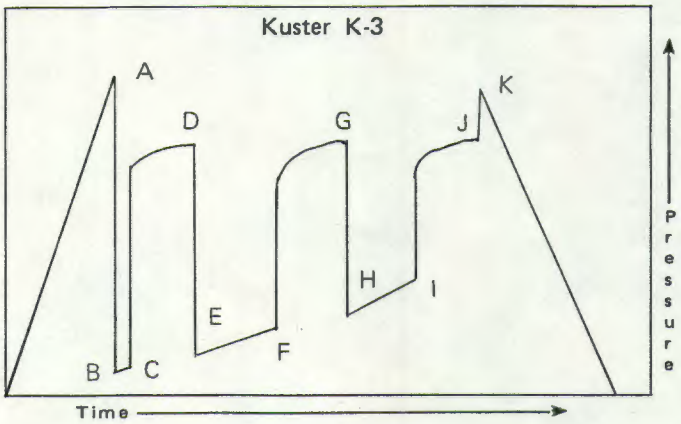
GUIDE TO INTERPRETATION AND IDENTIFICATION OF LYNES DRILL STEM TEST PRESSURE CHARTS

In making any interpretation, our employees will give Customer the benefit of their best judgment as to the correct interpretation. Nevertheless, since all interpretations are opinions based on inferences from electrical, mechanical or other measurements, we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not be liable or responsible, except in the case of gross or wilful negligence on our part, for any loss, costs, damages or expenses incurred or sustained by Customer resulting from any interpretation made by any of our agents or employees.

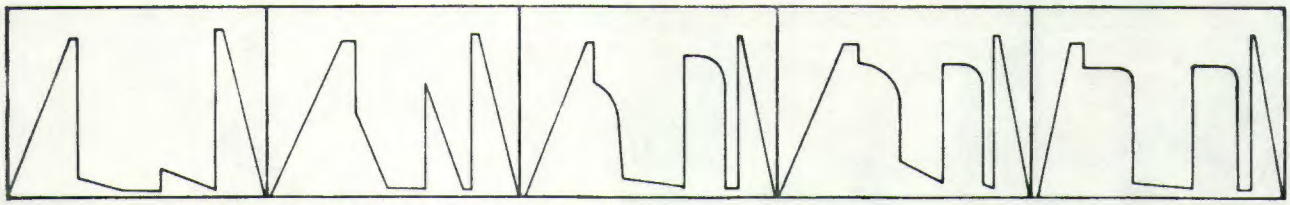
AK-1 recorders. Read from right to left.



K-3 recorders. Read from left to right.



A – Initial Hydrostatic
B – First Initial Flow
C – First Final Flow
D – Initial Shut-in
E – Second Initial Flow
F – Second Final Flow
G – Second Shut-in
H – Third Initial Flow
I – Third Final Flow
J – Third Shut-in
K – Final Hydrostatic



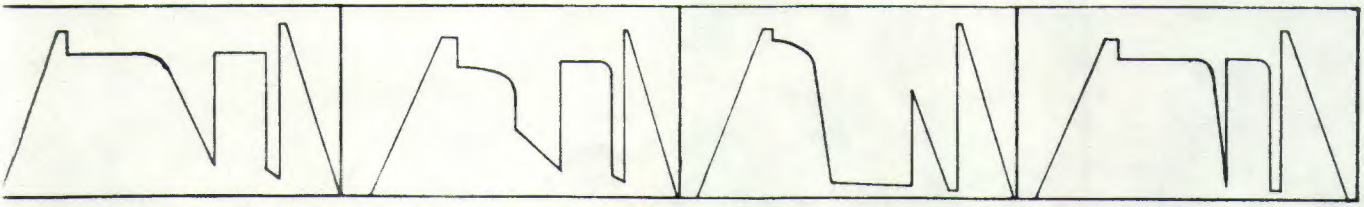
Very low permeability. Usually only mud recovered from interval tested. Virtually no permeability.

Slightly higher permeability. Again usually mud recovered.

Slightly higher permeability. Small recovery, less than 200 ft).

Average permeability. Final and initial shut-ins differ by 50 psi.

Average permeability. Strong damage effect. High shut-in pressure, low flow pressure.



Excelent permeability where final low final shut-in pressure.

High permeability where ISIP and FSIP are within 10 psi.

Deep well bore invasion or damage. Final shut-in higher than the initial shut-in.

Tight hole chamber tester. Permeability very difficult to interpret unless the recovery is less than chamber length. Flow pressure builds up rapidly if recovery is large, similar to a shut-in.

Phone
522-1206 Area 303

LYNES, INC.

Box 712
Sterling, Colo. 80751

Address 1700 Broadway Denver, Colorado 80202

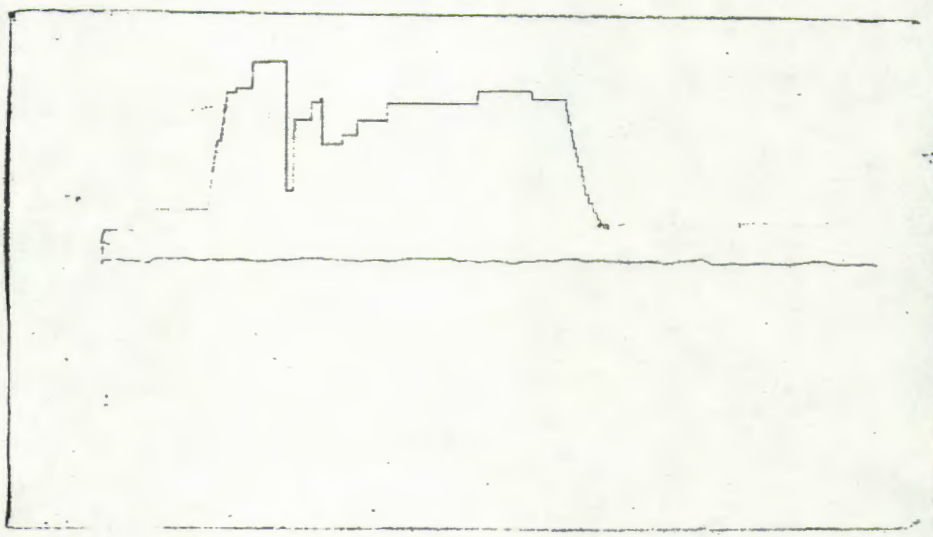
Ticket No. 9167

Date 12-12-77

No. Final Copies 5

Contractor	Dual Drlg. Co.	Top Choke	1"	Flow No. 1	10 Min.
Rig No.	3	Bottom Choke	1"	Shut-in No. 1	60 Min.
Spot	NW-SE	Size Hole	12 1/4"	Flow No. 2	90 Min.
Sec.	30	Size Rat Hole	--	Shut-in No. 2	180 Min.
Twp.	38 N	Size & Wt. D. P.	4 1/2" 16.60	Flow No. 3	-- Min.
Rng.	61 E	Size Wt. Pipe	--	Shut-in No. 3	-- Min.
Field	Wildcat	I. D. of D. C.	2 1/2"		
County	Elko	Length of D. C.	170'		
State	Nevada	Total Depth	2815'	Bottom Hole Temp.	98° F
Elevation	5550' "K.B."	Interval Tested	2165-2211'	Mud Weight	9.0
Formation	--	Type of Test	Inflate Straddle	Gravity	--
				Viscosity	33

Tool opened @ 3:50 AM.



Outside Recorder

PRD Make Kuster K-3
No. 13135 Cap. 2900 @2175'

Press		Corrected
Initial Hydrostatic	A	1050
Final Hydrostatic	K	854
Initial Flow	B	238
Final Initial Flow	C	238
Initial Shut-in	D	795
Second Initial Flow	E	528
Second Final Flow	F	673
Second Shut-in	G	774
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist.: Casper, Wy.
Our Tester: Rick Hanson
Witnessed By: Bruce Patterson

Did Well Flow – Gas No Oil No Water No

RECOVERY IN PIPE: 1500' Water = 19.71 bbl. (test was reverse circulated)

1st Flow - Tool opened with a fair blow, increased to bottom of bucket in 1 minute and remained thru flow period.

2nd Flow - Tool opened with a good blow for 30 minutes, began decreasing to a very weak blow at end of flow period.

REMARKS: Chart indicates recorder was not functioning properly during test, therefore the pressures are subject to question.

TIGHT HOLE

Form 1

LYNES, INC.

Fluid Sample Report

Date 12-12-77 Ticket No. 9167

Company Shell Oil Company

Well Name & No. Federal # 1 DST No. 1

County Elko State Nevada

Sampler No. -- Test Interval 2165-2211'

Pressure in Sampler 0 PSIG BHT 98 °F

Total Volume of Sampler: 3000 cc.

Total Volume of Sample: 2700 cc.

Oil: None cc.

Water: 2700 cc.

Mud: None cc.

Gas: None cu. ft.

Other: None

Resistivity

Make Up Water 2.6 @ 50° F of Chloride Content 3000 ppm.

Mud Pit Sample 2.5 @ 65° F of Chloride Content 2500 ppm.

Gas/Oil Ratio -- Gravity -- °API @ -- °F

Where was sample drained On location

Remarks: Recovery: Sample - R.W. - 2.7 @ 64° F = 2300 ppm. chl.

Form 5

NOMENCLATURE (Definition of Symbols)

- Q = average production rate during test, bbls./day
- Q_g = measured gas production rate during test, MCF/day
- k = permeability, md
- h = net pay thickness, ft. (when unknown, test interval is chosen)
- μ = fluid viscosity, centipoise
- Z = compressibility factor
- T_f = reservoir temperature, ° Rankine
- m = slope of final SIP buildup plot, psig/cycle (psig^2/cycle for gas)
- b = approximate radius of investigation, feet
- r_w = wellbore radius, feet
- t_o = total flowing time, minutes
- P_o = Extrapolated maximum reservoir pressure, psig
- P_f = final flowing pressure, psig
- P.I. = productivity index, bbls./day/psi
- $P.I._t$ = theoretical productivity index with damage removed, bbl./day/psi
- D.R. = damage ratio
- E.D.R. = estimated damage ratio
- AOF = absolute open flow potential, MCF/D
- AOF_t = theoretical absolute open flow if damage were removed
- $\bar{Z}$ = subsea depth
- W = water gradient based on salinity
- H_w = potentiometric surface

INTERPRETATION CALCULATIONS (OIL/WATER)

AVERAGE PRODUCTION RATE DURING TEST

Q = 1440 (drill collar capacity x recovery + drill pipe capac. x recovery) / initial flow time + final flow time

= 1440 [( ) ( ) + ( ) ( )] / [( ) + ( )]

= 1440 (.0145 or .0073) ( ) / ( )

= ..... bbls./day

Mud Expansion = — ..... ft. (Drill Collar Conversion Is Considered)

FLUID PROPERTIES — Estimated Bottom Hole Temperature °

API Gravity @ 60° F. ° Specific Gravity @ 60° F. Est. Viscosity ..... cp

TRANSMISSIBILITY

$\frac{kh}{\mu} = \frac{162.6Q}{m} = \frac{162.6 ( )}{( )}$ = ... md.-ft/cp

IN SITU CAPACITY

kh = ( ) ( ) = ... md.-ft.

AVERAGE EFFECTIVE PERMEABILITY — Estimated Pay Thickness Ft. / Actual Pay Thickness Ft.

$k = \frac{( )}{( )}$ = ... md.

PRODUCTIVITY INDEX

$PI = \frac{Q}{P_o - P_f} = \frac{( )}{( ) - ( )}$ = ... bbl./day-psi

DAMAGE RATIO

$D.R. = \frac{0.183 (P_o - P_f)}{m} = 0.183 \frac{[( ) - ( )]}{( )}$ = ...

PRODUCTIVITY INDEX WITH DAMAGE REMOVED

$P.I._t$ = P.I. x D.R. = ( ) ( ) = ... bbl./day-psi

APPROXIMATE RADIUS OF INVESTIGATION

$b = \sqrt{kt_o}$ = $\sqrt{( )( )}$ = ... ft.

Drawdown Factor = (I.S.I.P. - F.S.I.P.) / I.S.I.P. x 100 = ( ) — ( ) / ( ) x 100 = ... % (4% to 5% is considered serious or substantial)

Potentiometric Surface = $H_w = \bar{Z} + \frac{P_o}{w}$ H_w = ... + ( ) = + ... ± ..... ft.

INTERPRETATION CALCULATIONS (GAS)

$R(T_f)$ = ...°

ESTIMATED GAS PROPERTIES — Estimated Bottom Hole Temperature °

Gravity @ 60° F ..... Viscosity (Res.) ..... cp. Compressibility Factor (Z) .....

TRANSMISSIBILITY — Measured D.S.T. Gas Rate = ... mcf/d.

$\frac{kh}{\mu} = \frac{1637 Q_g Z T_f}{m} = \frac{1637 ( ) ( ) ( )}{( )}$ = ... md.-ft. / cp.

IN SITU CAPACITY

kh = ( ) ( ) = ... md.-ft.

AVERAGE EFFECTIVE PERMEABILITY — Estimated Pay Thickness Ft. / Actual Pay Thickness Ft.

$k = \frac{( )}{( )}$ = ... md.

APPROXIMATE RADIUS OF INVESTIGATION

$b = 0.02 \sqrt{kt_o P_o}$ = $0.02 \sqrt{( ) ( ) ( )}$ = ... ft.

ACTUAL CAPACITY

$kh = \frac{3270 Q_g \mu Z T_f \log(0.472 \frac{b}{r_w})}{P_o^2 - P_f^2} = \frac{3270 ( ) ( ) ( ) ( )}{( ) - ( )}$ = ... md.-ft.

DAMAGE RATIO — E.D.R. = $\frac{(P_o^2 - P_f^2)}{m (\log T_o + 2.65)}$

D.R. = In Situ Capacity / Actual Capacity = ( ) / ( ) = ...

E.D.R. = ...

ESTIMATED RANGE OF AOF POTENTIAL

Max. AOF = $\frac{Q_g P_o^2}{P_o^2 - P_f^2} = \frac{( ) ( )}{[( ) - ( )]} = \frac{( )}{( )}$ = ... MCF/D

Min. AOF = $\frac{Q_g P_o}{\sqrt{P_o^2 - P_f^2}} = \frac{( ) ( ) ( )}{\sqrt{[( ) - ( )]}} = \frac{( )}{( )}$ = ... MCF/D

ESTIMATED RANGE OF AOF POTENTIAL, DAMAGE REMOVED

Max. AOF_t = (Max. AOF) (D.R.) = ( ) ( ) = ... MCF/D

Min. AOF_t = (Min. AOF) (D.R.) = ( ) ( ) = ... MCF/D

Drawdown Factor = (ISIP — FSIP) / ISIP x 100 = ( ) — ( ) / ( ) x 100 = ... % (4% to 5% is considered serious or substantial)

Potentiometric Surface = $H_w = \bar{Z} + \frac{P_o}{W}$ H_w = ... + ( ) = + ... ± ..... ft.

DST 2

13R

JOHNSTON

Schlumberger

computerized data analysis

F.R. #09710 D

COMPANY SHELL OIL COMPANY WELL MARY'S RIVER #1 TEST NO. 2 COUNTY ELKO STATE NEVADA

JOHNSTON
Schlumberger

COMPUTERIZED DATA ANALYSIS

APRIL 26, 1978

GENTLEMEN:

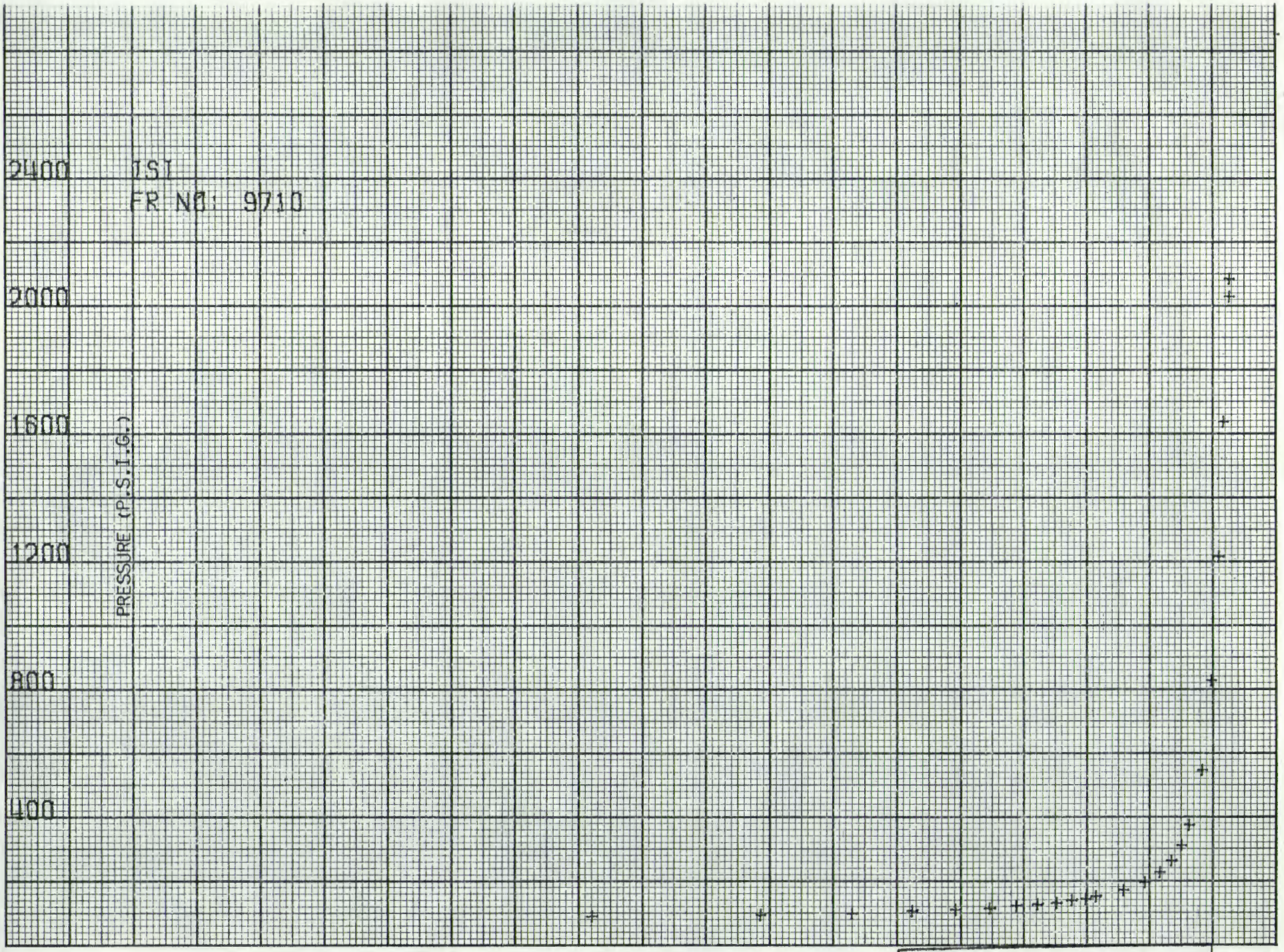
THE ENCLOSED TEST APPEARS TO BE A GOOD MECHANICAL DRILL STEM TEST DURING WHICH THE TOOLS DID FUNCTION PROPERLY. SLIGHTLY OIL & GAS CUT DRILLING MUD WAS RECOVERED ON THIS TEST. RESERVOIR PRESSURE DRAWDOWN WAS SUFFICIENT BUT ADEQUATE SHUT-IN BUILD-UPS DID NOT OCCUR FOR RELIABLE QUANTITATIVE ANALYSIS. THE CONTOUR OF THE BUILD-UP CURVE AND THE VOLUME OF MUD PRODUCED ON THIS TEST SUGGEST A TIGHT FORMATION.

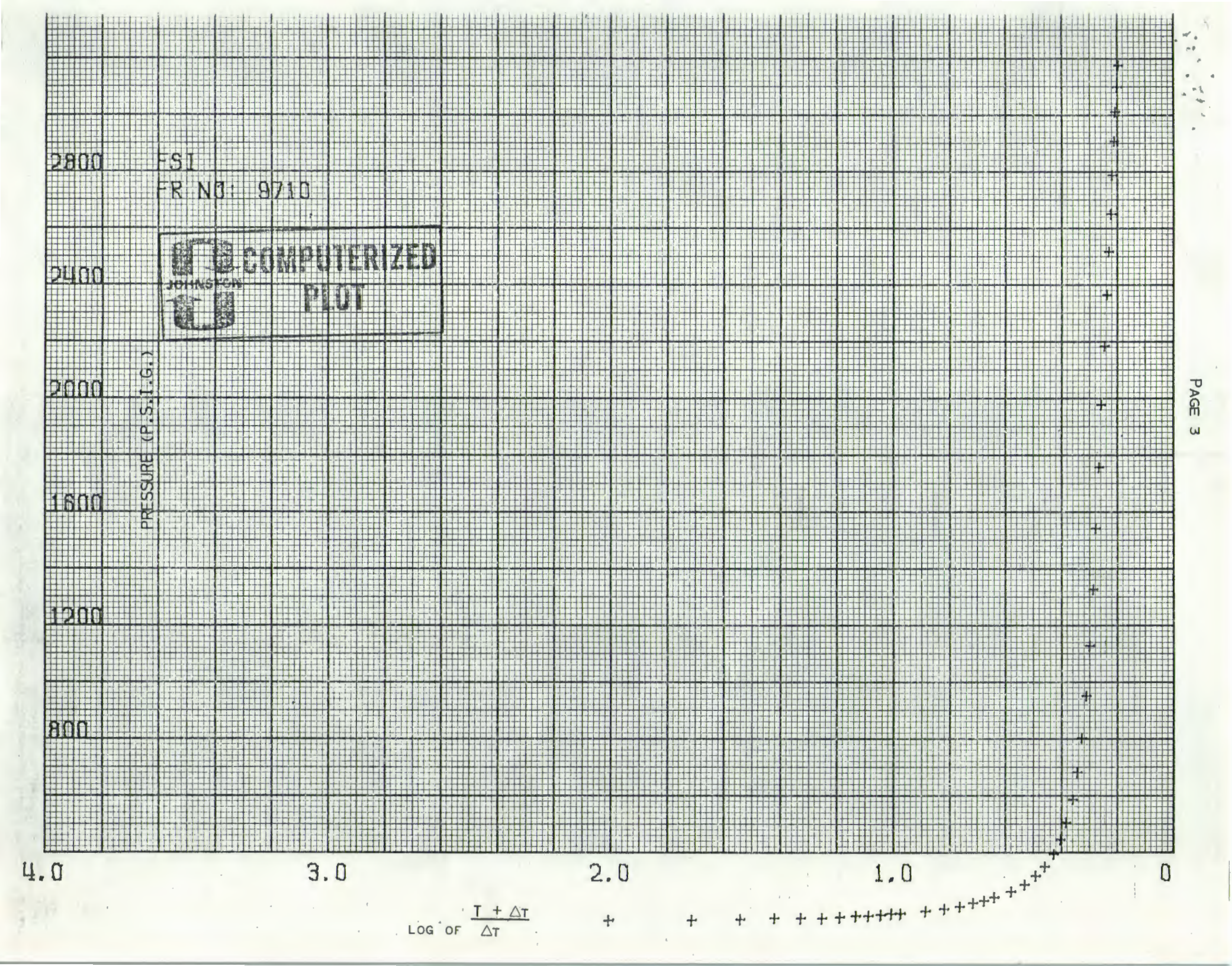
Kent Arceneaux

KENT ARCENEAUX
RESERVOIR EVALUATION
DEPARTMENT

SHELL OIL COMPANY
MARY'S RIVER #1; ELKO COUNTY, NEVADA
TEST #2; 9105' TO 9247'
LOCATION: SEC. 30 - T38N - R51E

FIELD REPORT # 09710 D


2400
2000
1600
1200
800
400
PRESSURE (P.S.I.G.)
IST
FR NO: 9710
2.0
1.0
0
LOG OF (T + ΔT)/ΔT
JOHNSTON
COMPUTERIZED
PLOT


2800
2400
2000
1600
1200
800
PRESSURE (P.S.I.G.)
FSI
FR NO: 9710
JOHNSTON
COMPUTERIZED
PLOT
4.0
3.0
2.0
1.0
0
LOG OF (T + ΔT)/ΔT

JOHNSTON
Schlumberger

SURFACE INFORMATION

Description (Rate of Flow)	Time	Pressure (P.S.I.G.)	Surface Choke
Opened Tool	0410	–	1/8''
BLOW, 8'' IN WATER			
BLOW, INCREASED TO 11''	0420	–	''
CLOSED FOR INITIAL SHUT-IN	0420	–	''
FINISHED SHUT-IN	0520	–	''
RE-OPENED TOOL	0522	–	''
BLOW, 1 1/4'' IN WATER			
BLOW, INCREASED TO 2''	0547	–	''
BLOW, INCREASED TO 2 1/4''	0613	–	''
BLOW, DECREASED TO 1 3/4''	0652	–	''
CLOSED FOR FINAL SHUT-IN	0652	–	''
FINISHED SHUT-IN	0952	–	''
PULLED PACKER LOOSE	0955	–	–

Cushion Type	Amount	Pressure	Bottom Choke
	–		Size 15/16''

MUD DATA

Mud Type LOW SOLID Wt. 9.3
Viscosity 38 Water Loss 4 C.C.
Resist: of Mud 1.3 @ 69 °F; of Filtrate 1.3 @ 69 °F
Chloride Content 750 PPM

EQUIPMENT & HOLE DATA

Type Test M.F.E. OPEN HOLE
Formation Tested ELKO
Elevation 5500 G.R. Ft.
Net Productive Interval 142 Ft.
Estimated Porosity 5 %
All Depths Measured From KELLY BUSHING
Total Depth 9247 Ft.
Main Hole/Casing Size 8 3/4''
Rat Hole/Liner Size –
Drill Collar Length 271' I.D.–
Drill Pipe Length 8791' I.D.–
Packer Depth(s) 9099 & 9105 Ft.

MULTI-FLOW EVALUATOR FLUID SAMPLE DATA

Sampler Pressure 50 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas .05
cc. Oil –
cc. Water –
cc. Mud 2150
Tot. Liquid cc. 2150
Gravity – °API @ °F.
Gas/Oil Ratio – cu. ft./bbl.

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	– @ – °F.	ppm
Recovery Mud	1.7 @ 63 °F.	
Recovery Mud Filtrate	1.3 @ 67 °F.	2800 ppm
Mud Pit Sample	1.3 @ 69 °F.	
Mud Pit Sample Filtrate	1.3 @ 69 °F.	750 ppm

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY	RESISTIVITY	CHL. PPM
SLIGHTLY OIL CUT DRILLING MUD	225	–				@ °F.	1.3 @ 69 °F.	750
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

Remarks:

Address 1700 BROADWAY; DENVER, COLORADO 80202

Company SHELL OIL COMPANY Field WILD CAT
Well MARY'S RIVER #1 Location SEC. 30, T38N, R51E
Test Interval 9105' TO 9247' Test # 2 Date 4-20-78

County ELKO State NEVADA
Technician RICHARDS (VERNAL) Test Approved By MS. JANICE ACKERMAN

Field Report No. 09710 D
No. Reports Requested 10 (6X'S)

JOHNSTON
Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

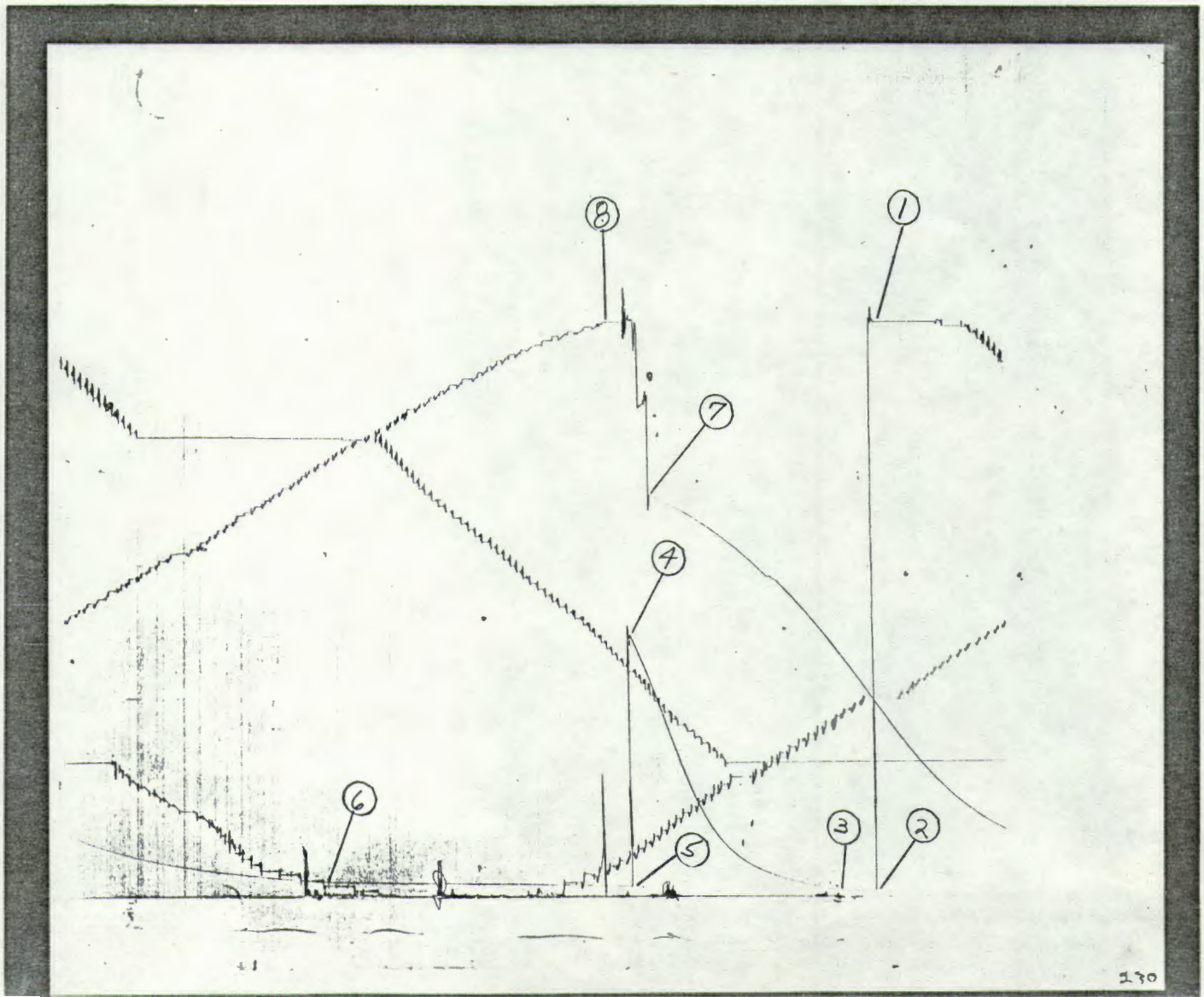
INSTRUMENT NO.: J-230 CAPACITY (P.S.I.): 6400# DEPTH 9084 FT.

PORT OPENING: INSIDE BOTTOM HOLE TEMP.: 167°F. FIELD REPORT NO. 09710 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	4480.3		
INITIAL FLOW (1)	2	63.1		
INITIAL FLOW (2)	3	64.4	10	11
INITIAL SHUT-IN	4	2054.8	60	61
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)	5	104.8		
FINAL FLOW (2)	6	106.1	90	89
FINAL SHUT-IN	7	3138.6	180	180
FINAL HYDROSTATIC MUD	8	4479.1		

REMARKS:

10+



JOHNSTON
Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

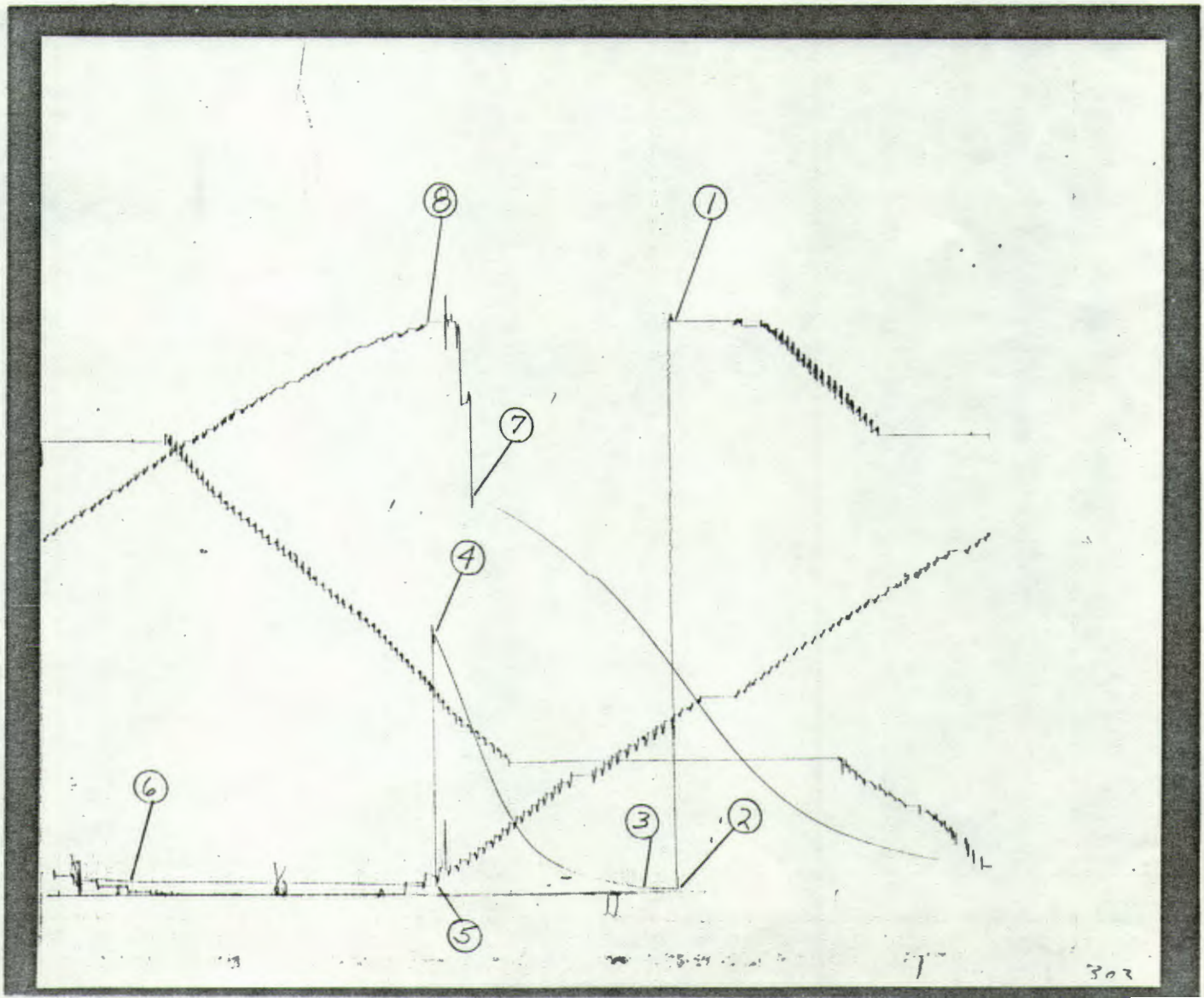
INSTRUMENT NO.: J-303 CAPACITY (P.S.I.): 6400# DEPTH 9107 FT.

PORT OPENING: INSIDE BOTTOM HOLE TEMP.: 167°F. FIELD REPORT NO. 09710 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	4506.5		
INITIAL FLOW (1)	2	68.6		
INITIAL FLOW (2)	3	80.1	10	11
INITIAL SHUT-IN	4	2075.2	60	61
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)	5	109.3		
FINAL FLOW (2)	6	148.8	90	89
FINAL SHUT-IN	7	3154.8	180	180
FINAL HYDROSTATIC MUD	8	4512.9		

REMARKS:

10+



JOHNSTON
Schlumberger

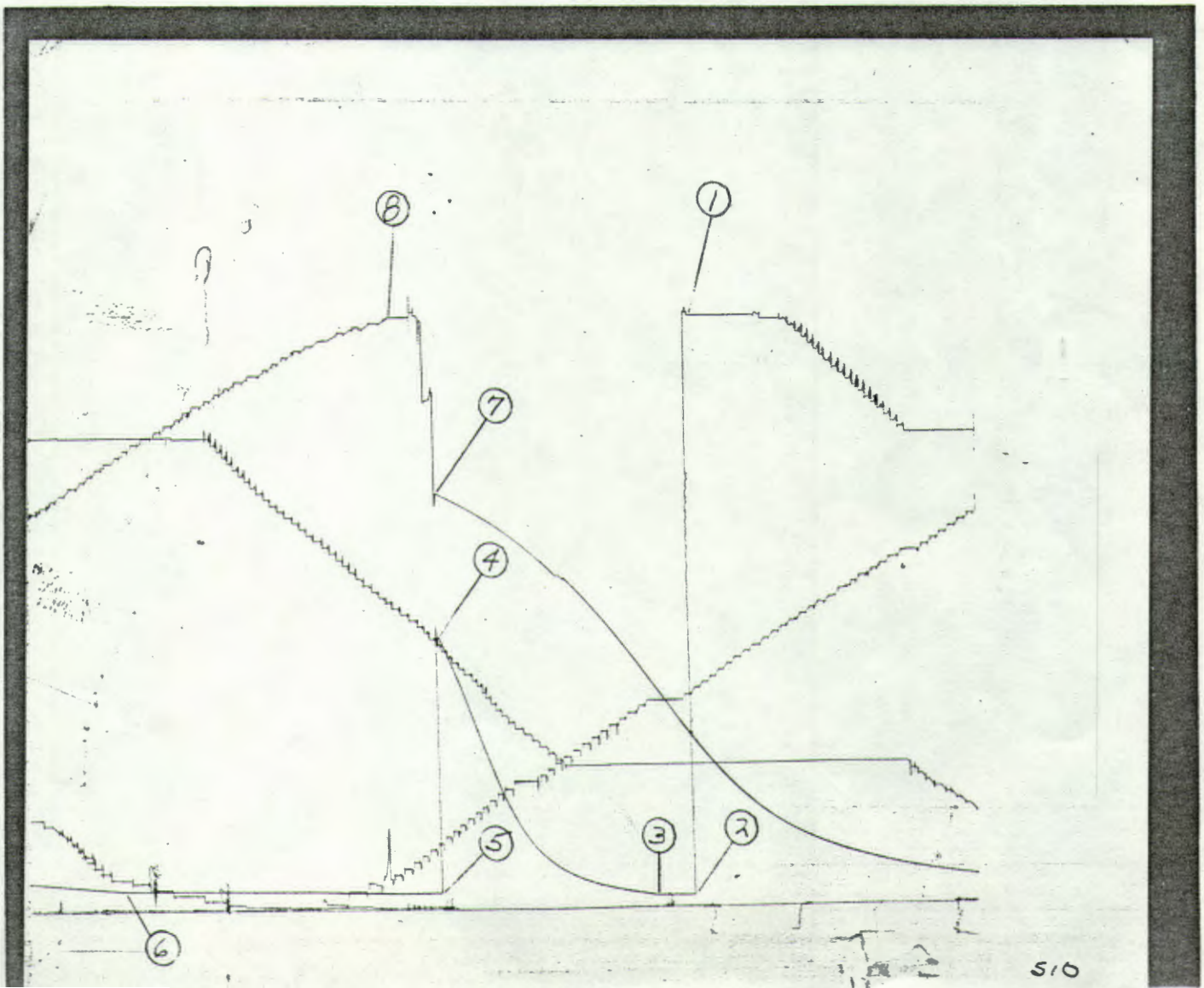
FIELD REPORT NO.: 09710 D

INSTRUMENT NO.: J-510

CAPACITY: 6400#

NO. OF REPORTS: 10+

PRESSURE DATA FROM THIS CHART IS PRESENTED ON NEXT PAGE



BOTTOM HOLE PRESSURE AND TIME DATA

JOHNSTON Schlumberger

INSTRUMENT NO.: J-510 CAPACITY(P.S.I.): 6400 DEPTH: 9111 FT.

PORT OPENING: OUTSIDE BOTTOM HOLE TEMP.: 167

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	4520.6		
INITIAL FLOW(1)	2	87.9		
INITIAL FLOW(2)	3	87.9	10	11
INITIAL SHUT-IN	4	2083.6	60	61
FINAL FLOW(1)	5	125.2		
FINAL FLOW(2)	6	156.3	90	89
FINAL SHUT-IN	7	3171.6	180	180
FINAL HYDROSTATIC MUD	8	4519.4		

INCREMENTAL READINGS

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
1		4520.6				HYDROSTATIC MUD
2	0	87.9				INITIAL FLOW(1)
	5	87.9				
	10	87.9				
3	11	87.9				INITIAL FLOW(2)
3	0	87.9				STARTED SHUT-IN
	1	91.7	12.000	1.079	3.7	
	2	96.6	6.500	0.813	8.7	
	3	101.6	4.667	0.669	13.7	
	4	106.6	3.750	0.574	18.7	
	5	111.5	3.200	0.505	23.6	
	6	116.5	2.833	0.452	28.6	
	7	122.7	2.571	0.410	34.8	
	8	127.7	2.375	0.376	39.8	
	9	132.7	2.222	0.347	44.8	
	10	138.9	2.100	0.322	51.0	
	11	145.1	2.000	0.301	57.2	
	12	151.3	1.917	0.283	63.4	
	15	172.5	1.733	0.239	84.6	
	18	197.3	1.611	0.207	109.4	
	21	228.4	1.524	0.183	140.5	
	24	265.7	1.458	0.164	177.8	
	27	313.0	1.407	0.148	225.1	
	30	375.1	1.367	0.136	287.2	
	36	548.0	1.306	0.116	460.1	
	42	827.7	1.262	0.101	739.8	
	48	1216.9	1.229	0.090	1129.0	
	54	1637.2	1.204	0.081	1549.3	
	60	2027.6	1.183	0.073	1939.7	
4	61	2083.6	1.180	0.072	1995.7	INITIAL SHUT-IN
5	0	125.2				FINAL FLOW(1)
	5	122.7				
	10	121.5				
	15	125.2				
	20	129.0				

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
	25	131.4				
	30	133.9				
	35	138.9				
	40	140.1				
	45	141.4				
	50	142.6				
	55	145.1				
	60	147.6				
	65	150.1				
	70	151.3				
	75	152.6				
	80	153.8				
	85	155.1				
6	89	156.3				FINAL FLOW(2)
6	0	156.3				STARTED SHUT-IN
	1	158.8	101.000	2.004	2.5	
	2	161.3	51.000	1.708	5.0	
	3	163.8	34.333	1.536	7.5	
	4	166.3	26.000	1.415	9.9	
	5	167.5	21.000	1.322	11.2	
	6	170.0	17.667	1.247	13.7	
	7	172.5	15.286	1.184	16.2	
	8	175.0	13.500	1.130	18.7	
	9	177.4	12.111	1.083	21.1	
	10	179.9	11.000	1.041	23.6	
	11	182.4	10.091	1.004	26.1	
	12	184.9	9.333	0.970	28.6	
	15	193.6	7.667	0.885	37.3	
	18	201.1	6.556	0.817	44.8	
	21	209.8	5.762	0.761	53.5	
	24	218.5	5.167	0.713	62.2	
	27	228.4	4.704	0.672	72.1	
	30	238.4	4.333	0.637	82.1	
	36	259.5	3.778	0.577	103.2	
	42	285.6	3.381	0.529	129.3	
	48	315.5	3.083	0.489	159.2	
	54	349.0	2.852	0.455	192.7	
	60	392.6	2.667	0.426	236.2	
	66	443.5	2.515	0.401	287.2	
	72	505.7	2.389	0.378	349.4	
	78	582.8	2.282	0.358	426.5	
	84	681.0	2.190	0.341	524.7	
	90	800.4	2.111	0.325	644.1	
	96	948.4	2.042	0.310	792.0	
	102	1122.4	1.980	0.297	966.1	
	108	1322.6	1.926	0.285	1166.3	
	114	1539.0	1.877	0.274	1382.7	
	120	1757.8	1.833	0.263	1601.5	
	126	1977.9	1.794	0.254	1821.6	
	132	2183.0	1.758	0.245	2026.7	
	138	2365.8	1.725	0.237	2209.5	
	144	2516.3	1.694	0.229	2360.0	
	150	2646.8	1.667	0.222	2490.5	

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
	156	2783.6	1.641	0.215	2627.3	
	162	2904.2	1.617	0.209	2747.9	
	168	3007.4	1.595	0.203	2851.1	
	174	3096.9	1.575	0.197	2940.6	
7	180	3171.6	1.556	0.192	3015.2	FINAL SHUT-IN
8		4519.4				HYDROSTATIC MUD

DST 2

JOHNSTON

Schlumberger

technical report

F. R. #09695 D

COMPANY SHELL OIL COMPANY WELL MARY'S RIVER AREA FEDERAL #1 TEST NO. 2 COUNTY ELKO STATE NEVADA

JOHNSTON
Schlumberger

SURFACE INFORMATION

Description (Rate of Flow)	Time	Pressure (P.S.I.G.)	Surface Choke
Opened Tool	1316	–	1/8''
BLOW, 5'' IN WATER			
	1317	1	''
	1321	1 3/4	''
CLOSED FOR INITIAL SHUT-IN	1321	1 3/4	''
FINISHED SHUT-IN	1406	–	''
RE-OPENED TOOL	1408	–	''
BLOW, 3 1/2'' IN WATER			
	1412	1 3/4	''
	1418	2 1/4	''
	1423	3 1/4	''
	1428	3 3/4	''
	1438	4 1/2	''
	1448	4 3/4	''
	1453	4 1/2	''
	1508	4	''
CLOSED FOR FINAL SHUT-IN	1508	4	''
FINISHED SHUT-IN	1708	–	''
PULLED PACKER LOOSE	1709	–	–

Cushion Type	Amount	Pressure	Bottom Choke
	–		Size 1''

MUD DATA

Mud Type LOW LIME MUD Wt. 9.1
Viscosity 36 Water Loss 16.0 C.C.
Resist: of Mud .7 @ 75 °F; of Filtrate .75 @ 75 °F
Chloride Content 1700 PPM

EQUIPMENT & HOLE DATA

Type Test M. F. E. OPEN HOLE
Formation Tested HUMBOLDT
Elevation 5536 GL.L Ft.
Net Productive Interval 55 Ft.
Estimated Porosity – %
All Depths Measured From KELLY BUSHING
Total Depth 2900 Ft.
Main Hole/Casing Size 8 3/4''
Rat Hole/Liner Size –
Drill Collar Length 360' I.D. 2.25''
Drill Pipe Length 2442' I.D. 3.80''
Packer Depth(s) 2839 & 2845 Ft.

MULTI-FLOW EVALUATOR FLUID SAMPLE DATA

Sampler Pressure – P.S.I.G. at Surface
Recovery: Cu. Ft. Gas –
cc. Oil –
cc. Water 2500
cc. Mud –
Tot. Liquid cc. 2500
Gravity – °API @ – °F.
Gas/Oil Ratio – cu. ft./bbl.

		RESISTIVITY	CHLORIDE CONTENT
Recovery Water	2.0 @ 60 °F.		800 ppm
Recovery Mud	– @ – °F.		
Recovery Mud Filtrate	– @ – °F.		– ppm
Mud Pit Sample	.7 @ 75 °F.		
Mud Pit Sample Filtrate	.75 @ 75 °F.		1700 ppm

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY	RESISTIVITY	CHL. PPM
MUD CUT WATER	1900	23.63		90	10	@ °F.	1.4 @ 62 °F.	1000
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

Remarks:

Address P.O. BOX 831; HOUSTON, TEXAS 77001

Company SHELL OIL COMPANY Field WILD CAT
Well MARY'S RIVER AREA FEDERAL #1 Location SEC. 30 - T38N - R61E
Test Interval 2845' TO 2900' Test # 2 Date 12-21-77

County ELKO State NEVADA Field Report No. 09695 D
Technician RICHARDS(VERNAL) Test Approved By MR. C. BONNER No. Reports Requested 9XX

JOHNSTON Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

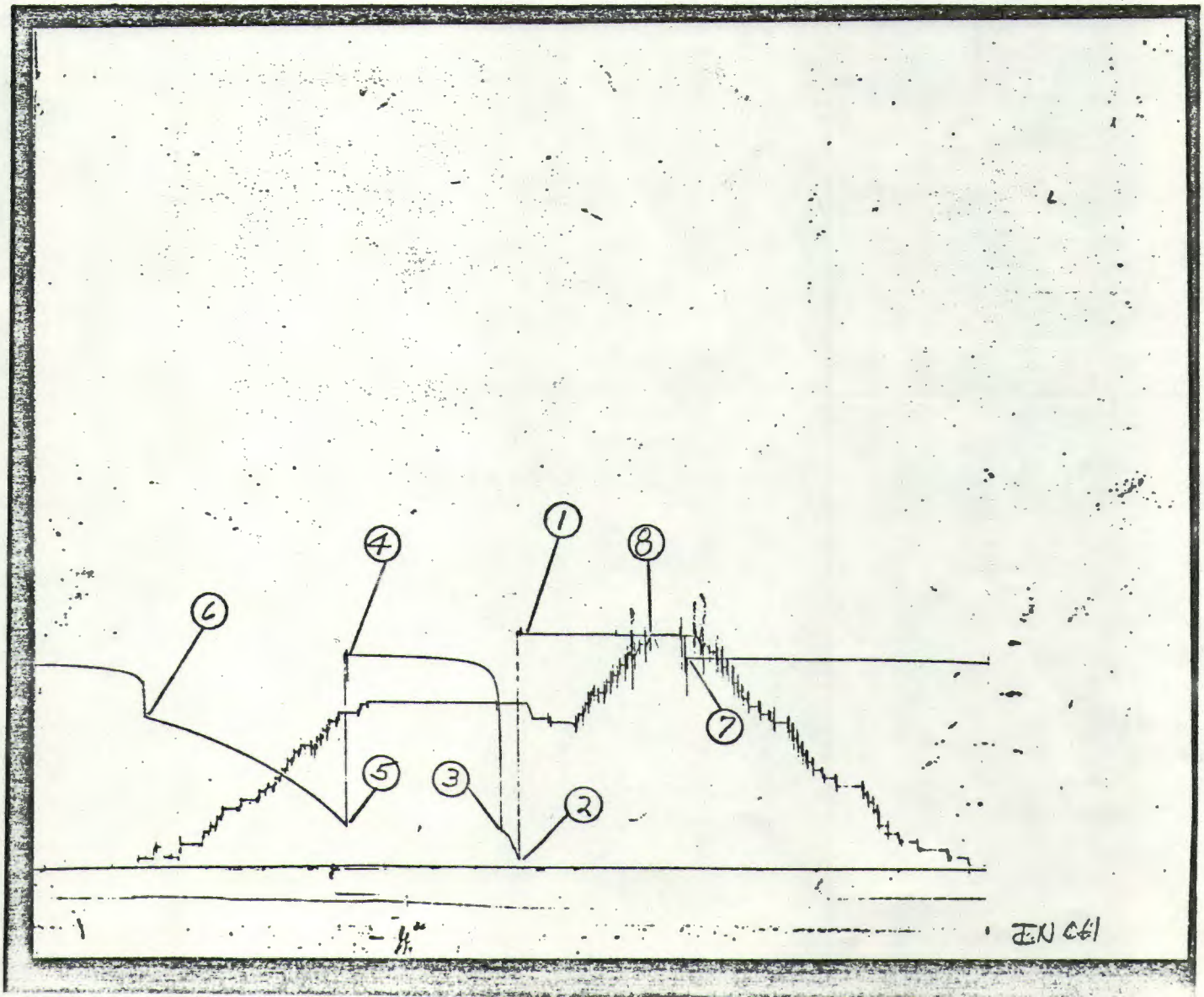
INSTRUMENT NO.: J-061 CAPACITY (P.S.I.): 4700# DEPTH 2824 FT.

PORT OPENING: INSIDE BOTTOM HOLE TEMP.: 157°F. FIELD REPORT NO. 09695 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	1367.8		
INITIAL FLOW (1)	2	61.9		
INITIAL FLOW (2)	3	234.8	5	5
INITIAL SHUT-IN	4	1243.8	45	46
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)	5	259.2	60	59
FINAL FLOW (2)	6	887.7	120	120
FINAL SHUT-IN	7	1227.8		
FINAL HYDROSTATIC MUD	8	1364.1		

REMARKS:

9+



JOHNSTON Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

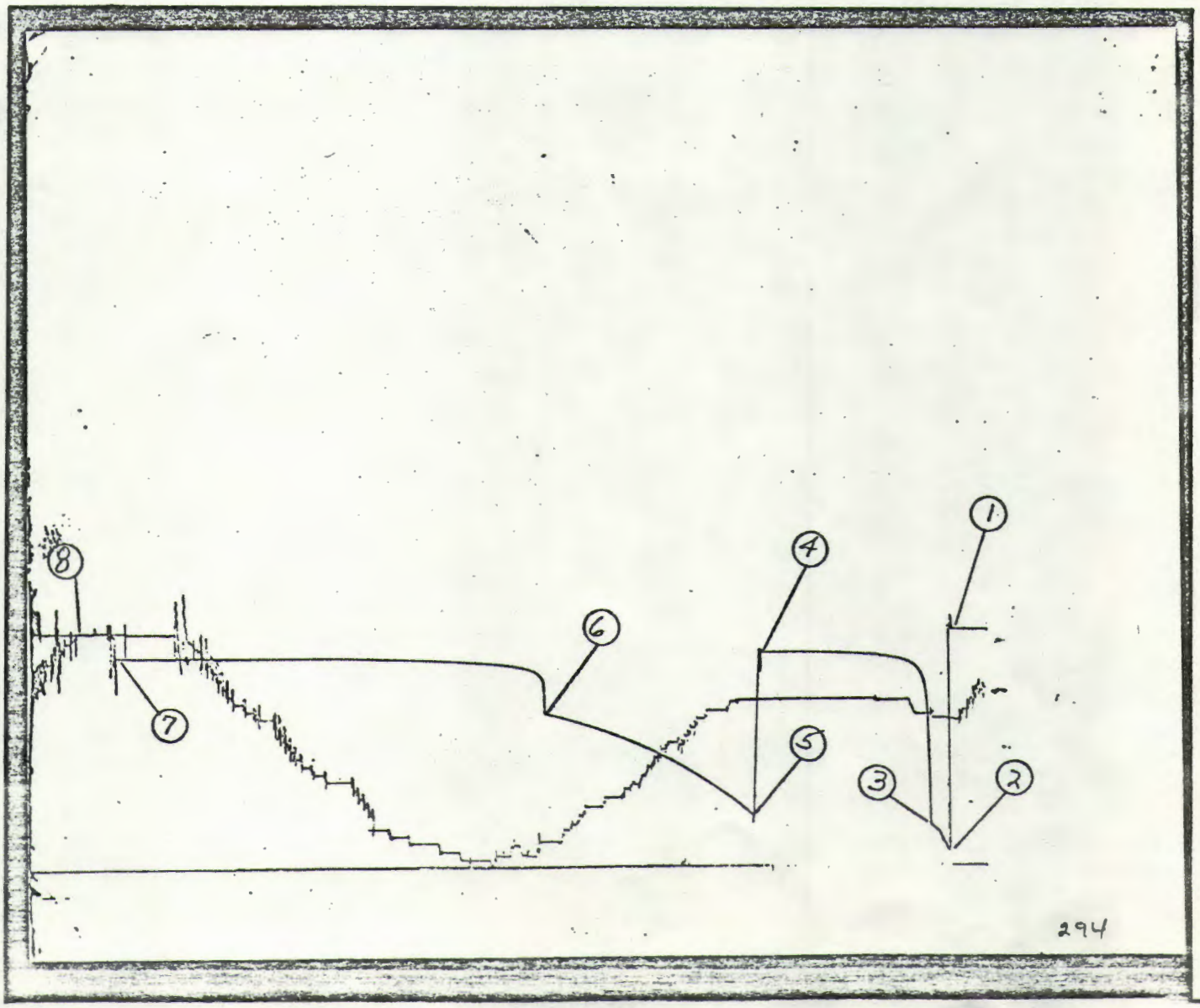
INSTRUMENT NO.: J-294 CAPACITY (P.S.I.): 4700# DEPTH 2847 FT.

PORT OPENING: OUTSIDE BOTTOM HOLE TEMP.: 157°F. FIELD REPORT NO. 09695 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	1360.0		
INITIAL FLOW (1)	2	76.6		
INITIAL FLOW (2)	3	226.7	5	5
INITIAL SHUT-IN	4	1233.4	45	46
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)	5	291.4		
FINAL FLOW (2)	6	888.1	60	59
FINAL SHUT-IN	7	1219.3	120	120
FINAL HYDROSTATIC MUD	8	1364.7		

REMARKS:

9+



JOHNSTON Schlumberger

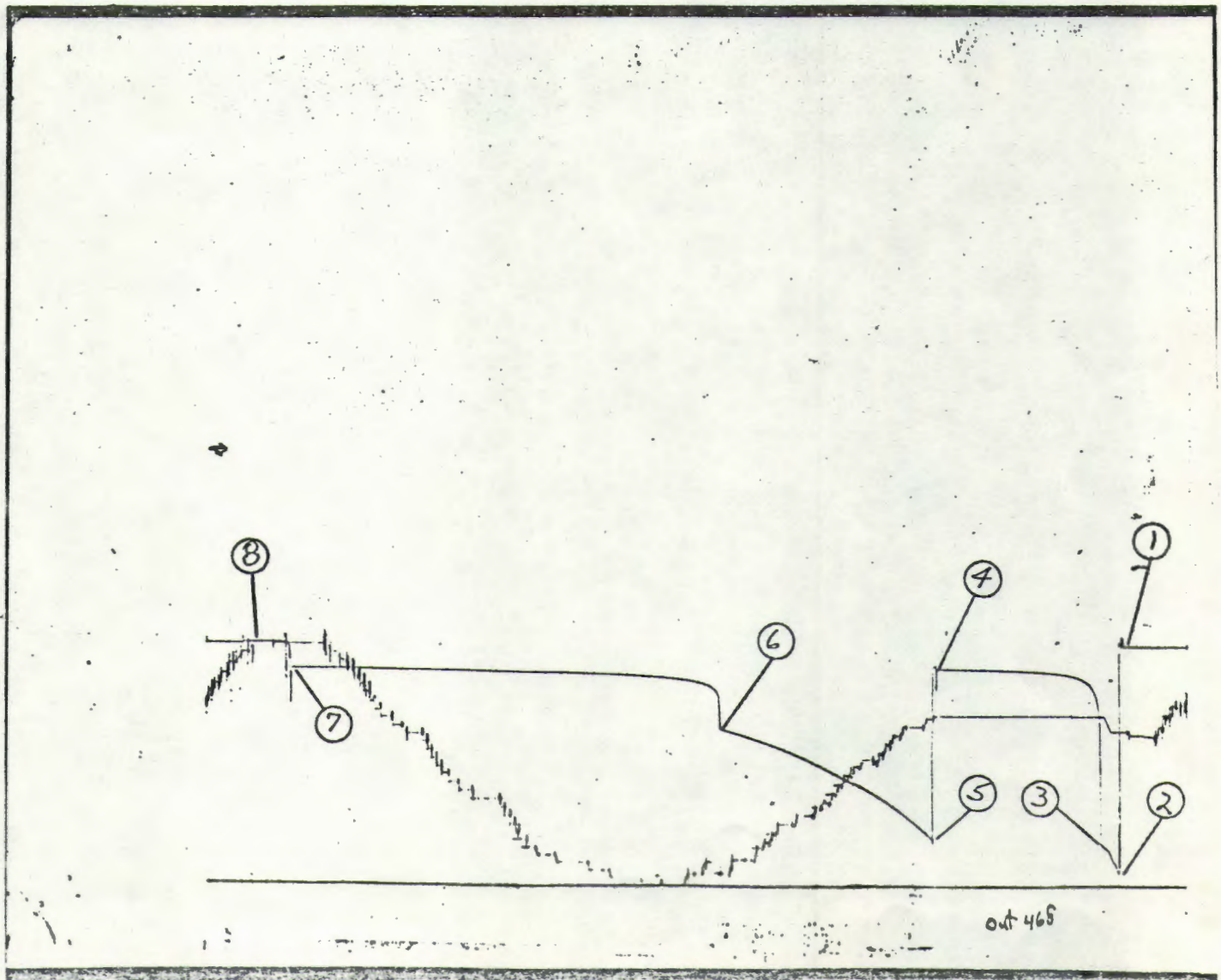
FIELD REPORT NO.: 09695 D

INSTRUMENT NO.: J-468

CAPACITY: 4700#

NO. OF REPORTS: 9+

PRESSURE DATA FROM THIS CHART IS PRESENTED ON NEXT PAGE



BOTTOM HOLE PRESSURE AND TIME DATA

JOHNSTON Schlumberger

INSTRUMENT NO.: J-468 CAPACITY(P.S.I.): 4700 DEPTH: 2851 FT.

PORT OPENING: OUTSIDE BOTTOM HOLE TEMP.: 157

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	1375.7		
INITIAL FLOW(1)	2	79.0		
INITIAL FLOW(2)	3	239.9	5	5
INITIAL SHUT-IN	4	1243.0	45	46
FINAL FLOW(1)	5	265.3		
FINAL FLOW(2)	6	897.7	60	59
FINAL SHUT-IN	7	1234.6	120	120
FINAL HYDROSTATIC MUD	8	1381.4		

INCREMENTAL READINGS

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
1		1375.7				HYDROSTATIC MUD
2	0	79.0				INITIAL FLOW(1)
3	5	239.9				INITIAL FLOW(2)
3	0	239.9				STARTED SHUT-IN
	3	1136.7	2.667	0.426	896.8	
	6	1186.6	1.833	0.263	946.6	
	9	1206.3	1.556	0.192	966.4	
	12	1217.6	1.417	0.151	977.7	
	15	1225.2	1.333	0.125	985.2	
	18	1228.9	1.278	0.106	989.0	
	21	1232.7	1.238	0.093	992.8	
	24	1235.5	1.208	0.082	995.6	
	27	1238.3	1.185	0.074	998.4	
	30	1239.3	1.167	0.067	999.3	
	33	1240.2	1.152	0.061	1000.3	
	36	1241.2	1.139	0.056	1001.2	
	39	1242.1	1.128	0.052	1002.2	
	42	1242.1	1.119	0.049	1002.2	
	45	1243.0	1.111	0.046	1003.1	
4	46	1243.0	1.109	0.045	1003.1	INITIAL SHUT-IN
5	0	265.3				FINAL FLOW(1)
	5	359.4				
	10	439.4				
	15	509.1				
	20	572.1				
	25	630.4				
	30	681.3				
	35	727.4				
	40	770.7				
	45	809.2				
	50	843.1				
	55	875.1				
6	59	897.7				FINAL FLOW(2)
6	0	897.7				STARTED SHUT-IN
	1	1101.9	65.000	1.813	204.2	

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
	2	1125.4	33.000	1.519	227.7	
	3	1139.5	22.333	1.349	241.8	
	4	1148.9	17.000	1.230	251.2	
	5	1156.5	13.800	1.140	258.8	
	6	1161.2	11.667	1.067	263.5	
	7	1166.8	10.143	1.006	269.1	
	8	1170.6	9.000	0.954	272.9	
	9	1174.3	8.111	0.909	276.7	
	10	1177.2	7.400	0.869	279.5	
	12	1182.8	6.333	0.802	285.1	
	14	1186.6	5.571	0.746	288.9	
	16	1190.3	5.000	0.699	292.7	
	18	1194.1	4.556	0.659	296.4	
	20	1196.9	4.200	0.623	299.2	
	22	1198.8	3.909	0.592	301.1	
	24	1201.6	3.667	0.564	303.9	
	26	1203.5	3.462	0.539	305.8	
	28	1205.4	3.286	0.517	307.7	
	30	1206.3	3.133	0.496	308.6	
	35	1211.0	2.829	0.452	313.4	
	40	1213.9	2.600	0.415	316.2	
	45	1216.7	2.422	0.384	319.0	
	50	1218.6	2.280	0.358	320.9	
	55	1220.5	2.164	0.335	322.8	
	60	1221.4	2.067	0.315	323.7	
	65	1223.3	1.985	0.298	325.6	
	70	1225.2	1.914	0.282	327.5	
	75	1226.1	1.853	0.268	328.4	
	80	1227.0	1.800	0.255	329.4	
	85	1228.0	1.753	0.244	330.3	
	90	1228.9	1.711	0.233	331.2	
	95	1229.9	1.674	0.224	332.2	
	100	1230.8	1.640	0.215	333.1	
	105	1231.7	1.610	0.207	334.1	
	110	1232.7	1.582	0.199	335.0	
	115	1233.6	1.557	0.192	335.9	
7	120	1234.6	1.533	0.186	336.9	FINAL SHUT-IN
8		1381.4				HYDROSTATIC MUD

JOHNSTON

PRESSURE LOG*

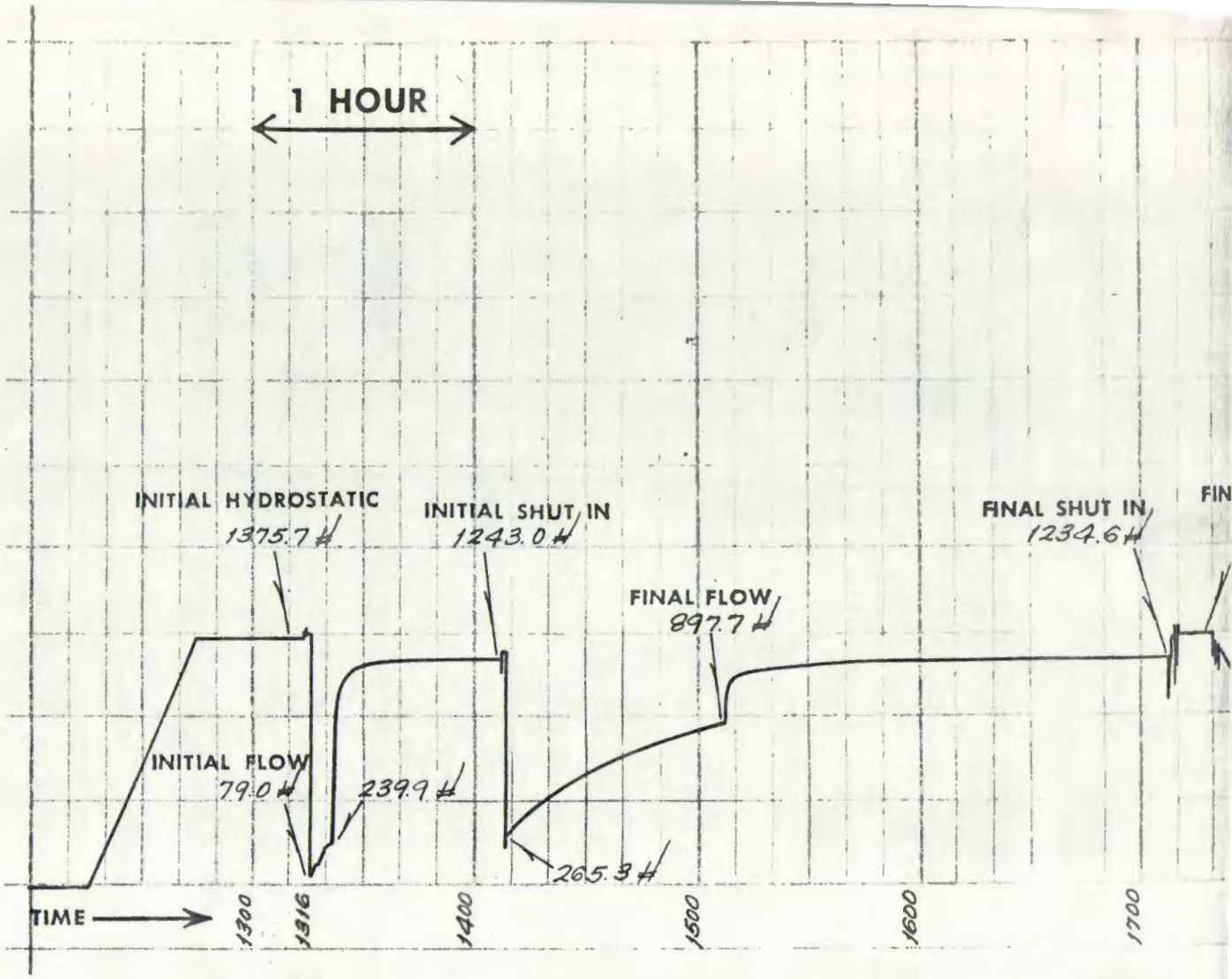
Field Report No. 09695 D

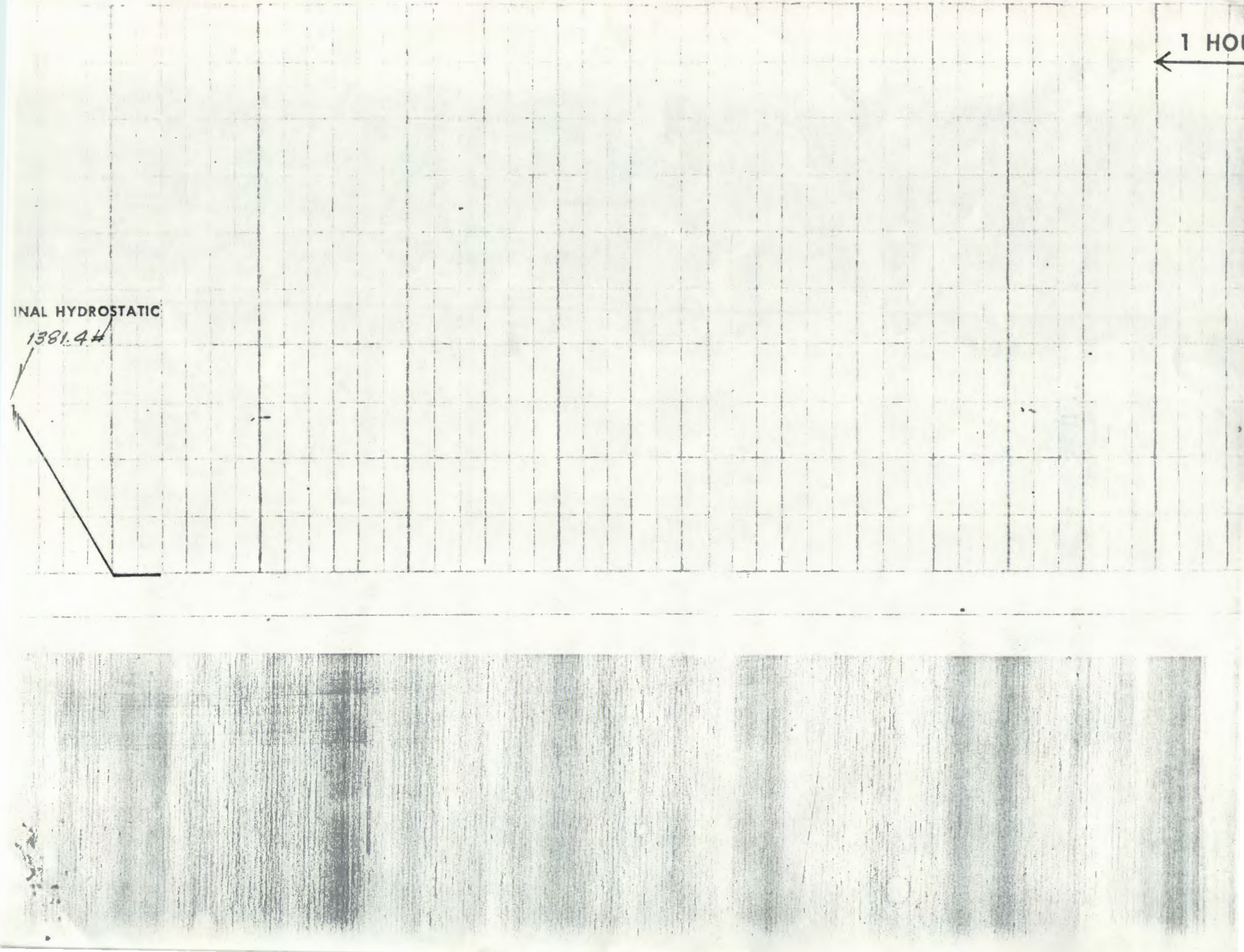
Instrument: Number J. 468

Capacity 4700 p.s.i.

Depth 2851 ft.

*a continuous tracing of the original chart




1 HOU
INAL HYDROSTATIC
1381.4#

Phone
522-1206 Area 303

LYNES, INC.

DST 4

Box 712
Sterling, Colo. 80751

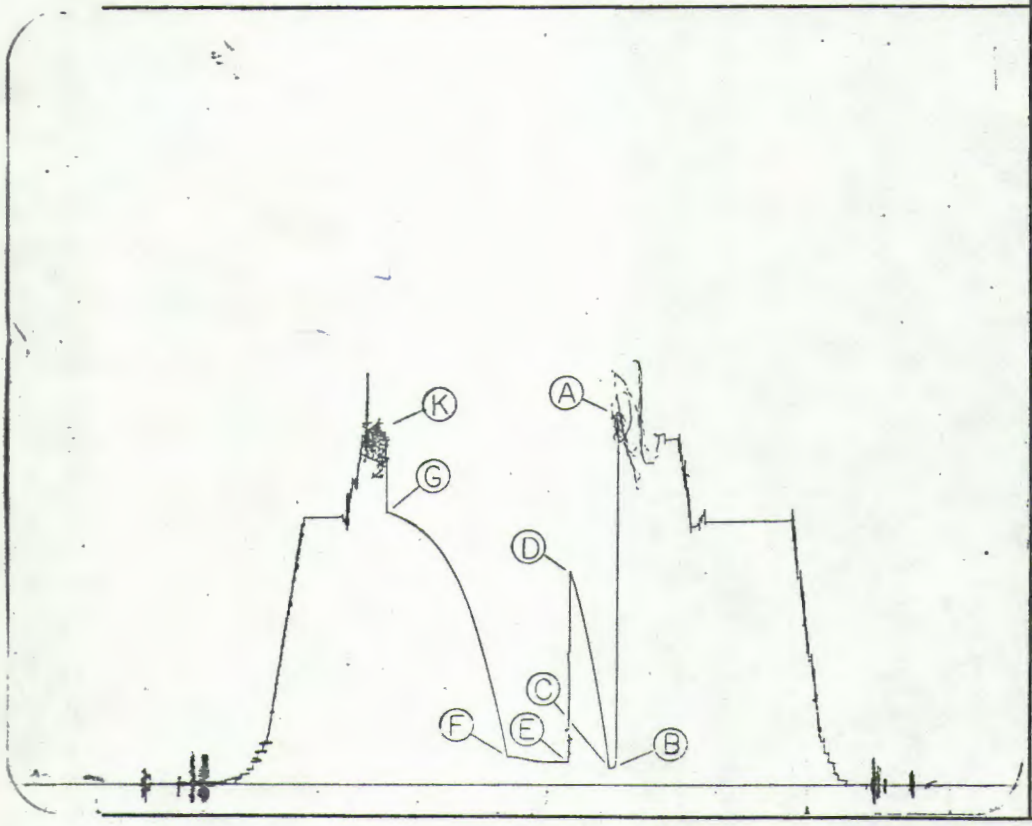
GR

Contractor	Dual Drlg. Co.
Rig No.	3
Spot	NW-SE
Sec.	30
Twp.	38 N
Rng.	61 E
Field	Wildcat
County	Elko
State	Nevada
Elevation	5503' "Ground"
Formation	Indian Wells

Top Choke	1/4"
Bottom Choke	3/4"
Size Hole	8 3/4"
Size Rat Hole	--
Size & Wt. D. P.	4 1/2" 16.60
Size Wt. Pipe	--
I. D. of D. C.	2 1/4"
Length of D. C.	447'
Total Depth	3594'
Interval Tested	3515-3545'
Type of Test	Conventional Straddle

Flow No. 1	10 Min.
Shut-in No. 1	60 Min.
Flow No. 2	90 Min.
Shut-in No. 2	180 Min.
Flow No. 3	-- Min.
Shut-in No. 3	-- Min.
Bottom Hole Temp.	154° F
Mud Weight	9.3
Gravity	--
Viscosity	35

Tool opened @ 5:12 AM.



Inside Recorder

PRD Make Kuster AK-1
No. 3697 Cap. 3700 @ 3488'

Press		Corrected
Initial Hydrostatic	A	1663
Final Hydrostatic	K	1649
Initial Flow	B	89
Final Initial Flow	C	81
Initial Shut-in	D	1032
Second Initial Flow	E	111
Second Final Flow	F	134
Second Shut-in	G	1322
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist.: Rock Springs, Wy.
Our Tester: John Webb
Witnessed By: --

Did Well Flow – Gas Yes Oil No Water No

RECOVERY IN PIPE: 275' Gas cut mud = 1.35 bbl.

1st Flow - Tool opened with a fair blow, increased to bottom of bucket in 1 minute, and to 6 psig in 10 minutes.

2nd Flow - Tool opened with a strong blow. Gas to surface in 16 minutes, see gas volume report.

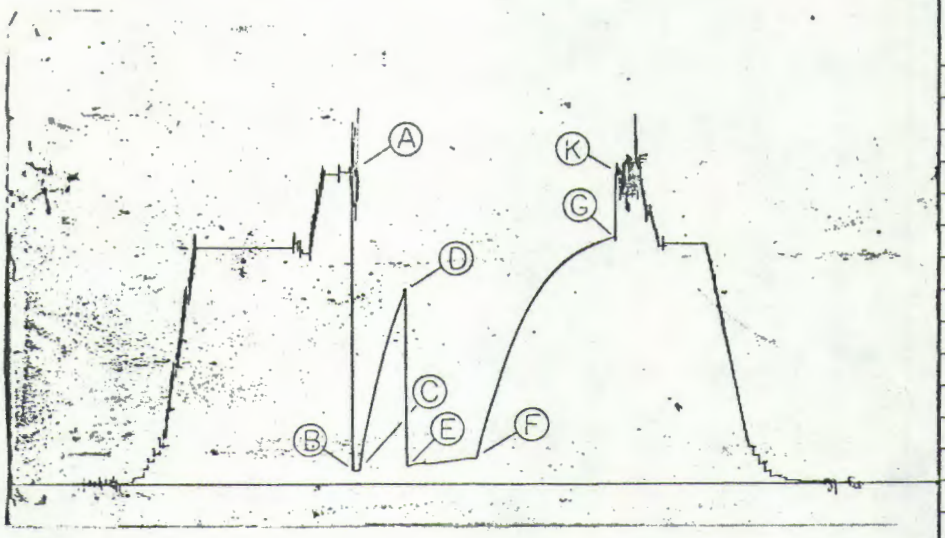
REMARKS:

Operator Shell Oil Co. c/o D.S. Cushman
Address 1700 Broadway Denver, Colorado 80202
Well Name and No. Federal #1
Ticket No. 10301
Date 12-27-77
DST No. 4
No. Final Copies 5

Form 1

LYNES, INC.

Operator Shell Oil Co. Lease & No. Federal #1 DST No. 4

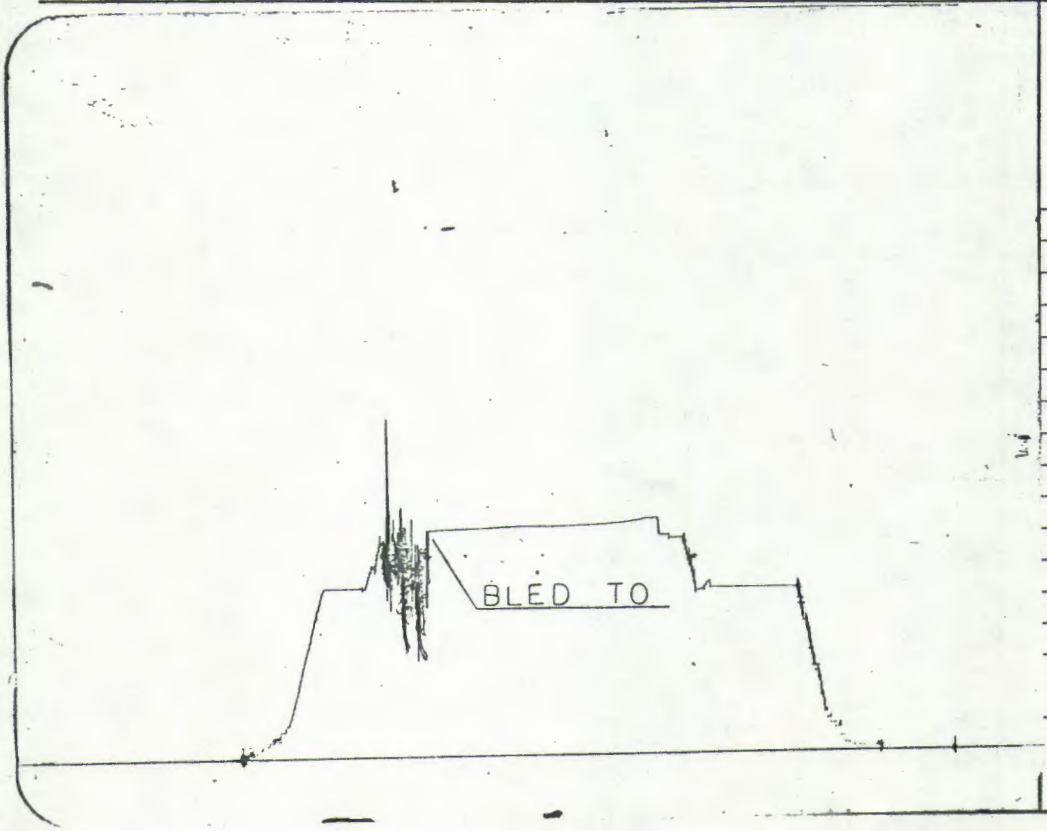


Inside Recorder

PRD Make Kuster K-3

No. 13723 Cap. 2500 @ 3493'

Press		Corrected
Initial Hydrostatic	A	1684
Final Hydrostatic	K	1660
Initial Flow	B	72
Final Initial Flow	C	69
Initial Shut-in	D	1038
Second Initial Flow	E	93
Second Final Flow	F	137
Second Shut-in	G	1335
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--
Pressure Below Bottom Packer Bled To		



PRD Make Kuster AK-1

No. 5563 Cap. 6100 @ 3592'

Press		Corrected
Initial Hydrostatic	A	
Final Hydrostatic	K	
Initial Flow	B	
Final Initial Flow	C	
Initial Shut-in	D	
Second Initial Flow	E	
Second Final Flow	F	
Second Shut-in	G	
Third Initial Flow	H	
Third Final Flow	I	
Third Shut-in	J	
Pressure Below Bottom Packer Bled To		1803

Form 3

LYNES INC.

REPORT # 65

WELL NAME - FEDERAL 1

WELL OPERATOR - SHELL OIL CO.

DST NUMBER - 4

RECORDER NUMBER - 3697

FIRST SHUT IN PRESSURE

TIME(MIN) PHI	(T+PHI) /PHI	PSIG
.0	.0000	81
5.0	3.0000	209
10.0	2.0000	315
15.0	1.6667	413
20.0	1.5000	500
25.0	1.4000	583
30.0	1.3333	658
35.0	1.2857	738
40.0	1.2500	807
45.0	1.2222	870
50.0	1.2000	929
55.0	1.1818	982
60.0	1.1667	1032

LYNES INC.

REPORT # 65

WELL NAME - FEDERAL 1

WELL OPERATOR - SHELL OIL CO.

DST NUMBER - 4

RECORDER NUMBER - 3697

SECOND SHUT IN PRESSURE

TIME(MIN) PHI	(T+PHI) /PHI	PSIG
.0	.0000	134
10.0	11.0000	295
20.0	6.0000	430
30.0	4.3333	557
40.0	3.5000	677
50.0	3.0000	785
60.0	2.6667	882
70.0	2.4286	961
80.0	2.2500	1029
90.0	2.1111	1087
100.0	2.0000	1136
110.0	1.9091	1174
120.0	1.8333	1208
130.0	1.7692	1235
140.0	1.7143	1259
150.0	1.6667	1279
160.0	1.6250	1295
170.0	1.5882	1310
180.0	1.5556	1322

FITTED LINE: LOG((TO+PHI)/PHI) = -.00072 PSIG + 1.14092

EXTRAPOLATION OF SECOND SHUT IN = 1589.30 M = 1393.00

Extrapolations of reservoir pressures should be used as indicators only.

LYNES, INC.

Operator Shell Oil Co. Lease & No. Federal #1 DST No. 4

2nd Flow:

Min.	PSIG	Orifice Size	MCF/D	Min.	PSIG	Orifice Size	MCF/D
16	13.0	1/4"	35.90				
17	12.0	"	34.00				
18	11.5	"	33.20				
19	11.0	"	32.40				
20	10.5	"	31.40				
25	8.0	"	27.00				
30	7.5	"	26.10				
35	8.0	"	27.00				
40	9.0	"	29.00				
50	10.0	"	30.80				
60	11.5	"	33.20				
70	14.0	"	37.60				
80	13.0	"	35.90				
90	8.0	"	27.00				

Remarks:

Form 4

LYNES, INC.

Fluid Sample Report

Date 12-27-77 Ticket No. 10301

Company Shell Oil Co. DST No. 4

Well Name & No. Federal #1 State Nevada

County Elko Test Interval 3515-3545'

Pressure in Sampler 60 PSIG BHT 154 °F

Total Volume of Sampler: 2100 cc.

Total Volume of Sample: 2000 cc.

Oil: None cc.

Water: None cc.

Mud: 2000 with a trace of gas cc.

Gas: -- cu. ft.

Other: None

R.W. Sample 3.5 @ 55° F = 2000 ppm. chl.

Resistivity

Make Up Water 10.0 @ 115° F of Chloride Content 350 ppm.

Mud Pit Sample 1.3 @ 70° F of Chloride Content 4600 ppm.

Gas/Oil Ratio Gravity °API @ °F

Where was sample drained On location.

Remarks: Recovery:

Top Sample R.W. 1.5 @ 80° F = 3500 ppm. chl.

Middle Sample R.W. 2.0 @ 80° F = 2500 ppm. chl.

Bottom Sample R.W. 2.5 @ 70° F = 2300 ppm. chl.

Form 5

DST 5

JOHNSTON

Schlumberger

technical report

F. R. #09697 D

COMPANY SHELL OIL COMPANY WELL MARY'S RIVER AREA FEDERAL #1 TEST NO. 5 COUNTY ELKO STATE NEVADA

JOHNSTON
Schlumberger

SURFACE INFORMATION

Description (Rate of Flow)	Time	Pressure (P.S.I.G.)	Surface Choke
Opened Tool	0715	–	1/8''
SLIGHT BUBBLES INCREASING			
BLOW, 1/4'' IN WATER	0720	–	''
DECREASING			
SLIGHT BUBBLES	0725	–	''
CLOSED FOR INITIAL SHUT-IN	0725	–	''
FINISHED SHUT-IN	0825	–	''
RE-OPENED TOOL, SLIGHT BUBBLES	0827	–	''
BLOW DIED	0830	–	''
SLIGHT BUBBLES FOR BALANCE	0900	–	''
OF TEST			
CLOSED FOR FINAL SHUT-IN	1012	–	''
PULLED PACKER LOOSE	1035	–	–

Cushion Type	Amount	Pressure	Bottom Choke Size
	–		15/16''

MUD DATA

Mud Type LOW LIME MUD Wt. 9.4
Viscosity 35 Water Loss 8.2 C.C.
Resist: of Mud 2.5 @ 48 °F; of Filtrate 3.0 @ 48 °F
Chloride Content 800 PPM

EQUIPMENT & HOLE DATA

Type Test M. F. E. OPEN HOLE
Formation Tested ELKO
Elevation 5500 G.L. Ft.
Net Productive Interval 56 Ft.
Estimated Porosity %
All Depths Measured From KELLY BUSHING
Total Depth 7271 Ft.
Main Hole/Casing Size 8 3/4''
Rat Hole/Liner Size –
Drill Collar Length 628' I.D. 2.25''
Drill Pipe Length 6550' I.D. 3.80''
Packer Depth(s) 7211 & 7215 Ft.

MULTI-FLOW EVALUATOR
FLUID SAMPLE DATA

Sampler Pressure 0 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas –
cc. Oil –
cc. Water –
cc. Mud 2500
Tot. Liquid cc. 2500
Gravity – °API @ – °F.
Gas/Oil Ratio – cu. ft./bbl.

		RESISTIVITY		CHLORIDE CONTENT
Recovery Water	–	@ – °F.	–	ppm
Recovery Mud	2.7	@ 54 °F.		
Recovery Mud Filtrate	3.0	@ 54 °F.	800	ppm
Mud Pit Sample	2.5	@ 48 °F.		
Mud Pit Sample Filtrate	3.0	@ 48 °F.	800	ppm

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY	RESISTIVITY	CHL. PPM
DRILLING MUD	100	.49			100	@ °F.	2.7 @ 50 °F.	800
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

Remarks:

Address P.O. BOX 576; HOUSTON, TEXAS 77001

Company SHELL OIL COMPANY Field WILD CAT
Well MARY'S RIVER AREA FEDERAL #1 Location SEC. 30 - T38N - R61E
Test Interval 7215' TO 7271' Test # 5 Date 1-9-78

County ELKO State NEVADA Field Report No. 09697 D
Technician RICHARDS (VERNAL) Test Approved By MR. GRADY, JR. No. Reports Requested 9XX

JOHNSTON Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

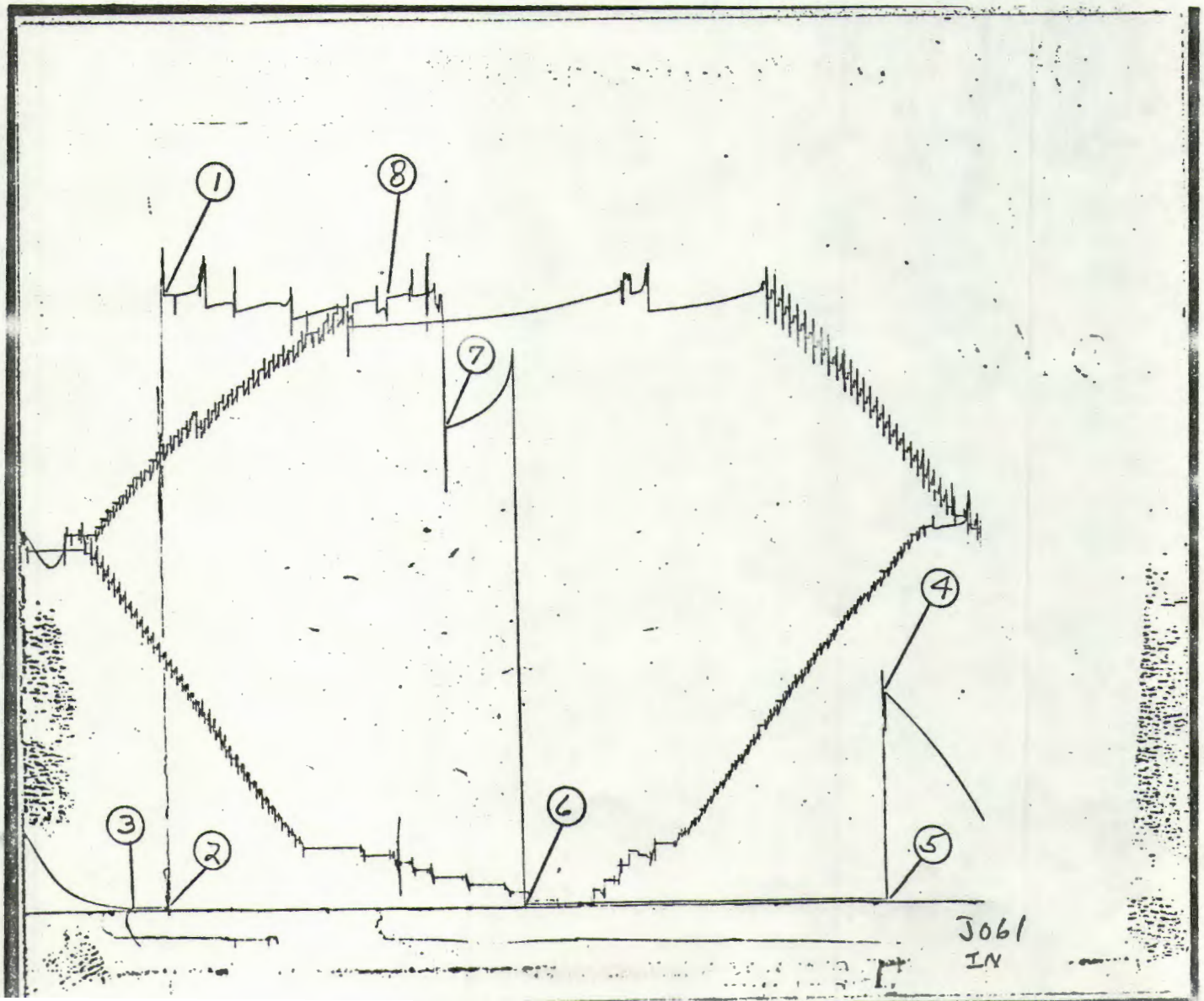
INSTRUMENT NO.: J-061 CAPACITY (P.S.I.): 4700# DEPTH 7217 FT.

PORT OPENING: INSIDE BOTTOM HOLE TEMP.: 215 °F. FIELD REPORT NO. 09697 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	3504.0		
INITIAL FLOW (1)	2	19.5		
INITIAL FLOW (2)	3	19.5	10	9
INITIAL SHUT-IN	4	1200.8	60	59
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)	5	22.3		
FINAL FLOW (2)	6	20.4	105	108
FINAL SHUT-IN	7	2731.9	23	22
FINAL HYDROSTATIC MUD	8	3475.2		

REMARKS: THE FINAL SHUT-IN IS NOT CONSIDERED A RELIABLE RESERVOIR VALUE DUE TO COMMUNICATIONS.

9+



JOHNSTON
Schlumberger

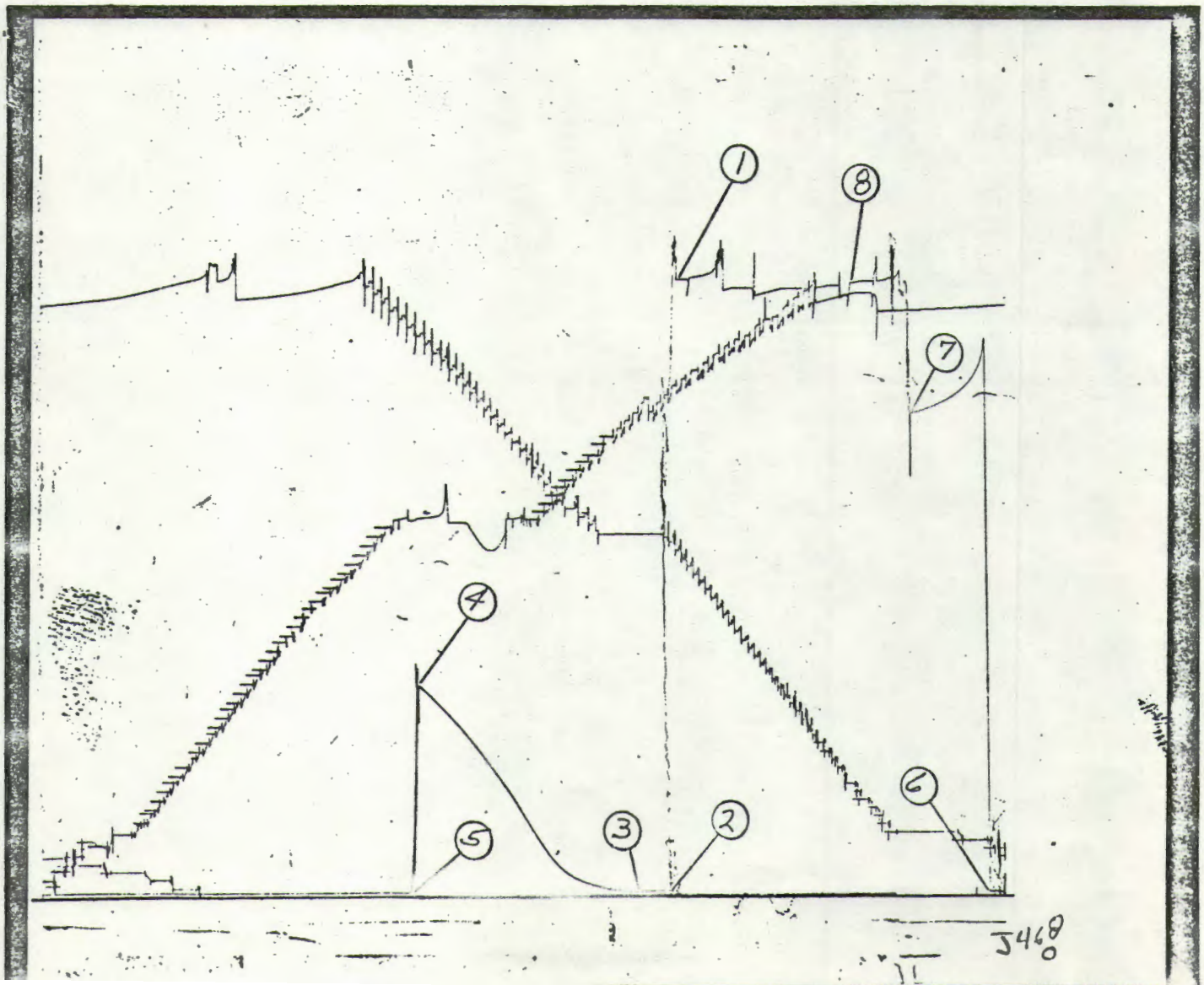
FIELD REPORT NO.: 09697 D

INSTRUMENT NO.: J-468

CAPACITY: 4700#

NO. OF REPORTS: 9+

PRESSURE DATA FROM THIS CHART IS PRESENTED ON NEXT PAGE



BOTTOM HOLE PRESSURE AND TIME DATA

JOHNSTON Schlumberger

INSTRUMENT NO.: J-468 CAPACITY(P.S.I.): 4700 DEPTH: 7221 FT.

PORT OPENING: OUTSIDE BOTTOM HOLE TEMP.: 215

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	3523.3		
INITIAL FLOW(1)	2	35.4		
INITIAL FLOW(2)	3	35.4	10	9
INITIAL SHUT-IN	4	1208.9	60	59
FINAL FLOW(1)	5	27.0		
FINAL FLOW(2)	6	28.9	105	108
FINAL SHUT-IN	7	2757.2	23	22
FINAL HYDROSTATIC MUD	8	3502.8		

THE FINAL SHUT-IN IS NOT CONSIDERED A RELIABLE RESERVOIR VALUE DUE TO COMMUNICATIONS.

INCREMENTAL READINGS

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
1		3523.3				HYDROSTATIC MUD
2	0	35.4				INITIAL FLOW(1)
3	9	35.4				INITIAL FLOW(2)
3	0	35.4				STARTED SHUT-IN
	1	28.0	10.000	1.000	-7.5	
	2	31.7	5.500	0.740	-3.7	
	3	34.5	4.000	0.602	-0.9	
	4	37.3	3.250	0.512	1.9	
	5	40.1	2.800	0.447	4.7	
	6	42.9	2.500	0.398	7.5	
	7	45.7	2.286	0.359	10.3	
	8	49.4	2.125	0.327	14.0	
	9	54.1	2.000	0.301	18.6	
	10	58.7	1.900	0.279	23.3	
	12	69.9	1.750	0.243	34.5	
	14	83.0	1.643	0.216	47.5	
	16	100.7	1.562	0.194	65.2	
	18	124.9	1.500	0.176	89.5	
	20	155.7	1.450	0.161	120.2	
	22	196.7	1.409	0.149	161.3	
	24	249.8	1.375	0.138	214.4	
	26	309.5	1.346	0.129	274.0	
	28	374.7	1.321	0.121	339.3	
	30	442.8	1.300	0.114	407.3	
	35	613.3	1.257	0.099	577.9	
	40	764.3	1.225	0.088	728.9	
	45	898.5	1.200	0.079	863.1	
	50	1018.8	1.180	0.072	983.4	
	55	1127.8	1.164	0.066	1092.4	
4	59	1208.9	1.153	0.062	1173.5	INITIAL SHUT-IN
5	0	27.0				FINAL FLOW(1)
	10	27.0				

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
	20	27.0				
	30	27.0				
	40	27.0				
	50	27.0				
	60	27.0				
	70	27.0				
	80	28.9				
	90	28.9				
	100	28.9				
6	108	28.9				FINAL FLOW(2)
6	0	28.9				STARTED SHUT-IN
7	22	2757.2	6.318	0.801	2728.3	FINAL SHUT-IN
8		3502.8				HYDROSTATIC MUD

JOHNSTON Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

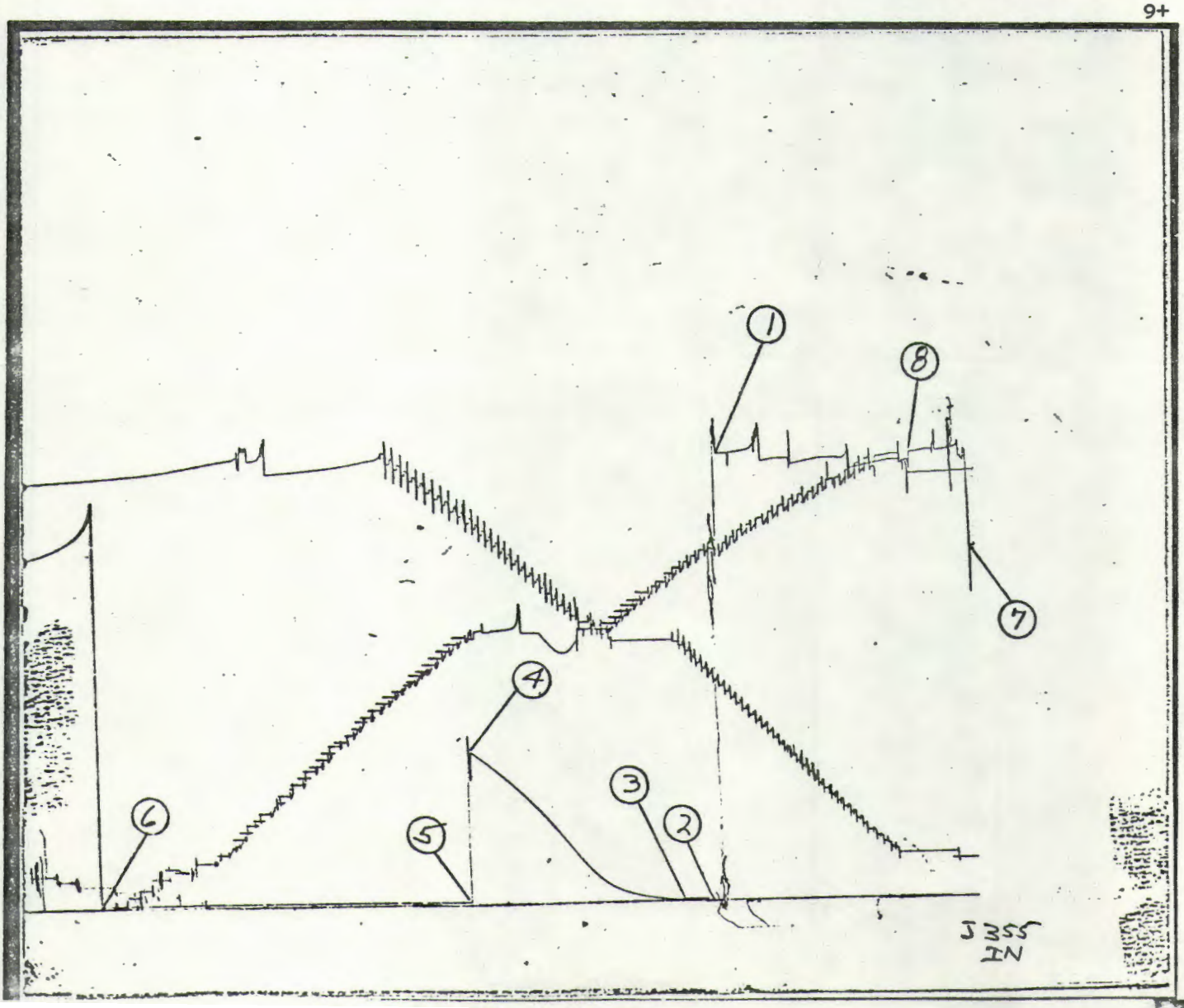
INSTRUMENT NO.: J-355 CAPACITY (P.S.I.): 6400# DEPTH 7232 FT.

PORT OPENING: INSIDE BOTTOM HOLE TEMP.: 215 °F. FIELD REPORT NO. 09697 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	3523.6		
INITIAL FLOW (1)	2	30.9		
INITIAL FLOW (2)	3	30.9	10	9
INITIAL SHUT-IN	4	1205.6	60	59
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)	5	30.9		
FINAL FLOW (2)	6	37.2	105	108
FINAL SHUT-IN	7	2761.0	23	22
FINAL HYDROSTATIC MUD	8	3506.1		

REMARKS: THE FINAL SHUT-IN IS NOT CONSIDERED A RELIABLE RESERVOIR VALUE DUE TO COMMUNICATIONS.

9+



JOHNSTON

PRESSURE LOG*

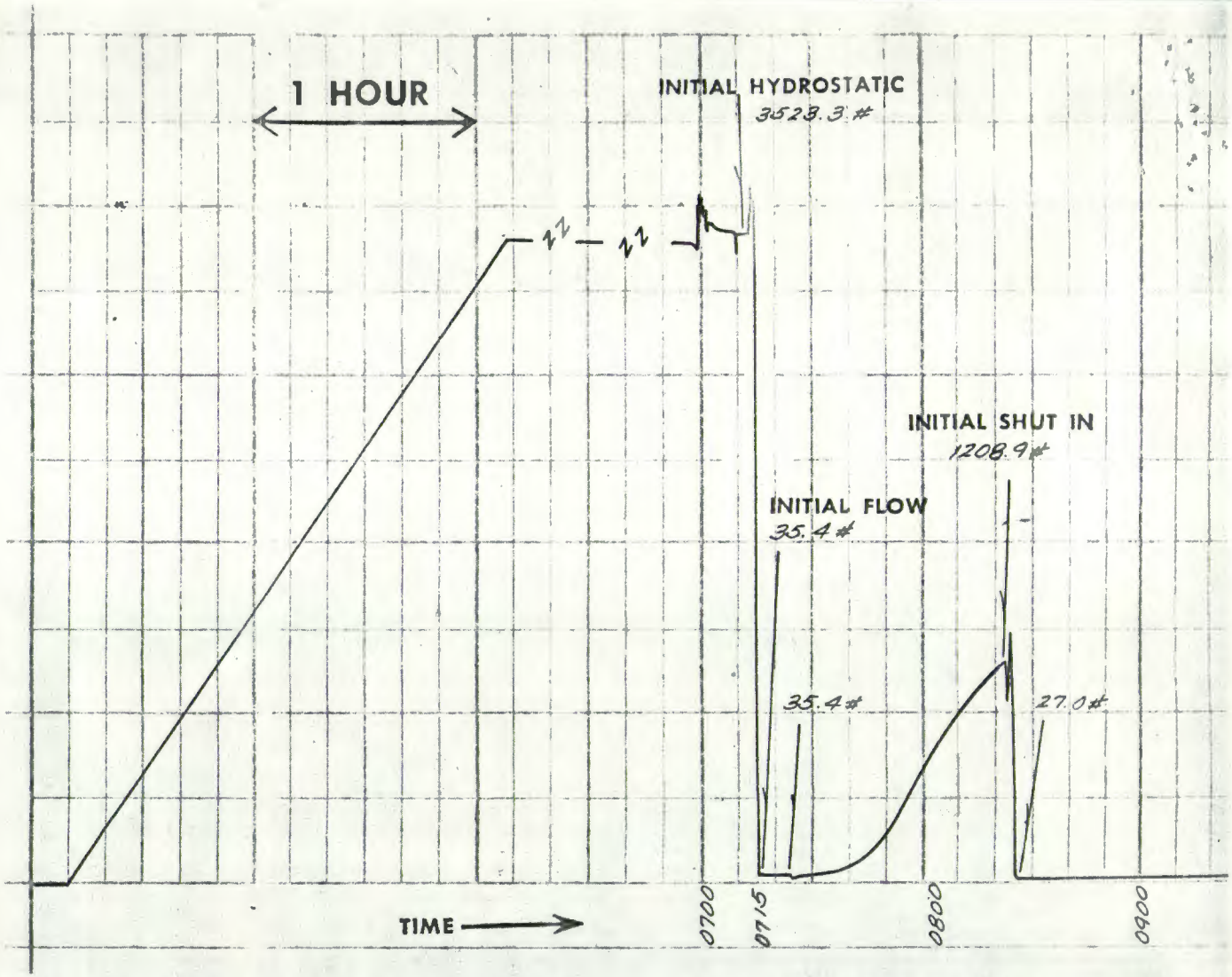
Field Report No. 09697 D

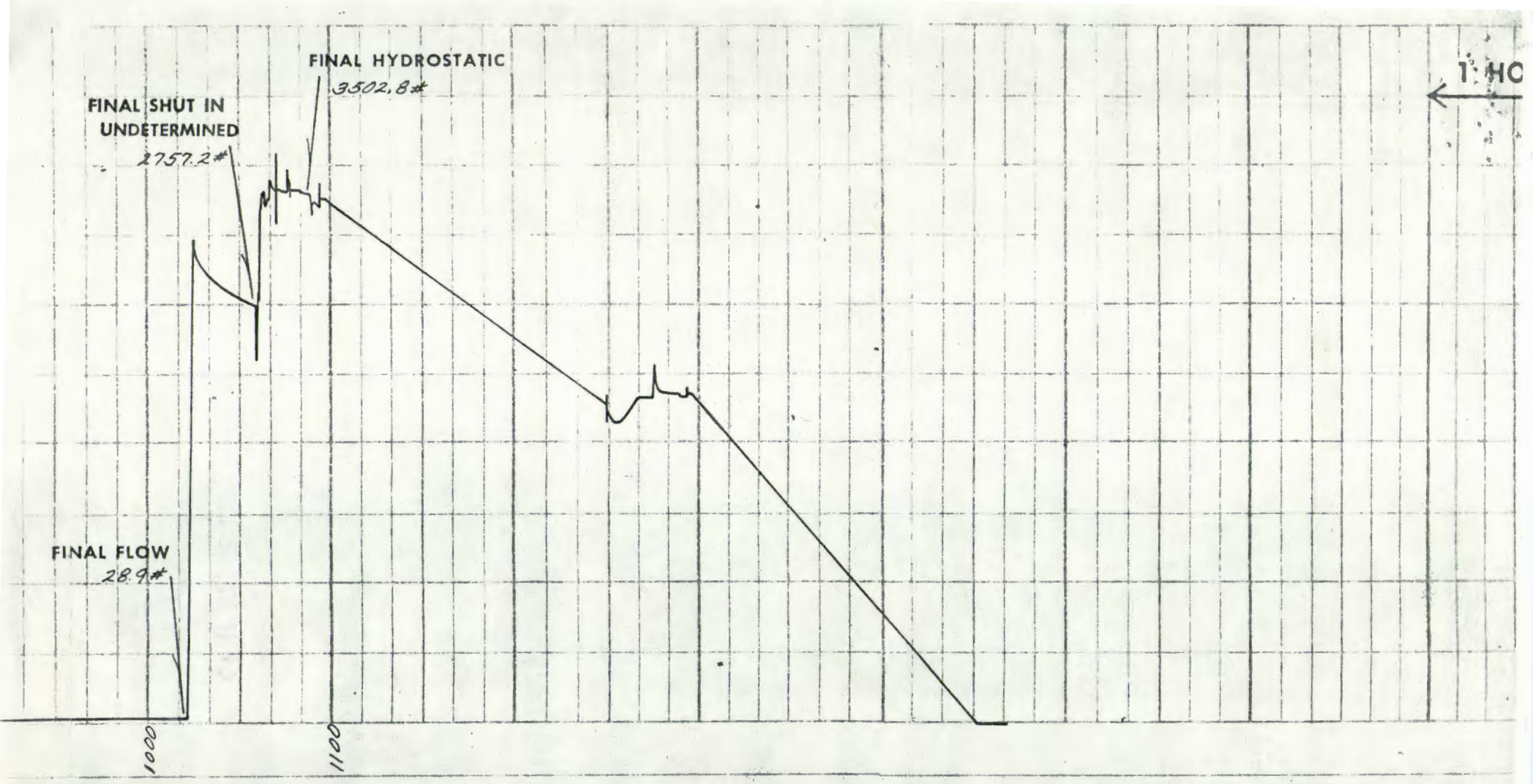
Instrument:
Number J-468

Capacity 4700 p.s.i.

Depth 7221 ft.

*a continuous tracing of the original chart




FINAL HYDROSTATIC
3502.8#
FINAL SHUT IN
UNDETERMINED
2757.2#
FINAL FLOW
28.9#
0001
0011

DST 6

JOHNSTON

Schlumberger

technical report

F. R. #09698 D

COMPANY SHELL OIL COMPANY WELL MARY'S RIVER AREA FEDERAL #1 TEST NO. 6 COUNTY ELKO STATE NEVADA

JOHNSTON
Schlumberger

SURFACE INFORMATION

Description (Rate of Flow)	Time	Pressure (P.S.I.G.)	Surface Choke
Opened Tool	0515	–	1/8''
BLOW, 1 1/4'' IN WATER			
INCREASED TO BLOW, 1 1/2''			
IN WATER	0518	–	''
CLOSED FOR INITIAL SHUT-IN	0525	–	''
FINISHED SHUT-IN	0625	–	''
RE-OPENED TOOL	0627	–	''
BLOW, 1/2'' IN WATER			
FOR BALANCE OF TEST			
CLOSED FOR FINAL SHUT-IN	0803	–	''
FINISHED SHUT-IN	1157	–	''
PULLED PACKER LOOSE	1200	–	–

Cushion Type	Amount	Pressure	Bottom Choke Size
	–		15/16''

MUD DATA

Mud Type LOW LIME MUD Wt. 9.4
Viscosity 41 Water Loss 7.2 C.C.
Resist: of Mud 2.7 @ 54 °F; of Filtrate 3.0 @ 54 °F
Chloride Content 800 PPM

EQUIPMENT & HOLE DATA

Type Test M. F. E. OPEN HOLE
Formation Tested ELKO
Elevation 5500 G.L. Ft.
Net Productive Interval 159 Ft.
Estimated Porosity 12 %
All Depths Measured From KELLY BUSHING
Total Depth 7365 Ft.
Main Hole/Casing Size 8 3/4''
Rat Hole/Liner Size –
Drill Collar Length 542' I.D. 2.25''
Drill Pipe Length 6630' I.D. 3.80''
Packer Depth(s) 7202 & 7206 Ft.

MULTI-FLOW EVALUATOR FLUID SAMPLE DATA

Sampler Pressure 0 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas –
cc. Oil 1
cc. Water –
cc. Mud 2050
Tot. Liquid cc. 2051
Gravity – °API @ – °F.
Gas/Oil Ratio – cu. ft./bbl.

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	– @ – °F.	– ppm
Recovery Mud	2.5 @ 57 °F.	
Recovery Mud Filtrate	2.7 @ 57 °F.	800 ppm
Mud Pit Sample	2.7 @ 54 °F.	
Mud Pit Sample Filtrate	3.0 @ 54 °F.	800 ppm

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY	RESISTIVITY	CHL. PPM
DRILLING MUD	230	1.13			100	@ °F.	2.5 @ 57 °F.	800
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

Remarks:

Address P.O. BOX 576; HOUSTON, TEXAS 77001

Company SHELL OIL COMPANY Field WILD CAT
Well MARY'S RIVER AREA FEDERAL #1 Location SEC. 30 - T38N - R61E
Test Interval 7206' TO 7365' Test # 6 Date 1-11-78

County ELKO State NEVADA
Technician RICHARDS(VERNAL) Test Approved By –

Field Report No. 09698 D
No. Reports Requested 9XX

JOHNSTON Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

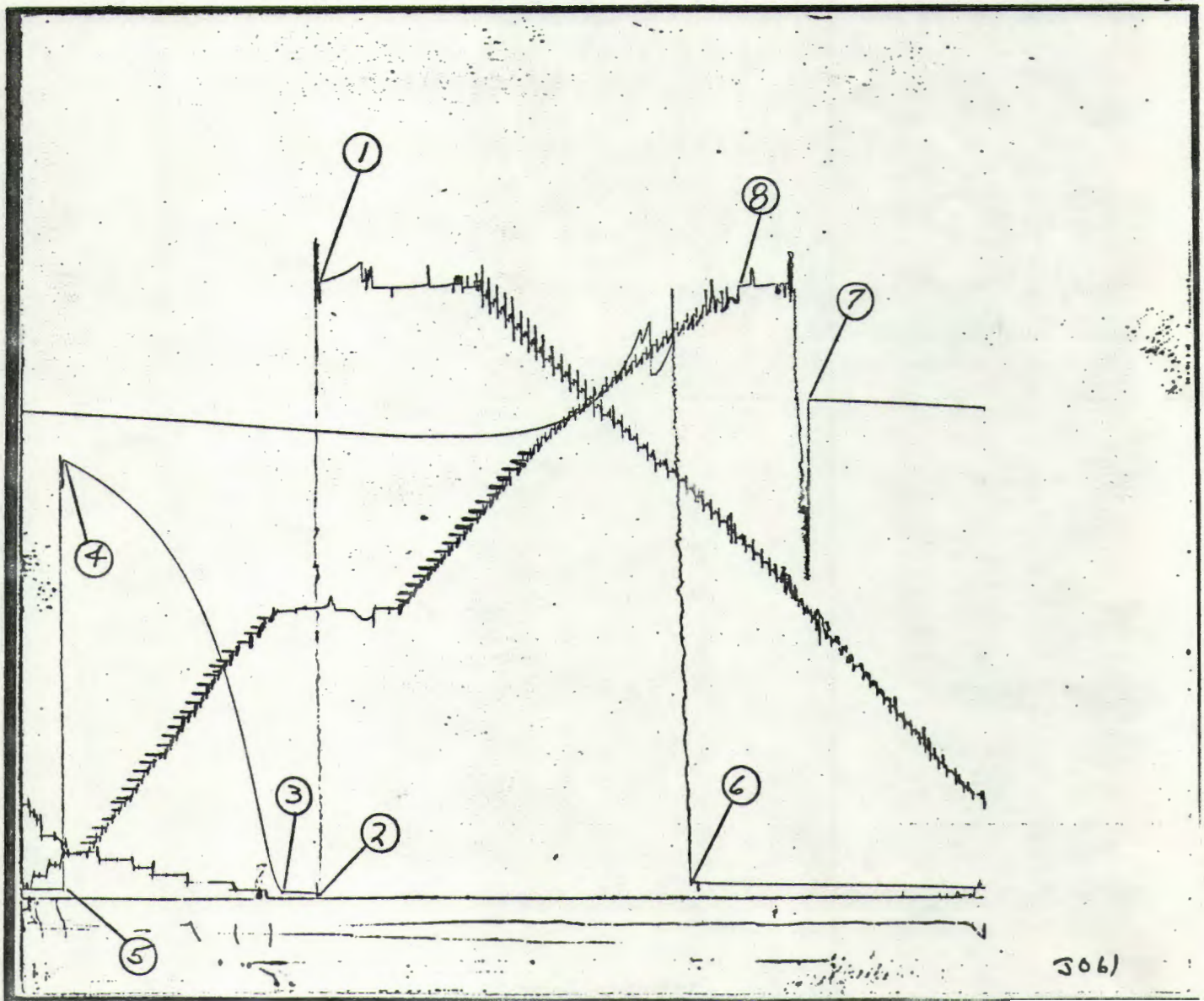
INSTRUMENT NO.: J-061 CAPACITY (P.S.I.): 4700# DEPTH 7208 FT.

PORT OPENING: INSIDE BOTTOM HOLE TEMP.: 208°F. FIELD REPORT NO. 09698 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	3521.2		
INITIAL FLOW (1)	2	25.1		
INITIAL FLOW (2)	3	40.0	10	11
INITIAL SHUT-IN	4	2510.7	60	61
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)	5	53.0		
FINAL FLOW (2)	6	91.2	96	92
FINAL SHUT-IN	7	2837.6	234	238
FINAL HYDROSTATIC MUD	8	3492.3		

REMARKS:

9+



JOHNSTON
Schlumberger

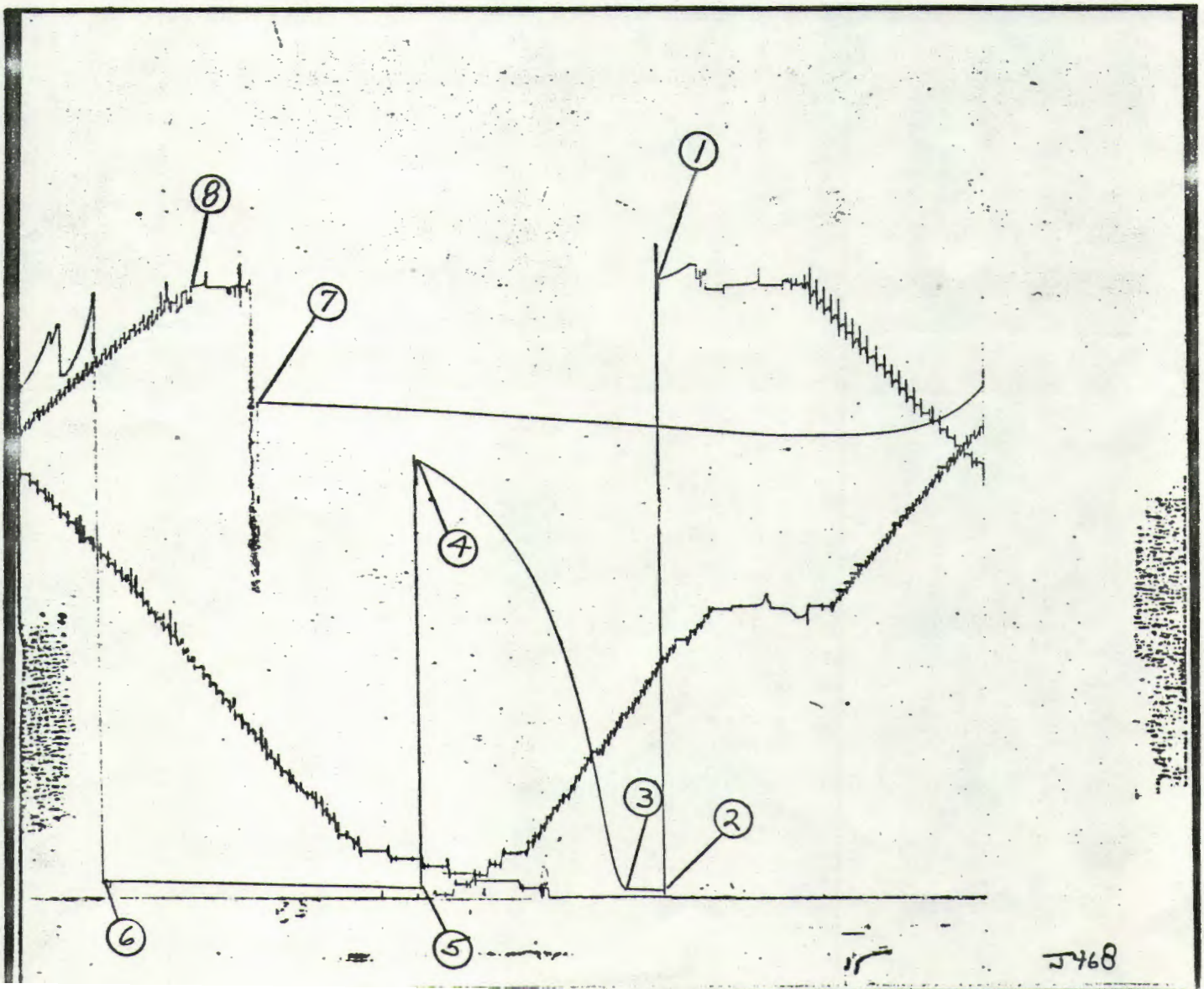
FIELD REPORT NO.: 09698 D

INSTRUMENT NO.: J-468

CAPACITY: 4700#

NO. OF REPORTS: 9+

PRESSURE DATA FROM THIS CHART IS PRESENTED ON NEXT PAGE



BOTTOM HOLE PRESSURE AND TIME DATA

JOHNSTON Schlumberger

INSTRUMENT NO.: J-468 CAPACITY(P.S.I.): 4700 DEPTH: 7212 FT.

PORT OPENING: OUTSIDE BOTTOM HOLE TEMP.: 208

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	3555.5		
INITIAL FLOW(1)	2	48.5		
INITIAL FLOW(2)	3	56.0	10	11
INITIAL SHUT-IN	4	2522.4	60	61
FINAL FLOW(1)	5	65.3		
FINAL FLOW(2)	6	105.5	96	92
FINAL SHUT-IN	7	2854.7	234	238
FINAL HYDROSTATIC MUD	8	3522.8		

INCREMENTAL READINGS

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
1		3555.5				HYDROSTATIC MUD
2	0	48.5				INITIAL FLOW(1)
	5	53.2				
	10	56.0				
3	11	56.0				INITIAL FLOW(2)
3	0	56.0				STARTED SHUT-IN
	5	213.7	3.200	0.505	157.7	
	10	698.0	2.100	0.322	642.0	
	15	1138.5	1.733	0.239	1082.5	
	20	1466.1	1.550	0.190	1410.1	
	25	1714.3	1.440	0.158	1658.3	
	30	1908.4	1.367	0.136	1852.4	
	35	2061.4	1.314	0.119	2005.4	
	40	2183.7	1.275	0.106	2127.7	
	45	2285.4	1.244	0.095	2229.4	
	50	2369.4	1.220	0.086	2313.4	
	55	2442.2	1.200	0.079	2386.2	
	60	2501.9	1.183	0.073	2445.9	
4	61	2522.4	1.180	0.072	2466.4	INITIAL SHUT-IN
5	0	65.3				FINAL FLOW(1)
	5	67.2				
	10	70.0				
	15	72.8				
	20	75.6				
	25	78.4				
	30	79.3				
	35	82.1				
	40	84.0				
	45	86.8				
	50	87.7				
	55	89.6				
	60	92.4				
	65	95.2				
	70	95.2				
	75	98.0				

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
	80	99.9				
	85	101.7				
	90	102.7				
6	92	105.5				FINAL FLOW(2)
6	0	105.5				STARTED SHUT-IN
	10	2920.9	11.300	1.053	2815.5	
	20	2800.5	6.150	0.789	2695.1	
	30	2900.4	4.433	0.647	2794.9	
	40	2756.7	3.575	0.553	2651.2	
	50	2692.3	3.060	0.486	2586.8	
	60	2665.2	2.717	0.434	2559.8	
	70	2657.8	2.471	0.393	2552.3	
	80	2657.8	2.287	0.359	2552.3	
	90	2661.5	2.144	0.331	2556.0	
	100	2675.5	2.030	0.307	2570.0	
	110	2690.4	1.936	0.287	2585.0	
	120	2707.2	1.858	0.269	2601.8	
	130	2722.1	1.792	0.253	2616.7	
	140	2737.1	1.736	0.239	2631.6	
	150	2752.9	1.687	0.227	2647.5	
	160	2766.9	1.644	0.216	2661.5	
	170	2780.0	1.606	0.206	2674.6	
	180	2793.1	1.572	0.197	2687.6	
	190	2806.1	1.542	0.188	2700.7	
	200	2816.4	1.515	0.180	2710.9	
	210	2827.6	1.490	0.173	2722.1	
	220	2837.9	1.468	0.167	2732.4	
	230	2848.1	1.448	0.161	2742.7	
7	238	2854.7	1.433	0.156	2749.2	FINAL SHUT-IN
8		3522.8				HYDROSTATIC MUD

JOHNSTON
Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

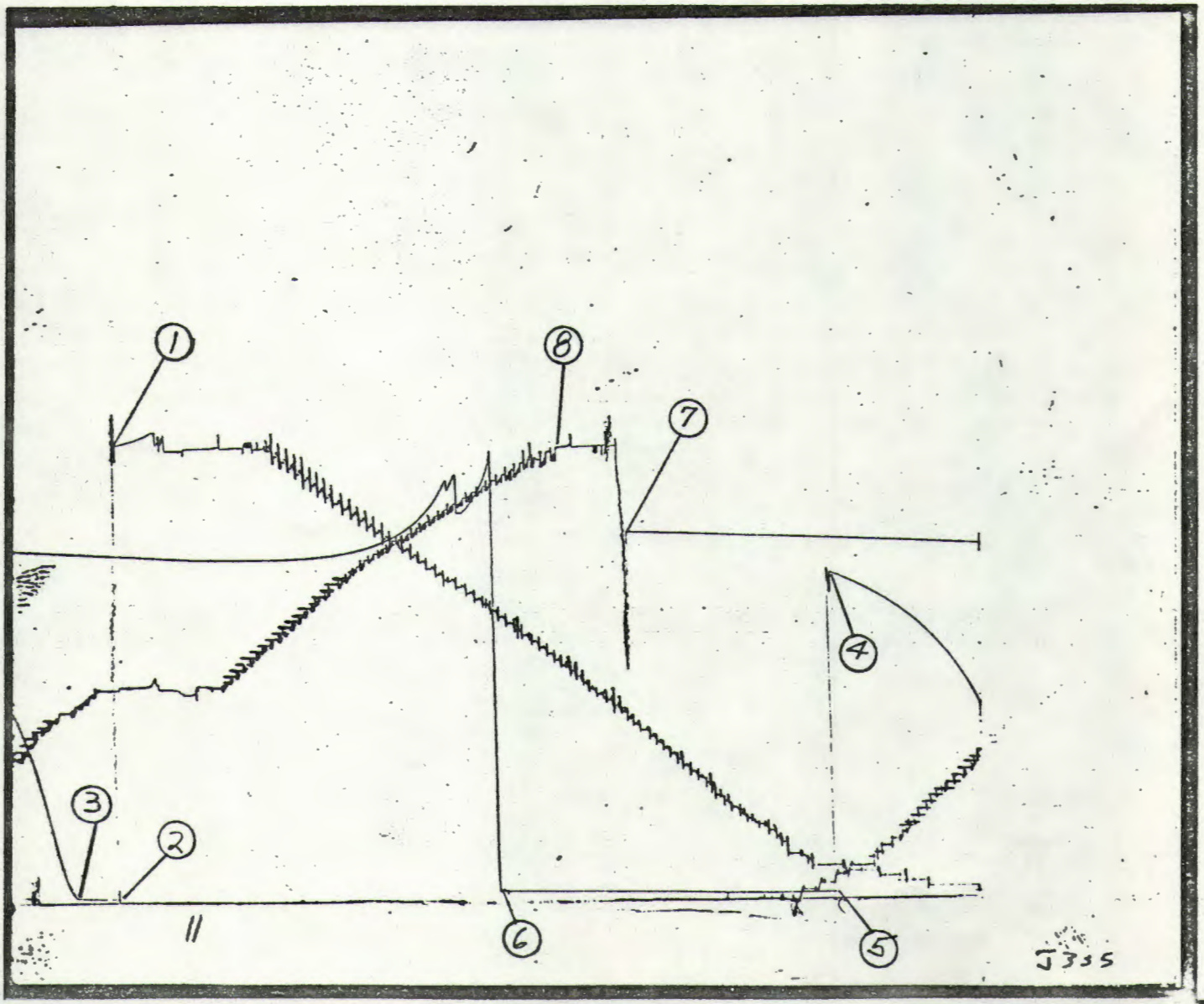
INSTRUMENT NO.: J-355 CAPACITY (P.S.I.): 6400# DEPTH 7223 FT.

PORT OPENING: OUTSIDE BOTTOM HOLE TEMP.: 208 °F. FIELD REPORT NO. 09698 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	3560.0		
INITIAL FLOW (1)	2	46.0		
INITIAL FLOW (2)	3	53.6	10	11
INITIAL SHUT-IN	4	2533.4	60	61
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)	5	66.1		
FINAL FLOW (2)	6	98.8	96	92
FINAL SHUT-IN	7	2856.0	234	238
FINAL HYDROSTATIC MUD	8	3521.1		

REMARKS:

9+



JOHNSTON

PRESSURE LOG*

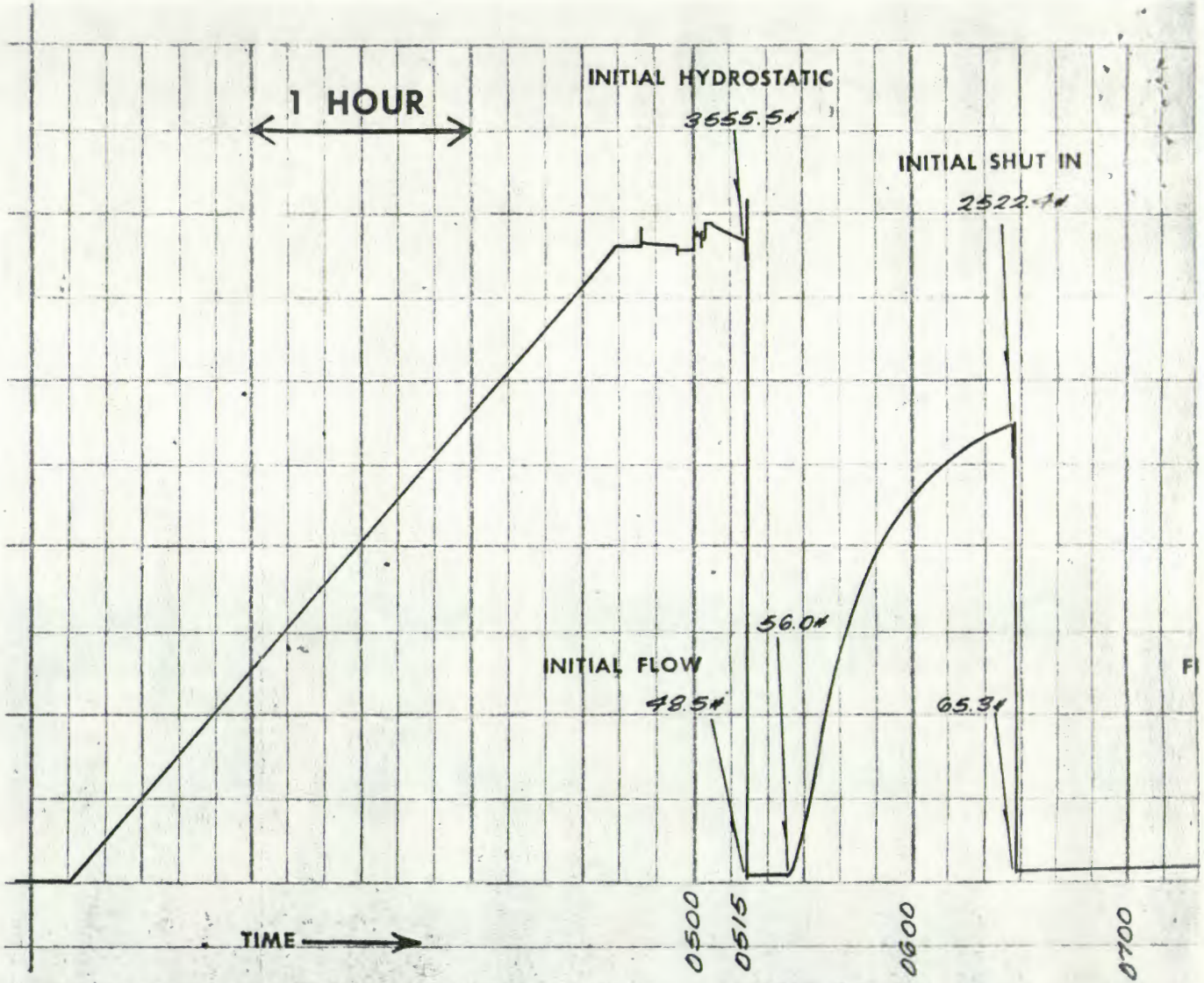
Field Report No. 09698 D

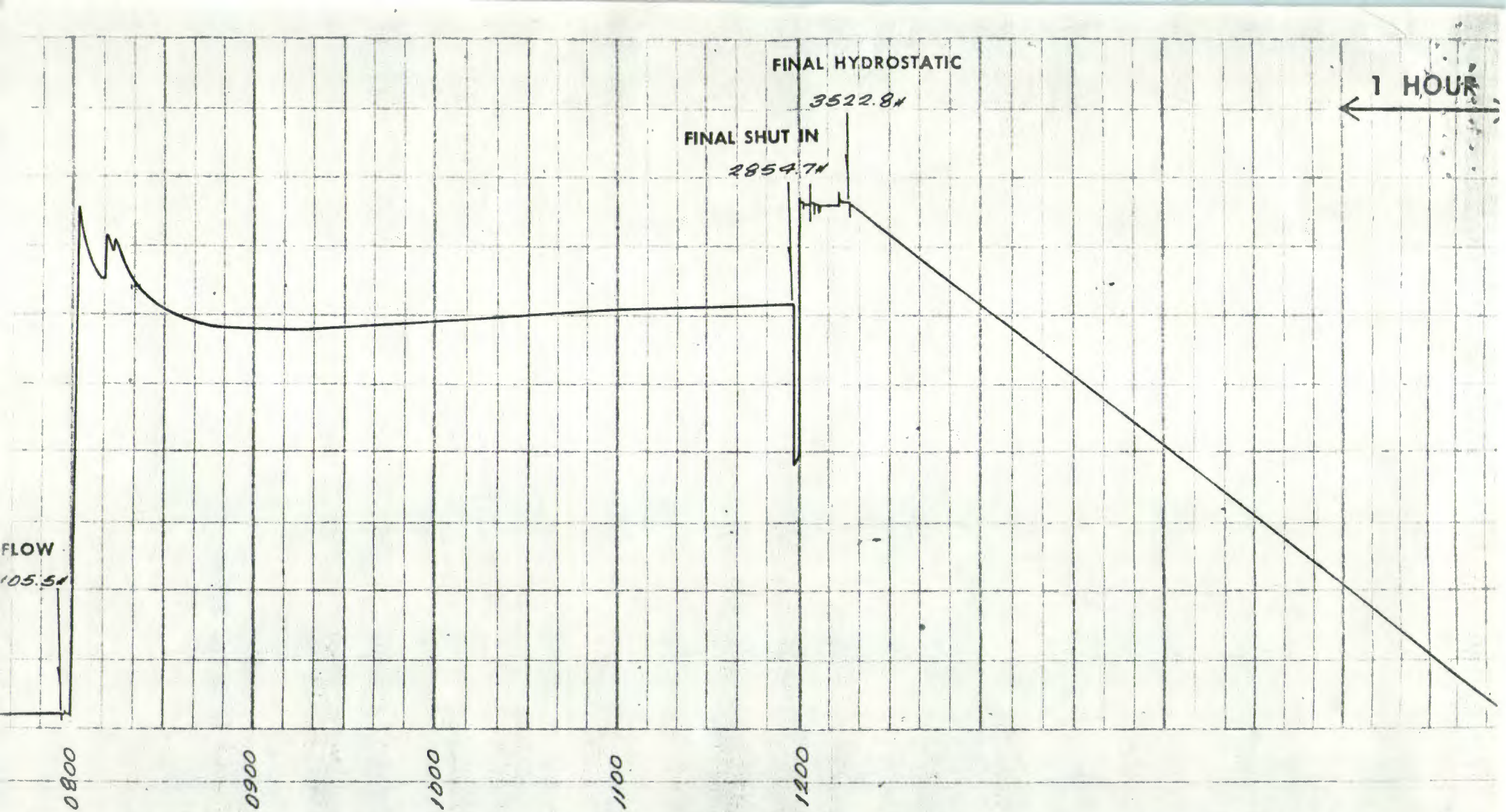
Instrument: Number J-468

Capacity 4700 p.s.i.

Depth 7212 ft.

*a continuous tracing of the original chart




FINAL HYDROSTATIC
3522.8#
1 HOUR
FINAL SHUT IN
2854.7#
FLOW
105.5#
0800
0900
1000
1100
1200

DST 1

10P

JOHNSTON

Schlumberger

technical report

F.R. #09709 D

COMPANY SHELL OIL COMPANY WELL MARY'S RIVER #1 TEST NO. 1 COUNTY ELKO STATE NEVADA

JOHNSTON
Schlumberger

SURFACE INFORMATION

Description (Rate of Flow)	Time	Pressure (P.S.I.G.)	Surface Choke
Opened Tool	0753	–	1/8''
BLOW, 8'' IN WATER			
CLOSED FOR INITIAL SHUT-IN	0803	–	''
FINISHED SHUT-IN	0903	–	''
RE-OPENED TOOL	0905	–	''
BLOW, 1 1/2'' IN WATER			
BLOW, INCREASED TO 2 1/4''			
IN WATER	0925	–	''
BLOW, DECREASED TO 1 3/4''			
IN WATER	1035	–	''
CLOSED FOR FINAL SHUT-IN	1035	–	''
FINISHED SHUT-IN	1335	–	''
PULLED PACKER LOOSE	1336	–	–
STARTED REVERSING	1351	–	–
FINISHED REVERSING	1451	–	–
TOOLS PARTED	1656	–	–

Cushion Type	Amount	Pressure	Bottom Choke
	–		Size 15/16''

MUD DATA

Mud Type LOW SOLID GEL Wt. 9.3
Viscosity 38 Water Loss 4.8 C.C.
Resist: of Mud 1.3 @ 70 °F; of Filtrate 1.2 @ 70 °F
Chloride Content 800 PPM

EQUIPMENT & HOLE DATA

Type Test M.F.E. OPEN HOLE
Formation Tested ELKO
Elevation 5500 GR Ft.
Net Productive Interval 148 Ft.
Estimated Porosity 5 %
All Depths Measured From KELLY BUSHING
Total Depth 9100 Ft.
Main Hole/Casing Size 8 3/4''
Rat Hole/Liner Size –
Drill Collar Length 273' I.D. 2.25''
Drill Pipe Length 8642' I.D. 3.80''
Packer Depth(s) 8948 & 8952 Ft.

MULTI-FLOW EVALUATOR FLUID SAMPLE DATA

Sampler Pressure – P.S.I.G. at Surface
Recovery: Cu. Ft. Gas –
cc. Oil –
cc. Water –
cc. Mud 2500
Tot. Liquid cc. 2500
Gravity – °API @ °F.
Gas/Oil Ratio – cu. ft./bbl.

		RESISTIVITY			CHLORIDE CONTENT
Recovery Water	–	@ –	°F.	–	ppm
Recovery Mud	1.5	@ 60	°F.		
Recovery Mud Filtrate	1.4	@ 60	°F.	800	ppm
Mud Pit Sample	1.3	@ 70	°F.		
Mud Pit Sample Filtrate	1.2	@ 70	°F.	800	ppm

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY	RESISTIVITY	CHL. PPM
DRILLING MUD (ESTIMATED)	20	.10				@ °F.	1.3 @ 70 °F.	800
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

Remarks:

Address 1700 BROADWAY; DENVER, COLORADO 80202

Company SHELL OIL COMPANY Field WILD CAT
Well MARY'S RIVER #1 Location SEC. 30, T38N, R51E
Test Interval 8952' TO 9100' Test # 1 Date 4-14-78

County ELKO State NEVADA
Technician RICHARDS (VERNAL) Test Approved By MR. R.E. DE SMIDT

Field Report No. 09709 D
No. Reports Requested 10 (6X'S)

JOHNSTON
Schlumberger

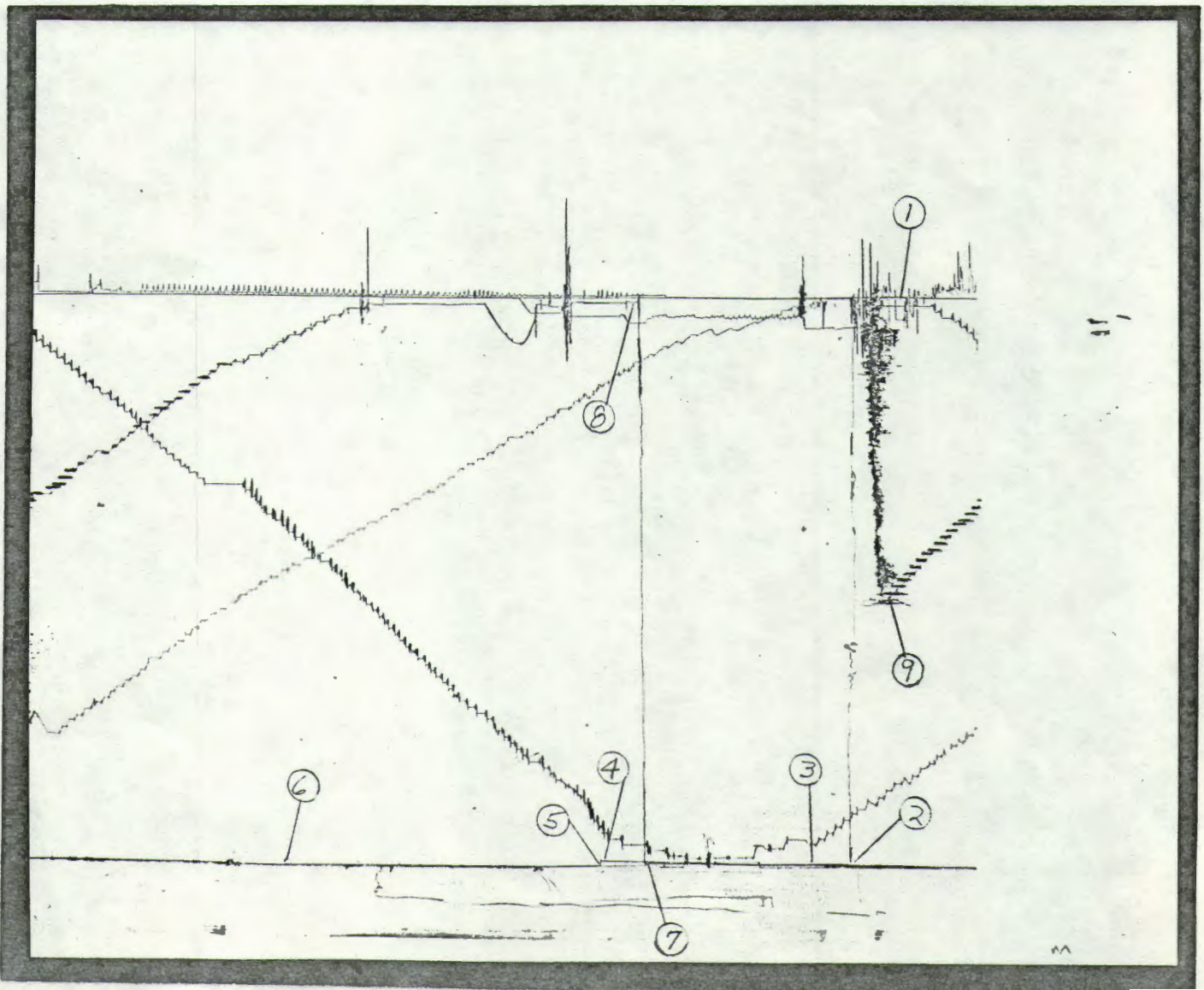
FIELD REPORT NO.: 09709 D

INSTRUMENT NO.: J-230

CAPACITY: 6400#

NO. OF REPORTS: 10+

PRESSURE DATA FROM THIS CHART IS PRESENTED ON NEXT PAGE



BOTTOM HOLE PRESSURE AND TIME DATA

JOHNSTON Schlumberger

INSTRUMENT NO.: J-230 CAPACITY(P.S.I.): 6400 DEPTH: 8957 FT.

PORT OPENING: INSIDE BOTTOM HOLE TEMP.: 275

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	4287.8		
INITIAL FLOW(1)	2	57.1		
INITIAL FLOW(2)	3	48.5	10	13
INITIAL SHUT-IN	4	71.9	60	61
FINAL FLOW(1)	5	39.9		
FINAL FLOW(2)	6	32.4	90	94
FINAL SHUT-IN	7	53.4	180	174
FINAL HYDROSTATIC MUD	8	4313.7		
TOOLS PARTED	9	2034.8		

INCREMENTAL READINGS

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
1		4287.8				HYDROSTATIC MUD
2	0	57.1				INITIAL FLOW(1)
	5	51.0				
	10	49.7				
3	13	48.5				INITIAL FLOW(2)
3	0	48.5				STARTED SHUT-IN
	1	46.0	14.000	1.146	-2.5	
	2	46.0	7.500	0.875	-2.5	
	3	46.0	5.333	0.727	-2.5	
	4	46.0	4.250	0.628	-2.5	
	5	46.0	3.600	0.556	-2.5	
	6	46.0	3.167	0.501	-2.5	
	7	46.0	2.857	0.456	-2.5	
	8	46.0	2.625	0.419	-2.5	
	9	46.0	2.444	0.388	-2.5	
	10	46.0	2.300	0.362	-2.5	
	11	46.0	2.182	0.339	-2.5	
	12	46.0	2.083	0.319	-2.5	
	15	47.3	1.867	0.271	-1.2	
	18	48.5	1.722	0.236	0.	
	21	51.0	1.619	0.209	2.5	
	24	53.4	1.542	0.188	4.9	
	27	54.7	1.481	0.171	6.2	
	30	54.7	1.433	0.156	6.2	
	36	59.6	1.361	0.134	11.1	
	42	63.3	1.310	0.117	14.8	
	48	67.0	1.271	0.104	18.5	
	54	69.5	1.241	0.094	21.0	
	60	71.9	1.217	0.085	23.5	
4	61	71.9	1.213	0.084	23.5	INITIAL SHUT-IN
5	0	39.9				FINAL FLOW(1)
	5	36.1				
	10	34.9				
	15	33.7				
	20	33.7				

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
	25	33.7				
	30	33.7				
	35	33.7				
	40	32.4				
	45	32.4				
	50	32.4				
	55	32.4				
	60	32.4				
	65	32.4				
	70	32.4				
	75	32.4				
	80	32.4				
	85	32.4				
	90	32.4				
6	94	32.4				FINAL FLOW(2)
6	0	32.4				STARTED SHUT-IN
	1	30.0	108.000	2.033	-2.5	
	2	30.0	54.500	1.736	-2.5	
	3	30.0	36.667	1.564	-2.5	
	4	30.0	27.750	1.443	-2.5	
	5	30.0	22.400	1.350	-2.5	
	6	30.0	18.833	1.275	-2.5	
	7	30.0	16.286	1.212	-2.5	
	8	30.0	14.375	1.158	-2.5	
	9	30.0	12.889	1.110	-2.5	
	10	30.0	11.700	1.068	-2.5	
	11	30.0	10.727	1.030	-2.5	
	12	30.0	9.917	0.996	-2.5	
	15	31.2	8.133	0.910	-1.2	
	18	32.4	6.944	0.842	0.	
	21	32.4	6.095	0.785	0.	
	24	32.4	5.458	0.737	0.	
	27	33.7	4.963	0.696	1.2	
	30	34.9	4.567	0.660	2.5	
	36	34.9	3.972	0.599	2.5	
	42	34.9	3.548	0.550	2.5	
	48	36.1	3.229	0.509	3.7	
	54	36.1	2.981	0.474	3.7	
	60	37.4	2.783	0.445	4.9	
	66	38.6	2.621	0.419	6.2	
	72	39.9	2.486	0.396	7.4	
	78	41.1	2.372	0.375	8.6	
	84	42.3	2.274	0.357	9.9	
	90	42.3	2.189	0.340	9.9	
	96	42.3	2.115	0.325	9.9	
	102	42.3	2.049	0.312	9.9	
	108	43.6	1.991	0.299	11.1	
	114	43.6	1.939	0.287	11.1	
	120	43.6	1.892	0.277	11.1	
	126	44.8	1.849	0.267	12.3	
	132	46.0	1.811	0.258	13.6	
	138	47.3	1.775	0.249	14.8	
	144	48.5	1.743	0.241	16.0	

LABEL POINT	DELTA TIME	PRESSURE (P.S.I.)	T + DT/DT	LOG	PW - PF (P.S.I.)	COMMENTS
	150	49.7	1.713	0.234	17.3	
	156	49.7	1.686	0.227	17.3	
	162	51.0	1.660	0.220	18.5	
	168	52.2	1.637	0.214	19.8	
7	174	53.4	1.615	0.208	21.0	FINAL SHUT-IN
8		4313.7				HYDROSTATIC MUD

JOHNSTON
Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

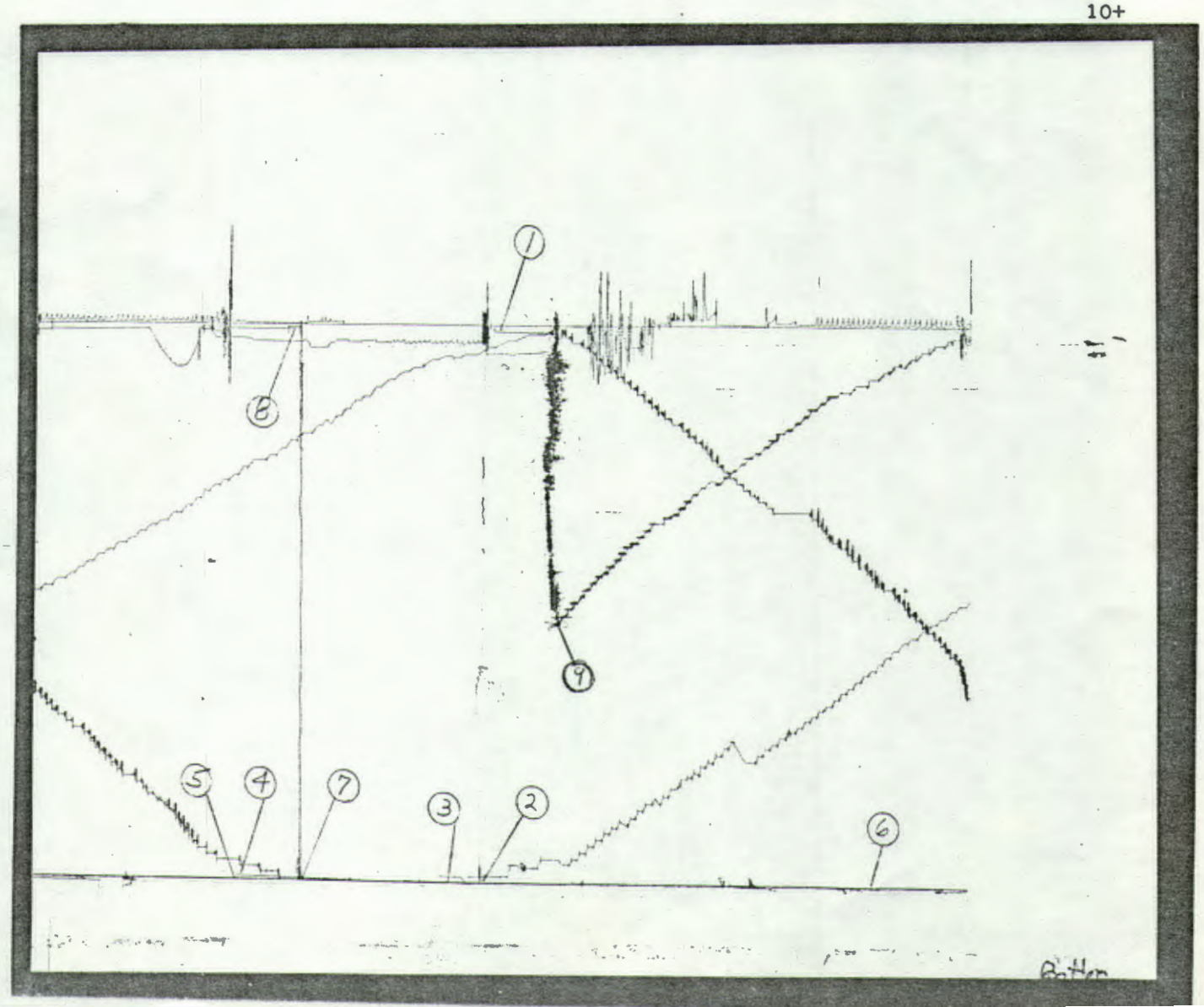
INSTRUMENT NO.: J-303 CAPACITY (P.S.I.): 6400# DEPTH 8963 FT.

PORT OPENING: OUTSIDE BOTTOM HOLE TEMP.: 275°F. FIELD REPORT NO. 09709 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	4309.0		
INITIAL FLOW (1)	2	48.1		
INITIAL FLOW (2)	3	48.1	10	13
INITIAL SHUT-IN	4	71.7	60	61
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)	5	45.6		
FINAL FLOW (2)	6	49.3	90	94
FINAL SHUT-IN	7	49.3	180	174
FINAL HYDROSTATIC MUD	8	4333.9		
TOOLS PARTED	9	2038.0		

REMARKS:

10+



JOHNSTON
Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

INSTRUMENT NO.: J-510 CAPACITY (P.S.I.): 6400# DEPTH 8969 FT.

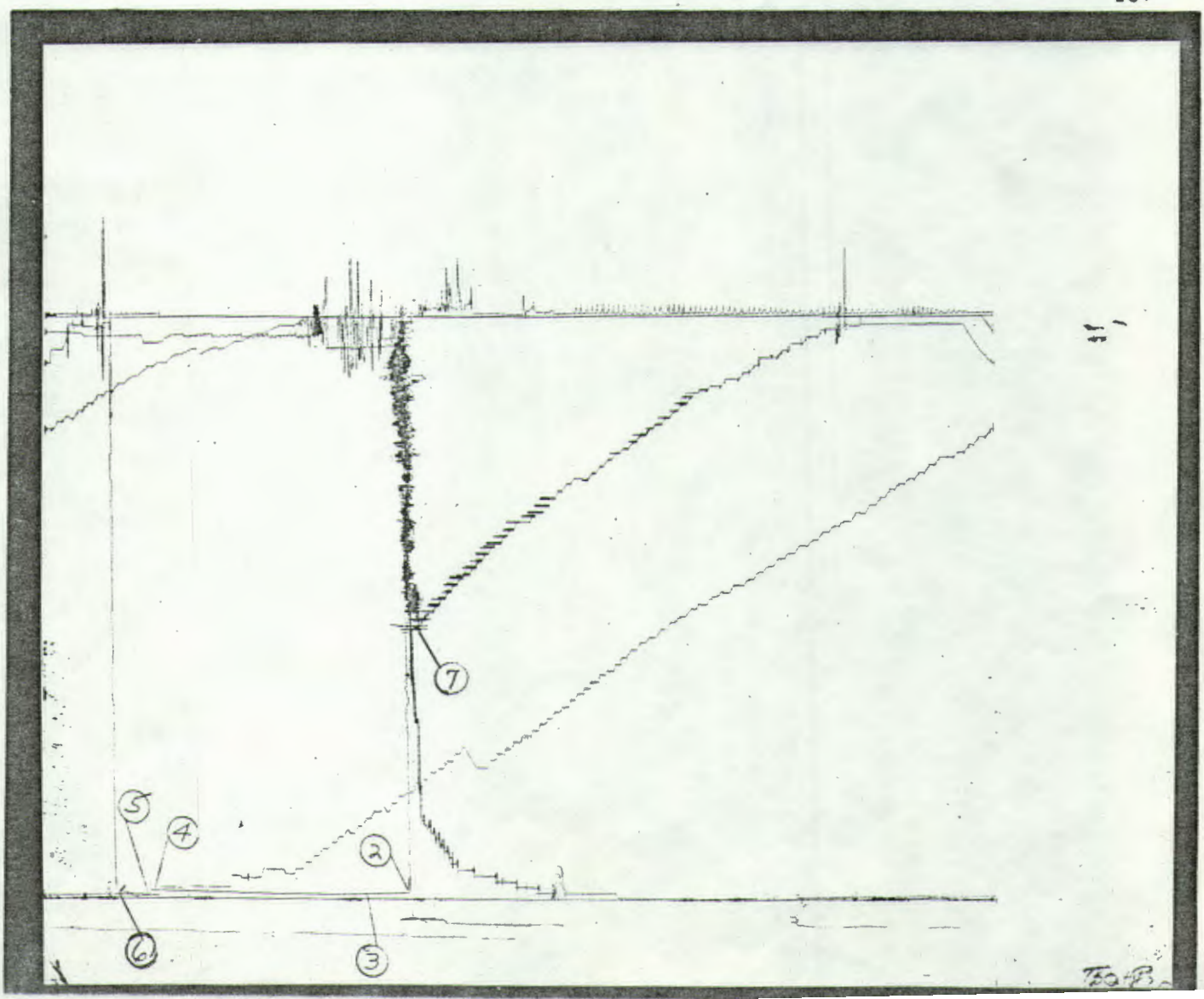
PORT OPENING: OUTSIDE BOTTOM HOLE TEMP.: 275°F. FIELD REPORT NO. 09709 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	–	UNDETERMINED		
INITIAL FLOW (1)	2	61.9		
INITIAL FLOW (2)	3	49.7	10	13
INITIAL SHUT-IN	4	75.3	60	61
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)	5	42.4		
FINAL FLOW (2)			90	94
FINAL SHUT-IN	–	UNDETERMINED	180	174
FINAL HYDROSTATIC MUD	–	UNDETERMINED		
	6	UNDETERMINED		

REMARKS: CLOCK STOPPED GOING IN THE HOLE AND ALSO DURING THE FINAL FLOW PERIOD AT POINT ''6'' LABELED ON CHART.

TOOLS PARTED 7 2037.2

10+



DST 9

JOHNSTON

Schlumberger

technical report

F. R. #09703 D

COMPANY SHELL OIL COMPANY WELL MARY'S RIVER AREA FEDERAL #1 TEST NO. 9 COUNTY ELKO STATE NEVADA

JOHNSTON
Schlumberger

SURFACE INFORMATION

Description (Rate of Flow)	Time	Pressure (P.S.I.G.)	Surface Choke
Opened Tool	0547	–	1/8''
PACKER SEAT FAILED			
PULLED PACKER LOOSE	0556	–	–

Cushion Type	Amount	Pressure	Bottom Choke
	–		Size 15/16''

MUD DATA

Mud Type GEL CHEMICAL Wt. 9.3
Viscosity 37 Water Loss 4.8 C.C.
Resist: of Mud 1.8 @ 70 °F; of Filtrate 1.4 @ 70 °F
Chloride Content 600 PPM

EQUIPMENT & HOLE DATA

Type Test M. F. E. OPEN HOLE
Formation Tested ELKO
Elevation 5536 Ft.
Net Productive Interval 113 Ft.
Estimated Porosity – %
All Depths Measured From KELLY BUSHING
Total Depth 9054 Ft.
Main Hole/Casing Size 8 3/4''
Rat Hole/Liner Size –
Drill Collar Length 559' I.D. 2.25''
Drill Pipe Length 8337' I.D. 3.80''
Packer Depth(s) 8936 & 8941 Ft.

MULTI-FLOW EVALUATOR FLUID SAMPLE DATA

Sampler Pressure 0 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas –
cc. Oil –
cc. Water –
cc. Mud 2300
Tot. Liquid cc. 2300
Gravity – °API @ – °F.
Gas/Oil Ratio – cu. ft./bbl.

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	– @ – °F.	– ppm
Recovery Mud	1.7 @ 69 °F.	
Recovery Mud Filtrate	1.3 @ 68 °F.	600 ppm
Mud Pit Sample	1.8 @ 70 °F.	
Mud Pit Sample Filtrate	1.4 @ 70 °F.	600 ppm

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY	RESISTIVITY	CHL. PPM
DRILLING MUD	6733	90.41			100	@ °F.	1.7 @69 °F.	600
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

Remarks: UNSUCCESSFUL TEST; PACKER SEAT FAILURE.

Address P.O. BOX 831; HOUSTON, TEXAS 77001

Company SHELL OIL COMPANY Field WILD CAT
Well MARY'S RIVER AREA FEDERAL #1 Location SEC. 30 - T38N - R61E
Test Interval 8941' TO 9054' (UNSUCCESSFUL) Test # 9 Date 2-2-78

County ELKO State NEVADA
Technician RICHARDS(VERNAL) Test Approved By MR. GRADY, JR.

Field Report No. 09703 D
No. Reports Requested 11(7X'S)

JOHNSTON
Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

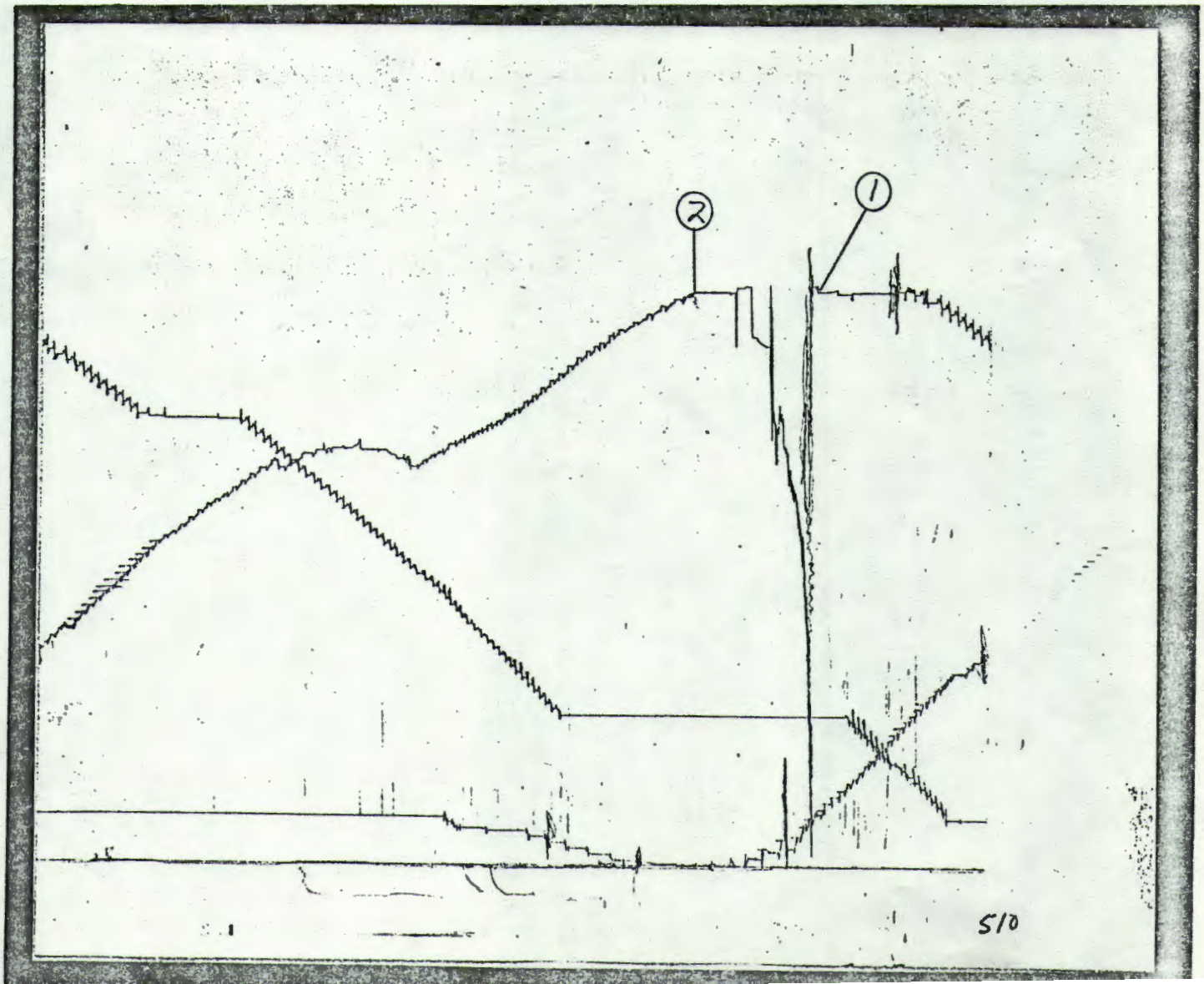
INSTRUMENT NO.: J-510 CAPACITY (P.S.I.): 6400# DEPTH 8921 FT.

PORT OPENING: INSIDE BOTTOM HOLE TEMP.: 148° F. FIELD REPORT NO. 09703 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	4397.9		
INITIAL FLOW (1)				
INITIAL FLOW (2)				
INITIAL SHUT-IN				
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)				
FINAL FLOW (2)				
FINAL SHUT-IN				
FINAL HYDROSTATIC MUD	2	4397.9		

REMARKS: UNSUCCESSFUL TEST

11+



JOHNSTON Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

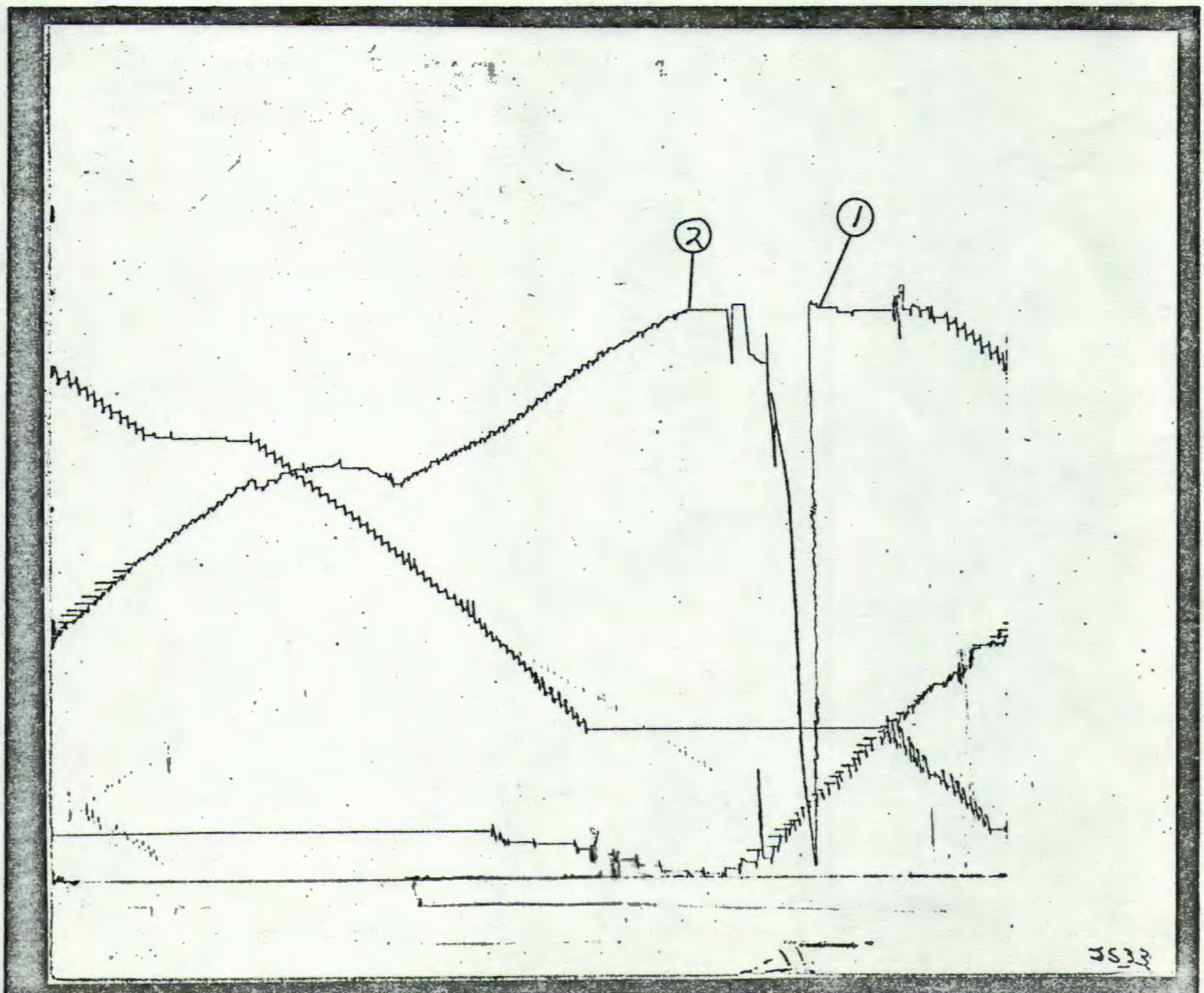
INSTRUMENT NO.: J-355 CAPACITY (P.S.I.): 6400# DEPTH 8946 FT.

PORT OPENING: OUTSIDE BOTTOM HOLE TEMP.: 148° F. FIELD REPORT NO. 09703 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	4419.3		
INITIAL FLOW (1)				
INITIAL FLOW (2)				
INITIAL SHUT-IN				
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)				
FINAL FLOW (2)				
FINAL SHUT-IN				
FINAL HYDROSTATIC MUD	2	4409.1		

REMARKS: UNSUCCESSFUL TEST

11+



JOHNSTON
Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

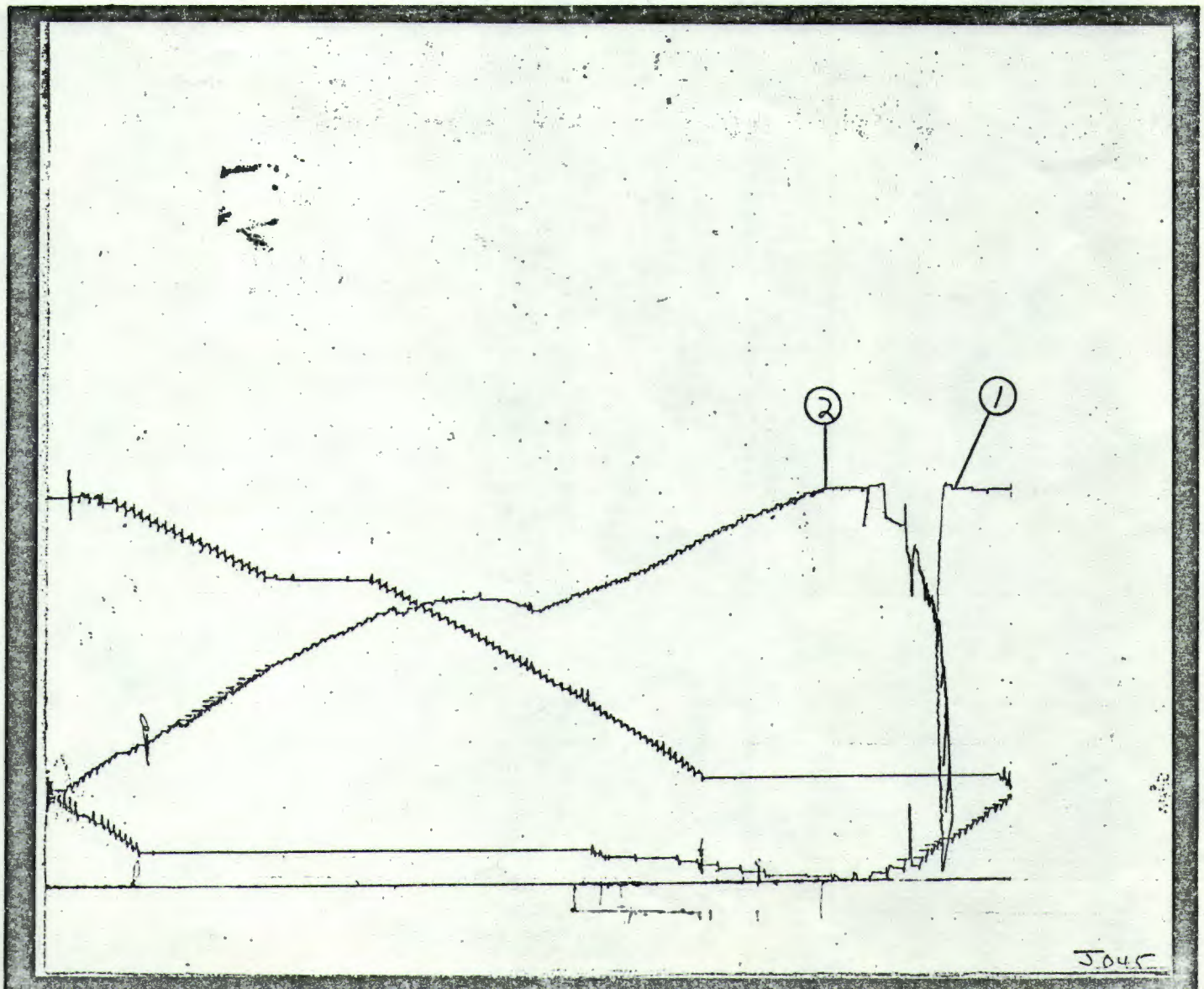
INSTRUMENT NO.: J-045 CAPACITY (P.S.I.): 9000 DEPTH 8962 FT.

PORT OPENING: OUTSIDE BOTTOM HOLE TEMP.: 148° F. FIELD REPORT NO. 09703 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	4419.4		
INITIAL FLOW (1)				
INITIAL FLOW (2)				
INITIAL SHUT-IN				
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)				
FINAL FLOW (2)				
FINAL SHUT-IN				
FINAL HYDROSTATIC MUD	2	4437.8		

REMARKS: UNSUCCESSFUL TEST

11+



JOHNSTON
Schlumberger

BOTTOM HOLE PRESSURE AND TIME DATA

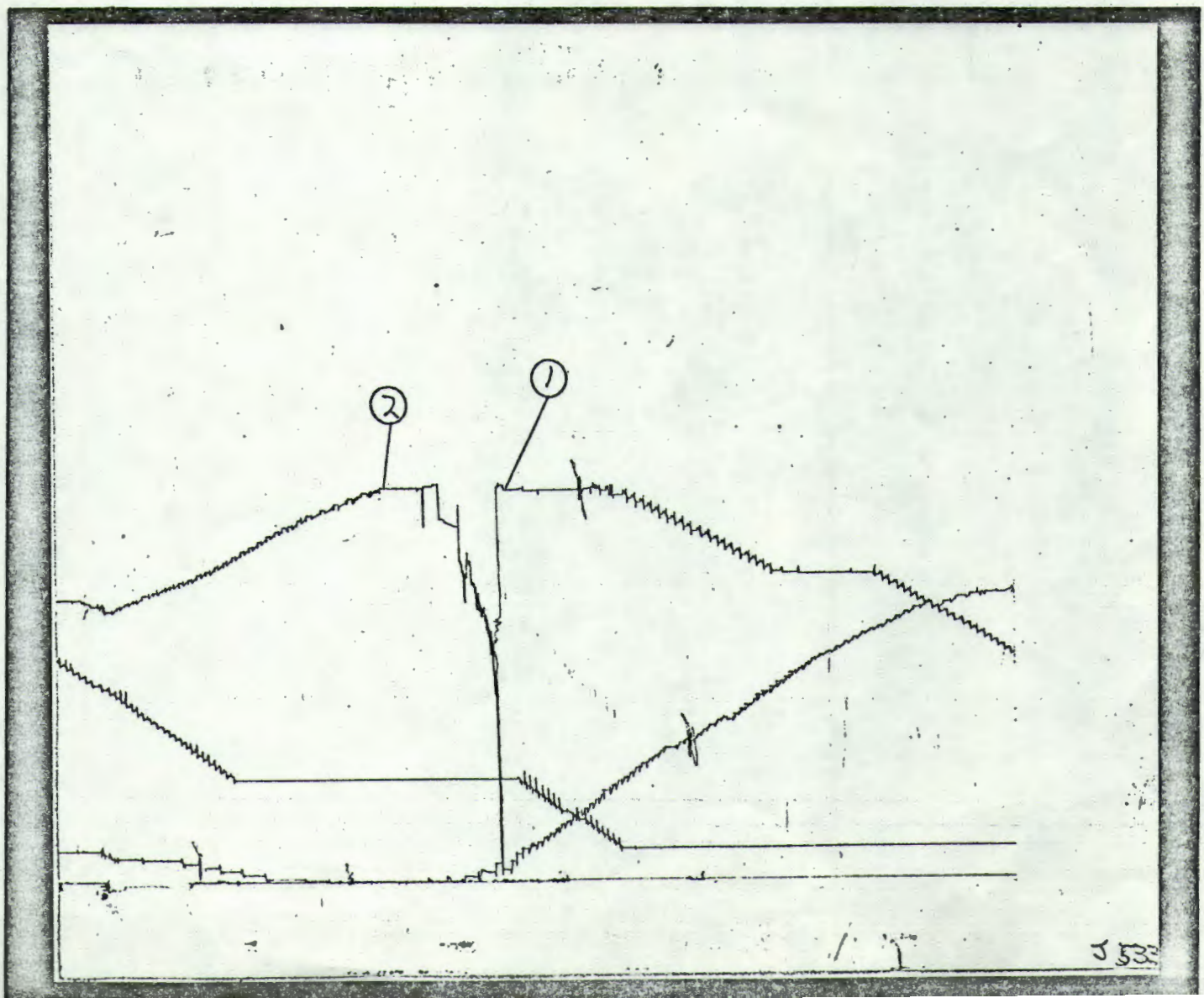
INSTRUMENT NO.: J-533 CAPACITY (P.S.I.): 9000# DEPTH 8968 FT.

PORT OPENING: INSIDE BOTTOM HOLE TEMP.: 148° F. FIELD REPORT NO. 09703 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	4407.7		
INITIAL FLOW (1)				
INITIAL FLOW (2)				
INITIAL SHUT-IN				
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)				
FINAL FLOW (2)				
FINAL SHUT-IN				
FINAL HYDROSTATIC MUD	2	4429.6		

REMARKS: UNSUCCESSFUL TEST

11+



ELKO
SHELL OIL CO.
MARY'S RIVER FEDERAL No. 1

U.S. DEPARTMENT OF THE INTERIOR
U.S GEOLOGICAL SURVEY

Rock-Eval pyrolysis data from well cuttings samples, Eastern Nevada, collected during 1991

by

Charles E. Barker[1], R.J. Szmajter[1], Ted A. Daws[1] and Charles N. Threlkeld[1]

Open-File Report 93-186

[1] U.S. Geological Survey, Box 25046, MS 971
Denver Federal Center, Denver, Colorado 80225 U.S.A.

1993

CONTENTS

INTRODUCTION

This report makes available recent Rock-Eval analyses measured as part of a thermal maturity study of eastern Nevada. The release of the data to the State of Nevada is required as part of their sampling agreement.

The well cuttings samples were collected from the Nevada Bureau of Mines and Geology (NBMG) core library at the University of Nevada, Reno. Additional well information including formation tops, if available, is given in Garside et al. (1988); Hess and Purkey (1992) and in the files of the NBMG.

METHODS

For this study, mudrock intervals at about 1000 foot spacing were selected from well logs and formation tops. The target sample for analysis was the most carbonaceous (e.g. darkest gray) mudrock. The depth interval used was selected for its lithologic homogeneity and(or) lack of contamination by well mud additives, but the samples were not individually picked for certain rock types. Visible organic contaminants were removed. The samples were pulverized for analysis.

Analyses were performed on a Delsi[1] Rock-Eval II instrument. The method is described by Espitalie et al. (1977). Recent general discussions of the interpretation of Rock-Eval data are: Katz, 1983; Peters, 1986; Langford and Blanc-Valleron, 1990. Specific definitions for Rock Eval data reports are as follows: S1 and S2 are the first and second pulses of hydrocarbon yield occurring during pyrolysis of the sample; S3 is the amount of CO_2 generated during pyrolysis; TOC is total organic carbon; Tmax is the temperature of maximum pyrolysis yield in the S2 pulse; Hydrogen index (HI) = (S2/TOC)x100; Oxygen index (OI) = (S3/TOC)x100; PI = Transformation ratio = S1/(S1+S2).

REFERENCES

Espitalie, J., Laporte, J.L., Madec, M., Marquis, F., Leplat, P., Paulet, J., Boutefeu, A., 1977, Rapid method of characterizing source rocks and their petroleum potential and degree of maturity: Revue de l'Institut Francais du Petrole, v. 32, p. 23-42.

Garside, L.J., Hess, R.H., Fleming, K.L., and Weimer, B.S., 1988, Oil and gas developments in Nevada: Nevada Bureau of Mines and Geology Bulletin 104. 136 p.

Hess, R.H., and Purkey, B.W., 1992, Oil and gas wells drilled in Nevada since 1986: Nevada Bureau of Mines and Geology List L-8. 4 p.

Katz, B.J., 1983, Limitations of 'Rock-Eval' pyrolysis for typing organic matter: Organic Geochemistry, v. 4, p. 195-199.

Langford, F.F. and Blanc-Valleron, M.-M., 1990, Interpreting Rock-Eval pyrolysis data using graphs of pyrolizable hydrocarbons vs. total organic carbon: American Association of Petroleum Geologists Bulletin, v. 74, no. 6, p. 799-804.

Peters, K.E., 1986, Guidelines for evaluating petroleum source rock using programmed pyrolysis: American Association of Petroleum Geologists Bulletin, v. 70, no. 3, p. 318-329.

Well identification and location			Operator and well name	Sample Interval		Rock-Eval results							
API no.	Latitude (decimal degrees) (X 100,000)	Longitude (X 100,000)		Top feet	Bottom feet	Tmax Celsius	S1 mgHC/ gRock	S2 mgHC/ gRock	S3 mgCO2/ gRock	S2/S3 mgHC/ mgCO2	TOC Wt-%	HI mgHc/ gC	OI mgCO2/ gC
9270030522400000001	3643664	11420213	Ruby 1-20 DEVILS THROAT	2410	2420	375	0.05	0.1	0.19	0.52	0.08	125	237
9270030520600000018	3663844	11439572	MOBIL VIRGIN RIVER 1-A	17440	17450	367	0.11	0.15	0.54	0.27	0.12	125	450
9270030520600000019	3663844	11439572	MOBIL VIRGIN RIVER 1-A	17490	17500	406	0.06	0.12	0.72	0.16	0.21	57	342
9270030520600000020	3663844	11439572	MOBIL VIRGIN RIVER 1-A	17580	17600	334	0.11	0.52	1.64	0.31	0.52	100	315
9270170520800000001	3736574	11550151	6-1 TICKABOO V	5490	5520	340	0.02	0.04	0.37	0.1	0.2	20	185
9270170520800000002	3736574	11550151	6-1 TICKABOO V	7500	7530	335	0.03	0.15	0.76	0.19	0.27	55	281
9270230538500000001	3835722	11505585	AMOCO 1 SUNNYSIDE UNIT	3700	3720	435	0.23	9.93	1.8	5.51	3.57	278	50
9270230538500000002	3835722	11505585	AMOCO 1 SUNNYSIDE UNIT	3790	3800	429	0.03	0.27	0.68	0.39	0.96	28	70
9270230538500000003	3835722	11505585	AMOCO 1 SUNNYSIDE UNIT	4200	4210	432	0.09	3.23	1.53	2.11	1.88	171	81
9270230538500000004	3835722	11505585	AMOCO 1 SUNNYSIDE UNIT	5000	5010	437	0.04	0.69	0.79	0.87	1.21	57	65
9270230538500000005	3835722	11505585	AMOCO 1 SUNNYSIDE UNIT	5800	5810	441	0.24	1.58	0.69	2.28	1.18	133	58
9270230538500000006	3835722	11505585	AMOCO 1 SUNNYSIDE UNIT	6520	6550	428	0.1	0.29	0.98	0.29	0.3	96	326
9270230540700000001	3845747	11564256	TRUE OIL TRUEBIRD 31-23	10070	10110	439	0.04	0.13	0.63	0.2	0.2	65	315
9270230540700000002	3845747	11564256	TRUE OIL TRUEBIRD 31-23	11020	11080	421	0.03	0.07	0.39	0.17	0.12	58	325
9270230540700000003	3845747	11564256	TRUE OIL TRUEBIRD 31-23	11900	11912	387	0.01	0.04	0.35	0.11	0.15	26	233
9270170520000000001	3843636	11492354	TENNECO GB CORE HOLE 13	260	270	376	0.12	0.22	0.68	0.32	0.24	91	283
9270170520000000002	3843636	11492354	TENNECO GB CORE HOLE 13	300	330	434	0.46	9.53	2.21	4.31	3.4	280	65
9270170520000000003	3843636	11492354	TENNECO GB CORE HOLE 13	470	480	436	0.82	21.23	4.48	4.73	5.43	390	82
9270170521000000001	3852225	11480173	1-28 CAVE VALLEY	2990	3020	441	0.01	0.04	0.36	0.11	0.02	200	1800
9270170521000000002	3852225	11480173	1-28 CAVE VALLEY	3760	3790	361	0	0.02	0.26	0.07	0.04	50	650
9270170520900000001	3856516	11456970	AMOCO 1 SAGUARO UNIT	5010	5050	458	0.06	0.27	0.43	0.62	0.51	52	84
9270170520900000002	3856516	11456970	AMOCO 1 SAGUARO UNIT	6050	6080	406	0.01	0.05	0.29	0.17	0.11	45	263
9270170520900000003	3856516	11456970	AMOCO 1 SAGUARO UNIT	6440	6500	390	0.04	0.06	0.53	0.11	0.17	35	311
9270230523400000002	3861615	11564841	NORTHWEST 9 TRAP SPRING	6335	6335	356	0.02	0.11	0.41	0.26	0.05	220	820
9270230541500000001	3884375	11582675	EXXON 1 WILDHORSE UNIT	100	150	444	0.17	1.82	0.63	2.88	0.9	202	70
9270230541500000002	3884375	11582675	EXXON 1 WILDHORSE UNIT	500	550	445	0.27	3.1	0.85	3.64	1.32	234	64
9270230541500000003	3884375	11582675	EXXON 1 WILDHORSE UNIT	1000	1040	442	0.1	0.27	0.45	0.6	0.21	128	214
9270230541500000004	3884375	11582675	EXXON 1 WILDHORSE UNIT	2600	2620	441	0.22	0.79	0.93	0.84	0.34	232	273
9270230541500000005	3884375	11582675	EXXON 1 WILDHORSE UNIT	3500	3520	411	0.03	0.06	0.39	0.15	0.09	66	433
9270230541500000006	3884375	11582675	EXXON 1 WILDHORSE UNIT	3800	3820	299	0.02	0.04	0.36	0.11	0.13	30	276
9270110524700000001	3945180	11633272	WILLIAMS 10-6 TWIN SPRING F	6620	6690	427	0.05	0.21	0.79	0.26	0.15	140	526
9270110524700000002	3945180	11633272	WILLIAMS 10-6 TWIN SPRING F	8000	8022	442	0.01	0.06	0.36	0.16	0.12	50	300
9270110520400000001	3972302	11594580	HUNT 1 PLASKETT	7580	7590	427	0.03	0.58	0.75	0.77	0.54	107	138
9270110520400000002	3972302	11594580	HUNT 1 PLASKETT	8000	8010	424	0.04	0.53	0.78	0.67	0.51	103	152
9270110520400000003	3972302	11594580	HUNT 1 PLASKETT	9270	9280	428	0.08	1.54	0.95	1.62	0.74	208	128
9270110520400000004	3972302	11594580	HUNT 1 PLASKETT	10200	10230	426	0.12	2.04	1.17	1.74	0.76	268	153
9270110520400000005	3972302	11594580	HUNT 1 PLASKETT	10580	10600	427	0.57	3.89	1.52	2.55	1.05	370	144
9270110524700000003	3979680	11424615	REMKIN 1 Federal	1720	1730	448	0.11	0.38	0.48	0.79	0.45	84	106
9270110524700000004	3979680	11424615	REMKIN 1 Federal	2490	2500	424	0.34	0.37	0.65	0.56	1.98	18	32
9270110524700000005	3979680	11424615	REMKIN 1 Federal	2580	2590	383	0.25	0.25	0.7	0.35	0.56	44	125
9270110524700000006	3979680	11424615	REMKIN 1 Federal	2950	2960	319	0.19	0.35	0.65	0.53	0.87	40	74
9270110524700000007	3979680	11424615	REMKIN 1 Federal	3480	3498	377	0.08	0.16	0.43	0.37	0.5	32	86
9270110520600000001	3995285	11595709	HUNT 1-24 DIAMOND VALLEY	8260	8270	523	0	0.23	0.44	0.52	0.08	287	550
9270070523100000001	4016449	11498045	MARLIN 1-4 FEDERAL	8000	8020	528	0	0.18	0.45	0.4	0.08	225	562

LYNES, INC.

Fluid Sample Report

Date 12-24-77 Ticket No. 10257

Company Shell Oil Co. DST No. 3

Well Name & No. Federal # 1 State Nevada

County Elko Test Interval 3225-3370'

Pressure in Sampler 38 PSIG BHT 118 °F

Total Volume of Sampler: 2100 cc.

Total Volume of Sample: 1800 cc.

Oil: None cc.

Water: 1800 (Slight gas odor) cc.

Mud: None cc.

Gas: -- cu. ft.

Other: None

Resistivity

Make Up Water 10.5 @ 60° F of Chloride Content 625 ppm.

Mud Pit Sample 3.0 @ 56° F of Chloride Content 2250 ppm.

Gas/Oil Ratio -- Gravity -- °API @ -- °F

Where was sample drained On location

Remarks: Recovery: Top Sample - R.W. - 1.6 @ 57° F = 4400 ppm. chl.

Middle Sample - R.W. - 1.5 @ 56° F = 4800 ppm. chl.

Bottom Sample - R.W. - 1.5 @ 58° F = 4400 ppm. chl.

Form 5

Well identification and location			Operator and well name	Sample Interval		Rock-Eval results							
API no.	Latitude (decimal degrees) (X 100,000)	Longitude (X 100,000)		Top feet	Bottom feet	Tmax Celsius	S1 mgHC/ gRock	S2 mgHC/ gRock	S3 mgCO2/ gRock	S2/S3 mgHC/ mgCO2	TOC Wt-%	HI mgHc/ gC	OI mgCO2/ gC
9270070524400000001	4029567	11589185	EXXON 1 ASPEN UNIT	610	640	404	0.01	0.03	1.44	0.02	0.06	50	2400
9270070524400000002	4029567	11589185	EXXON 1 ASPEN UNIT	1000	1020	432	0.06	0.36	0.42	0.85	0.19	189	221
9270070524400000003	4029567	11589185	EXXON 1 ASPEN UNIT	2020	2050	454	0.13	0.72	0.34	2.11	0.63	114	53
9270070524400000004	4029567	11589185	EXXON 1 ASPEN UNIT	2900	2930	370	0.1	0.36	0.42	0.85	0.63	57	66
9270070524400000005	4029567	11589185	EXXON 1 ASPEN UNIT	3960	4000	328	0.07	0.22	0.6	0.36	0.38	57	157
9270070524400000006	4029567	11589185	EXXON 1 ASPEN UNIT	5000	5030	351	0.1	0.13	0.48	0.27	0.31	41	154
9270070524400000007	4029567	11589185	EXXON 1 ASPEN UNIT	5860	5890	352	0.05	0.06	0.32	0.18	0.18	33	177
9270070524400000008	4029567	11589185	EXXON 1 ASPEN UNIT	7000	7030	362	0.06	0.14	0.72	0.19	0.25	56	288
9270070524400000009	4029567	11589185	EXXON 1 ASPEN UNIT	8040	8060	358	0.06	0.11	0.3	0.36	0.67	16	44
9270070524400000010	4029567	11589185	EXXON 1 ASPEN UNIT	9000	9030	311	0.02	0.07	0.19	0.36	0.11	63	172
9270070524400000011	4029567	11589185	EXXON 1 ASPEN UNIT	10080	10100	356	0.08	0.16	0.44	0.36	0.84	19	52
9270070524400000012	4029567	11589185	EXXON 1 ASPEN UNIT	11000	11030	282	0.05	0.09	0.19	0.47	0.86	10	22
9270070524400000013	4029567	11589185	EXXON 1 ASPEN UNIT	11940	11970	298	0.03	0.08	0.15	0.53	0.4	20	37
9270070521100000001	4114861	11512791	SHELL 1 MARYS RIVER	7460	7470	436	0.07	1.26	1.16	1.08	0.73	172	158
9270070521100000002	4114861	11512791	SHELL 1 MARYS RIVER	10090	10100	414	0.05	0.16	0.76	0.21	0.38	42	200
9270070524500000001	4135523	11483552	EXXON 1 RATTLESNAKE UNIT	200	220	298	0.05	0.05	0.37	0.13	1.09	4	33
9270070524500000002	4135523	11483552	EXXON 1 RATTLESNAKE UNIT	570	600	309	0.09	0.1	0.31	0.32	1.06	9	29
9270070524500000003	4135523	11483552	EXXON 1 RATTLESNAKE UNIT	1020	1050	307	0.05	0.08	0.09	0.88	0.84	9	10
9270070524500000004	4135523	11483552	EXXON 1 RATTLESNAKE UNIT	2000	2020	321	0.08	0.1	0.12	0.83	0.78	12	15
9270070524500000005	4135523	11483552	EXXON 1 RATTLESNAKE UNIT	3090	3120	269	0.06	0.09	0.2	0.45	0.68	13	29
9270070524500000006	4135523	11483552	EXXON 1 RATTLESNAKE UNIT	4020	4060	351	0.07	0.11	0.3	0.36	1.67	6	17
9270070524500000007	4135523	11483552	EXXON 1 RATTLESNAKE UNIT	5000	5030	270	0.06	0.08	0.23	0.34	0.74	10	31
9270070524500000008	4135523	11483552	EXXON 1 RATTLESNAKE UNIT	6000	6020	292	0.05	0.08	0.3	0.2	0.63	9	47

LYNES, INC.

Operator Shell Oil Company Lease & No. Federal #1 DST No. 3

Comments relative to the analysis of the pressure chart from DST #3, Interval: 3225-3370', which was run in the captioned well located in the NW SE Section 30, T38N-R61E, Elko County, Nevada:

For purposes of this analysis, the following reservoir and fluid properties and test parameters have been used:

BHT = 118°F, μ = 1.0 cp., h = 10 feet(estimated), t = 70 minutes, m = 105 psi/log cycle.

1. Extrapolation of the Initial Shut-in pressure build-up curve indicates a maximum reservoir pressure of 1424 psi at the recorder depth of 3235 feet. Extrapolation of the Final Shut-in pressure build-up curve indicates a maximum reservoir pressure of 1397 psi. The difference between the extrapolated Initial and Final Shut-in pressures (27 psi) indicates that depletion may have been caused by the 60-minute Final Flow period. It therefore is indicated that the tested reservoir is of limited areal extent if depletion did actually occur.

   The indicated maximum reservoir pressure at the recorder depth is equivalent to a sub-surface pressure gradient of 0.440 psi/ft., which in turn indicates an essentially "normal" reservoir pressure in the formation tested at this test location.

2. Because the fluid produced during this test was reversed out and not measured, the volume of the recovered fluid has been calculated on the basis of the Final Flow pressure being representative of the weight of the liquid in the drill pipe at the end of the test. A conversion constant of 2.31 ft./psi has been used to convert the Final Flow pressure of 1048 psi to a footage recovery of 2420 feet of water. This footage recovery indicates a gross recovery volume of 31.1 barrels.

   The calculated Average Production Rate which was used in this analysis, 639.8 BPD, is based upon the above calculated gross recovery volume of 31.1 barrels and the total flowing time of 70 minutes.

Form 2

3. The calculated Damage Ratio of 0.6 indicates that no significant well-bore damage was present at the time of this formation test.

4. The calculated Effective Transmissibility of 989.7 md.-ft./cp. indicates an Average Permeability to the produced fluid of 99.0 md. for the estimated 10 feet of effective porosity within the total 145 feet of interval tested.

5. The Radius of Investigation of this test is indicated by the relationship, $b \approx \sqrt{k t_o}$, to be about 83 feet.

6. The evaluation criteria used in the Drill-Stem-Test Analysis System indicate that the results obtained in this analysis should be reliable within reasonable limits relative to the assumptions which have been made.

Roger L. Hoeger
Consultant for Lynes, Inc.

LYNES INC.

REPORT # 48

WELL NAME - FEDERAL 1

WELL OPERATOR - SHELL OIL CO

DST NUMBER - 3

RECORDER NUMBER - 3697

FIRST SHUT IN PRESSURE

TIME(MIN) PHI	(T+PHI) /PHI	PSIG
.0	.0000	401
6.0	2.6667	1339
12.0	1.8333	1361
18.0	1.5556	1373
24.0	1.4167	1381
30.0	1.3333	1387
36.0	1.2778	1392
42.0	1.2381	1395
48.0	1.2083	1398
54.0	1.1852	1401
60.0	1.1667	1403

EXTRAPOLATION OF FIRST SHUT IN = 1423.97

LYNES INC.

REPORT # 48

WELL NAME - FEDERAL 1

WELL OPERATOR - SHELL OIL CO

DST NUMBER - 3

RECORDER NUMBER - 3697

SECOND SHUT IN PRESSURE

TIME(MIN) PHI	(T+PHI) /PHI	PSIG
.0	.0000	1048
9.0	8.7778	1313
18.0	4.8889	1330
27.0	3.5926	1341
36.0	2.9444	1348
45.0	2.5556	1354
54.0	2.2963	1359
63.0	2.1111	1363
72.0	1.9722	1367
81.0	1.8642	1369
90.0	1.7778	1371

FITTED LINE: LOG((TO+PHI)/PHI) = -.00951 PSIG + 13.29300

EXTRAPOLATION OF SECOND SHUT IN = 1397.27 M = 105.11

RESERVOIR PARAMETERS:

COLLAR RECOV	353.000	PIPE RECOVRY	2068.000	INIT FLO TIM	10.000
FINL FLO TIM	60.000	MUD EXPANSN	1.000	BOTTM HOL TM	118.000
API GRAVITY	10.000	SPEC GRAVITY	1.000	VISCOSITY	1.000
PAY THICKNES	10.000	SUBSEA DEPTH	2268.000	WATER GRADNT	.433

LYNES INC.

REPORT # 48

WELL NAME - FEDERAL 1

WELL OPERATOR - SHELL OIL CO

DST NUMBER - 3

RECORDER NUMBER - 3697

CALCULATIONS: SECOND SHUT IN

EXTRAPOLATED RESERVOIR PRESS.(PSIG)	1397.3
NO. OF POINTS ENTERED	11.0
NO. OF POINTS USED IN EXTRAPOLATION	6.0
ROOT MEAN SQUARE DEVIATION OF BEST FIT LINE(PSI)	.004
TOTAL FLOW TIME(MIN)	70.0
AVERAGE PRODUCTION RATE DURING TEST(BBLS/DAY)	639.8
TRANSMISSIBILITY(MD-FT/CP)	989.7
IN SITU CAPACITY(MD-FT)	989.7
AVERAGE EFFECTIVE PERMEABILITY(MD)	98.97
PRODUCTIVITY INDEX(BBLS/DAY-PSI)	1.832
DAMAGE RATIO	.6
PRODUCTIVITY INDEX WITH DAMAGE REMOVED(BBLS/DAY-PSI)	1.114
RADIUS OF INVESTIGATION(FT)	83.2
DRAWDOWN FACTOR(%)	1.9
POTENTIOMETRIC SURFACE(FT)	5494.9

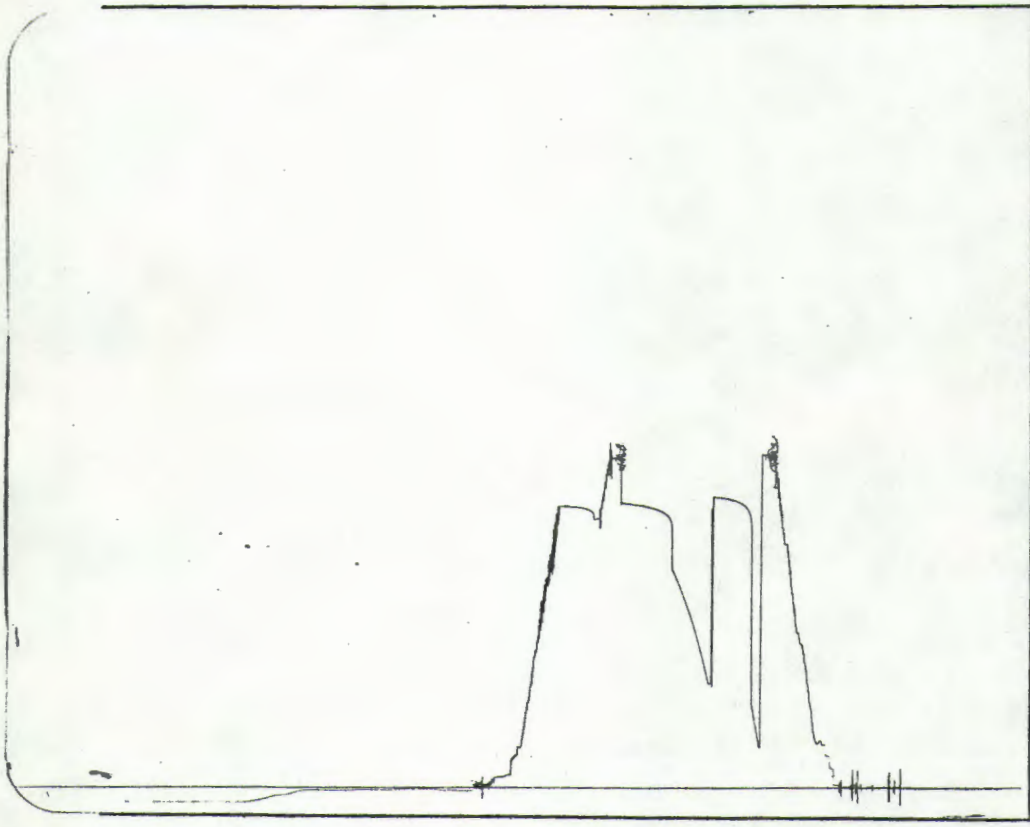
DST 3

Phone
522-1206 Area 303

LYNES, INC.

Box 712
Sterling, Colo. 80751

Contractor	Dual Drlg. Co.	Top Choke	1/4"
Rig No.	3	Bottom Choke	3/4"
Spot	NW- SE	Size Hole	8 3/4"
Sec.	30	Size Rat Hole	--
Twp.	38 N	Size & Wt. D. P.	4 1/2" 16.60
Rng.	61 E	Size Wt. Pipe	--
Field	Wildcat	I. D. of D. C.	2 1/4"
County	Elko	Length of D. C.	353'
State	Nevada	Total Depth	3370'
Elevation	5503' "Ground"	Interval Tested	3225-3370'
Formation	Morrison	Type of Test	Bottom Hole Conventional



Flow No. 1	10 Min.
Shut-in No. 1	60 Min.
Flow No. 2	60 Min.
Shut-in No. 2	90 Min.
Flow No. 3	-- Min.
Shut-in No. 3	-- Min.
Bottom Hole Temp.	118° F
Mud Weight	9.1
Gravity	--
Viscosity	32
Tool opened @	12:28 AM.

Inside Recorder

PRD Make Kuster AK-1
No. 3697 Cap. 3700 @ 3235'

Press		Corrected
Initial Hydrostatic	A	1602
Final Hydrostatic	K	1588
Initial Flow	B	197
Final Initial Flow	C	401
Initial Shut-in	D	1403
Second Initial Flow	E	506
Second Final Flow	F	1048
Second Shut-in	G	1371
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist.: Rock Springs, Wy.
Our Tester: Wayne Hockaday
Witnessed By: Kent Crawford

Did Well Flow – Gas No Oil No Water No

RECOVERY IN PIPE: Test was reverse circulated.

1st Flow - Tool opened with a 12" underwater blow, increased to bottom of bucket in 2 minutes. Continued to increase thru remainder of flow period.

2nd Flow - Tool opened with a 3" underwater blow, increased to bottom of bucket in 1 minute. Continued to increase to .5 psig. for 50 minutes, decreased to .25 psig. at end of flow period.

REMARKS:

Form 1

Operator Shell Oil Co. c/o D. S. Cushman Well Name and No. Federal # 1
Address 1700 Broadway Denver, Colorado 80202 Ticket No. 10257 Date 12-24-77 No. Final Copies 5 DST No. 3