JOHNSTON

Schlumberger

technical report

FIELD REPORT # 12060 D

COMPANY U.S.G.S./HUSKY OIL WELL LISBURNE #1 TEST NO. 2 COUNTY NORTH SLOPE STATE ALASKA

COMPANY

JS-166

JOHNSTON
Schlumberger

COMPUTERIZED DATA ANALYSIS

JULY 16, 1980

GENTLEMEN:

THE ENCLOSED TEST APPEARS TO BE AN UNSUCCESSFUL TEST DUE TO TOOL PLUGGING. THE FORMATION DID NOT PRODUCE ENOUGH FLUID FOR PROPER IDENTIFICATION. RESERVOIR PRESSURE DRAWDOWN WAS SUFFICIENT AND ADEQUATE SHUT-IN BUILD-UPS DID OCCUR FOR AN ESTIMATION OF RESERVOIR PRESSURE.

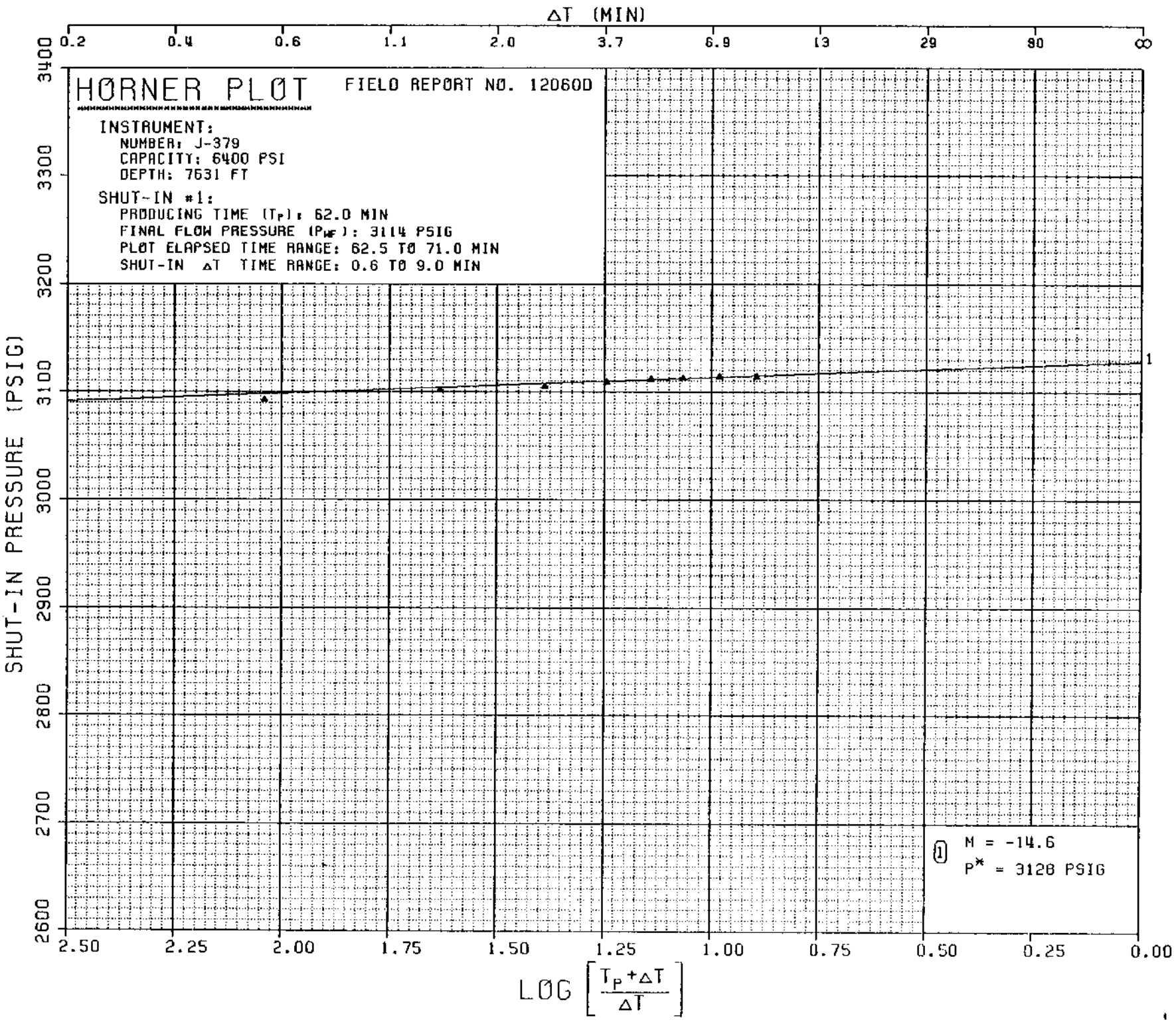
INITIAL SHUT-IN EXTRAPOLATION:	3128 PSIG
FINAL SHUT-IN STABILIZED:	3130 PSIG

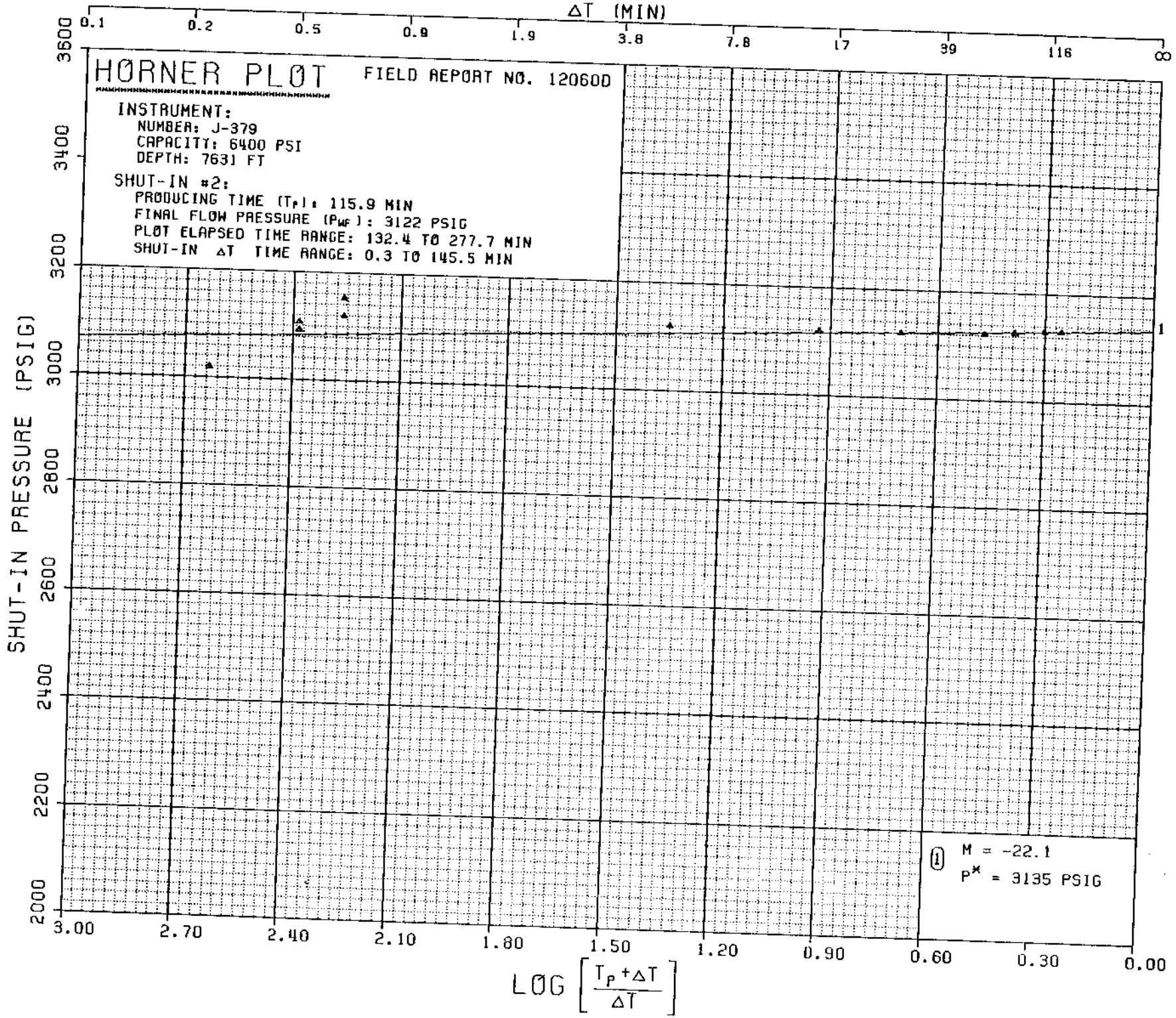
THIS YIELDS A PRESSURE GRADIENT OF .410 PSIG AT RECORDER DEPTH.

D.J. SIMPER
RESERVOIR EVALUATION
DEPARTMENT

U.S.G.S./HUSKY OIL COMPANY
LISBURNE #1; NORTH SLOPE, ALASKA
TEST #2; 7645' TO 7662' (UNSUCCESSFUL)
LOCATION: SEC. 17 - T11S - R16W, UM

FIELD REPORT # 12060 D


ΔT (MIN)
0.2
0.4
0.6
1.1
2.0
3.7
6.9
13
29
80
∞
HØRNER PLØT
FIELD REPORT NO. 12060D
INSTRUMENT:
NUMBER: J-379
CAPACITY: 6400 PSI
DEPTH: 7631 FT
SHUT-IN #1:
PRODUCING TIME (T_P): 62.0 MIN
FINAL FLOW PRESSURE (P_{WF}): 3114 PSIG
PLØT ELAPSED TIME RANGE: 62.5 TØ 71.0 MIN
SHUT-IN ΔT TIME RANGE: 0.6 TØ 9.0 MIN
SHUT-IN PRESSURE (PSIG)
3400
3300
3200
3100
3000
2900
2800
2700
2600
1
1
M = -14.6
P* = 3128 PSIG
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
LØG [(Tp+ΔT)/ΔT]


HØRNER PLØT
FIELD REPORT NO. 120600
INSTRUMENT:
NUMBER: J-379
CAPACITY: 6400 PSI
DEPTH: 7631 FT
SHUT-IN #2:
PRODUCING TIME (T_P): 115.9 MIN
FINAL FLOW PRESSURE (P_{WF}): 3122 PSIG
PLØT ELAPSED TIME RANGE: 132.4 TØ 277.7 MIN
SHUT-IN ΔT TIME RANGE: 0.3 TØ 145.5 MIN
ΔT (MIN)
0.1
0.2
0.5
0.9
1.9
3.8
7.8
17
39
116
∞
SHUT-IN PRESSURE (PSIG)
3600
3400
3200
3000
2800
2600
2400
2200
2000
3.00
2.70
2.40
2.10
1.80
1.50
1.20
0.90
0.60
0.30
0.00
LØG $\left[\frac{T_P+\Delta T}{\Delta T}\right]$
1
M = -22.1
P^* = 3135 PSIG

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J8-225

SURFACE INFORMATION

Description (Rate of Flow)	Time	Pressure (P.S.I.G.)	Surface Choke
Opened Tool	0124	–	1/4''
CLOSED FOR INITIAL SHUT-IN	0220	–	''
FINISHED SHUT-IN	0230	–	''
RE-OPENED TOOL	0236	–	''
CLOSED FOR FINAL SHUT-IN	0330	–	''
PULLED PACKER LOOSE	0557	–	''

Cushion Type	Amount	Pressure	Bottom Choke
	–		Size 3/4''

MUD DATA

Mud Type – Wt. –
Viscosity – Water Loss – C.C.
Resist. of Mud – @ – °F; of Filtrate – @ – °F
Chloride Content – PPM

EQUIPMENT & HOLE DATA

Type Test M.F.E. CASING
Formation Tested –
Elevation – Ft.
Net Productive Interval – Ft.
Estimated Porosity – %
All Depths Measured From –
Total Depth 7680 Ft.
Main Hole/Casing Size 9 5/8''
Rat Hole/Liner Size 7 5/8''
Drill Collar Length – I.D. –
Drill Pipe Length – I.D. –
Packer Depth(s) 7610 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 ____
Tot. Liquid cc. ____
Gravity ____ °API @ ____ °F.
Gas/Oil Ratio ____ cu. ft./bbl.

		RESISTIVITY	CHLORIDE CONTENT
Recovery Water	@ °F.		ppm
Recovery Mud	@ °F.		
Recovery Mud Filtrate	@ °F.		ppm
Mud Pit Sample	@ °F.		
Mud Pit Sample Filtrate	@ °F.		ppm

RECOVERY DESCRIPTION	FEET	BARRELS	% OIL	% WATER	% OTHERS	API GRAVITY	RESISTIVITY	CHL. PPM
DRILLING MUD, LITTLE WATER	110	–				@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	
						@ °F.	@ °F.	

Remarks: UNSUCCESSFUL TEST. ''MARINE OPERATIONS''

(CUSTOMER) HUSKY OIL COMPANY
Address 2525 C. STREET, SUITE 400; ANCHORAGE, ALASKA 99503

Company U.S.G.S./HUSKY OIL COMPANY Field NPR (WILD CAT)
Well LISBURNE #1 Location SEC. 17 - T11S - R16W, UM
Test Interval 7645' TO 7662' (UNSUCCESSFUL) Test # 2 Date 5-28-80

County NORTH SLOPE State ALASKA
Technician NEWCOMB (KENAI) Test Approved By MR. D.L. WESTNER

Field Report No. 12060 D
No. Reports Requested 5

BOTTOM HOLE PRESSURE AND TIME DATA

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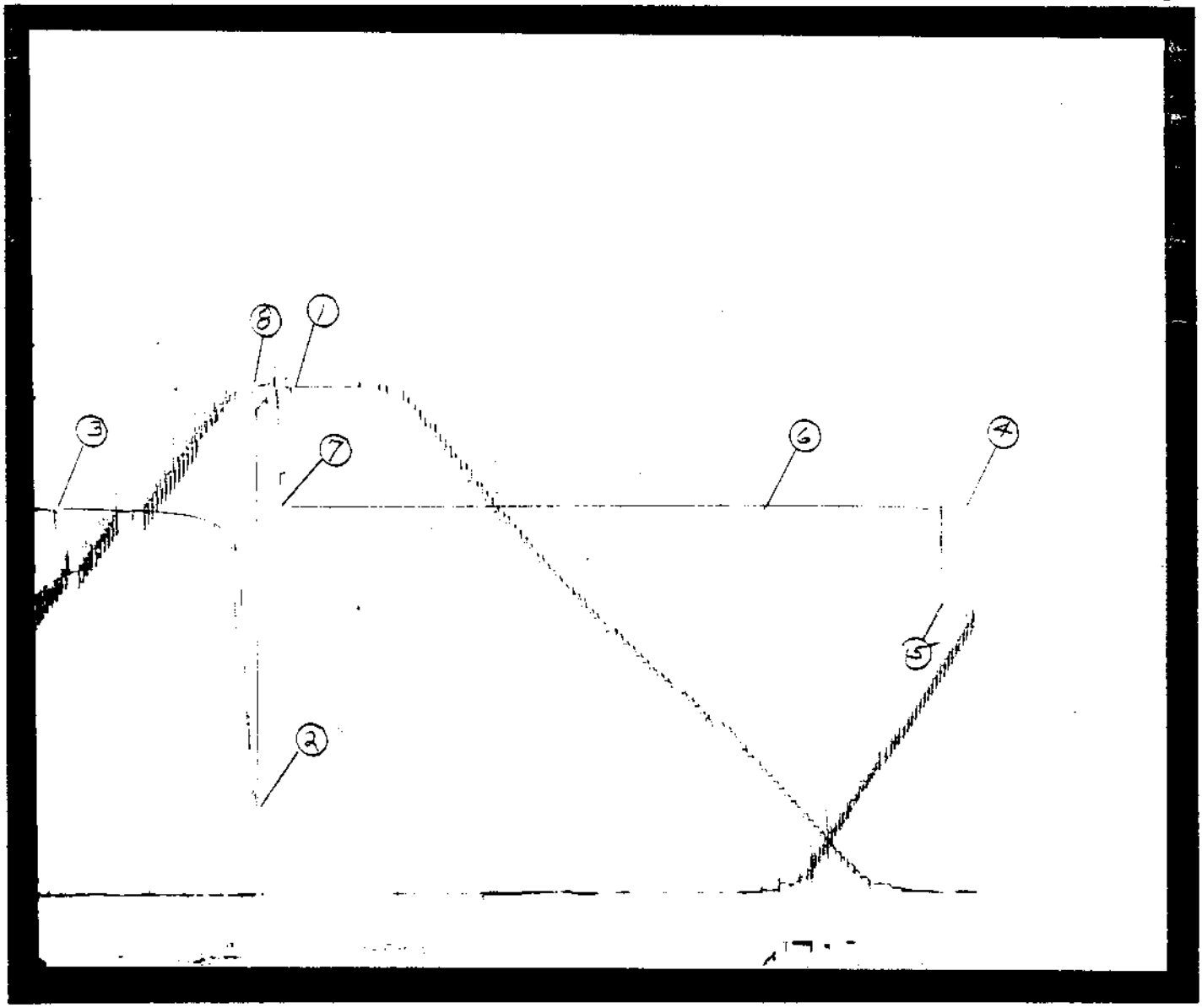
PAGE NUMBER 2

INSTRUMENT NUMBER	CAPACITY (P.S.I.)	DEPTH
J-313	6400#	7590
PORT OPENING	**BOTTOM HOLE TEMPERATURE**	**FIELD REPORT NUMBER**
INSIDE	125°F.	12060 D

DESCRIPTION	LABELED POINTS	PRESSURE (P.S.I.)	GIVEN TIME	COMPUTED TIME
INITIAL HYDROSTATIC MUD	1	4054.2		
INITIAL FLOW (1)	2	721.8		
INITIAL FLOW (2)	3	3089.5		
INITIAL SHUT-IN	4	3089.5		
SECOND FLOW (1)				
SECOND FLOW (2)				
SECOND SHUT-IN				
FINAL FLOW (1)	5	2332.3		
FINAL FLOW (2)	6	3099.7		
FINAL SHUT-IN	7	3097.1		
FINAL HYDROSTATIC MUD	8	4064.5		

REMARKS: UNSUCCESSFUL TEST. CHARTS INDICATE TOOL PLUGGED DURING THE TEST.

5+



FIELD REPORT NO.: 12060 D

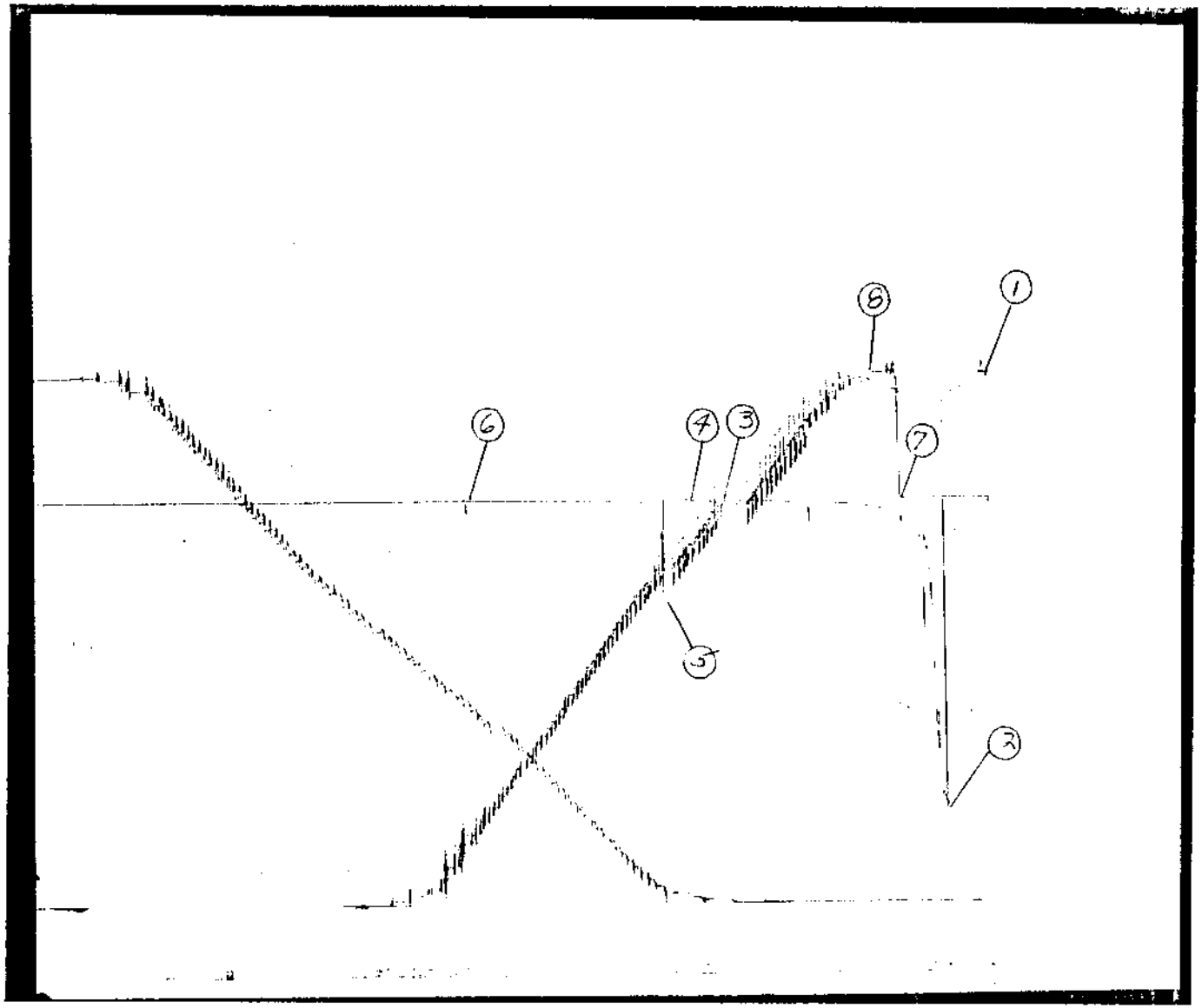
CAPACITY: 6400#

INSTRUMENT NO.: J-379

NUMBER OF REPORTS: 5+

JOHNSTON Schlumberger

UNSUCCESSFUL TEST. CHARTS INDICATE TOOL PLUGGED DURING THE TEST.

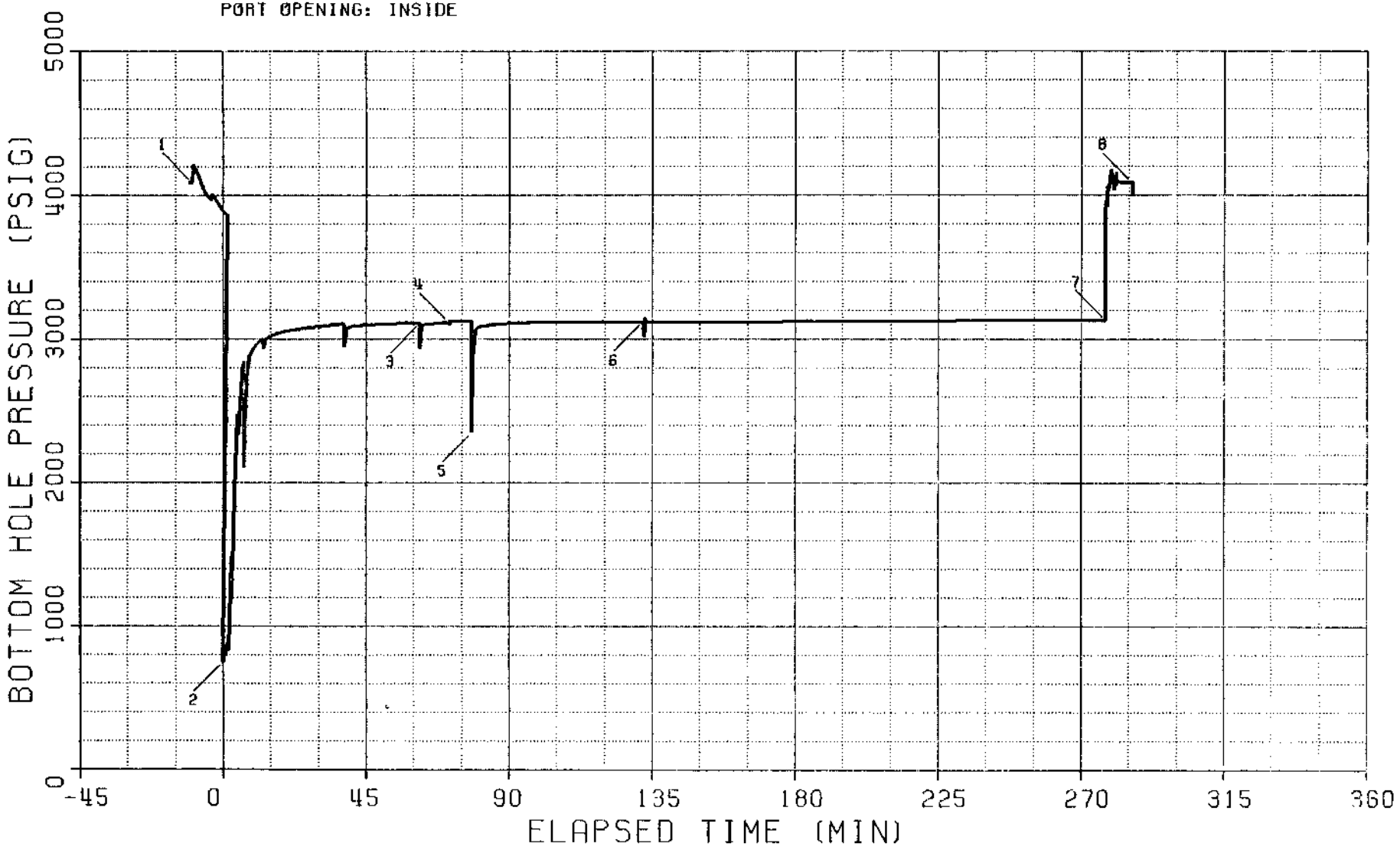


PRESSURE LOG

FIELD REPORT NO. 120600

INSTRUMENT:

NUMBER: J-379
CAPACITY: 6400 PSI
DEPTH: 7631 FT
PORT OPENING: INSIDE



BOTTOM HOLE PRESSURE AND TIME DATA

INSTRUMENT NO.: J-379 CAPACITY (PSI): 6400 DEPTH (FT): 7631
PORT OPENING: INSIDE BOTTOM HOLE TEMP (F): 125

EXPLANATION	LABELED POINT	PRESSURE (PSIG)	ELAPSED TIME (MIN)
HYDROSTATIC MUD	1	4087	-9.7
START FLOW	2	751	0.0
END FLOW & START SHUT-IN	3	3114	62.0
END SHUT-IN	4	3114	71.0
START FLOW	5	2355	78.3
END FLOW & START SHUT-IN	6	3122	132.2
END SHUT-IN	7	3130	277.7
HYDROSTATIC MUD	8	4085	286.0

* SUMMARY OF FLOW PERIODS *

FLOW PERIOD	ELAPSED TIME AT START (MIN)	ELAPSED TIME AT END (MIN)	DURATION OF FLOW (MIN)	PRESSURE AT START (PSIG)	PRESSURE AT END (PSIG)
1	0.0	62.0	62.0	751	3114
2	78.3	132.2	53.9	2355	3122

* SUMMARY OF SHUT-IN PERIODS *

SHUT-IN PERIOD	ELAPSED TIME AT START (MIN)	ELAPSED TIME AT END (MIN)	DURATION OF SHUT-IN (MIN)	PRESSURE AT START (PSIG)	PRESSURE AT END (PSIG)	FINAL FLOW PRESSURE (PSIG)	PRODUCING TIME (MIN)
1	62.0	71.0	9.0	3114	3114	3114	62.0
2	132.2	277.7	145.5	3122	3130	3122	115.9

FIELD REPORT NO. 12Ø6ØD
INSTRUMENT NO. J-379

TEST PHASE : FLOW PERIOD # 1

ELAPSED TIME (MIN)	DELTA TIME (MIN)	FLOWING PRESSURE (PSIG)
Ø.Ø	Ø.Ø	751
5.Ø	5.Ø	2427
1Ø.Ø	1Ø.Ø	295Ø
15.Ø	15.Ø	3Ø24
2Ø.Ø	2Ø.Ø	3Ø58
25.Ø	25.Ø	3Ø76
3Ø.Ø	3Ø.Ø	3Ø87
35.Ø	35.Ø	3Ø98
4Ø.Ø	4Ø.Ø	3Ø84
45.Ø	45.Ø	31Ø1
5Ø.Ø	5Ø.Ø	31Ø8
55.Ø	55.Ø	3112
6Ø.Ø	6Ø.Ø	3114
62.Ø	62.Ø	3114

TEST PHASE : SHUT-IN PERIOD # 1

1. FINAL FLOW PRESSURE ["P_{WF}"] = 3114 PSIG
2. PRODUCING TIME ["T_P"] = 62.Ø MIN

ELAPSED TIME (MIN)	DELTA TIME ["DT"] (MIN)	SHUT-IN PRESSURE ["P_{WS}"] (PSIG)	LOG [(T +DT)/DT] P	DELTA PRESSURE [P_{WS} - P_{WF}]
62.Ø	Ø.Ø	3114		Ø
63.Ø	1.Ø	3Ø97	1.799	-17
64.Ø	2.Ø	31Ø3	1.5Ø5	-11
65.Ø	3.Ø	31Ø6	1.336	-8
66.Ø	4.Ø	311Ø	1.217	-4
67.Ø	5.Ø	3112	1.127	-2
68.Ø	6.Ø	3113	1.Ø54	-1
69.Ø	7.Ø	3114	Ø.994	Ø
7Ø.Ø	8.Ø	3114	Ø.942	Ø
71.Ø	9.Ø	3114	Ø.897	Ø
71.Ø	9.Ø	3114	Ø.895	Ø

FIELD REPORT NO. 12Ø6ØD
INSTRUMENT NO. J-379

TEST PHASE : FLOW PERIOD # 2

ELAPSED TIME (MIN)	DELTA TIME (MIN)	FLOWING PRESSURE (PSIG)
78.3	Ø.Ø	2355
83.3	5.Ø	3Ø99
88.3	1Ø.Ø	31Ø8
93.3	15.Ø	3115
98.3	2Ø.Ø	3117
1Ø3.3	25.Ø	3119
1Ø8.3	3Ø.Ø	312Ø
113.3	35.Ø	3121
118.3	4Ø.Ø	3121
123.3	45.Ø	3122
128.3	5Ø.Ø	3122
132.2	53.9	3122

TEST PHASE : SHUT-IN PERIOD # 2

1. FINAL FLOW PRESSURE ["P_{WF}"] = 3122 PSIG
2. PRODUCING TIME ["T_P"] = 115.9 MIN

ELAPSED TIME (MIN)	DELTA TIME ["DT"] (MIN)	SHUT-IN PRESSURE ["P_{WS}"] (PSIG)	LOG [(T +DT)/DT] P	DELTA PRESSURE [P_{WS} - P_{WF}]
132.2	Ø.Ø	3122		Ø
133.2	1.Ø	312Ø	2.Ø68	-1
134.2	2.Ø	312Ø	1.77Ø	-1
135.2	3.Ø	312Ø	1.598	-1
136.2	4.Ø	312Ø	1.477	-1
137.2	5.Ø	312Ø	1.383	-1
138.2	6.Ø	312Ø	1.3Ø8	-1
139.2	7.Ø	312Ø	1.244	-1
14Ø.2	8.Ø	312Ø	1.19Ø	-1
141.2	9.Ø	312Ø	1.142	-1
142.2	1Ø.Ø	312Ø	1.1ØØ	-1
144.2	12.Ø	312Ø	1.Ø28	-1
146.2	14.Ø	312Ø	Ø.967	-1
148.2	16.Ø	312Ø	Ø.916	-1
15Ø.2	18.Ø	312Ø	Ø.871	-1
152.2	2Ø.Ø	312Ø	Ø.832	-1
154.2	22.Ø	312Ø	Ø.797	-1
156.2	24.Ø	312Ø	Ø.765	-1
158.2	26.Ø	312Ø	Ø.737	-1
16Ø.2	28.Ø	312Ø	Ø.711	-1
162.2	3Ø.Ø	3121	Ø.687	-1
167.2	35.Ø	3121	Ø.635	-1

FIELD REPORT NO. 12060D
INSTRUMENT NO. J-379

TEST PHASE : SHUT-IN PERIOD # 2

1. FINAL FLOW PRESSURE ["P_{WF}"] = 3122 PSIG
2. PRODUCING TIME ["T_P"] = 115.9 MIN

ELAPSED TIME (MIN)	DELTA TIME ["DT"] (MIN)	SHUT-IN PRESSURE ["P_{WS}"] (PSIG)	LOG [(T_P+DT)/DT]	DELTA PRESSURE [P_{WS} - P_{WF}]
172.2	40.0	3121	0.591	0
177.2	45.0	3122	0.553	0
182.2	50.0	3122	0.521	0
187.2	55.0	3123	0.492	1
192.2	60.0	3123	0.467	1
197.2	65.0	3124	0.444	2
202.2	70.0	3125	0.424	3
207.2	75.0	3126	0.406	4
212.2	80.0	3126	0.389	5
217.2	85.0	3127	0.373	5
222.2	90.0	3127	0.359	6
227.2	95.0	3128	0.346	6
232.2	100.0	3128	0.334	7
237.2	105.0	3129	0.323	7
242.2	110.0	3129	0.312	7
247.2	115.0	3130	0.303	8
252.2	120.0	3130	0.293	8
257.2	125.0	3130	0.285	8
262.2	130.0	3130	0.277	8
267.2	135.0	3130	0.269	8
272.2	140.0	3130	0.262	8
277.2	145.0	3130	0.255	8
277.7	145.5	3130	0.254	8