

MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company CITIES SERVICE OIL COMPANY
Lease and Well No. REIN "A" #4
County NESS State KANSAS Date AUGUST 7, 1966

Formation Test No. 4 Total Depth 4439 Elev. 2316 KB
Interval Tested 4429 To 4439 Anchor Length 10'
Size Hole 7 7/8 Size Drill Pipe 4 1/2 ACME Size Packer 6 3/4
Mud Weight 10 Viscosity 47 Water Loss 14.6 c.c. Bottom Hole Temp. 114 °F
Chokes: Top 1/2 Bottom 1/2 Ticket No. 8116

RECOVERY

GOOD BLOW THROUGHOUT TEST

247 FEET OF FREE OIL

156 FEET OF MUDDY OIL

164 FEET OF GAS

PARTIAL PLUGGING OF TOOL ON 1ST OPENING FOR 5 MINS.

Lease and Well No. REIN "A" #4 29 19S 21W C NW NW Formation Test No. 1

COMPANY CITIES SERVICE OIL CO. DATE AUGUST 7, 1966

LEASE REIN "A" WELL NO. 4 TEST NO. 1 TICKET NO. 8116

	TIME	PSI
INITIAL HYDRO MUD PRESSURE		2430
INITIAL CLOSED IN PRESSURE	30 MINS.	1336
INITIAL FLOW	15 MINS.	28 to 51
FINAL FLOW	75 MINS.	55 to 146
FINAL CLOSED IN PRESSURE	30 MINS.	1309
FINAL HYDRO MUD PRESSURE		2388

TOTAL DEPTH 4439

PACKER DEPTH 4429

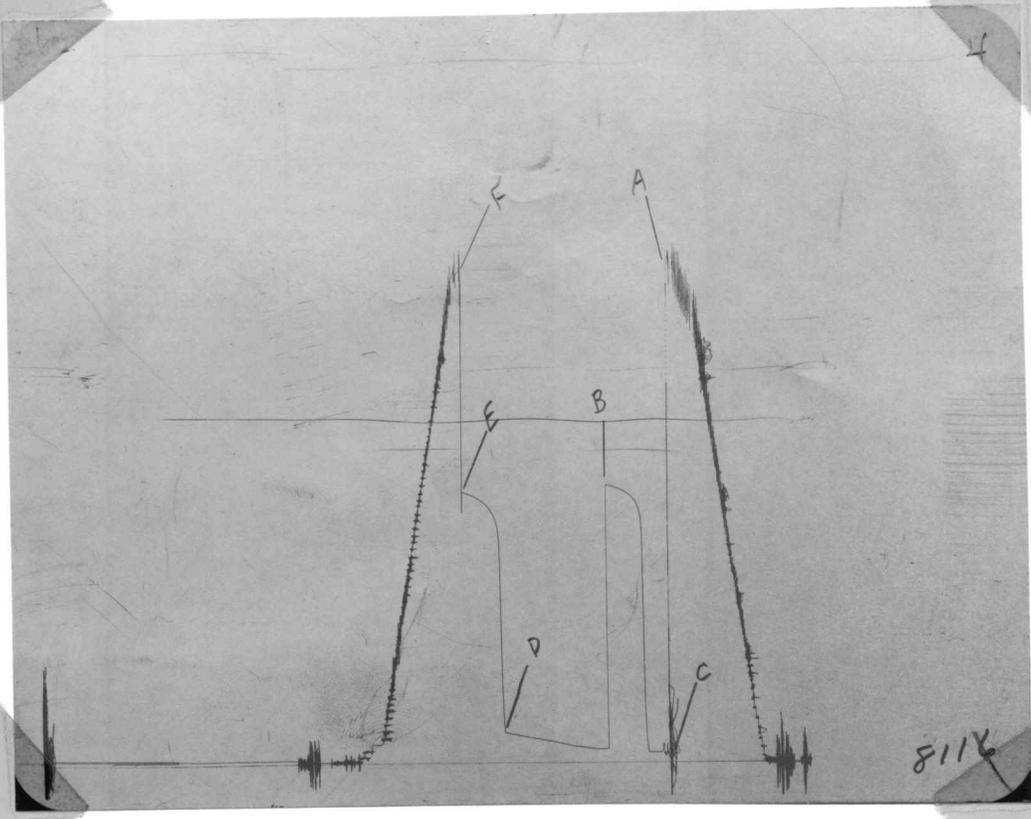
BT. NO. 1049 DEPTH 4434

	1ST FLOW PRESSURE		INITIAL CIP		2ND FLOW PRESSURE		FINAL CIP	
	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.
P0		28		51		55		146
P1		46		1235		73		1190
P2		49		1281		92		1235
P3		51		1309		110		1272
P4				1323		128		1290
P5				1331		146		1304
P6				1336				1309
P7								
P8								
P9								
P10								
	5 MINUTE INTERVAL		5 MINUTE INTERVAL		15 MINUTE INTERVAL		5 MINUTE INTERVAL	

REMARKS PARTIAL PLUGGING OF FIRST 5 MINS. OF 1ST OPENING.

SPECIAL PRESSURE DATA

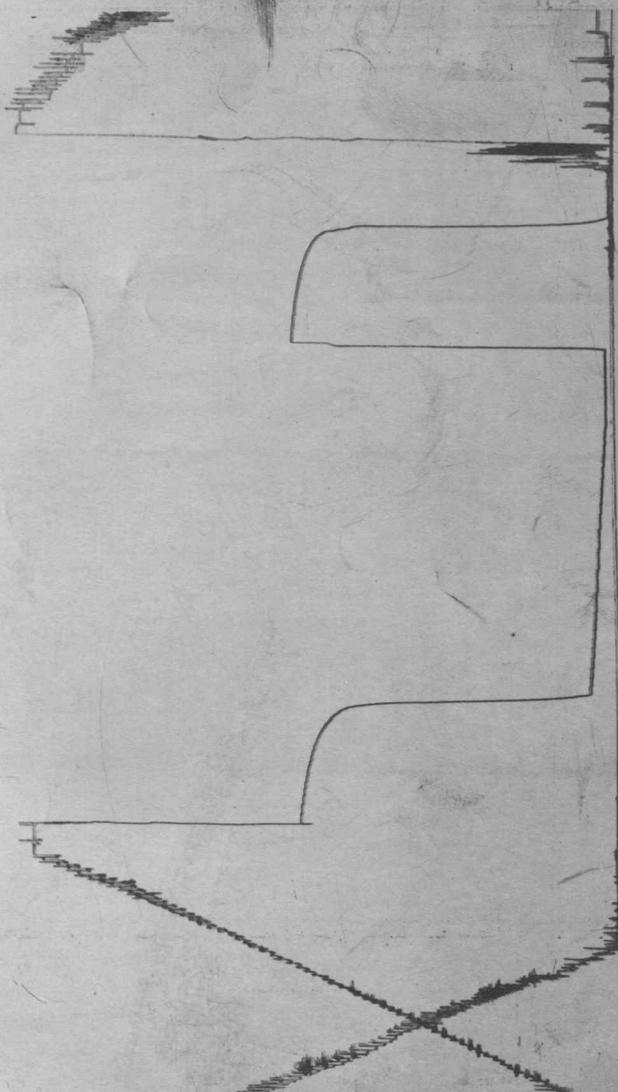
Pressure: _____ psi



Tool Open: 1st Flow _____ hr. 15 mins: 2nd Flow 1 hr. 15 mins: Shut-in: Initial _____ hr. 30 mins: Final _____ hr. 30 mins.

	Field Reading	Corrected Reading
(A) Initial Hydrostatic Pressure	<u>2415</u>	<u>2430</u>
(B) Initial Shut-in Pressure	<u>1336</u>	<u>1336</u>
(C) Initial Flow Pressure	<u>46</u>	<u>28</u>
(D) Final Flow Pressure	<u>141</u>	<u>146</u>
(E) Final Shut-in Pressure	<u>1299</u>	<u>1309</u>
(F) Final Hydrostatic Pressure	<u>2397</u>	<u>2388</u>

Bo Horn Chart



8116

PHOTO COPY FROM ORIGINAL

MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company CITIES SERVICE OIL COMPANY
Lease and Well No. REIN "A" #4
County NESS State KANSAS Date AUGUST 8, 1966

Formation Test No. 2 Total Depth 4449 Elev. 2316 KB
Interval Tested 4439 To 4449 Anchor Length 10'
Size Hole 7 7/8 Size Drill Pipe 4 1/2 ACME Size Packer 6 3/4
Mud Weight 9.8 Viscosity 51 Water Loss 14.6 c.c. Bottom Hole Temp. 114 °F
Chokes: Top 1/2 Bottom 1/2 Ticket No. 8117

RECOVERY

GOOD BLOW THROUGHOUT TEST

1048 FEET OF GAS IN PIPE

272 FEET OF CLEAN OIL

189 FEET OF MUDDY OIL

Lease and Well No. REIN "A" #4 29 19S 21W C NW NW Formation Test No. 2

COMPANY CITIES SERVICE OIL COMPANY

DATE AUGUST 8, 1966

LEASE REIN "A"

WELL NO. 4

TEST NO. 2

TICKET NO. 8117

	TIME	PSI
INITIAL HYDRO MUD PRESSURE		2425
INITIAL CLOSED IN PRESSURE	30 MINS.	1334
INITIAL FLOW	40 MINS.	41 to 97
FINAL FLOW	60 MINS.	105 to 183
FINAL CLOSED IN PRESSURE	30 MINS.	1301
FINAL HYDRO MUD PRESSURE		2416

TOTAL DEPTH 4449

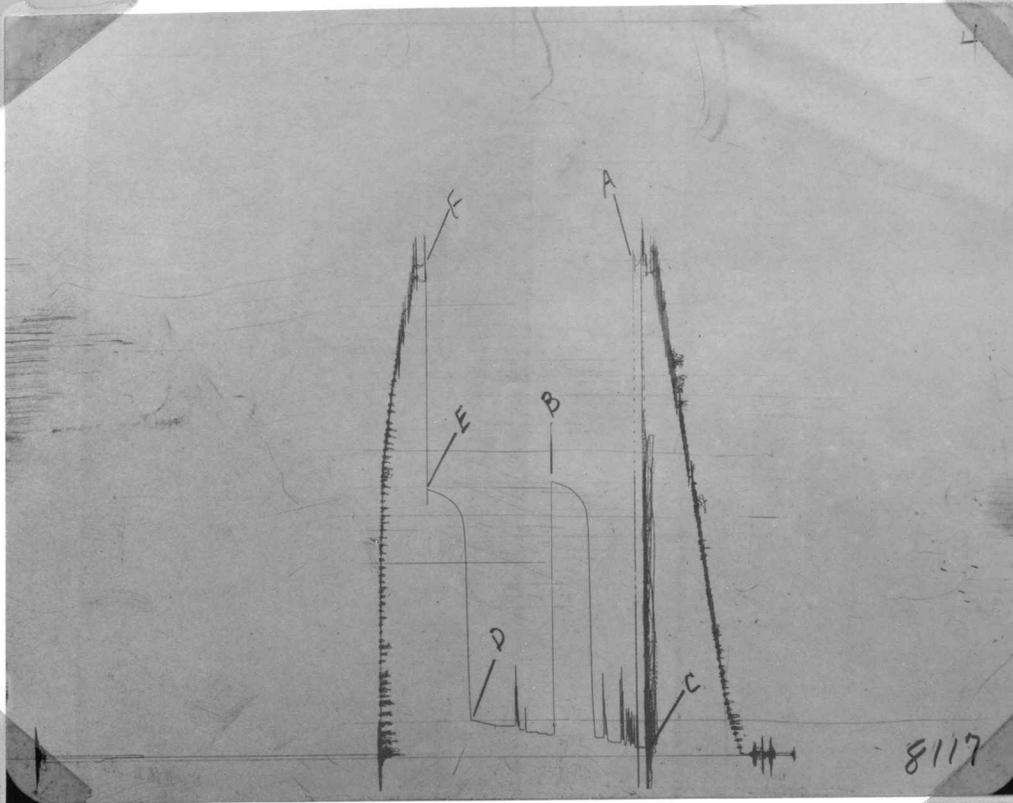
PACKER DEPTH 4439

BT. NO. 1049 DEPTH 4444

	1ST FLOW PRESSURE		INITIAL CIP		2ND FLOW PRESSURE		FINAL CIP	
	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.
P0		41		97		105		183
P1		?		1235		110		1217
P2		?		1281		119		1244
P3		?		1299		154		1263
P4		66		1318		156		1281
P5		68		1327		165		1290
P6		82		1334		183		1301
P7		92						
P8		97						
P9								
P10								
	5	MINUTE INTERVAL	5	MINUTE INTERVAL	10	MINUTE INTERVAL	5	MINUTE INTERVAL

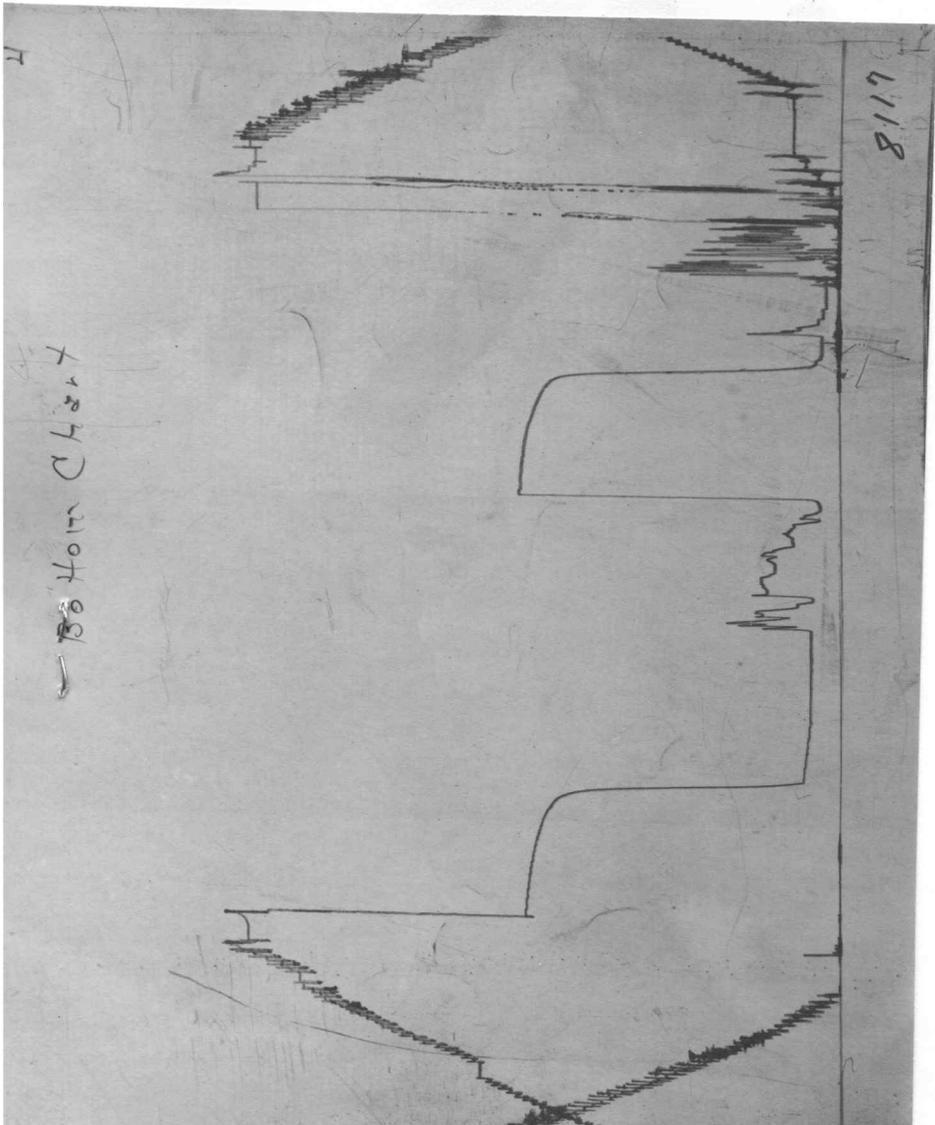
REMARKS PARTIAL PLUGGING ON BOTH FLOW PERIODS

SPECIAL PRESSURE DATA



Tool Open: 1st Flow hr. 40 mins: 2nd Flow 1 hr. _____ mins: Shut-in: Initial _____ hr. 30 mins: Final _____ hr. 30 mins.

	Field Reading	Corrected Reading
(A) Initial Hydrostatic Pressure	<u>2415</u>	<u>2425</u>
(B) Initial Shut-in Pressure	<u>1336</u>	<u>1334</u>
(C) Initial Flow Pressure	<u>41</u>	<u>41</u>
(D) Final Flow Pressure	<u>183</u>	<u>183</u>
(E) Final Shut-in Pressure	<u>1299</u>	<u>1301</u>
(F) Final Hydrostatic Pressure	<u>2397</u>	<u>2416</u>



DRIFT CLEM JEN BROWN

1911

MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company CITIES SERVICE OIL COMPANY

Lease and Well No. REIN "A" #4

County NESS State KANSAS Date AUGUST 8, 1966

Formation Test No. 3 Total Depth 4457 Elev. 2316 KB

Interval Tested 4449 To 4457 Anchor Length 8'

Size Hole 7 7/8 Size Drill Pipe 4 1/2 ACME Size Packer 6 3/4

Mud Weight 9.8 Viscosity 50 Water Loss 11 c.c. Bottom Hole Temp. 122 °F

Chokes: Top 1/2 Bottom 1/2 Ticket No. 8118

RECOVERY

GOOD BLOW DECREASING SOME BY END OF TEST,

1376 FEET OF GAS IN PIPE

388 FEET OF FREE OIL

126 FEET OF MUDDY OIL

48 FEET OF SLIGHTLY OILY MUD

15 FEET OF THIN MUD

Lease and Well No. REIN "A" #4 29 19S 21W C NW NW Formation Test No. 3

COMPANY CITIES SERVICE OIL CO. DATE AUGUST 8, 1966

LEASE REIN #A7 WELL NO. 4 TEST NO. 3 TICKET NO. 8118

	TIME	PSI
INITIAL HYDRO MUD PRESSURE		2379
INITIAL CLOSED IN PRESSURE	30 MINS.	1338
INITIAL FLOW	30 MINS.	28 to 119
FINAL FLOW	30 MINS.	146 to 211
FINAL CLOSED IN PRESSURE	30 MINS.	1334
FINAL HYDRO MUD PRESSURE		2379

TOTAL DEPTH 4457

PACKER DEPTH 4449

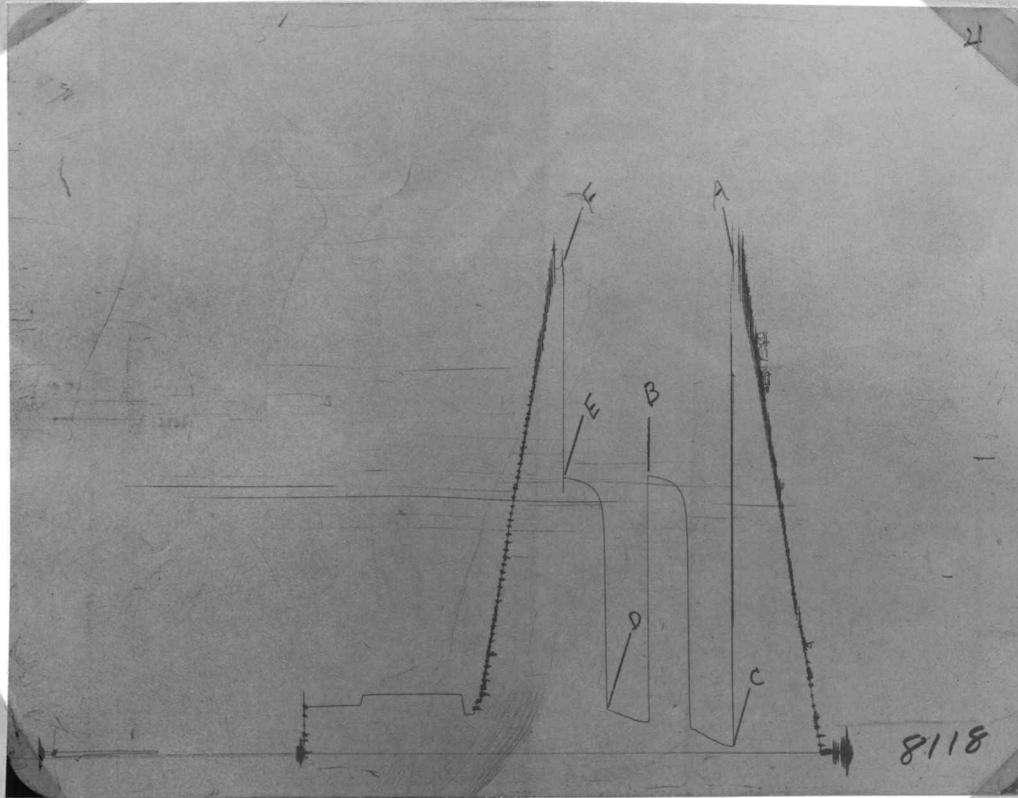
BT. NO. 1049 DEPTH 4452

	1ST FLOW PRESSURE		INITIAL CIP		2ND FLOW PRESSURE		FINAL CIP	
	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.	TIME DEFL. .000"	PSI TEMP. CORR.
P0		28		119		146		211
P1		37		1272		151		1263
P2		55		1304		165		1299
P3		73		1318		174		1309
P4		92		1327		183		1318
P5		105		1334		197		1327
P6		119		1338		211		1334
P7								
P8								
P9								
P10								
	5	MINUTE INTERVAL	5	MINUTE INTERVAL	5	MINUTE INTERVAL	5	MINUTE INTERVAL

REMARKS _____

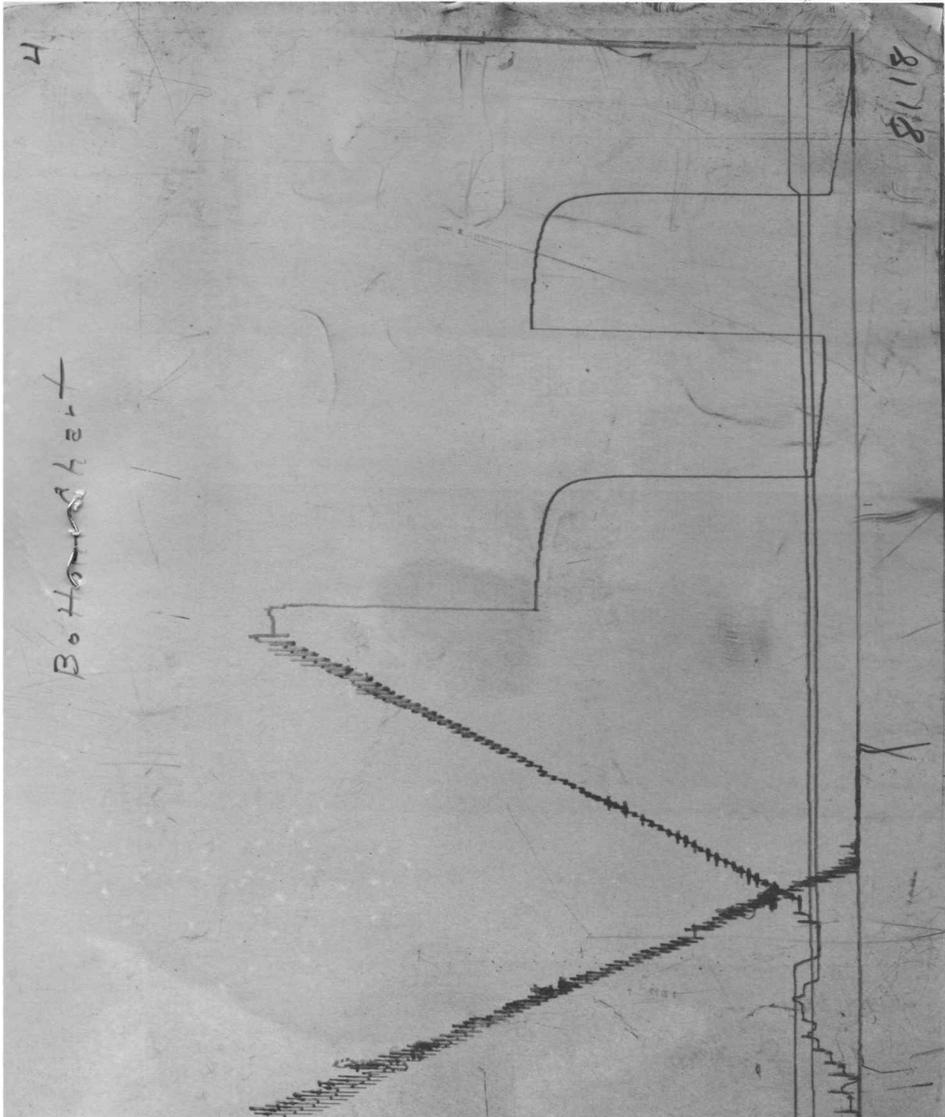
SPECIAL PRESSURE DATA

Pressure: Each Square _____ psi



Tool Open: 1st Flow _____ hr. 30 mins: 2nd Flow _____ hr. 30 mins: Shut-in: Initial _____ hr. 30 mins: Final _____ hr. 30 mins.

	Field Reading	Corrected Reading
(A) Initial Hydrostatic Pressure	<u>2379</u>	<u>2379</u>
(B) Initial Shut-in Pressure	<u>1336</u>	<u>1338</u>
(C) Initial Flow Pressure	<u>28</u>	<u>28</u>
(D) Final Flow Pressure	<u>210</u>	<u>211</u>
(E) Final Shut-in Pressure	<u>1322</u>	<u>1334</u>
(F) Final Hydrostatic Pressure	<u>2342</u>	<u>2379</u>



DRIFT STEEL TEST REPORT