

March 30, 1987

DUGAN PRODUCTION CORP./  
JEROME P. McHUGH & ASSOC.Exhibit No. 9EVALUATION OF 3/13/87 PRODUCTION SURVEY  
Jerome P. McHugh's Homestead Ranch No. 2Well History

- 4/15/85 Well completed with IPF = 700 BOPD @ 371 GOR.
- 5/85 First production. Well produced 5 days averaging 533 BOPD.
- 5/85 Production = 122,027 BO + 83,867 MCF of gas (monthly  
thru production detail attached).  
12/86
- 1/87 Well produced 16 days averaging 274 BOPD with a GOR = 855.
- 2/87 Well produced 12 days averaging 396 BOPD with a GOR of 2212  
(Note: production during February estimated from daily gauges.  
Well shut-in on 2-13-87). Ran Benson-Montin-Greer's GRC pressure  
bomb to monitor static BHP with bomb landed at 6862' (near base  
of "B" zone).
- 3/87 Continued surveillance of static BHP 3/1-3/87 and 3/9-11/87 using  
Benson-Montin-Greer's GRC pressure bomb (pressure data attached).
- 3/11/87 Killed well with approximately 100 BO and raised tubing from 6954 to  
6437'. Placed well on production to condition for production survey.
- 3/13/87 Rigged up Welex cased hole equipment and ran combination production  
log. Data recorded as follows: Gamma Ray-CCL log for depth control  
in combination with a Fluid Density (Gamma Radiation) log, Temperature  
log (both absolute and differential), spinner tool and pressure tool.  
All data was recorded simultaneously. Survey tool was on bottom  
at 10:15 A.M. and the survey was completed at 12:25 P.M.  
Production data during this survey is tabulated as follows:

<u>Time</u>	<u>Casing Pressure</u>	<u>Tubing Pressure</u>	<u>Oil Rate (BOPH)</u>	<u>Remarks</u>
8:30 AM	----	----	11.66	Average 7:30 AM-8:30 AM
8:44 AM	710 psig	----	----	
9:03 AM	722 psig	278 psig	----	
9:15 AM	----	----	----	Shut-in to rig up Welex
9:22 AM	726 psig	205 psig	----	
9:35 AM	----	----	----	Well returned to production
9:45 AM	750 psig	230 psig	----	
10:15 AM	750 psig	230 psig	----	Survey tool on bottom
10:45 AM	760 psig	255 psig	12.92	Average rate 9:45-10:45
11:45 AM	780 psig	240 psig	14.17	Average rate 10:45-11:45
12:10 PM	800 psig	260 psig	----	
12:25 PM	820 psig	250 psig	----	Production survey completed
12:45 PM	820 psig	260 psig	14.58	Average rate 11:45-12:45

During the conditioning period beginning 3-11-87 and thru the completion of the survey, produced gas was vented in order to maintain back pressure as stable as possible. Prior to shutting the well in the gas-oil-ratio was averaging 2212. During the survey between 9:45 AM and 12:45 PM a total of 40 BO was produced for a daily average rate of 333 BOPD. The survey was witnessed by James Hazen and Murphy Brasuel for Jerome P. McHugh and Barbara Williams for Dugan Production Corp. Results from the survey are summarized as follows:

<u>Zone</u>	<u>Perfs</u>	<u>Remarks</u>
Niobrara "A"	6698-6738' (8 holes)	No fluid entry
Niobrara "B"	6756-6874' (13 holes)	Approximately 94% of production is entering the casing at 6770'. The wellbore fluid has a density of 0.29 g/cc (34% oil-66% gas).  Approximately 6% of the total production is entering the casing at 6797'. The wellbore fluid has a density of 0.70 g/cc (94% oil & 6% gas).
Niobrara "C"	6883-6946' (14 holes)	No fluid entry during the survey, however, fluid density in the casing is averaging 0.72 g/cc which represents oil with approx. 300 scf/bbl of gas, which corresponds to the anticipated dissolved gas at the indicated producing BHP $\pm$ 1060 psi.
Rathole	-----	Fluid in the rathole below the bottom perf in the "C" zone is indicated to have a density of 0.98 g/cc which is the approx. density of fresh water at 170° which was the fluid used for completion.

GAVILAN MANCOS POOL, RIO ARRIBA CO., NM  
 J.P. MCHUGH, HOMESTEAD RANCH #2. (SW 34-25N-2W)

		OIL					GAS			GOR	WATER		
YR	MO	DAYS PRODUCED	BOPM	BOPPD	BOPCD	CUM MBO	MCF/M	MCF/D	CUM MCF	SCF/BBL	Month	BWPD	CUM MBW
1985	5	5.0	2667.0	533.4	86.0	2.7	610.0	122.0	0.6	228.7	0.0	0.0	0.0
1985	6	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.6	0.0	0.0	0.0	0.0
1985	7	2.0	646.0	323.0	20.8	3.3	240.0	120.0	0.9	371.5	10.0	5.0	0.0
1985	8	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.9	0.0	0.0	0.0	0.0
1985	9	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.9	0.0	0.0	0.0	0.0
1985	10	9.0	4654.0	517.1	150.1	8.0	1727.0	191.9	2.6	371.1	5.0	0.6	0.0
1985	11	30.0	20105.0	670.2	670.2	28.1	7460.0	248.7	10.0	371.1	10.0	0.3	0.0
1985	12	20.0	12973.0	648.7	418.5	41.0	4814.0	240.7	14.9	371.1	10.0	0.5	0.0
Subtotal		66.0	41045.0	621.9	167.5		14851.0				35.0		
1986	1	0.0	0.0	0.0	0.0	41.0	0.0	0.0	14.9	0.0	25.0	0.0	0.1
1986	2	0.0	0.0	0.0	0.0	41.0	0.0	0.0	14.9	0.0	25.0	0.0	0.1
1986	3	0.0	0.0	0.0	0.0	41.0	0.0	0.0	14.9	0.0	25.0	0.0	0.1
1986	4	0.0	0.0	0.0	0.0	41.0	0.0	0.0	14.9	0.0	20.0	0.0	0.1
1986	5	25.0	14249.0	570.0	459.6	55.3	2992.0	119.7	17.8	210.0	20.0	0.8	0.1
1986	6	30.0	18555.0	618.5	618.5	73.8	11212.0	373.7	29.1	604.3	20.0	0.7	0.2
1986	7	31.0	17383.0	560.7	560.7	91.2	16311.0	526.2	45.4	938.3	31.0	1.0	0.2
1986	8	29.0	13841.0	477.3	446.5	105.1	14628.0	504.4	60.0	1056.9	25.0	0.9	0.2
1986	9	6.0	2382.0	397.0	79.4	107.5	1034.0	172.3	61.0	434.1	13.0	2.2	0.2
1986	10	13.0	5340.0	410.8	172.3	112.8	10310.0	793.1	71.3	1930.7	2.0	0.2	0.2
1986	11	11.0	5302.0	482.0	176.7	118.1	6611.0	601.0	77.9	1246.9	15.0	1.4	0.3
1986	12	14.0	3930.0	280.7	126.8	122.0	5918.0	422.7	83.9	1505.9	21.0	1.5	0.3
Subtotal		159.0	80982.0	509.3	221.9		69016.0				242.0		

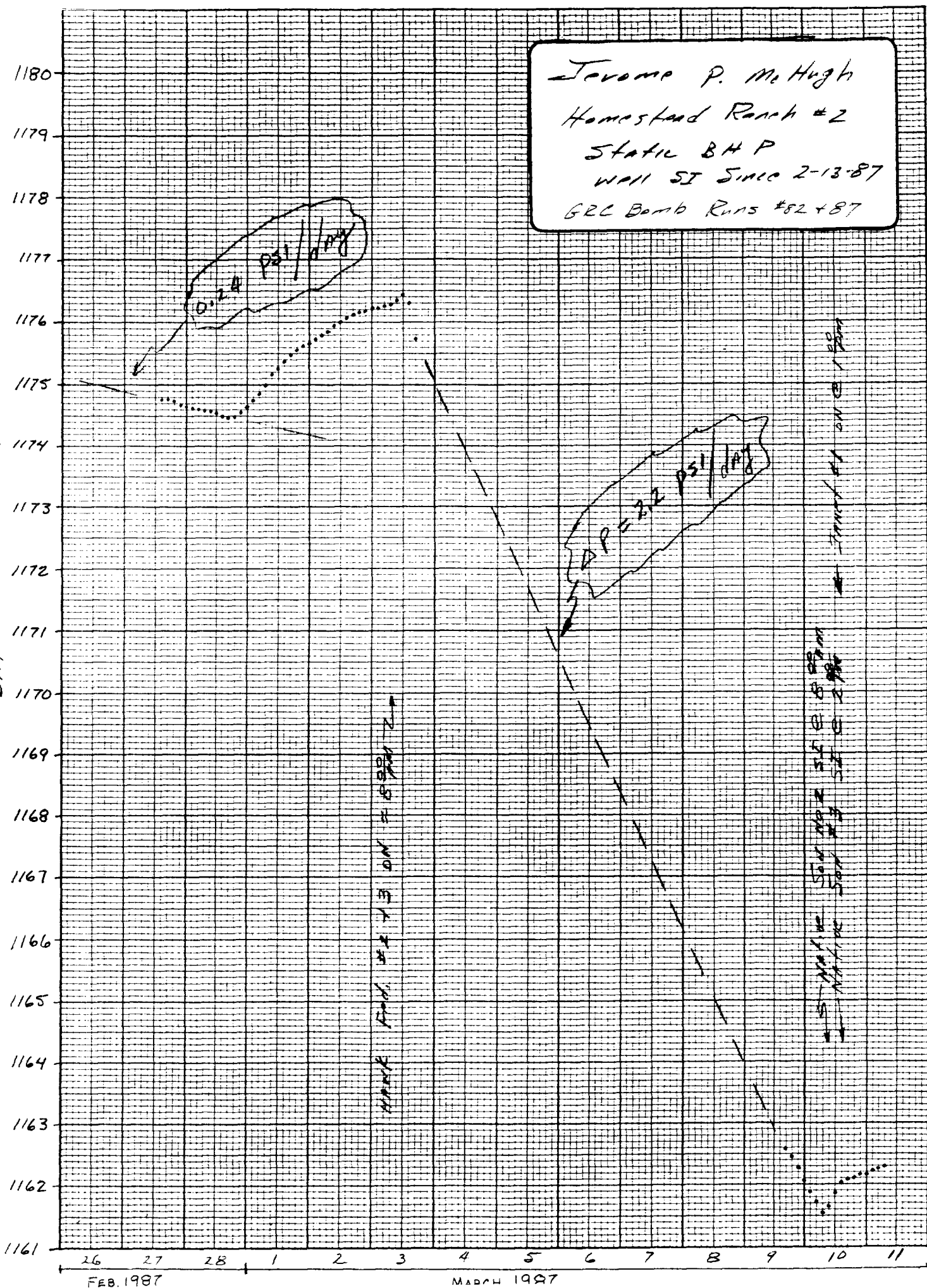
\* BOPPD: BARRELS PER PRODUCING DAY.

\* BOPCD: BARRELS PER CALENDER DAY.

K&E 20 X 20 TO THE INCH 46 1242  
MADE IN U.S.A.  
KEUFFEL & ESSER CO.

BHP @ 6862' KB (+360') - PSIA

Jerome P. McHugh  
Homestead Ranch #2  
Static BHP  
Well SI Since 2-13-87  
GRC Bomb Runs #82 + 87



3/13/87

Homestead Ranch #2

Sulq 34, T-25N, R-2W

## Summary of BHP Measurements

2/27 thru 3/3/87 &amp; 3/9 thru 3/11/87.

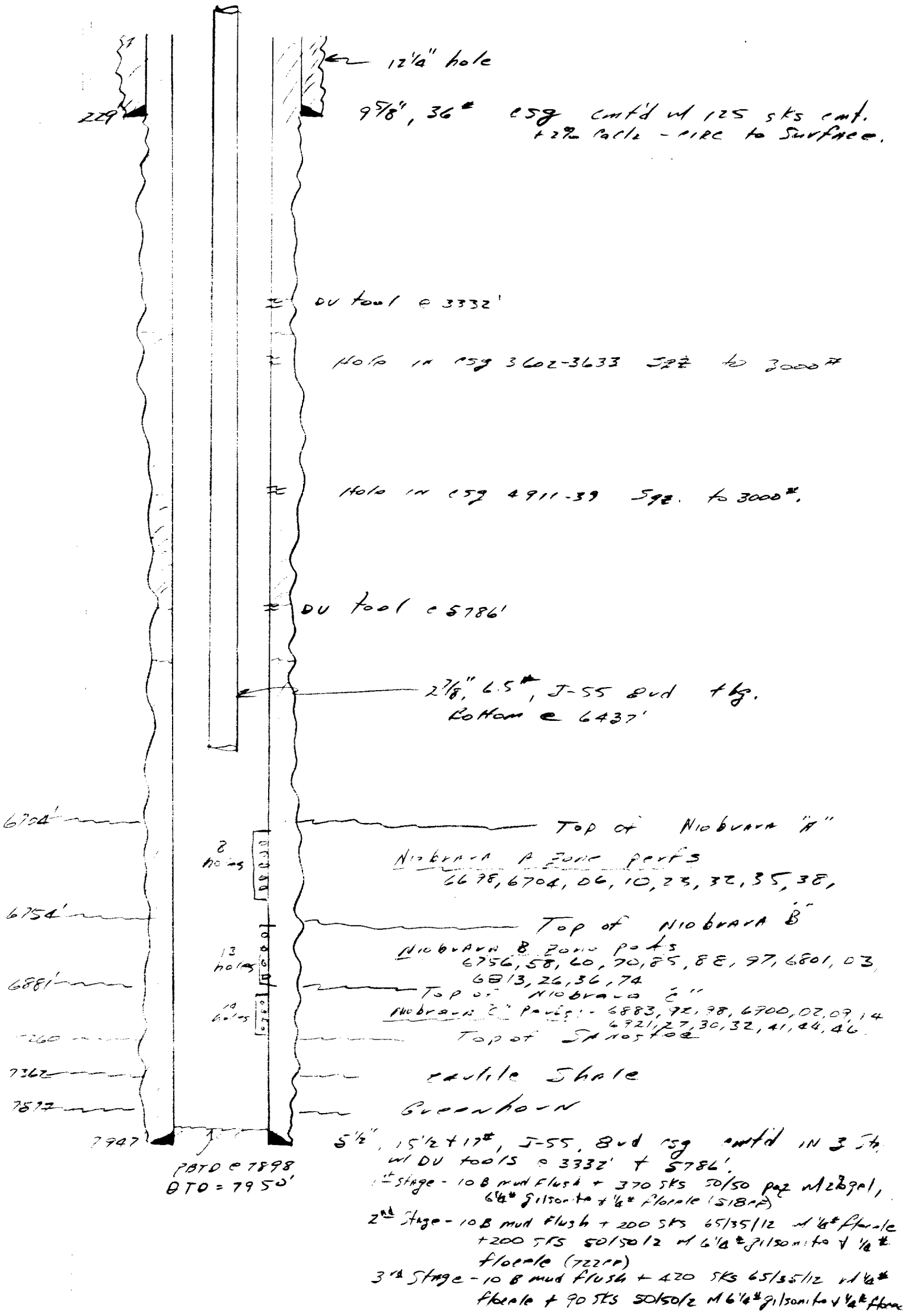
	Time	2/27/87	2/28/87	3/1/87	3/2/87	3/3/87	3/9/87	3/10/87	3/11/87
0	0:00		1174.65	1174.63	1175.66	1176.21		1162.07	1162.17
0.1	2:24		.63	.75	.73	.22		1161.88	.22
0.2	4:48		.61	.88	.79	.25		.72	.25
0.3	7:12		.59	.99	.86	.29		.54	.30
0.4	9:36		.57	1175.17	.94	.36		.65	
0.5	12:00		.54	.28	1176.01	.43		.87	
0.6	14:24	1174.76	.50	.39	.07	.30		1162.03	
0.7	16:48	.76	.48	.49	.12	1175.73	1162.59	.09	
0.8	19:12	.73	.49	.56	.16		.46	.11	
0.9	21:36	.68	.55	.62	.18		.28	.14	

## Notes:

- ① All pressures are PSIA @ 6862' KB
- ② Pressures recorded w/ BME'S GRC Bomb, Element # 69689
- ③ Bomb calibration verified against Dead weight testing of wellhead pressure before & after BHP Surveys.
- ④ Well was -I @ 12<sup>00</sup> Noon 2/17/87 & remained shut in until Bomb was pulled on 3/11/87.

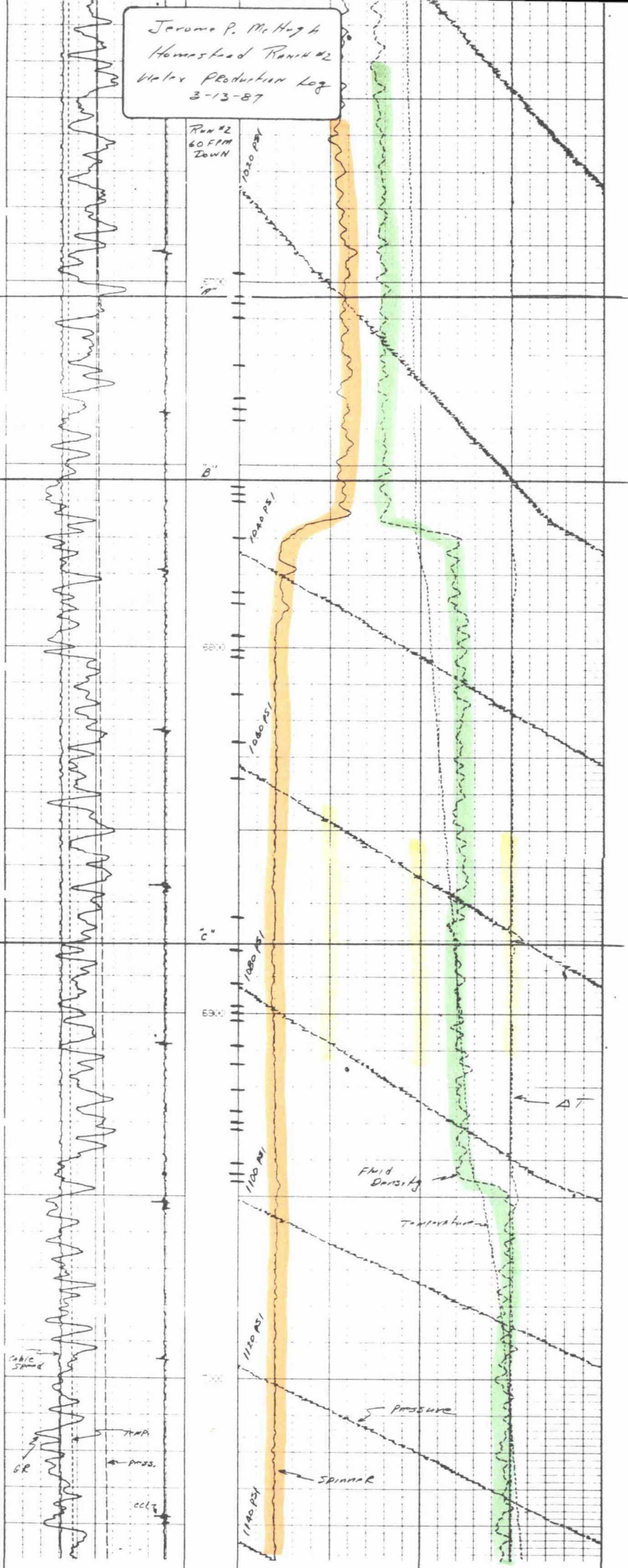
Jerome P. McHugh  
 Homestead Ranch No 2  
 SE SW 34, T-25N, R-2W  
 E.P.U. = 7222' KOB.

Status of  
 wellbore  
 3/15/87



Jerome P. McHugh  
 Homestead Ranch #2  
 Valve Production Log  
 3-13-87

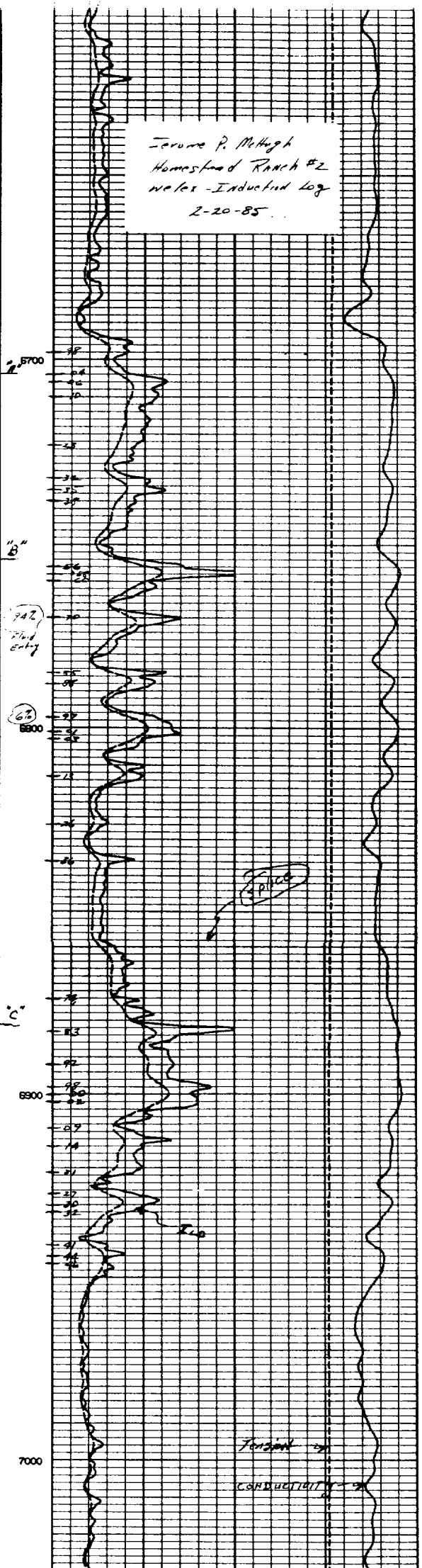
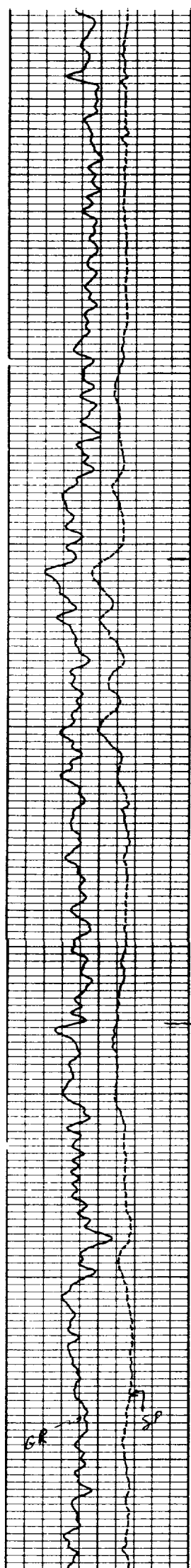
Run #2  
 60 FPM  
 DOWN



0	COLLAR LOCATOR	10
0	PRESSURE PSI	2000
0	DEPTH FT	100
2	CABLE SPEED FT/M	2.0
100	TEMPERATURE DEG F	200

-1	DIFF TEMPERATURE DEG F	1
1.5	FLUID DENSITY G/CC	1.5
950	WELL PRESSURE PSI	950
20	SPINNER REV/S	20
200	WELL TEMPERATURE DEG F	200

Terence P. McHugh  
 Homestead Ranch #2  
 water - Inducted Log  
 2-20-85



# 5700

"B"

742  
 500  
 500

62  
 5900

5900

7000

GR

SP

constant

CONDUCTIVITY

