

BATES UNIT B No. 4-1

(form. Beardmore Drilling Haines No. 1)

spud: 6-01-66
compl: 7-01-66

8 5/8" 24 ppf csg @ 430'
w/320 sx cnt circ to surf

ELEVATIONS:
RKB 1312'
DF unknown
BH 1305'

TBG: 2-7/8" 8R EUE

STIMULATION JOBS:
7/86 250g Xyl, 1500g 15% DSFe,
w/0.75% LoSurf259, 500g
Diesel w/1% Hyflo, displ w/lw.
6 & 6 -> 12 & 15
10/89 Sand Frac
19,000g UF-4
33,000 lb 20/40 & 12/20 sand
18 bpm @ 3400 psi
6 & 6 -> trace & 160
(13 & 244 4 no. (tr))

Csg Leak 3180'-3271'
sqzd w/192 sx cnt (3/91)

TDC @ 3250' (calc.)

5 1/2" 15.5 ppf csg @ 3736'
w/75 sx cnt

Open Hole: MISSISSIPPI 3736'-52'

TD 3752'



OPERATOR	PHILLIPS PETROLEUM COMPANY	
WELL NAME	Bates Unit B	WELL NO. 4-1
FIELD	Bates	
COUNTY	Sumner	STATE Kansas
LOCATION	C E/2 SE SE, 36-T30S-R2W	DATE 8/31/94



DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

Oklahoma City, Oklahoma

FOR: Beardman Drilling Company

Date: June 28, 1966

HAINES

Haires No. 1, Sumner
County, Kansas

36-30s-2w

O. C. L. No. 956

SUBMITTED BY: Jack Wagner
Wichita, Kansas

Sample No. 10904

TYPE OF SAMPLE: Cores

DESCRIPTION: Sample from Haires No. 1, Mississippi Lime Formation,
Sumner County, Kansas.

The core samples were submitted to the laboratory for analysis and treatment recommendations.

Laboratory test results show that the cores samples consists of 99 to 99.5 per cent carbonate material, and 0.5 to 1 per cent Quartz and silicates. Due to the very small amount of silicate material present, no problems with clays are expected when treating this formation with acid. An acid treatment should effectively stimulate the Mississippi Lime Formation represented by the core samples.

Acid Solubility Tests

<u>Sample Depth (feet)</u>	<u>Per Cent Soluble in 15X</u>
3738-39	99.5
3744-45	99

The above solubilities were measured gravimetrically in excess acid in order to determine the maximum amount of soluble material present.

M. L. Bishop

MLB/sla

cc: Tulsa Lab File

Means Laboratories, Inc.



ANALYTICAL & CONSULTING CHEMISTS
419 N. HANDLEY • BOX 2012 • TELEPHONE AM 2-4407
Wichita, Kansas 67203

TO: Beardmore Drilling Company
120 Building
Wichita, Kansas

DATE: June 13, 1966

LAB. NO.: 18260

Sample Identification:

Haines #1

Blow Out Gas

c 2240' 2210'

GAS ANALYSIS

	<u>% Volume</u>
Nitrogen	42.0
Helium	.7
Methane	57.3
Ethane	Trace
Propane	Nil
Iso Butane	Nil
N. Butane	Nil
Gross BTU	575

Respectfully submitted,

MEANS LABS., INC.

Eldon A. Means

EAM/vs

EARLOUGHER ENGINEERING

PETROLEUM CONSULTANTS - CORE ANALYSES

3316 EAST 21ST STREET

TULSA, OKLAHOMA 74114

April 29, 1970

Beardmore Oil, Inc.
Suite 700, One-Twenty Building
Wichita, Kansas 67202

Attention - Mr. Heber Beardmore

Re - Bates Unit
Haines No. 1
Water Analysis

Gentlemen:

Attached are results of identification tests for sample of produced water from Haines No. 1 secured April 11, 1970. Analysis was made to determine whether produced water contained fresh injection water. Results of analysis for a sample of produced water from Haines No. 2 secured in March, 1970 is included for comparison purposes.

Results indicate that the sample of produced water from Haines No. 1 is principally from the Mississippian formation.

Yours very truly

EARLOUGHER ENGINEERING



H. L. Brockey, Engineer

HLB bw

Encl - 2 w/attach.

**EARLOUGHER ENGINEERING
TULSA, OKLA.**

RESULTS OF WATER ANALYSES

SAMPLE RECEIVED 4-15-70 RESULTS REPORTED 4-29-70 LABORATORY NO. 1554

COMPANY <u>Beardmore Oil, Inc.</u>		LEASE <u>Bates Unit</u>
FIELD OR POOL <u>Bates</u>		
SECTION <u>31, 36</u>	TWP. <u>30S</u>	RGE. <u>1W</u> COUNTY <u>Sumner</u> STATE <u>Oklahoma</u>
SOURCE OF SAMPLE AND DATE TAKEN:		
No. 1	<u>1554 - Haines No. 1</u>	<u>4-11-70</u>
No. 2	<u>1550 - Haines No. 2 (for comparison)</u>	<u>3- 9-70</u>
No. 3		
No. 4		
No. 5		

CHEMICAL AND PHYSICAL PROPERTIES

	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5
SPECIFIC GRAVITY @ 60/60° F	1.140	1.138			
pH					
TOTAL ALKALINITY AS CaCO ₃					
SUPERSATURATION AS CaCO ₃					
UNDERSATURATION AS CaCO ₃					
CALCIUM	12,200.	12,300.			
MAGNESIUM	2,390.	2,390.			
SODIUM					
BARIUM	0	0			
SULFATE	640.	710.			
CHLORIDE	123,000.	123,000.			
SILICA					
TOTAL IRON					
ALUMINUM					
TURBIDITY AS SiO ₂					
Ca/Mg Ratio	5.1	5.1			
TOTAL DISSOLVED SOLIDS					
CARBON DIOXIDE					
HYDROGEN SULFIDE					
DISSOLVED OXYGEN					

REMARKS:

INJECTION RATE: B/D PRODUCED WATER RATE: B/D

TREATMENT:

NOTE: N. D. = NOT DETERMINED. ALL RESULTS REPORTED AS MILLIGRAMS PER LITER UNLESS OTHERWISE MARKED.

bw

By *Lawrence M. Harkins*

WELL HISTORY

CORES 3734-48 AVG PERM 24.3 MILLIDARCY'S

AVG POROSITY - 14.5%

AVG SW IN PORE SPACE - 38.2%

TOP 6' COMPOSED OF FINELY CRYSTALLINE SLIGHTLY DOLOMITIC LIMESTONE. BALANCE WAS A SOFT BR. DOLOMITE. - SOME FRACTURING IN TOP 4'. GOOD OIL SATURATION WAS FOUND THROUGHOUT.

TOPS STALNAKER 2775'

KANSAS CITY 3075'

MISS CHERT 3724'

MISS LIME 3733'

COMPLETION: Drill out shoe & clean out to TD. Swab & bail well

ONFU - 450[#]. Flowed 4.64 BBLs. Fillup - 500' FWH Swab well.

ONFU - 645[#]. Flow & swab. Stimulate w/ 500 gals XXM38 & 1000 gals gel x 100 retarder acid. Flush w/ lease oil.

ONFU - 659-30[#], T69 - 0[#]. Well flowed Swab, well kicked off. Flow well. Put on production

7-86 STIMULATE WELL DOWN ANNULUS AS FOLLOWS:

DUMP 250 GALS XYLENE. Let set 1 hr. Circ for 8 hrs. Put to LL. Produce for 24 hrs.

Stimulate down annulus w/ 1500 gal 15% DS Fe Acid w/ 10 GALS 40-SURF 259. FLUSH w/

500 GALS DIESEL w/ 5 GAL HY-FLO. DISPLACE w/ SALT WTR. 5.8/5.8 → 11.7 / 15.

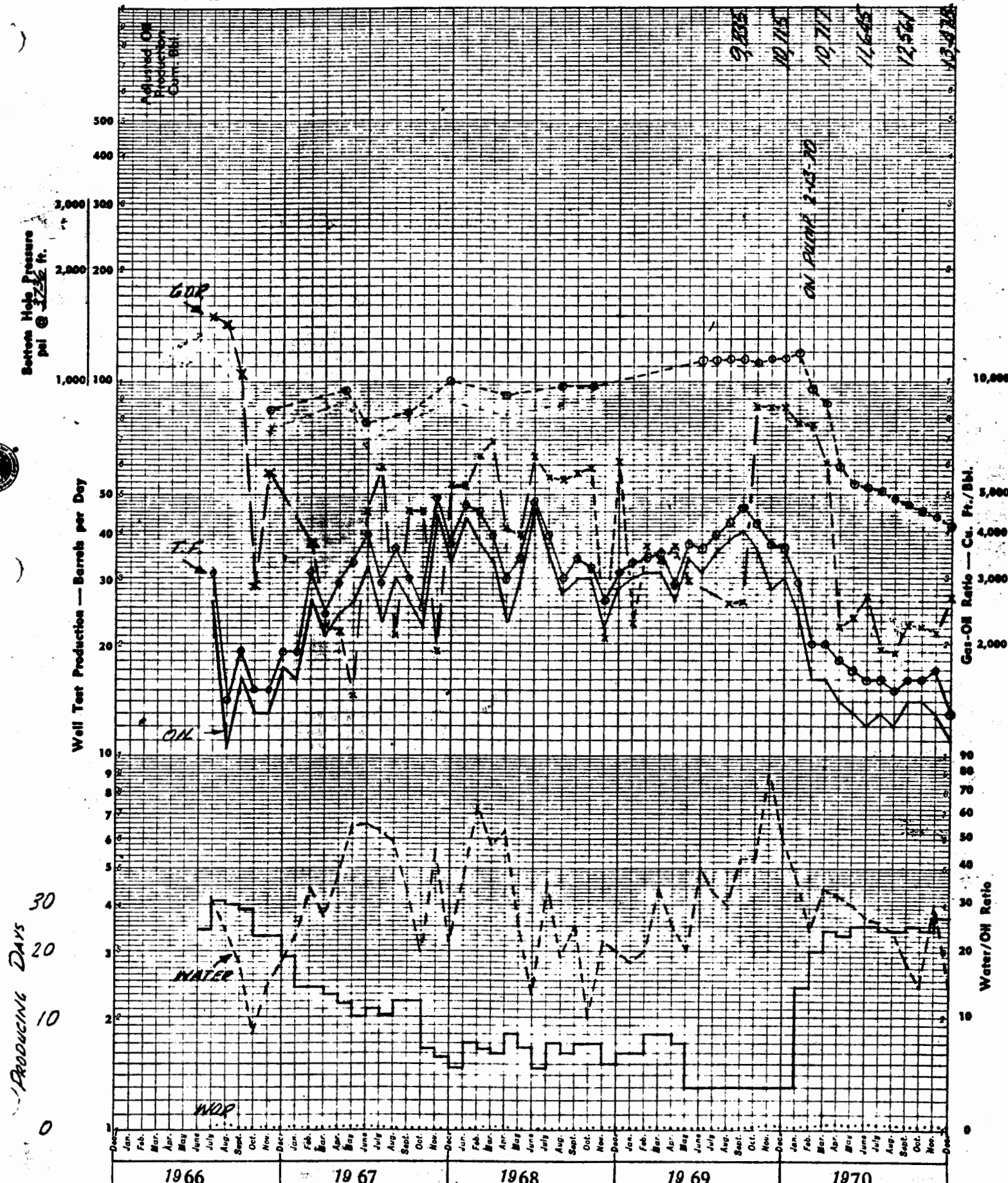
Net Ft. Oil Sd. _____ p. Md. _____
 Avg. Por. % _____ r. x Md. _____
 Oil Sat. % _____ Shot, Qts. _____
 Water Sat. % _____

OIL & WATER PRODUCTION

Company Beardmore Drilling Co.

Lease or Flood Bates Pool

Well No. Haines No. 1



Key: Oil _____ Water _____ Water/Oil Ratio _____ Total Fluid _____
 BHP ○-○-○ GOR x-x-x-x

Erlougher Engineering

Net Fr. Oil Sd. _____ J. Md. _____
 Avg. Por. % _____ T. Md. _____
 Oil Sat. % _____ Shot, Qts. _____
 Water Sat. % _____

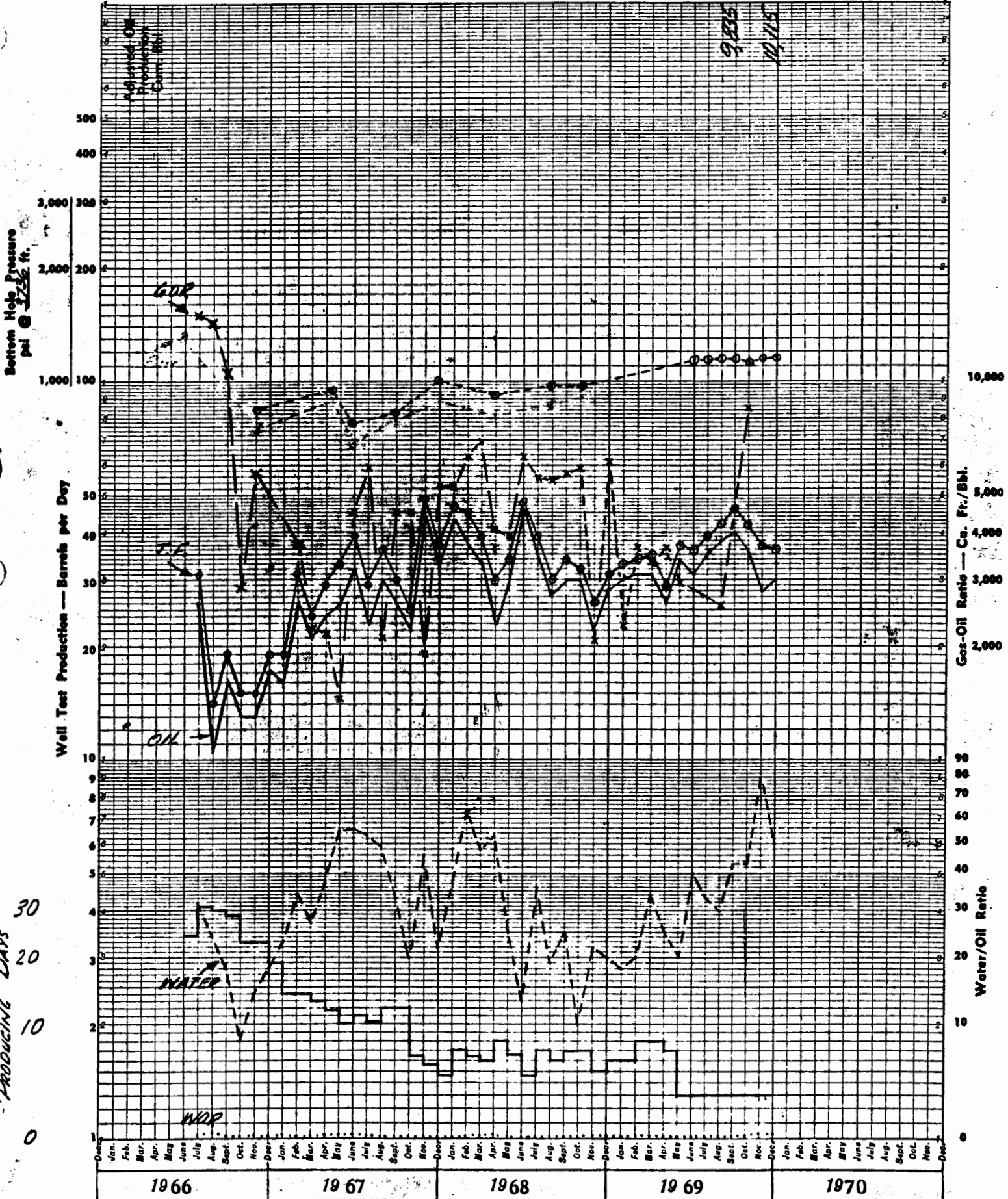
OIL & WATER PRODUCTION

Company Beardmore Drilling Co.

Lease or Flood Bates Pool

Well No. Haines No. 1

9/25
11/15



PRODUCING DAYS
30
20
10
0

Key: Oil _____ Water _____ Water/Oil Ratio Total Fluid ○ _____
 BHP ○ - - - - - GOR x - - - - -
 Earlougher Engineering

HAUSES No 1 TOWN No 1 TOWN No 2 BATES No 1 BATES No 2 BATES A-2 BATES A-1
 E2 SE SE 36-30-20 S2 SW SW 31-30-16 NW SE SW 31-30-16 SW NE SW 31- E2 NW SW - 31- S2 SW NW - 31- W2 SE NW - 31-
 1312 KB 1302 KB 1291 KB 1295 KB 1298 KB 1299 KB 1304 KB

2400

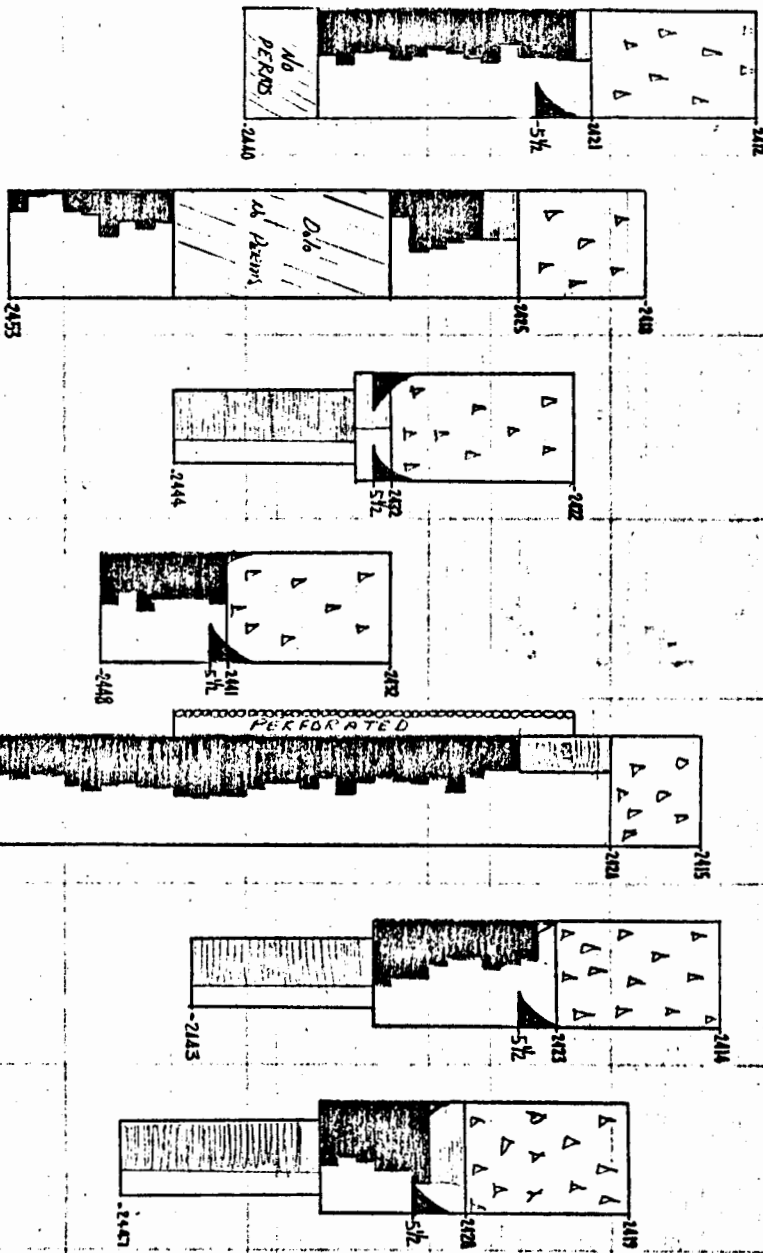
-2410

-2420

-2430

-2440

-2450



2460 Feet Square - 5 7/8 oil sur. DANGER AHEAD FROM THE HAUSES LIGHTER BURNED HAUSES WIRE ESTIMATED.

Township _____ Range _____ County SUMNER State KANSAS

