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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RECEIVED BY
AUG 13 1987
O. C. D.
ARTESIA, OFFICE

Form C-122
Revised 10-1-78

dlsf File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: 4 PT. [X] Initial [ ] Annual [ ] Special			Test Date: 7-27-87	1980 FNL
Company: SUN EXPLORATION & PROD.	Connection: TO AIR			1980 FWL
Pool: Red Lake Azotz - Morrow ~~SCROGGINS DRAW~~	Formation: MORROW			Unit: F
Completion Date: 7-25-87	Total Depth: 10,000	Plug Back TD: 10,000	Elevation: 3416.6'	Farm or Lease Name: SCROGGINS DRAW
Csg. Size: 5.5 / Wt.: 17.0 / d: 4.892 / Set At: 10,000	Perforations: From 9732 To 9778			Well No.: FED. COMM #1
Tbg. Size: 2.875 / Wt.: 6.5 / d: 2.441 / Set At: 9695	Perforations: From OPEN To ENDED			Unit: F / Sec.: 22 / Twp.: 18S / Rge.: 27E
Type Well – Single – Bradenhead – G.C. or G.O. Multiple: SINGLE		Packer Set At: 9695		County: EDDY
Producing Thru: TUBING	Reservoir Temp. °F: 190 @ 9755	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2	State: NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
9755	9755	0.6262	0.56	0.17	Ø	Ø	4.026	FLNG.

NO.	FLOW DATA: Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI.							3045	80			24 HRS
1.	4.026		2.000	600	14.0	76	3000	78			60 MIN
2.	4.026		2.000	605	27.0	78	2965	77			60 MIN
3.	4.026		2.000	605	53.0	78	2917	75			60 MIN
4.	4.026		2.000	610	102.0	64	2795	73			60 MIN
5.											

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	19.81	92.65	613.2	0.9850	1.2639	1.0526	2406
2.	19.81	129.20	618.2	0.9831	1.2639	1.0523	3347
3	19.81	181.86	618.2	0.9831	1.2639	1.0523	4711
4.	19.81	252.12	623.2	0.9962	1.2639	1.0583	6656
5.							

NO.	P_t	Temp. °R	T_r	Z
1	0.91	536	1.47	0.903
2.	0.92	538	1.47	0.903
3.	0.92	538	1.47	0.903
4.	0.93	524	1.43	0.903
5				

Gas Liquid Hydrocarbon Ratio 0 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 0 Deg.
Specific Gravity Separator Gas 0.626 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX 0.626
Critical Pressure 673 P.S.I.A. 673 P.S.I.A.
Critical Temperature 365 R 365 R

P_c 3036.6 P_c^2 9221

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		3004	9023	199
2		2979	8875	346
3		2952	8716	505
4		2873	8252	969
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 9.5133$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 4.2377$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 28208$

Absolute Open Flow 28208 Mcfd @ 15.025 Angle of Slope θ 57.3 Slope, n 0.641

Remarks:

Approved By Division	Conducted By:	Calculated By:	Checked By:
	BENNETT & CATHEY	RICHARD TOWNLEY	

2987

BENNETT & CATHEY PRODUCTION TESTING
BACK PRESSURE CURVE

Operator Sun Exploration & Production Lease Scoggins Draw Fed Comm Well No. 1

County Eddy Field Scoggins Draw Fed. Comm #1 Location F 22 18S 27E

Date of Test 7-27-87 Slope "n" 0.641 Angle of Slope 57.3

Calc. Abs. Potential 28208 MCF/D

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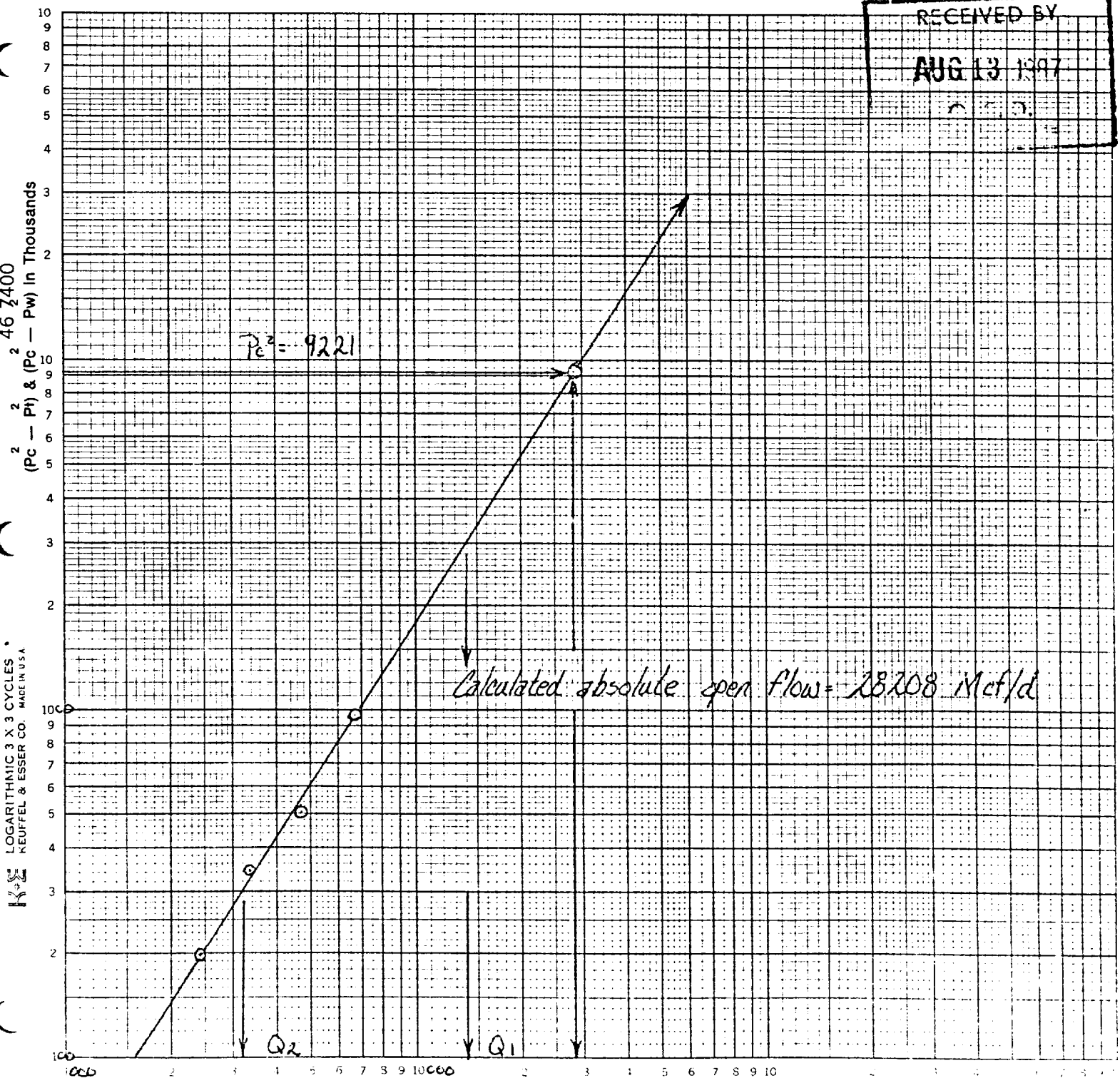


$\overline{\Delta P_1^2}$ $P_c^2 - P_w^2$ = 3000

$\overline{\Delta P_2^2}$ $P_c^2 - P_w^2$ = 300

Q_1 = 14000

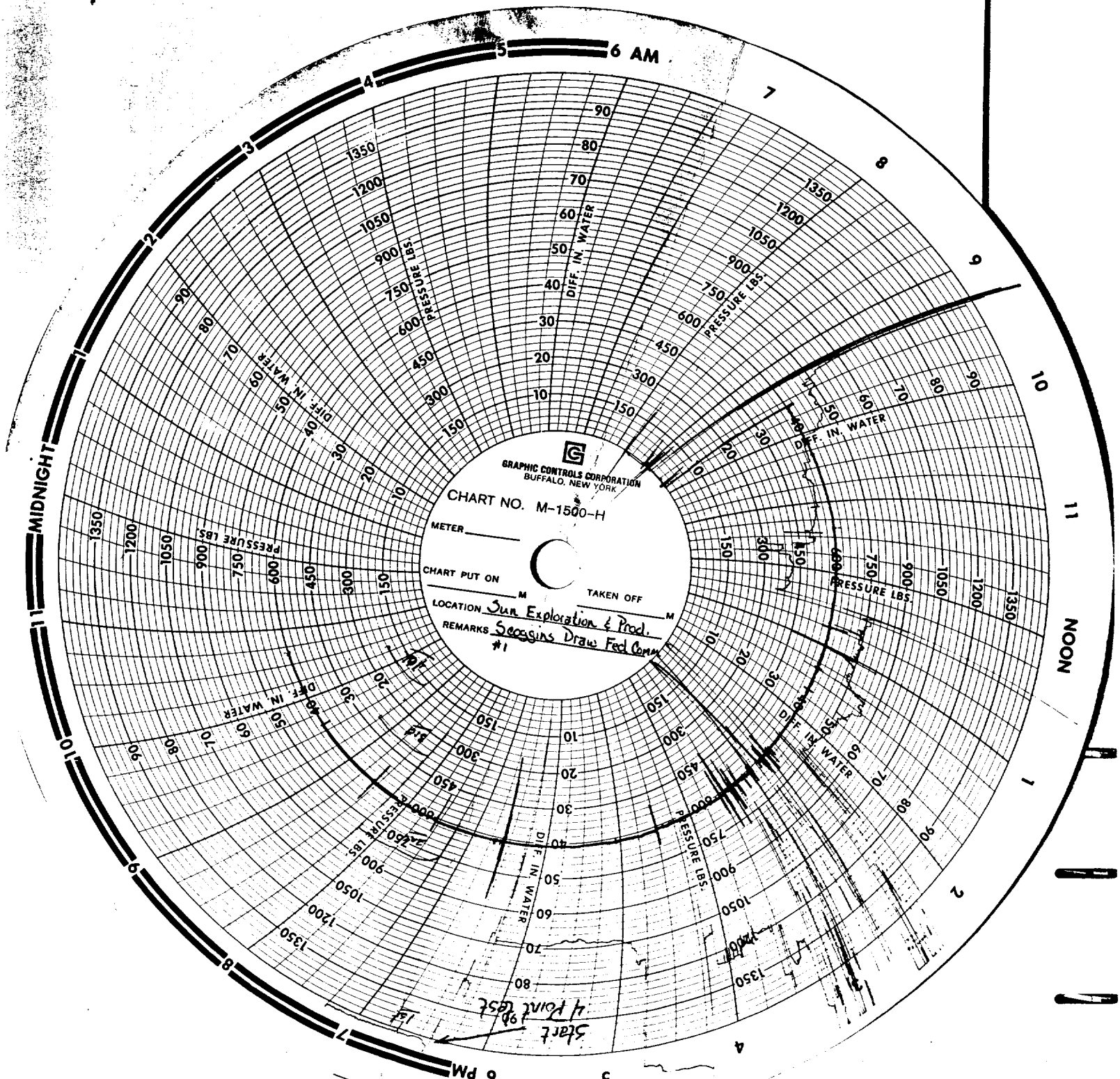
Q_2 =

LOG Q_1 = 4.14615

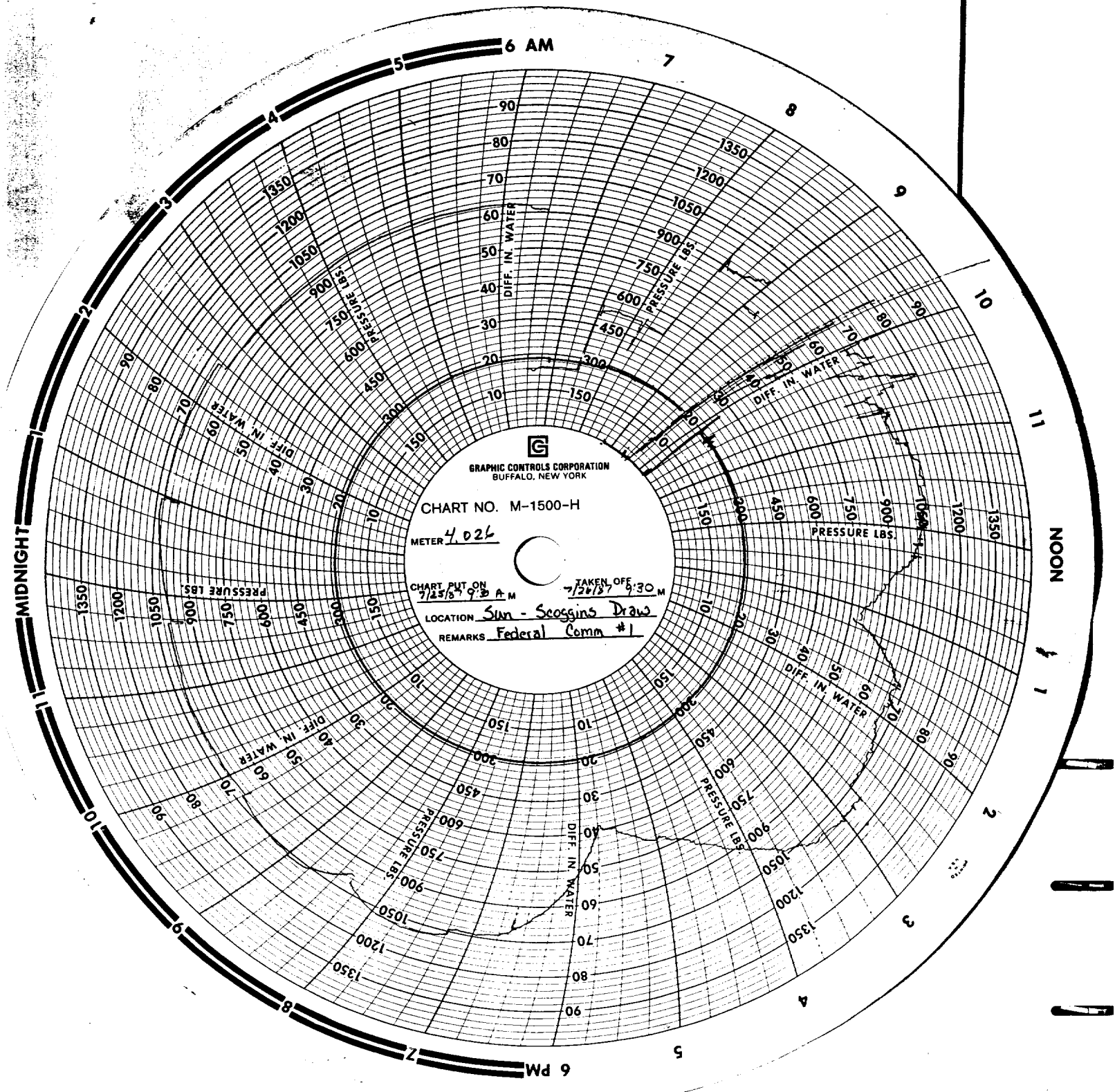
LOG Q_2 = 3.50515

n = 0.6410

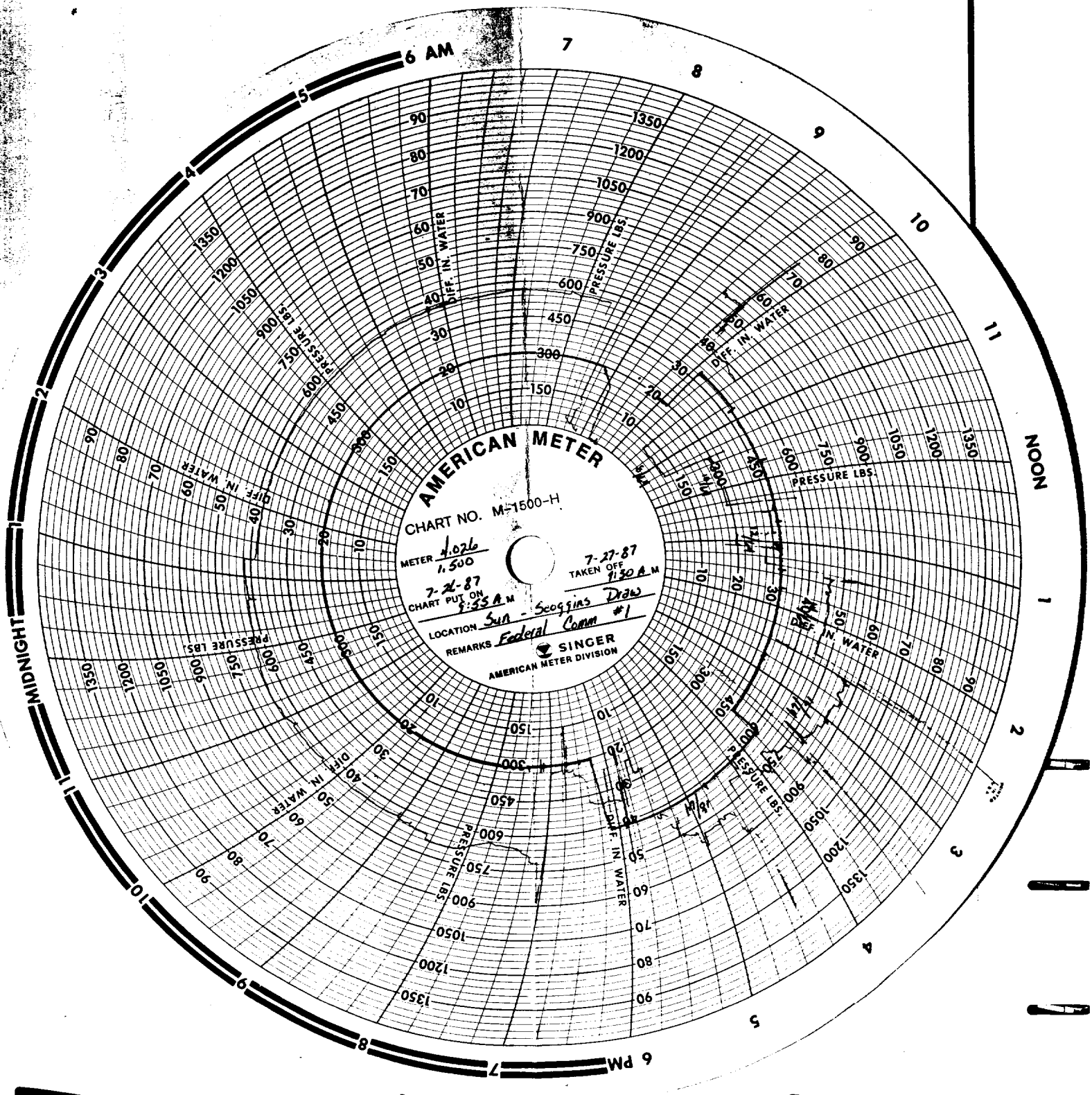
REDUCED


GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
CHART NO. M-1500-H
METER
CHART PUT ON
M
TAKEN OFF
M
LOCATION Sun Exploration & Prod.
REMARKS Scoggins Draw Fed Com #1
MIDNIGHT
6 AM
NOON
6 PM
DIFF. IN. WATER
PRESSURE LBS.
Start 1 Point Test

REDUCED


6 AM
NOON
6 PM
MIDNIGHT
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
CHART NO. M-1500-H
METER 4,026
CHART PUT ON 7/25/57 9:30 A M
TAKEN OFF 7/26/57 6:30 M
LOCATION Sun - Scoggins Draw
REMARKS Federal Comm #1
DIFF. IN. WATER
PRESSURE LBS.

REDUCED


AMERICAN METER
CHART NO. M-1500-H
METER 4.026 / 1,500
7-27-87
TAKEN OFF 9:30 A.M.
7-26-87
CHART PUT ON 9:55 A.M.
LOCATION Sun - Scoggins Draw
REMARKS Federal Comm #1
SINGER
AMERICAN METER DIVISION
MIDNIGHT
6 AM
NOON
6 PM
DIFF. IN WATER
PRESSURE LBS.