THE ANACONDA COMPANY

New Mexico Operations

P. O. Box 638, Grants, New Mexico

April 13, 1959

Mr. D. S. Nutter, Chief Engineer
New Mexico Oil Conservation Commission
107 Mabry Hall
Capitol Building
Santa Fe, New Mexico

Dear Mr. Nutter:

I am returning the transcript of proceedings for the two hearings in the matter of Oil and Gas Conservation Commission, Case No. 1369, dated January 15, 1958 and February 13, 1958, with this letter.

Acting on your prior approval we copied both hearings.

Thank you for making the transcript of Case No. 1369 available to us.

Sincerely,

R. D. Lynn

RDL:vm
Incl.

,421

file - case 1369

Halliburton OIL WELL CEMENTING COMPANY

DUNCAN, OKLAHOMA

CHEMICAL RESEARCH LABORATORIES
HAYDEN ROBERTS, SUPERVISOR
FRANCIS M. ANDERSON, ASST. SUPERVISOR

August 4, 1958

Mr. A. L. Porter, Jr.
Oil Conservation Commission
State of New Mexico
P. O. Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

In reply to your letter of June 3, 1958, we have prepared a series of curves illustrating the compressive strength of various cementing compositions presently being used in the state of New Mexico.

These have been prepared from data that we have accumulated in our laboratory and could be expected to be typical values at the time and temperature conditions shown.

As you know there are some variations in the strength of cement between different brands and batches, but this data should be a satisfactory guide for your Commission personnel

I trust this information will assist your personnel and we are happy to be of assistance.

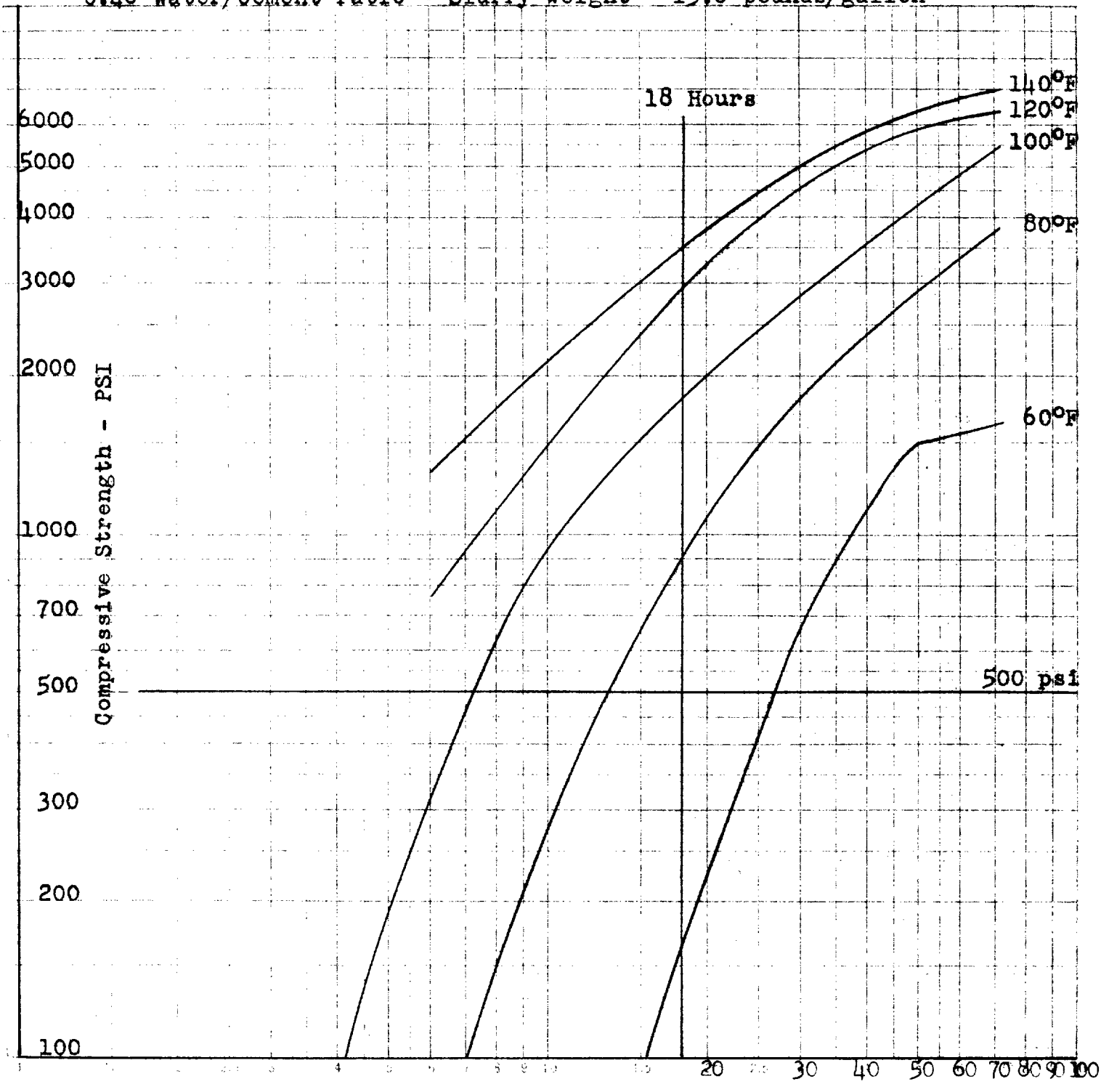
Yours very truly,

Dwight K. Smith

DKS:lh
Encl.
cc: Mr. W. D. Owsley
Mr. Phil Montgomery
Mr. Hayden Roberts
Mr. F. M. Anderson

Case 1269

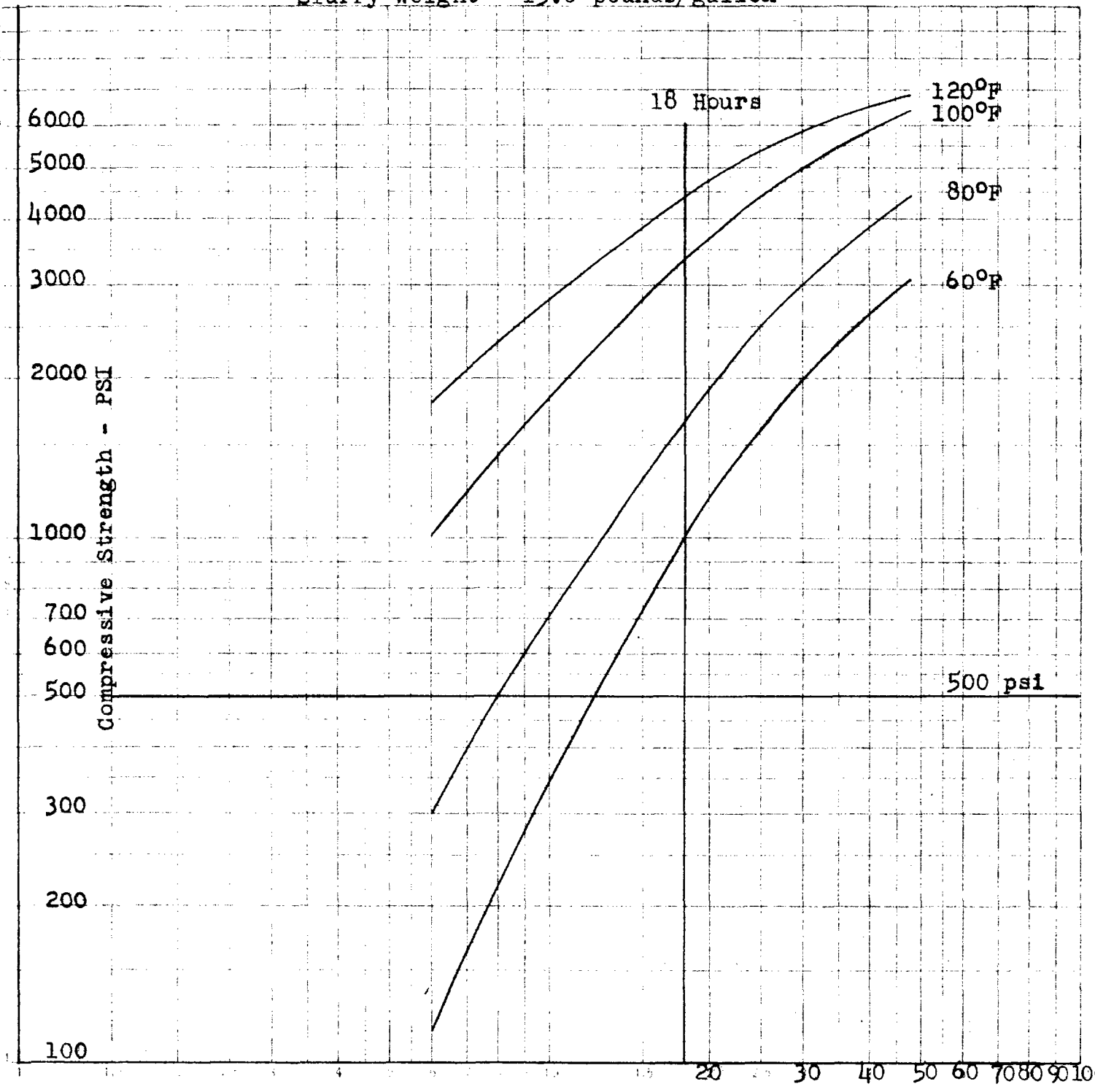
API Class A Cement
Neat
0.46 Water/Cement ratio - Slurry weight - 15.6 pounds/gallon



Curing Time - Hours

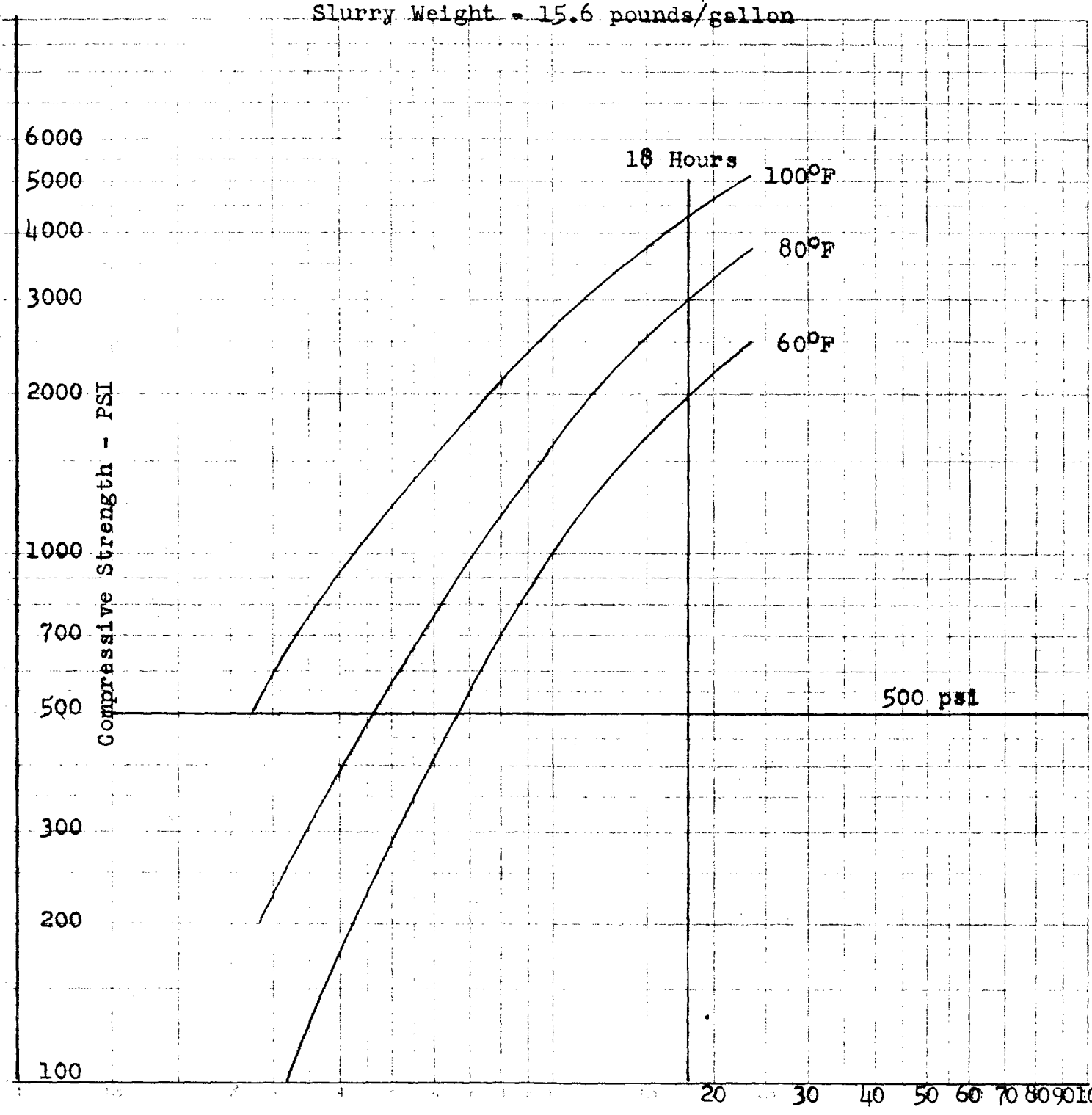
Howco Laboratories
7-9-58 KAS

API Class A Cement
2% Calcium Chloride
Water Ratio - 0.46
Slurry Weight - 15.6 pounds/gallon



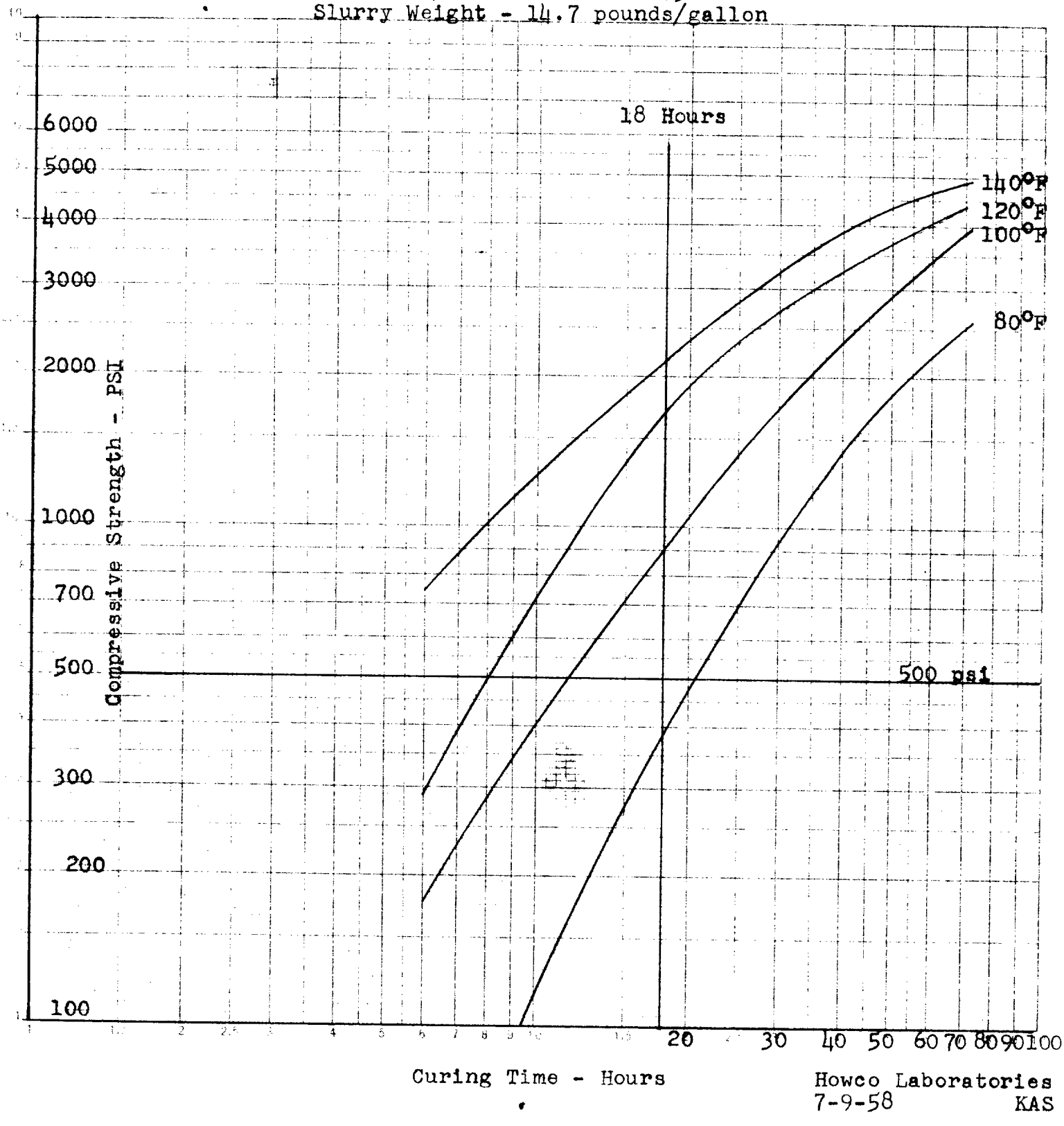
Howco Laboratories
7-9-58 KAS

API Class A Cement
3% HA-5
Water/Cement Ratio - 0.46
Slurry Weight - 15.6 pounds/gallon



Howco Laboratories
7-9-58 KAS

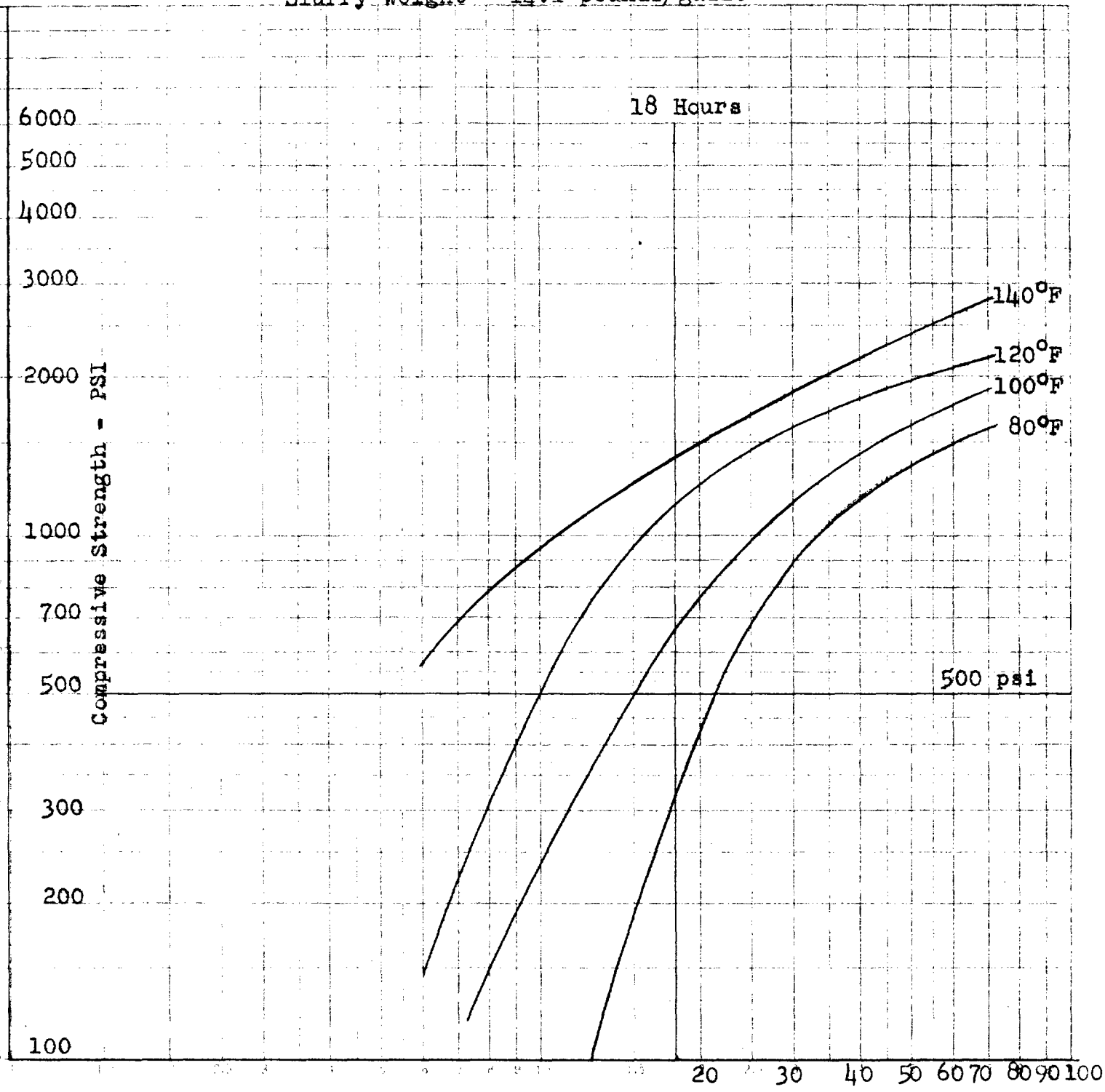
API Class A Cement
2% Bentonite
Water/Cement Ratio - 0.58
Slurry Weight - 14.7 pounds/gallon



LOGARITHMIC 359.110

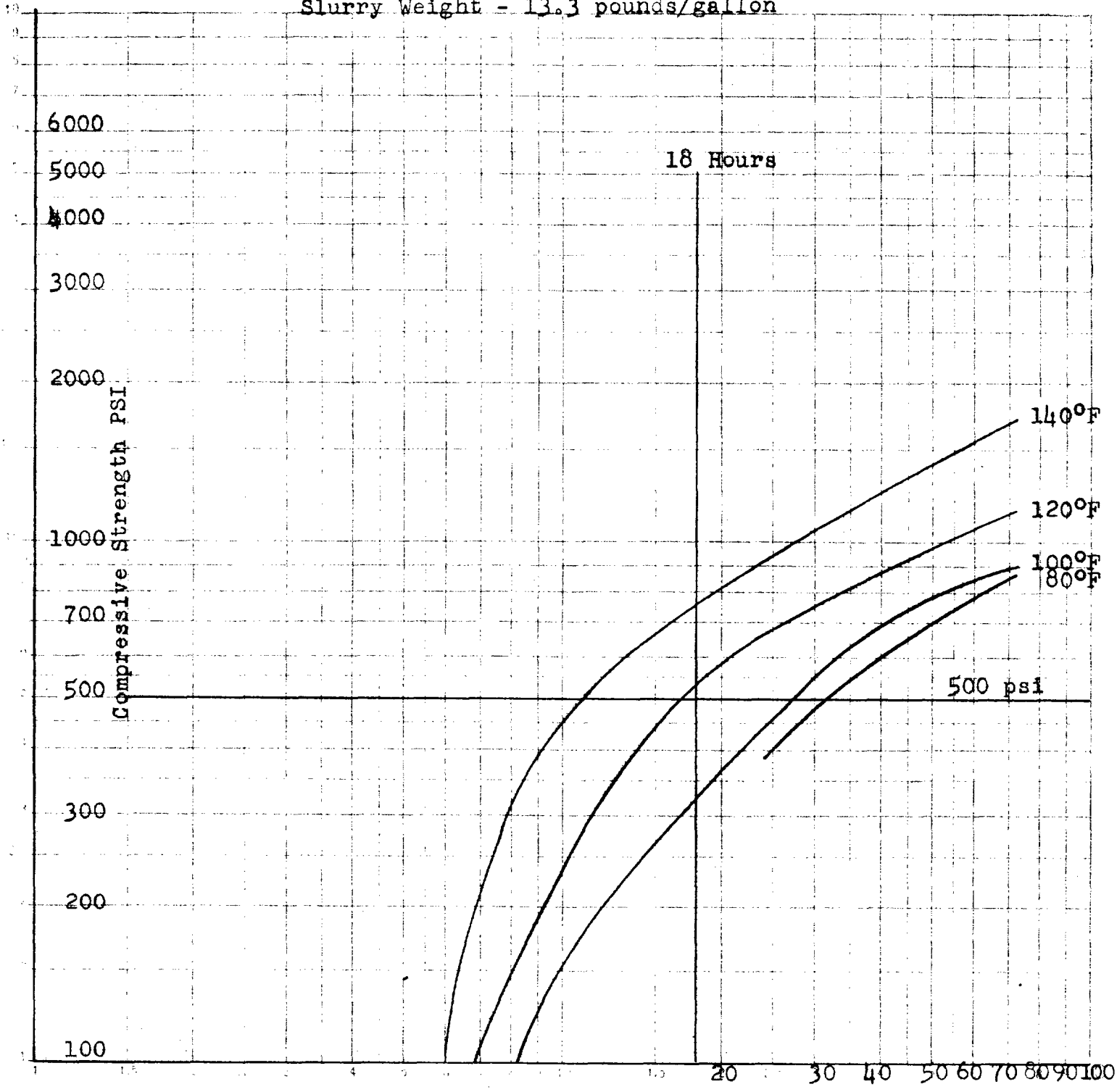
Howco Laboratories
7-9-58 KAS

API Class A Cement
4% Bentonite
Water/Cement Ratio - 0.68
Slurry Weight - 14.1 pounds/gallon



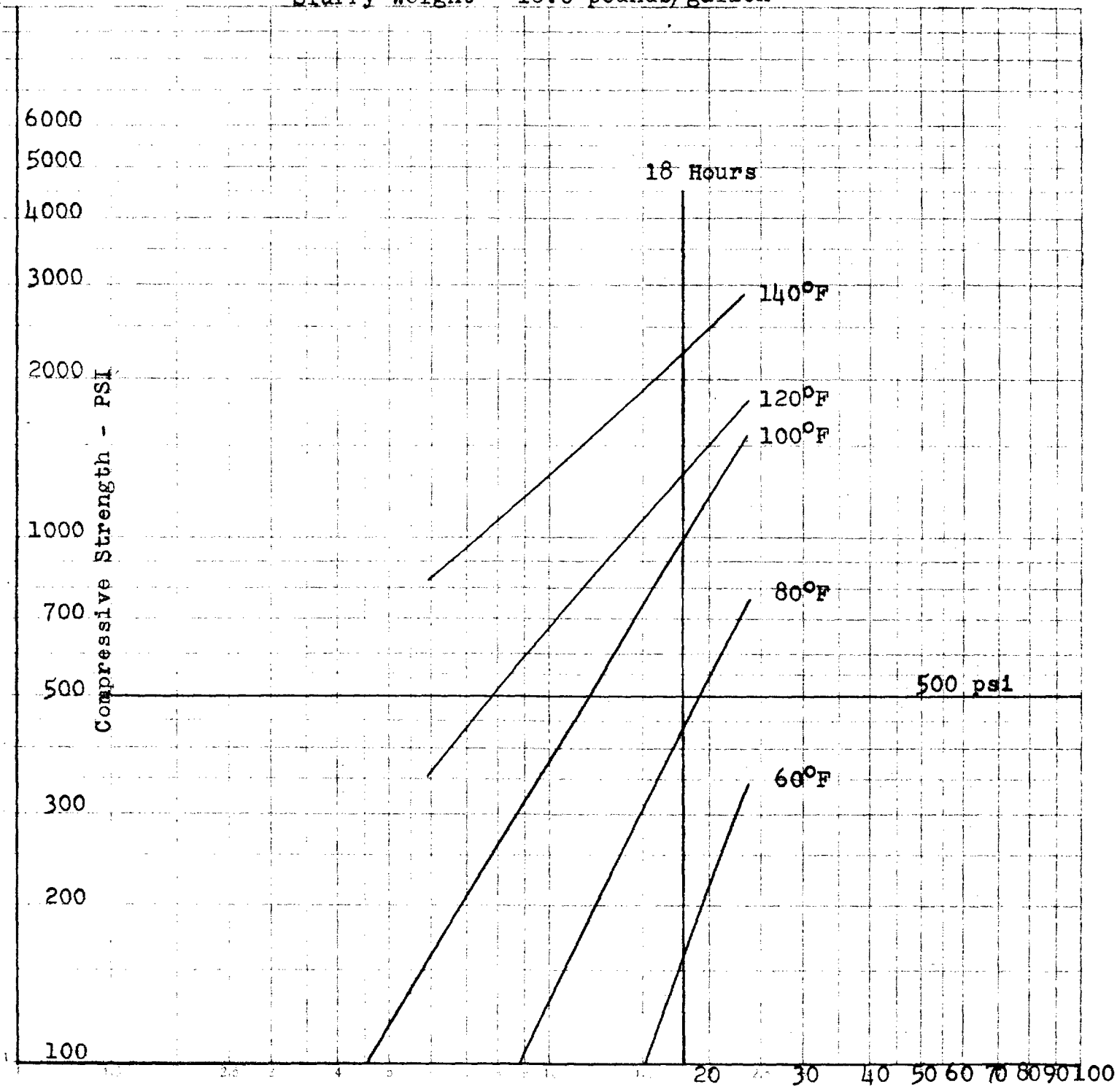
Howco Laboratories
7-9-58 KAS

API Class A Cement
8% Bentonite
Water/Cement Ratio - 0.86
Slurry Weight - 13.3 pounds/gallon



Howco Laboratories
7-9-58 KAS

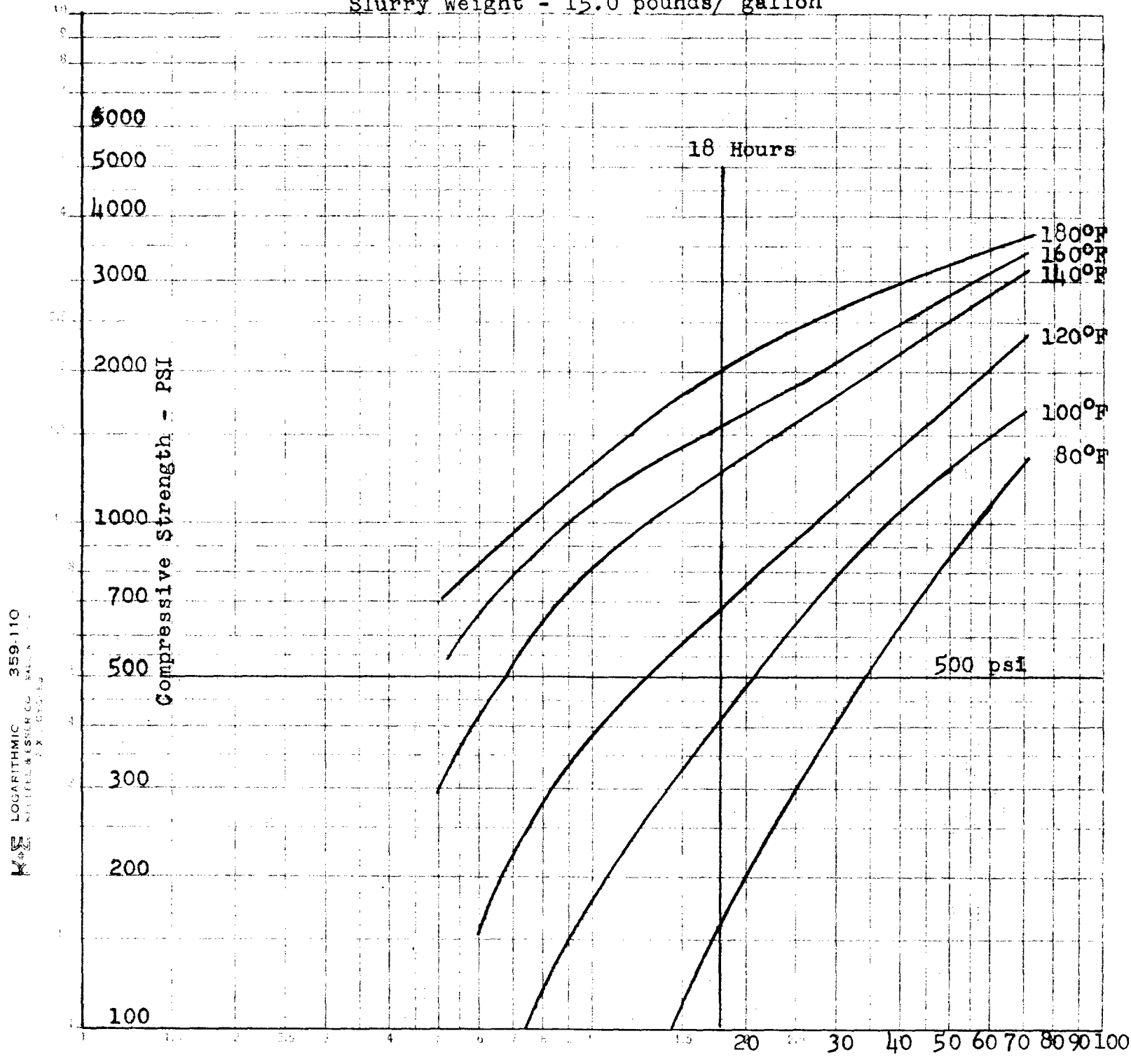
50-50 Pozmix S-API Class A Cement
0% Bentonite
Water/Solids Ratio - 0.38
Slurry Weight - 16.0 pounds/gallon



LOGARITHMIC 359-110

Howco Laboratories
7-9-58 KAS

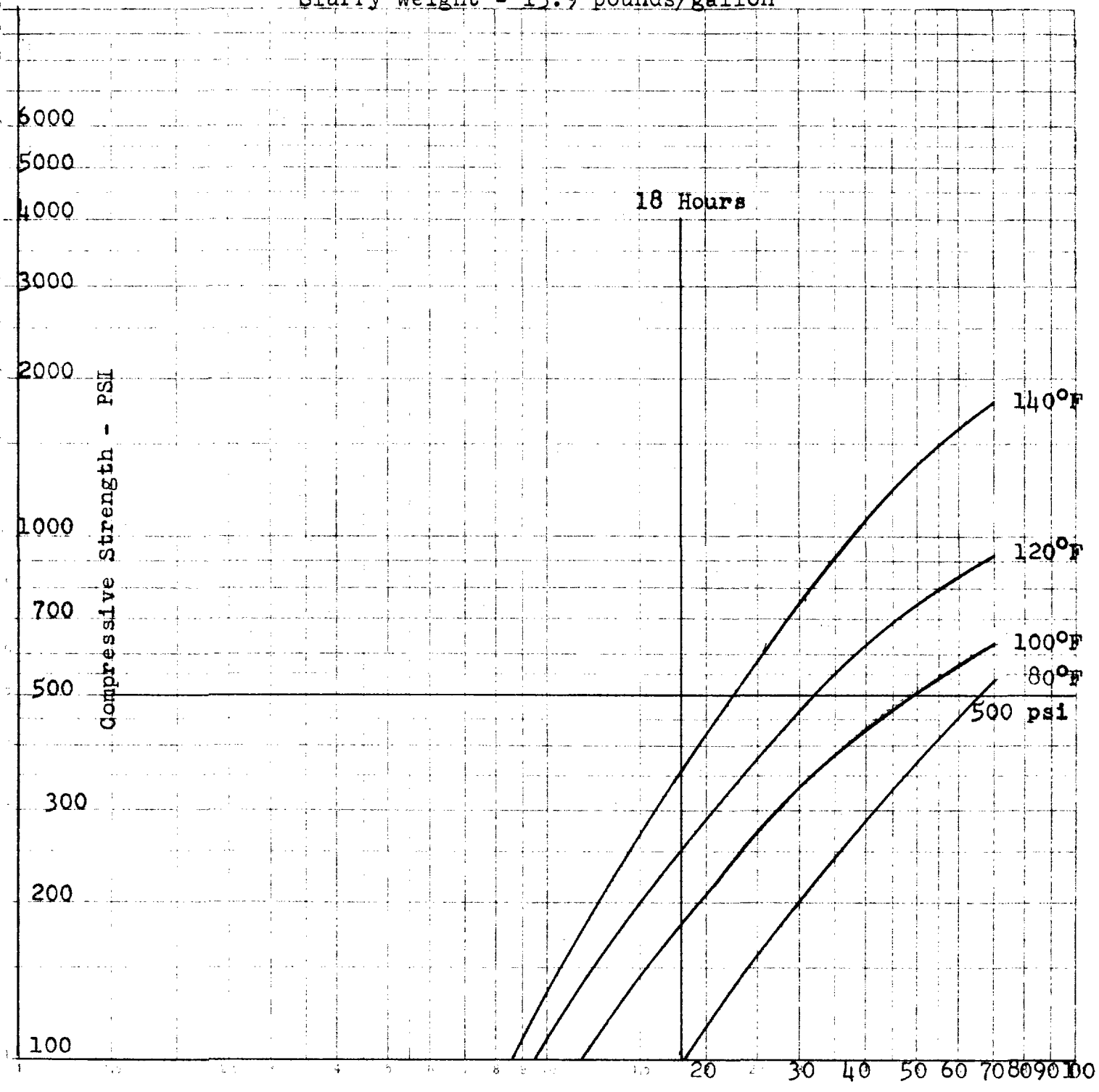
50-50 Pozmix S-API Class A Cement
2% Bentonite
Water/Solids Ratio - 0.50
Slurry Weight - 15.0 pounds/ gallon



LOGARITHMIC 359-110

Howco Laboratories
7-9-58 KAS

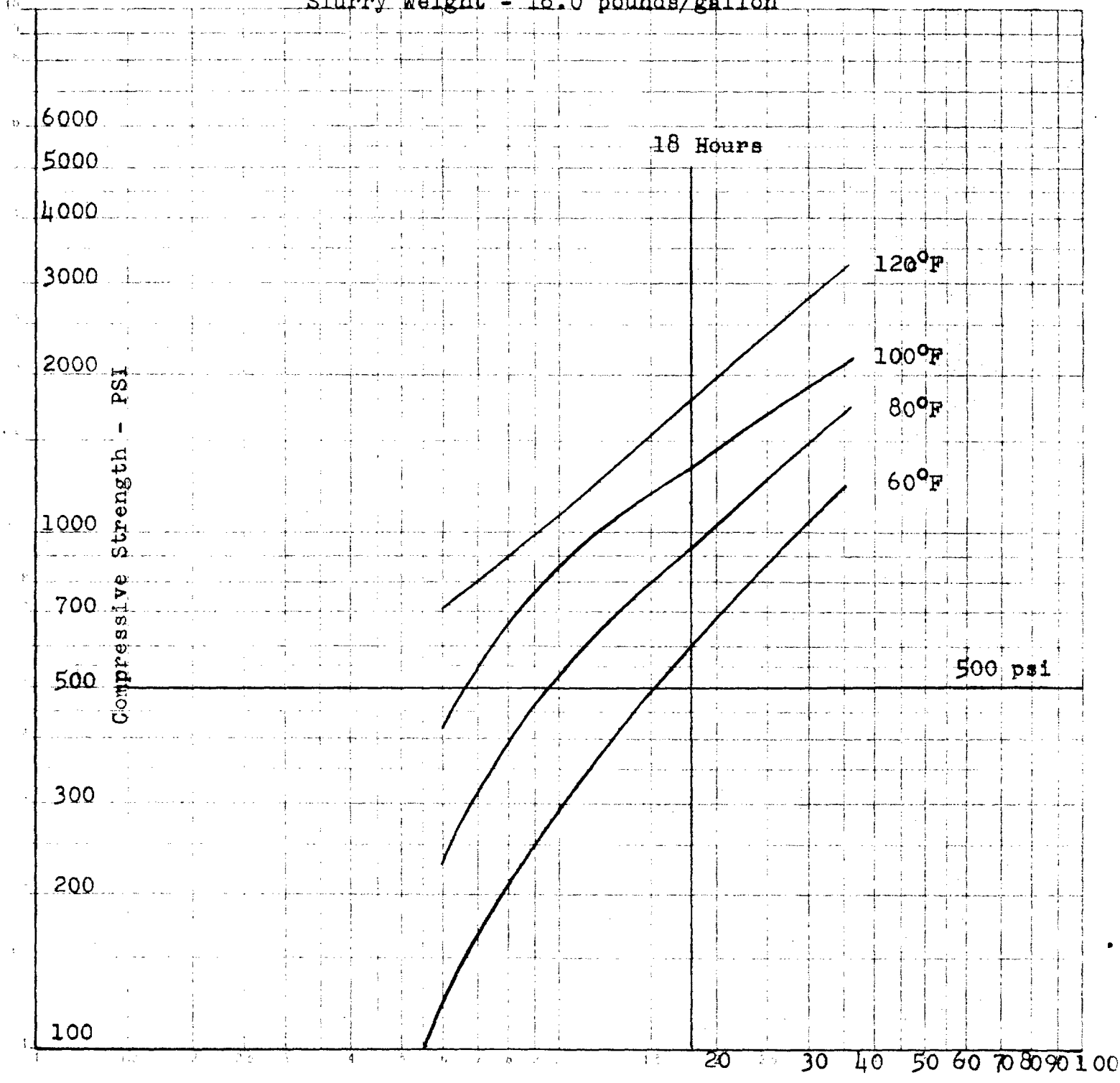
50-50 Pozmix S-API Class A Cement
4% Bentonite
Water/Solids Ratio - 0.68
Slurry Weight - 13.9 pounds/gallon



LOGARITHMIC 359-110

Howco Laboratories
7-9-58 KAS

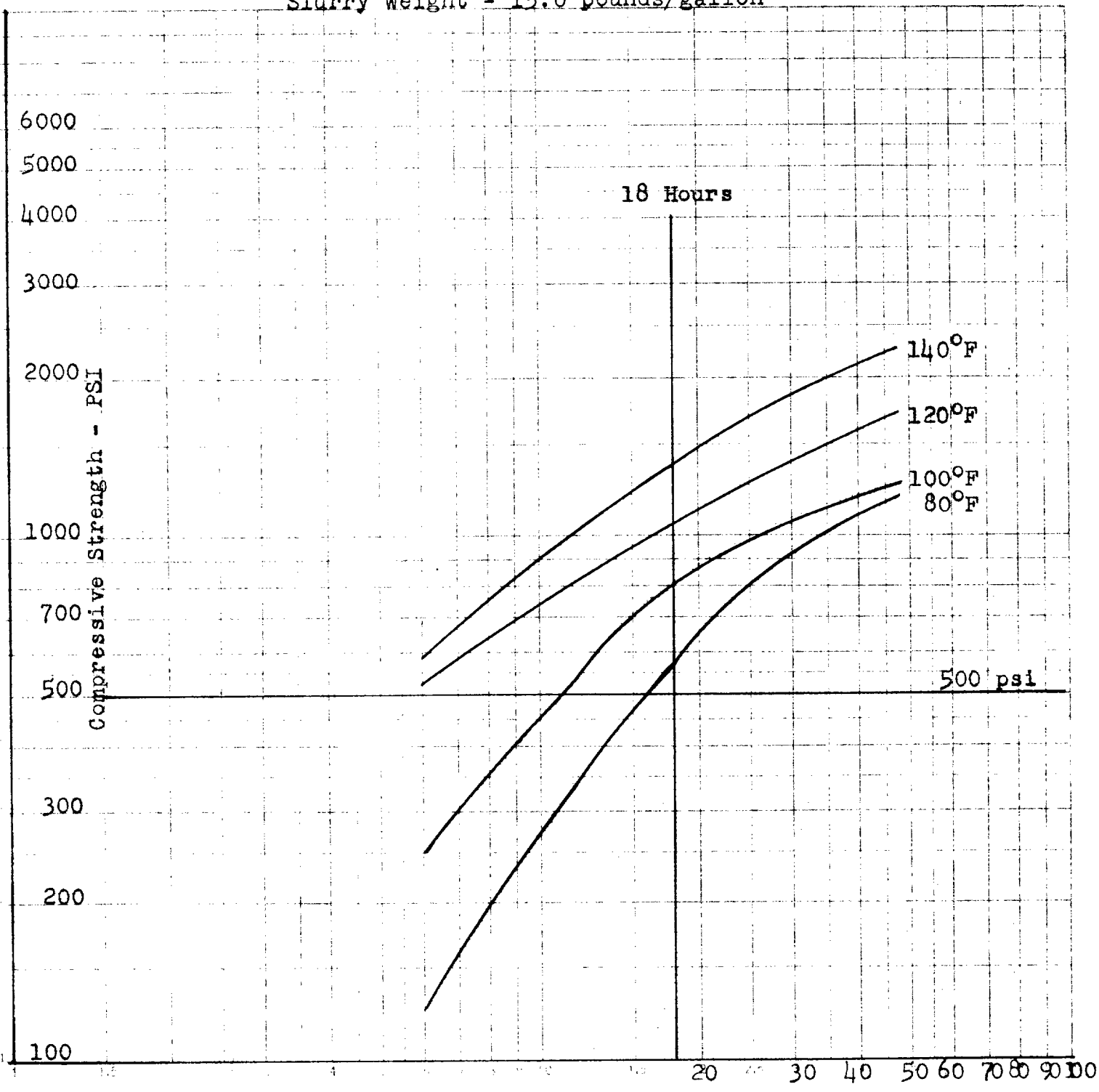
50-50 Pozmix S-API Class A Cement
0% Bentonite
2% Calcium Chloride
Water/Solids Ratio - 0.38
Slurry Weight - 16.0 pounds/gallon



Howco Laboratories
7-9-58 KAS

359-110
LOGARITHMIC

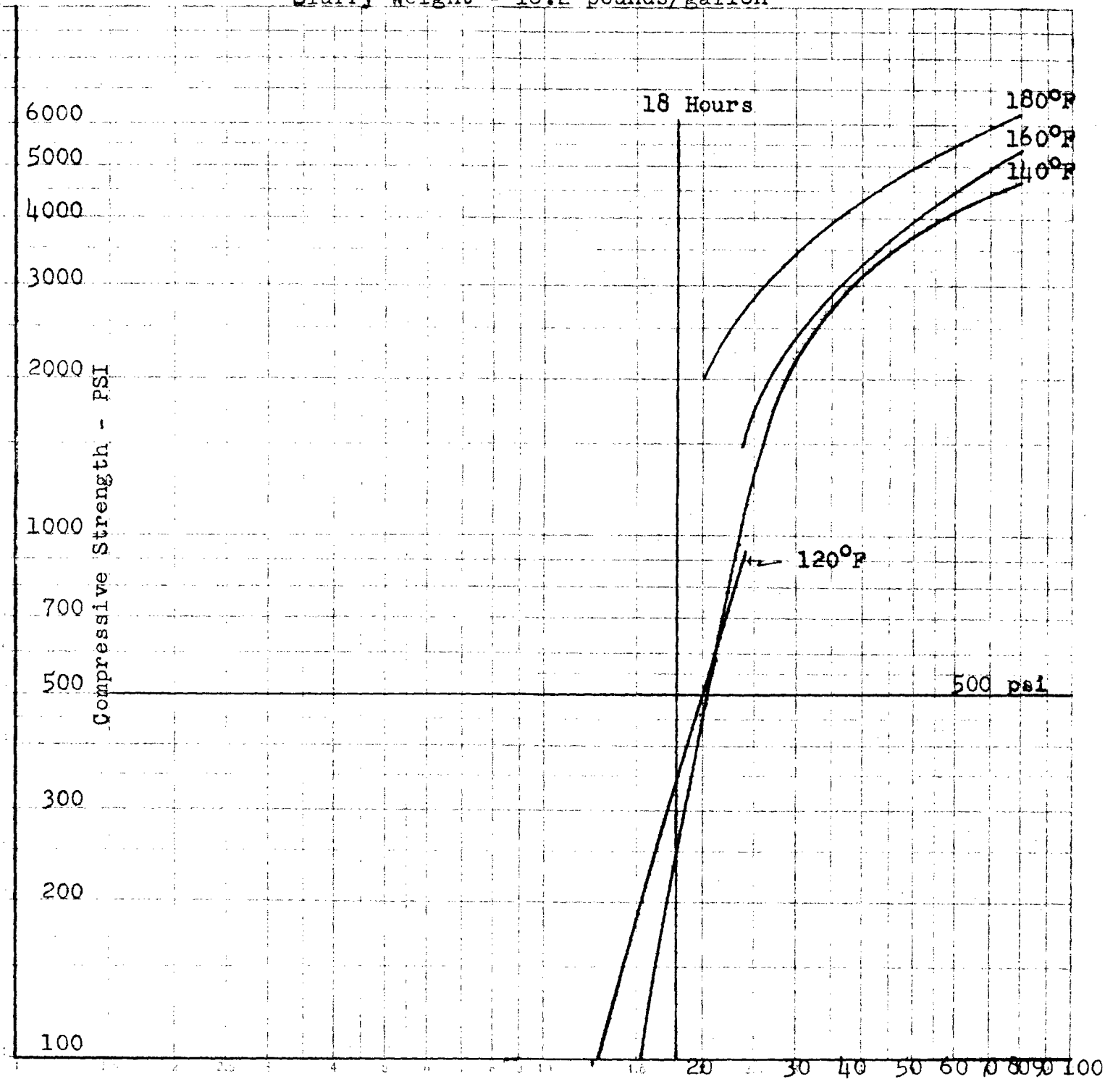
50-50 Pozmix S-API Class A Cement
2% Bentonite
2% Calcium Chloride
Water/Solids Ratio - 0.50
Slurry Weight - 15.0 pounds/gallon



Curing Time - Hours

Howco Laboratories
7-9-58 KAS

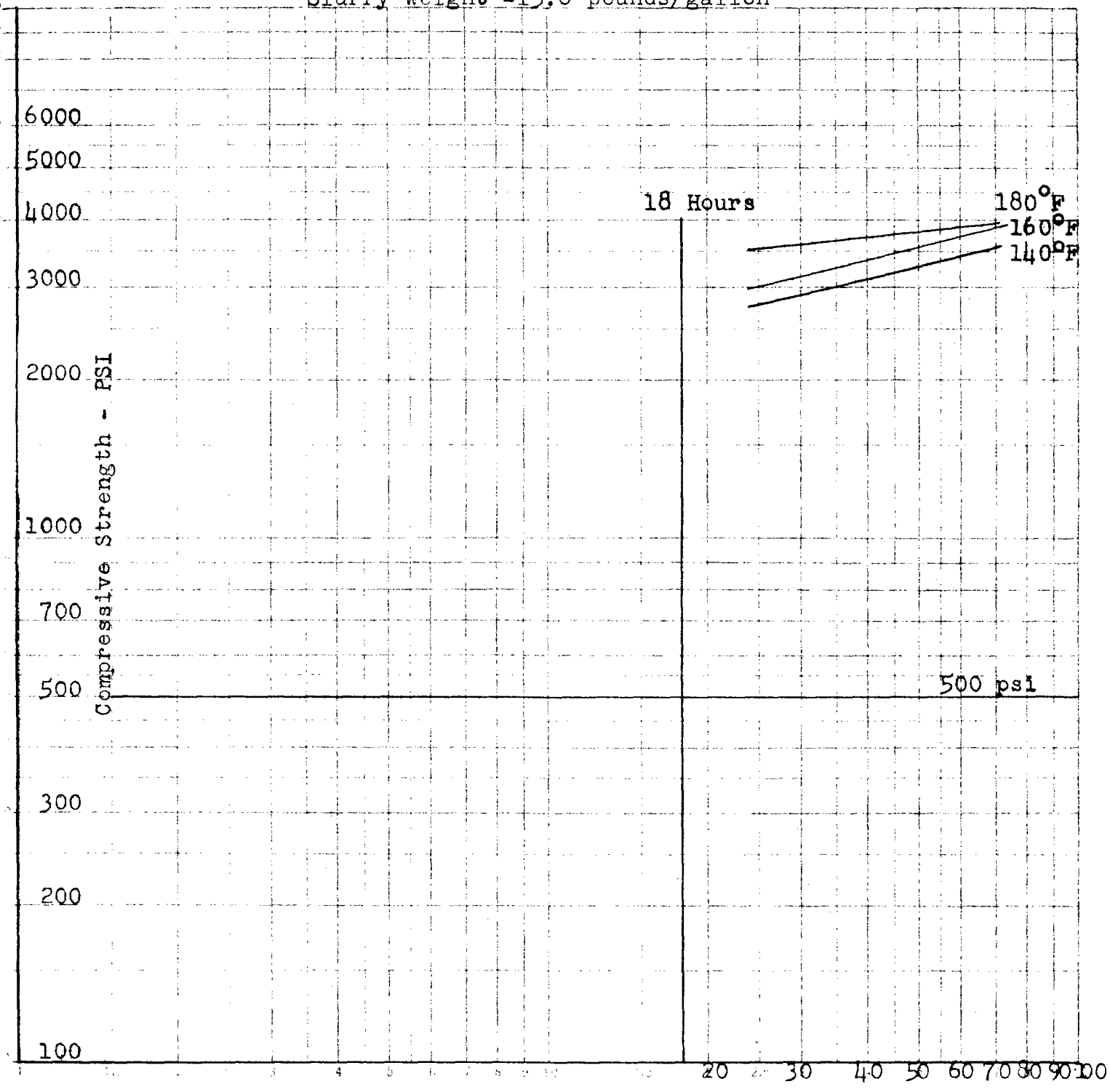
API Class E Cement
Water/Cement Ratio - 0.40
Slurry Weight - 16.2 pounds/gallon



Curing Time - Hours

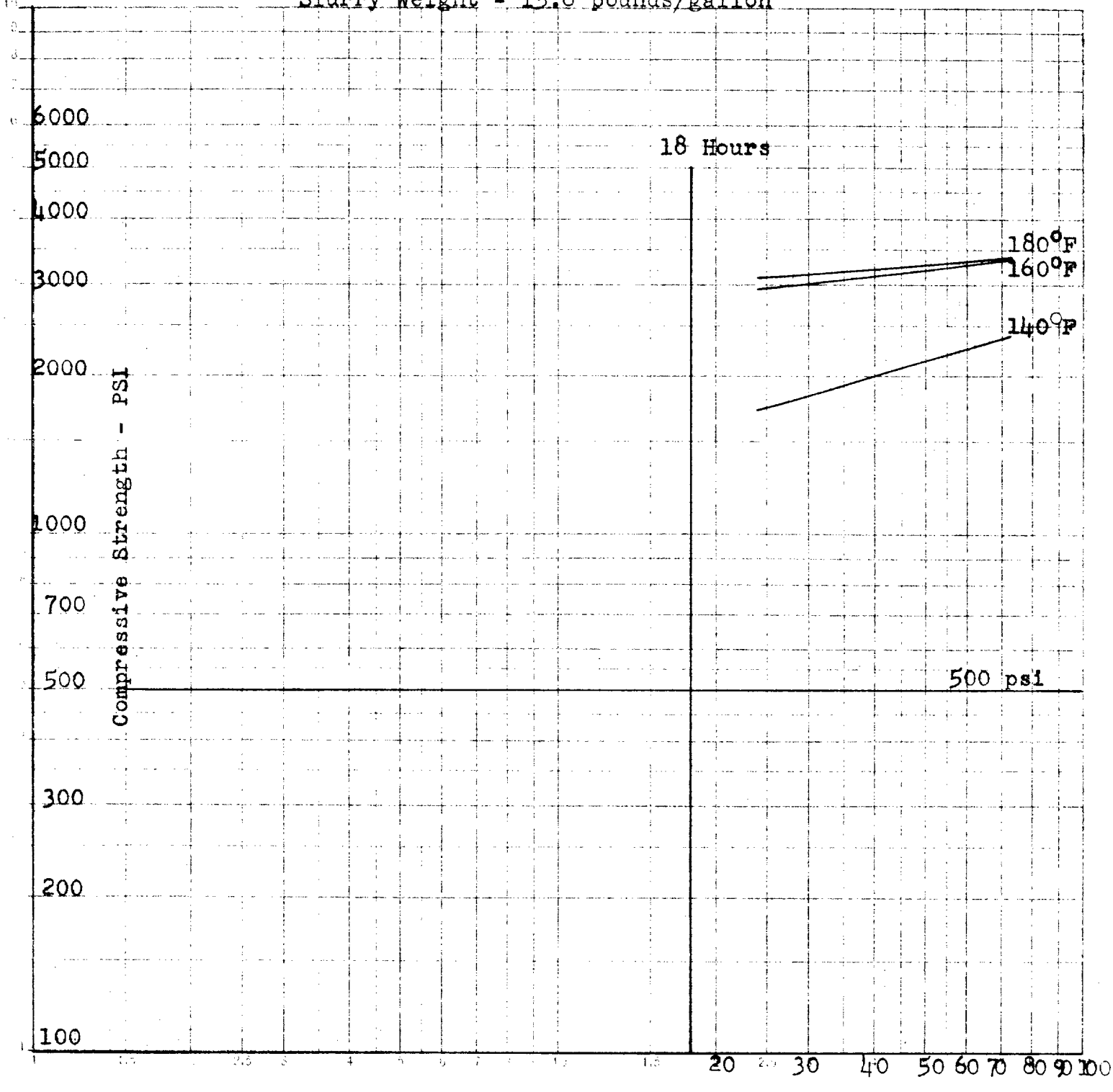
Howco Laboratories
7-9-58 KAS

API Class A Cement
0.3% HR-4 Retarder
Water/Cement Ratio - 0.46
Slurry Weight -15.6 pounds/gallon



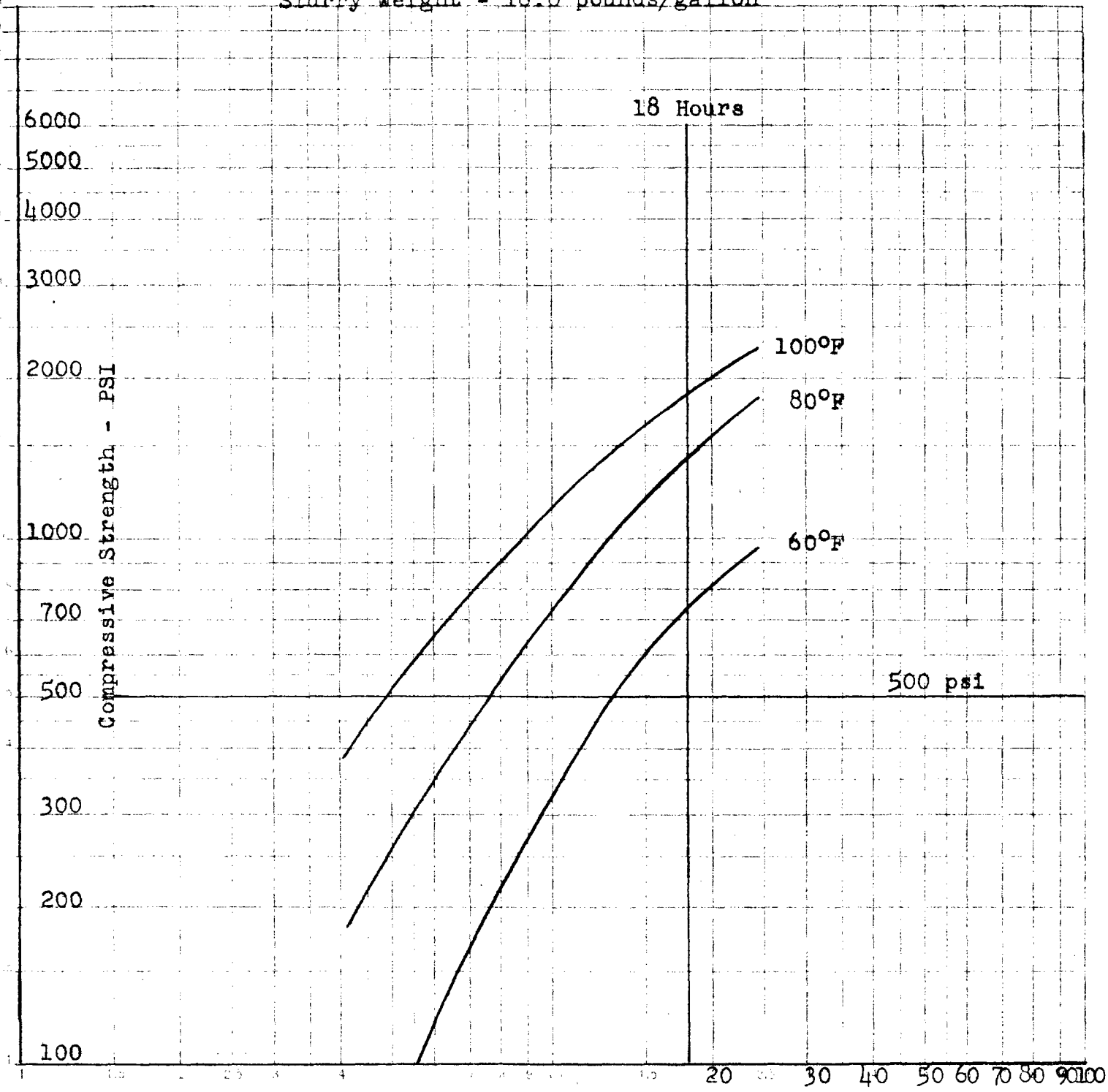
Howco Laboratories
7-9-58 KAS

API Class A Cement
0.5% HR-4 Retarder
Water/Cement Ratio - 0.46
Slurry Weight - 15.6 pounds/gallon



Howco Laboratories
7-9-58 KAS

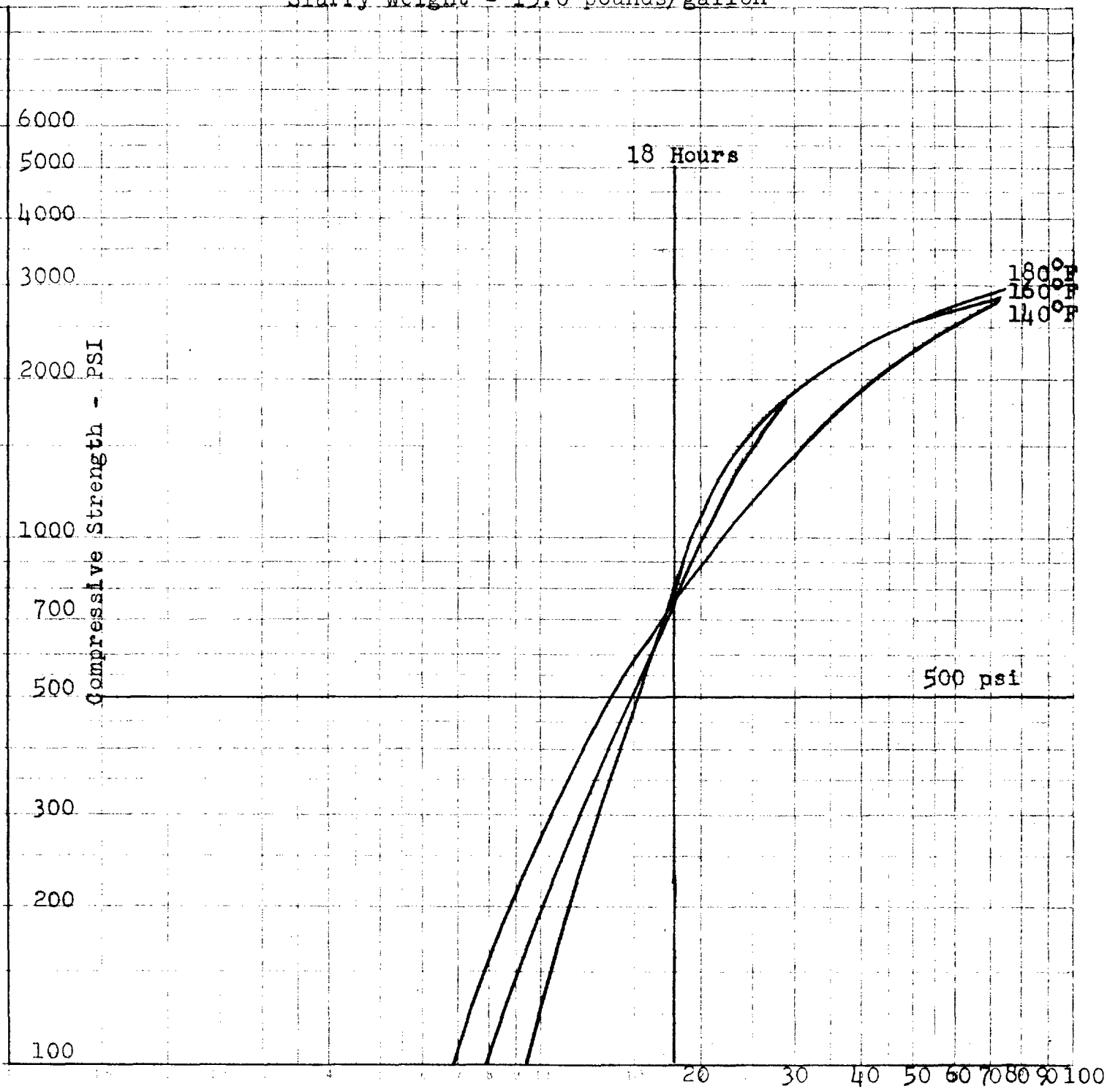
50-50 Pozmix S-API Class A Cement
0% Bentonite
2% HA-5
Water/Solids Ratio - 0.38
Slurry Weight - 16.0 pounds/gallon



Curing Time - Hours

Howco Laboratories
7-9-58 KAS

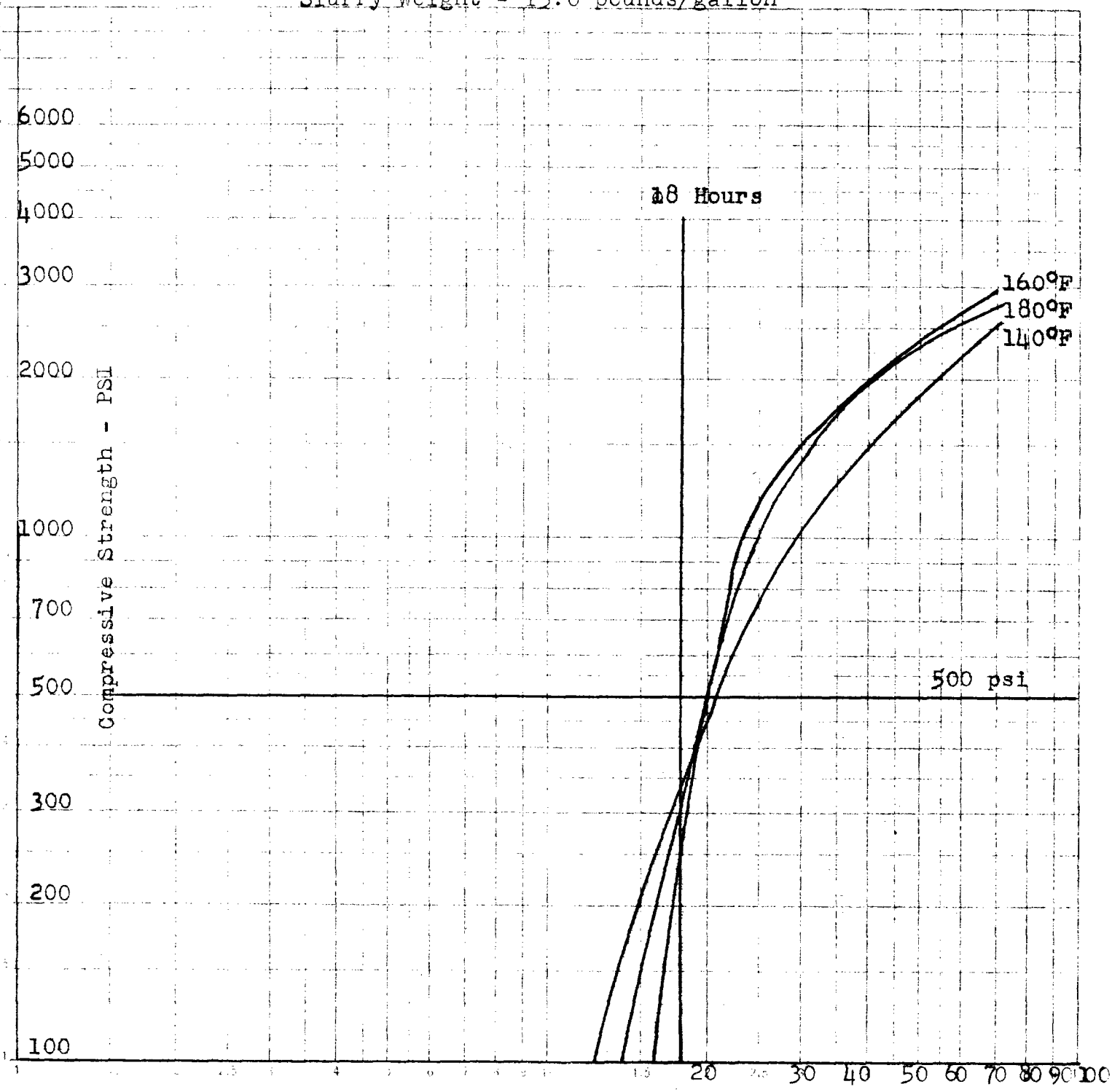
50-50 Pozmix S-API Class A Cement
2% Bentonite
0.3% HR-4 Retarder
Water/Solids Ratio - 0.50
Slurry Weight - 15.0 pounds/gallon



Howco Laboratories
7-9-58 KAS

359-110
KEUFFEL & ESSER CO. LOGARITHMIC

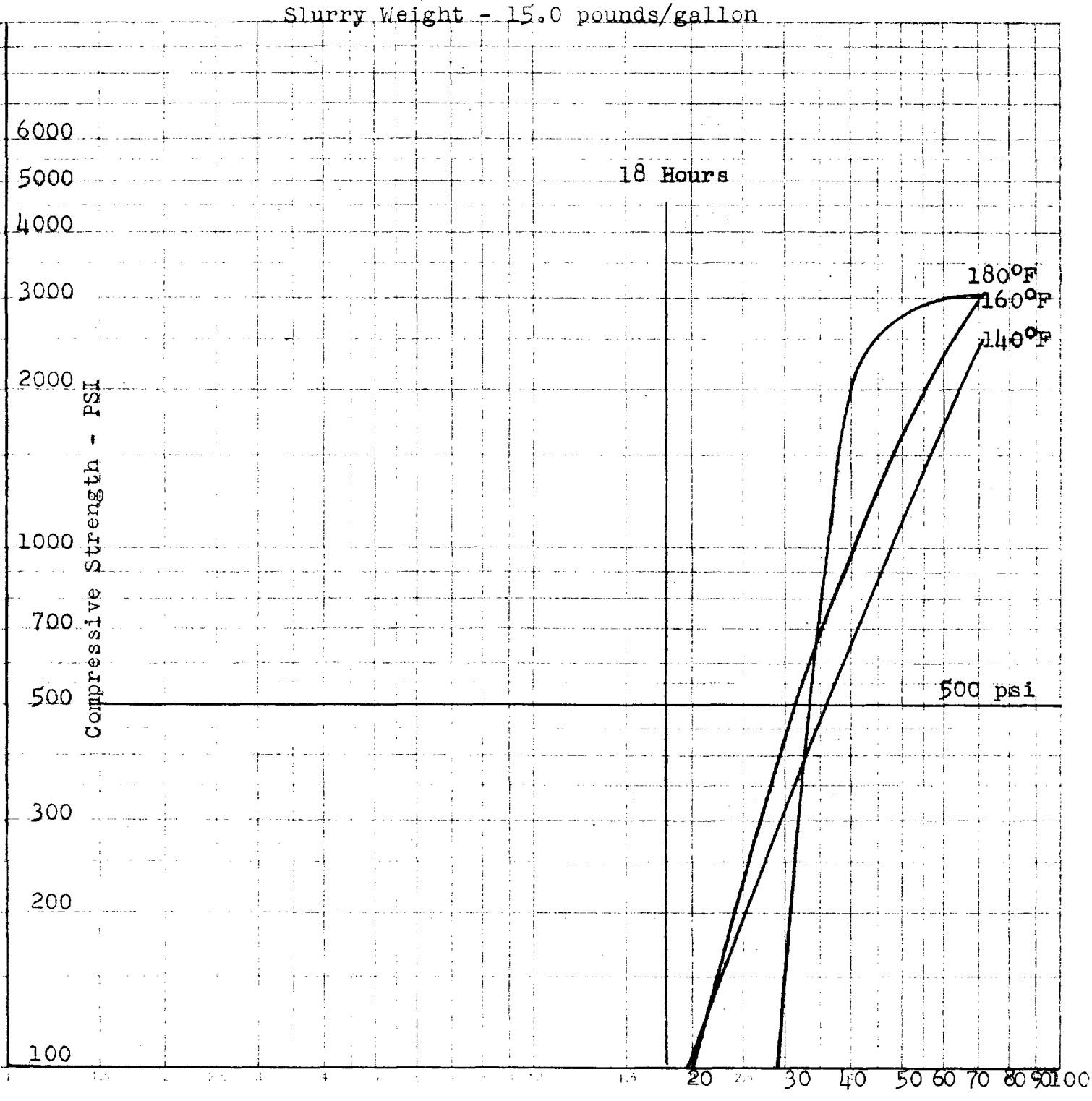
50-50 Pozmix S-API Class A Cement
2% Bentonite
0.4% HR-4 Retarder
Water/Solids Ratio - 0.50
Slurry Weight - 15.0 pounds/gallon



359-110
LOGARITHMIC

Howco Laboratories
7-9-58 KAS

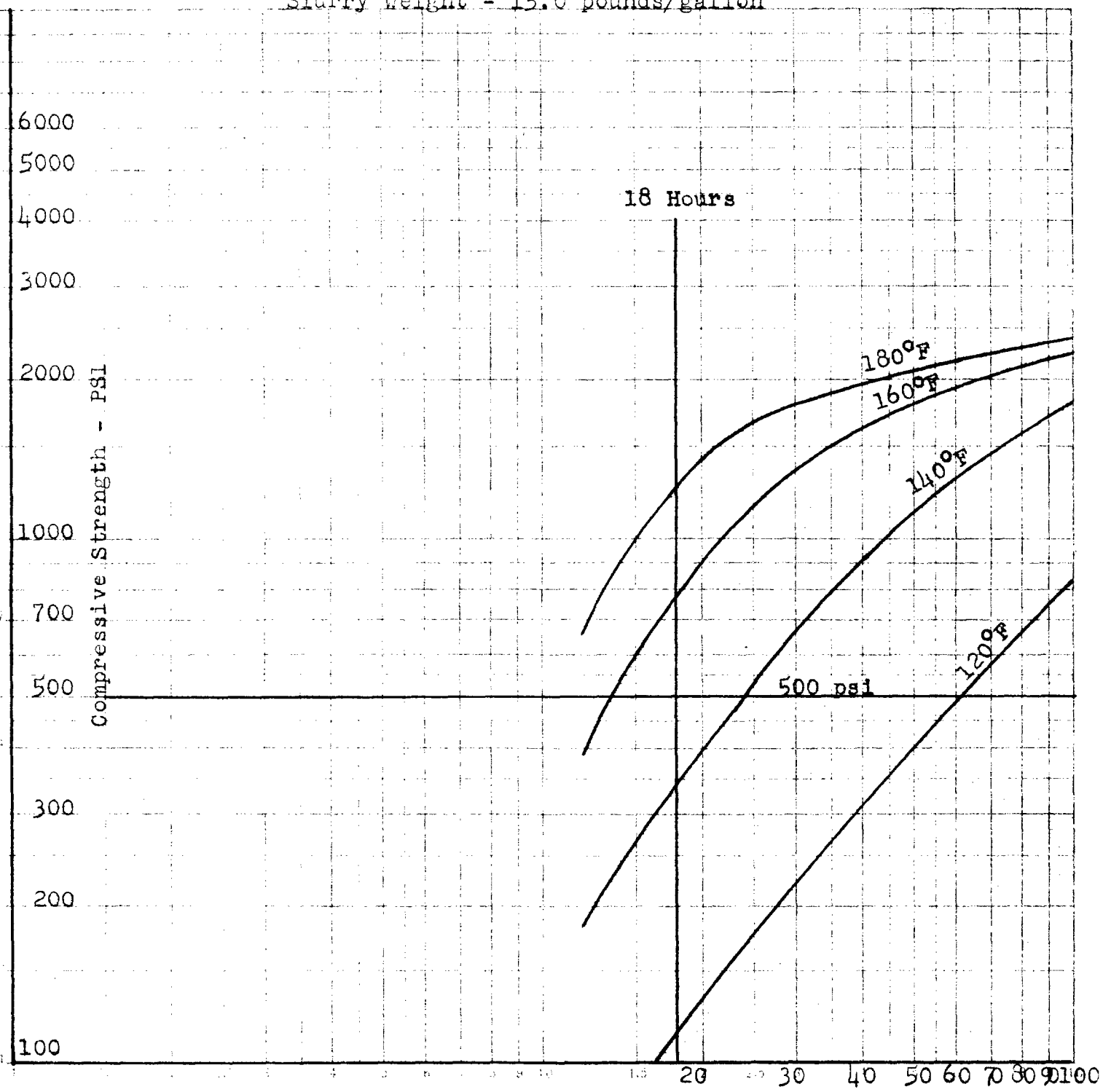
50-50 Pozmix S-API Class A Cement
2% Bentonite
0.5% HR-4 Retarder
Water/Solids Ratio - 0.50
Slurry Weight - 15.0 pounds/gallon



359-110

Howco Laboratories
7-9-58 KAS

Pozmix S 140
Water/Pozmix Ratio - 0.47
Slurry Weight - 15.0 pounds/gallon



Curing Time - Hours

Howco Laboratories
7-9-58 KAS

ATLANTIC

THE ATLANTIC REFINING COMPANY
INCORPORATED 1870
PETROLEUM PRODUCTS
ATLANTIC BUILDING
DALLAS, TEXAS

March 5, 1958

DOMESTIC PRODUCING DEPARTMENT
PRODUCTION DIVISION

T. C. FRICK, MANAGER
V. E. STEPP, CHIEF PET. ENGR.
R. O. CHILDERS, GEN'L. DRILLING SUPT.
W. L. BOWSER, SUPT. OF NATURAL GAS
R. A. HAMILTON, SUPT. OF MATERIALS
H. C. RENZ, SUPV. OF CLERICAL AND RECORDS

MAILING ADDRESS
P. O. BOX 2819
DALLAS 21, TEXAS

Mr. Daniel S. Nutter
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Mr. Nutter:

Enclosed is the temperature and cement strength data which you requested. The separate temperature graphs and the curves showing the time required for bentonite-cements to gain 500 psi are new. The remaining curves are those which were presented as exhibits at the hearing.

I hope these graphs will provide the information which you will need. Please call on us, however, if we can be of any further assistance to you.

Very truly yours,

Sidney H. Davis

Sidney H. Davis

/at
Enc.

TENTATIVELY PROPOSED NEW MEXICO OIL CONSERVATION COMMISSION STATE WIDE

RULE 107. CASING AND TUBING REQUIREMENTS

(a) No change.

(b) Cementing shall be by pump and plug method, or other method approved by the Commission. Sufficient cement shall be used on surface casing to fill the annular space back of the casing to the bottom of the collar or to the surface of the ground. Before initiating tests, all casing strings shall stand cemented a minimum of either (1) 18 hours, or (2) until compressive strength of the cement is at least 500 pounds per square inch in the "zone of interest". In the case of surface, intermediate or protection casing strings the "zone of interest" shall be the bottom 20% of the casing string, but shall be no greater than 1,000' nor less than 300' from the bottom of the string unless the casing is set at a depth less than 300'. In the case of the production casing string the "zone of interest" shall include all known hydrocarbon producing formations. Operators using compressive strength criterion shall report the following information on Form C-103:

(1) Volume of cement slurry (cubic feet)
(2) Brand name of cement together with additives showing sequence of placement if more than one type cement slurry is used.
(3) Approximate temperature of cement slurry when mixed.
(4) Estimate of cement strength at time of testing.

(c) All casing strings, except conductor pipe, shall be tested satisfactorily after cementing and before starting operations such as drilling plug or perforating. Minimum casing test pressure shall be approximately one-third casing interval yield pressure except that the test pressure shall not be less than 600 psi nor more than 2500 psi. Test pressure shall be applied for a period of 30 minutes. If a drop of more than ten percent of the test pressure should occur, the casing shall be considered defective and corrective measures shall be applied.

(d) All flowing wells shall be tubed, and tubing shall be set as near the bottom as practical, but tubing perforations shall not be more than 250 feet above the top of pay, unless authorized by the Commission.

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

May 5, 1958

COPY

Mr. Jason Kellahin
Kellahin & Fox
P.O. Box 1713
Santa Fe, New Mexico

Dear Mr. Kellahin:

On behalf of your client, Atlantic Refining Company, we enclose two copies of Order R-1173 issued May 5, 1958, by the Oil Conservation Commission in Case 1369, which was heard on January 15th and February 13th at Santa Fe.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp
Encls.

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

The
FRONTIER REFINING CO.
4040 EAST LOUISIANA AVENUE • DENVER 22, COLORADO

DENVER, COLORADO
General Office

CHEYENNE, WYOMING
Manufacturing

Case File

4040 East Louisiana Avenue
Denver 22, Colorado
January 10, 1958

New Mexico Oil Conservation Commission
Santa Fe, New Mexico

Gentlemen:

Re: Case 1369
Hearing January 15, 1958

We wish to enter an appearance in this case by letter as follows:

We object to paragraph (c)(1) with regard to testing production casing strings. When the top plug is bumped with approximately 500 PSI greater than the pump pressure during final stage of the cementing operation, this in effect is a test of the casing. When rotary rig is released and the well completed with cable tools, the proposed order would impose on the operator an additional pump truck charge of from about $200 to $300, plus approximately 75¢ per mile one way over 25 miles.

We also object to (c)(2): When completing a well with cable tools, we have found that a dry test of 2 hours has always been sufficient.

We believe adoption of the proposed rule change would for the most part cause unwarranted additional expense to the operator. In general we believe the existing Rule 107 is entirely adequate and would urge that the proposed rule change be denied in entirety with one exception: we agree that 18 hours WOC on surface casing would be sufficient.

Yours very truly,

E. B. Granville

E. B. Granville
Drilling and Production
Superintendent

EBG:pb

Case 1367

J. M. HERVEY (1874-1953)
HIRAM M. DOW
CLARENCE E. HINKLE
W. E. BONDURANT, JR.
GEORGE H. HUNKER, JR.
HOWARD C. BRATTON
S. B. CHRISTY IV
J. PENROD TOLES
LEWIS C. COX, JR.
PAUL W. EATON, JR.

LAW OFFICES
HERVEY, DOW & HINKLE
FIRST NATIONAL BANK BUILDING
ROSWELL, NEW MEXICO

TELEPHONE MAIN 2-6510
POST OFFICE BOX 547

December 31, 1957

New Mexico Oil Conservation Commission
Mabry Hall, State Capitol
Santa Fe, New Mexico

Attention: Mr. Dan Nutter

Gentlemen:

This will refer to the writer's conversation with Mr. Nutter last week in regard to the proposed amendment of Rule 107 of the Rules of the New Mexico Oil Conservation Commission.

It is our understanding that this matter will go on the docket for the regular January hearing on the motion of the Commission at the request of The Atlantic Refining Company. As you know, The Atlantic Refining Company has been in touch with us in regard to the matter and this is agreeable to The Atlantic and they will be prepared to submit evidence in support of the proposed amendment.

Yours very truly,

HERVEY, DOW & HINKLE

By _____

CEH/bp

PHILLIPS PETROLEUM COMPANY

BARTLESVILLE, OKLAHOMA

PRODUCTION DEPARTMENT
L. E. FITZJARRALD
MANAGER

October 14, 1957

EARL GRIFFIN
GENERAL SUPERINTENDENT
JACK TARNER
TECHNICAL ADVISER TO MGR.
H. S. KELLY
CHIEF ENGINEER

In re: Completion Practices - Cementing - Proposal for Amendment of New Mexico Oil Conservation Commission Statewide Rule 107.

Atlantic Refining Company
Midland, Texas

Attention of Mr. J. H. Faulk

Gentlemen:

This is to advise that Phillips Petroleum Company is in support of your proposal to amend the subject rule to reduce WOC time and to eliminate the requirement of an opening of less than 1" at the bottom of the tubing on flowing wells. The proposal to change the WOC time was expressed in your memorandum of September 24, 1957.

You may advise the New Mexico Oil Conservation Commission of our concurrence.

Very truly yours,

L. E. Fitzjarrald

L. E. Fitzjarrald

LEF:OPN:HD