CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

File WP-3-1642

Well U. S. Smelting
USA No. 2

Sample Number	Bulk Density	Sample Number	Bulk Density
1	2.31	26	2.01
2	2.27	27	2.03
3	2.25	28	2.01
4	2.51	29	2.04
5	2.24	30	2.00
6	2.18	31	2.09
7	2.19	32	1.97
8	2.15	33	1.98
9	2.17	34	2.04
10	2.15	35	2.06
11	2.14	36	2.03
12	2.15	37	2.09
13	2.14	38	2.09
14	2.13	39	2.36
15	2.15	40	2.06
16	2.15	41	2.19
17	2.14	42	2.20
18	2.15	43	2.29
19	2.17	44	2.18
20	1.93	45	2.32
21	1.96	46	2.36
22	2.08	47	2.31
23	2.05	48	2.11
24	2.01	49	2.12
25	2.04	50	2.09

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

File WP-3-1642

Well U. S. Smelting USA No. 2

Sample Number	Bulk Density	Sample Number	Bulk Density
51	2.08	80	2.04
52	2.15	81	2.02
53	1.95	82	2.15
54	2.41	83	2.09
55	2.00	84	2.09
56	2.07	85	2.12
57	2.12	86	2.08
58	2.13	87	2.07
59	2.07	88	2.07
60	2.05	89	2.09
61	2.06	90	2.06
62	2.08	91	2.10
63	2.10	92	2.04
64	2.09	93	2.28
65	2.10	94	2.06
66	2.13	95	2.05
67	2.10	96	2.09
68	2.14	97	2.05
69	2.14	98	2.03
70	2.15	99	2.04
71	2.12	100	2.06
72	2.22	101	2.01
73	2.26	102	2.07
74	2.21	103	2.10
75	2.19	104	2.53
76	2.24	105	2.61
77	2.15	106	2.29
78	2.13	107	2.11
79	2.16	108	2.24
		109	2.13

Distribution of Final Reports

12 Copies

Mr. C. W. Nance
Tenneco Oil Company
Box 307
Hobbs, New Mexico

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Formation cored in the subject well has been analyzed according to instructions received at the laboratory. Results of the analysis are presented in both tabular and graphical form on the attached Completion Coregraph. Information relative to the drilling fluid used during the coring operation, sampling and preservation of the core and type of analysis employed will also be found on the Completion Coregraph.

Thank you for the opportunity to be of service.

CORE LABORATORIES, INC.
P. O. Box 4337
Midland, Texas

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO

February 7, 1966

COPY

Mr. John J. Lacy
Tenneco Oil Company
P. O. Box 1031
Midland, Texas

Dear Sir:

You will recall that at a recent hearing of Case No. 2720, you requested relief from complete shut-in of your overproduced U. S. Smelting #2 gas well. You will also recall that I questioned whether the call of the hearing would permit us to consider this question at this hearing.

After reviewing this matter with our legal department, we have determined that it will be necessary that you have a hearing on this matter before it can be considered. There are two reasons for this (1) the call of Case 2720 did not mention this matter and (2) Rule 17 of Order R-2397 requires a hearing for relief from complete shut-in.

We will refrain from ordering this well for a period of two weeks in order to give you time to make application.

Very truly yours,

ELVIS A. UTZ
Gas Engineer

EAU/og

TENNECO OIL COMPANY · P. O. BOX 1031 · 1800 WILCO BUILDING · MIDLAND, TEXAS

November 20, 1962 Case 2720

State of New Mexico
New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.
Secretary, Director

Gentlemen:

Pursuant to the undersigned's conversation of this date with your Mr. Nutter, there are enclosed the original and two (2) copies of Application For The Adoption Of Rules and Regulations For the Double X Delaware Pool in Lea County, New Mexico.

It is respectively requested that if at all possible notice for the hearing be advertised so that this matter may be set down on the docket of December 6th. If it is not possible to get it on such docket, then it is requested that a special hearing be granted and if a special hearing is necessary, Tenneco will gladly reimburse you for any advertising cost and reporter fees.

In connection with Item 6 on the enclosed application, Tenneco will request a six months balancing period.

Mr. Clarence Hinkle or an attorney designated by him of the firm of Hervey, Dow & Hinkle will represent Tenneco in this matter.

Yours very truly,

J. D. MOON,
Division Attorney,
Southwestern Division

JDM:nlk
Encl:

cc: Mr. Clarence Hinkle
Hervey, Dow & Hinkle
P. O. Box 10
Roswell, New Mexico

DOCKET MAILED
Date 12-26-62

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

COPY

TO WHOM IT MAY CONCERN

I, A. L. PORTER, Jr., Secretary-Director of the New Mexico Oil Conservation Commission, do hereby certify that this is a true and correct copy of Commission Order No. R-2397 entered by the Commission on December 26, 1962.

A. L. PORTER, Jr.,
Secretary-Director

January 10, 1963

IN WITNESS WHEREOF, I have affixed my hand and notarial seal this 10th day of January, 1963.

Notary Public

My Commission Expires:

September 22, 1965

GOVERNOR
EDWIN L. MECHEM
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

P. O. BOX 871
SANTA FE

December 26, 1962

Mr. Howard Bratton
Hervey, Dow & Hinkle
Post Office Box 10
Roswell, New Mexico

Re: Case No. 2720
Order No. R-2397
Applicant:
Tenneco Oil Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC
OTHER

DOCKET MAILED
Date 12-26-63

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

P. O. BOX 2088
SANTA FE

February 9, 1966

Mr. Sim Christy
Hinkle, Bondurant & Christy
Attorneys at Law
Post Office Box 10
Roswell, New Mexico

Re: Case No. 2720
Order No. R-2397-C
Applicant:

TENNECO OIL COMPANY

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC

Other

LAW OFFICES
HINKLE, BONDURANT & CHRISTY
HINKLE BUILDING
ROSWELL, NEW MEXICO

CLARENCE E. HINKLE
W. E. BONDURANT, JR.
S. B. CHRISTY IV
LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
MICHAEL R. WALLER

OF COUNSEL: HIRAM M. DOW

TELEPHONE 622-6510
AREA CODE 505
POST OFFICE BOX 10

December 30, 1965

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.

Re: NMOCC Case No. 2720
Double X Delaware Pool
Lea County, New Mexico

Gentlemen:

This letter will confirm our telephone conversation of this date with your Mr. Durrett in which, in behalf of Tenneco Oil Company, we requested a continuance of the examiner hearing in the captioned case from January 5, 1966 to the next regularly scheduled examiner's hearing which we understand will be January 26.

We thank you in advance for your consideration to this request.

Respectfully,

HINKLE, BONDURANT & CHRISTY

By S. B. Christy IV

SBC:jy

cc: Tenneco Oil Company (Mr. Moon)

DOCKET MAILED

Date 1-13-66

for Jan. 26th Hearing

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

P. O. BOX 2088
SANTA FE

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

January 20, 1965

Re: Case No. 2720
Order No. R-2397-B
Applicant:
TENNECO OIL COMPANY

Mr. Sim Christy
Hinkle, Bondurant & Christy
Attorneys at Law
Post Office Box 10
Roswell, New Mexico

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC
OTHER

DOCKET MAILED

Date

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER

P. O. BOX 871
SANTA FE

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

January 13, 1964

Re: Case No. 2720
Order No. R-2397-A
Applicant:
Tenneco Oil Company

Mr. Howard Bratton
Hervey, Dow & Hinkle
Attorneys at Law
Post Office Box 10
Roswell, New Mexico

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC
OTHER

SPECIAL RULES AND REGULATIONS FOR THE DOUBLE X-DELAWARE POOL, LEA COUNTY, NEW MEXICO

RULE 1. Each well completed or recompleted in the Delaware formation within the boundary of the Double X-Delaware Pool or within one mile thereof, and not nearer to nor within the boundaries of another designated Delaware pool, shall be drilled, spaced, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. (a) Each gas well completed or recompleted in the Double X-Delaware Pool shall be located on a tract consisting of approximately 160 acres, more or less, which may reasonably be presumed to be productive of gas from said pool, and which shall be in the form of a square which is a quarter section of a single governmental section, being a legal subdivision of the United States Public Lands Survey. For purposes of these Rules, a unit consisting of between 158 and 162 surface contiguous acres shall be considered a standard gas unit. Nothing contained herein shall be construed as prohibiting the drilling of a gas well on each quarter-quarter section in any 160 acre unit.

(b) For good cause shown, the Secretary-Director may grant an exception to the requirements of Rule 2 (a) of these Rules without notice and hearing where an application has been filed in due form, and where the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Lands Survey, or where the following facts exist and the following provisions are complied with:

(1) The nonstandard unit consists of contiguous quarter-quarter sections or lots.

(2) The nonstandard unit consist of not more than 162 acres and lies wholly within a single governmental section.

(3) The entire nonstandard unit may reasonably be presumed to be productive of gas from said pool.

(4) The applicant presents written consent in the form of waivers from all offset operators, and from all operators owning interests in the section in which any part of the nonstandard unit is situated and which acreage is not included in the nonstandard unit.

(5) In lieu of Paragraph 4 of this Rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered mail of his intent to form such nonstandard unit. The Secretary-Director may approve the application if, after a period of 20 days, no such operator has entered an objection to the formation of the nonstandard unit.

(c) The District Supervisor shall have authority to approve non-standard gas proration units without notice and hearing and without administrative approval by the Secretary-Director if such unit consists of less than 158 surface contiguous acres and the nonstandard unit is necessitated by a variation in the United States Public Lands Survey.

(d) The allowable assigned to any such nonstandard gas proration unit shall bear the same ratio to a standard allowable in said pool as the acreage in the unit bears to 160 acres.

RULE 3. Each oil well completed or recompleted in the Double X-Delaware Pool shall be located on a tract containing approximately 40 acres, and which consists of any single governmental quarter-quarter section or lot. For purposes of these Rules, a unit consisting of between 39-1/2 and 40-1/2 surface contiguous acres shall be considered a standard unit. Exceptions to this Rule may be granted as provided in Statewide Rule 104.

RULE 4. Each well, oil or gas, completed or recompleted in the Double X-Delaware Pool shall be located no nearer than 330 feet to the outer boundary of the tract nor closer than 330 feet to any governmental quarter-quarter section line or subdivision inner boundary line. Any well drilled and producing from the Double X-Delaware Pool prior to the effective date of this Order at a location conforming to the well location requirements in effect at the time the well was drilled shall be considered to be located in conformance with this Rule. Exceptions to this Rule may be granted as provided in Statewide Rule 104.

RULE 5. (a) A well in the Double X-Delaware Pool shall be classified as a gas well if it has a gas-liquid ratio of 30,000 cubic feet of gas per barrel of liquid hydrocarbons, or more.

(b) A well in said pool shall be classified as an oil well if it has a gas-liquid ratio of less than 30,000 cubic feet of gas per barrel of liquid hydrocarbons.

(c) The simultaneous dedication of any acreage to both an oil well and a gas well is strictly prohibited.

RULE 6. The gas-liquid ratio limitation for the Double X-Delaware Pool shall be 2,000 cubic feet of gas per barrel of liquid hydrocarbons produced.

RULE 7. Any gas well in the Double X-Delaware Pool shall be permitted to produce that amount of gas obtained by multiplying the top unit oil allowable for the pool by 2,000 by a fraction, the numerator of which is the number of acres dedicated to the particular gas well and the denominator of which is 40. In the event there is more than one gas well on a 160-acre gas proration unit, the operator may produce the amount of gas assigned to the unit from ~~said wells in any proportion.~~ any well or wells located

RULE 8. The operator of each newly completed well in the Double X-Delaware Pool shall cause a gas-liquid ratic test to be taken on said well upon recovery of all load oil from the well, provided however, that in no event shall the test be commenced later than 30 days from the date of first production unless the well is connected to a gas-gathering facility and is producing under a temporary gas allowable assigned in accordance with Rule 11 of these Rules. Provided further, that any well which is shut-in shall be exempted from the aforesaid gas-liquid ratio test requirement so long as it remains shut-in. If the gas-liquid ratio is 30,000 cubic feet of gas per barrel of liquid hydrocarbons, or more, the operator shall not produce the well until beneficial use can be made of the gas.

RULE 9. Gas-liquid ratio tests shall be taken on all wells in the Double X-Delaware Pool, and on all wells producing from the Delaware formation within one mile of the boundaries of the Double X-Delaware Pool which are not within another designated Delaware oil pool in accordance with the provisions of Rule 301.

RULE 10. An initial shut-in pressure test shall be taken on each gas well and shall be reported to the Commission on Form C-125.

RULE 11. Any well completed in the Double X-Delaware Pool after the effective date of this Order shall receive an allowable only upon receipt by the Commission's Hobbs Office of Commission Forms C-104, C-110 and C-116, all properly executed. The District Supervisor of the Commission's Hobbs Office is hereby authorized to assign a temporary gas allowable to wells connected to a gas transportation facility during the recovery of load oil, which allowable shall not exceed the number of cubic feet of gas obtained by multiplying the daily top unit allowable for the Double X-Delaware Pool by 2,000.

RULE 12. The initial gas proration period shall be from 7 o'clock a.m. on January 1, 1963, to 7 o'clock a.m. on August 1, 1963. Subsequently, the dates 7 o'clock a.m. February the first and 7 o'clock a.m. August the first shall be known as balancing dates, and the periods of time bounded by these dates shall be known as the gas proration periods for the Double X-Delaware Pool.

RULE 13. Any gas well which has an underproduced status as of the end of a gas proration period shall be allowed to carry such underproduction forward into the next gas proration period and may produce such underproduction in addition to the allowable assigned during such succeeding period. Any allowable carried forward into a gas proration period and remaining unproduced at the end of such gas proration period shall be cancelled.

RULE 14. Production during any one month of a gas proration period in excess of the allowable assigned to a well for such month shall be applied against the underproduction carried into such period in determining the amount of allowable, if any, to be cancelled.

RULE 15. Any well which has an overproduced status as of the end of a gas proration period shall carry such overproduction forward into the next gas proration period, provided that such overproduction shall be compensated for during such succeeding period. Any well which has not compensated for the overproduction carried into a gas proration period by the end of such proration period shall be shut-in until such overproduction is compensated for. If, at any time, a well is overproduced an amount equalling three times its current monthly allowable, it shall be shut-in during that month and each succeeding month until

the well is overproduced less than three times its current monthly allowable.

RULE 16. The allowable assigned to a well during any one month of a gas proration period in excess of the production for the same month shall be applied against the overproduction carried into such period in determining the amount of overproduction, if any, which has not been compensated for.

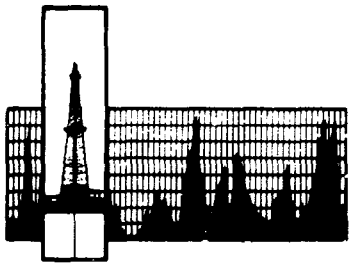
RULE 17. The Commission may allow overproduction to be compensated for at a lesser rate than would be the case if the well were completely shut-in upon a showing after notice and hearing that complete shut-in of the well would result in material damage to the well and/or reservoir.

RULE 18. The monthly gas production from each gas well shall be metered separately and the gas production therefrom shall be reported to the Commission on Form C-115 so as to reach the Commission on or before the 24th day of the month next succeeding the month in which the gas was produced. The operator shall show on such report what disposition has been made of the produced gas.

RULE 19. Each purchaser or taker of gas shall submit a report to the Commission on or before the 15th day of the month next succeeding the month in which the gas was purchased or taken. Such report shall be filed on either Form C-111 or Form C-114 (whichever is applicable) with the wells being listed in approximately the same order as they are listed on the oil proration schedule.

RULE 20. Failure to comply with any provision of this Order or the Rules contained herein shall result in the immediate cancellation of

DWS-1



Darrell W. Smith Co.

Box 1105 • Midland, Texas
Box 455 • Hobbs, New Mexico

October 1, 1962

Tenneco Oil Company
Box 307
Hobbs, New Mexico

Re: Well No. 1 - Ernest USA
Undesignated Field
Lea County, New Mexico

Gentlemen:

The Delaware formation in the above described well was cored from 4,892 feet to 4,992 feet, using a water base mud and diamond coring equipment.

All of the recovered core was brought to the Hobbs laboratory where the gamma radiation was measured and the intervals selected by a representative of Tenneco Oil Company were analyzed by Conventional Core Study. The results of the Core analysis data are reported in a tabulation and are also plotted on a graph having the same depth scale as the detailed section of the subsurface logs for your convenience.

We hope that you have found our analysis and service to be satisfactory, and the opportunity to be of service to your company is sincerely appreciated.

Yours very truly,

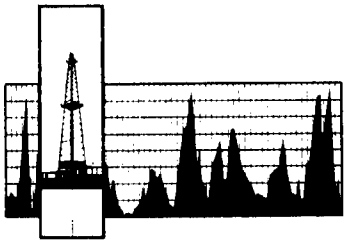
DARRELL W. SMITH COMPANY

J. M. Glenn

J. M. Glenn,
Laboratory Manager,
Hobbs, New Mexico

JMG/dl
9 Copies - Addressee
Attention: Mr. Nance

DWS-5A



Darrell W. Smith Co.

PHONE OX 4-2511—MIDLAND, TEXAS
PHONE EX 3-6173—HOBBS, N. MEX.

FULL DIAMETER CORE STUDY

Operator Tenneco Oil Company **Field** Undesignated **Formation** Delaware

Well No. Ernest USA No. 1 **Location** 660' FNL & 330' FWL, Section 23-24S-32E

Depths 4,892 - 4,992 **Date** October 1, 1962 **Lab No.** 624-H

SAMPLE NO.	REPRESENTATIVE OF FEET	FOOTAGE	PERMEABILITY, MD. HORIZONTAL	PERMEABILITY, MD. VERTICAL	EFFECTIVE POROSITY %	SATURATION % OF PORE SPACE RESIDUAL OIL	SATURATION % OF PORE SPACE WATER	DESCRIPTION
			CORE NO. 1 4,892 - 4,942 (50 Ft.)					
			RECOVERED 4,892 - 4,942 (50 Ft.)					
	4892 - 96	4.0	-		-	-	-	Vfg gray Ss slty shy very lmy NS NA
	4896 - 4901	5.0	-		-	-	-	Vfg gray Ss slty very shy very lmy NS NA
1	4901 - 4902	1.0	0.09		13.4	-0-	81.0	Vfg gray Ss slty shy lmy
2	4902 - 03	1.0	0.31		13.8	4.3	79.8	Vfg gray Ss slty shy lmy
3	4903 - 04	1.0	12.		18.2	9.4	57.1	Vfg gray Ss slty shy lmy
4	4904 - 05	1.0	3.7		14.8	9.5	60.3	Vfg gray Ss slty shy lmy
5	4905 - 06	1.0	7.4		19.1	8.9	50.2	Vfg gray Ss slty shy lmy
6	4906 - 07	1.0	8.2		19.2	7.3	34.9	Vfg gray Ss slty sl shy sl lmy
7	4907 - 08	1.0	22.		21.9	10.5	48.0	Vfg gray Ss slty sl shy sl lmy
8	4908 - 09	1.0	15.		18.6	12.9	50.9	Vfg gray Ss slty sl shy sl lmy
9	4909 - 10	1.0	5.3		21.7	10.6	53.6	Vfg gray Ss slty sl lmy
10	4910 - 11	1.0	7.3		23.6	8.1	55.3	Vfg gray Ss slty sl lmy
11	4911 - 12	1.0	17.		23.9	10.9	52.7	Vfg gray Ss slty sl lmy
12	4912 - 13	1.0	10.		22.8	9.8	51.3	Vfg gray Ss slty sl lmy
13	4913 - 14	1.0	27.		24.1	10.4	60.6	Vfg gray Ss slty sl lmy
14	4914 - 15	1.0	13		22.9	15.3	59.8	Vfg gray Ss slty sl lmy
15	4915 - 16	1.0	0.15		15.4	16.9	66.3	Vfg gray Ss slty shy lmy
16	4916 - 17	1.0	15.		24.0	12.9	50.8	Vfg gray Ss slty sl lmy
17	4917 - 18	1.0	12.		22.8	11.0	59.3	Vfg gray Ss slty sl lmy
18	4918 - 19	1.0	3.9		23.6	8.5	56.8	Vfg gray Ss slty sl lmy
19	4919 - 20	1.0	2.6		22.0	10.9	58.1	Vfg gray Ss slty sl lmy
20	4920 - 21	1.0	3.0		22.4	8.0	56.3	Vfg gray Ss slty sl lmy

DWS-6

PAGE NO. -2- OPERATOR Tenneco Oil Company LAB NO. 624-H

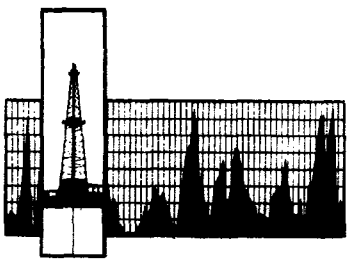
SAMPLE NO.	REPRESENTATIVE OF FEET	FOOTAGE	PERMEABILITY, MD. HORIZONTAL	PERMEABILITY, MD. VERTICAL	EFFECTIVE POROSITY %	SATURATION % OF PORE SPACE RESIDUAL OIL	SATURATION % OF PORE SPACE WATER	DESCRIPTION
21	4921 - 22	1.0	0.17		15.4	14.9	60.4	Vfg gray Ss slty shy lmy
22	4922 - 23	1.0	1.9		20.0	17.5	59.5	Vfg gray Ss slty shy lmy
23	4923 - 24	1.0	-		-	-	-	Vfg gray Ss slty shy lmy NS NA
	4924 - 25	1.0	6.8		21.3	15.5	61.4	Vfg gray Ss slty sl lmy
24	4925 - 26	1.0	12.		24.8	8.5	55.6	Vfg gray Ss slty sl lmy
25	4926 - 27	1.0	7.3		26.4	7.6	60.9	Vfg gray Ss slty sl lmy
26	4927 - 28	1.0	0.12		16.6	16.3	57.1	Vfg gray Ss slty shy lmy
27	4928 - 29	1.0	0.88		16.1	14.9	60.7	Vfg gray Ss slty shy lmy
28	4929 - 30	1.0	10.		21.9	11.4	62.2	Vfg gray Ss slty sl lmy
29	4930 - 31	1.0	8.1		23.5	8.5	69.8	Vfg gray Ss slty sl lmy
30	4931 - 32	1.0	7.0		22.4	9.4	66.9	Vfg gray Ss slty sl lmy
31	4932 - 33	1.0	2.6		20.6	9.2	70.9	Vfg gray Ss slty sl lmy
32	4933 - 34	1.0	3.0		20.2	8.9	64.8	Vfg gray Ss slty sl lmy
33	4934 - 35	1.0	7.3		22.6	7.5	61.1	Vfg gray Ss slty sl lmy
34	4935 - 36	1.0	6.3		23.7	8.4	60.3	Vfg gray Ss slty sl lmy
35	4936 - 37	1.0	6.1		22.4	6.7	74.6	Vfg gray Ss slty sl lmy
36	4937 - 38	1.0	2.8		20.8	3.8	68.3	Vfg gray Ss slty sl lmy
37	4938 - 39	1.0	2.5		22.1	3.6	73.8	Vfg gray Ss slty sl lmy
	4939 - 42	3.0	-		-	-	-	Vfg gray Ss slty sl shy Sh ptgs lmy NS NA
			CORE NO. 2 4,942 - 4,992 (50 Ft.)					
			RECOVERED 4,942 - 4,992 (50 Ft.)					
38	4942 - 43	1.0	3.3		17.7	10.2	47.5	Vfg gray Ss slty sl lmy RF
39	4943 - 44	1.0	4.5		21.9	5.9	51.1	Vfg gray Ss slty sl lmy RF
40	4944 - 45	1.0	4.2		21.5	13.0	54.5	Vfg gray Ss slty sl lmy RF
41	4945 - 46	1.0	6.6		23.6	7.6	65.7	Vfg gray Ss slty sl lmy RF
42	4946 - 47	1.0	6.5		21.3	8.5	59.5	Vfg gray Ss slty sl lmy RF
43	4947 - 48	1.0	17.		22.0	6.8	74.1	Vfg gray Ss slty sl lmy RF
44	4948 - 49	1.0	25.		23.0	13.0	68.3	Vfg gray Ss slty sl lmy RF
45	4949 - 50	1.0	11.		21.3	8.9	69.5	Vfg gray Ss slty sl lmy RF
46	4950 - 51	1.0	10.		20.9	2.8	72.9	Vfg gray Ss slty sl lmy RF
47	4951 - 52	1.0	13.		21.5	4.9	75.8	Vfg gray Ss slty sl lmy RF
48	4952 - 53	1.0	2.8		22.5	4.0	79.6	Vfg gray Ss slty sl lmy RF
49	4953 - 54	1.0	9.4		25.9	11.2	50.2	Vfg gray Ss slty sl lmy RF
50	4954 - 55	1.0	7.2		21.0	3.8	63.3	Vfg gray Ss slty sl lmy RF

DWS-6

PAGE NO. -3- OPERATOR Tenneco Oil Company LAB NO. 624-H

SAMPLE NO.	REPRESENTATIVE OF FEET	FOOTAGE	PERMEABILITY, MD.		EFFECTIVE POROSITY %	SATURATION % OF PORE SPACE		DESCRIPTION
			HORIZONTAL	VERTICAL		RESIDUAL OIL	WATER	
51	4955 - 56	1.0	31.		23.2	4.3	60.8	Vfg gray Ss slty sl lmy RF
52	4956 - 57	1.0	5.8		21.0	4.0	76.7	Vfg gray Ss slty sl lmy RF
53	4957 - 58	1.0	18.		20.7	12.6	69.1	Vfg gray Ss slty sl lmy RF
54	4958 - 59	1.0	16.		21.8	4.1	62.8	Vfg gray Ss slty sl lmy RF
55	4959 - 60	1.0	15.		21.5	4.7	75.8	Vfg gray Ss slty sl lmy VF
56	4960 - 61	1.0	9.0		22.2	5.0	62.2	Vfg gray Ss slty sl lmy VF
57	4961 - 62	1.0	3.6		20.7	3.9	66.7	Vfg gray Ss slty sl lmy VF
58	4962 - 63	1.0	16 .		22.9	7.8	65.9	Vfg gray Ss slty sl lmy VF
59	4963 - 64	1.0	6.4		22.2	4.5	68.5	Vfg gray Ss slty sl shy lmy
60	4964 - 65	1.0	20.		23.9	3.4	60.9	Vfg gray Ss slty sl shy lmy
61	4965 - 66	1.0	7.4		22.9	Trace	83.4	Vfg gray Ss slty sl shy lmy
62	4966 - 67	1.0	6.8		22.8	-0-	81.1	Vfg gray Ss slty sl shy lmy
63	4967 - 68	1.0	28.		23.2	-0-	73.3	Vfg gray Ss slty sl shy lmy
64	4968 - 69	1.0	10.		20.6	-0-	78.2	Vfg gray Ss slty sl shy lmy
65	4969 - 70	1.0	3.0		17.8	-0-	81.6	Vfg gray Ss slty sl shy lmy
66	4970 - 71	1.0	17.		19.6	-0-	71.5	Vfg gray Ss slty sl shy lmy
67	4971 - 72	1.0	22.		19.1	-0-	73.2	Vfg gray Ss slty sl shy lmy
68	4972 - 73	1.0	4.3		18.9	-0-	80.9	Vfg gray Ss slty sl shy lmy
69	4973 - 74	1.0	7.1		19.6	-0-	76.0	Vfg gray Ss slty sl shy lmy
70	4974 - 75	1.0	6.8		19.5	-0-	82.3	Vfg gray Ss slty sl shy lmy
71	4975 - 76	1.0	7.4		19.7	-0-	66.5	Vfg gray Ss slty sl shy lmy
72	4976 - 77	1.0	13.		21.1	-0-	73.9	Vfg gray Ss slty sl shy lmy
73	4977 - 78	1.0	5.4		21.2	-0-	75.4	Vfg gray Ss slty sl shy lmy
74	4978 - 79	1.0	3.5		21.9	-0-	82.6	Vfg gray Ss slty sl shy lmy
75	4979 - 80	1.0	15.		22.4	-0-	80.7	Vfg gray Ss slty sl shy lmy
76	4980 - 81	1.0	9.0		22.6	-0-	79.9	Vfg gray Ss slty sl shy lmy
	4981 - 92	11.0	-		-	-	-	Sh black very sdy, very lmy NS NA

DWS-2



Darrell W. Smith Co.

CORE FOOTAGE SUMMARY

Operator Tennessee Gas Transmission Company **Lab No.** 367-H

Well No. 1 U. S. Smelting U.S.A.

Formations Delaware

Depths 4860-5010

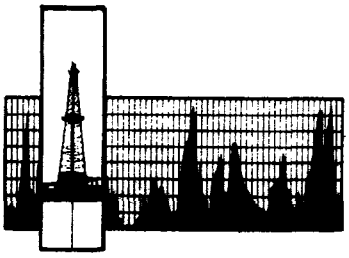
Field Wildcat **County** Lea **State** New Mexico

Location 660' FNL, 1980' FEL, Sec. 24, Twp. 24 S, R 32 E

CORE INFORMATION

Intervals cored	**from** 4860 **to** 5010	
	from ____ **to** ____	
	from ____ **to** ____	
Feet of formation cored	150	
Feet of formation recovered	147	
Feet of formation cored but not recovered	3	
Feet of core received at laboratory for analysis	147	147
Number of samples selected for analysis	60	
Feet of core represented by selected samples	60	
Feet of shale and/or dense barren material not analyzed	87	
Total footage of core accounted for in laboratory analysis	147	147

DWS-1



Darrell W. Smith Co.

Box 1105 • Midland, Texas
Box 455 • Hobbs, New Mexico
January 9, 1961

Tennessee Gas Transmission Company
P.O. Box 307
Hobbs, New Mexico

Re: Well No. 1 U.S. Smelting U.S.A.
Wildcat
Lea County, New Mexico

Gentlemen:

Attached are the results of core analysis from a section of the Delaware formation in the above well. The data are presented in a tabulation and are also plotted on a graph having the same depth scale as the detail section of the subsurface logs.

The well was cored from 4860 feet to 5010 feet with a water base mud. All of the core was brought to the Hobbs laboratory and the intervals selected by a representative for the Tennessee Gas Transmission Company were analyzed by Conventional Core Study. Surface Gamma radiation was measured on all of the recovered core.

The bulk and grain density are plotted on a graph having the same depth scale as the detail sections of the subsurface log. This scale is used to facilitate correlating the core analysis with the subsurface logs.

Yours very truly,

DARRELL W. SMITH COMPANY

J. M. Glenn

J. M. Glenn,
Laboratory Manager

JMG:cm

DWS-5B

Darrell W. Smith Co.

PHONE OX 4-2511—MIDLAND, TEXAS
PHONE EX 3-6173—HOBBS, N. MEX.

CONVENTIONAL CORE STUDY

Operator Tennessee Gas Transmission Co **Field** Wildcat **Formation** Delaware

Well No. 1 U.S. Smelting U.S.A. **Location** 660' FNL, 1980' FEL, Sec. 24, Twp. 24 S, R 32 E

Depths 4860 - 5010 **Date** January 9, 1961 **Lab No.** 367-H

SAMPLE NO.	REPRESENTATIVE OF FEET	FOOTAGE	PERMEABILITY, MD.		EFFECTIVE POROSITY %	SATURATION % OF PORE SPACE		DESCRIPTION
			HORIZONTAL	VERTICAL		RESIDUAL OIL	WATER	
			Core No. 1 4860-4910 (50 Ft.) Recovered 4860-4910 (50 Ft.)					
	4860-68	8.0	-		-	-	-	Ss vfg very shy very lmy NS NA
1	4868-69	1.0	0.58		16.6	0	66.5	Ss vfg shy lmy NS
2	4869-70	1.0	46.		22.2	0	52.3	Ss vfg lmy
3	4870-71	1.0	5.3		16.5	0	57.0	Ss vfg lmy
4	4871-72	1.0	17.		19.0	0	46.3	Ss vfg lmy
5	4872-73	1.0	84.		25.0	0	46.4	Ss vfg lmy
6	4873-74	1.0	111.		26.8	0	45.5	Ss vfg lmy 1" Sh stgr
7	4874-75	1.0	0.79		16.6	2.4	58.9	Ss vfg sl lmy shy
8	4875-76	1.0	25.		23.3	0	45.0	Ss vfg lmy
9	4876-77	1.0	25.		24.2	0	50.6	Ss vfg lmy
10	4877-78	1.0	9.5		22.7	0	60.4	Ss vfg lmy
11	4878-79	1.0	5.8		26.3	0	50.6	Ss vfg lmy
12	4879-80	1.0	8.0		23.3	0	64.4	Ss vfg lmy
13	4880-81	1.0	5.3		22.2	0	66.2	Ss vfg lmy
14	4881-82	1.0	3.4		22.2	0	64.4	Ss vfg lmy
15	4882-83	1.0	4.9		21.1	1.9	64.0	Ss vfg lmy
16	4883-84	1.0	3.2		20.4	2.9	66.2	Ss vfg lmy VF
17	4884-85	1.0	6.9		22.2	2.7	57.2	Ss vfg lmy sl shy VF
18	4885-86	1.0	1.5		20.5	0	71.2	Ss vfg lmy sl shy VF
19	4886-87	1.0	1.0		20.4	0	68.4	Ss vfg lmy sl shy VF

DWS-6

PAGE NO. 2 OPERATOR Tennessee Gas Transmission Company LAB NO. 367-H

SAMPLE NO.	REPRESENTATIVE OF FEET	FOOTAGE	PERMEABILITY, MD.		EFFECTIVE POROSITY %	SATURATION % OF PORE SPACE		DESCRIPTION
			HORIZONTAL	VERTICAL		RESIDUAL OIL	WATER	
20	4887-88	1.0	2.1		21.1	0	69.5	Ss vfg lmy sl shy VF
21	4888-89	1.0	3.0		21.3	Trace	70.4	Ss vfg lmy sl shy VF
22	4889-90	1.0	51.		23.6	4.7	58.5	Ss vfg lmy sl shy VF
23	4890-91	1.0	8.5		23.3	8.2	55.8	Ss vfg lmy
24	4891-92	1.0	17.		20.5	8.3	60.4	Ss vfg sl lmy
25	4892-93	1.0	33.		23.7	9.3	52.3	Ss vfg sl lmy
26	4893-94	1.0	0.68		17.4	Trace	59.8	Ss vfg very shy sl lmy
27	4894-95	1.0	1.2		18.0	Trace	65.0	Ss vfg lmy shy
28	4895-96	1.0	0.99		17.2	Trace	68.4	Ss vfg lmy shy
29	4896-97	1.0	0.84		18.0	Trace	67.8	Ss vfg lmy shy
30	4897-98	1.0	0.84		17.2	Trace	72.1	Ss vfg lmy shy
31	4898-99	1.0	1.2		18.7	Trace	66.8	Ss vfg lmy shy
32	4899-4900	1.0	1.2		18.0	3.3	62.8	Ss vfg lmy shy
33	4900-01	1.0	136.		26.0	6.9	45.4	Ss vfg sl lmy
34	4901-02	1.0	8.9		21.1	4.3	48.8	Ss vfg sl lmy
35	4902-03	1.0	15.		21.4	4.2	53.3	Ss vfg sl lmy VF
36	4903-04	1.0	3.5		22.7	3.1	51.1	Ss vfg lmy VF
37	4904-05	1.0	12.		22.4	4.5	57.2	Ss vfg lmy VF
38	4905-06	1.0	16.		22.1	5.9	52.5	Ss vfg lmy VF
39	4906-07	1.0	18.		26.2	8.0	45.4	Ss vfg sl lmy VF
40	4907-08	1.0	4.9		21.1	5.2	50.7	Ss vfg lmy
41	4908-09	1.0	8.9		22.6	4.9	60.2	Ss vfg lmy sl shy
42	4909-10	1.0	11.		24.6	4.9	54.9	Ss vfg sl lmy RF
			Core No. 2 4910-4960 (50 Ft.)					
			Recovered 4910-4960 (50 Ft.)					
43	4910-11	1.0	11.		21.5	11.2	61.5	Ss vfg lmy
44	4911-12	1.0	0.73		18.0	0	63.0	Ss vfg shy lmy
45	4912-13	1.0	1.0		16.9	0	68.7	Ss vfg shy lmy
46	4913-14	1.0	96.		25.6	10.2	51.2	Ss vfg lmy MRF
47	4914-15	1.0	102.		25.0	6.4	53.6	Ss vfg lmy MRF
48	4915-16	1.0	39.		23.0	5.2	55.3	Ss vfg lmy MRF
49	4916-17	1.0	27.		23.0	5.7	59.6	Ss vfg lmy MRF

DWS-6

PAGE NO. 3 OPERATOR Tennessee Gas Transmission Company LAB NO. 367-H

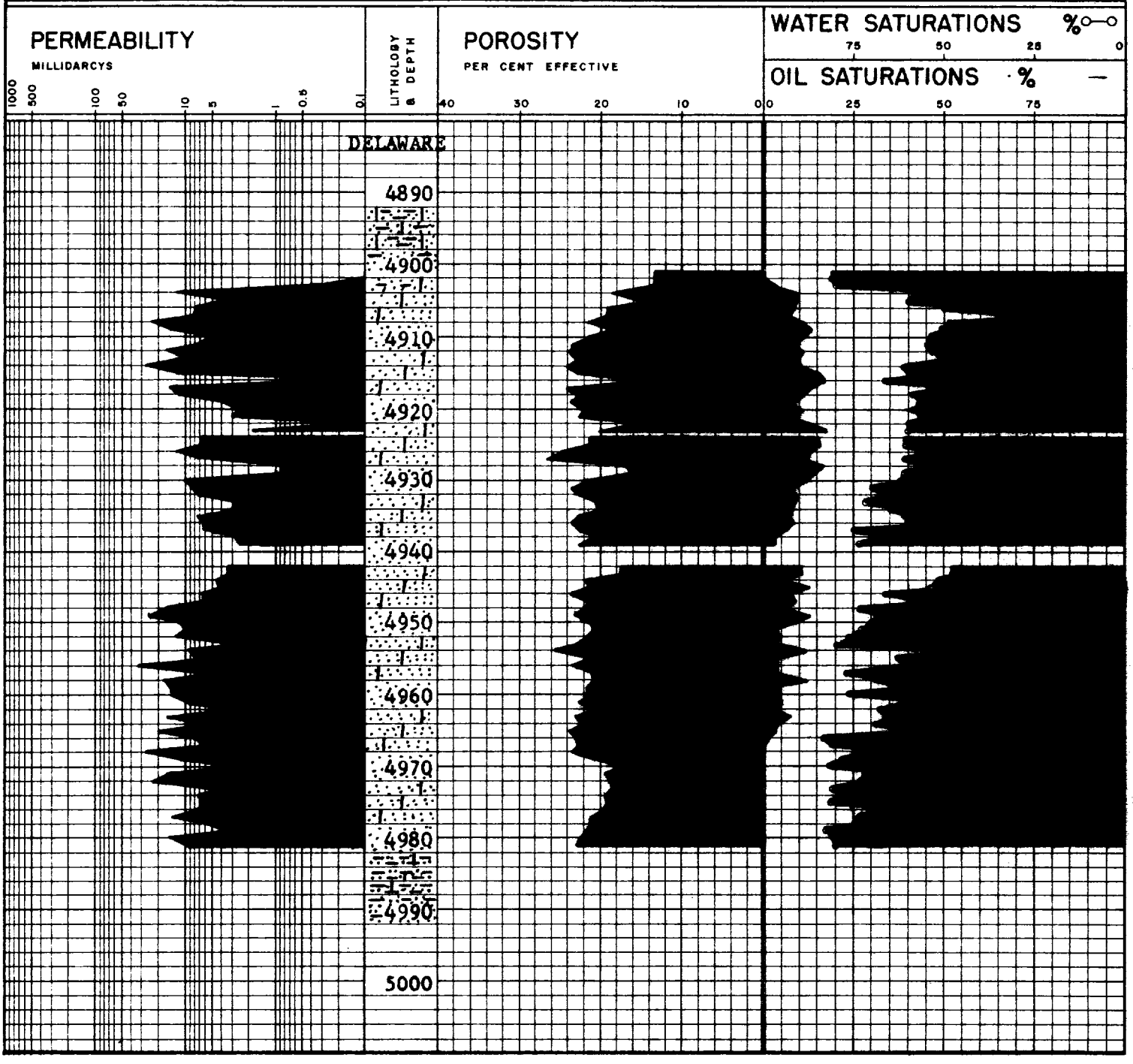
SAMPLE NO.	REPRESENTATIVE OF FEET	FOOTAGE	PERMEABILITY, MD.		EFFECTIVE POROSITY %	SATURATION % OF PORE SPACE		DESCRIPTION
			HORIZONTAL	VERTICAL		RESIDUAL OIL	WATER	
50	4917-18	1.0	33.		22.4	5.4	59.2	Ss vfg lmy MRF
51	4918-19	1.0	271.		23.6	5.9	61.4	Ss vfg lmy MRF
52	4919-20	1.0	111.		24.2	11.2	60.3	Ss vfg lmy 6" shy sd stgr
53	4920-21	1.0	0.79		18.2	0	70.8	Ss vfg shy lmy
54	4921-22	1.0	0.25		15.8	0	78.5	Ss vfg shy lmy
55	4922-23	1.0	49.		24.2	6.6	53.3	Ss vfg lmy
56	4923-24	1.0	25.		21.3	5.6	56.0	Ss vfg lmy
57	4924-25	1.0	23.		19.6	4.1	54.1	Ss vfg lmy
58	4925-26	1.0	17.		20.5	6.3	58.5	Ss vfg lmy
59	4926-27	1.0	145.		19.3	6.2	57.3	Ss vfg lmy VF
60	4927-28	1.0	105.		23.0	5.7	56.5	Ss vfg lmy MRF
	4928-41	13.0	-		-	-	-	Ss vfg very shy lmy NS NA
	4941-44	3.0	-		-	-	-	Sh NS NA
	4944-51	7.0	-		-	-	-	Ss vfg shy lmy NS NA
	4951-54.5	3.5	-		-	-	-	Sh sdy lmy NS NA MRF
	4954.5-56	1.5	-		-	-	-	Sh lmy NS NA
	4956-60	4.0	-		-	-	-	Ss vfg shy lmy MRF NA
			Core No. 3 4960-5010 (50 Ft.)					
			Recovered 4960-5007 (47 Ft.)					
	4960-81	21.0	-		-	-	-	Ss vfg sl shy lmy NS NA
	4981-92	11.0	-		-	-	-	Ss vfg shy lmy NS NA
	4992-95	3.0	-		-	-	-	Sh sl sdy lmy NS NA
	4995-5007	12.0	-		-	-	-	Ss vfg sl shy lmy NS NA

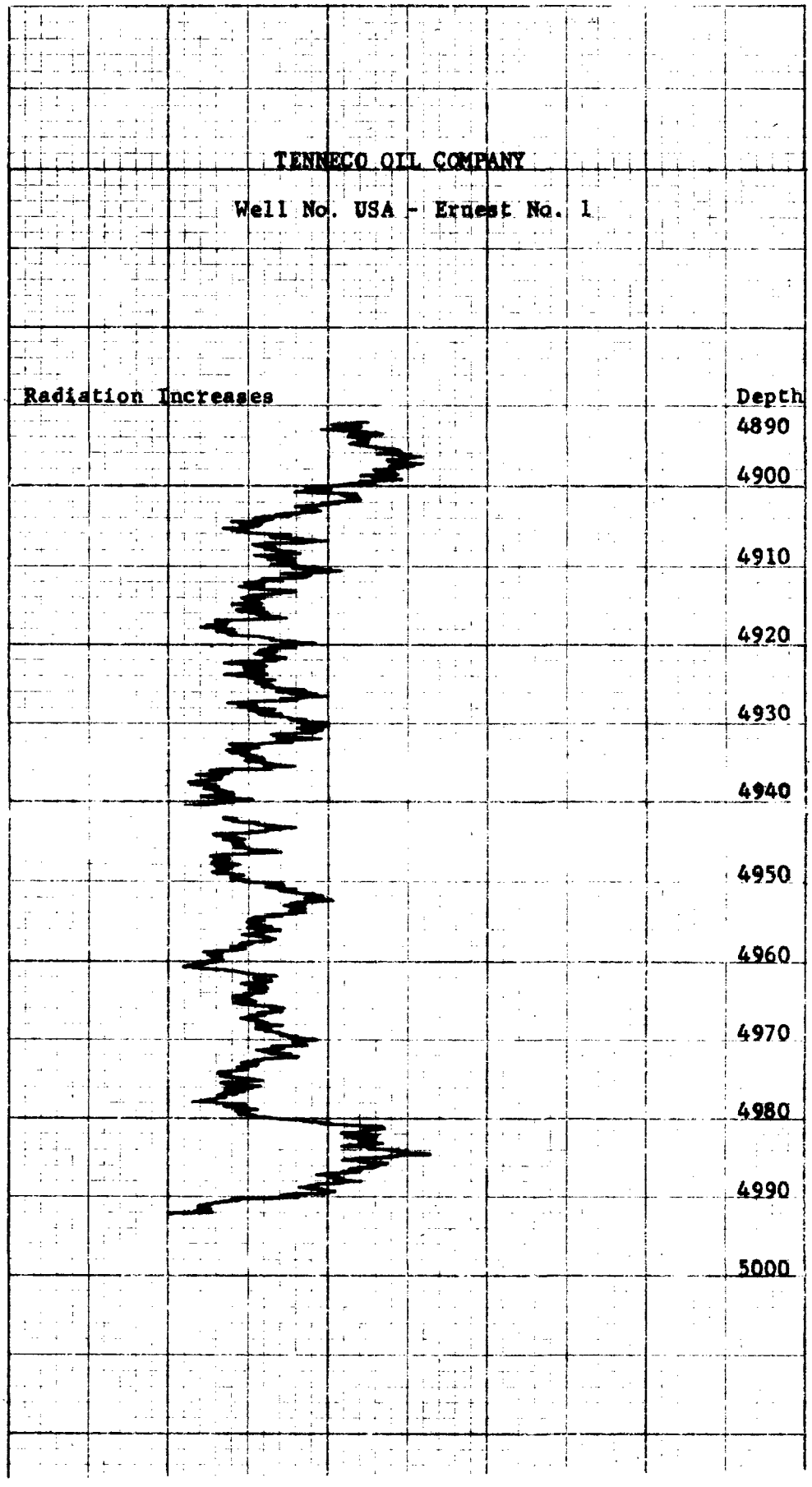
LAB. NO. 624-H

Darrell W. Smith Co.

OPERATOR TENNECO OIL COMPANY WELL NO. 1 ERNEST USA

FIELD UNDESIGNATED COUNTY LEA STATE NEW MEXICO




TENNECO OIL COMPANY
Well No. USA - Ernest No. 1
Radiation Increases
Depth
4890
4900
4910
4920
4930
4940
4950
4960
4970
4980
4990
5000