STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

January 8, 1987

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Texaco USA
P. O. Box 730
Hobbs, New Mexico 88240

Attn: W. B. Cade

Re: Injection Pressure Increase
Skelly Unit Well Nos, 10, 40 and 58 Eddy County, New Mexico

Dear Sir:

Reference is made to your request of December 8, 1986 to increase the surface injection pressure on your Skelly Unit Well Nos 10, 40 and 58. This request is based on step rate tests conducted on the wells on November 25, 1986. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase your surface injection pressure on the following well(s):

Well & Location	Maximum Injection Surface Pressure
Skelly Unit No. 10 1980 FNL & 660 FEL (Unit H) Sec. 21, T-17S, R-31E	1495 PSIG
Skelly Unit No. 40 660 FNL & 660 FWL (Unit D) Sec. 23, T-17S, R-31E	1440 PSIG
Skelly Unit No. 58 510 FSL & 660 FEL (Unit P) Sec. 22, T-17S, R-31E	1585 PSIG

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or it is endangering any fresh water aquifers.

Sincerely,

CHARLES ROYBAL,
Acting Director

DRC/et

cc: Oil Conservation Division - Artesia
D. McDonald
D. Catanach
Case File 6103

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

October 20, 1986

Texaco USA
P.O. Box 728
Hobbs, New Mexico 88240

Attention: W. B. Cade

Re: Injection Pressure Increase
Skelly Unit Waterflood
Eddy County, New Mexico

Dear Sir:

Reference is made to your request of September 17, 1986, to increase the surface injection pressure on four wells in your Skelly Unit Waterflood Project. This request is based on step rate tests conducted on these wells at various times in 1981, 1984, and 1985. It is our opinion that due to the length of time that has elapsed since these tests were run, that the fracture pressure data contained on the tests may not be accurate due to a number of factors.
We therefore request that new tests be conducted on these wells in order to obtain new data that would better reflect the current condition of the formation. We further request that advance notification be given to the Artesia district office of the Division of the date and time that the tests will be run in order that they may be witnessed.

If you have any questions in regards to the requests we have outlined, please feel free to call me at (505) 827-5800.

Sincerely,

David R. Catanach
UIC Director

Texaco USA

P O Box [illegible]
Hobbs NM 88 [illegible]
505 393 [illegible]

September 17, 1986

Mr. R. L. Stamets, Director
New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Skelly Unit
Sections 14, 15, 21, 22, 23, 26, 27, 28
T-17-S, R-31-E
Eddy County, New Mexico

Mr. Stamets:

Texaco Inc. respectfully requests permission to increase the limiting surface injection pressure on four Skelly Unit injection wells in the Fren Seven Rivers Pool. Step rate tests on the subject wells indicate that the surface injection pressure could be increased above the present limiting pressure of 1300 psi without fracturing the reservoir. Step rate tests on the subject wells are summarized on Attachment "A". Copies of the step rate tests are also attached.

Approval to waterflood the Fren Seven Rivers on the Skelly Unit was granted by NMOCC Order No. R-4717-A. NMOCC Order Number R-4717-A states that "... the Secretary-Director of the Commission may administratively authorize a pressure limitation in excess of that set out in Order No. (5) above upon a showing by the operator that such higher pressure will not result in fracturing of the confining strata...". Order No. (5) limits the surface injection pressure to 1300 psi.

Texaco Inc. requests that the limiting surface injection pressure on the four subject wells be increased to the requested levels on Attachment "A".

Your consideration in this matter is appreciated.

Sincerely,

W. B. Cade

W. B. Cade
District Operations Manager

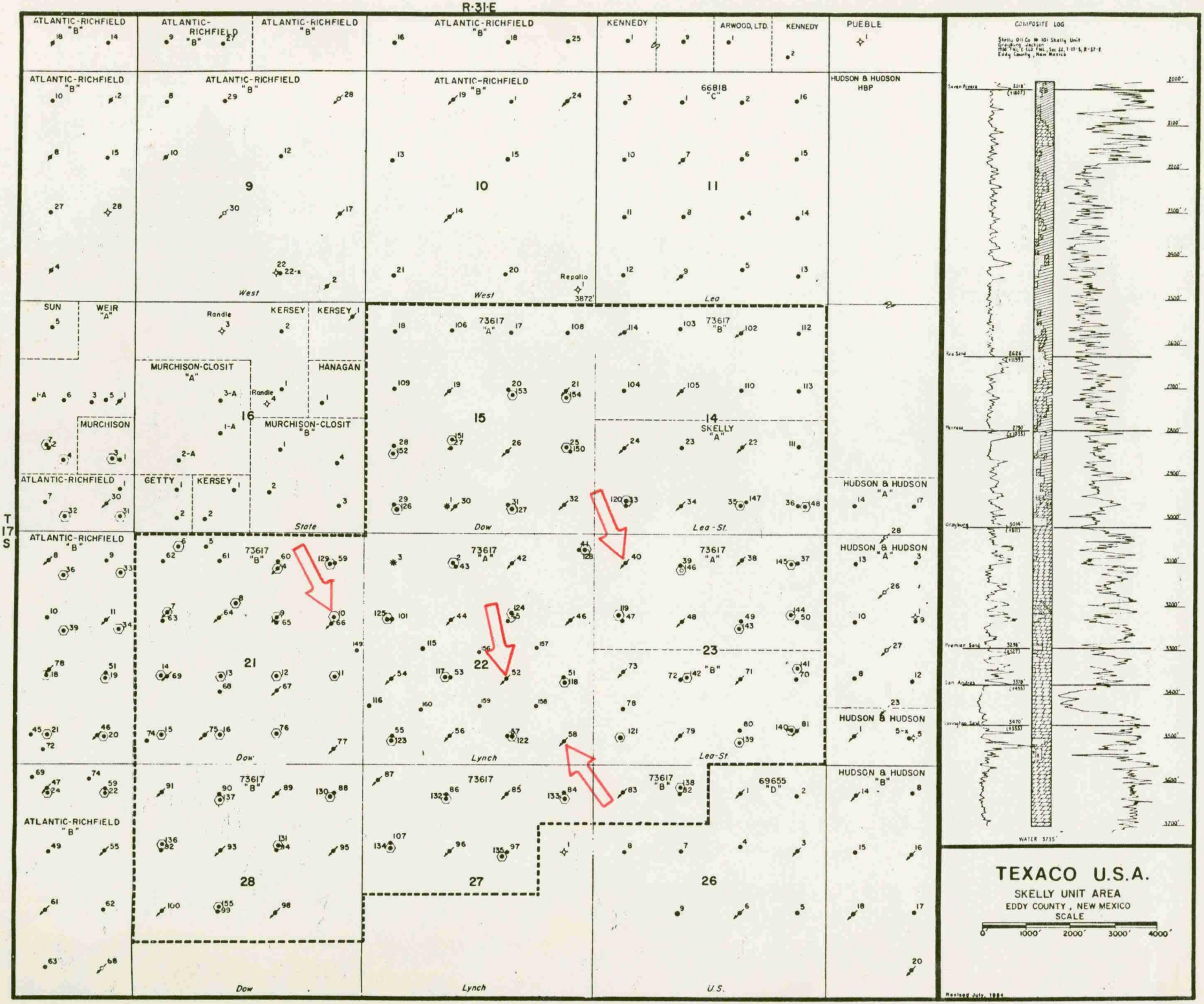
KGC:CLP

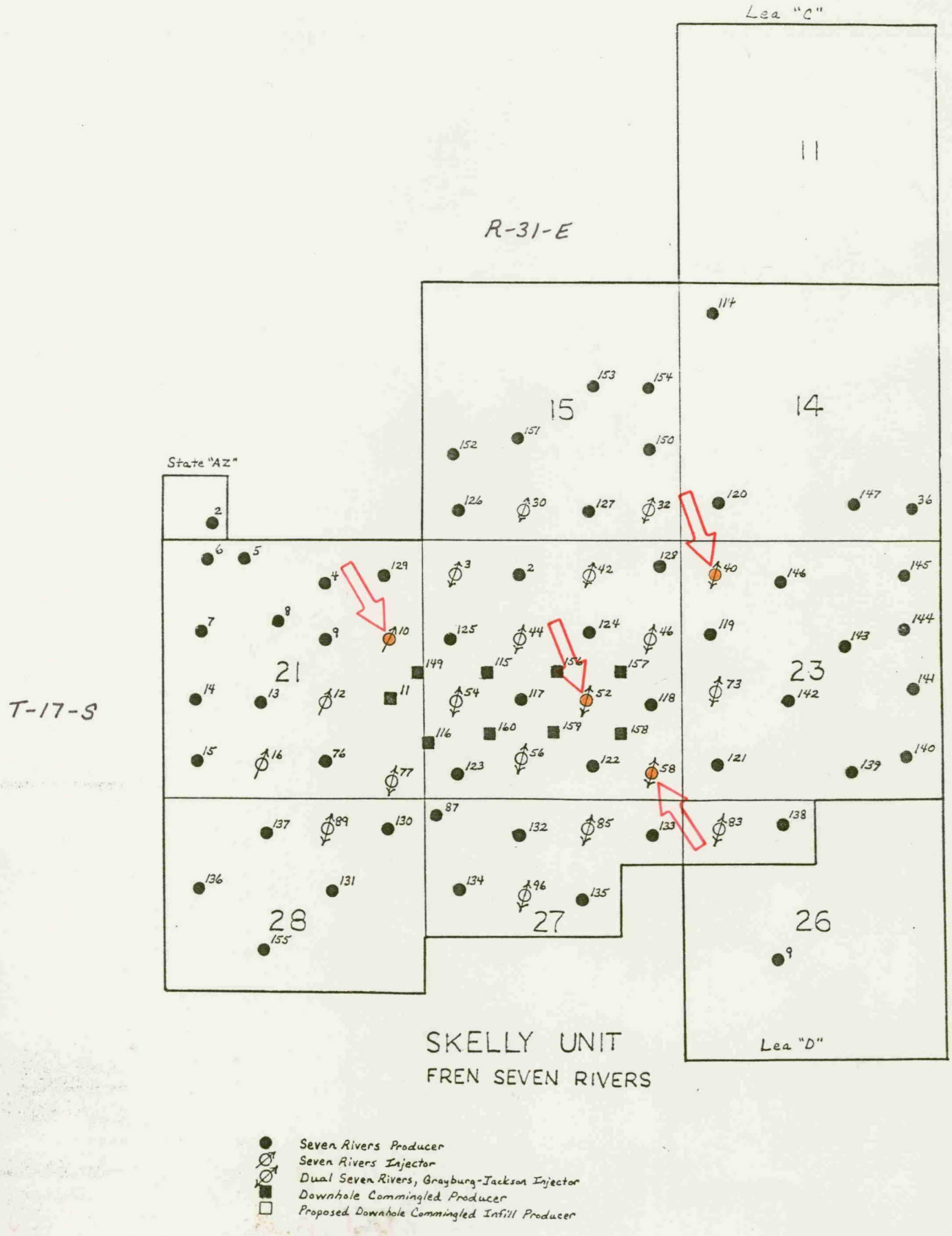
cc: NMOCD (Attn: Mr. Les Clemmons)
P. O. Drawer DD
Artesia, New Mexico 88210

LJS-Hobbs District
JAH-Hobbs Area
File

Attachment "A"

WELL	DATE OF STEP RATE TEST	PARTING PRESSURE psi	REQUESTED LIMITING SURFACE INJECTION PRESSURE, psi	TOP PERF	WELL LOCATION
Skelly Unit No. 10	12/84	1505	1455	2,156'	H, Sec 21
Skelly Unit No. 40	5/81	1550	1500	2,324'	D, Sec 23
Skelly Unit No. 52	6/81 6/85	1550 1560	1510	2,284'	J, Sec 22
Skelly Unit No. 58	6/81	1575	1525	2,349	P, Sec 22

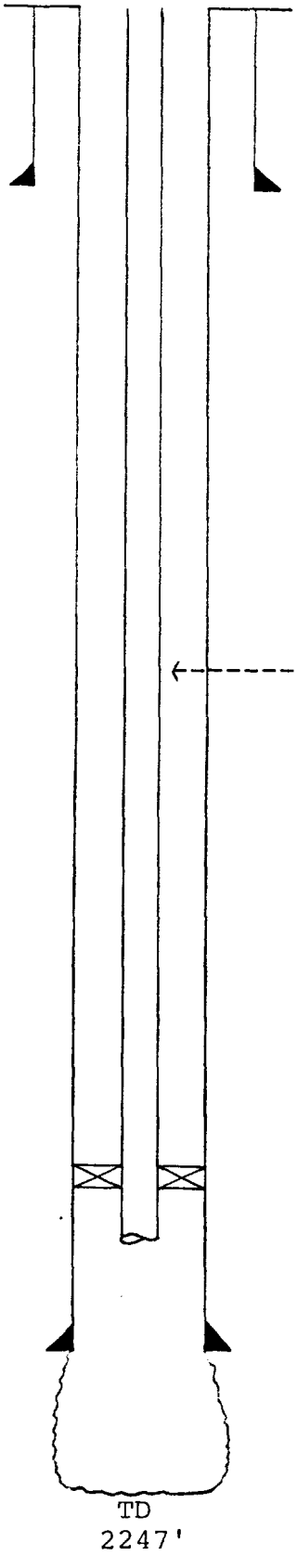

R-31-E
T 17 S
ATLANTIC-RICHFIELD "B"
ATLANTIC-RICHFIELD
KENNEDY
ARWOOD, LTD.
PUEBLE
HUDSON & HUDSON HBP
66818 "C"
9
10
11
West
Lea
SUN
WEIR "A"
Randle
KERSEY
MURCHISON-CLOSIT "A"
HANAGAN
MURCHISON
MURCHISON-CLOSIT "B"
GETTY
16
15
14
SKELLY "A"
73617 "A"
73617 "B"
HUDSON & HUDSON "A"
State
Dow
Lea-St.
21
22
23
73617 "B"
73617 "A"
HUDSON & HUDSON "A"
Dow
Lynch
Lea-St.
28
27
26
73617 "B"
73617
69655 "D"
HUDSON & HUDSON "B"
Dow
Lynch
U.S.
COMPOSITE LOG
Skelly Oil Co. et al Skelly Unit
Seven Rivers
Yates
Queen
Grayburg
Premier Sand
San Andres
Lovington Sand
WATER 3735'
TEXACO U.S.A.
SKELLY UNIT AREA
EDDY COUNTY, NEW MEXICO
SCALE
0 1000' 2000' 3000' 4000'
Revised July, 1984


Lea "C"
11
R-31-E
15
14
State "AZ"
21
23
T-17-S
28
27
26
Lea "D"
SKELLY UNIT
FREN SEVEN RIVERS
Seven Rivers Producer
Seven Rivers Injector
Dual Seven Rivers, Grayburg-Jackson Injector
Downhole Commingled Producer
Proposed Downhole Commingled Infill Producer

WELL: Skelly Unit No. 10
POOL: Fren 7-Rivers
COMPLETED: October 1, 1947

LOCATION: Unit Letter "H"
1980' FNL & 660' FEL
Sec. 21, T-17-S, R-31-E
Eddy County, New Mexico

ELEVATION: 3826' DF



10¼" Hole

8 5/8" 28# csg. set @ 610'
w/75 sxs. cmt. circulated

Geological Tops (SU #66)

Anhydrite 365'
Salt 557'-1505'
Yates 1677'
7-Rivers 2009'

8" Hole

←-------2 3/8" J-55 Salta plastic coated tbg.

Packer set @ 2076'

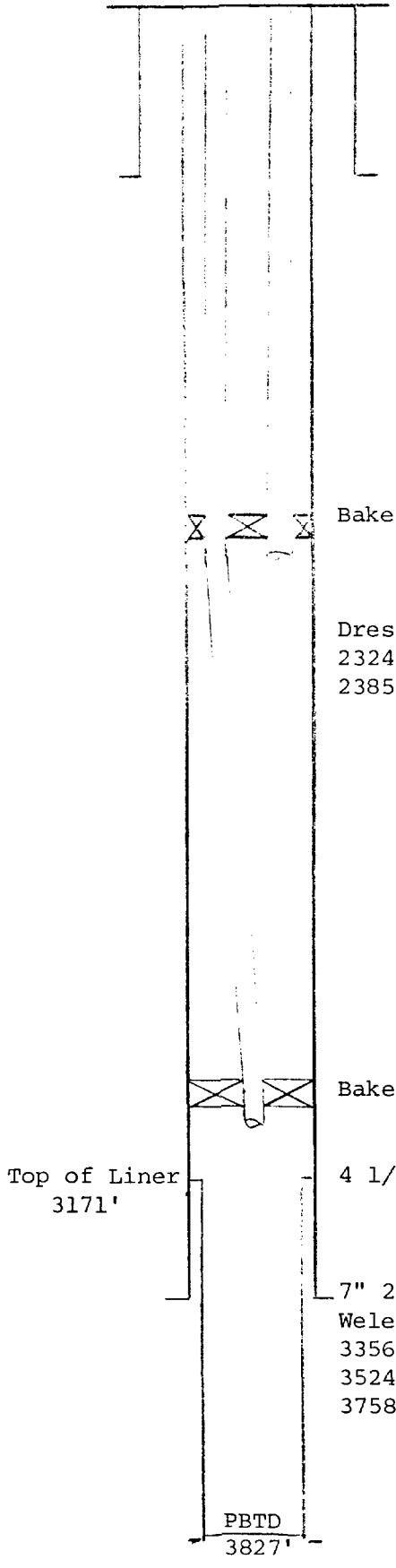
7" 20# csg. set @ 2156'
w/135 sxs. cmt circulated

No perforation-Open hole completion

TD
2247'

Lease: Skelly Unit
Pool: Grayburg-Jackson, Fren 7-Rivers
Well: 40
Completed: September 19, 1934

Location: Unit Ltr. D, 660' FNL & 660' FWL of Sec. 23, T-17S, R-31E Eddy County, New Mexico
Elevation: 3863' DF



Formation Tops

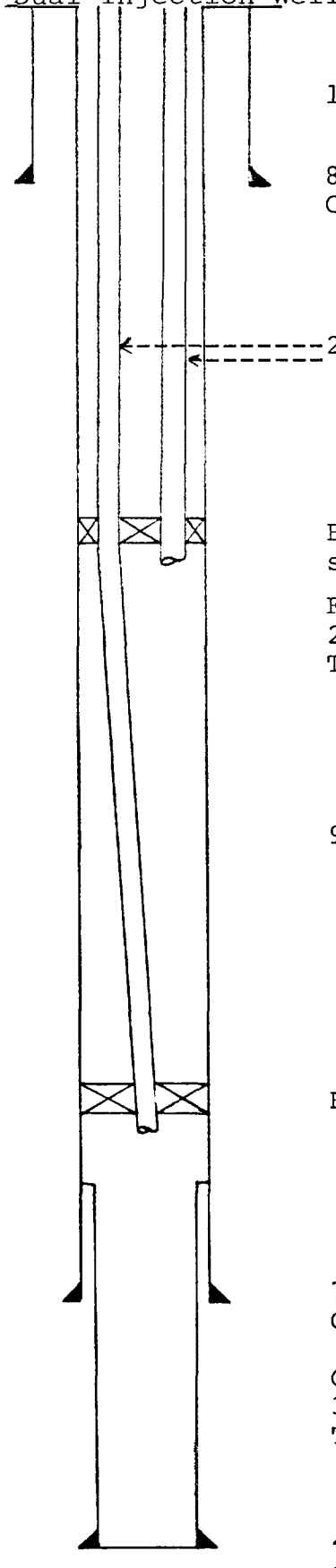
Anhydrite - 456
Salt - 640 - 1645
Red Sand - 2750
Lime - 3151

WELL: Skelly Unit No. 52
POOL: Fren 7-Rivers, Grayburg-Jackson
COMPLETED: March 1, 1946

LOCATION: Unit Letter "J"
1980' FSL & 1980' FEL
Sec. 22, T-17-S, R-31-E
Eddy County, New Mexico

ELEVATION: 3839' DF

Dual Injection Well



11" Hole

8 5/8" 28# csg. set @ 655' w/100 sxs.
Calculated top of cmt. @ 136'

2 3/8" IPC tbg.

Baker Dual Tension pkr.
set @ 2198'

Fren 7-Rivers perf.
2284'-2611'
Total 34 intervals, 1 SPF

9" Hole

Baker AD-1 pkr. set @ 2933'

7" 20# csg. set @ 3130' w/150 sxs.
Calculated Top of Cmt. @ 1996'

Grayburg-Jackson perfs.
3201'-3842'
Total 40 intervals, 1 SPF

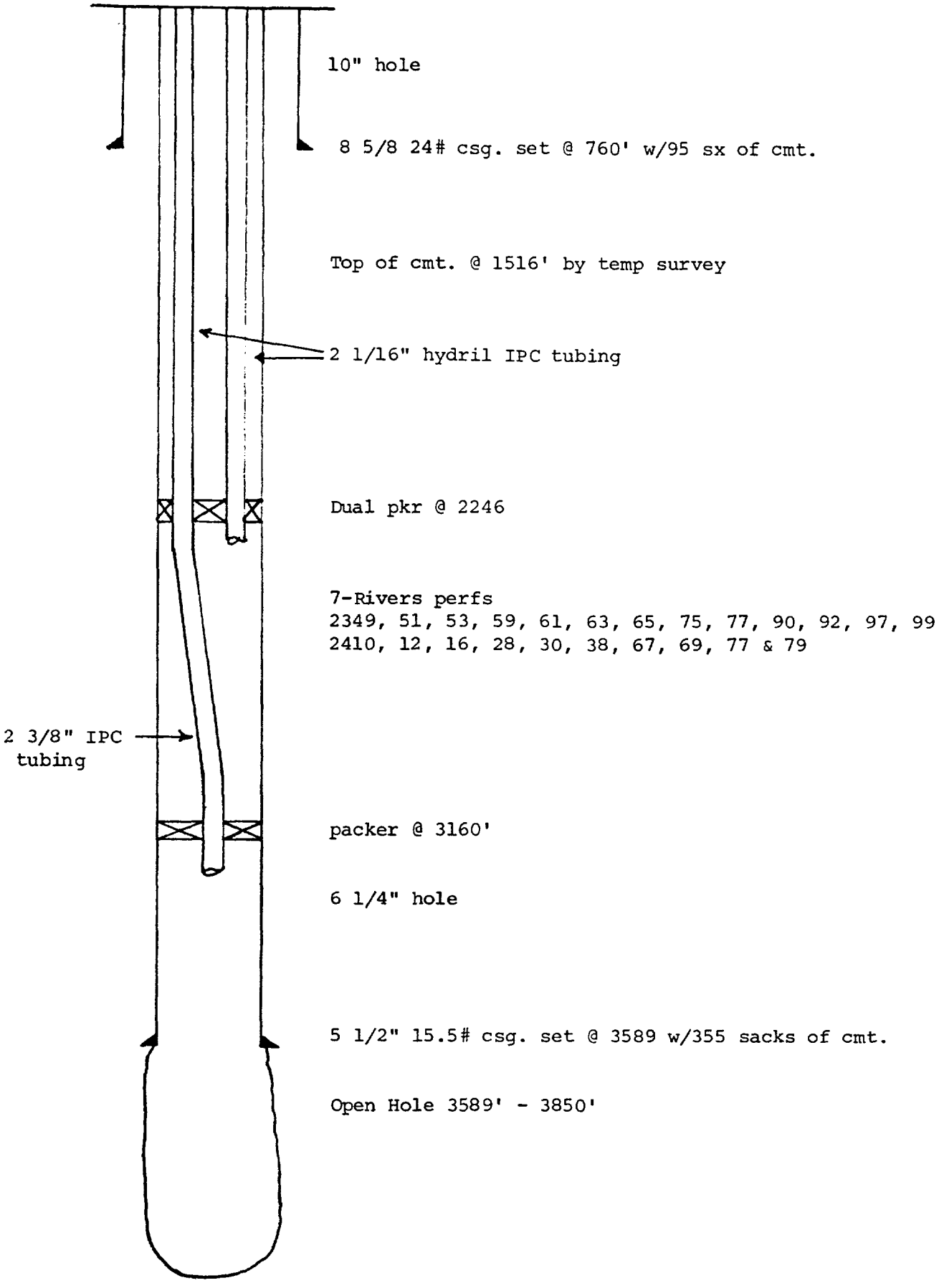
4½" 10.5# J-55 liner set from 3006'-3870'
cmt. w/200 sxs., circ.

Geological Tops

Anhydrite 435'
Salt 612'-1590'
Yates 1713'
7-Rivers 2151'
Queen 2715'
Penrose
Grayburg 3120'
San Andres 3530'
Lovington Sand 3660'

Lease: Skelly Unit
Pool: Fren 7-Rivers
Well: #58

Location: Unit Ltr. P, 510 FSL & 660 FEL of Sec. 22, T17S, R31E, Eddy Coun NM
Elevation: 2829' DF



BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 6103
Order No. R-4717-A

APPLICATION OF GETTY OIL COMPANY FOR A
WATERFLOOD PROJECT EXPANSION AND DUAL
COMPLETIONS, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on December 14, 1977, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 31st day of January, 1978, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That Commission Order No. R-4717 entered on January 25, 1974, authorized a pilot waterflood project in the Skelly Unit Area, Fren-Seven Rivers Pool, Eddy County, New Mexico.

(3) That said project was designated the Skelly Unit Fren-Seven Rivers Waterflood Project.

(4) That the applicant, Getty Oil Company, seeks the expansion of said waterflood project by the injection of water into the Seven Rivers formation through 32 additional wells in said project as set out on Exhibit A attached to this order.

(5) That 28 of said additional injection wells as identified on Exhibit A of this order are to be completed as dual completions with injection into both the Fren-Seven Rivers and Grayburg Jackson Pools, most of said wells having been authorized previously as single completion Grayburg Jackson injection wells.

(6) That injection into each of the singly completed wells should be through internally coated tubing set in a packer to be located within approximately 100 feet of the casing shoe.

(7) That injection into each of the dually completed wells should be through internally coated tubing with the long string of tubing set in a packer to be located as close as practicable to the lowermost injection interval and the short string of tubing set in a packer to be located within approximately 100 feet of the uppermost perforation.

(8) That the casing-tubing annulus in each injection well should be filled with an inert fluid, and that a pressure gauge or approved leak detection device should be attached to the annulus or the annulus should be left open in order to determine leakage in the casing, tubing, or packer.

(9) That the injection wells or system should be equipped with a pressure limiting switch or other acceptable device which will limit the surface injection pressure to no more than 1300 pounds unless the Secretary-Director of the Commission should administratively authorize a higher pressure.

(10) That there are 42 wells, as set out on Exhibit B to this order, which are located within or immediately adjacent to the boundaries of said Skelly Unit Area which may or may not be completed or plugged in such a manner that will assure that they will not serve as channels for injected water to migrate from the San Andres formation to other formations or to the surface.

(11) That to prevent migration of injected water from the Seven Rivers formation, formation injection pressure at wells within one half mile of any well identified on said Exhibit B should be limited to hydrostatic pressure until such time as the wells on said Exhibit B have been repaired or it shall otherwise be demonstrated to the satisfaction of the Secretary-Director of the Commission that the same will not serve as avenues for escape of such waters.

(12) That the wells within the project should be equipped to facilitate periodic testing of the annular space between strings of production and surface casing.

(13) That the operator should take all other steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, producing, or plugged and abandoned wells.

(14) That approval of the subject application should result in the recovery of additional volumes of oil from the Skelly Unit Area, thereby preventing waste.

(15) That the applicant should secure Commission approval for injection into the Grayburg Jackson Waterflood Project for any well herein authorized as a dual completion injection well which has not heretofore been approved as a Grayburg Jackson injection well.

(16) That the application should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant, Getty Oil Company, is hereby authorized to expand its Skelly Unit Fren-Seven Rivers Waterflood Project by the injection of water into the Seven Rivers formation through 4 singly completed and 28 dually completed injection wells, as set out on Exhibit A to this order, Fren-Seven Rivers Pool, Eddy County, New Mexico.

(2) That injection into each of said singly completed wells shall be through internally coated tubing installed in a packer set within approximately 100 feet of the casing shoe.

(3) That injection into each of said dually completed wells shall be through two strings of internally coated tubing with the long string to be installed in a packer set as close as practicable to the lowermost injection interval (Grayburg Jackson) and with the short string installed in a packer set within approximately 100 feet of the uppermost perforation.

(4) That the casing-tubing annulus in each injection well shall be filled with an inert fluid and a pressure gauge or approved leak detection device shall be attached to the annulus or the annulus allowed to remain open in order to determine leakage in the casing, tubing, or packer.

(5) That the injection wells or system shall be equipped with a pressure limiting switch or other acceptable device which will limit the surface injection pressure to no more than 1300 pounds.

(6) That the Secretary-Director of the Commission may administratively authorize a pressure limitation in excess of that set out in Order No. (5) above upon a showing by the operator that such higher pressure will not result in fracturing of the confining strata.

(7) That the applicant shall not inject water into the Seven Rivers formation through any well located within one half mile of any of the 42 wells identified on Exhibit B attached hereto and by reference made a part hereof, at a pressure greater than hydrostatic until such well has been repaired or it has been shown to the satisfaction of the Secretary-Director of the Commission that such well will not serve as an avenue of escape for waters injection into the Seven Rivers formation and he has authorized a higher than hydrostatic pressure.

(8) That the wells within the project area shall be equipped with risers or in another acceptable manner such as to facilitate the periodic testing of the bradenhead for pressure or fluid production.

(9) That the operator shall immediately notify the supervisor of the Commission district office at Artesia of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from or around any producing well, the leakage of water or oil from or around any plugged and abandoned well within the project area, or any other evidence of fluid migration from the injection zone, and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(10) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1115 of the Commission Rules and Regulations.

(11) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman

EMERY C. ARNOLD, Member

JOE D. RAMEY, Member & Secretary

S E A L

jr/

GETTY OIL COMPANY SKELLY UNIT
Additional Authorized Injection Wells

All in Township 17 South, Range 31 East, NMPM

SINGLE COMPLETIONS

Skelly Unit Well No.	Unit	Section
4	B	21
6	D	21
8	G	21
14	L	21

DUAL COMPLETIONS

Skelly Unit Well No.	Unit	Section
3	D	22
22	J	14
24	L	14
26	J	15
30	N	15
32	P	15
34	N	14
36	P	14
38	B	23
40	D	23
42	B	22
44	F	22
46	H	22
48	F	23
50	H	23
52	J	22
56	N	22
58	P	22
71	J	23
73	L	23
79	N	23
83	D	26
85	B	27
87	D	27
91	D	28
93	F	28
96	F	27
100	L	28

Case No. 6103
Order No. R-4717-A

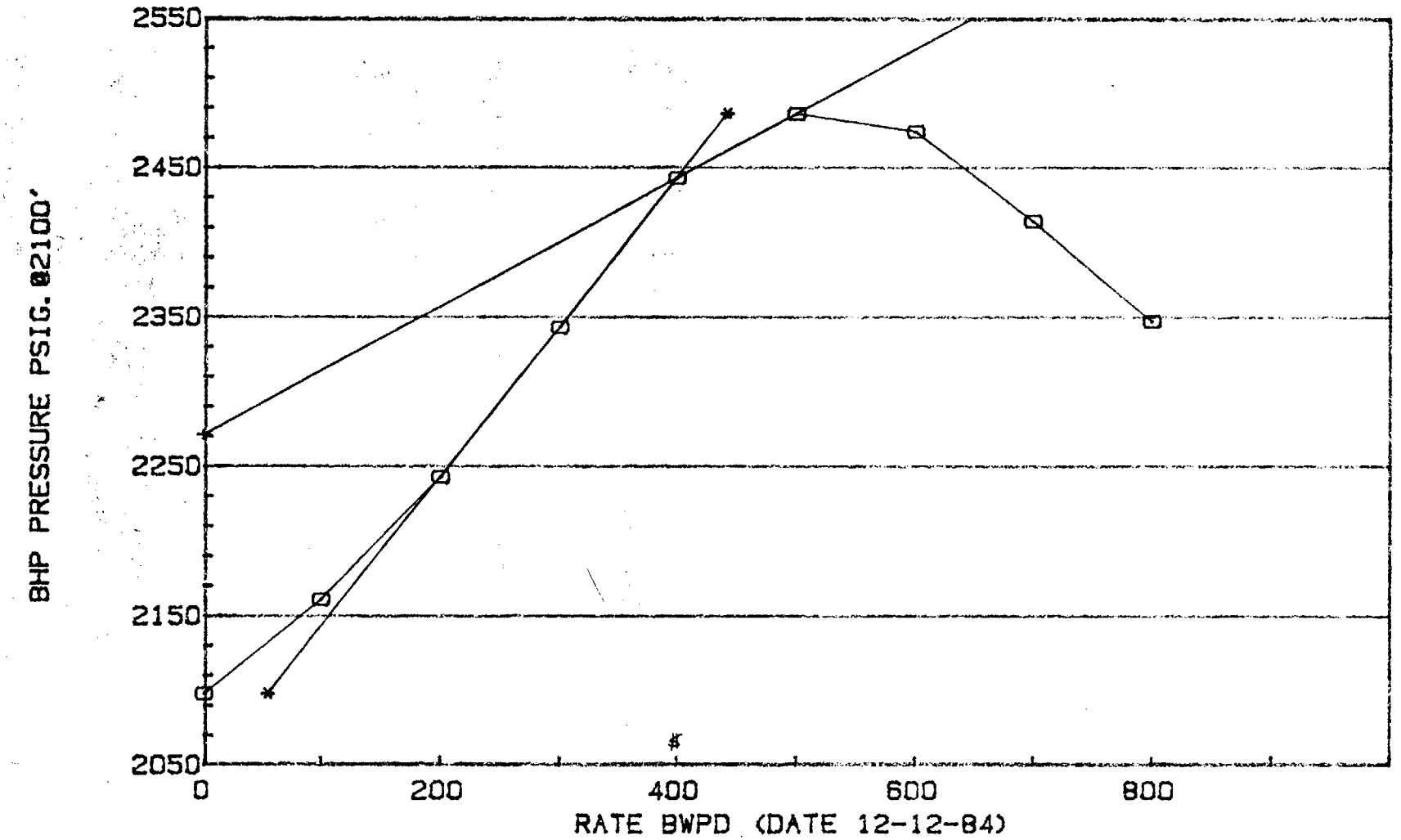
Exhibit "A"

Operator	Lease	Well No.	Ut.	Sec.	Twp.	Rge.
Atlantic Rich. Company	Turner "B"	1	P	17	17	31
		7	O	17	17	31
		9	A	20	17	31
		10	G	20	17	31
		11	H	20	17	31
		30	P	17	17	31
		47	B	29	17	31
		49	G	29	17	31
		51	I	20	17	31
		55	H	29	17	31
		59	A	29	17	31
		61	J	29	17	31
		62	I	29	17	31
		63	O	29	17	31
		68	P	29	17	31
		69	B	29	17	31
		78	J	20	17	31
	West "B"	20	O	10	17	31
Murchison & Closuit	Foster Federal	1	I	17	17	31
	State "A"	1	K	16	17	31
	State "A"	2	L	16	17	31
	State "B"	1	J	16	17	31
		2	O	16	17	31
		3	P	16	17	31
William A. & Edward R. Hudson	Puckett "A"	9	F	24	17	31
		10	E	24	17	31
		13	D	24	17	31
		14	M	13	17	31
		20	F	24	17	31
		27	K	24	17	31
	Puckett "B"	8	C	25	17	31
Getty Oil Co.	State "AZ"	1	M	16	17	31
	Skelly Unit	23	K	14	17	31
		29	M	15	17	31
		31	O	15	17	31
		35	O	14	17	31
		45	G	22	17	31
		55	M	22	17	31
		72	K	23	17	31
		78	M	23	17	31
		106	C	15	17	31
		116	L	22	17	31

Case No. 6103
Order No. R-4717-A

Exhibit "B"

TYLER SURVEYS STEP RATE



TYLER SURVEYS, INC

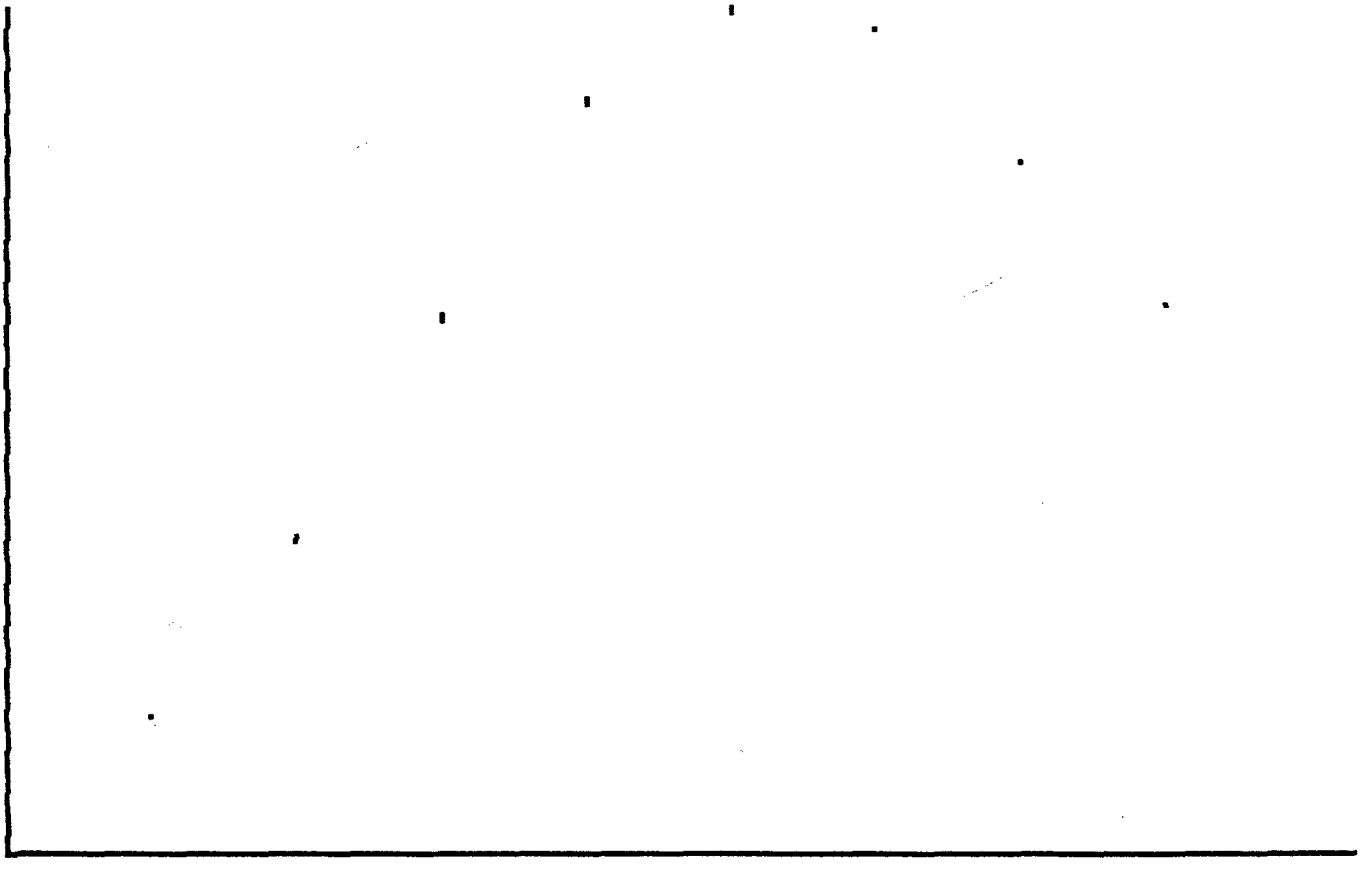
915/523-6826 908 CARDINAL CREST
ANDREWS, TEXAS 79714

COMPANY - TEXACO (GETTY) DATE - 10-12-84
WELL NUMBER 10
BHP@ DEPTH - 2100 FT

STABILIZATION
RATE - 50 BWPD PRESURE - 1160 PSIG

INCREMENTS:
RATE - 100 BWPD STEP LENGTH - 20 MIN

TEST RESULTS
FORMATION PARTING POINT - 2443 PSIG @ 400 BWPD
SURFACE STATIC PART. 1505 PSIG



TIME	PRESSURE	TEMPERATURE	GAUGE
09:56:20 1300	1614.61	79.57*	1
09:57:20	1688.76	119.92*	1
09:58:36	1657.75*	77.84	1
09:59:36	1766.64*	106.95	1
10:00:36	1806.29*	102.67	1
10:01:36	1839.19*	96.77	1
10:02:36	1869.55*	91.13	1
10:03:36	1890.97*	86.61	1
10:04:36	1929.4*	87.21	1
10:05:36	1964.6*	93.5	1
10:06:36	2001.7*	83.6	1
10:07:36	2041.76*	84.49	1
10:08:36 Close	2059.9*	88.74	1
10:09:36	2059.49*	88.5	1
10:13:18	-47701.87*	88.5	1
10:14:18	2099.51*	86.38	1
10:15:18	2098.66*	85.85	1
10:16:18	2091.08*	81.53	1
10:17:18	2089.04*	80.49	1
10:18:18	2088.34*	80.26	1
10:19:18	2088.33*	80.46	1
10:20:18	2107.4*	91.71	1
10:21:18	2092.99*	79.87	1
10:22:14	2101.79	80.2*	1
10:23:14	2095.74*	80.2	1
10:24:14	2096.95*	80.2	1
10:25:14 Start	2097.95*	80.2	1
102614	2132.6*	80.2	1
10:27:25	2131.32*	80.2	1
10:28:25	2136.02*	80.2	1
10:29:25	2129.19*	80.2	1
10:30:25	2134.43*	80.2	1
10:31:25	2136.52*	80.2	1
10:32:25	2137.84*	80.2	1
10:33:25	2139.57	76.81*	1
10:34:25	2136.36*	76.81	1
10:35:25	2136.85*	76.81	1
10:36:25	2145.76*	76.81	1
10:37:25	2149.25*	76.81	1
10:38:25	2151.67*	76.81	1
10:39:25	2152.92*	76.81	1
10:40:25	2154.52*	76.81	1
10:41:25	2156.82*	76.81	1
10:42:25	2159.11*	76.81	1
10:43:25	2161.21*	76.81	1
10:44:25	2159.1*	74.53	1
10:45:25 100	2161*	74.53	1
10:46:25	2174.71*	74.53	1
10:47:25	2179*	74.53	1
10:48:24	2186.02*	74.53	1

TIME	PRESSURE	TEMPERATURE	GAUGE
10:49:24	2191.45*	74.53	1
10:50:24	2197.59*	74.53	1
10:51:24	2200.54*	74.53	1
10:52:24	2205.91*	74.53	1
10:53:24	2205.89*	74.53	1
10:54:24	2208.97*	74.14	1
10:55:24	2214.2*	74.14	1
10:56:24	2215.95*	74.14	1
10:57:24	2222.68*	74.14	1
10:58:24	2226.09*	74.14	1
10:59:24	2228.85*	74.14	1
11:00:24	2231.68*	74.14	1
11:01:24	2234.19*	74.14	1
11:02:24	2237.01*	74.14	1
11:03:24	2239.7*	74.14	1
11:04:24	2240.54*	73.25	1
11:05:24 2000	2243.15*	73.25	1
11:06:24	2257.23*	73.25	1
11:07:24	2268*	73.25	1
11:08:24	2265.43*	73.25	1
11:09:24	2273.74*	73.25	1
11:10:24	2280.55*	73.25	1
11:11:24	2285.74*	73.25	1
11:12:24	2292.42*	73.25	1
11:13:24	2296.66*	73.25	1
11:14:24	2298.55*	72.12	1
11:15:24	2302.85*	72.12	1
11:16:24	2308.11*	72.12	1
11:17:24	2311.93*	72.12	1
11:18:24	2315.94*	72.12	1
11:19:24	2319.13*	72.12	1
11:20:24	2322.43*	72.12	1
11:21:24	2328.66*	72.12	1
11:22:24	2333.57*	72.12	1
11:23:24	2337.71*	72.12	1
11:24:24	2339.52*	70.69	1
11:25:24 3000	2342.88*	70.69	1
11:26:24	2356.09*	70.69	1
11:27:24	2363.31*	70.69	1
11:28:24	2368.29*	70.69	1
11:29:24	2374.15*	70.69	1
11:30:24	2381.43*	70.69	1
11:31:24	2386.64*	70.69	1
11:32:24	2393.33*	70.69	1
11:33:24	2398.94*	70.69	1
11:34:24	2403.03	69.28*	1
11:35:24	2407.6*	69.28	1
11:36:24	2414.04*	69.28	1
11:37:24	2415.75*	69.28	1
11:38:24	2418.28*	69.28	1

TIME		PRESSURE	TEMPERATURE	GAUGE
11:39:24		2421.64*	69.28	1
11:40:24		2426.28*	69.28	1
11:41:24		2431.16*	69.28	1
11:42:24		2438.74*	69.28	1
11:43:24		2439.27*	69.28	1
11:44:24		2442.37*	69.28	1
11:45:24		2443.35*	68.33	1
11:46:24		2455.62*	68.33	1
11:47:24		2462.85*	68.33	1
11:48:24		2466.56*	68.33	1
11:49:24		2469.09*	68.33	1
11:50:24		2471.07*	68.33	1
11:51:24		2474.89*	68.33	1
11:52:24		2475.77*	68.33	1
11:53:24		2476.51*	68.33	1
11:54:24		2479.08*	68.33	1
11:55:24		2480.58*	67.34	1
11:56:24		2481.82*	67.34	1
11:57:24		2482.4*	67.34	1
11:58:24		2482.62*	67.34	1
11:59:24		2484.04*	67.34	1
12:00:24		2483.32*	67.34	1
12:01:24		2483.71*	67.34	1
12:02:24		2485.91*	67.34	1
12:03:24		2487.09*	67.34	1
12:04:24		2489.08*	67.34	1
12:05:24	500	2485.84*	66.06	1
12:06:24		2492.86*	66.06	1
12:07:24		2493.96*	66.06	1
12:08:24		2503.39*	66.06	1
12:09:24		2492.37*	66.06	1
12:10:24		2489.64*	66.06	1
12:11:24		2487.78*	66.06	1
12:12:24		2486.32*	66.06	1
12:13:24		2485.66*	66.06	1
12:14:24		2483.77*	66.06	1
12:15:24		2482.21*	65.22	1
12:16:24		2480.92*	65.22	1
12:17:24		2479.7*	65.22	1
12:18:24		2480.01*	65.22	1
12:19:24		2479.76*	65.22	1
12:20:24		2479.06*	65.22	1
12:21:24		2478.44*	65.22	1
12:22:24		2477.26*	65.22	1
12:23:24		2476.49*	65.22	1
12:24:24		2475.73*	65.22	1
12:25:24	600	2474.3*	64.64	1
12:26:24		2475.99*	64.64	1
12:27:24		2478.83*	64.64	1
12:28:24		2478.64*	64.64	1

TIME	PRESSURE	TEMPERATURE	GAUGE
12:29:24	2474.54*	64.64	1
12:30:24	2467.84*	64.64	1
12:31:24	2467.78*	64.64	1
12:32:24	2468.5*	64.64	1
12:33:24	2466.84*	64.64	1
12:34:24	2457.73*	64.64	1
12:35:24	2459.83	66.83*	1
12:36:24	2462.5*	66.83	1
12:37:24	2458.93*	66.83	1
12:38:24	2455.48*	66.83	1
12:39:24	2451.45*	66.83	1
12:40:24	2447.35*	66.83	1
12:41:24	2438.72*	66.83	1
12:42:24	2431.54*	66.83	1
12:43:24	2425.96*	66.83	1
12:44:24	2417.32*	66.83	1
12:45:24	2414.17*	66.83	1
12:46:24	2412.61*	64.68	1
12:47:24	2412.12*	64.68	1
12:48:24	2409.8*	64.68	1
12:49:24	2406.38*	64.68	1
12:50:24	2402.01*	64.68	1
12:51:24	2399.3*	64.68	1
12:52:24	2395.88*	64.68	1
12:53:24	2392.9*	64.68	1
12:54:24	2389.15*	64.68	1
12:55:24	2386.49*	64.68	1
12:56:24	2377.26*	63.34	1
12:57:24	2369.7*	63.34	1
12:58:24	2366.19*	63.34	1
12:59:24	2362.93*	63.34	1
13:00:24	2359.38*	63.34	1
13:01:24	2354.14*	63.34	1
13:02:24	2352.37*	63.34	1
13:03:24	2349.16*	63.34	1
13:04:24	2347.29*	63.34	1
13:05:24	2347.09*	63.34	1
13:06:24	2316.21*	63.1	1

DAVIS SERVICES INC. HOBBS,

(505) 393-0119 STEP RATE TEST NEW MEXICO

FIELD DATA SHEET

Type Test: ☐ Initial ☐ Annual ☒ Special Test Date: May 30, 1981 | Lease No. or Serial No.

Company: Getty Oil | Allottee

Field | Reservoir: Seven Rivers | Location | Unit

Completion Date | Total Depth: 3828 | Plug Back TD: 3827 | Elevation | Farm or Lease Name: Skelly Unit

Csg. Size | Wt. | d | Set At | Perforations: From 3270 To 3819 | Well No.: # 40

Tbg. Size: 2 3/8 | Wt. | d | Set At: 2191 | Perforations: From | To | Sec. | Twp - Blk | Rge - Sur

Type Completion (Describe) | Packer Set At: 2205 | County or Parish: Eddy

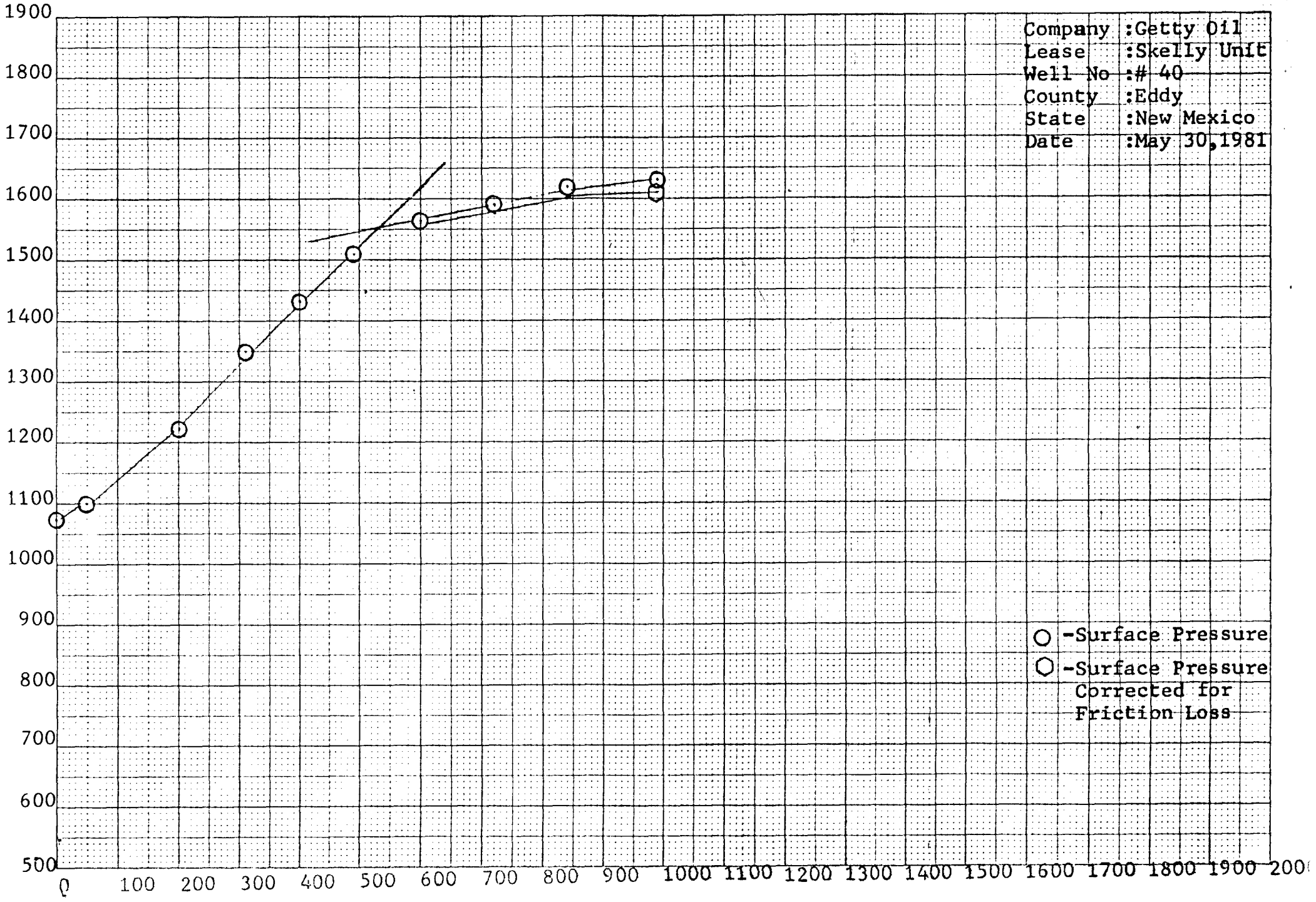
Producing Thru | Reservoir Temp. F: @ | Mean Ground Temp. F | Baro. Press. - P | State: New Mexico

CO. REPRESENTATIVE

DATE Time of Reading	ELAP. TIME Hrs.	well information Rate BPD	Surf. Psig	B.H.P.	surf. psi.cor friction	remarks (Include liquid production data: Type - API Gravity - Amount)
9:15			1075			
		50	1075			
9:30		200	1100			
9:45	15	200	1225			
10:00	30	310	1350			
10:15	45	400	1435			
10:30	1	490	1510	1503	7	
10:45	15	600	1565	1556	9	
11:00	30	720	1590	1576	14	
11:15	45	840	1620	1602	18	
11:30	2	990	1630	1607	23	

REMARKS

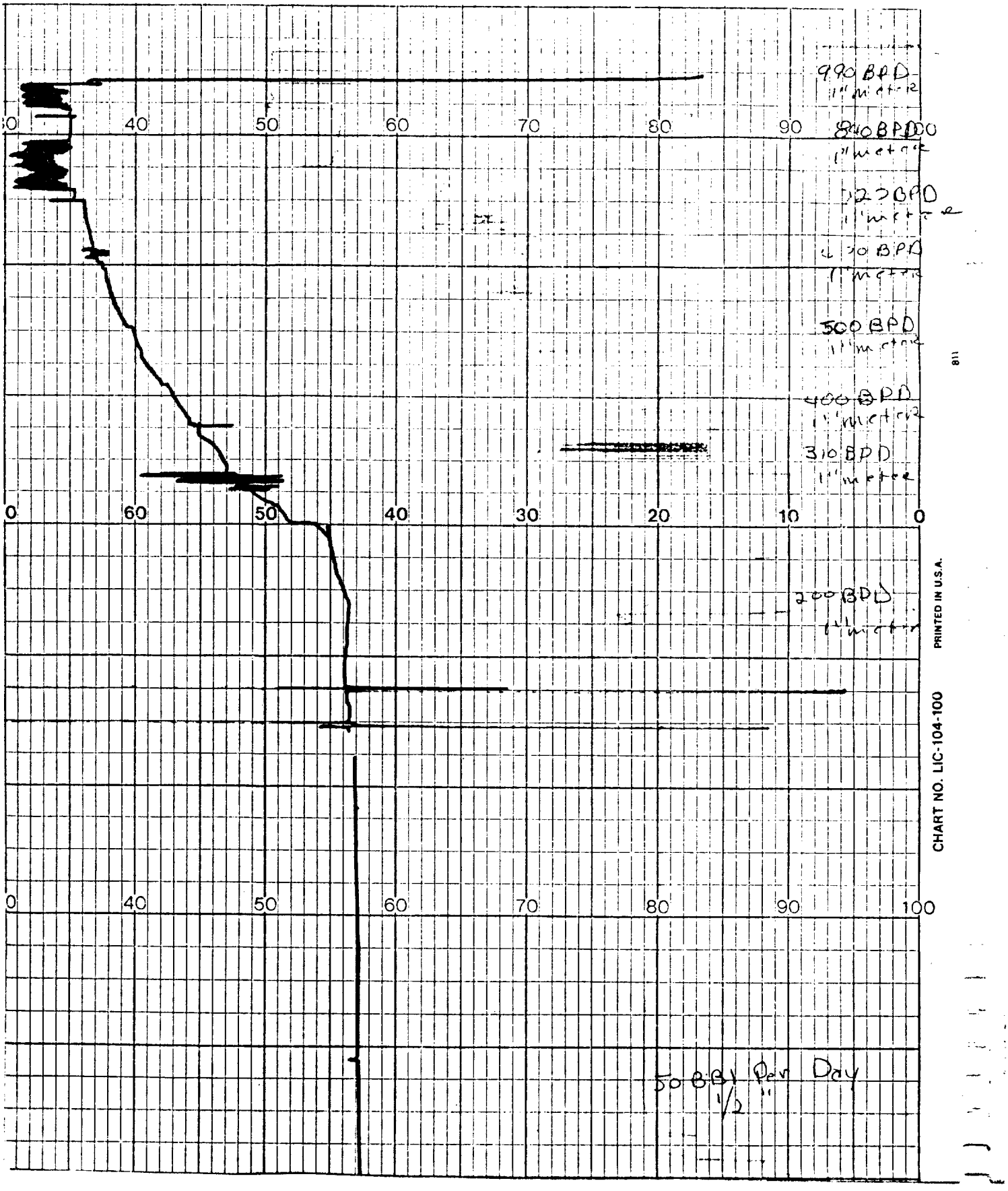
Parting Point 1552



Company : Getty Oil
Lease : Skelly Unit
Well No : # 40
County : Eddy
Date : May 30,1981

Davis Services

PHONE 505 393-0119 P. O. BOX 2033
HOBBS, NEW MEXICO 88240



DAVIS SERVICES INC. HOBBS,

(505) 393-0119 STEP RATE TEST NEW MEXICO

FIELD DATA SHEET

Type Test: ☐ Initial ☐ Annual ☒ Special — Test Date: June 4, 1981 — Lease No. or Serial No.:

Company: Getty Oil — Allottee:

Field: Skelly Unit — Reservoir: Seven Rivers — Location: — Unit:

Completion Date: — Total Depth: — Plug Back TD: — Elevation: — Form or Lease Name: Skelly Unit

Csg. Size: — Wt.: — d: — Set At: — Perforations: From: — To: — Well No.: # 52

Tbg. Size: 2 3/8" Plasticoated(ID 1.995 — Wt.: — d: — Set At: — Perforations: From: 2284 — To: 2611 — Sec. — Twp – Blk — Rge –

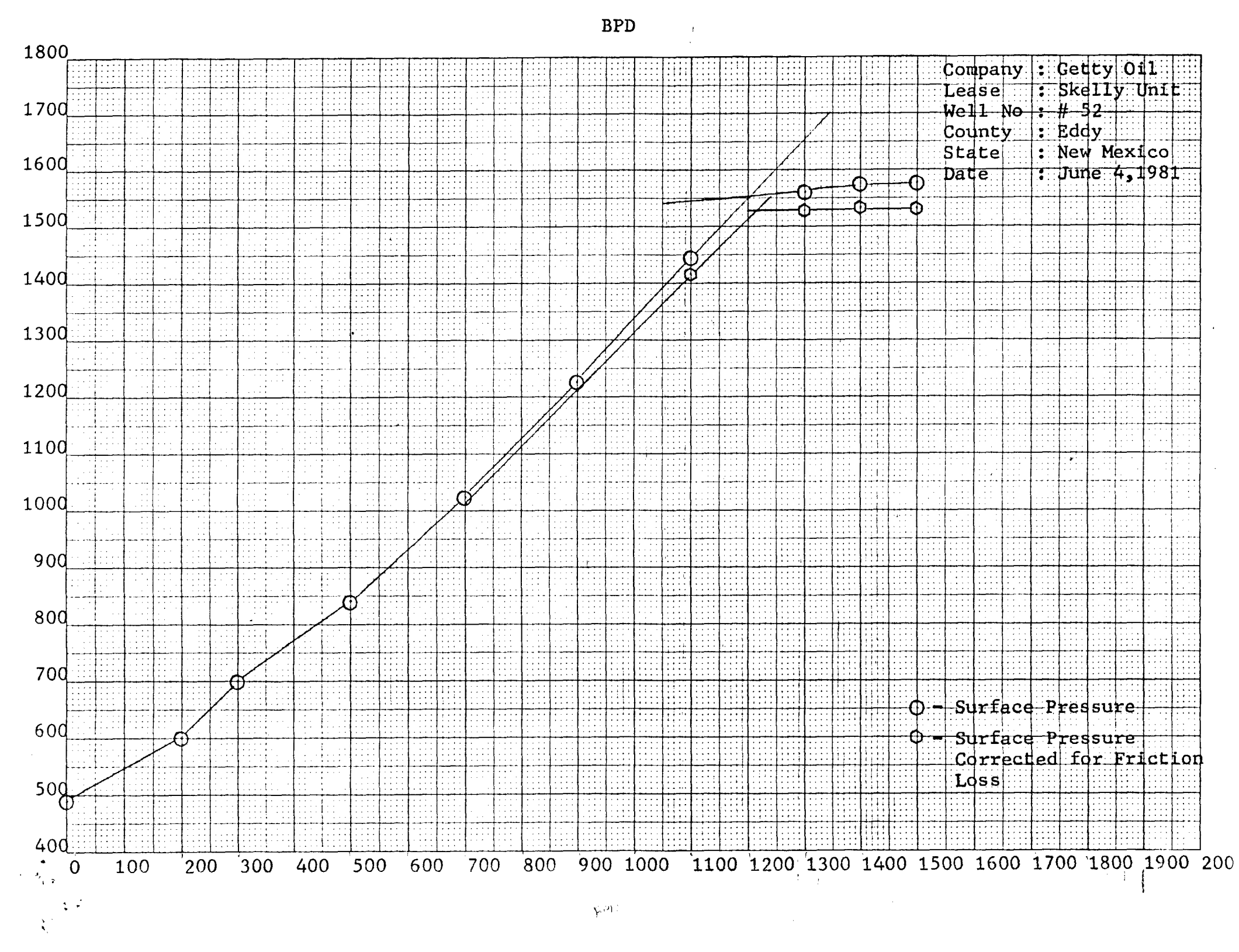
Type Completion (Describe): — Packer Set At: 2198 — County or Parish: Eddy

Producing Thru: — Reservoir Temp. F: — Mean Ground Temp. F: — Baro. Press. – P_a: — State: New Mexico

CO. REPRESENTATIVE

DATE Time of Reading	ELAP. TIME Hrs.	well imformation Rate BPD	Surf. Psig	B.H.P.	surf. psi.cor friction	remarks (Include liquid production data: Type – API Gravity – Amount)
3:30			490			
3:45	st	200	490			1" T.M.
4:00	15	200	600			Step # 1
		300	600			
4:15	30	300	700			Step # 2
		500	700			
4:30	45	500	849			Step # 3
		700	849			
4:45	1	700	1030		10.0	Step # 4
		900	1030			
5:00	15	900	1225		17.5	Step # 5
		1100	1225			
5:15	30	1100	1445		26.3	Step # 6
		1300	1445			
5:30	45	1300	1562		33.0	Step # 7
		1400	1562		38.5	Step # 8
5:45	2	1400	1575			
						REMARKS
		1500	1575			
6:00	15	1500	1576		44.0	Step # 9 - End of Test

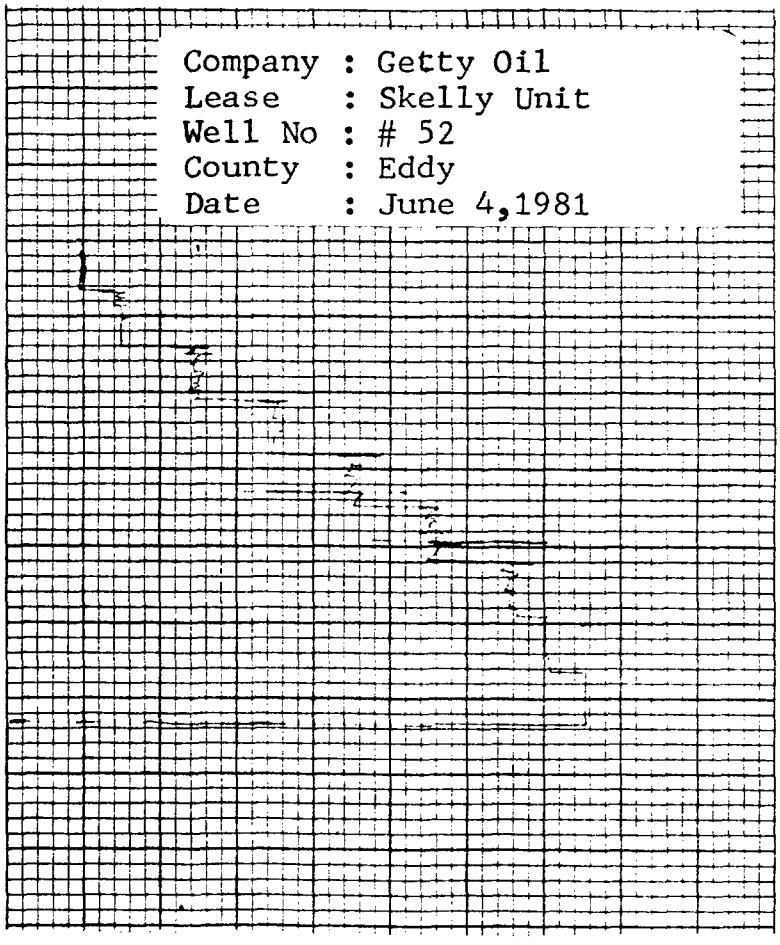
PARTING POINT @ 1550 PSI


BPD
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
200
Company : Getty Oil
Lease : Skelly Unit
Well No : # 52
County : Eddy
State : New Mexico
Date : June 4,1981
- Surface Pressure
- Surface Pressure Corrected for Friction Loss

Davis Services

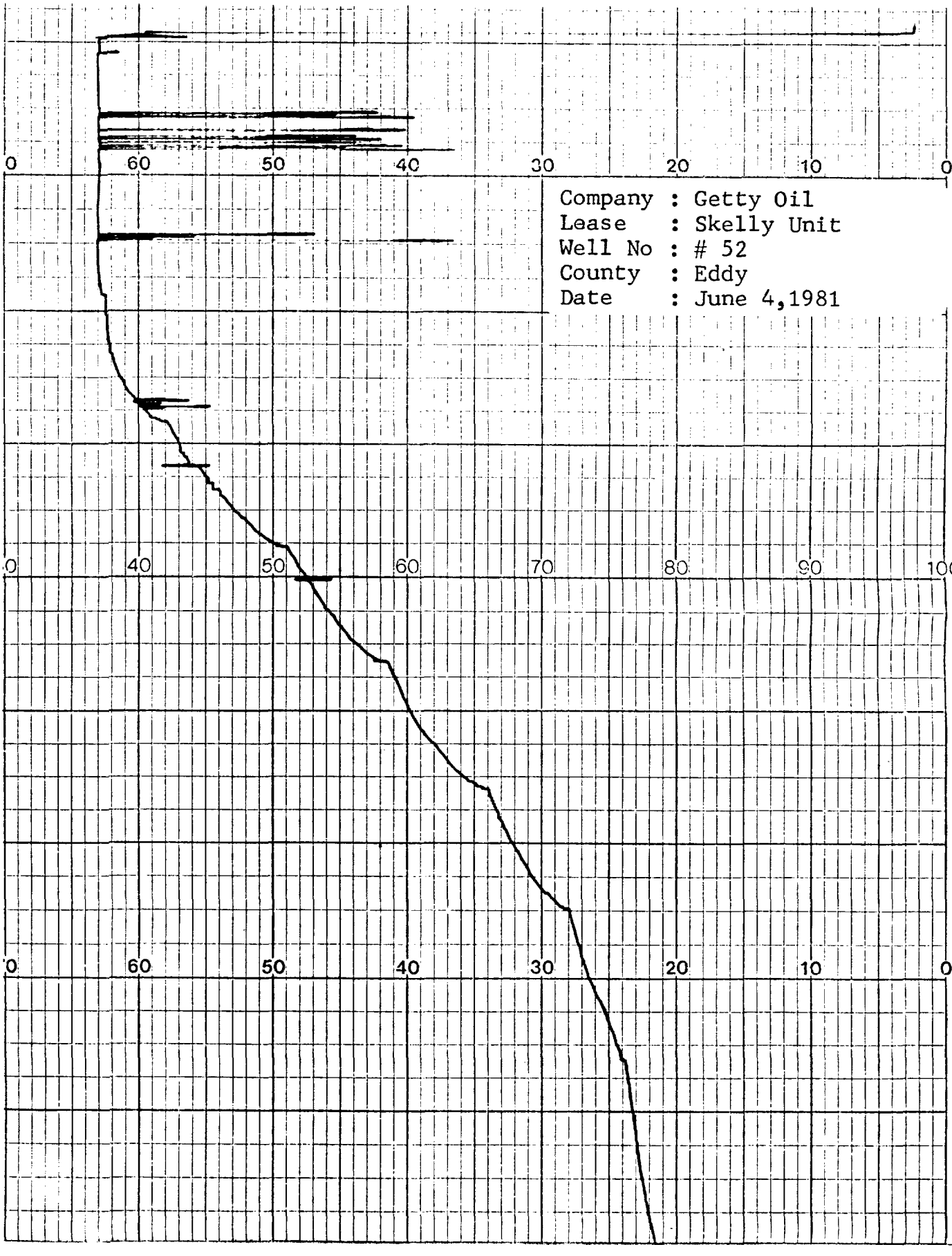
PHONE 505 393-0119 P. O. BOX 2033

HOBBS, NEW MEXICO 88240



Davis Services

PHONE 505 393-0119 P. O. BOX 2033
HOBBS, NEW MEXICO 88240



B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914 — Hobbs, New Mexico 88240

Company Texaco Producing Inc — Test Date 6-24-85 — Unit

Lease Skelly Unit — Well # 52

Total Depth 3870' — Plug Back TD — Elevation — Sec — Twp-Blk — Rge

Csg size 7 Wt 20# d Set at — Perfs: From — To

Tbg size 2 3/8 Wt pc d Set at — Perfs: From — To — County Lea — State NM

Producing thru — Packer set at — Co. Rep Glen Carter

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
10:45	Shut In			530			2447' Midway of perfs
10:50	start	50		530			1" TM turbine meter
10:55		50		546			
11:00		50		555			
11:05	15	50	.52	562			
11:10		150		583			
11:15		150		595			
11:20	30	150	1.5	605			
11:25		300		631			
11:30		300		644			
11:35	45	300	3.1	655			
11:40		450		730			
11:45		450		745			
11:50	1hr	450	4.6	765			
11:55		600		833			
12:00		600		864			
12:05	15	600	6.2	887			
12:10		750		964			
12:15		750		1002			
12:20	30	750	7.8	1022			
12:25		900		1145			Change to 1½TM turbine meter
12:30		900		1183			
12:35	45	900	9.3	1225			
12:40		1050		1320			
12:45		1050		1358			
12:50	2hr	1050	10.9	1402			
12:55		1200		1495			
1:00		1200		1528			
1:05	15	1200	12.4	1557			

B & D WELL TESTERS

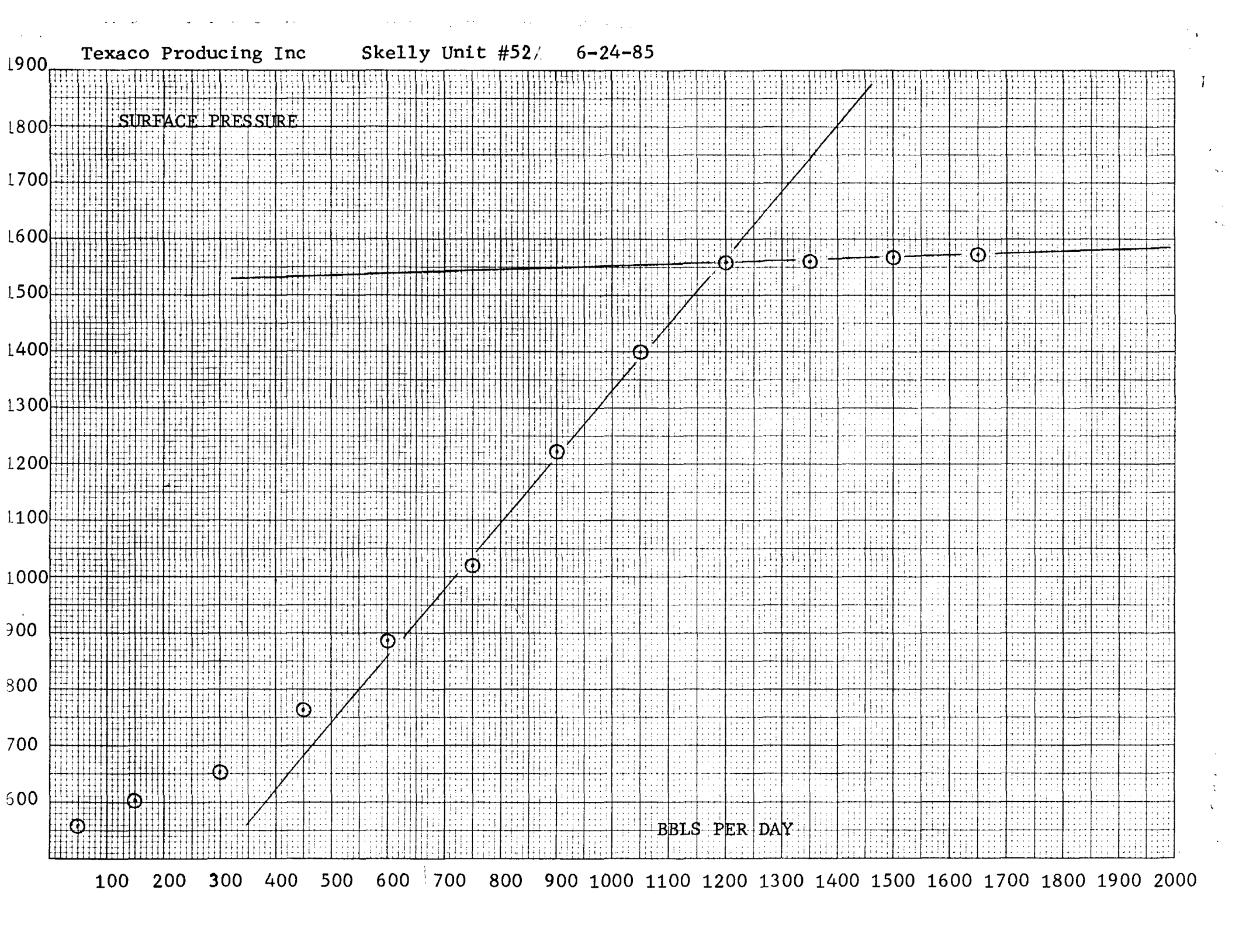
Step Rate Test

Phone (505) 397-3914 — Hobbs, New Mexico 88240

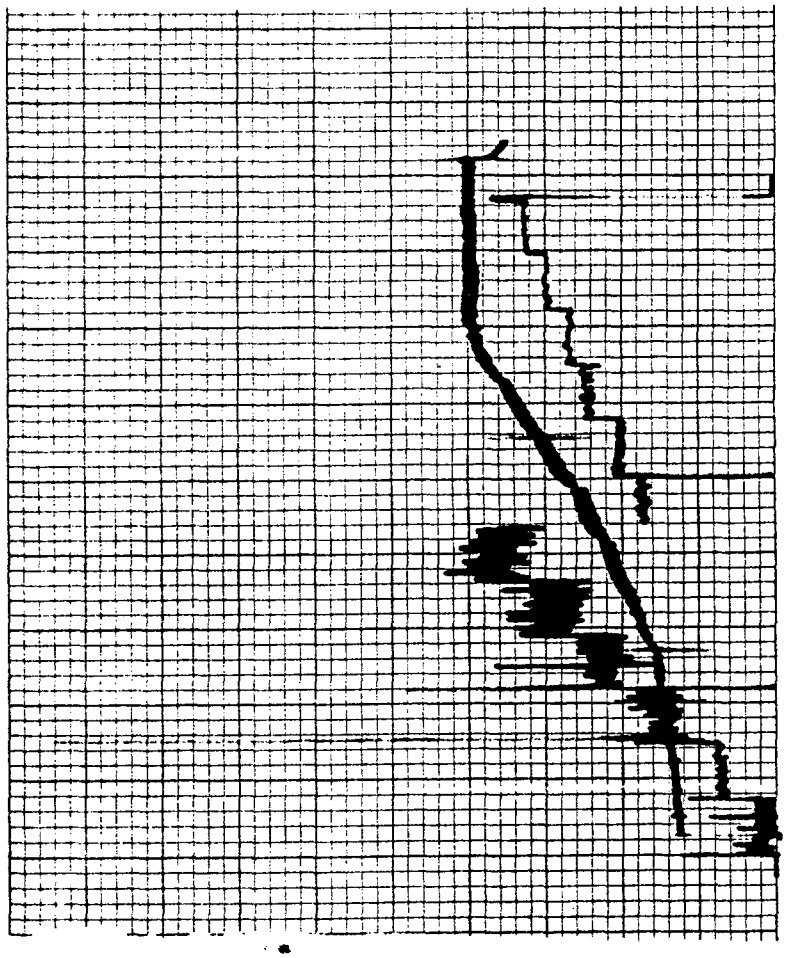
Company: Texaco Producing Inc — Test Date: 6-24-85 — Unit:
Lease: Skelly Unit
Total Depth: 3870' — Plug Back TD: — Elevation: — Well #: 52
Csg size: 7 — Wt: 20# — d: — Set at: — Perfs: From: — To: — Sec: — Twp-Blk: — Rge:
Tbg size: 2 3/8 — Wt: pc — d: — Set at: — Perfs: From: — To: — County: Lea — State: NM
Producing thru: — Packer set at: — Co. Rep: Glen Carter

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
1:10		1350		1570			
1:15		1350		1572			
1:20	30	1350	14.0	1558			
1:25		1500		1570			
1:30		1500		1572			
1:35	45	1500	15.6	1569			
1:40		1650		1575			
1:45		1650		1580			
1:50	3hr	1650	17.1	1575			
ISIP				1540			
1:51	5minute fall off			1485			
1:52				1460			
1:53				1440			
1:54				1430			
1:55				1410			

B-6615


Texaco Producing Inc
Skelly Unit #52
6-24-85
SURFACE PRESSURE
BBLS PER DAY
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000

TEXACO PRODUCING, INC.
SKELLY UNIT #52
6-24-85



DAVIS SERVICES INC. HOBBS,

(505) 393-0119 STEP RATE TEST NEW MEXICO

FIELD DATA SHEET

Type Test: ☐ Initial ☐ Annual ☒ Special Test Date: may 30,1981 Lease No. or Serial No.:

Company: Getty Oil Co. Allottee: 1

Field: Reservoir: Seven Rivers Location: Unit: P

Completion Date: Total Depth: Plug Back TD: Elevation: Farm or Lease Name: Skelly Unit

Csg. Size: 5½ Wt.: d: Set At: Perforations: From: 2349 To: 2379 Well No.: # 58

Tbg. Size: 2 1/16 Wt.: d: Set At: 2246 Perforations: From: To: Sec.: 22 Twp - Blk: 17s Rge - : 31e

Type Completion (Describe): Packer Set At: 2246 County or Parish: Eddy

Producing Thru: Reservoir Temp. F: Mean Ground Temp. F: Baro. Press. - P: State: New Mexico

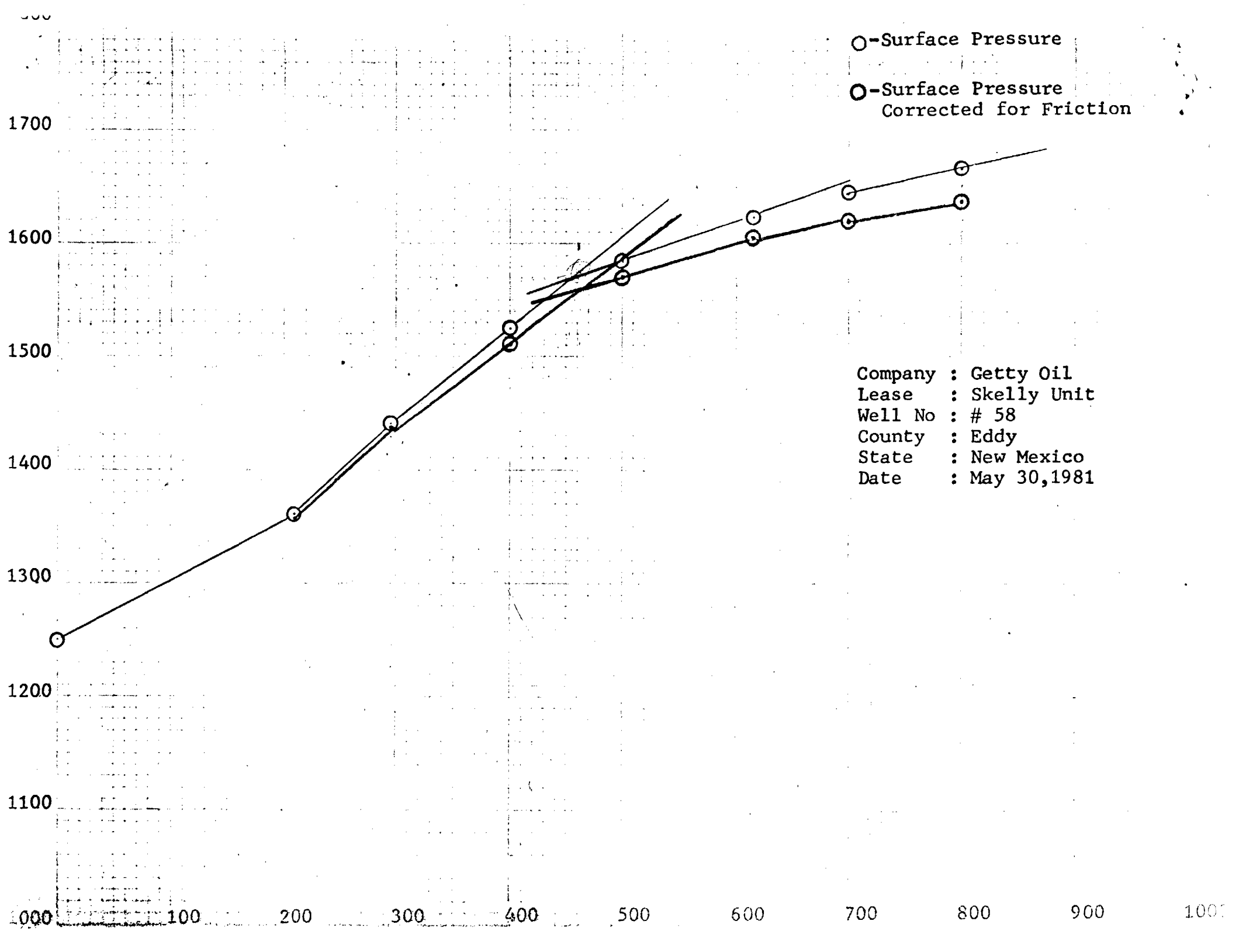
CO. REPRESENTATIVE

DATE Time of Reading	ELAP. TIME Hrs.	well information Rate BPD	Surf. Psig	B.H.P.	surf. psi.cor friction	remarks (Include liquid production data: Type - API Gravity - Amount)
12:15			1260			
12:25	st		1250			
12:40	15	210	1360		2.6	
12:55	30	295	1440		5	
1:10	45	400	1525		11.6	
1:25	1	500	1587		14.5	
1:40	15	615	1625		18.0	
1:55	30	700	1645		22.4	
2:10	45	800	1665		28	

REMARKS

1. Using Getty's Injection System.

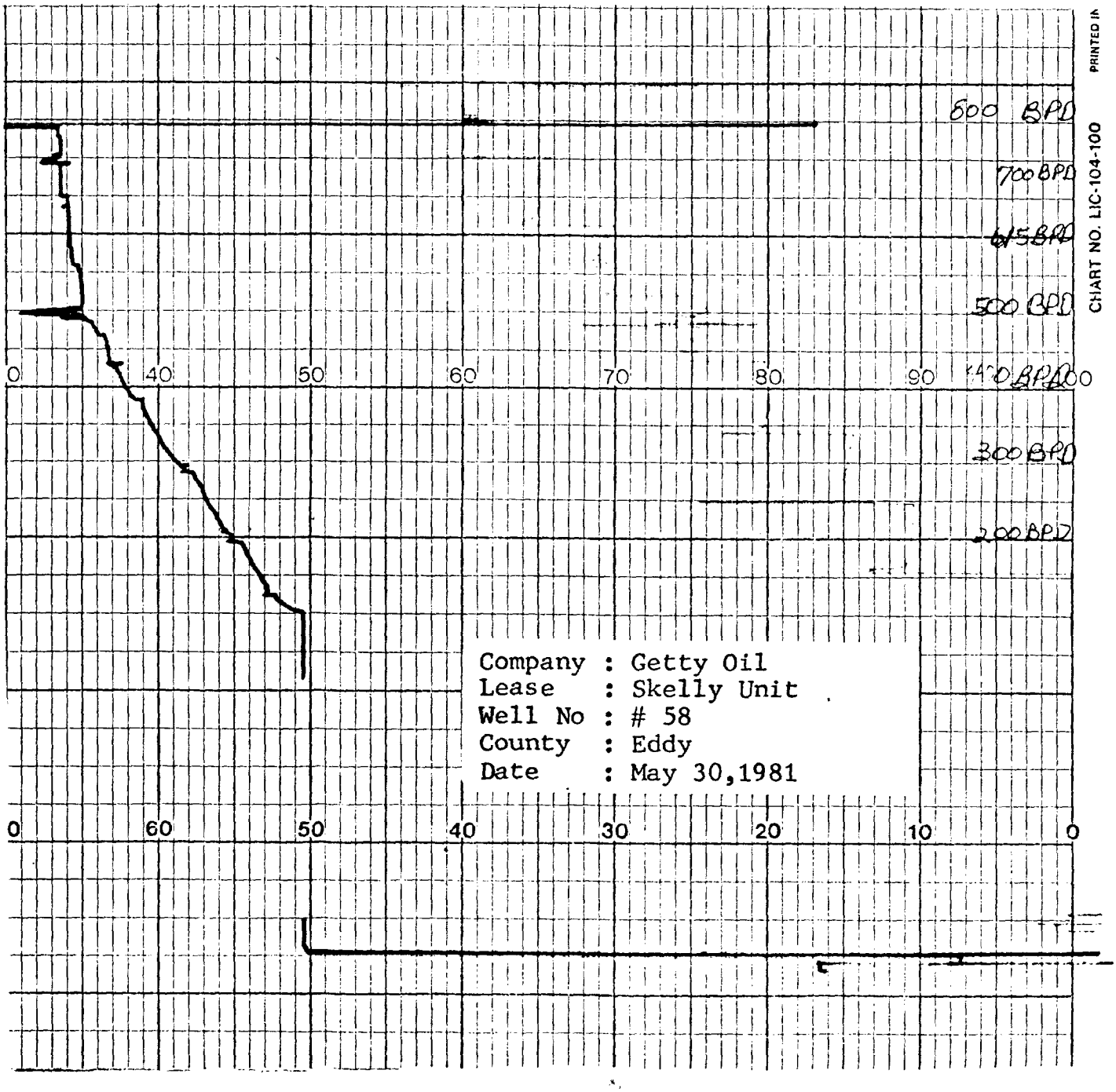
2. Parting Point @ 1575 PSI


-Surface Pressure
-Surface Pressure
Corrected for Friction
Company : Getty Oil
Lease : Skelly Unit
Well No : # 58
County : Eddy
State : New Mexico
Date : May 30,1981
1700
1600
1500
1400
1300
1200
1100
000
100
200
300
400
500
600
700
800
900
100

Davis Services

PHONE 505 393-0119 P. O. BOX 2033

HOBBS, NEW MEXICO 88240



STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

6103

GARREY CARRUTHERS
GOVERNOR

May 22, 1987

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Texaco, Inc.
P.O. Box 728
Hobbs, NM 88240

Attention: J.A. Head

RE: Injection Pressure Increase
Skelly Unit
Eddy County, New Mexico

Dear Sir:

Reference is made to your request dated March 25, 1987, to increase the surface injection pressure on eight wells in the Skelly Unit Waterflood Project. This request is based on step rate tests conducted on these wells during February and March, 1987. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells.

WELL & LOCATION	MAXIMUM INJECTION SURFACE PRESSURE
Skelly Unit No. 3 660 FNL & 660 FWL (Unit D) Section 22	1575 PSIG
Skelly Unit No. 30 650 FSL & 2087 FWL (Unit N) Section 15	1200 PSIG
Skelly Unit No. 32 660 FSL & 660 FEL (Unit P) Section 15	1330 PSIG
Skelly Unit No. 42 660 FNL & 1880 FEL (Unit B) Section 22	1395 PSIG

Skelly Unit No. 46 1980 FNL & 560 FEL (Unit H) Section 22	1495 PSIG
Skelly Unit No. 73 2130 FSL & 660 FWL (Unit L) Section 23	1590 PSIG
Skelly Unit No. 89 660 FNL 7 1980 FEL (Unit B) Section 28	1380 PSIG
Skelly Unit No. 96 1980 FNL & 1980 FWL (Unit F) Section 27	1315 PSIG

All in Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico.

The Division Director may rescind this injection pressure increase it is becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

William J. LeMay

xc: OCD - Artesia
Case File - 5138 & 6103
D. McDonald
D. Catanach

Texaco USA

P. O. Box 730
Hobbs, New Mexico 88240
505 397 3571

APR 2 8 1987

March 25, 1987

New Mexico Oil Conservation Division
Mr. Mike Williams
P. O. Drawer DD
Artesia, New Mexico 88210

RECEIVED BY
MAR 27 1987
O. C. D.
ARTESIA, OFFICE

Re: Skelly Unit

Mr. Williams:

Eight step rate tests were recently run on the Skelly Unit. The 7-Rivers zone was tested in Wells No. 3, 30, 32, 42, 46, 73, 89, and 96. Prior to conducting the tests, the wells were shut-in for at least one week to allow the pressure to decline. Copies of the step rate tests are attached.

Skelly Unit No. 52, 56, and 83 are dual injection wells which are presently shut-in. We are presently evaluating alternate means of dual injection and/or possible abandonment of one zone in these three wells.

Skelly Unit No. 114 is a dually completed well which produces from the 7-Rivers and injects into the Grayburg-Jackson. A tubing leak in the Grayburg-Jackson string is anticipated, and both strings are currently shut-in. The well is presently being reviewed for repair.

If you have any questions, please contact Glenn Carter at 397-3572.

Sincerely,

J. A. Head
Hobbs Area Superintendent

KGC/clp

Attachments

cc: File

B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914 — Hobbs, New Mexico 88240

Company Texaco Inc. — Test Date 3-13-87 — Unit

Lease Skelly Unit

Total Depth 3772 — Plug Back TD 3772 — Elevation — Well # 3

Csg size 7" Wt d Set at — Perfs: From 2224 To 2342 — Sec Twp-Blk Rge

Tbg size 2 3/8 Wt d Set at — Perfs: From To — County Eddy State New Mexico

Producing thru — Packer set at 2113 — Co. Rep Glen Carter

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
11:55	SI			680			
12:00	Start	200		680			
12:05		200		720			
12:10		200		745			
12:15	:15	200		760			
12:20		400		810			
12:25		400		850			
12:30	:30	400		870			
12:35		600		950			
12:40		600		990			
12:45	:45	600		1010			
12:50		800		1095			
12:55		800		1120			
1:00	1:00	800		1150			
1:05		1000		1235			
1:10		1000		1290			
1:15	1:15	1000		1320			
1:20		1200		1420			
1:25		1200		1465			
1:30	1:30	1200		1480			
1:35		1400		1570			
1:40		1400		1600			
1:45	1:45	1400		1610			
1:50		1600		1660			Start Pumping
1:55		1600		1680			
2:00	2:00	1600		1690			
2:05		1800		1705			
2:10		1800		1740			
2:15	2:15	1800		1750			
See page #2							

B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914 Hobbs, New Mexico 88240

Company Texaco, Inc. Test Date 3-13-87 | Unit

Total Depth 3772 Plug Back TD 3772 Elevation | Lease Skelly Unit

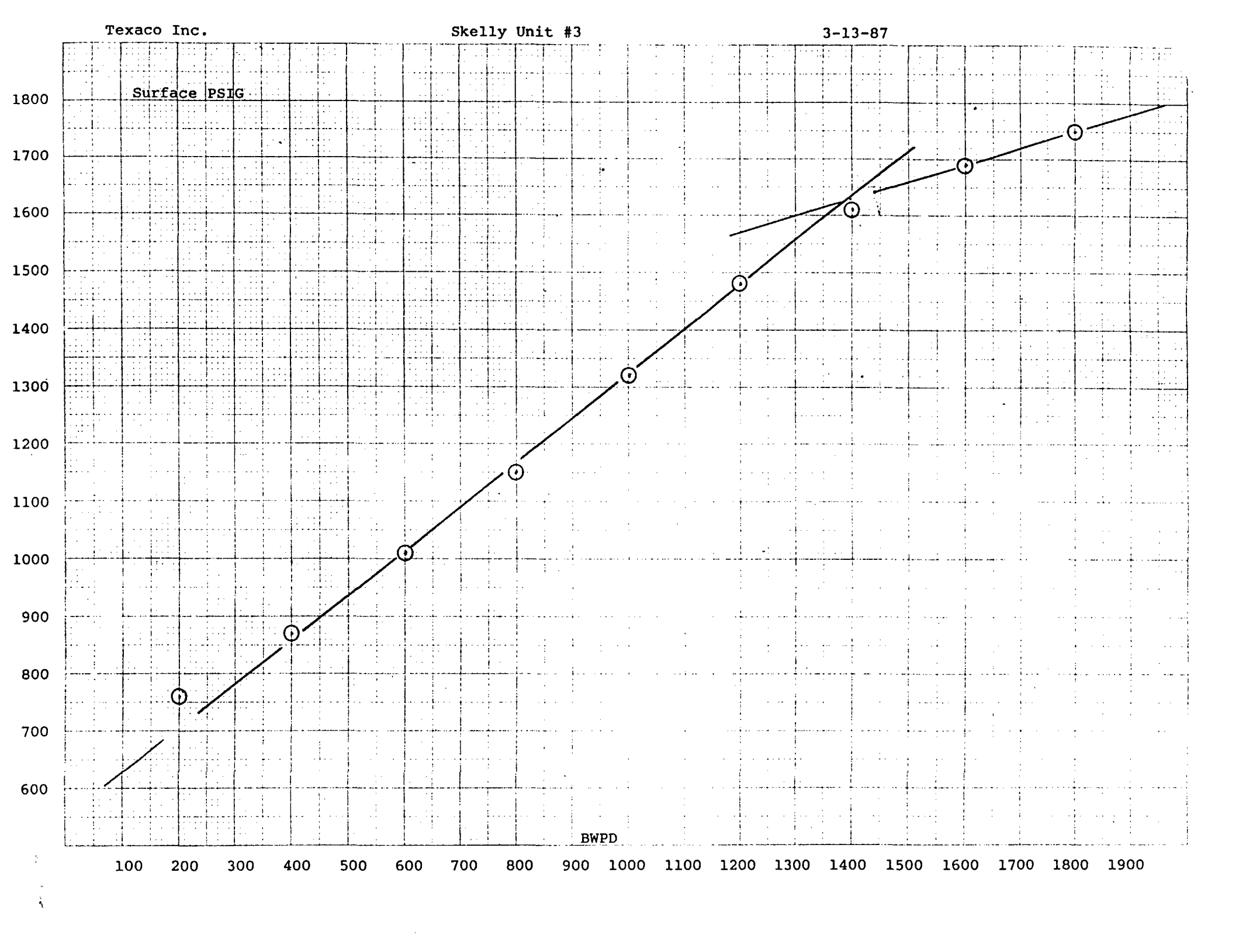
Csg size 7" Wt d Set at Perfs: From 2224 To 2342 | Well # 3

Tbg size 2 3/8 Wt d Set at Perfs: From To | Sec Twp-Blk Rge

Producing thru Packer set at 2113 | County Eddy State New Mexico

Co. Rep Glen Carter

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
2:16	ISIP			1610			
2:17	5 minute fall		off	1600			
2:18				1580			
2:19				1570			
2:20				1560			


Texaco Inc.
Skelly Unit #3
3-13-87
Surface PSIG
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
BWPD
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900

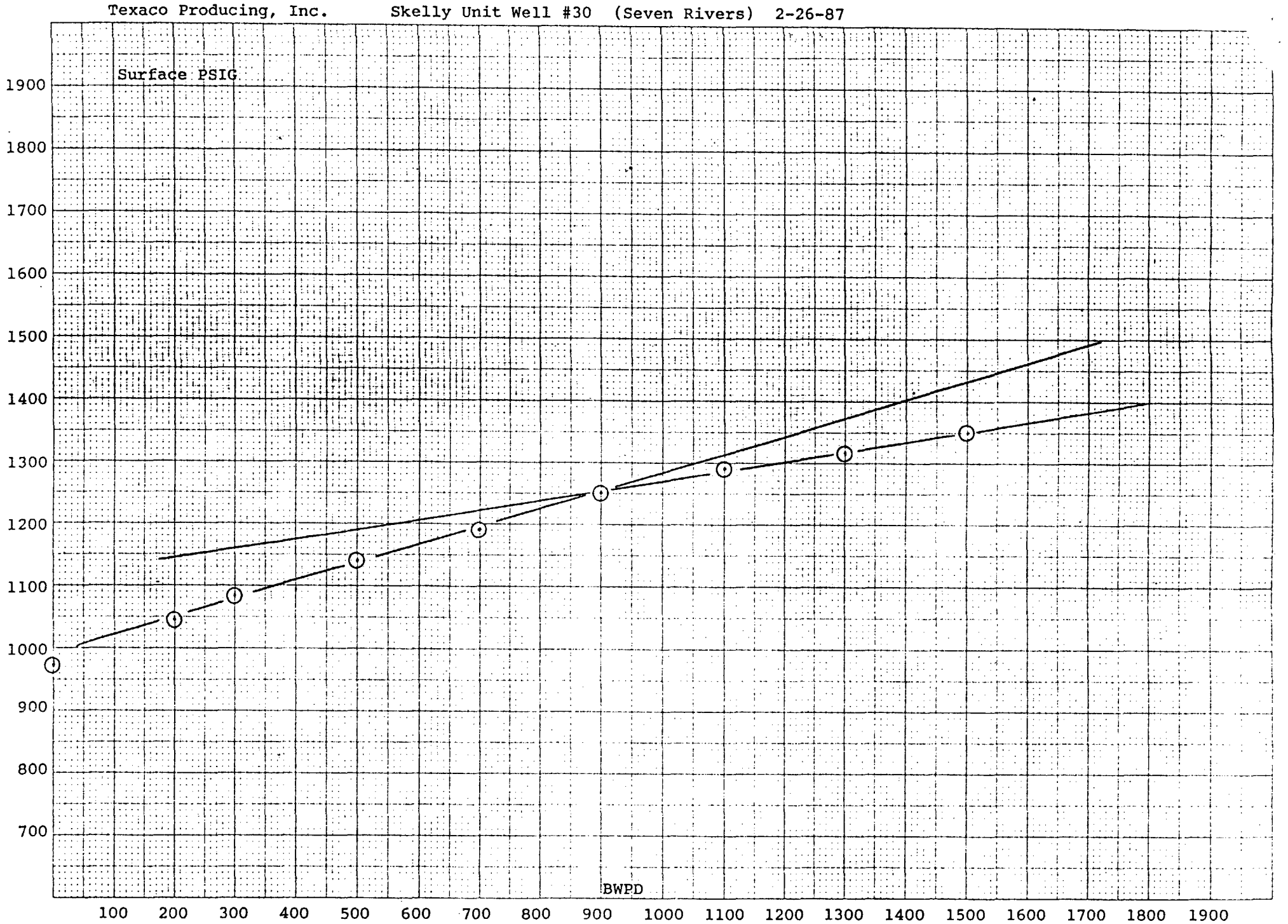
B & D WELL TESTERS
Step Rate Test

Phone (505) 397-3914 — Hobbs, New Mexico 88240

Company	Texaco Producing, Inc.	Test Date	2-26-87
Total Depth	3900'	Plug Back TD	3879
Csg size	5½" Wt 14# d	Set at	Perfs: From 2258 To 2403
Tbg size	2 3/8 Wt PC d	Set at	Perfs: From To
Producing thru		Packer set at	2166'
Elevation	3870' KB		

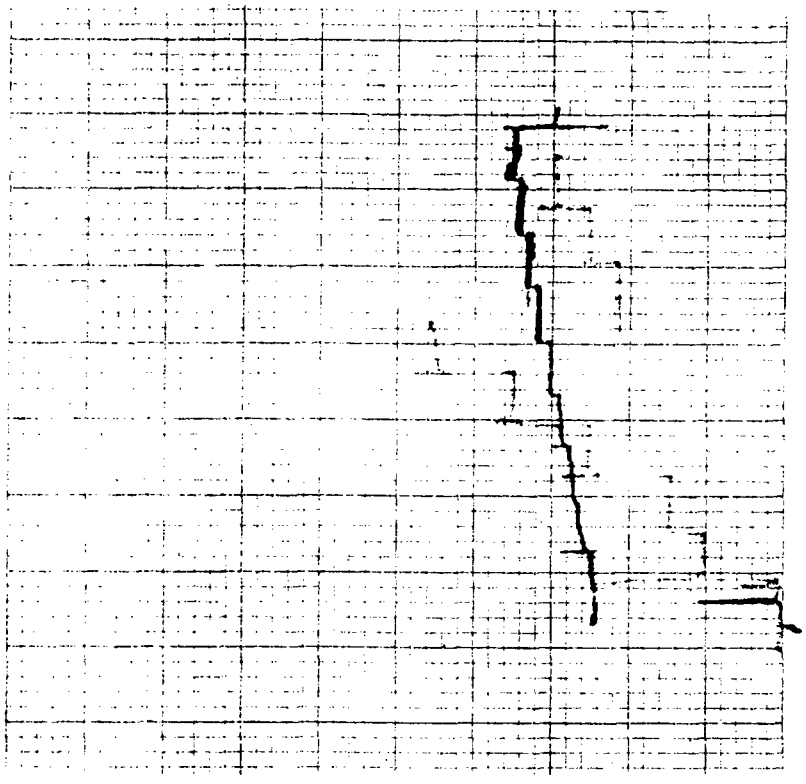
Unit
Lease Skelly Unit
Well # 30
Sec 15 Twp-Blk 17S Rge 31E
County Eddy State NM
Co. Rep Glen Carter

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
10:00	SI			975			
10:10	Start	200		975			
10:15		200		1020			
10:20		200		1040			
10:25	:15	200	2.1	1045			
10:30		300		1065			
10:35		300		1080			
10:40	:30	300	3.1	1085			
10:45		500		1125			
10:50		500		1135			
10:55	:45	500	5.2	1140			
11:00		700		1180			
11:05		700		1185			
11:10	1:00	700	7.3	1190			
11:15		900		1235			
11:20		900		1250			
11:25	1:15	900	9.3	1250			
11:30		1100		1285			1½ TM
11:35		1100		1290			
11:40	1:30	1100	11.4	1290			
11:45		1300		1320			
11:50		1300		1320			
11:55	1:45	1300	13.5	1315			
12:00		1500		1345			
12:05		1500		1350			
12:10	2:00	1500	15.6	1350			
	End Test						
12:11	ISIP			1255			
12:12	5-minute fall off			1195			
12:13				1180			
12:14				1175			
12:15				1170			


Texaco Producing, Inc. Skelly Unit Well #30 (Seven Rivers) 2-26-87
Surface PSIG
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
BWPD
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900

B & D WELL TESTERS, INC.
P.O. BOX 5683
HOBBS, NEW MEXICO
505 397-3914

Texaco Producing, Inc.
Skelly Unit Well #30 (Seven Rivers)
2-26-87



B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914 — Hobbs, New Mexico 88240

Company Texaco Producing Inc. — Test Date 2-26-87

Total Depth 3808' — Plug Back TD 3803' — Elevation 3880' GL

Csg size 5½ Wt 15.5# d — Set at — Perfs: From 2321 To 2446

Tbg size 2 3/8 Wt PC d — Set at — Perfs: From — To

Producing thru — Packer set at 2243'

Unit

Lease Skelly Unit

Well # 32

Sec 15 Twp-Blk 17S Rge 31E

County Eddy State NM

Co. Rep Glen Carter

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
12:45	SI			480			
12:50	Start	200		480			
12:55		200		560			
1:00		200		610			
1:05	:15	200	2.1	640			
1:10		300		705			
1:15		300		750			
1:20	:30	300	3.1	775			
1:25		400		830			
1:30		400		880			
1:35	:45	400	4.2	920			
1:40		500		985			
1:45		500		1030			
1:50	1:00	500	5.2	1065			
1:55		600		1115			
2:00		600		1160			
2:05	1:15	600	6.3	1200			
2:10		700		1255			
2:15		700		1290			
2:20	1:30	700	7.3	1315			
2:25		800		1360			
2:30		800		1385			
2:35	1:45	800	8.4	1405			
2:40		900		1435			
2:45		900		1450			
2:50	2:00	900	9.4	1455			
2:55		1000		1470			
3:00		1000		1480			
3:05	2:15	1000	10.5	1485			
3:06	End Test ISIP			1425			
3:07	5-minute fall off			1420			
	See Page #2						

B & D WELL TESTERS
Step Rate Test

Phone (505) 397-3914

Hobbs, New Mexico 88240

Company Texaco Producing, Inc. Test Date 2-26-87

Total Depth 3808' Plug Back TD 3803' Elevation 3880' GL

Csg size 5½ Wt 15.5# d Set at Perfs: From 2321 To 2446

Tbg size 2 3/8 Wt PC d Set at Perfs: From To

Producing thru Packer set at 2243

Unit

Lease Skelly Unit

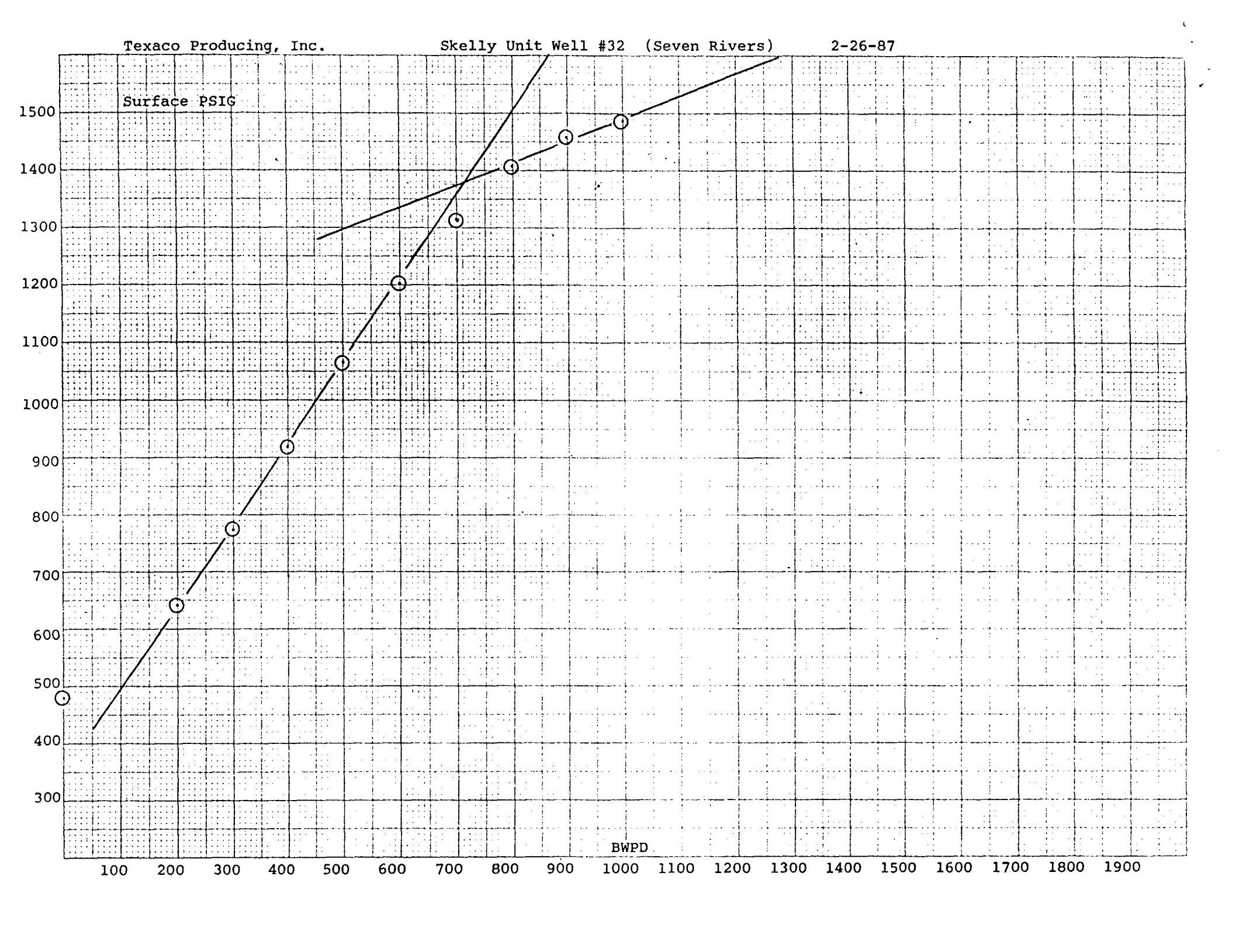
Well # 32

Sec 15 Twp-Blk 17S Rge 31E

County Eddy State NM

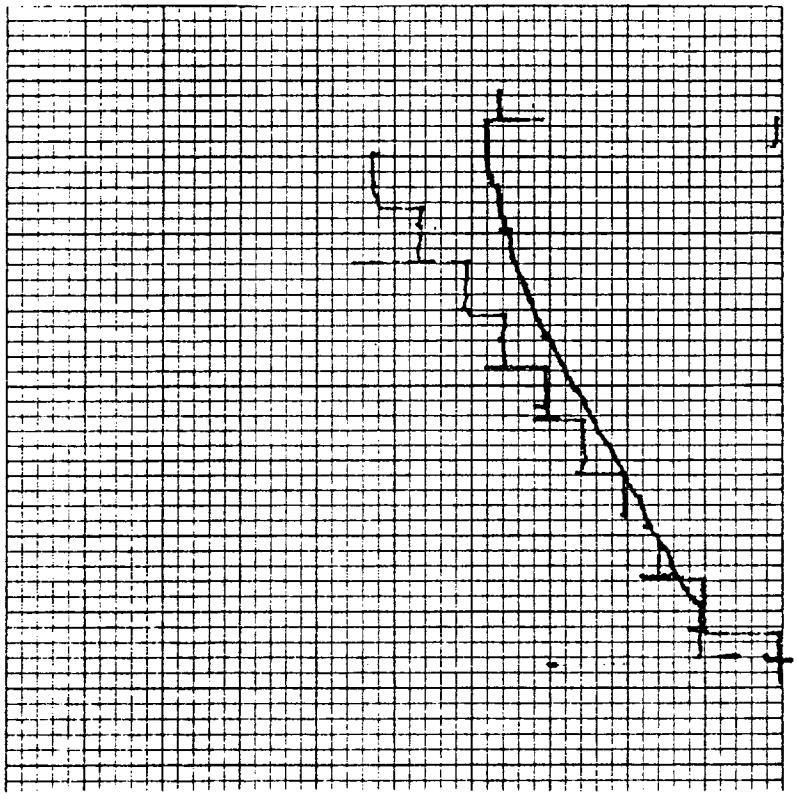
Co. Rep Glen Carter

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
3:08				1420			
3:09				1415			
3:10				1410			


Texaco Producing, Inc.
Skelly Unit Well #32 (Seven Rivers)
2-26-87
Surface PSIG
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
BWPD
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900

B & D WELL TESTERS, INC.
P.O. BOX 5683
HOBBS, NEW MEXICO
505 397-3914

Texaco Producing, Inc.
Skelly Unit Well #32 (Seven Rivers)
2-26-87



B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914 — Hobbs, New Mexico 88240

Company Texaco Inc. — Test Date 3-13-87 — Unit

Lease Skelly Unit

Total Depth — Plug Back TD 3787 — Elevation — Well # 42

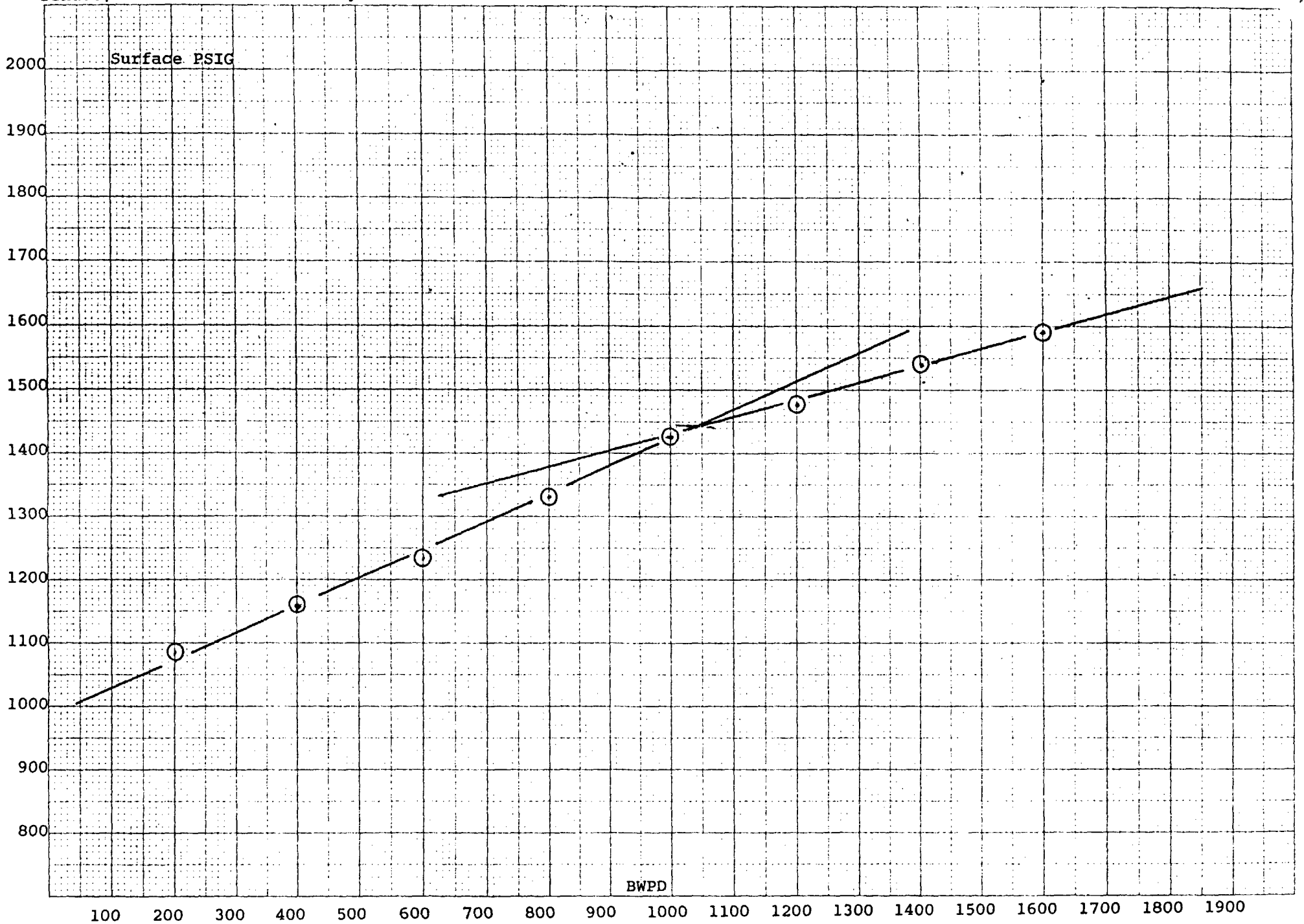
Csg size — Wt — d — Set at — Perfs: From 2283 To 2400 — Sec — Twp-Blk — Rge

Tbg size 1.66 — Wt — d — Set at — Perfs: From — To — County Eddy — State New Mexico

Producing thru — Packer set at 2197 — Co. Rep Glen Carter

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
3:00	SI			1025			
3:05	Start	200		1025			
3:10		200		1065			
3:15		200		1080			
3:20	:15	200		1085			
3:25		400		1125			
3:30		400		1150			
3:35	:30	400		1155			
3:40		600		1215			
3:45		600		1230			
3:50	:45	600		1235			
3:55		800		1280			
4:00		800		1310			
4:05	1:00	800		1330			
4:10		1000		1390			
4:15		1000		1410			
4:20	1:15	1000		1425			
4:25		1200		1460			
4:30		1200		1470			
4:35	1:30	1200		1475			
4:40		1400		1525			
4:45		1400		1535			
4:50	1:45	1400		1540			
4:55		1600		1565			
5:00		1600		1580			
5:05	2:00	1600		1590			
5:06	ISIP			1390			
5:07	5 minute fall		off	1165			
5:08				1145			
5:09				1120			
5:10				1110			

Texaco, Inc. Skelly Unit (Seven Rivers) #42 3-14-87



B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914 — Hobbs, New Mexico 88240

Company Texaco Producing, Inc. — Test Date 2-27-87 — Unit

Lease Skelly Unit

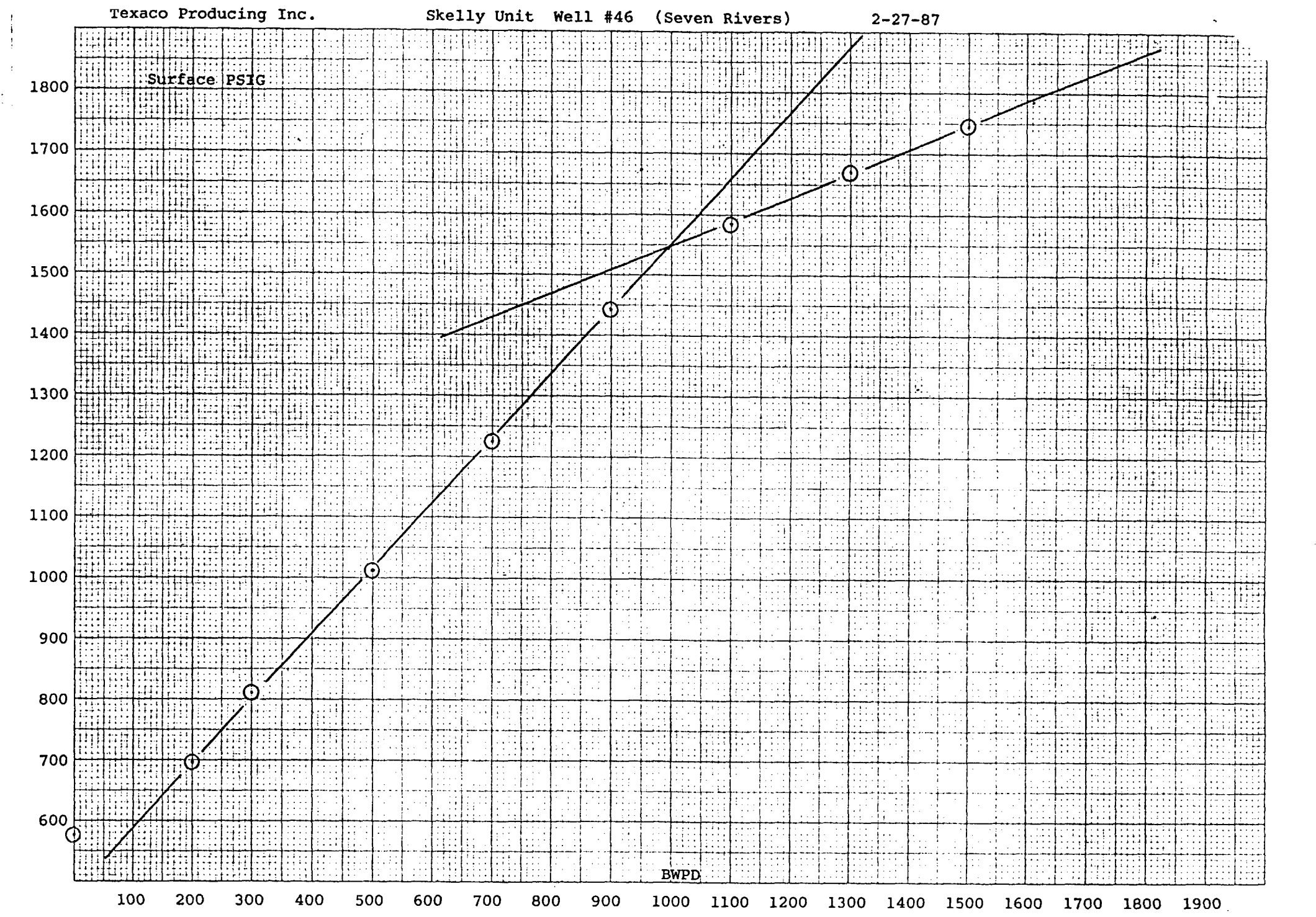
Total Depth 3820' — Plug Back TD — Elevation 3856' GL — Well # 46 (Seven Rivers)

Csg size 4½ Wt 11.6# d — Set at — Perfs: From 2302 To 2431 — Sec 22 Twp-Blk 17S Rge 31E

Tbg size 2 3/8 Wt PC d — Set at — Perfs: From — To — County Eddy State NM

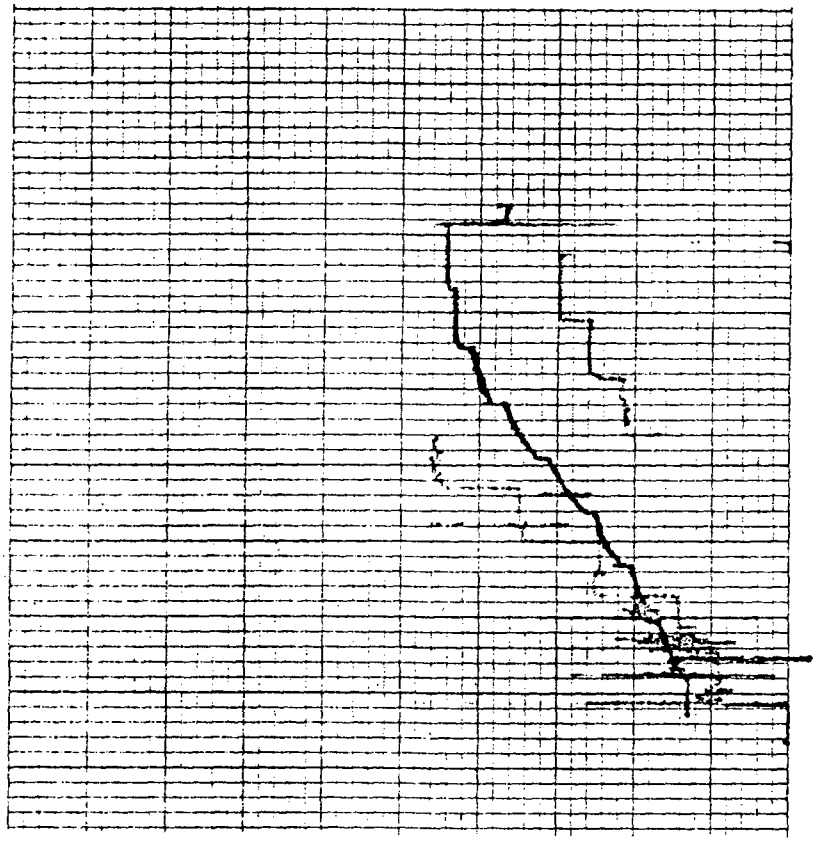
Producing thru — Packer set at 2239' — Co. Rep Glen Carter

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
8:40	SI			575			
8:45	Start	200		575			
8:50		200		645			
8:55		200		670			
9:00	:15	200	2.1	695			
9:05		300		755			
9:10		300		790			
9:15	:30	300	3.1	810			
9:20		500		920			
9:25		500		975			
9:30	:45	500	5.2	1010			
9:35		700		1130			
9:40		700		1185			
9:45	1:00	700	7.3	1225			
9:50		900		1355			
9:55		900		1415			
10:00	1:15	900	9.3	1440			
10:05		1100		1535			1.5" T.M.
10:10		1100		1570			
10:15	1:30	1100	11.4	1585			
10:20		1300		1665			
10:25		1300		1670			
10:30	1:45	1300	13.5	1670			
10:35		1500		1740			
10:40		1500		1745			
10:45	2:00	1500	15.6	1745			
10:46	ISIP	End Test		1455			
10:47	5-minute fall off			1440			
10:48				1435			
10:49				1430			
10:50				1425			


Texaco Producing Inc.
Skelly Unit Well #46 (Seven Rivers)
2-27-87
Surface PSIG
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
BWPD
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900

B & D WELL TESTERS, INC.
P.O. BOX 5683
HOBBS, NEW MEXICO
505 397-3914

Texaco Producing, Inc.
Skelly Unit Well #46 (Seven Rivers)
2-27-87



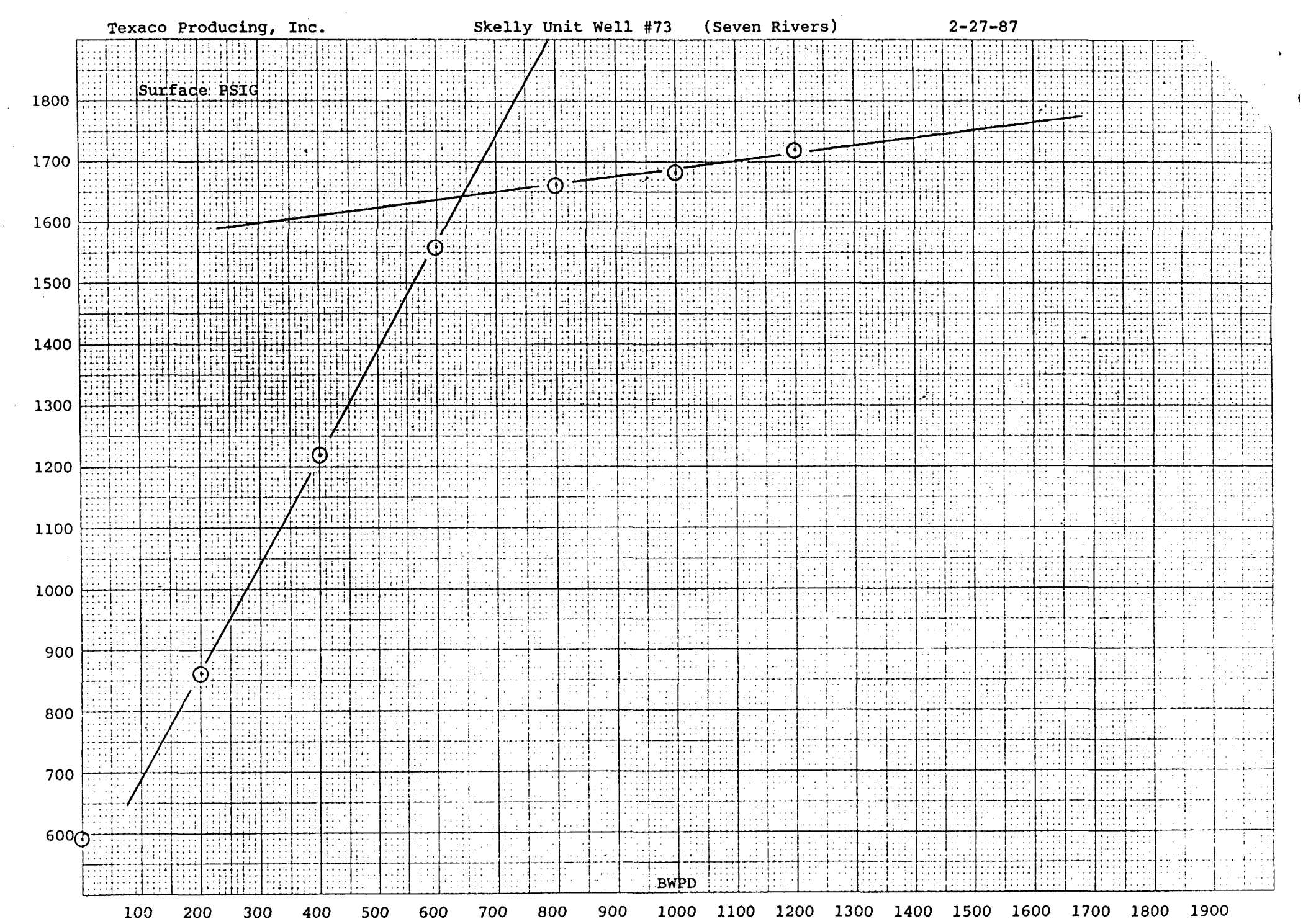
B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914 — Hobbs, New Mexico 88240

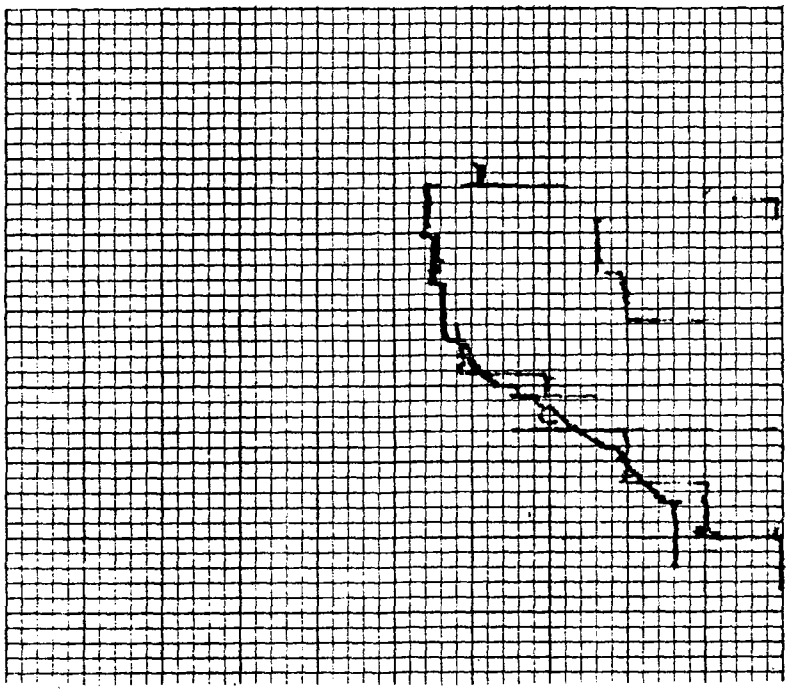
Company	Texaco Producing, Inc.	Test Date 2-27-87	Unit
Total Depth	3834' Plug Back TD	Elevation 3857' GL	Lease Skelly Unit
Csg size 4½	Wt 11.6# d Set at	Perfs: From 2340' To 2466'	Well # 73 (Seven Rivers)
Tbg size 2 3/8	Wt PC d Set at	Perfs: From To	Sec 23 Twp-Blk 17S Rge 31E
Producing thru	Packer set at 2297		County Eddy State NM
			Co. Rep Glen Carter

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
11:25	SI			590			
11:30	Start	200		590			
11:35		200		730			
11:40		200		810			
11:45	:15	200		860			
11:50		400		1055			
11:55		400		1160			
12:00	:30	400		1220			
12:05		600		1440			
12:10		600		1520			
12:15	:45	600		1560			
12:20		800		1640			
12:25		800		1655			
12:30	1:00	800		1655			
12:35		1000		1690			
12:40		1000		1685			
12:45	1:15	1000		1680			
12:50		1200		1725			
12:55		1200		1720			
1:00	1:30	1200		1720			
1:01	ISIP	End Test		1530			
1:02	5-minute fall off			1475			
1:03				1470			
1:04				1465			
1:05				1465			


Texaco Producing, Inc.
Skelly Unit Well #73 (Seven Rivers)
2-27-87
Surface PSIG
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
BWPD
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900

B & D WELL TESTERS, INC.
P.O. BOX 5683
HOBBS, NEW MEXICO
505 397-3914

Texaco Producing, Inc.
Skelly Unit #73 (Seven Rivers)
2-27-87



NO. 5918

B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914 — Hobbs, New Mexico 88240

Company Texaco Inc. — Test Date 3-14-87 — Unit

Total Depth — Plug Back TD 3670 — Elevation — Well # 89

Csg size 7" Wt d Set at — Perfs: From 2264 To 2329 — Sec 22 Twp-Blk 17S Rge 31E

Tbg size 2 3/8 Wt 4.7 d Set at — Perfs: From To — County Eddy State New Mexic

Producing thru — Packer set at 2112 — Co. Rep Glen Carter — Lease Skelly Unit (Seven Rive

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
8:30				720			
8:35	Start	200		720			
8:40		200		770			
8:45		200		785			
8:50	:15	200		795			
8:55		400		850			
9:00		400		880			
9:05	:30	400		900			
9:10		600		960			
9:15		600		990			
9:20	:45	600		1020			
9:25		800		1090			
9:30		800		1120			
9:35	1:00	800		1150			
9:40		1000		1210			
9:45		1000		1245			
9:50	1:15	1000		1280			
9:55		1200		1335			
10:00		1200		1370			
10:05	1:30	1200		1390			
10:10		1400		1420			
10:15		1400		1450			
10:20	1:45	1400		1470			
10:25		1600		1500			
10:30		1600		1510			
10:35	2:00	1600		1520			
10:40		1750		1540			
10:45		1750		1545			
10:50	2:15	1750		1555			
10:51	5 minute fall off			1445			
10:52				1440			
10:53				1435			

See Page #2

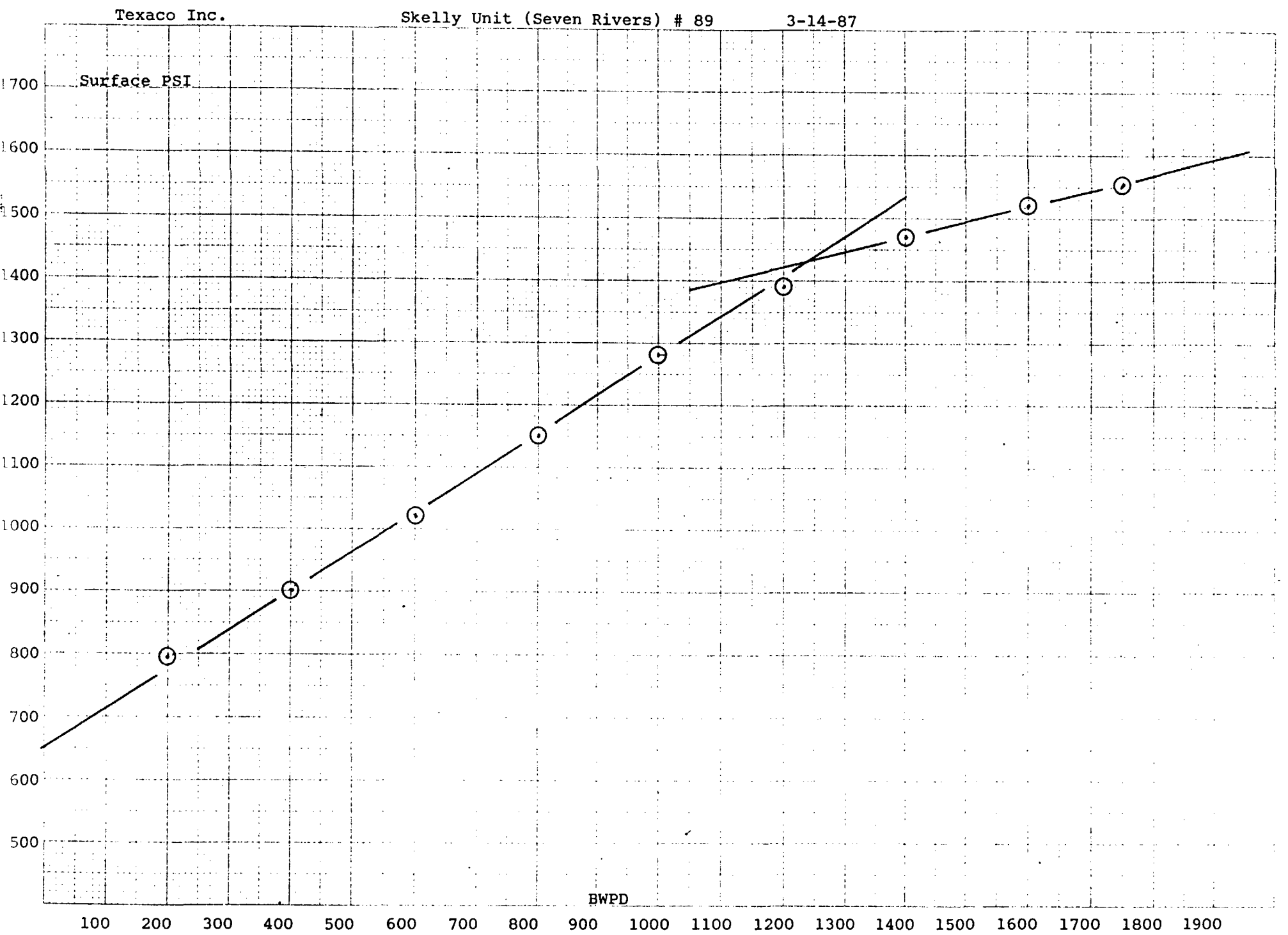
B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914 — Hobbs, New Mexico 88240

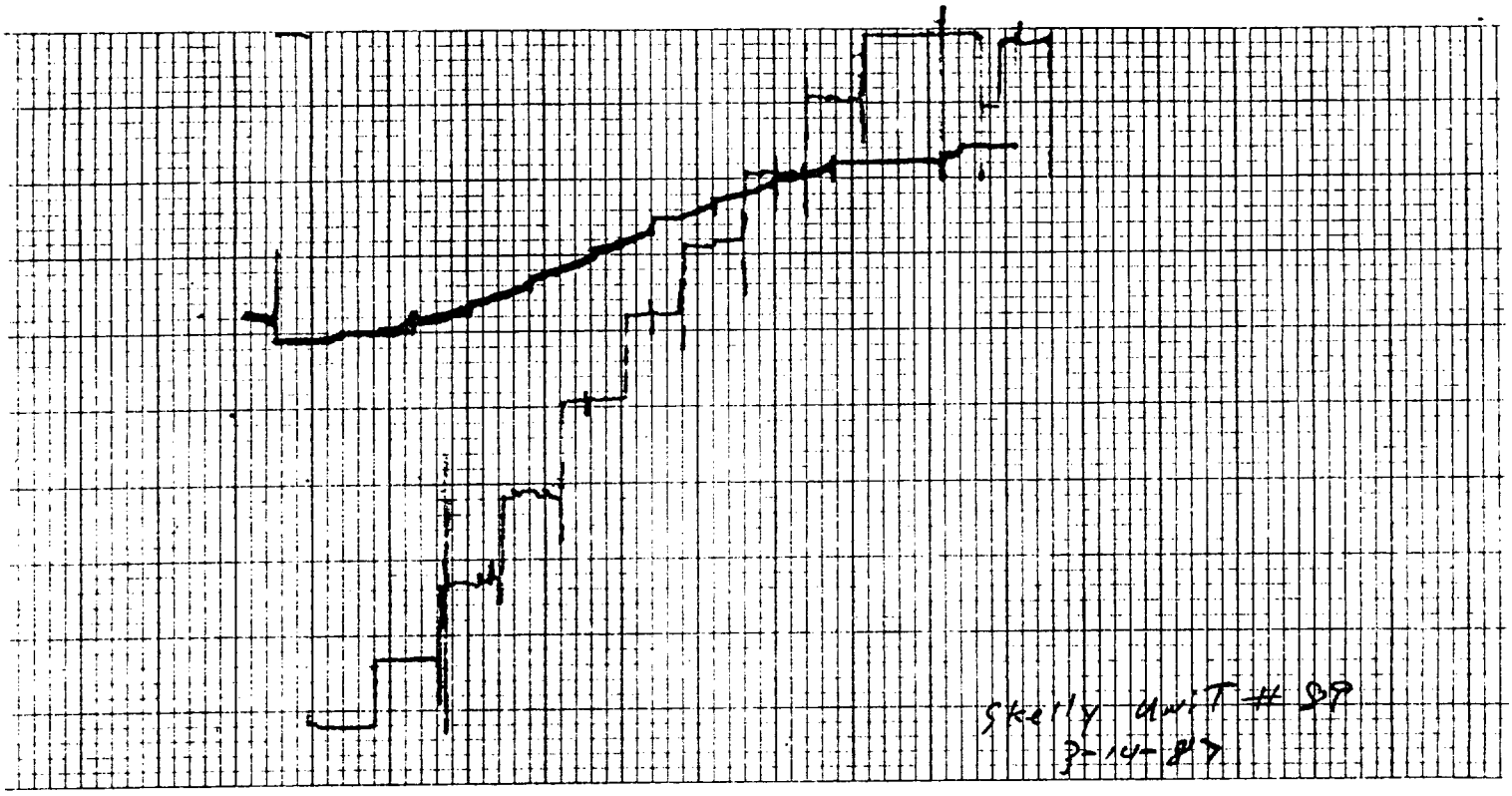
Company Texaco Inc.		Test Date 3-14-87	Unit
Total Depth	Plug Back TD 3670	Elevation	Lease Skelly Unit (Seven Riv
Csg size 7" Wt d	Set at	Perfs: From 2264	To 2329 — Well # 89
Tbg size 2 3/8 Wt 4.7 d	Set at	Perfs: From	To — Sec 22 Twp-Blk 17S Rge 31E
Producing thru	Packer set at 2112		County Eddy State New Mexico
			Co. Rep Glen Carter

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
10:54				1430			
10:55				1425			


Texaco Inc.
Skelly Unit (Seven Rivers) # 89
3-14-87
Surface PSI
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
BWPD
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900

B & D WELL TESTERS, INC.
P.O. Box 5683
HOBBS, NEW MEXICO
505 397-3914

Texaco Inc.
Skelly Unit (Seven Rivers) #89
3-14-87



B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914 — Hobbs, New Mexico 88240

Company Texaco Inc. — Test Date 3-14-87 — Unit

Lease Skelly Unit (Seven River

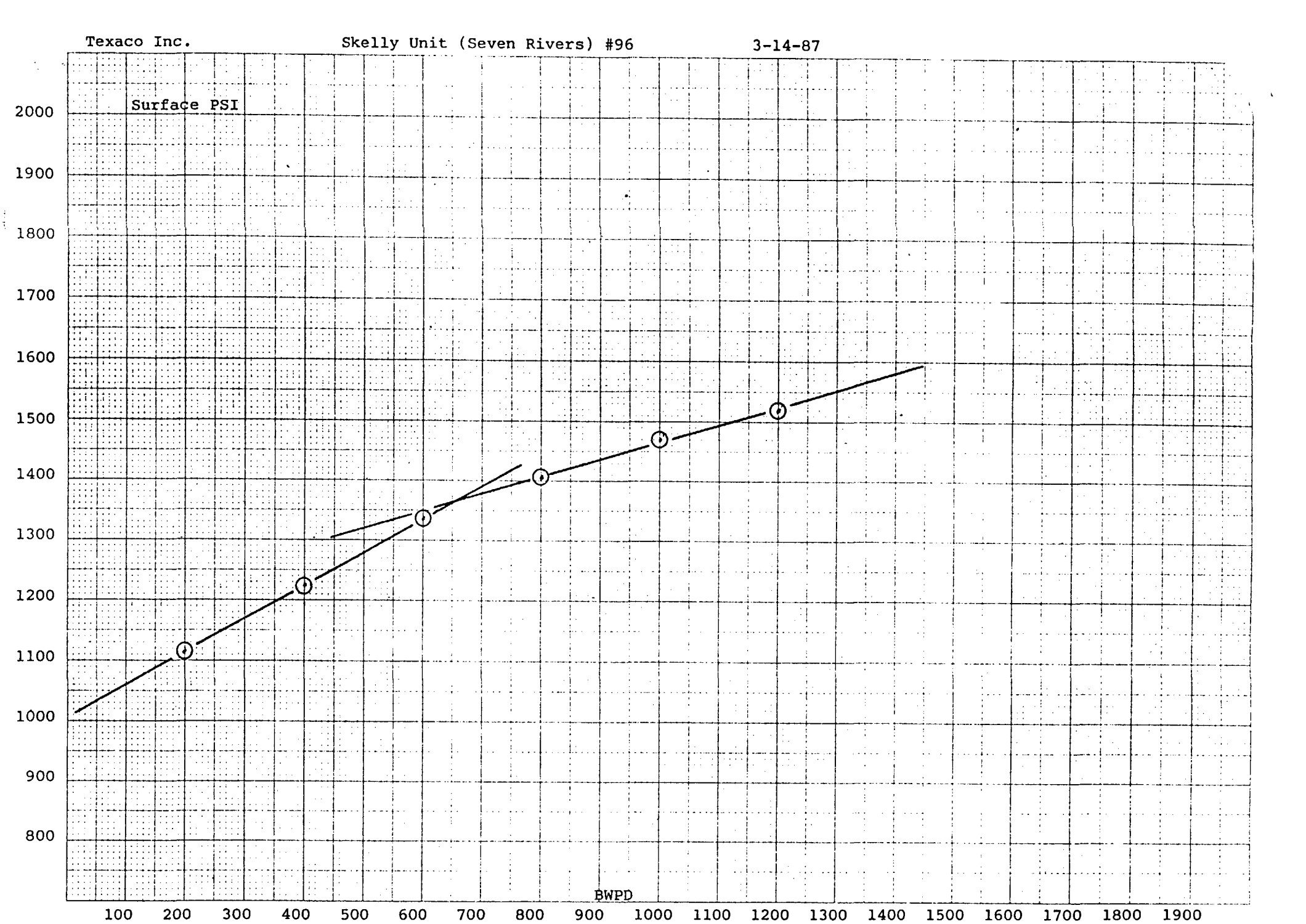
Total Depth — Plug Back TD — Elevation — Well # 96

Csg size — Wt — d — Set at — Perfs: From — To — Sec — Twp-Blk — Rge

Tbg size — Wt — d — Set at — Perfs: From — To — County Eddy — State New Mexico

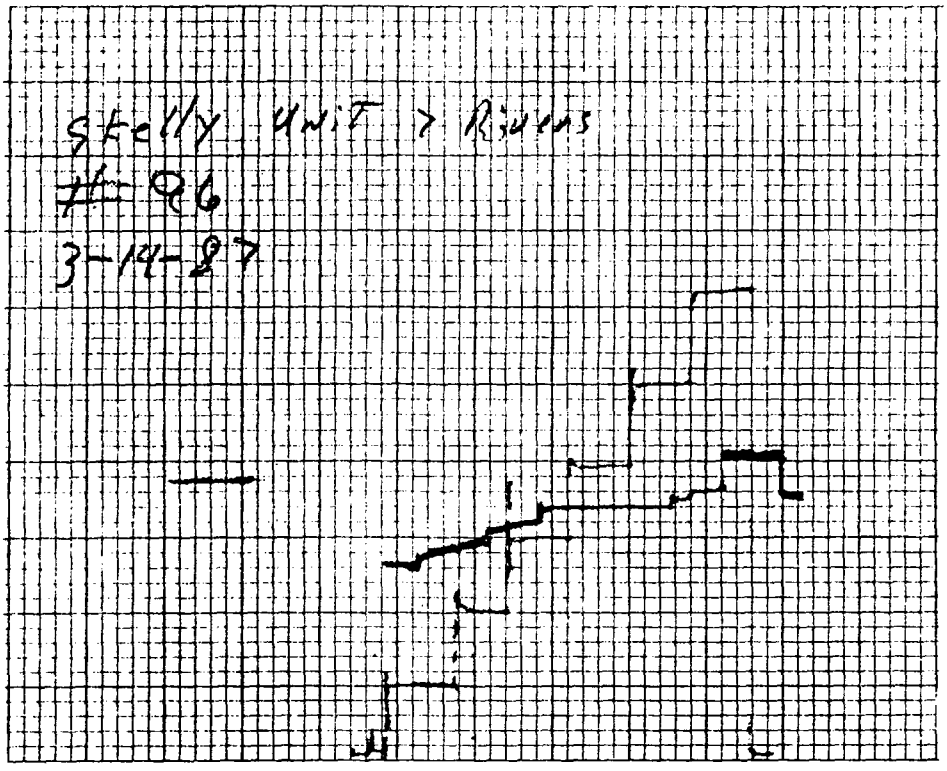
Producing thru — Packer set at — Co. Rep Glen Carter

Time of Reading	Elap Time Hrs.	Well Information: Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks
11:40				1050			
11:45	Start			1050			
11:50		200		1075			
11:55		200		1090			
12:00	:15	200		1115			
12:05		400		1180			
12:10		400		1205			
12:15	:30	400		1225			
12:20		600		1300			
12:25		600		1320			
12:30	:45	600		1335			
12:35		800		1390			
12:40		800		1400			
12:45	1:00	800		1405			
12:50		1000		1460			
12:55		1000		1465			
1:00	1:15	1000		1470			
1:05		1200		1525			
1:10		1200		1520			
1:15	1:30	1200		1520			
1:16				1350			
1:17				1340			
1:18				1335			
1:19				1330			
1:20				1330			


Texaco Inc.
Skelly Unit (Seven Rivers) #96
3-14-87
Surface PSI
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
BWPD
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900

B & D WELL TESTERS, INC.
P.O. BOX 5683
HOBBS, NEW MEXICO
505 397-3914

Texaco Inc.
Skelly Unit (Seven Rivers) #96
3-14-87



Elliott 7

ANCE [illegible]

SCHLUMBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS

Electrical Log

COUNTY Eddy
FIELD or LOCATION Maljamar
WELL Lynch A #5
COMPANY Skelly Oil Co.

COMPANY SKELLY OIL CO.
Skelly Unit #45
WELL LYNCH A #5
FIELD MALJAMAR
LOCATION SEC.22-17S-31E
COUNTY EDDY
STATE NEW MEXICO

Location of Well
1980'fr N&E/L
Sec.22-17S-31E

Elevation: D.F.
K.B.:
or G.L.:

FILING No.

RUN No.	1				
Date	2-14-51				
First Reading	5039				
Last Reading	612				
Feet Measured	4427				
Csg. Schlum.	612				
Csg. Driller	603				
Depth Reached	5042				
Bottom Driller	5040				
Depth Datum	RT - 9' abv. G.L.				
Mud Nat.	Zeogel, Impermix				
" Density	10.1				
" Viscosity	39				
" Resist.	.05@42 °F	@ °F	@ °F	@ °F	@ °F
" Res. BHT	.025 @110°F	@ °F	@ °F	@ °F	@ °F
" pH	5 @ °F	@ °F	@ °F	@ °F	@ °F
" Wtr. Loss	5.6 CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min
Max. Temp. °F	110				
Bit Size	8"-3100, 7 7/8-5022, 6 3/4"				
Spcgs.—AM	10"				
AO	32" LS				
AO	19'				
Opr. Rig Time	3½ hrs.				
Truck No.	504-Hobbs				
Recorded By	Crues				
Witness By	Wilkie				

REMARKS