AMERADA P-2(1)

KSC

F CODE

AMERADA BOTTOM-HOLE PRESSURE ~~TEMPERATURE~~ REPORT

R.P.G. 3 NO. 4703 CLOCK NO. HK 1931 SPEED 24 HR. LEASE L. W. Ward WELL NO. 2

ELEMENT NO. 10,655N RANGE 0-6000 CORR. TO - °F. LOCATION Bronco S/D Pool Lea, County, N.M.

RUN BY JRE/RAB CALCULATED BY JRE/RAB REPORTED BY RAB DATE RUN 10-2-53 TIME 10:45 PULLED 10-3-53 TIME 10:37 a.m

Pkr. Set @ 11,499'

9-24-53 581.23 bbl. in 8 hrs. WELL DATA Gas measurement by orifice well tester.

POTENTIAL: CHOKE 1/2" OIL WATER 0 G.O.R. 113 ZONE Devonian-Silurn TOP 11,566' BOTTOM - T.D. 11,871

HOW PRODUCED Natural flow thru tbg. P.I. CASING 5½" DEPTH 11,650' TUBING 2" DEPTH 11,864

HOURS SHUT IN 46 WELL HEAD PRESS.: CAS. Pkr. TUB 1000 TOP LINER - PERFORATIONS Open hole 11,650-11,871

LAST RESERVOIR PRESSURE Initial DEPTH 11,810 DATE ELEVATION 3810DF GRAVITY OF OIL 45.0 SP. GR. OF GAS

Flow line : 1627' of 3"

Trap press: 65 psi

Estimated shrinkage - 12%

TEST RECORD

PURPOSE OF TEST To determine flowing characteristics of well.

TIME	DEPTH	~~PRESSURE~~ PRESSURE	Press. Decline	Tbg. Prod.	Prod. Net	Prod. Net Average	P. I. (Hrly)	Tbg. Press.	~~GOR~~ GOR	Remarks
11:15A	11810									
11:45A	11810	4771	-	-	-	-	-	1000	-	Opened well on a 24/64" Pos. Choke. Oil Immediately
12:45P		4546	225	0.03	60.75	58.84	0.2615	545	93	
1:45		4544	227	-	56.93	57.62	0.2538	546	102	
~~2:45~~		~~4544~~	~~227~~	-	~~58.31~~	~~59.69~~	~~0.2630~~	~~547~~	~~100~~	
3:45		4544	227	-	61.07	60.38	0.2660	550	96	
4:45		4541	230	-	59.69	59.00	0.2565	551	99	
5:45		4538	233	-	58.31	58.48	0.2510	550	101	
6:45		4535	236	-	58.65	59.69	0.2529	549	101	
7:45		4535	236	-	60.72	60.72	0.2573	549	97	
~~8:45~~		~~4535~~	~~236~~	-	~~60.72~~	~~59.69~~	~~0.2529~~	~~548~~	~~97~~	
9:45		4532	239	-	58.65	59.17	0.2476	548	102	
10:45		4529	242	-	59.69	59.17	0.2445	547	100	
11:45		4526	245	-	58.65	59.00	0.2408	547	102	
12:45A		4526	245	-	59.34	58.83	0.2401	547	100	
1:45		4526	245	-	58.31	58.31	0.2380	547	101	
~~2:45~~		~~4526~~	~~245~~	-	~~58.31~~	~~59.52~~	~~0.2429~~	~~547~~	~~101~~	
3 :45		4526	245	-	60.72	61.07	0.2493	547	97	
4:45		4526	245	-	61.41	60.03	0.2450	547	96	
5:45		4526	245	-	58.65	59.00	0.2408	547	101	
6:45		4526	245	-	59.34	59.69	0.2436	547	99	
7:45		4526	245	-	60.03	60.72	0.2478	547	98	
8:45		4526	245	-	61.41	61.41	0.2507	547	95	Shut well in Storage full.

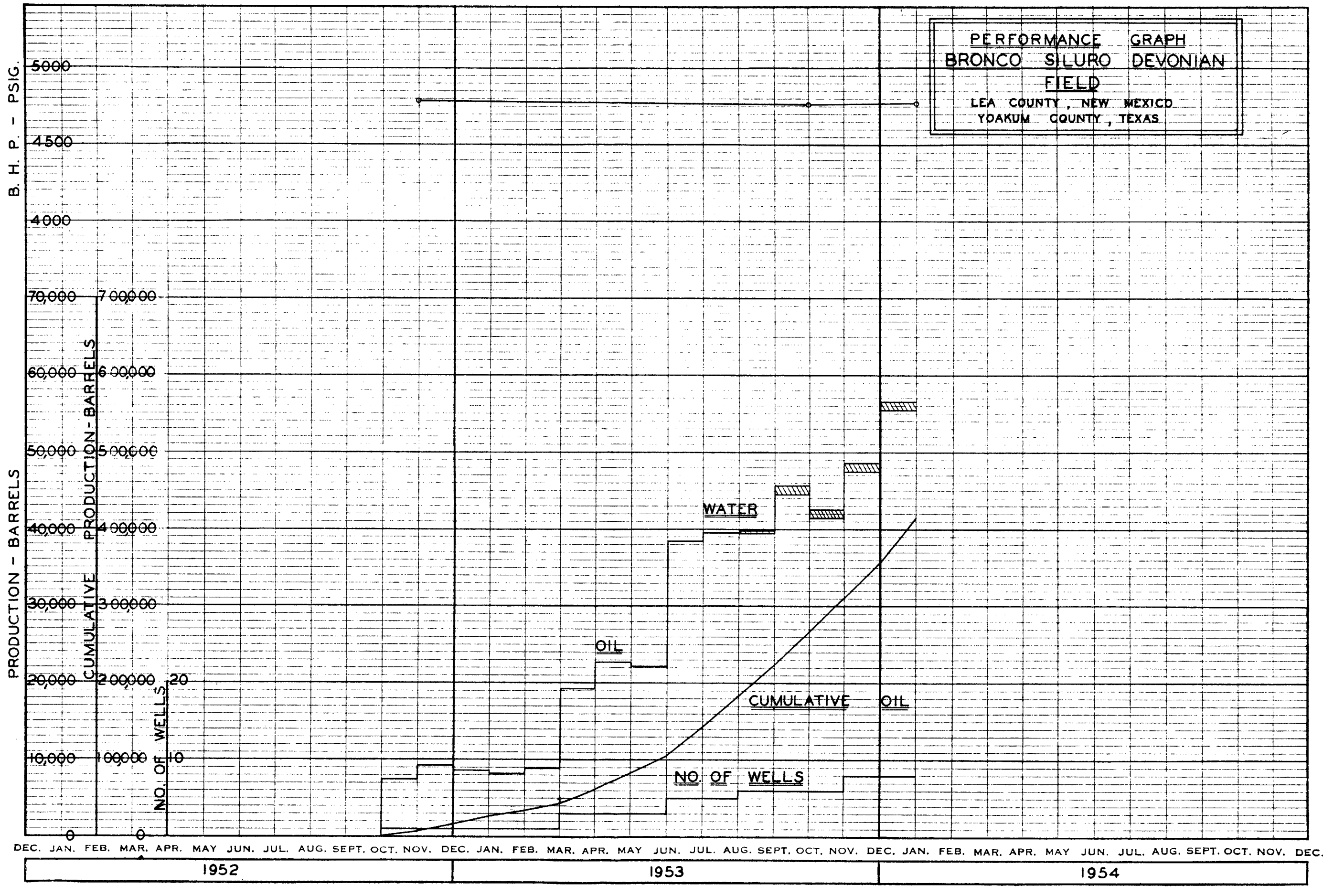
EXPLANATIONS OR CHART

Total oil production prior to test: 673 bbls.

Total oil production during test: 1249.63

MAKE FURTHER EXPLANATIONS ON BACK OF SHEET

EXHIBIT "E"



AMERADA P.[illegible]

AMERADA BOTTOM-H[illegible]LE PRESSURE-~~TEMPERATURE~~ REPORT

F CODE

155 12

EXHIBIT "F"

R.P.G. 3 NO. 4703 CLOCK NO. 1931 SPEED 24 HR. LEASE H. D. Schenck WELL NO. 1

ELEMENT NO. 10655N RANGE 0-6000 CORR. TO - °F. LOCATION Bronco S/D Field, Lea County, N.M.

RUN BY JRE/CMH CALCULATED BY JRE REPORTED BY JRE DATE RUN 6-18-53 TIME 10:00am DRILLED 6-19-53 TIME 4:00 pm

Pkr @ 11,527

WELL DATA Sweet 2-Stage tool @ 11,521

POTENTIAL: CHOKE 3/4 OIL 559.89 WATER 12.63 G.O.R. 205 ZONE Siluro-Devonian TOP 11,338 BOTTOM 11,780 T.D. 12,548

HOW PRODUCED Natural flow through tbg. P.I. CASING 7" DEPTH 11,411 TUBING 2" DEPTH 11,726

HOURS SHUT IN 61 WELL HEAD PRESS.: CAS. 695 TUB 810 TOP LINER 11,335 PERFORATIONS 11,620 - 11,515 11,535 - 11,615 11,700-11,780

LAST RESERVOIR PRESSURE 4629 DEPTH 11,810 DATE 4-27-53 ELEVATION 3810DF GRAVITY OF OIL SP. GR. OF GAS

Flow Line - 375' of 3" -5300 Estimated Shrinkage - 12%

Trap Press- 28 psi TEST RECORD Gas measured by orifice well tester.

PURPOSE OF TEST TO DETERMINE FLOWING CHARACTERISTICS OF WELL

TIME	DEPTH	PRESSURE	Press Decline	Csg.Tbg. Prod.	Prod. Net	Prod.Net Avg.	P.I.	Pressure Tbg.	Csg.	GFR	Remarks
9:30A	10,960	4501									
10:00A	11,460	4670									
	11,810	4788									Run depth Calculated BHP @ -8000' datum.
10:00A	11,460	4670	-	-	-	-	-	810	695	-	Open well on 3/8" positive choke. On fluid immediately
11:00		4186	484	-0.90	42.19	39.15	0.0809	300	225	137	0.7% BS&Mud o.2% Water
12:00N		4147	523	-1.09	36.11	36.04	.0689	280	195	148	
1:00P		4135	535	-0.08	35.96	35.96	.0672	265	180	145	0.7% BS&Mud 0.2% Water
2:00		4123	547	-0.85	35.97	34.02	.0622	260	170	143	
3:00		4114	556	-0.36	32.07	32.60	.0586	255	165	152	
4:00		4108	562	-	33.12	32.60	.0580	250	160	153	0.6% BS&Mud 0 Water
5:00		4102	568	0	32.06	31.90	.0562	250	155	158	
6:00		4096	574		31.74	31.57	.0550	240	150	155	
7:00		-	-		31.39	31.57	-	230	150	152	Pull & Rerun Gauge
8:00		4084	586		31.74	31.23	.0533	230	145	148	0.6% BS&Mud 0.2% Water
9:00		4084	586		30.71	30.88	.0527	220	145	151	
10:00		4078	592		31.05	30.71	.0519	220	145	147	
11:00		4072	598		30.36	30.19	.0505	220	140	150	0.7% BS&Mud 0.1% Water
12:00M		4069	601		30.02	30.02	.0500	220	135	150	
1:00A		4069	601		30.02	30.54	.0508	220	135	150	
2:00		4069	601		31.05	30.71	.0511	220	135	145	
3:00		4063	607		30.36	30.36	.0500	220	130	148	0.5% BS&Mud 0 Water
4:00		4063	607		30.36	30.36	.0500	220	130	145	

EXPLANATIONS OR CHART

5:00	4060	610	30.36	30.19	.0495	220	130	145	
6:00	4057	613	30.02	29.67	.0484	220	130	147	
7:00	4057	613	29.33	29.16	.0476	220	125	151	0.6% BS&Mud 0.2% Water
8:00	4057	613	28.98	29.02	.0473	220	125	152	
9:00	4057	613	30.36	30.19	.0492	220	120	148	
10:00	4057	613	30.02	29.67	.0484	220	120	152	
11:00	4057	613	29.33	29.67	.0484	220	120	159	0.6% BS&Mud 0 Water
12:00N	4057	613	30.02	29.67	.0484	220	120	155	
1:00P	4057	613	29.33	29.16	.0476	220	120	161	
2:00	4057	613	28.98	29.40	.0480	220	120	162	0.6% BS&Mud 0 Water
3:00	4057	613	30.02	29.67	.0484	220	120	157	
4:00	4057	613	29.33	29.33	.0478	220	120	159	0.6% BS&Mud 0.1% Water

Productivity Index calculated on total fluid basis Pull Gauge - Test Concluded

Water percentages determined by shake outs

Acidized from: 11,700 - 780 w/1000 gal., 1000 gal., 2000 gal. DoloFrac, 2000 gal.

Total of 6000 gal.

11,535 - 615 w/1000 gal.

MORE FURTHER EXPLANATIONS ON BACK OF SHEET

Total Production on test - 944.78 bbls. fluid in 30 hrs. Ave. 0.6% BS&Mud 0.1% Water

EMERALD

AMERADA BOTTOM-HOLE PRESSURE-TEMPERATURE REPORT

CODE

RPG 3 NO 4703 CLOCK NO 1656 155 SPEED 24 12 HR LEASE L.R. Weems et al WELL NO 1

ELEMENT NO 10655-N RANGE 0-6000 CORR TO F LOCATION Yoakum County, Texas

RUN BY AFG/CMH CALCULATED BY AFG/CMH REPORTED BY AFG/CMH DATE RUN 12-15-52 ME 12:15P PULLED 12-17-52 ME 12:15P

WELL DATA

POTENTIAL CHOKE 3/4" POIL 967 WATER 0 G O R 178 ZONE Devonian (-7879) TOP 11,682 BOTTOM T.D. 11,860

HOW PRODUCED Natural Flow Thru Tbg. P I CASING 5-1/2" DEPTH 11,860 TUBING 2-3/8 DEPTH 11,841

HOURS SHUT IN 76-1/4 WELL HEAD PRESS. CAS Pkr. TUB 690 TOP LINER PERFORATIONS

LAST RESERVOIR PRESSURE 4789 DEPTH 11,813 (-8000) DATE 11-20-52 ELEVATION 3813DF GRAVITY OF OIL 43.4 SP GR OF GAS

Trap Pressure 55 & 40 Pkr. @ 11,546 Flow Line 2" - 632'

TEST RECORD Gas Measured by 1/2" x 2" OWT
3/4" x 2" OWT

Shrinkage Factor 12%

PURPOSE OF TEST To Determine flowing Characteristic of Well.

~~HOUR~~ Hours	DEPTH	~~PRESS~~ PRESSURE	Press. Decline	Tbg. Prod.	Prod. Gross.	Gross Prod. Net Avg.	PI	Tbg Press.	REMARKS GFR	%Mud	Remarks.
0	11,813	4789						690			
1	(-8000)	4747	42	~~+~~1.39	73.88	74.15	1.7655	510	77	0.7	Opened Well on
2		4744	45	-0.11	74.11	74.59	1.6576	518	79	0.7	24/64"P.Choke
3		4741	48	-0.10	74.77	74.65	1.5552	525	79	0.7	Fluid Immediately
4		4741	48	0.0	74.52	74.52	1.5525	525	80	0.7	Pulled & re-ran
~~5~~		~~4738~~	~~51~~		~~74.52~~	~~73.49~~	~~1.4410~~	~~525~~	~~80~~	~~5.0~~	gauge.
6		4738	51		72.45	72.45	1.4206	525	80	5.0	
7		4735	54		72.45	72.45	1.3417	533	80	5.0	
8		4735	54		72.45	72.80	1.3482	533	80	4.8	
9		4735	54		73.14	73.14	1.3544	533	80	4.0	
10		4732	57		73.14	72.97	1.2802	533	80	5.0	
~~11~~		~~4732~~	~~57~~		~~72.80~~	~~72.97~~	~~1.2802~~	~~533~~	~~80~~	~~3.7~~	
12		4732	57		73.14	72.97	1.2802	533	79	3.6	
13		4732	57		72.80	73.66	1.2923	533	80	3.6	
14		4732	57		74.52	73.49	1.2893	533	78	3.7	
15		4732	57		72.45	73.66	1.2923	533	80	3.8	
16		4732	57		74.87	73.63	1.2918	533	78	3.7	
17		4732	57		72.39	72.39	1.2700	533	80	3.8	
18		4732	57		72.39	72.77	1.2767	533	80	3.5	
19		4729	60		73.14	73.83	1.2305	533	79	3.2	

EXPLANATIONS OR CHART

MAKE FURTHER EXPLANATIONS ON BACK OF SHEET

25

AMERADA

AMERADA BOTTOM-HOLE PRESSURE-TEMPERATURE REPORT

Sheet #2 CODE

RPG NO CLOCK NO SPEED HR LEASE L. R. Weems et al WELL NO 1

ELEMENT NO RANGE CORR TO F LOCATION

RUN BY CALCULATED BY REPORTED BY DATE RUN TIME PULLED TIME

WELL DATA

POTENTIAL CHOKE OIL WATER G O R ZONE TOP BOTTOM T D

HOW PRODUCED P I CASING DEPTH TUBING DEPTH

HOURS SHUT IN WELL HEAD PRESS CAS TUB TOP LINER PERFORATIONS

LAST RESERVOIR PRESSURE DEPTH DATE ELEVATION GRAVITY OF OIL SP GR OF GAS

TEST RECORD

PURPOSE OF TEST

~~Hours~~	DEPTH	~~PRESSURE~~	Press. Decline	Tbg. Prod.	Prod. Gross	Gross Prod. Net	Avg.	PI	Tbg. Press	GFR	%Mud	Remarks
20		4729	60		74.52	74.18		1.2363	533	79	3.0	
21		4729	60		73.83	73.83		1.2305	533	80	3.1	
22		4729	60		73.83	73.32		1.2220	540	80	3.4	
23		4729	60		72.30	72.97		1.2162	540	82	1.9	
24		4726	63		73.14	73.66		1.1692	540	82	1.6	
~~25~~		~~4726~~	~~63~~		~~74.18~~	~~73.49~~		~~1.1665~~	~~540~~	~~97~~	~~1.7~~	
26		4726	63		72.30	73.49		1.1665	540	101	1.9	Pulled and re-
27		4726	63		74.18	73.49		1.1665	533	99	1.4	ran Gauge
28		4726	63		72.30	73.49		1.1665	518	101	1.0	
29		4726	63		74.18	74.01		1.1748	518	99	1.3	
30		4723	66		73.83	73.83		1.1186	518	98	1.2	
~~32~~		~~4720~~	~~69~~		~~148.35~~	~~74.18~~		~~1.0751~~	~~518~~	~~97~~	~~1.2~~	
34		4720	69		148.35	74.18		1.0751	518	97	1.0	
36		4720	69		146.97	73.49		1.0651	518	96	0.8	
38		4720	69		145.59	72.80		1.0551	518	96	0.7	
40		4720	69		145.59	72.80		1.0551	518	97	1.2	
42		4720	69		147.32	73.66		1.0675	518	97	0.9	
44		4717	72		147.32	73.66		1.0231	518	97	0.4	
46		4714	75		148.35	74.18		0.9891	525	97	0.6	
48		4711	78		147.97	73.99		0.9486	525	99	0.6	Shut-in Well Test Concluded
48:30		4753										30-Min Buildup
~~49:00~~		~~4759~~										1 Hr. Buildup

EXPLANATIONS OR CHART

Tankage: 4 - High 500 bbl, Cone bottom, Strapping 2.76 bbls. per inch.

Total gross fluid produced on test 3530.80 bbls.

Total gas produced on test 313.039 Cu. Ft.

Productivity index based on gross production (Oil and Mud).

MAKE FURTHER EXPLANATIONS ON BACK OF SHEET

AMERADA P-[illegible]

AMERADA BOTTOM-HOLE PRESSURE-TEMPERATURE REPORT

F CODE

R.P.G. 3 NO. 4703 CLOCK NO. 1931 SPEED 24 HR. LEASE L. R. Weems et al WELL NO. 3

ELEMENT NO 10655N RANGE 0-6000 CORR. TO — °F. LOCATION Bronco S/D Field, Yoakum Co., Texas

RUN BY JRE/CMH CALCULATED BY JRE/CMH REPORTED BY JRE/CMH DATE RUN 7-15-53 TIME 4:20 pm PULLED 7-16-64 TIME 2:30 pm

Pkr @ 11,528

WELL DATA

7-3-53

POTENTIAL: CHOKE ½" OIL 320.82 WATER 2.10 BS G.O.R. 180 ZONE Devonian TOP 11,837 BOTTOM T.D 11,921

HOW PRODUCED Flow thru tubing P.I. CASING 5½" DEPTH 11,890 TUBING 2" DEPTH 11,879

HOURS SHUT IN 125 WELL HEAD PRESS.: CAS. Pkr TUB 790 TOP LINER PERFORATIONS Open hole 11,837 - 11,880 11,890 - 11,921

LAST RESERVOIR PRESSURE Initial DEPTH DATE ELEVATION 3813 DF GRAVITY OF OIL 43.8 SP. GR. OF GAS

Flow line - 1050' of 3"
Gas measured by orifice well tester.
Trap Press - 30 psi

TEST RECORD

PURPOSE OF TEST To determine producing characteristics of well.

TIME	DEPTH	PRESSURE	Press Decline	Tbg. Prod.	Prod. Net	Prod. Net Average	P.I.	Tbg. Press	GOR	Remarks
4:30P	11,813 (-8000)	4789	-	-	-	-	-	790	-	Run Depth @ -8000' Datum Open well on 3/8" Pos. Chk. on fluid immediately
5:30		4256	533	↓ 0.19	34.98	34.36	0.0645	240	119	
6:30		4253	536	↓ 0.02	33.83	34.01	.0635	235	120	0.2% B_s 0 Water
7:30		4250	539	↓ 0.02	34.19	33.87	.0628	230	112	
8:30		4246	543	- 0.04	33.55	33.51	.0617	230	112	
9:30		4246	543	-	33.47	33.64	.0620	230	109	
10:30		4243	546	-	33.81	33.64	.0616	230	109	0.2% BS 0 Water
11:30		4243	546	-	33.47	33.47	.0613	230	110	
12:30A		4240	549	-	33.47	33.47	.0610	230	110	
1:30		4240	549	-	33.47	33.29	.0606	230	110	
2:30		4240	549	-	33.12	33.12	.0603	230	108	0.2% BS 0 Water
3:30		4237	552	-	33.12	33.29	.0603	230	108	
4:30		4237	552	-	33.47	33.64	.0609	230	107	
5:30		4237	552	-	33.81	33.64	.0609	230	107	
6:30		4237	552	-	33.47	33.47	.0606	230	107	
7:30		4237	552	-	33.47	33.64	.0609	230	107	
8:30		4237	552	-	33.81	33.64	.0609	230	109	0.1% BS ● Water
9:30		4237	552	-	33.47	33.29	.0603	230	114	
10:30		4237	552	-	33.12	33.12	.0600	230	117	
11:30		4237	552	-	33.12	33.47	.0606	230	118	
12:30		4237	552	-	33.81	33.64	.0609	230	117	
1:30		4237	552	-	33.47	33.29	.0603	230	120	0.1% BS 0 Water

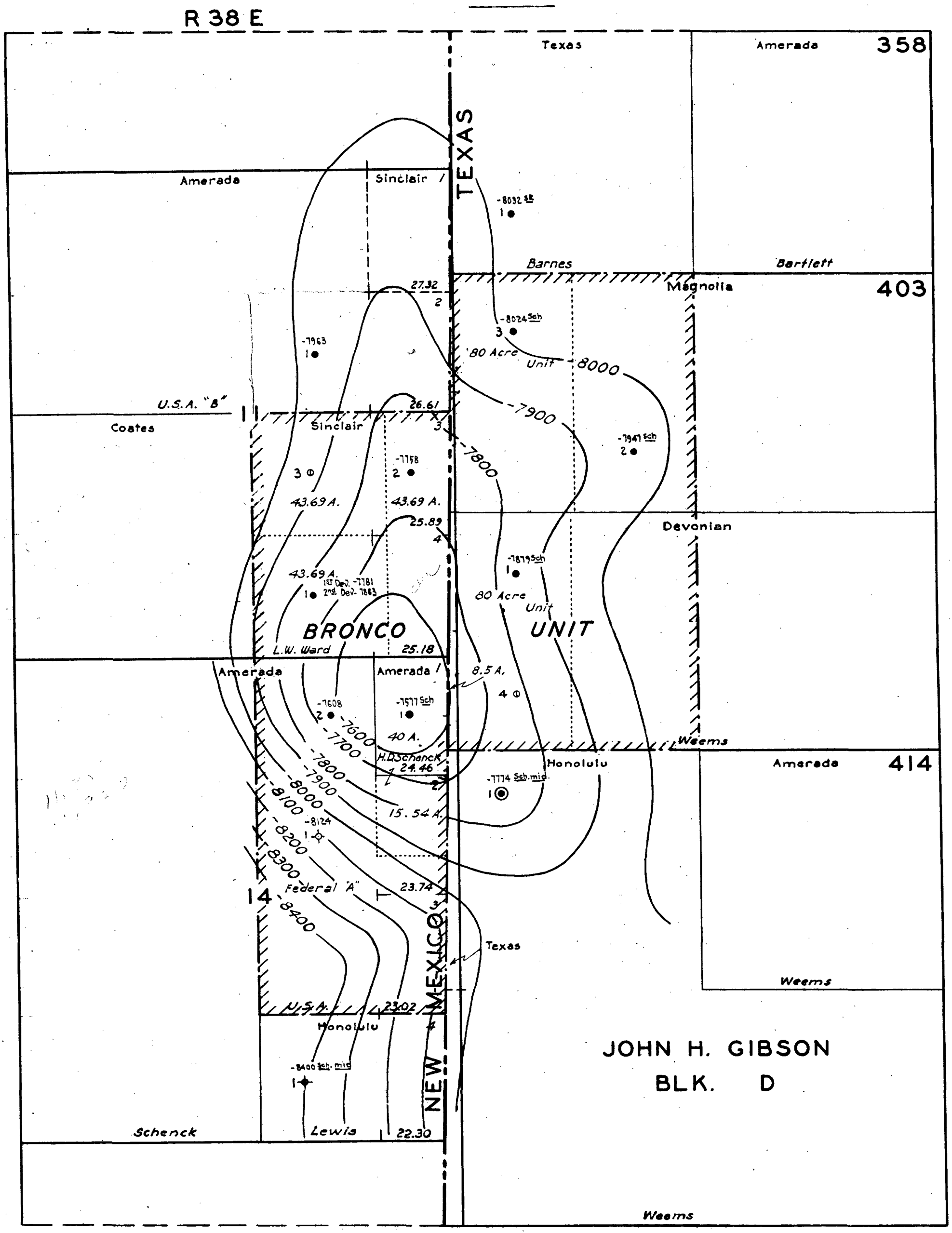
EXPLANATIONS OR CHART

2:30		4237	552		33.12	33.12	.0600	230	123	Pulled gauge & attempted to rerun. Gauge would not go below 11,437. Pulled gauge - Test concluded

Total Production Prior to test - 1030 bbls.
Production during test - 738.43 bbls. in 22 hrs.
Well was acidized w/2000 gallons Western 15% LST acid.

MAKE FURTHER EXPLANATIONS ON BACK OF SHEET

EXHIBIT "A"



Unit Outline

Acreage within this outline owned as follows:

Amerada	29.77 %
Magnolia	24.91
Warren	24.91
Sinclair	12.76
Geo. H. Coates	7.65

◉ Pennsylvanian Well

CONTOURS ON TOP DEVONIAN
Contour Interval 100'

BRONCO POOL

LEA CO., NEW MEXICO
YOAKUM CO., TEXAS

SCALE: 1 INCH = 1000 FEET

0 — 2

MILES

2-9-55

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

April 7, 1954

COPY

Mr. Arthur Barbeck
Chief Engineer
Railroad Commission of Texas
Austin, Texas

Dear Art:

Please be advised that the New Mexico Oil Conservation Commission has assigned a top allowable of 227 barrels of oil per well per day to the Bronco-Siluro-Devonian Pool for the month of April, 1954. The limited gas-oil ratio for this pool is two thousand cubic feet per well.

It is the opinion of the staff of the Oil Conservation Commission that this producing rate does not exceed the MER for the Bronco-Siluro-Devonian reservoir. I will advise you immediately of any change in the allowable for this pool.

I regret that I was unable to attend the special Bronco Pool hearing in Austin on April 2 however, I am looking forward to seeing you in Savannah next month.

Kindest regards.

Sincerely,

R. R. Spurrier
Secretary and Director

RRS:vc

EXHIBIT "B"

PROPOSED FIELD RULES
BRONCO SILURO-DEVONIAN FIELD
YOAKUM COUNTY, TEXAS
LEA COUNTY, NEW MEXICO

RULE 1: The casing program of all wells hereafter drilled in said field shall include at least three strings of pipe set in accordance with the following program:

(a) The surface casing shall consist of new or reconditioned pipe with an original mill test of not less than one thousand (1,000) pounds per square inch, and shall be set and cemented below the top of the red beds; provided, however, that not less than three hundred (300) feet of surface string shall be set. Cement shall be by the pump and plug method, and sufficient cement shall be used to fill the annular space back of the pipe to the surface of the ground or the bottom of the cellar. Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug. The casing shall be tested by pump pressure of at least five hundred (500) pounds per square inch applied at the well head. If at the end of thirty (30) minutes the pressure shows a drop of one hundred and fifty (150) pounds per square inch, or more, the casing shall be condemned. After the corrective operations, the casing shall again be tested in the same manner.

(b) The intermediate string shall consist of new or reconditioned pipe that has been tested to two thousand (2,000) pounds per square inch, and shall be set no higher than the top of the San Andres formation at an approximate depth of forty-five hundred (4500) feet. Sufficient cement shall be used to fill the calculated annular space back of the pipe to at least as high as the bottom of the surface pipe. Cement shall be by the pump and plug method, and the cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before initiating tests or drilling the plug. The casing shall be tested by pump pressure of at least one thousand (1,000) pounds per square inch applied at the well-head. If at the end of thirty (30) minutes the pressure shows a drop of one hundred and fifty (150) pounds per square inch, or more, the casing shall be condemned. After the corrective operations the casing shall again be tested in the same manner.

(c) The producing or oil string shall be new or reconditioned pipe that has been tested to three thousand (3,000) pounds per square inch, and shall be set no higher than the top of the producing formation. Cement shall be by the pump and plug method, and sufficient cement shall be used to fill the calculated annular space behind the pipe to a point at least thirty-three hundred (3300) feet above the shoe. Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests. The casing shall be tested by pump pressure of at least fifteen hundred (1500) pounds per square inch applied at the well-head. If at the end of thirty (30) minutes the pressure shows a drop of two hundred (200) pounds per square inch, or more, the casing shall be condemned. After the corrective operations the casing shall again be tested in the same manner.

RULE 2: The acreage assigned the individual oil well for the purpose of allocating allowable oil production thereto shall be known as a proration unit. No proration unit shall contain more than forty (40) acres except as hereinafter provided, and the two points farthermost removed one from the other and contained within any proration unit shall not be in excess of twenty-one hundred (2100) feet apart; provided, however, that in the case of long and narrow leases or in cases where because of the shape of the lease such is necessary to permit the utilization of tolerance acreage the Commission may, after proper showing, grant exceptions to the limitation as to the shape of the proration units as herein contained. All proration units, however, shall consist of acreage which can reasonably be considered to be productive of oil.

If after the drilling of the last well on any lease and the assignment of acreage to each well thereon, in accordance with the regulations of the Commission, there remains an additional unassigned lease acreage of less than forty (40) acres, then and in such event, the remaining unassigned lease acreage up to and including a total of twenty (20) acres may be assigned to the last well drilled on such lease or may be distributed between any group of wells located thereon so long as the proration unit or units resulting from the inclusion of such additional acreage meets the limitations prescribed by the Commission.

Operators shall file certified plats of their properties in the field, which plats shall show all of those things pertinent to the determination of the acreage claimed for each well hereunder.

RULE 3: The daily oil allowable for the field as fixed by the Commission after deductions have been made for marginal wells, high gas-oil ratio wells, and wells incapable of producing their allowable shall be distributed among the remaining producing wells in the field on the following basis:

The daily average allowable for each remaining well shall be that proportion of one hundred (100) per cent of such remaining daily field allowable that the acreage assigned to such well bears to the total acreage assigned to all of such remaining wells in the field.

RULE 4: The permitted gas-oil ratio for all wells shall be two thousand (2,000) cubic feet of gas per barrel of oil produced. Any oil well producing with a gas-oil ratio in excess of two thousand (2,000) cubic feet of gas per barrel of oil shall be allowed to produce daily only that volume of gas obtained by multiplying the daily oil allowable of such well as determined by the applicable rules of the Commission by two thousand (2,000) cubic feet. The gas volume thus obtained shall be known as the daily gas limit of such well. The daily oil allowable therefore shall then be determined and assigned by dividing the daily gas limit by its producing gas-oil ratio.

C

O

P

Y

Supl. to Ex. C

Feldmont - Kendrick #1

Open Hole 11735 - 785 T.D. 11,785 -7983

I. P. Nat. 1150 Bbls. 3/4" Ch. based on 6 hr. test

7" = 11735' GOR 164 Gr. 46°

A. P. C. - Weems #4 TD 11,680' 5½ @ 11,590'

Comp. 3-16-54 Pok. 11,195'

I. P. (Nat.) 412.69 bbls/8 hrs. 3/4" pos. ch. TP 150# GOR 178 Gr. 43.5

24 Hr. rate 1238 bbls.

A. P. C. - Ward #3 New Mexico

T. D. 11,867 Completed 3-8-54

7" @ 11,720 Acidized 1000 gal. (open hole)

I. P. 470.8 bbls./6 hrs. 1/2" choke, 24 hr. rate 1883 bbls.

EXHIBIT "C"

BRONCO SILURO-DEVONIAN FIELD

Lea Co., New Mexico and Yoakum Co., Texas

PERTINENT WELL DATA

	Schenck No. 1	Ward No. 1	Ward No. 2	Fed. A 2	Fed. B 1	Weems 1	Weems 2	Weems 3
Location	660' F NL & 477.18' F EL S. 14-T13S-R38E Lea Co.,New Mex.	660' F SL & 660' F WL S. 11-T13S-R38E Lea Co., New Mex.	1983' F SL & 520' F EL S. 11-T13S-R38E Lea Co.,New Mex.	660' F NL & 1274.18' F EL S. 14-T13S-R38E Lea Co.,New Mex.	1983' F NL & 1538.46' F EL S. 11-T13S-R38E Lea Co.,New Mex.	1980' F SL & 660' F WL Sec. 403,Bl. D J.H.Gibson Sur. Yoakum Co.,Texas	1980' F NL & 1980' F WL Sec. 403,Bl.D J.H.Gibson Sur. Yoakum Co.,Texas	660' F WL & 660' F NL Sec. 403,Bl. D J. H. Gibson Sur. Yoakum Co., Texas
Spudded	11-21-52	4-7-53	7-7-53	10-11-53	10-1-53	7-19-52	1-4-53	4-13-53
Completed	4-4-53	7-3-53	9-24-53	12-29-53	12-17-53	11-5-52	4-9-53	7-3-53
Elev.(DF)	3810'	3809'	3810'	3810'	3810'	3813'	3804'	3813'
Top Devonian	11,387'	11,672'	11,568'	11,418'	11,773'	11,692'	11,751'	11,837'
Oil String	7" at 11,411' 5" liner 12,030'	5½" at 11,725'	5½" at 11,650'	5½" at 11,870'	7" at 11,800'	5½" at 11,860'	7" at 11,769'	5½" at 11,890'
Perforations	11,420-11,515' 11,535-11,615' 11,700-11,780'	open hole	open hole	11,490-11,572' 11,586-11,650'	open hole	11,850-11,860' 11,773-11,850'	open hole	11,837-880 11,890-11,921 open hole
Total Depth	12,548' P.B.11,780'	11,890'	11,871'	11,862'	11,875'	11,860'	11,912 P.B.D.	11,921
Acidized	11,420-11,780' w/5000 gals.	11,725-11,890' w/1000 gals.	11,650-11,871' w/1000 gals.	6000 gals.	1000 gals.	~~X~~	500 gals.	2000 gals.
Pot'l. Test	560 bbls. in 24 hrs., 3/4" choke, GOR 205 Gravity 43.5° API	1598 in 24 hrs. 1/2" choke, GOR 125, Gravity 43.9° API	1744 bbls. in 24 hrs., 1/2" choke, GOR 113, Gravity 45° API	413 bbls. in 24 hrs.,3/4" choke GOR 134, Gravity 44.2° API	1116 bbls. in 24 hrs., 1/2" ch. Gr. 43.9° API	1934.5 bbls. in 24 hrs., 3/4" choke, GOR 178 Gr. 43.4° API	2364 bbls. in 24 hrs., 1/2" choke, GOR 95, Gr. 43.4°	962 bbls. in 24 hrs. 1/2" choke, GOR 179 Gravity 43.8° API
P.I.	1.94	No test	6.28	No test	No test	42.37	No test	1.55
Reservoir Pressure at -8000'	6-18-53 4788# 9-28-53 4767# 2-15-54 4780#	9-28-53 4768# 2-13-54 4783#	10-3-53 4771# 2-15-54 4788#	2-13-53 4753#	2-11-53 4786#	11-24-52 4789#* 12-15-52 4789# 9-28-53 4771# 2-17-54 4765#	9-28-53 4771# 2-17-54 4768#	7-15-53 4789# 9-28-53 4768#

* Initial reservoir pressure of the reservoir

EXHIBIT "C"

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARINGS
HELD JOINTLY BY THE NEW MEXICO
OIL CONSERVATION COMMISSION AND
THE RAILROAD COMMISSION OF TEXAS
FOR THE PURPOSE OF CONSIDERING:

CASE NO. 672
ORDER NO. R-510

THE MATTER OF PRORATION METHODS,
MAXIMUM EFFICIENT RATE OF PRODUCTION,
AND SPECIAL POOL RULES FOR OIL AND GAS
POOLS EMBRACING LANDS WITHIN THE STATES
OF TEXAS AND NEW MEXICO: NAMELY, THE
BRONCO-SILURO-DEVONIAN POOL IN LEA
COUNTY, NEW MEXICO (THE TEXAS PORTION
OF WHICH LIES IN YOAKUM COUNTY AND IS
TERMED THE BRONCO POOL.)

ORDER OF THE COMMISSION

BY THE COMMISSION:

WHEREAS, After due notice, the Railroad Commission of Texas and the New Mexico Oil Conservation Commission held a joint hearing in Santa Fe, New Mexico, on February 26, 1954, to consider the adoption of rules and regulations to govern the drilling, completion and operation of wells in the Bronco-Siluro-Devonian Pool, Lea County, New Mexico, and Yoakum County, Texas; and

WHEREAS, After due notice, the Railroad Commission of Texas and the New Mexico Oil Conservation Commission held a joint hearing in Austin, Texas, on April 2, 1954, to consider the adoption of rules and regulations to govern the drilling, completion and operation of wells in the Bronco-Siluro-Devonian Pool, Lea County, New Mexico, and Yoakum County, Texas; and

NOW, on this 15th day of July, 1954, the Oil Conservation Commission of New Mexico, a quorum being present, having considered the records and the testimony adduced, and being fully advised in the premises,

FINDS:

(1) That due notice of the time and place of hearing and the purpose thereof having been given as required by law, it has jurisdiction of this case and the subject matter thereof.

(2) That waste will take place in said pool unless rules are adopted by the Commission for the prevention thereof, and that the rules and regulations hereinafter set forth are necessary to prevent such waste and to provide for a more orderly development and operation of said field.

IT IS THEREFORE ORDERED, by the Oil Conservation Commission of New Mexico that the following rules, in addition to such of the Commission's general rules and regulations as are not in conflict herewith, be and the same are hereby adopted to govern the drilling, completion and operation of wells in the Bronco-Siluro-Devonian Pool, Lea County, New Mexico.

RULE 1. The permitted gas-oil ratio for all wells shall be two thousand (2,000) cubic feet of gas per barrel of oil produced. Any oil well producing with a gas-oil ratio in excess of two thousand (2,000) cubic feet of gas per barrel of oil shall be allowed to produce daily only that volume of gas obtained by multiplying the daily oil allowable of such well as determined by the applicable rules of the Commission by two thousand (2,000) cubic feet. The gas volume thus obtained shall be known as the daily gas limit of such well. The daily oil allowable therefor shall then be determined and assigned by dividing the daily gas limit by its producing gas-oil ratio.

RULE 2. The acreage assigned to the individual oil well for the purpose of allocating allowable oil production thereto shall be known as a proration unit. No proration unit shall consist of more than forty (40) acres except as hereinafter provided, and the two farthermost points in any proration unit shall not be in excess of twenty-one hundred (2100) feet removed from each other; provided, however, that in the case of long and narrow leases or in cases where because of the shape of the lease such is necessary to permit the utilization of tolerance acreage the Commission may after proper showing grant exceptions to the limitations as to the shape of proration units as herein contained. All proration units, however, shall consist of continuous and contiguous acreage which can reasonably be considered to be productive of oil.

If after the drilling of the last well on any lease and the assignment of acreage to each well thereon in accordance with the regulations of the Commission there remains an additional unassigned lease acreage of less than forty (40) acres, then and in such event the remaining unassigned lease acreage up to and including a total of twenty (20) acres may be assigned to the last well drilled on such lease or may be distributed among any group of wells located thereon so long as the proration units resulting from the inclusion of such additional acreage meets the limitations prescribed by the Commission.

Operators shall file certified plats of their properties in the pool, which plats show all those things pertinent to the determination of the acreage claimed for each well hereunder.

RULE 3: The casing program of all wells hereafter drilled in said pool shall include at least three (3) strings of pipe set in accordance with the following program:

(a) The surface casing shall consist of new or reconditioned pipe with an original mill test of not less than one thousand (1000) pounds per square inch, and shall be set and cemented below the top of the red beds; provided, however, that not less than three hundred (300) feet of surface string shall be set. Cement shall be by the pump and plug method, and sufficient cement shall be used to fill the annular space back of the pipe to the surface of the ground or the bottom of the cellar. Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug. The casing shall be tested by pump pressure of at least five hundred (500) pounds per square inch applied at the well head. If at the end of thirty (30) minutes the pressure shows a drop of one hundred and fifty (150) pounds per square inch, or more, the casing shall be condemned. After the corrective operations, the casing shall again be tested in the same manner.

(b) The intermediate string shall consist of new or reconditioned pipe that has been tested to two thousand (2000) pounds per square inch, and shall be set no higher than the top of the San Andres formation at an approximate depth of forty-five hundred (4500) feet. Sufficient cement shall be used to fill the calculated annular space back of the pipe to at least as high as

the bottom of the surface pipe. Cement shall be by the pump and plug method, and the cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before initiating tests or drilling the plug. The casing shall be tested by pump pressure of at least one thousand (1000) pounds per square inch applied at the well head. If at the end of thirty (30) minutes the pressure shows a drop of one hundred and fifty (150) pounds per square inch, or more, the casing shall be condemned. After the corrective operations, the casing shall again be tested in the same manner.

(c) The producing or oil string shall be new or reconditioned pipe that has been tested to three thousand (3000) pounds per square inch, and shall be set no higher than the top of the producing formation. Cement shall be by the pump and plug method, and sufficient cement shall be used to fill the calculated annular space behind the pipe to a point at least thirty-three hundred (3300) feet above the shoe. Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests. The casing shall be tested by pump pressure of at least fifteen hundred (1500) pounds per square inch applied at the well head. If at the end of thirty (30) minutes the pressure shows a drop of two hundred (200) pounds per square inch, or more, the casing shall be condemned. After the corrective operations, the casing shall again be tested in the same manner.

At the option of the operator, a liner may be run in lieu of a full length producing or oil string, such liner to extend not less than 200 feet above the shoe of the next larger casing string. The liner shall be secured to the next larger casing string in a manner approved by the New Mexico Oil Conservation Commission through a duly authorized representative or the District I Oil and Gas Inspector. Such liner shall be tested in the manner prescribed above for the testing of producing or oil strings.

RULE 4: The production allowable for said pool within New Mexico shall be, and the same hereby is fixed at 227 barrels of oil per day beginning at 7 o'clock a.m., M.S.T. on June 1, 1954, and continuing until further order.

RULE 5: The datum reservoir pressure of all wells in the pool shall be determined annually and the testing period shall be during the months of October and November; the results thereof to be reported to the Commission on or before the fifteenth (15th) of December of each year. All pressure determinations shall be reported at a datum of eight thousand (8000) feet below sea level. Prior to testing, all wells shall be shut in for a period of not less than forty-eight (48) hours or more than seventy-two (72) hours. All offset operators shall be notified at least forty-eight (48) hours before such test is made on any well, and any operator in the pool shall have the privilege of witnessing such pressure determinations. Said pressures shall be taken on all flowing wells with subsurface pressure gauge or other method of equal accuracy and may be taken on pumping wells with sonic devices or other method of equal accuracy.

RULE 6: All operators shall take a GOR test not sooner than 30 days nor later than 60 days following the completion or recompletion of an oil well. A GOR test shall be made annually on all oil wells producing from the Bronco-Siluro-Devonian reservoir pool. Such tests shall be made in accordance with Commission Rule 301, and shall be taken during the months of April and May of each calendar year. Results of such tests shall be reported on Commission Form C-116 not later than June 15 of the year in which the test was made.

IT IS FURTHER ORDERED, That this cause be held open on the docket for such other and further orders as may be necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

R. R. SPURRIER, Secretary and Member

S E A L