

1488 N - 1510 W

30-025-34272

E-14-165-30E

TEXACO
Denver Region**ANDERSON RANCH U.# 201**

Estimate: 984334

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SURVEY REPORT
Proprietary Information of Texaco Inc.

Lateral: 0

Proposed Direction: 0

Dog Leg Severity per: 100 feet

Measured Depth	Inclination	Azimuth	True Vertical Depth	North/South Coordinate	East/West Coordinate	Vertical Section	Dog Leg Severity	Survey Tool
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SURFACE
250	1.00	0.00	249.99	2.18	0.00	2.18	0.40	TOTCO
508	0.50	0.00	507.96	5.56	0.00	5.56	0.19	
1053	0.25	0.00	1052.95	9.13	0.00	9.13	0.05	
1564	0.50	0.00	1563.94	12.47	0.00	12.47	0.05	
2041	0.50	0.00	2040.92	16.63	0.00	16.63	0.00	
2290	0.50	0.00	2289.91	18.81	0.00	18.81	0.00	
2549	0.75	0.00	2548.90	21.63	0.00	21.63	0.10	
2707	0.50	0.00	2706.89	23.35	0.00	23.35	0.16	
3210	0.50	0.00	3209.87	27.74	0.00	27.74	0.00	
3703	0.75	0.00	3702.84	33.12	0.00	33.12	0.05	
4211	1.00	0.00	4210.78	40.88	0.00	40.88	0.05	
4447	0.50	0.00	4446.76	43.97	0.00	43.97	0.21	
4956	0.25	0.00	4955.75	47.30	0.00	47.30	0.05	
5477	0.50	0.00	5476.74	50.71	0.00	50.71	0.05	
5943	1.00	0.00	5942.69	56.81	0.00	56.81	0.11	
6436	2.25	0.00	6435.49	70.79	0.00	70.79	0.25	
6716	0.50	0.00	6715.39	77.51	0.00	77.51	0.63	
7214	1.00	0.00	7213.35	84.03	0.00	84.03	0.10	
7706	1.75	0.00	7705.21	95.83	0.00	95.83	0.15	
7987	0.50	0.00	7986.15	101.35	0.00	101.35	0.44	
8505	2.00	0.00	8504.01	112.65	0.00	112.65	0.29	
8629	2.25	0.00	8627.92	117.25	0.00	117.25	0.20	
8906	2.00	0.00	8904.73	127.52	0.00	127.52	0.09	
9183	2.00	0.00	9181.56	137.19	0.00	137.19	0.00	
9428	2.00	0.00	9426.41	145.74	0.00	145.74	0.00	
9649	1.00	0.00	9647.34	151.52	0.00	151.52	0.45	
9956	1.00	0.00	9954.29	156.88	0.00	156.88	0.00	
10208	1.00	0.00	10206.25	161.28	0.00	161.28	0.00	
10720	1.25	0.00	10718.15	171.33	0.00	171.33	0.05	
10997	3.50	0.00	10994.90	182.81	0.00	182.81	0.81	
11044	1.75	0.00	11041.84	184.96	0.00	184.96	3.72	
11139	2.25	0.00	11136.79	188.28	0.00	188.28	0.53	
11326	3.00	0.00	11323.59	196.84	0.00	196.84	0.40	
11420	1.00	0.00	11417.53	200.12	0.00	200.12	2.13	
11669	1.25	0.00	11666.48	205.01	0.00	205.01	0.10	
11964	1.25	0.00	11961.41	211.44	0.00	211.44	0.00	
12426	2.25	0.00	12423.19	225.55	0.00	225.55	0.22	
12699	1.75	0.00	12696.02	235.08	0.00	235.08	0.18	
13015	2.00	0.00	13011.85	245.42	0.00	245.42	0.08	
13369	2.00	0.00	0.00	0.00	0.00	0.00	0.00	

Submit in duplicate to
appropriate district office
See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

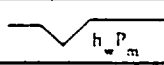
OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator TEXACO EXPLORATION						Lease or Unit Name ANDERSON RANCH 'U'					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 6-25-98		Well No. 207			
Completion Date 6-17-98		Total Depth		Plug Back TD 12395		Elevation 4314		Unit Ltr. - Sec. - TWP - Rge. 14 16S 32E			
Crg. Size 5 1/2		Wt. 17#	d 4.892	Set At	Perforations: From: 12213 To: 12231				Country LEA		
Tbg. Size 2-7/8		Wt. 6.5	d 2.441	Set At 12070	Perforations: From: To:				Pool		
Type Well - Single - Bradenhead - G.G. or G.Q. Multiple single						Packer Set At 12070		Formation MORROW			
Producing Thru tbg		Reservoir Temp. °F 60°		Mean Annual Temp. °F		Baro. Press. - P _a 13.2		Connections SALES			
L 12070	H 12070	Gg .590	% CO ₂ 2.0	% N ₂ .5	% H ₂ S -0-	Prover -0-	Meter Run 3.068		Taps 62g		

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	
SI						4033	90°	PKR.	
1.	3.068 X 1.750		57	87"	102 °	3313	85°	"	60 min
2.	3.068 X 1.750		67	137"	97 °	2913	85°	"	60 min
3.	3.068 X 1.750		70	232"	97 °	2593	82°	"	60 min
4.	3.068 X 1.750		85.7	266"	94.7°	2313	80°	"	60 min
5.									

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)		Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1.							1500
2.							1951
3.	VOLUMES FROM TOTAL FLOW METER						2670
4.							3140
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mc/bbl
					16.282	
1.					A.P. I. Gravity of Liquid Hydrocarbons 51°	Deg.
2.					Specific Gravity Separator Gas .590	XXXXXXXXXX
3.					Specific Gravity Flowing Fluid N/A	XXXXXX
4.					Critical Pressure 679	P.S.I.A. P.S.I.A.
5.					Critical Temperature 348	R R

P_c **4046.2** P_c² **16371.7**

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		3330.5	11092.4	5279.3
2.		2934.3	8610.0	7761.7
3.		2622.9	6879.4	9492.4
4.		2341.8	5484.0	10887.7
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.504$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4.722$

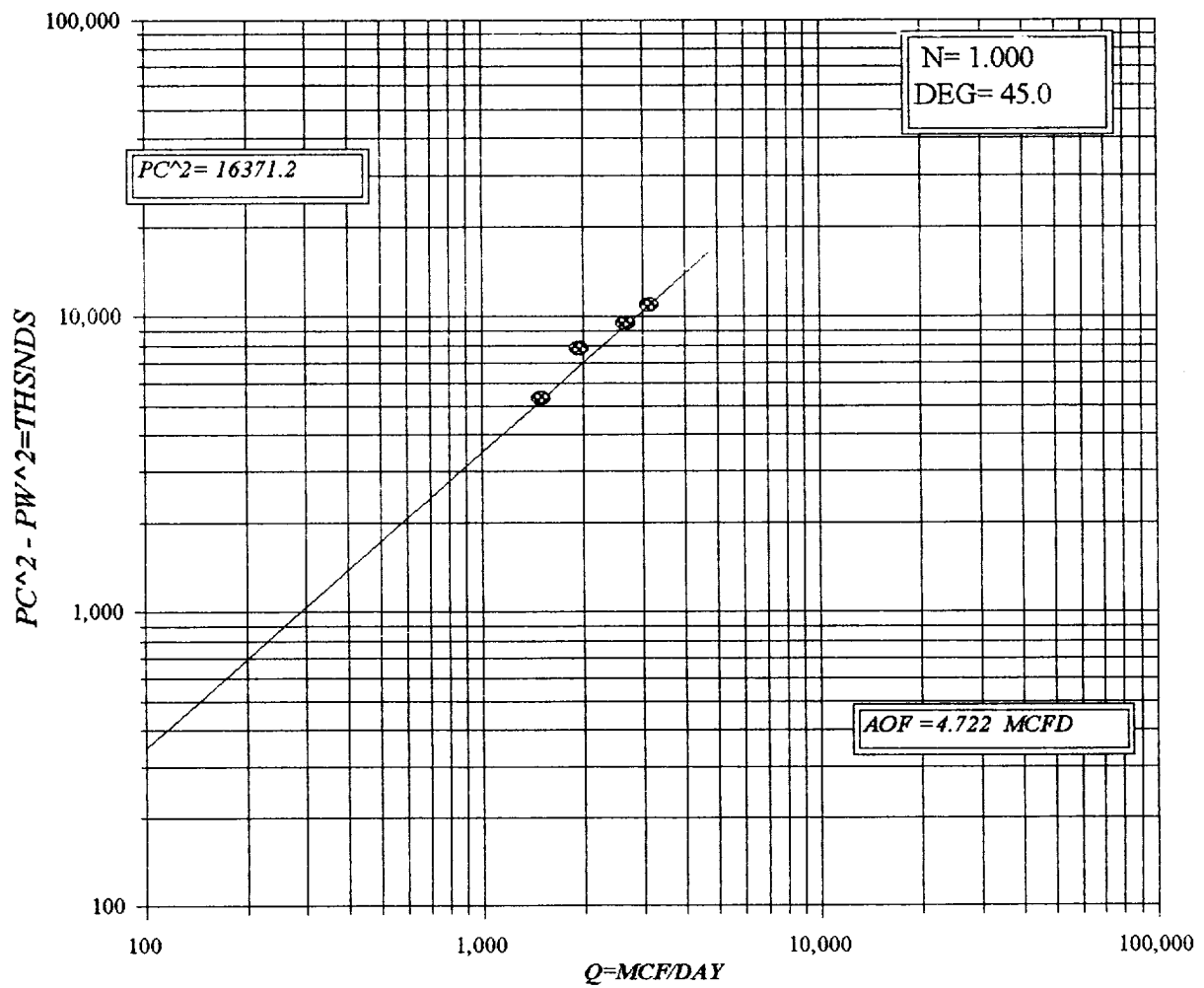
(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.504$

Absolute Open Flow 4.722 Mcfd @ 15.025	Angle of Slope θ 45°	Slope, n 1.000
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Remarks: *** WELL MADE 23.7 BBLS OF 51° @60° CONDENSATE DURING TEST**

Approved By Division	Conducted By: PRO WELL TESTING	Calculated By: MB	Checked By: BM
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TEXACO E. & P.
ANDERSON RANCH 'U' #201



COMPANY : TEXACO E & P		LEASE : ANDERSON RANCH U		WELL NO. : 201		Pc = 4046.2		Pc2 = 16371.7 *											
UNIT :		SECTION : 14		TOWNSHIP : 16				*											
L : 12070		H : 12070		L/H : 1		G/GMIX : 0.590		Pt2 = ***** Pw = 3330.5 *											
%CO2 : 2		%N2 : 0.5		H2S :		DATE : 6/25/98		8562.6 2934.3 *											
d : 2.441		Fr : 0.010763		GH : 7121.3		RANGE : 32		6792.3 2622.9 *											
								5364.8 2341.8 *											
								*											
VOL 1 : 1500		PSIA 1 : 3326.2		RESV.TEMP 194.7		Pc2-Pw2= 5279.3		Pw2 = 11092.4 *											
VOL 2 : 1951		PSIA 2 : 2926.2				7761.7		8610.0 *											
VOL 3 : 2670		PSIA 3 : 2606.2		SHUT-IN PR= 4046.2		9492.4		6879.4 *											
VOL 4 : 3140		PSIA 4 : 2316.2				*****		5484.0 *											
								*											
		PCR : 679						n = 1.000 *											
		TCR : 348						*											
						Pc2/(Pc2-Pw2) =		3.101 *											
LINE		RATE 1		RATE 2		RATE 3		RATE 4		2.109 *									
										1.725 *									
										1.504 *									
		1ST		2ND		1ST		2ND		*									
										*									
1 QM		1.500		1.500		1.951		1.951		2.670		2.670		3.140		3.140		*	
2 TW		534		534		534		534		534		534		534		534		[Pc2/Pc2-Pw2]n = 3.101 *	
3 Ts		654.7		654.7		654.7		654.7		654.7		654.7		654.7		654.7		2.109 *	
4 T		594.4		594.4		594.4		594.4		594.4		594.4		594.4		594.4		1.725 *	
PR (est)		4.90				4.31				3.84				3.41				1.504 *	
5 Z(est)		0.865		0.888		0.852		0.867		0.846		0.854		0.845		0.847		*	
6 TZ		514.1		527.8		506.3		515.2		502.8		507.7		502.0		503.4		AOF= Q 4.652 *	
7 GH/TZ		13.852		13.492		14.064		13.822		14.163		14.025		14.186		14.145		4.115 *	
8 eS		1.681		1.659		1.695		1.679		1.701		1.692		1.702		1.700		4.605 *	
9 l-e-S		0.405		0.397		0.410		0.404		0.412		0.409		0.413		0.412		4.722 *	
10 Pt		3326.2		3326.2		2926.2		2926.2		2606.2		2606.2		2316.2		2316.2		*	
11 Pt2 /1000		11063.6		11063.6		8562.6		8562.6		6792.3		6792.3		5364.8		5364.8		*	
12 Fr		0.010763		0.010763		0.010763		0.010763		0.010763		0.010763		0.010763		0.010763		*	
13 Fc=FrTZ		5.533		5.681		5.450		5.545		5.412		5.465		5.403		5.419		*	
14 FcQm		8.30		8.52		10.63		10.82		14.45		14.59		16.97		17.01		*	
15 L/H(FcQm)		68.9		72.6		113.1		117.1		208.8		212.9		287.8		289.5		*	
16 Fw		27.91124		28.83215		46.33718		47.34483		86.03034		87.08058		118.7452		119.17052		*	
17 Pw2		11091.5		11092.4		8609.0		8610.0		6878.3		6879.4		5483.5		5484.0		*	
18 Ps2		18645.8		18397.7		14588.1		14457.9		11698.8		11640.3		9334.6		9321.0		*	
19 Ps		4318.1		4289.3		3819.4		3802.4		3420.4		3411.8		3055.3		3053.0		*	
20 P		3822.1		3807.7		3372.8		3364.3		3013.3		3009.0		2685.7		2684.6		*	
21 Pr		5.63		5.61		4.97		4.95		4.44		4.43		3.96		3.95		*	
22 Tr		1.71		1.71		1.71		1.71		1.71		1.71		1.71		1.71		*	
23 Z		0.888		0.887		0.867		0.867		0.854		0.854		0.847		0.847		FORM C122-0 *	

NEW MEXICO G.O.R./G. MIX

NO. OF BBLS PRODUCED = 23.7
API GRAVITY @ 60 DEG. = 51.0

SPECIFIC GRAVITY OF GAS = 0.5900

XX

TOTAL GAS PRODUCED = 386

G.O.R. = 16.282

G.MIX = 0.774