

OIL CONSERVATION DIVISION
P. O. Box 2088
SANTA FE, NEW MEXICO
87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

ADMINISTRATIVE ORDER
NFL 23

INFILL DRILLING FINDINGS PURSUANT TO
SECTION 271.305(b) OF THE FEDERAL ENERGY REGULATORY
COMMISSION REGULATIONS, NATURAL GAS POLICY ACT OF 1978
AND OIL CONSERVATION DIVISION ORDER NO. R-6013-A

I.
Operator El Paso Natural Gas Co. Well Name and No. Texas Pacific Com Well No. 1R
Location: Unit 0 Sec. 16 Twp. 29N Rng. 10W Cty. San Juan

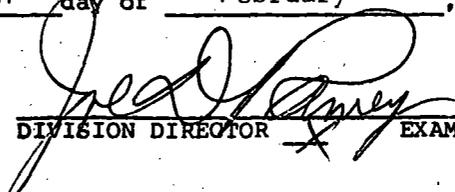
II.
THE DIVISION FINDS:

- (1) That Section 271.305(b) of the Federal Energy Regulatory Commission Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find that the infill well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit.
- (2) That by Order No. R-6013-A, dated February 8, 1980, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.
- (3) That the well for which a finding is sought is completed in the Aztec-Pictured Cliffs Gas Pool, and the standard spacing unit in said pool is 160 acres.
- (4) That a 156.44-acre proration unit comprising the SE/4 of Sec. 16, Twp. 29N, Rng. 10W, is currently dedicated to the Texas Pacific Com Well No. 1 located in Unit I of said section.
- (5) That this proration unit is (X) standard () nonstandard; if nonstandard, said unit was previously approved by Order No. _____.
- (6) That said proration unit is not being effectively and efficiently drained by the existing well(s) on the unit.
- (7) That the drilling and completion of the well for which a finding is sought should result in the production of an additional 170-200 M MCF of gas from the proration unit which would not otherwise be recovered.
- (8) That all the requirements of Order No. R-6013-A have been complied with, and that the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.
- (9) That in order to permit effective and efficient drainage of said proration unit, the subject application should be approved.

IT IS THEREFORE ORDERED:

- (1) That the applicant is hereby authorized to drill the well described in Section I above as an infill well on the existing proration unit described in Section II(4) above. The authorization for infill drilling granted by this order is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.
- (2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on this 6th day of February, 19 81.


DIVISION DIRECTOR EXAMINER

OIL CONSERVATION DIVISION
P. O. Box 2088
SANTA FE, NEW MEXICO
87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

ADMINISTRATIVE ORDER
NFL 23

INFILL DRILLING FINDINGS PURSUANT TO
SECTION 271.305(b) OF THE FEDERAL ENERGY REGULATORY
COMMISSION REGULATIONS, NATURAL GAS POLICY ACT OF 1978
AND OIL CONSERVATION DIVISION ORDER NO. R-6013-A

I.
Operator El Paso Natural Gas Co Well Name and No. Texas Pacific Gas Well No 1R
Location: Unit 0 Sec. 16 Twp. 29 N Rng. 10 W Cty. San Juan

II.
THE DIVISION FINDS:

(1) That Section 271.305(b) of the Federal Energy Regulatory Commission Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find that the infill well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit.

(2) That by Order No. R-6013-A, dated February 8, 1980, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.

(3) That the well for which a finding is sought is to be completed in the 17th sec - Picture d
Cliffs Gas Pool, and the standard spacing unit in said pool is 160 acres.

(4) That a 156.44 -acre proration unit comprising the SE/4
of Sec. 16, Twp. 29 N, Rng. 10 W, is currently dedicated to the Texas Pacific Gas
Well No 1 located in Unit I of said section.

(5) That this proration unit is standard () nonstandard; if nonstandard, said unit was previously approved by Order No. _____.

(6) That said proration unit is not being effectively and efficiently drained by the existing well(s) on the unit.

(7) That the drilling and completion of the well for which a finding is sought should result in the production of an additional 170-200 M MCF of gas from the proration unit which would not otherwise be recovered.

(8) That all the requirements of Order No. R-6013-A have been complied with, and that the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.

(9) That in order to permit effective and efficient drainage of said proration unit, the subject application should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant is hereby authorized to drill the well described in Section I above as an infill well on the existing proration unit described in Section II(4) above. The authorization for infill drilling granted by this order is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.

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

DONE at Santa Fe, New Mexico, on this 6th day of Feb, 1981.

DIVISION DIRECTOR _____ EXAMINER _____

El Paso NATURAL GAS
COMPANY

P. O. BOX 1492
EL PASO, TEXAS 79978
PHONE: 915-543-2600

October 14, 1980

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey

Dear Mr. Ramey:

RECEIVED

OCT 21 1980

Oil Conservation

Re: El Paso Natural Gas Company
Texas Pacific Com. No. 1R,
SE/4, Section 16, T-29-N, R-10-W,
Aztec Pictured Cliffs Pool,
San Juan County, New Mexico

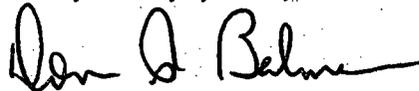
Enclosed you will find both an application for determination under the NGPA and a request for an administrative finding that the drilling and completing of our Texas Pacific Com. No. 1R is necessary to effectively and efficiently drain the proration unit. This well is completed in the Aztec Pictured Cliffs Pool and is the second well on the proration unit.

We send these instruments together and request that upon an affirmative finding that the well is necessary, that you will incorporate said finding with the application for determination and then consider the application for determination.

We think that this will comply with NMOCD Order Nos. R-5878-B and R-6013-A.

Should you feel that we should file these instruments in a different manner, please advise.

Very truly yours,



D. R. Balmer
Reservoir Engineering Dept.

DRB:cc

Enclosures



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
 OIL CONSERVATION DIVISION

BRUCE KING
 GOVERNOR

LARRY KEHOE
 SECRETARY

January 19, 1981

POST OFFICE BOX 2088
 STATE LAND OFFICE BUILDING
 SANTA FE, NEW MEXICO 87501
 (505) 827-2434

Mr. Don Balmer
 El Paso Natural Gas Co.
 P. O. Box 1492
 El Paso, Texas 79978

Re: Request for Infill Findings,
 Texas Pacific Com Well No. 1R,
 Unit O, Sec. 16, T-29-N, R-10-W,
 San Juan County, New Mexico

Dear Mr. Balmer:

The subject application was received on October 21, 1980. It was also the subject of a later meeting between us wherein we attempted to arrive at a set of guidelines for such applications.

This latter process being unsuccessfully completed, we are requesting the following data in order to process the application originally received:

- (1) Any current shut-in pressures on Well No. 1.
- (2) An explanation of the data used to establish the remaining recoverable reserves on the surrounding proration units.
- (3) A volumetric reserves calculation for Well No. 1R showing the data upon which such calculations was based.

Sincerely,

R. L. STAMETS
 Technical Support Chief

RLS/dr

*letter to
 Dec 15 to
 Joe relative
 to NGPP
 application*

*1972 lost
 Test
 Joe*

*525 million
 225 remaining
 recoverable*

El Paso NATURAL GAS
COMPANY

P. O. BOX 1492
EL PASO, TEXAS 79978
PHONE: 915-543-2600

January 26, 1981

NGPA

State Of New Mexico
Energy And Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. R. L. Stamets

Dear Sir:

Re: Texas Pacific Com. No. 1R
0-16-29N-10W
Aztec Pictured Cliffs Field
San Juan County, New Mexico

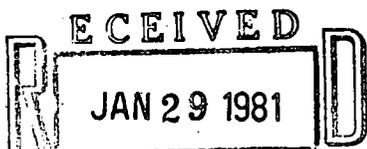
In answer to your recent letter, responses to your three requests are as follows:

Request No. 1: Any current shut-in pressure on Well No. 1.

Response No. 1: This well is classified as exempt marginal, therefore, we have no recent shut-in pressures. The latest shut-in pressure taken was on May 11, 1972 and was 310 psia.

Request No. 2: An explanation of the data used to establish the remaining recoverable reserves on the surrounding proration units.

Response No. 2: Mr. Joe Ramey asked for the same information in an earlier request. We answered him in a letter dated December 15, 1980. A copy of our letter, with attachments, is enclosed.



OIL CONSERVATION DIVISION
SANTA FE

} Section 103
NGPA Act
This well

Request No. 3: A volumetric reserve calculation for Well No. 1R showing the data upon which such calculations was based.

Response No. 3: Attached is a volumetric calculation worksheet showing the various factors used in arriving at an estimated gas in place of 200 MMcf.

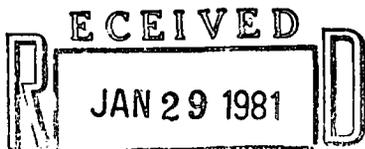
Yours very truly,



D. R. Balmer
Reservoir Engineering Dept.

DRB:cc

Enclosures



OIL CONSERVATION DIVISION
SANTA FE

El Paso NATURAL GAS
COMPANY

P. O. BOX 1492
EL PASO, TEXAS 79978
PHONE: 915-543-2600

December 15, 1980

NGPA

State Of New Mexico
Energy And Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey

Dear Sir:

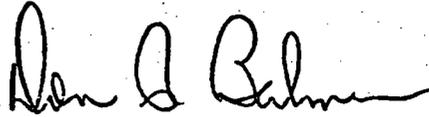
Re: Texas Pacific Com. No. 1R
0-16-29N-10W
Aztec Pictured Cliffs Field
San Juan County, New Mexico

Per your request, attached are copies of pressure-decline curves on wells located on proration units adjacent to the subject well's proration unit. Also attached is a work sheet that shows how we estimated the additional reserves to be recovered as a result of drilling and completing the Texas Pacific Com. No. 1R.

You also inquired as to whether a volumetric determination could be made utilizing information from the new well. We feel that if the volumetric approach is to be used, logs from surrounding wells should be reviewed and an isopach of the pay be constructed so as to determine thickening and thinning within the proration unit. After planimetering the proration unit, a volumetric gas in place estimate could be made. This would be the most desirable approach to the volumetric method. However, a volumetric approach would still require an estimate of a recovery factor which is extremely difficult to determine in the San Juan Basin. But if on the other hand, these same surrounding wells have some pressure-production performance history, then this performance is a more reliable tool to use to estimate additional reserves to be recovered.

Inasmuch as we do have pressure-production performance on the surrounding proration units, we chose to use this method.

Yours very truly,

A handwritten signature in black ink, appearing to read "D. R. Balmer". The signature is fluid and cursive, with a long horizontal stroke at the end.

D. R. Balmer
Reservoir Engineering Dept.

DRB:cc

Attachments

CALCULATION WORKSHEET FOR ESTIMATING ADDITIONAL GAS
TO BE RECOVERED FROM PRORATION UNIT AS A
RESULT OF DRILLING THE EPNG TEXAS PACIFIC COM. NO. 1R,
SE/4, SECTION 16, T-29-N, R-10-W,
AZTEC PICTURED CLIFFS FIELD, SAN JUAN COUNTY, NEW MEXICO

(Volumes MMcf At 15.025 Psia)

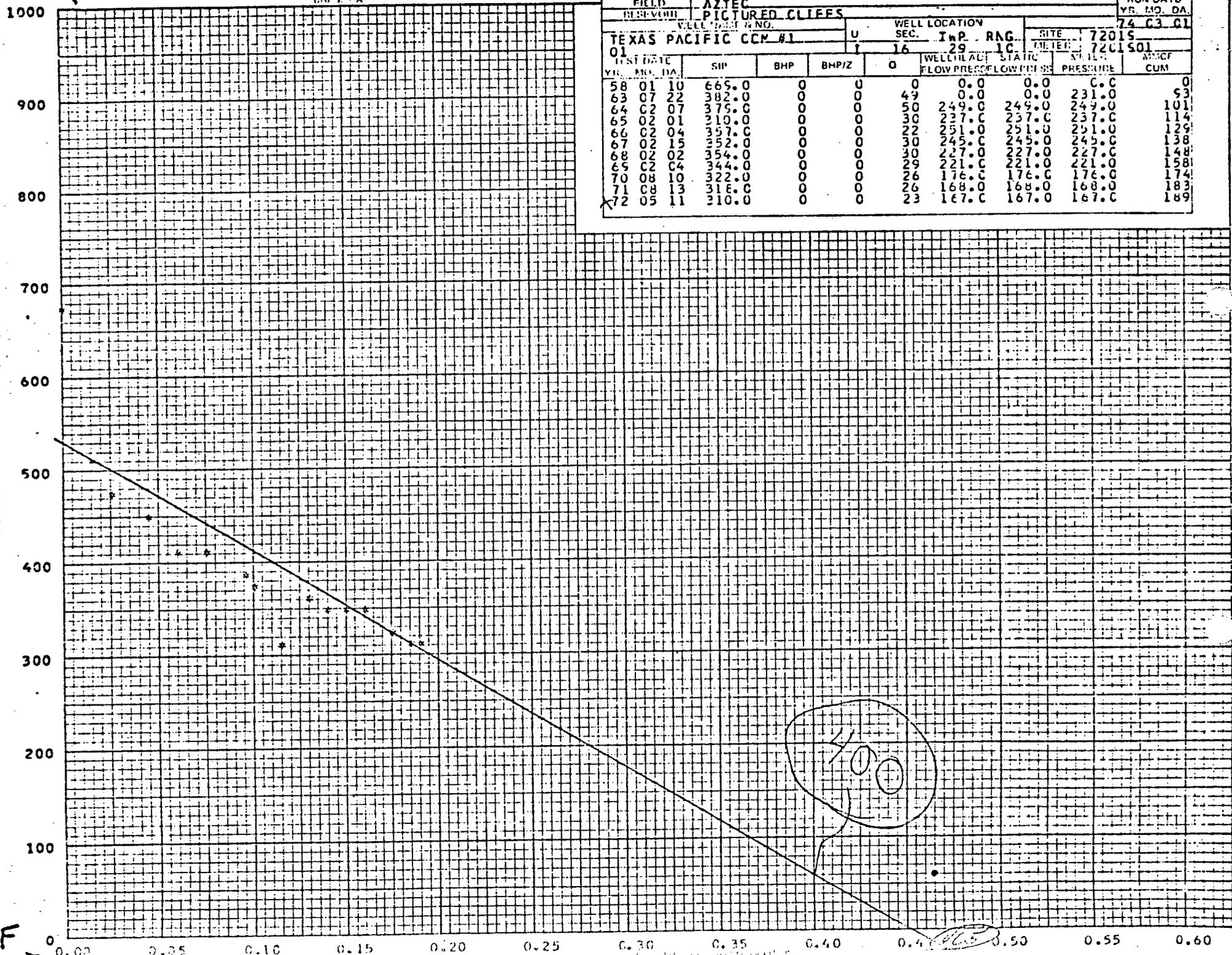
<u>Well Name And Number</u>	<u>Location U-S-T-R</u>	<u>Original^{1/} Recoverable Reserves</u>	<u>7-1-80 Cumulative Production</u>	<u>7-1-80 Remaining Recoverable Reserves</u>
Schultz Com. A #5	D-16-29-10	690	515	175
Schultz Com. D #8	A-16-29-10	820	637	183
Schultz Com. B #6	M-16-29-10	1,320	977	343
Hare #6	F-15-29-10	1,400	931	469
Albright #1	M-15-29-10	790	571	219
San Jacinto #5	E-21-29-10	1,900	1,388	512
San Jacinto #4	B-21-29-10	1,400	998	402
Albright #2 ^{2/}	D-22-29-10	174	134	40
J. Albright #2 PC ^{2/}	E-22-29-10	300	8	292
Total		8,794	6,159	2,635
Average For Eight Proration Units		1,099	770	329
Texas Pacific Com. #1	I-16-29-10	400	242	158
Texas Pacific Com. #1-R	O-16-29-10	171	-0-	171 ^{3/}

1/ Pressure decline curves enclosed.

2/ Share common proration unit.

3/ 329 MMcf - 158 MM = 171 MM \approx 170 MM = Estimate of additional gas to be recovered from the proration unit.

PLUT SYMBOLS: WHP - X
BHP - Z



FIELD		AZTEC		RESERVOIR		PICTURED CLIFFS		WELL LOCATION		SITE		RUN DATE	
TEXAS PACIFIC CCM #1		U		I		SEC.	IMP.	RNG.	IC	72015		74 C3 C1	
WELL IDENT. NO.		01		0		WELL HEAD		STATIC		PRESSURE		CUM	
TEST DATE	YR.	MO.	DA.	SHP	BHP	BHP/Z	Q	FLOW PRESS	FLOW PRESS	PSIA	PSIA	ACT	CUM
58 01 10				665.0	0	0	0	0.0	0.0	0.0	C.C		0
63 07 22				382.0	0	0	49	0.0	0.0	0.0	231.0		93
64 02 07				375.0	0	0	50	249.0	249.0	249.0	249.0		101
65 02 01				310.0	0	0	300	237.0	237.0	237.0	237.0		114
66 02 04				357.0	0	0	22	251.0	251.0	251.0	251.0		129
67 02 15				352.0	0	0	30	245.0	245.0	245.0	245.0		138
68 02 02				354.0	0	0	30	227.0	227.0	227.0	227.0		148
69 02 04				344.0	0	0	29	221.0	221.0	221.0	221.0		158
70 08 10				322.0	0	0	26	176.0	176.0	176.0	176.0		174
71 08 13				318.0	0	0	26	168.0	168.0	168.0	168.0		183
72 05 11				310.0	0	0	23	167.0	167.0	167.0	167.0		189

PLOT SYMBOLS: WHISP = •

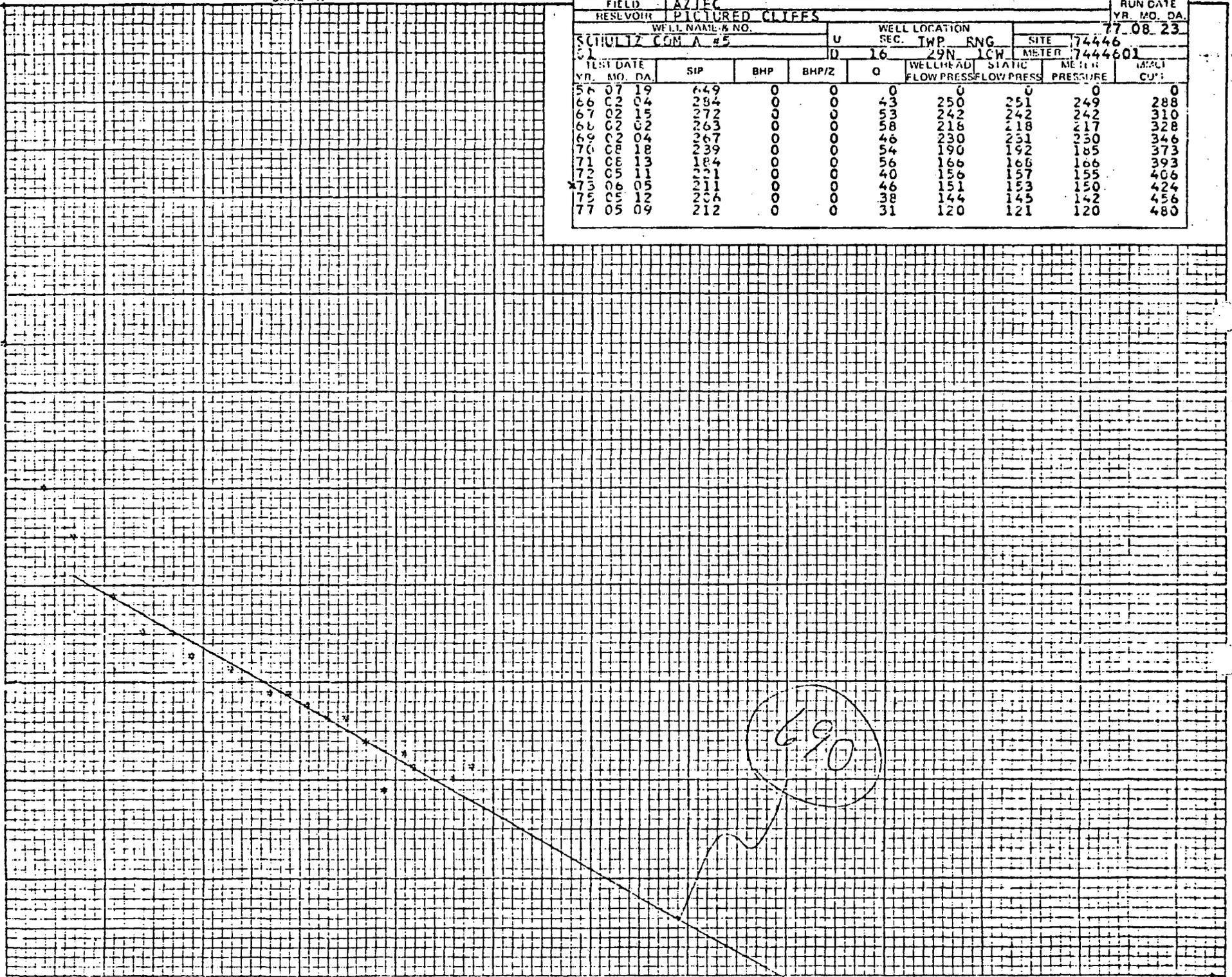
BHP/Z = X

FIELD		AZTEC				RUN DATE		77-08-23	
RESERVOIR		PICTURED CLIFFS				YR. MO. DA.		77-08-23	
WELL NAME & NO.		SCHULTZ COM A 45		WELL LOCATION		SEC. TWP. RNG		SITE 74446	
TEST DATE		YR. MO. DA.		SIP		BHP		BHP/Z	
O		D		16		29N		1CW	
METER		7444601		WELLHEAD FLOW PRESS		STATIC FLOW PRESS		METER PRESSURE	
O		0		0		0		0	
56		07 19		649		0		0	
66		02 04		284		0		0	
67		02 15		272		0		0	
68		02 02		263		0		0	
69		02 04		267		0		0	
70		08 18		239		0		0	
71		08 13		184		0		0	
72		05 11		251		0		0	
73		06 05		211		0		0	
75		05 12		204		0		0	
77		05 09		212		0		0	

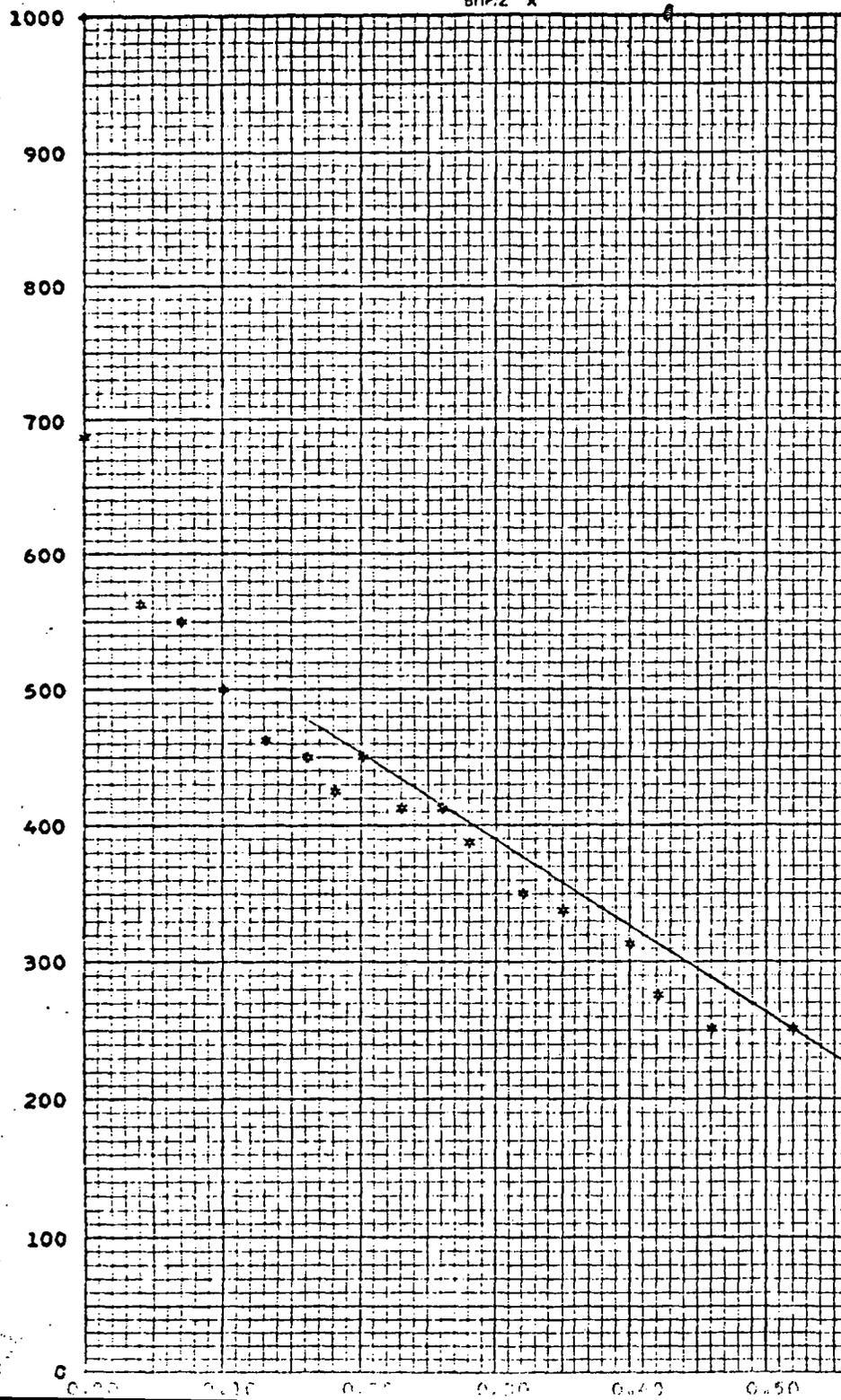
PRESSURE - PSIA

1000
900
800
700
600
500
400
300
200
100
0

0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20



PILOTS: MUDS WHIP
BHP/Z X

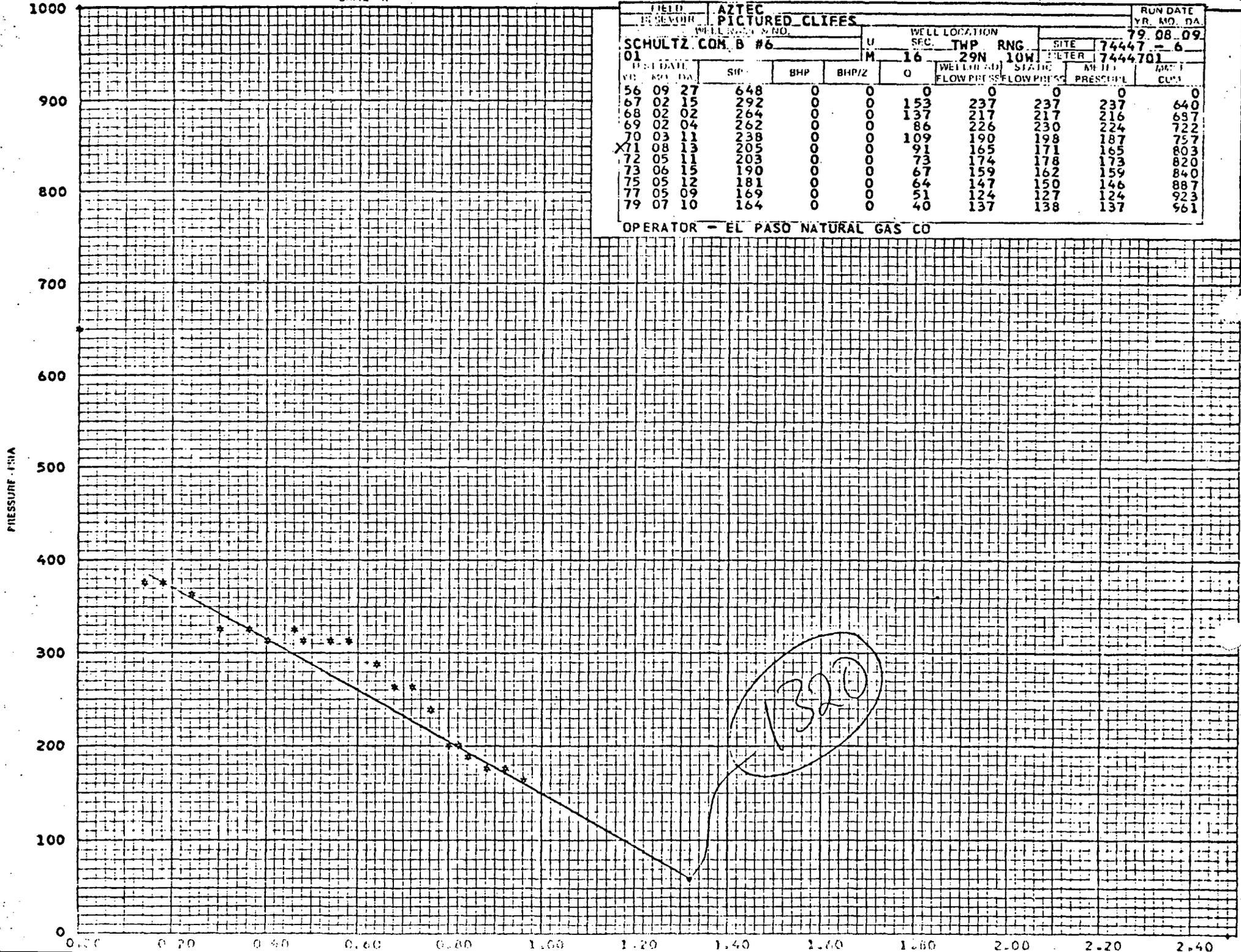


FIELD		AZTEC				RUN DATE		
RESERVOIR		PICTURED CLIFFS				YR.	MO.	DA.
WELL NO.		WELL LOCATION			SITE			
SCHULTZ COM D #8		SEC.	TWP	RNG	72035			
01		U	16	29N	10W	6		
DATE	SIP	BHP	BHP/Z	U	WELLFLOW	STATION	MT. PRES.	MT. CUM.
YR.	MO.	DA.			FLOW	FLOW	PRES.	CUM.
58	02	20	692	0	0	0	0	0
67	02	15	409	0	0	107	247	247
68	02	02	393	0	0	104	216	216
69	02	04	350	0	0	118	234	241
70	03	11	339	0	0	152	186	200
71	08	13	308	0	0	115	172	181
72	05	11	279	0	0	111	166	175
73	06	05	256	0	0	103	157	165
75	05	12	247	0	0	84	143	149
X77	05	09	226	0	0	71	123	128
79	07	10	169	0	0	64	138	142

OPERATOR - EL PASO NATURAL GAS CO

FIELD		AZTEC				RUN DATE	
RESERVOIR		PICTURED CLIFFS				YR. MO. DA.	
WELL NO.		SCHULTZ COM. B #6		U		79 08 09	
WELL NO. & NO.		01		M		74447 - 6	
DATE		01		WELL LOCATION		SITE	
YR. MO. DA.		09 27		SEC. TWP. RNG.		74447 701	
SYN		648		16 29N 10W		FILTER	
BHP		0		0		7444701	
BHP/Z		0		0		PRESCHIL	
O		0		0		CUM	
WELL NO.		0		0		0	
FLOW PRESS		0		0		0	
STATIC FLOW PRESS		0		0		0	
PRESCHIL		0		0		0	
CUM		0		0		0	

OPERATOR - EL PASO NATURAL GAS CO



PLOT SYMBOLS: W/SIP = •
BHP/Z = X

1000

900

800

700

600

500

400

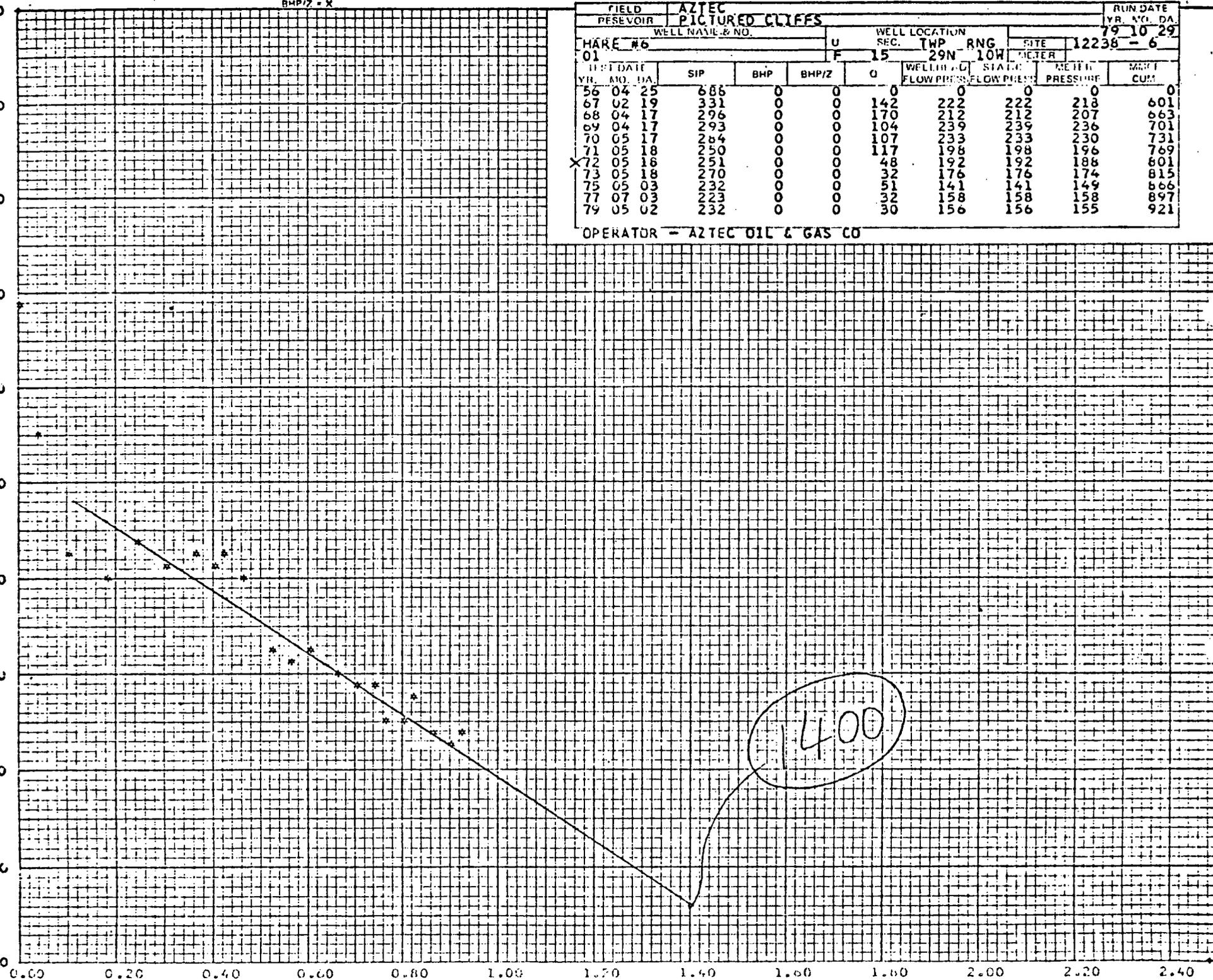
300

200

100

0

PRESSURE - PSIA



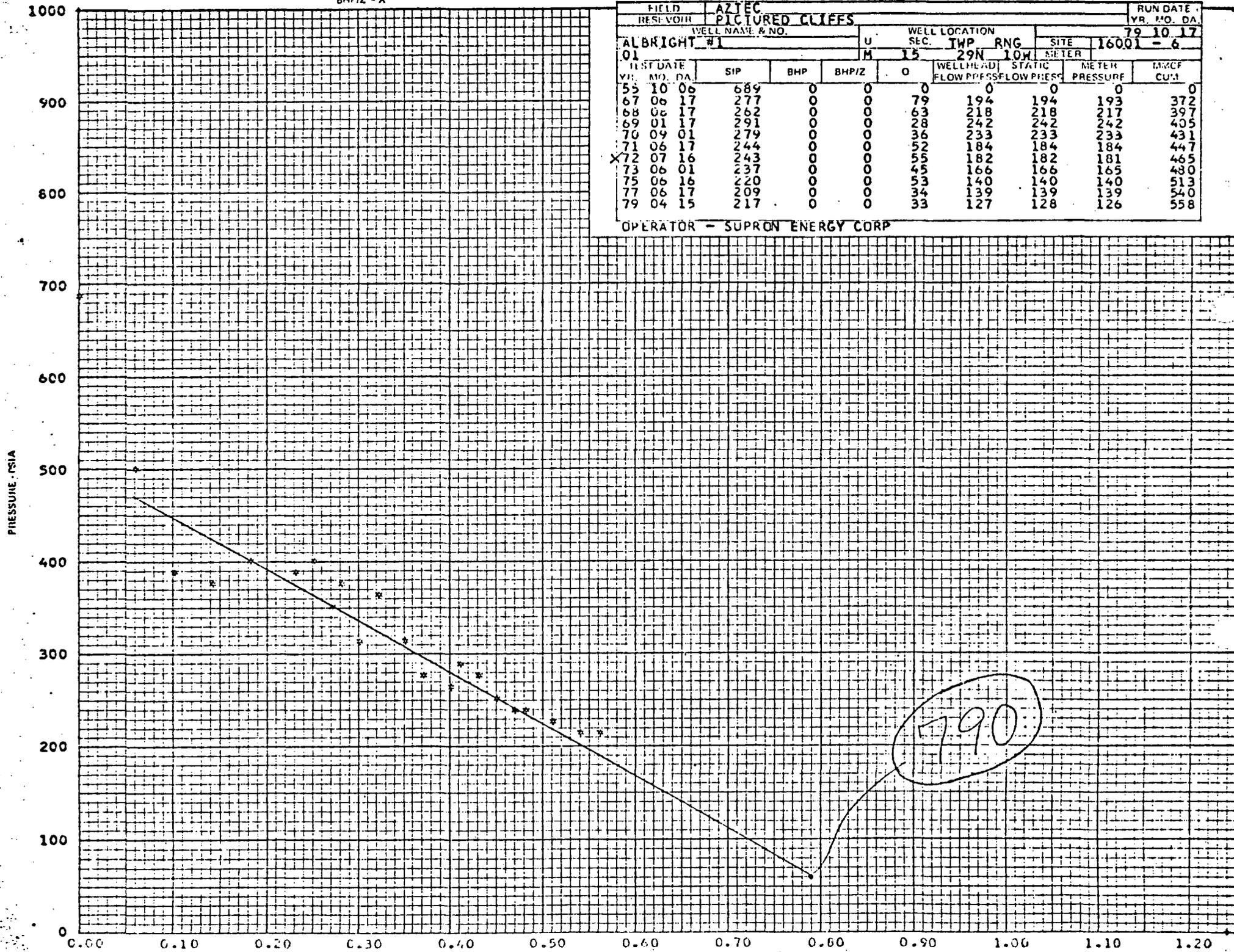
FIELD	AZTEC			RESERVOIR	PICTURED CLIFFS			WELL LOCATION	SITE		12238 - 6	RUN DATE	79 10 29	
WELL NAME & NO.	HARE #6			U	F			SEC.	TWP	RNG	METER			
								15	29N	10W				
TEST DATE	YR.	MO.	DA.	SIP	BHP	BHP/Z	Q	WELL HEAD FLOW PRESS.	STATIC FLOW PRESS.	METER PRESSURE	METER CUM.			

OPERATOR - AZTEC OIL & GAS CO

400

FIELD		AZTEC		RUN DATE	
RESERVOIR		PICTURED CLIFFS		YR. MO. DA.	
WELL NAME & NO.		WELL LOCATION		SITE	
ALBRIGHT #1		SEC. IWP RNG		16001 - 6	
01		M 15		29N 10W	
INST DATE		SIP		BHP	
YR.	MO.	DA.	BHP/2	0	0
WELLHEAD FLOW PRESS		STATIC FLOW PRESS		METER PRESSURE	
0		0		0	
55 10 06		689		0	
67 06 17		277		0	
68 06 17		262		0	
69 01 17		291		0	
70 09 01		279		0	
71 06 17		244		0	
X 72 07 16		243		0	
73 06 01		237		0	
75 06 16		220		0	
77 06 17		209		0	
79 04 15		217		0	

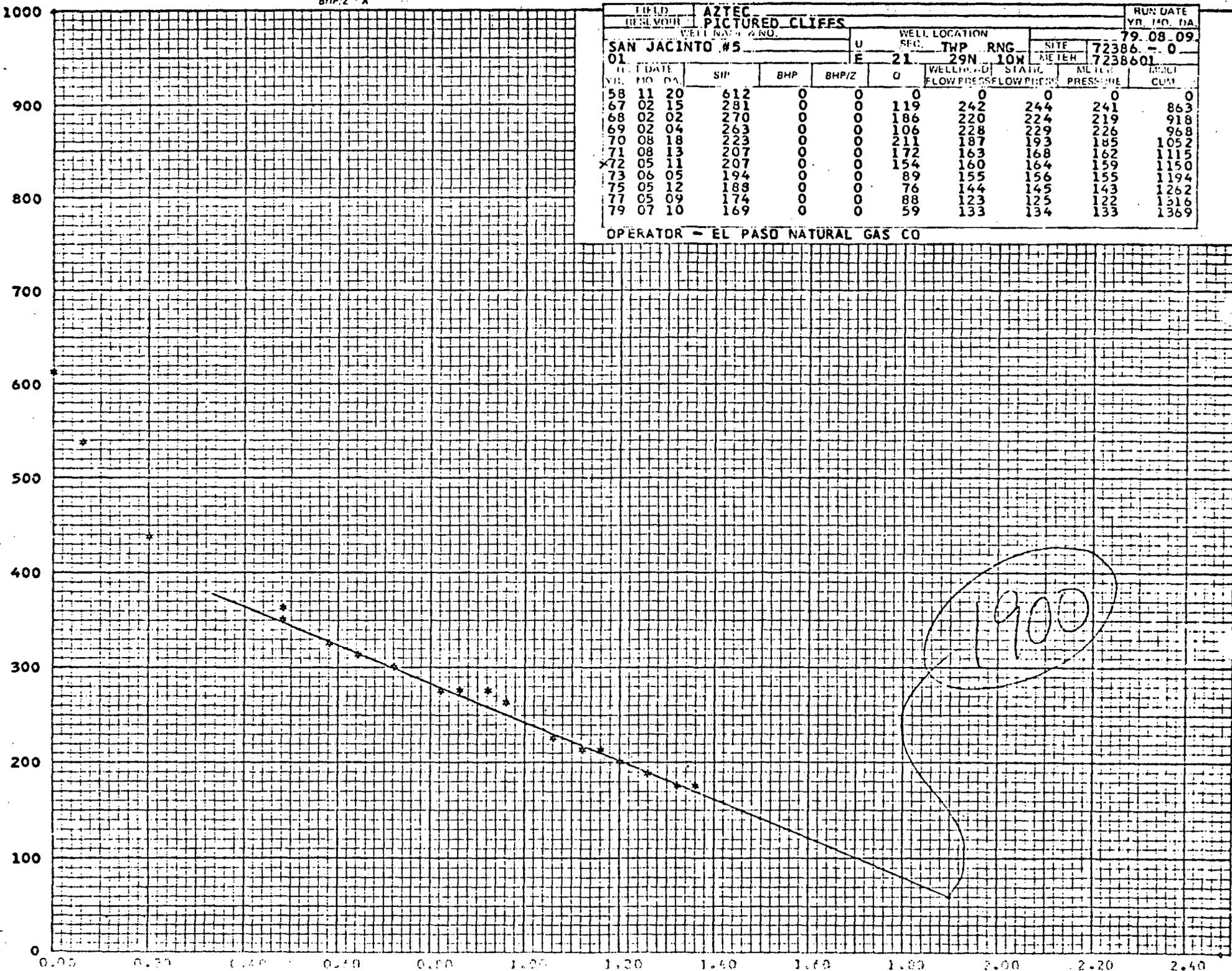
OPERATOR - SUPRON ENERGY CORP



FIELD		AZTEC		RUN DATE	
RESERVOIR		PICTURED CLIFFS		YR. MO. DA.	
WELL NAME & NO.		WELL LOCATION		79-08-09	
SAN JACINTO #5		U	SEC. TWP. RNG.	SITE	
01		E	21 29N 10W	72386-0	
DATE	SHR	BHP	BHP/Z	FLOW	STATIC
YR. MO. DA.				PRESS	PRESS
				MI PER	MI PER
				PRESSURE	CUM
58 11 20	612	0	0	0	0
67 02 15	281	0	0	119	242
68 02 02	270	0	0	186	220
69 02 04	263	0	0	106	228
70 08 18	223	0	0	211	187
71 08 13	207	0	0	172	163
72 05 11	207	0	0	154	160
73 06 05	194	0	0	89	155
75 05 12	188	0	0	76	144
77 05 09	174	0	0	88	123
79 07 10	169	0	0	59	133

OPERATOR - EL PASO NATURAL GAS CO

PRESSURE PSIA



1900

PLOT SYMBOLS: WHSIP = *
BHP/Z = X

1000

900

800

700

600

500

400

300

200

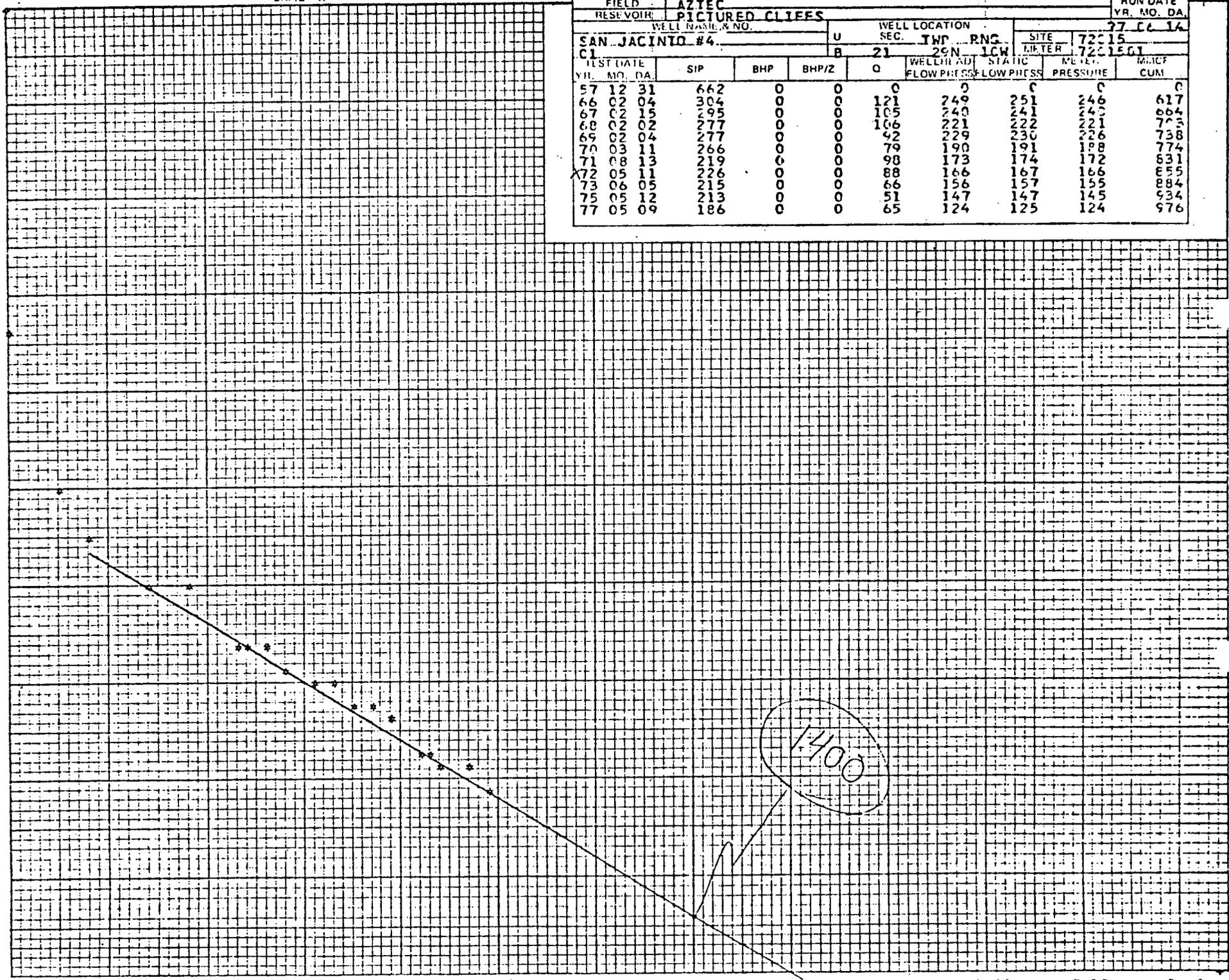
100

0 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40

PRESSURE - PSIA

FIELD		AZTEC		RUN DATE					
RESERVOIR		PICTURED CLIFFS		YR. MO. DA.					
WELL NAME & NO.				WELL LOCATION					
SAN JACINTO #4				SEC.	TWP. RNG.				
C1				U	SITE				
				B 21	72-15				
TEST DATE		SIP	BHP	BHP/Z	WELLHEAD FLOW PRESS	STATIC FLOW PRESS	METER	MEAS. PRESSURE	MISC. CUM
YR.	MO.	DA.			0	1CW	72-1501		
57	12	31	662	0	0	0	0	0	0
66	02	04	304	0	0	121	249	251	246
67	02	15	295	0	0	105	240	241	240
68	02	02	277	0	0	106	221	222	221
69	02	04	277	0	0	42	229	230	226
70	03	11	266	0	0	79	190	191	198
71	08	13	219	0	0	98	173	174	172
72	05	11	226	0	0	88	166	167	166
73	06	05	215	0	0	66	156	157	155
75	05	12	213	0	0	51	147	147	145
77	05	09	186	0	0	65	124	125	124

1400



1000

900

800

700

600

500

400

300

200

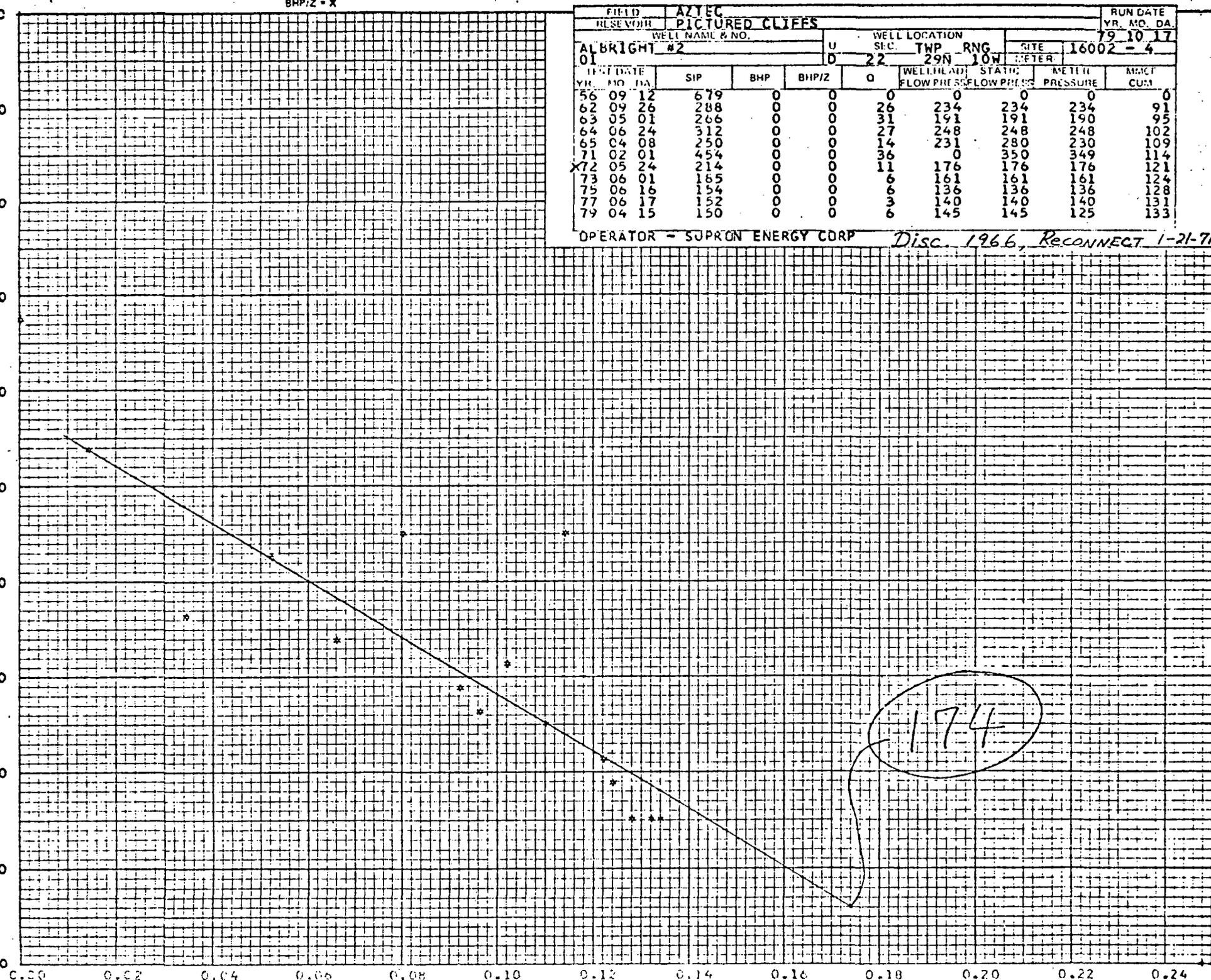
100

0

FIELD		AZTEC		RUN DATE		YR. MO. DA.	
RESERVOIR		PICTURED CLIFFS		22		10 17	
WELL NAME & NO.				WELL LOCATION		SITE	
ALBRIGHT #2				SEC.	TWP	RNG	1602 - 4
01				U	22	29N	10W
DATE				Q	WELLHEAD FLOW PRESS	STATIC FLOW PRESS	METRIC PRESSURE
YR.	MO.	DA.	SIP	BHP	BHP/Z	Q	FLOW PRESS
56	09	12	679	0	0	0	0
62	09	26	288	0	0	26	234
63	05	01	266	0	0	31	191
64	06	24	312	0	0	27	248
65	04	08	250	0	0	14	231
71	02	01	454	0	0	36	0
X72	05	24	214	0	0	11	176
73	06	01	185	0	0	6	161
75	06	16	154	0	0	6	136
77	06	17	152	0	0	3	140
79	04	15	150	0	0	6	145

OPERATOR - SUPRON ENERGY CORP *Disc. 1966, RECONNECT 1-21-71*

PRESSURE - PSIA



174

1600

FIELD	AZTEC			STATE	NEW MEXICO		METER		RUN DATE					
RESERVOIR	PICTURED CLIFFS			COUNTY	SAN JUAN				YR. MO. DA.	80 08 19				
WELL NAME & NO.	J ALBRIGHT #2 PC			WELL LOCATION	SURV. U SEC. TWP 22 29N R13W		WELL STATUS	PRODUCING		RRID NO.	16002-4-02			
					NEWM E 22 29N 13W		OPLR	SUPRON ENERGY CORP		SITE	16002-4-02			
							SOS	PICTURED CLIFFS SYSTEM						
TEST TYPE	TEST DATE	SIP	HRS SI	BHP	BHP/Z	Q	WELLHEAD FLOW PRESS	STATIC FLOW PRESS	METER PRESSURE	H2O Bbls/D	H2O Bbls/MMCF	COND Bbls/D	COND Bbls/MMCF	MMCF CUM
A	80 01 31	291	0	0	0	72	129	129	123	3	0.0	0.0	0.0	4
A	80 04 23	297 ✓	0	0	0	31	128 ✓	128 ✓	125 ✓	0	0.0	0.0	0.0	8

PRESSURE - PSIA

900

800

700

600

500

400

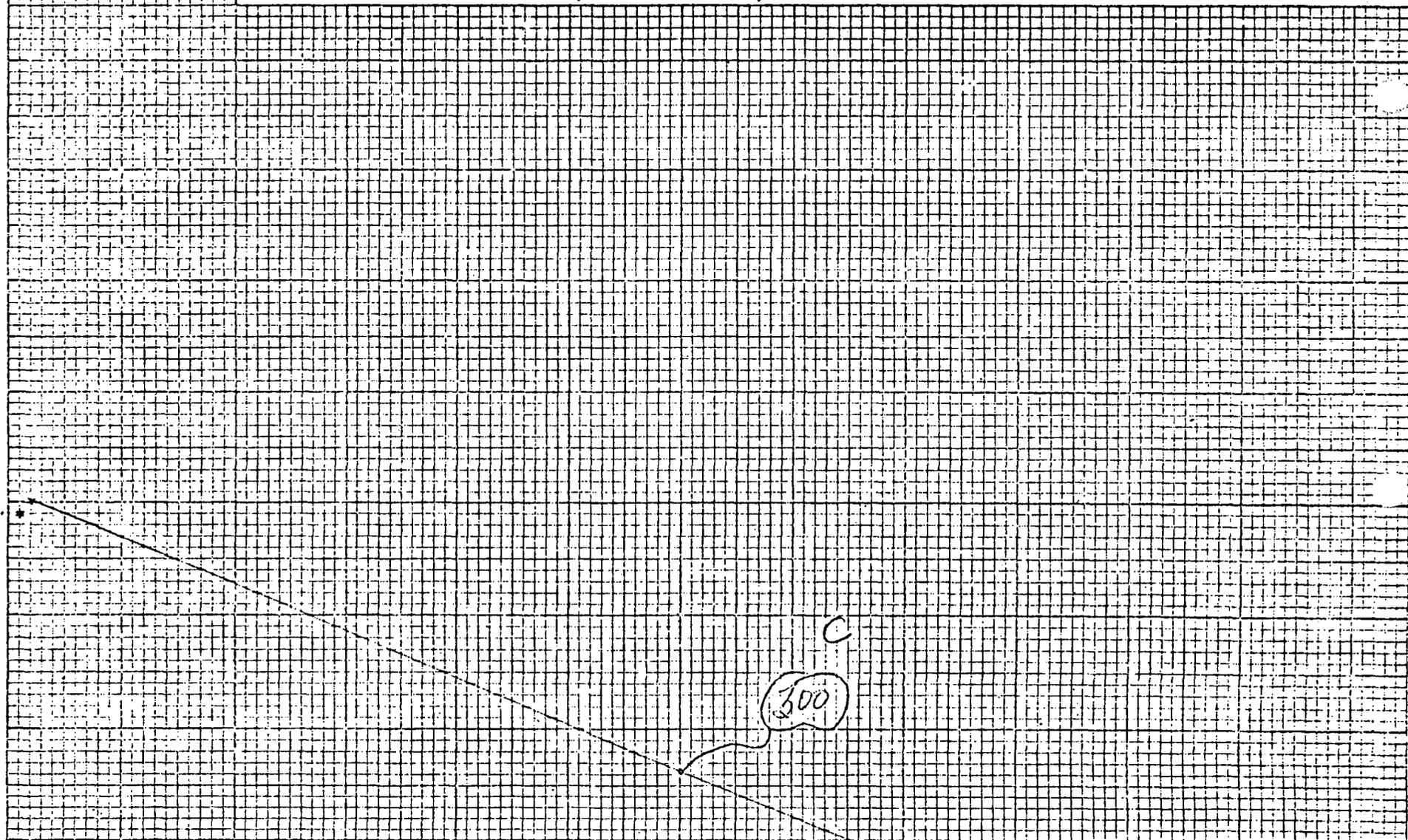
300

200

100

0.00 0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60

C
300



operator: EPNG

well Name: Texas Pacific 1-R

**CALCULATION SHEET
ASSOCIATED OR NON-ASSOCIATED GAS RESERVES
PORE VOLUME METHOD**

Location: 016-29-10
Sec 16, 29 N, 10 W

LD AZtec

RESERVOIR Picture Cliff Perfs: 1957-2017

COUNTY SAN JUAN

STATE NM

ITEM RESERVOIR DATA

SOURCE OF DATA

1. Fractional porosity, $f = 0.163$
2. Interstitial Water Saturation, $S_w = 0.552$
3. Net pay thickness, $h = 18$ ft. Map
4. Area of gas zone, $A = 1$ acres
5. Reservoir volume, $Ah = 1$ ac. ft. +460
6. Gas Gravity = .642; Reservoir Temp. 92 °F = 552 °R
 Orig. reservoir press. = 339.52 psia; Terminal res. press. = 60 psia
 Pseudo-critical pressure, $P_0 =$ _____ psia
 Pseudo-critical temp., $T_0 =$ _____ °R; $T_r =$ _____
7. Original conditions: $P_r =$ _____; $Z_0 = .948$
8. Terminal conditions: $P_r =$ _____; $Z_a = .996$

9. Vol. of gas zone, $V_1 = 43,560 f (1 - S_w) Ah = 43,560 (0.163)(0.448)(1)$
 $= 3181$ cu. ft.

Orig. gas-in-place $= V_1 \times \frac{P_0}{14.73} \times \frac{520}{T_0}$
WNP 324 PSIA
IP AAF 217 Mcf/D
Rw .2
 $= (3181) \times \frac{(339.52)}{14.73} \times \frac{520}{(552)(.948)}$
 $= 71.4$ M cf/Ac-FT

11. Gas-in-place @ abd. $= V_1 \times \frac{P_a}{14.73} \times \frac{520}{T_a}$
 $= () \times \frac{()}{14.73} \times \frac{520}{() ()}$
 $=$ _____ M cf/Ac-FT

12. Orig. gas reserves = Item 10 - Item 11 = _____
 $=$ _____ M cf/Ac-FT

$\frac{71.4}{1000} \times 156 \text{ acres} \times 18' = 200 \text{ M}^2 \text{ C F G I P}$

October 14, 1980

RECEIVED

OCT 21 1980

Oil Conservation

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Sir:

Re: Request For An Administrative Finding That The Drilling Of The El Paso Natural Gas Company Texas Pacific Com. No. 1R, Located In Unit O, Section 16, T-29-N, R-10-W, Aztec Pictured Cliffs Field, San Juan County, New Mexico, Was Necessary To Effectively And Efficiently Drain A Portion Of The Reservoir Covered By The Proration Unit Which Could Not Be Effectively And Efficiently Drained By Any Existing Well Within The Proration Unit.

Pursuant to New Mexico Oil Conservation Division Order No. R-6013-A dated February 8, 1980 and §271.305(b) of the final regulations of the Natural Gas Policy Act of 1978 (NGPA), we respectfully request a finding from your office that the drilling of the El Paso Natural Gas Company Texas Pacific Com. No. 1R was necessary to effectively and efficiently drain a portion of the Aztec Pictured Cliffs Field covered by the proration unit which could not be effectively and efficiently drained by any existing well within the proration unit. The proration unit is described as SE/4, Section 16, T-21-N, R-10-W, San Juan County, New Mexico.

The standard proration (spacing) unit for the Aztec Pictured Cliffs Field is 160 acres. We have included a copy of the field rules applicable to the subject proration unit.

The support for this finding is attached and described below.

1. NMOCC Forms C-101 and C-102 - Copies of approved application to drill and proration unit dedicated.

2. NMOCC Form C-103 - Copy of sundry notice advising that all reports filed on subject well should reflect Aztec Pictured Cliffs Field.
3. NMOCC Form C-105 - Copy of well completion report filed on the EPNG Texas Pacific Com. No. 1R.
4. Well Status Report - Current status of the two wells drilled and completed in the Aztec Pictured Cliffs Field within the subject proration unit.
5. Formation Structure Map - Structure map showing the subject proration unit and the eight adjacent proration units of that portion of the Aztec Pictured Cliffs Field. Contours are on the top of the Pictured Cliffs formation. Also depicted on the map are all Pictured Cliffs wells within the proration units showing their completion dates and estimated remaining reserves as of July 1, 1980. The reserves were estimated by pressure-cumulative production decline curves.

Based on offset wells, it is estimated that approximately 170 MMcf of additional gas can be recovered by the drilling of the Texas Pacific Com. No. 1R and that absent the drilling of the subject well, this volume of gas could not be effectively and efficiently recovered.

Operators, other than El Paso Natural Gas Company, of proration units offsetting the unit for which this finding is sought are listed below:

Supron Energy Corporation
Building V, Fifth Floor
10300 North Central Expressway
Dallas, Texas 75231

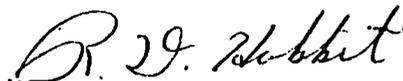
Southland Royalty Company
Cadillac - Fairview Building
Suite 1000
410 - 17th Street
Denver, Colorado 80202

The above parties have been notified by registered mail of this request for a finding.

Upon the issuance of an affirmative finding regarding this well, we request that you consider our application for well classification under Section 103 of the NGPA of 1978. Said application for determination is being filed in conjunction with this request for a finding.

Should you have any questions concerning this request for a finding, please contact the undersigned.

Very truly yours,



R. D. Habbit, Manager
Reservoir Engineering Dept.

DRBalmer:cc

Attachments

AZTEC-PICTURED CLIFFS GAS POOL
Rio Arriba and San Juan Counties, New Mexico

Order No. R-1670, Adopting Special Rules and Regulations, in Addition to the General Rules and Regulations for Northwestern New Mexico, for the Aztec-Pictured Cliffs Gas Pool, Rio Arriba and San Juan Counties, New Mexico, May 20, 1960, as Amended by Order No. R-2307, August 28, 1962.

(Order No. R-1670 Supersedes Order No. R-46, Adopting Rules for the Aztec-Pictured Cliffs and other Gas Pools, Rio Arriba and San Juan Counties, New Mexico, December 29, 1950, as Amended by Order No. R-397, December 17, 1953; Order No. R-565, December 23, 1954; Order No. R-565-A, January 7, 1955; Order No. R-614, April 20, 1955; Order No. R-620, April 20, 1955; Order No. R-565-C, October 13, 1955; Order No. R-565-D, March 29, 1956; and Order No. R-967, April 23, 1957.)

(The Aztec-Pictured Cliffs Gas Pool was created March 15, 1950 and gas prorationing was instituted March 1, 1955)

See separate Order No. R-1670-R, discontinuing gas prorationing as of 7:00 a.m. April 1, 1974.

A. WELL LOCATION AND ACREAGE REQUIREMENTS

RULE 5 (A). A standard gas proration unit in the Aztec-Pictured Cliffs Gas Pool shall be 160 acres.

C. ALLOCATION AND GRANTING OF ALLOWABLES

RULE 11. (As Added by Order No. R-2307, August 28, 1962.) A minimum allowable of 1000 MCF per month per proration unit will be assigned in order to prevent the premature abandonment of wells.

G. GENERAL

RULE 22. No gas, either dry gas or casinghead gas, produced from the Aztec-Pictured Cliffs Gas Pool, except that gas used for "drilling-in" purposes, shall be flared or vented unless specifically authorized by order of the Commission after notice and hearing.

H. MISCELLANEOUS SPECIAL POOL RULES

RULE 25. The vertical limits of the Aztec-Pictured Cliffs Gas Pool shall be the Pictured Cliffs formation.

(General Pool Rules also apply unless in conflict with these Special Pool Rules)

30-045-24408

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease
STATE FEE

5. State Oil & Gas Lease No.
E-2940

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
b. Type of Well DRILL DEEPEN PLUG BACK
OIL WELL GAS WELL OTHER SINGLE ZONE MULTIPLE ZONE

2. Name of Operator
El Paso Natural Gas Company

3. Address of Operator
Box 990, Farmington, New Mexico 87401

4. Location of Well
UNIT LETTER 0 LOCATED 875' FEET FROM THE South LINE
AND 1800 FEET FROM THE East LINE OF SEC. 16 TWP. 29N RGE. 10W NMPM

7. Unit Agreement Name

8. Farm or Lease Name
Texas Pacific Com.

9. Well No.
1R

10. Field and Pool, or Wildcat
Blanco PC

12. County
San Juan

19. Proposed Depth 2070 19A. Formation Pictured Cliffs 20. Rotary or C.T. Rotary

21. Elevations (Show whether DF, RT, etc.) 5604' GL 21A. Kind & Status Plug. Bond Statewide 21B. Drilling Contractor 22. Approx. Date Work will start

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 1/4"	8 5/8"	24#	120'	106 cu.ft.	Surface
6 3/4"	2 7/8"	6.9	2070	410 cu.ft.	Cover OJO Alamo Sufficient to circulate

Selectively perforate and sand water fracture the Pictured Cliffs formation.

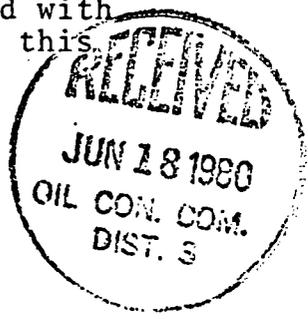
A 3000 psi WP & 6000 psi test double gate preventor equipped with blind and pipe rams will be used for blow out prevention on this well.

This gas is dedicated.

The SE/4 of Section 16 is dedicated to this well.

APPROVAL VALID
DRILLING COMMENCED,

EXPIRES 9-16-80



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed W. G. Sizoo Title Drilling Clerk Date June 16, 1980

(This space for State Use)

APPROVED BY Frank S. Dewey TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

1980

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

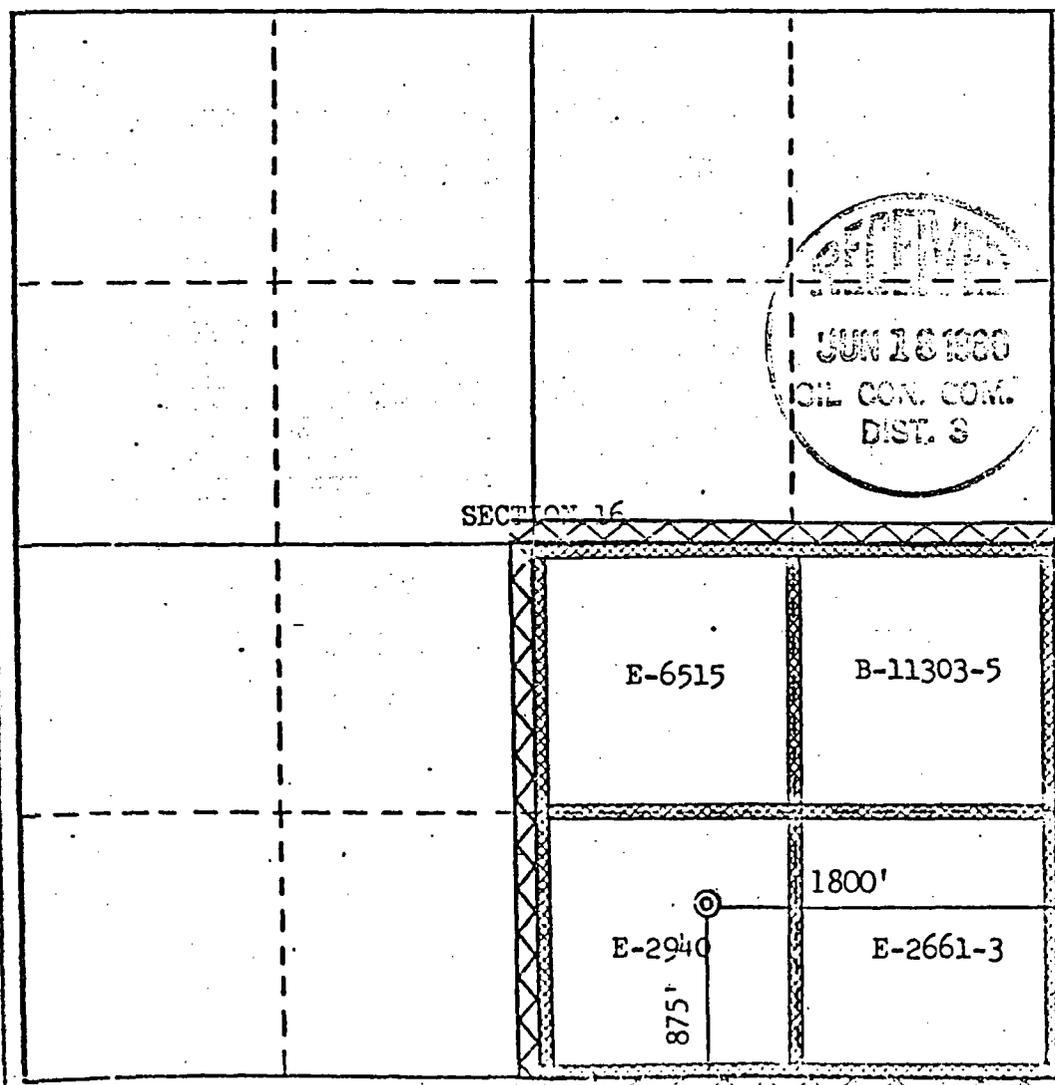
Operator EL PASO NATURAL GAS COMPANY		Lease TEXAS PACIFIC COM (E-2940)		Well No. 1R
Unit Letter 0	Section 16	Township 29N	Range 10W	County SAN JUAN
Actual Footage Location of Well: 875 feet from the SOUTH line and 1800 feet from the EAST line				
Ground Level Elev. 5604	Producing Formation PICTURED CLIFFS	Pool BLANCO PICTURED CLIFFS	Dedicated Acreage: 156.44 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes No If answer is "yes," type of consolidation communitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



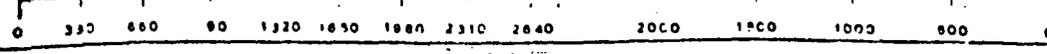
CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

A. P. Luises
Name
Drilling Clerk
Position
El Paso Natural Gas
Company
June 16, 1980
Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
10/8/78
Registered Professional Engineer or Land Surveyor
Mark A. Eichstadt
Certificate No. 1100
Professional Engineer and Surveyor
New Mexico State Board of Engineers and Land Surveyors



NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.
E-2940

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER- 2. Name of Operator El Paso Natural Gas Company	7. Unit Agreement Name
3. Address of Operator PO Box 289, Farmington, NM 87401	8. Farm or Lease Name Texas Pacific Co
4. Location of Well UNIT LETTER O FEET FROM THE 875' South LINE AND 1800' FEET FROM East 16 29N 10W THE LINE, SECTION TOWNSHIP RANGE NMPM.	9. Well No. 1R
15. Elevation (Show whether DF, RT, GR, etc.) 5604' GL	10. Field and Pool, or Wildcat Aztec Pictured Cl
	12. County San Juan

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	
OTHER Correct Pool Name <input type="checkbox"/>			

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

The pool name for this pool should be corrected to be Aztec Pictured Cliffs. This should apply to all reports filed on this well.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Deanna Bradford TITLE Drilling Clerk DATE 9-25-80

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

Form C-105
Revised 1-1-65

5a. Indicate Type of Lease
State Fee
5. State Oil & Gas Lease No.
E-2940

1a. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		7. Unit Agreement Name	
b. TYPE OF COMPLETION NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____		8. Farm or Lease Name Texas Pacific Com	
2. Name of Operator El Paso Natural Gas Company		9. Well No. 1R	
3. Address of Operator P.O. Box 289, Farmington, NM 87401		10. Field and Pool, or Wildcat Blanco PC	
4. Location of Well UNIT LETTER 0 LOCATED 875 FEET FROM THE South LINE AND 1800 FEET FROM		12. County San Juan	
THE E LINE OF SEC. 16 TWP. 29-N RGE. 10-W NMPM			
15. Date Spudded 7-18-80	16. Date T.D. Reached 7-21-80	17. Date Compl. (Ready to Prod.) 8-26-80	18. Elevations (DF, RKB, RT, GR, etc.) 5604' GL
19. Elev. Casinghead		20. Total Depth 2072'	21. Plug Back T.D. 2061'
22. If Multiple Compl., How Many		23. Intervals Drilled By 0-2072'	Rotary Tools 0-2072'
24. Producing Interval(s), of this completion - Top, Bottom, Name 1957-2017' (PC)			25. Was Directional Survey Made No
26. Type Electric and Other Logs Run IES, DBC/ GRS, Temp. Survey			27. Was Well Cored No
28. CASING RECORD (Report all strings set in well)			
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE
8 5/8"	24#	138'	12 1/4"
2 3/8"	6.4#	2072'	6 3/4"
CEMENTING RECORD		AMOUNT PULLED	
100 cu. ft.		864 cu. ft.	
29. LINER RECORD		30. TUBING RECORD	
SIZE	TOP	BOTTOM	SACKS CEMENT
SCREEN		PACKER SET	
Tubingless Completion			
31. Perforation Record (Interval, size and number) 1957, 1966, 1972, 1978, 1988, 1993, 1999, 2011, 2017' W/1 SPZ.		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED	
1957-2017'		49,000# sd, 54,000 gal. wtr.	
33. PRODUCTION			
Date First Production	Production Method (Flowing, gas lift, pumping - Size and type pump)		Well Status (Prod. or Shut-in)
	After Rrac Gauge 217 MCF/D		Shut-in
Date of Test	Hours Tested	Choke Size	Prod'n. Per Test Period
8-26-80			
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.
	310		
34. Disposition of Gas (Sold, used for fuel, vented, etc.)		Test Witnessed By	
		H. E. McAnally	
35. List of Attachments			
36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.			
SIGNED	TITLE		DATE
<i>[Signature]</i>	Drilling Clerk		9-22-80

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

Northwestern New Mexico

T. Anhy _____	T. Canyon _____	738'	T. Penn. "B" _____
T. Salt _____	T. Strawn _____	874'	T. Penn. "C" _____
B. Salt _____	T. Atoka _____	1634'	T. Penn. "D" _____
T. Yates _____	T. Miss _____	1950'	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____	T. Menefee _____	T. Madison _____
T. Queen _____	T. Silurian _____	T. Point Lookout _____	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos _____	T. McCracken _____
T. San Andres _____	T. Simpson _____	T. Gallup _____	T. Ignacio Qtzte _____
T. Glorieta _____	T. McKee _____	Base Greenhorn _____	T. Granite _____
T. Paddock _____	T. Ellenburger _____	T. Dakota _____	T. _____
T. Blinebry _____	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb _____	T. Granite _____	T. Todilto _____	T. _____
T. Drinkard _____	T. Delaware Sand _____	T. Entrada _____	T. _____
T. Abo _____	T. Bone Springs _____	T. Wingate _____	T. _____
T. Wolfcamp _____	T. _____	T. Chinle _____	T. _____
T. Penn. _____	T. _____	T. Permian _____	T. _____
T. Cisco (Bough C) _____	T. _____	T. Penn. "A" _____	T. _____

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
738	874	136	Ojo Alamo				
874	1634'	760'	Kirtland				
1634'	1950'	316	Fruitland				
1950'	2072'	122	Pictured Cliffs				

WELL STATUS REPORT

I. Well Name & Number: Texas Pacific Com. No. 1

Location: 1,650' FSL & 790' FEL, Section 16, T-29-N,
R-10-W, San Juan County, New Mexico

Pool Name & Formation: Aztec Pictured Cliffs

Spud Date: 12-7-57

Completion Date: 1-10-58

Current Rate of Production: 14 Mcf/D (August, 1980)

II. Status:

As stated above, the well was completed in early 1958 and had an initial open flow of 814 Mcf/D. Production continually declined and is currently producing 14 Mcf/D. Initial treatment consisted of 40,000 pounds of sand and 38,800 gallons of water.

This well's 5 1/2" casing was perforated from 2,170' - 2,180', 2,186 - 2,200' and 2,204' - 2,214' with two shots per foot. It was felt that a successful retreatment could not be accomplished due to the large perforated interval which would not allow selective stimulation of the pay zone. Considering this, it was felt that a new well with a limited entry type completion would produce the most desirable results.

Estimated remaining recoverable reserves as of 7-1-80 are 158 MMcf. A review of proration units surrounding this well indicates an average proration unit 7-1-80 remaining recoverable reserves of 329 MMcf. Based on this review, it is estimated that approximately 170 MMcf of additional reserves can be recovered by the completion of the additional well.

WELL STATUS REPORT

I. Well Name & Number: Texas Pacific Com. No. 1R

Location: 875' FSL & 1,800 FEL, Section 16, T-29-N,
R-10-W, San Juan County, New Mexico

Pool Name & Formation: Aztec Pictured Cliffs

Spud Date: 7-18-80

Completion Date: 8-26-80

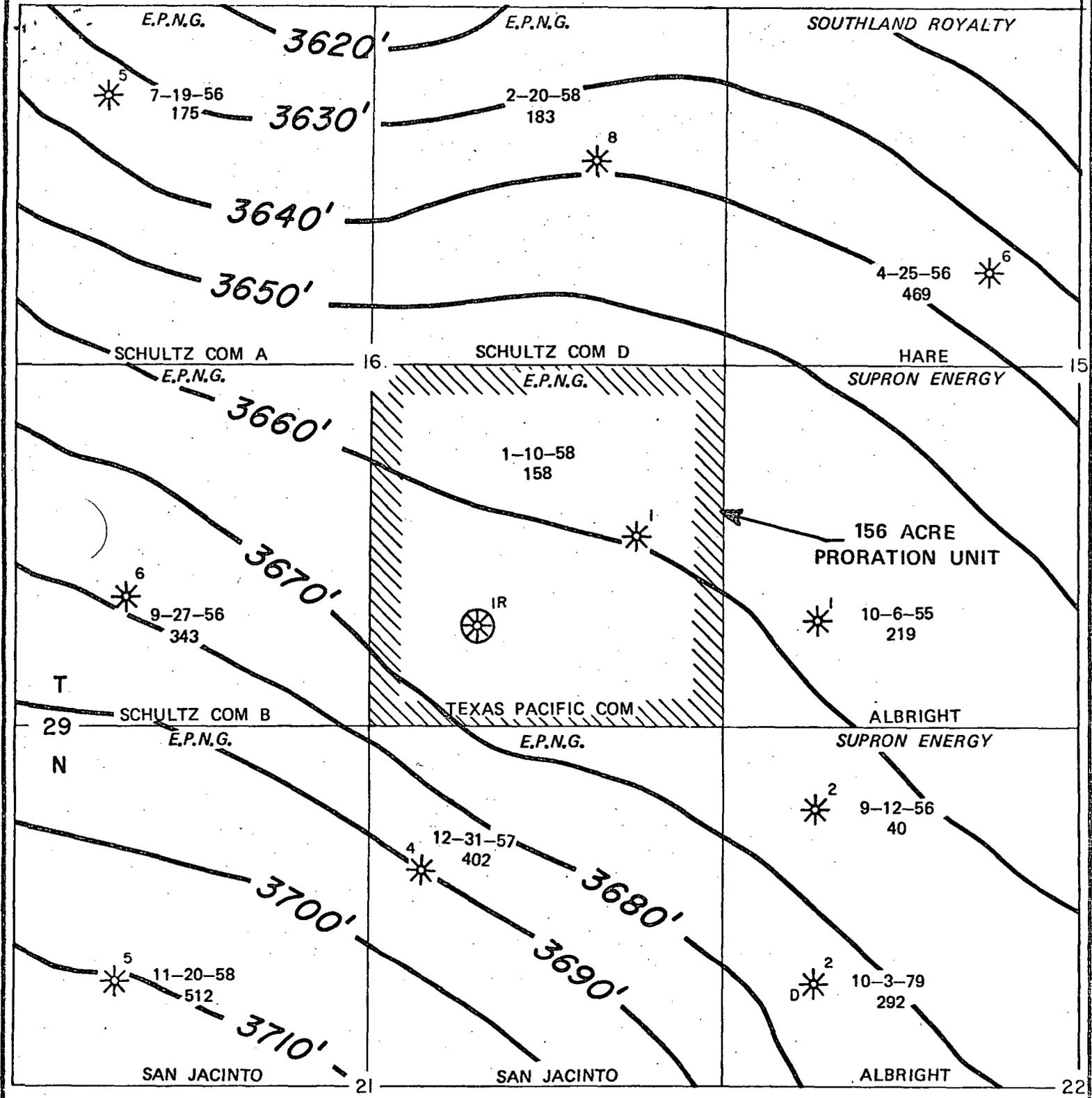
Current Rate of Production: Has not commenced production.

II. Status:

This well was drilled and completed in an effort to recover additional reserves that would not otherwise be recovered. The initial well on this proration unit was reflecting a 7-1-80 remaining recoverable reserve of 158 MMcf. Adjacent proration units indicate an average 7-1-80 remaining reserve of 329 MMcf. For this reason, an additional well was drilled and we feel that an additional reserve of approximately 170 MMcf can be recovered.

This well is a tubingless completion using 2 3/8", 6.4 #/ft. pipe as casing. The limited entry completion method was utilized with the casing being perforated with nine holes. The well was then treated with 49,000 pounds of sand and 54,000 gallons of water.

This completion resulted in an after frac gauge of 217 Mcf/D and a shut-in pressure of 310 psi.

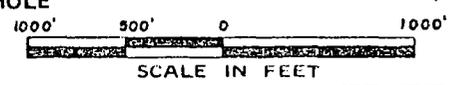


STRUCTURE MAP
 SUBSEA TOP OF PICTURED CLIFFS FORMATION
 CONTOUR INTERVAL = 10'

El Paso Natural Gas Company

AZTEC FIELD
 PICTURED CLIFFS RESERVOIR
 SAN JUAN COUNTY, NEW MEXICO

- * GAS WELL
- *_D DUAL GAS WELL
- *_{P & A} P & A GAS WELL
- *₊ DRY HOLE
- ⊗ REPLACEMENT WELL
- XX-XX-XX COMPLETION DATE
- XXX REMAINING RESERVES AS OF JULY 1, 1980, MMCF



October 14, 1980

RECEIVED

OCT 21 1980

Oil Conservation

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Sir:

Re: Request For An Administrative Finding That The Drilling Of The El Paso Natural Gas Company Texas Pacific Com. No. 1R, Located In Unit O, Section 16, T-29-N, R-10-W, Aztec Pictured Cliffs Field, San Juan County, New Mexico, Was Necessary To Effectively And Efficiently Drain A Portion Of The Reservoir Covered By The Proration Unit Which Could Not Be Effectively And Efficiently Drained By Any Existing Well Within The Proration Unit.

Pursuant to New Mexico Oil Conservation Division Order No. R-6013-A dated February 8, 1980 and §271.305(b) of the final regulations of the Natural Gas Policy Act of 1978 (NGPA), we respectfully request a finding from your office that the drilling of the El Paso Natural Gas Company Texas Pacific Com. No. 1R was necessary to effectively and efficiently drain a portion of the Aztec Pictured Cliffs Field covered by the proration unit which could not be effectively and efficiently drained by any existing well within the proration unit. The proration unit is described as SE/4, Section 16, T-21-N, R-10-W, San Juan County, New Mexico.

The standard proration (spacing) unit for the Aztec Pictured Cliffs Field is 160 acres. We have included a copy of the field rules applicable to the subject proration unit.

The support for this finding is attached and described below.

1. NMOCC Forms C-101 and C-102 - Copies of approved application to drill and proration unit dedicated.

2. NMOCC Form C-103 - Copy of sundry notice advising that all reports filed on subject well should reflect Aztec Pictured Cliffs Field.
3. NMOCC Form C-105 - Copy of well completion report filed on the EPNG Texas Pacific Com. No. 1R.
4. Well Status Report - Current status of the two wells drilled and completed in the Aztec Pictured Cliffs Field within the subject proration unit.
5. Formation Structure Map - Structure map showing the subject proration unit and the eight adjacent proration units of that portion of the Aztec Pictured Cliffs Field. Contours are on the top of the Pictured Cliffs formation. Also depicted on the map are all Pictured Cliffs wells within the proration units showing their completion dates and estimated remaining reserves as of July 1, 1980. The reserves were estimated by pressure-cumulative production decline curves.

Based on offset wells, it is estimated that approximately 170 MMcf of additional gas can be recovered by the drilling of the Texas Pacific Com. No. 1R and that absent the drilling of the subject well, this volume of gas could not be effectively and efficiently recovered.

Operators, other than El Paso Natural Gas Company, of proration units offsetting the unit for which this finding is sought are listed below:

Supron Energy Corporation
Building V, Fifth Floor
10300 North Central Expressway
Dallas, Texas 75231

Southland Royalty Company
Cadillac - Fairview Building
Suite 1000
410 - 17th Street
Denver, Colorado 80202

The above parties have been notified by registered mail of this request for a finding.

Upon the issuance of an affirmative finding regarding this well, we request that you consider our application for well classification under Section 103 of the NGPA of 1978. Said application for determination is being filed in conjunction with this request for a finding.

Should you have any questions concerning this request for a finding, please contact the undersigned.

Very truly yours,



R. D. Habbit, Manager
Reservoir Engineering Dept.

DRBalmer:cc

Attachments

**AZTEC-PICTURED CLIFFS GAS POOL
Río Arriba and San Juan Counties, New Mexico**

Order No. R-1670, Adopting Special Rules and Regulations, in Addition to the General Rules and Regulations for Northwestern New Mexico, for the Aztec-Pictured Cliffs Gas Pool, Río Arriba and San Juan Counties, New Mexico, May 20, 1960, as Amended by Order No. R-2307, August 28, 1962.

(Order No. R-1670 Supersedes Order No. R-46, Adopting Rules for the Aztec-Pictured Cliffs and other Gas Pools, Río Arriba and San Juan Counties, New Mexico, December 29, 1950, as Amended by Order No. R-397, December 17, 1953; Order No. R-565, December 23, 1954; Order No. R-565-A, January 7, 1955; Order No. R-614, April 20, 1955; Order No. R-620, April 20, 1955; Order No. R-565-C, October 13, 1955; Order No. R-565-D, March 29, 1956; and Order No. R-967, April 23, 1957.)

(The Aztec-Pictured Cliffs Gas Pool was created March 15, 1950 and gas prorationing was instituted March 1, 1955)

See separate Order No. R-1670-R, discontinuing gas prorationing as of 7:00 a.m. April 1, 1974.

A. WELL LOCATION AND ACREAGE REQUIREMENTS

RULE 5 (A). A standard gas proration unit in the Aztec-Pictured Cliffs Gas Pool shall be 160 acres.

C. ALLOCATION AND GRANTING OF ALLOWABLES

RULE 11. (As Added by Order No. R-2307, August 28, 1962.) A minimum allowable of 1000 MCF per month per proration unit will be assigned in order to prevent the premature abandonment of wells.

G. GENERAL

RULE 22. No gas, either dry gas or casinghead gas, produced from the Aztec-Pictured Cliffs Gas Pool, except that gas used for "drilling-in" purposes, shall be flared or vented unless specifically authorized by order of the Commission after notice and hearing.

H. MISCELLANEOUS SPECIAL POOL RULES

RULE 25. The vertical limits of the Aztec-Pictured Cliffs Gas Pool shall be the Pictured Cliffs formation.

(General Pool Rules also apply unless in conflict with these Special Pool Rules)

30-045-24408

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease
STATE FEE

5. State Oil & Gas Lease No.
E-2940

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

b. Type of Well DRILL DEEPEN PLUG BACK
OIL WELL GAS WELL OTHER SINGLE ZONE MULTIPLE ZONE

2. Name of Operator
El Paso Natural Gas Company

3. Address of Operator
Box 990, Farmington, New Mexico 87401

4. Location of Well
UNIT LETTER 0 LOCATED 875' FEET FROM THE South LINE
AND 1800 FEET FROM THE East LINE OF SEC. 16 TWP. 29N RGE. 10W NMPM

7. Unit Agreement Name

8. Farm or Lease Name
Texas Pacific Com.

9. Well No.
1R

10. Field and Pool, or Wildcat
Blanco PC

12. County
San Juan

19. Proposed Depth 2070
19A. Formation Pictured Cliffs
20. Rotary or C.T. Rotary

21. Elevations (Show whether DF, RT, etc.) 5604' GL
21A. Kind & Status Plug. Bond Statewide
21B. Drilling Contractor
22. Approx. Date Work will start

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 1/4"	8 5/8"	24#	120'	106 cu.ft.	Surface
6 3/4"	2 7/8"	6.9	2070	410 cu.ft.	Cover OJO Alamo Sufficient to circulate

Selectively perforate and sand water fracture the Pictured Cliffs formation.

A 3000 psi WP & 6000 psi test double gate preventor equipped with blind and pipe rams will be used for blow out prevention on this well.

This gas is dedicated.

The SE/4 of Section 16 is dedicated to this well.

APPROVAL VALID
DRILLING COMMENCED,

EXPIRES 9-16-80



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT, PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed [Signature] Title Drilling Clerk Date June 16, 1980

(This space for State Use)

SUPERVISOR DISTRICT 3

APPROVED BY [Signature] TITLE DATE JUN 18 1980

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

1980

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

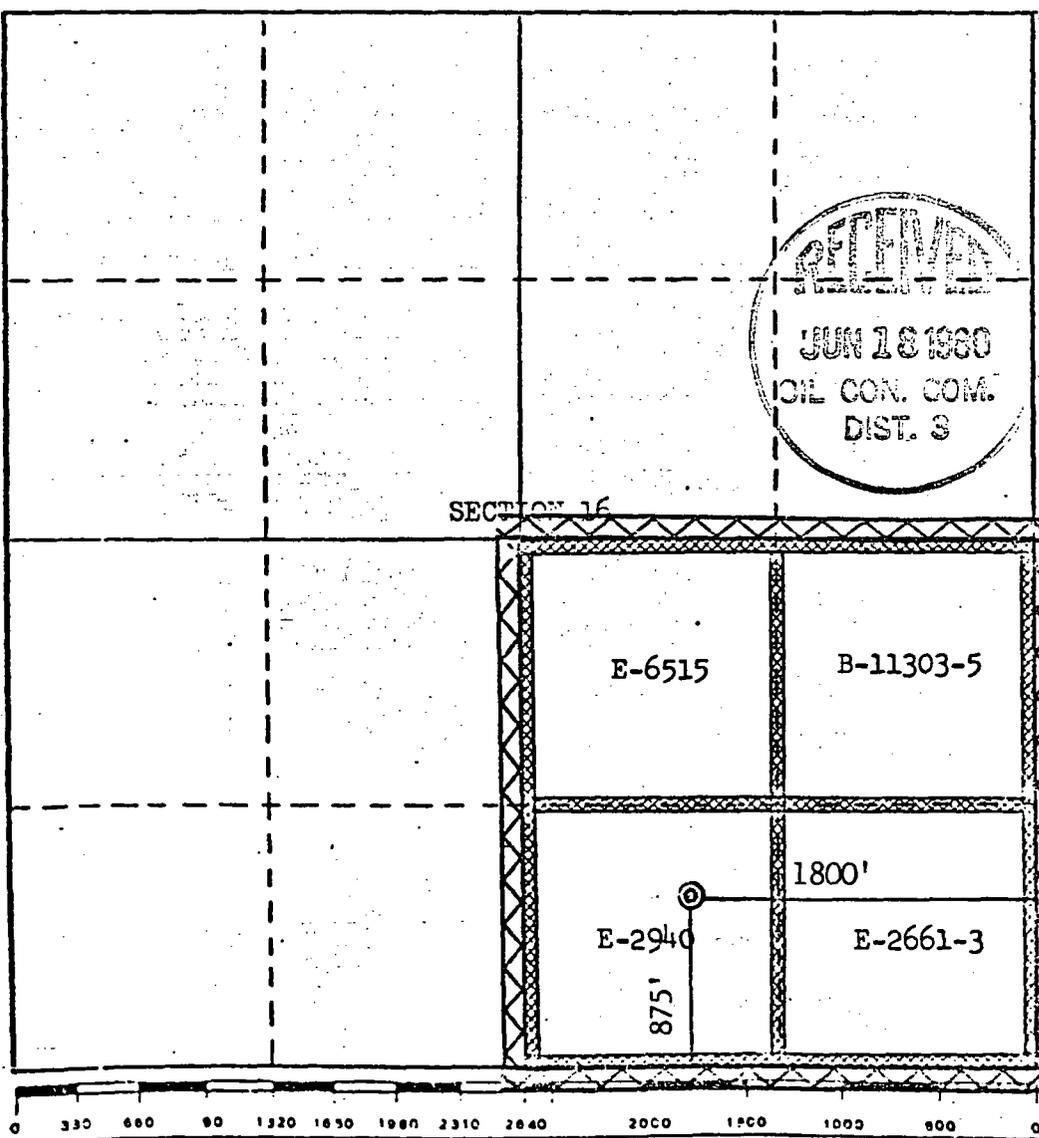
Operator EL PASO NATURAL GAS COMPANY			Lease TEXAS PACIFIC COM (E-2940)			Well No. 1R		
Unit Letter 0	Section 16	Township 29N	Range 10W	County SAN JUAN				
Actual Footage Location of Well: 875 feet from the SOUTH line and 1800 feet from the EAST line								
Ground Level Elev. 5604	Producing Formation PICTURED CLIFFS		Pool BLANCO PICTURED CLIFFS			Dedicated Acreage: 156.44 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes No If answer is "yes," type of consolidation communitization

If answer is "no," list the owners and tract descriptions which have actually, been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

A. P. Guises
Name
Drilling Clerk
Position
El Paso Natural Gas
Company
June 16, 1980
Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
10/8/78
Registered Professional Land Surveyor
Mark A. Eichstadt
Certificate No. 1001

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.
E-2940

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL GAS WELL OTHER

2. Name of Operator
El Paso Natural Gas Company

3. Address of Operator
PO Box 289, Farmington, NM 87401

4. Location of Well
UNIT LETTER O, 875' FEET FROM THE South LINE AND 1800' FEET FROM THE East LINE, SECTION 16 TOWNSHIP 29N RANGE 10W NMPM.

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.
E-2940

7. Unit Agreement Name

8. Farm or Lease Name
Texas Pacific Com

9. Well No.
1R

10. Field and Pool, or Wildcat
Aztec Pictured Cli

11. Elevation (Show whether DF, RT, GR, etc.)
5604' GL

12. County
San Juan

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK

TEMPORARILY ABANDON

PULL OR ALTER CASING

OTHER Correct Pool Name

PLUG AND ABANDON

CHANGE PLANS

SUBSEQUENT REPORT OF:

REMEDIAL WORK

COMMENCE DRILLING OPNS.

CASING TEST AND CEMENT JOB

OTHER

ALTERING CASING

PLUG AND ABANDONMENT

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

The pool name for this pool should be corrected to be Aztec Pictured Cliffs. This should apply to all reports filed on this well.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Deanna Bradford TITLE Drilling Clerk DATE 9-25-80

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

Form C-105
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease
State Fee

5. State Oil & Gas Lease No.
E-2940

1a. TYPE OF WELL
OIL WELL GAS WELL DRY OTHER _____

b. TYPE OF COMPLETION
NEW WELL WORK OVER DEEPEN PLUG BACK DIFF. RESVR. OTHER _____

7. Unit Agreement Name
8. Farm or Lease Name
Texas Pacific Com

2. Name of Operator
El Paso Natural Gas Company

9. Well No.
1R

3. Address of Operator
P.O. Box 289, Farmington, NM 87401

10. Field and Pool, or Wildcat
Blanco PC

4. Location of Well
UNIT LETTER 0 LOCATED 875 FEET FROM THE South LINE AND 1800 FEET FROM

THE E LINE OF SEC. 16 TWP. 29-N RGE. 10-W NMPM

12. County
San Juan

15. Date Spudded 7-18-80 16. Date T.D. Reached 7-21-80 17. Date Compl. (Ready to Prod.) 8-26-80 18. Elevations (DF, RKB, RT, GR, etc.) 5604' GL 19. Elev. Casinghead

20. Total Depth 2072' 21. Plug Back T.D. 2061' 22. If Multiple Compl., How Many _____ 23. Intervals Drilled By Rotary Tools 0-2072' Cable Tools _____

24. Producing Interval(s), of this completion - Top, Bottom, Name
1957-2017' (PC)

25. Was Directional Survey Made
No

26. Type Electric and Other Logs Run
IES, DRC/ GRS, Temp Survey

27. Was Well Cored
No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24#	138'	12 1/4"	100 cu. ft.	
2 3/8"	6 4#	2072'	6 3/4"	864 cu. ft.	

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
Tubingless Completion							

30. TUBING RECORD

31. Perforation Record (Interval, size and number)
1957, 1966, 1972, 1978, 1988, 1993, 1999, 2011, 2017' W/1 SPZ.

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
<u>1957-2017'</u>	<u>49,000# sd. 54,000 gal. wtr.</u>

33. PRODUCTION

Date First Production _____ Production Method (*Flowing, gas lift, pumping - Size and type pump*) After Frac Gauge 217 MCF/D Well Status (*Prod. or Shut-in*) Shut-In

Date of Test 8-26-80 Hours Tested _____ Choke Size _____ Prod'n. For Test Period _____ Oil - Bbl. _____ Gas - MCF _____ Water - Bbl. _____ Gas-Oil Ratio _____

Flow Tubing Press. _____ Casing Pressure 310 Calculated 24-Hour Rate _____ Oil - Bbl. _____ Gas - MCF _____ Water - Bbl. _____ Oil Gravity - API (Corr.) _____

34. Disposition of Gas (*Sold, used for fuel, vented, etc.*) _____ Test Witnessed By
H. E. McAnally

35. List of Attachments _____

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED [Signature] TITLE Drilling Clerk DATE 9-22-80

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

Northwestern New Mexico

T. Anhy _____	T. Canyon _____	T. Ojo Alamo _____ 738'	T. Penn. "B" _____
T. Salt _____	T. Strawn _____	T. Kirtland-Fruitland _____ 874'	T. Penn. "C" _____
B. Salt _____	T. Atoka _____	T. Fruitland _____ 1634'	T. Penn. "D" _____
T. Yates _____	T. Miss _____	T. P.C. _____ 1950'	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____	T. Menefee _____	T. Madison _____
T. Queen _____	T. Silurian _____	T. Point Lookout _____	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos _____	T. McCracken _____
T. San Andres _____	T. Simpson _____	T. Gallup _____	T. Ignacio Qtzte _____
T. Glorieta _____	T. McKee _____	Base Greenhorn _____	T. Granite _____
T. Paddock _____	T. Ellenburger _____	T. Dakota _____	T. _____
T. Blinebry _____	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb _____	T. Granite _____	T. Todilto _____	T. _____
T. Drinkard _____	T. Delaware Sand _____	T. Entrada _____	T. _____
T. Abo _____	T. Bone Springs _____	T. Wingate _____	T. _____
T. Wolfcamp _____	T. _____	T. Chinle _____	T. _____
T. Penn. _____	T. _____	T. Permian _____	T. _____
T. Cisco (Bough C) _____	T. _____	T. Penn. "A" _____	T. _____

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
738	874	136	Ojo Alamo				
874	1634'	760'	Kirtland				
1634'	1950'	316	Fruitland				
1950'	2072'	122	Pictured Cliffs				

WELL STATUS REPORT

I. Well Name & Number: Texas Pacific Com. No. 1

Location: 1,650' FSL & 790' FEL, Section 16, T-29-N,
R-10-W, San Juan County, New Mexico

Pool Name & Formation: Aztec Pictured Cliffs

Spud Date: 12-7-57

Completion Date: 1-10-58

Current Rate of Production: 14 Mcf/D (August, 1980)

II. Status:

As stated above, the well was completed in early 1958 and had an initial open flow of 814 Mcf/D. Production continually declined and is currently producing 14 Mcf/D. Initial treatment consisted of 40,000 pounds of sand and 38,800 gallons of water.

This well's 5 1/2" casing was perforated from 2,170' - 2,180', 2,186 - 2,200' and 2,204' - 2,214' with two shots per foot. It was felt that a successful retreatment could not be accomplished due to the large perforated interval which would not allow selective stimulation of the pay zone. Considering this, it was felt that a new well with a limited entry type completion would produce the most desirable results.

Estimated remaining recoverable reserves as of 7-1-80 are 158 MMcf. A review of proration units surrounding this well indicates an average proration unit 7-1-80 remaining recoverable reserves of 329 MMcf. Based on this review, it is estimated that approximately 170 MMcf of additional reserves can be recovered by the completion of the additional well.

WELL STATUS REPORT

I. Well Name & Number: Texas Pacific Com. No. 1R

Location: 875' FSL & 1,800 FEL, Section 16, T-29-N,
R-10-W, San Juan County, New Mexico

Pool Name & Formation: Aztec Pictured Cliffs

Spud Date: 7-18-80

Completion Date: 8-26-80

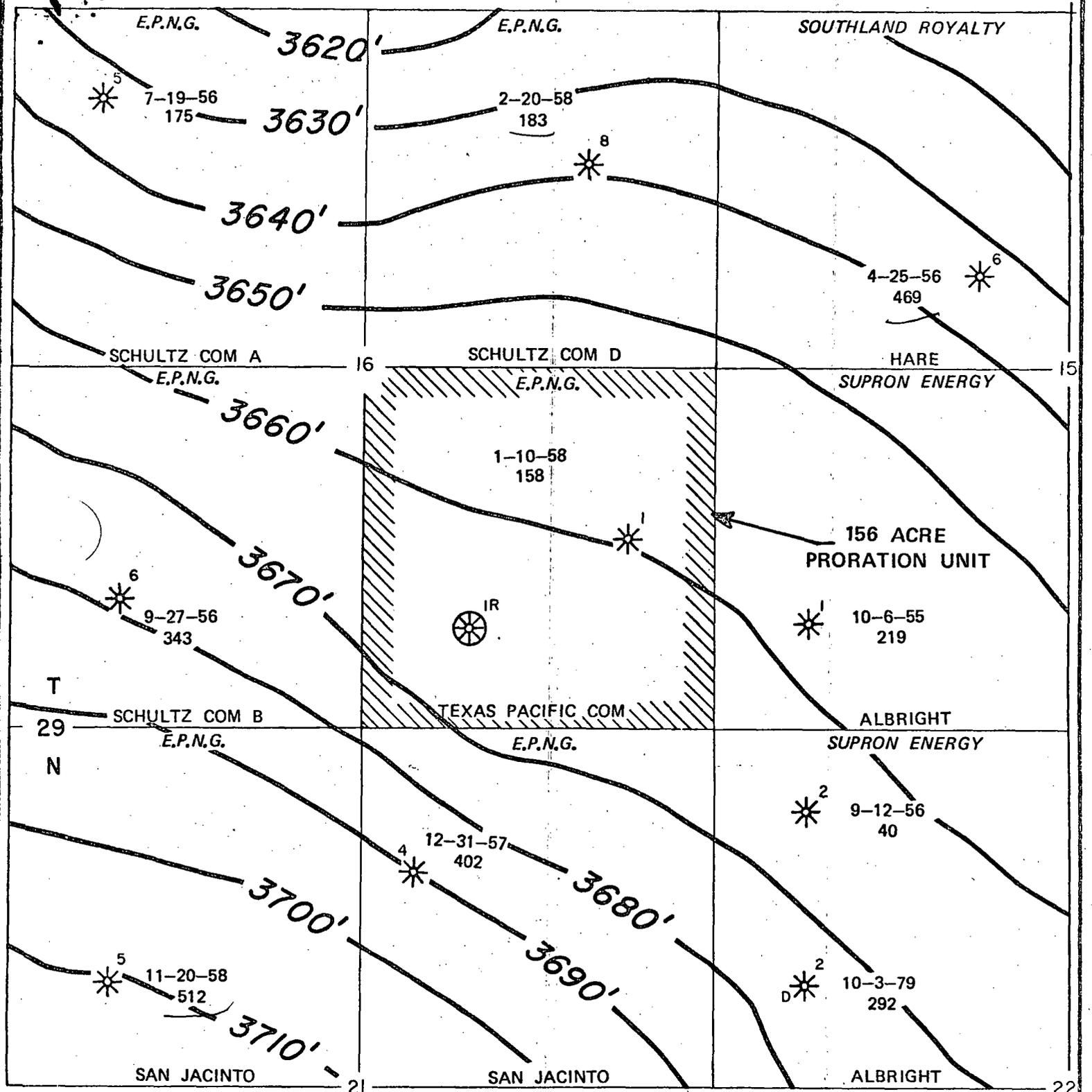
Current Rate of Production: Has not commenced production.

II. Status:

This well was drilled and completed in an effort to recover additional reserves that would not otherwise be recovered. The initial well on this proration unit was reflecting a 7-1-80 remaining recoverable reserve of 158 MMcf. Adjacent proration units indicate an average 7-1-80 remaining reserve of 329 MMcf. For this reason, an additional well was drilled and we feel that an additional reserve of approximately 170 MMcf can be recovered.

This well is a tubingless completion using 2 3/8", 6.4 #/ft. pipe as casing. The limited entry completion method was utilized with the casing being perforated with nine holes. The well was then treated with 49,000 pounds of sand and 54,000 gallons of water.

This completion resulted in an after frac gauge of 217 Mcf/D and a shut-in pressure of 310 psi.



R 10 W

STRUCTURE MAP
SUBSEA TOP OF PICTURED CLIFFS FORMATION
CONTOUR INTERVAL = 10'

El Paso Natural Gas Company
AZTEC FIELD
PICTURED CLIFFS RESERVOIR
SAN JUAN COUNTY, NEW MEXICO

* GAS WELL	⊗ REPLACEMENT WELL
* _D DUAL GAS WELL	XX-XX-XX COMPLETION DATE
* _P P & A GAS WELL	XXX REMAINING RESERVES
* _D DRY HOLE	AS OF JULY 1, 1980, MMCF

1000' 500' 0 1000'
 SCALE IN FEET

✓

✓

✓