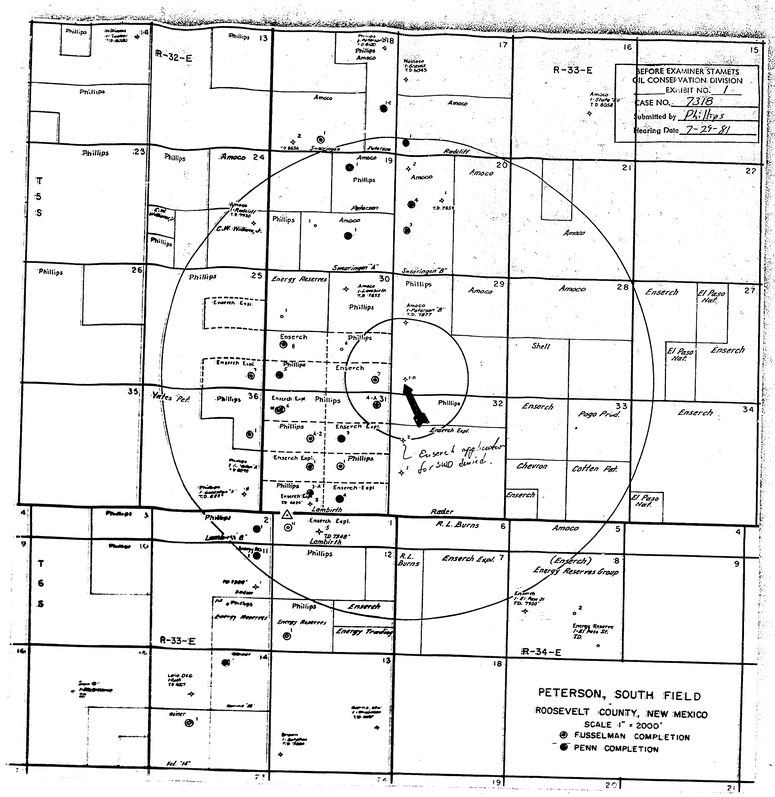
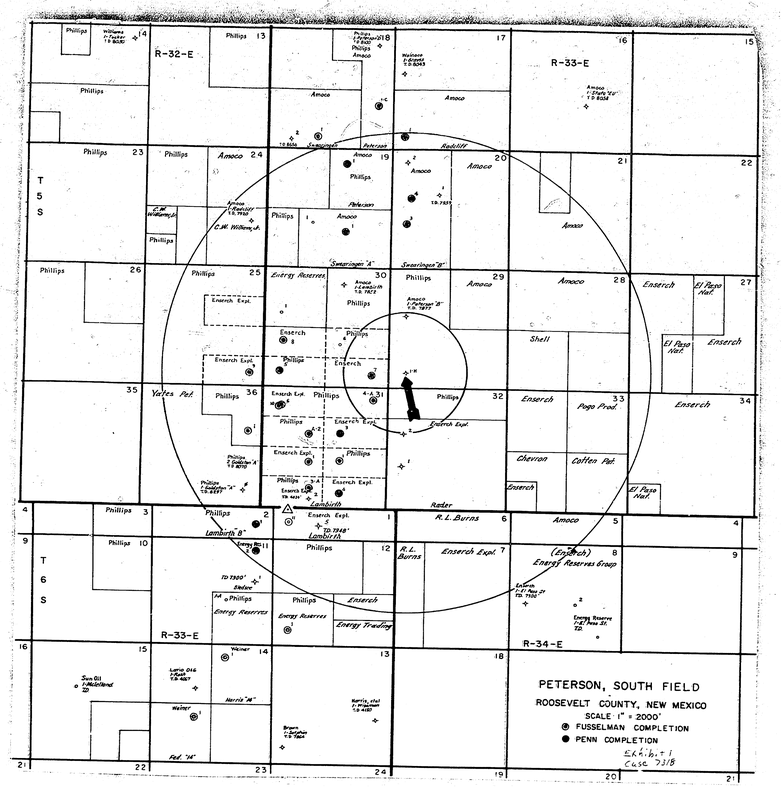
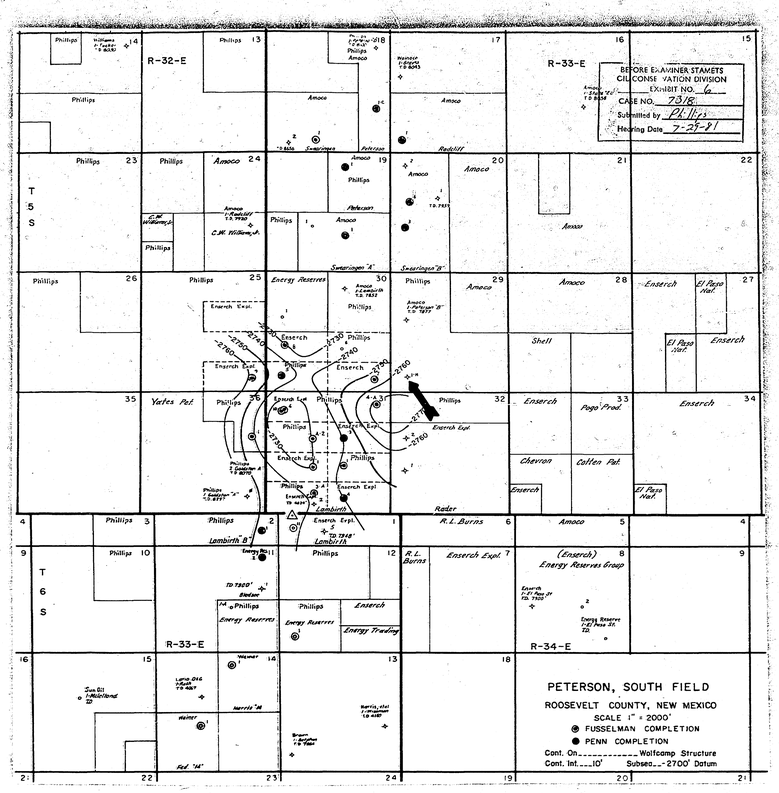
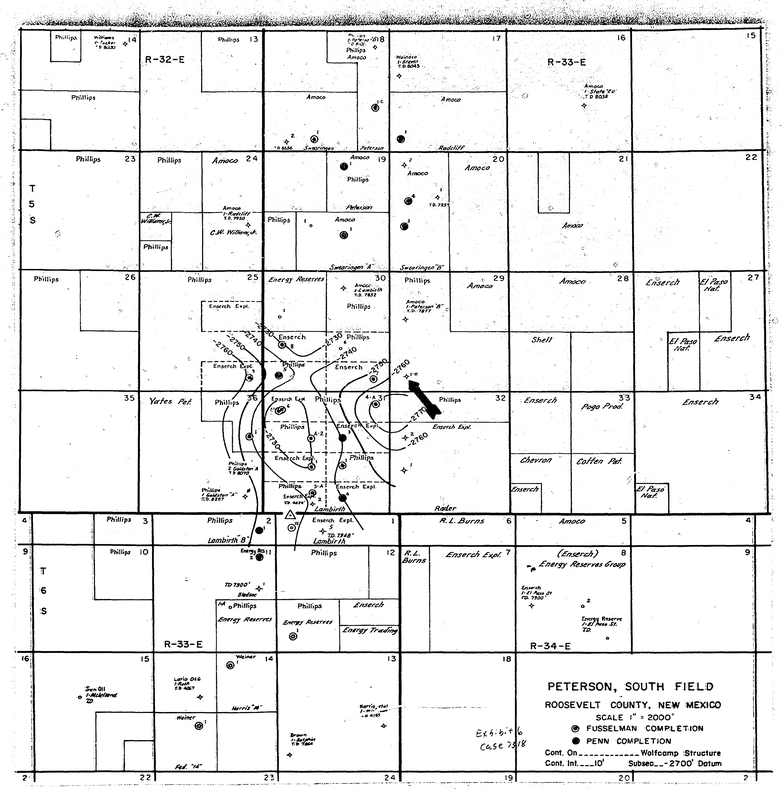
Case No.
7318

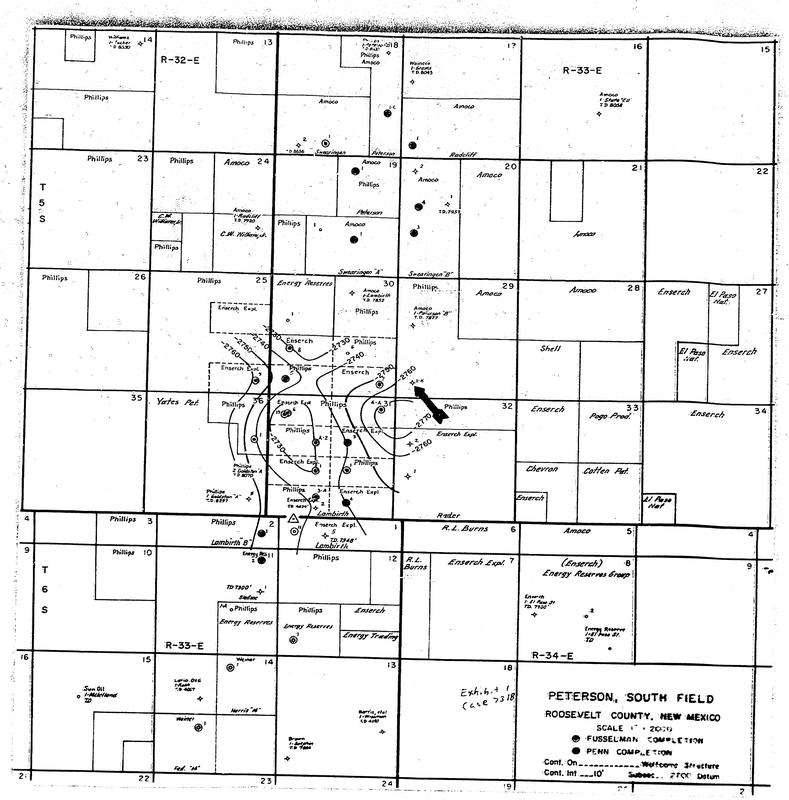
Large Exhibits

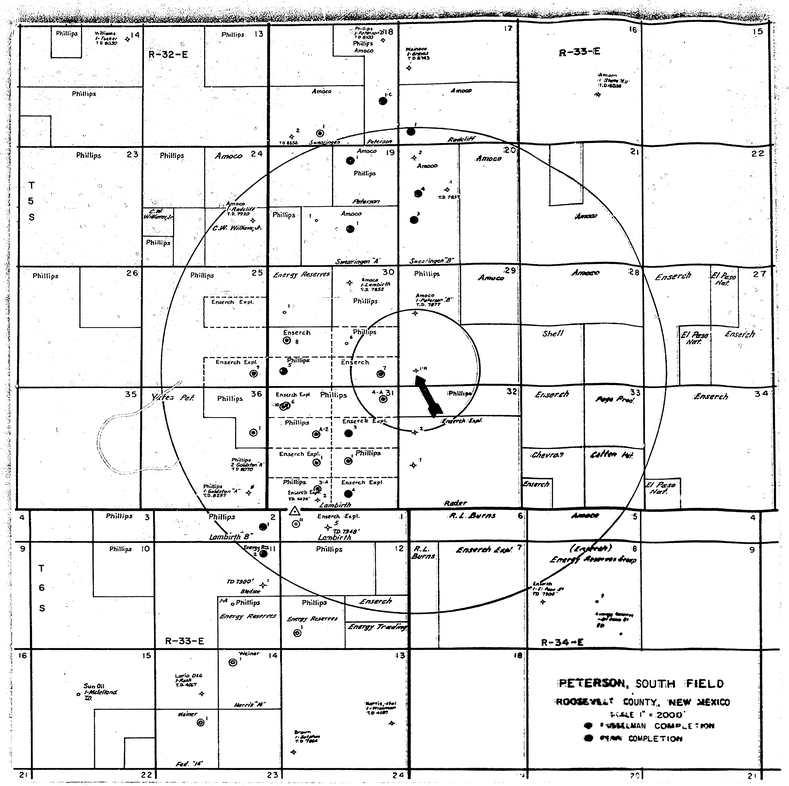

R-32-E
R-33-E
R-34-E
T 5 S
T 6 S
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 1
CASE NO. 7318
Submitted by Phillips
Hearing Date 7-23-81
PETERSON, SOUTH FIELD
ROOSEVELT COUNTY, NEW MEXICO
SCALE 1" = 2000'
FUSSELMAN COMPLETION
PENN COMPLETION


R-32-E
R-33-E
R-34-E
T 5 S
T 6 S
Phillips
Amoco
Enserch Expl.
Energy Reserves
Yates Pet.
Shell
Cheron
Coffen Pet.
Pogo Prod.
El Paso Nat.
Enserch
R.L. Burns
Rader
Lambirth
Pelecan
Swearingen "A"
Swearingen "B"
PETERSON, SOUTH FIELD
ROOSEVELT COUNTY, NEW MEXICO
SCALE 1" = 2000'
FUSSELMAN COMPLETION
PENN COMPLETION
Exhibit 1
Case 7318

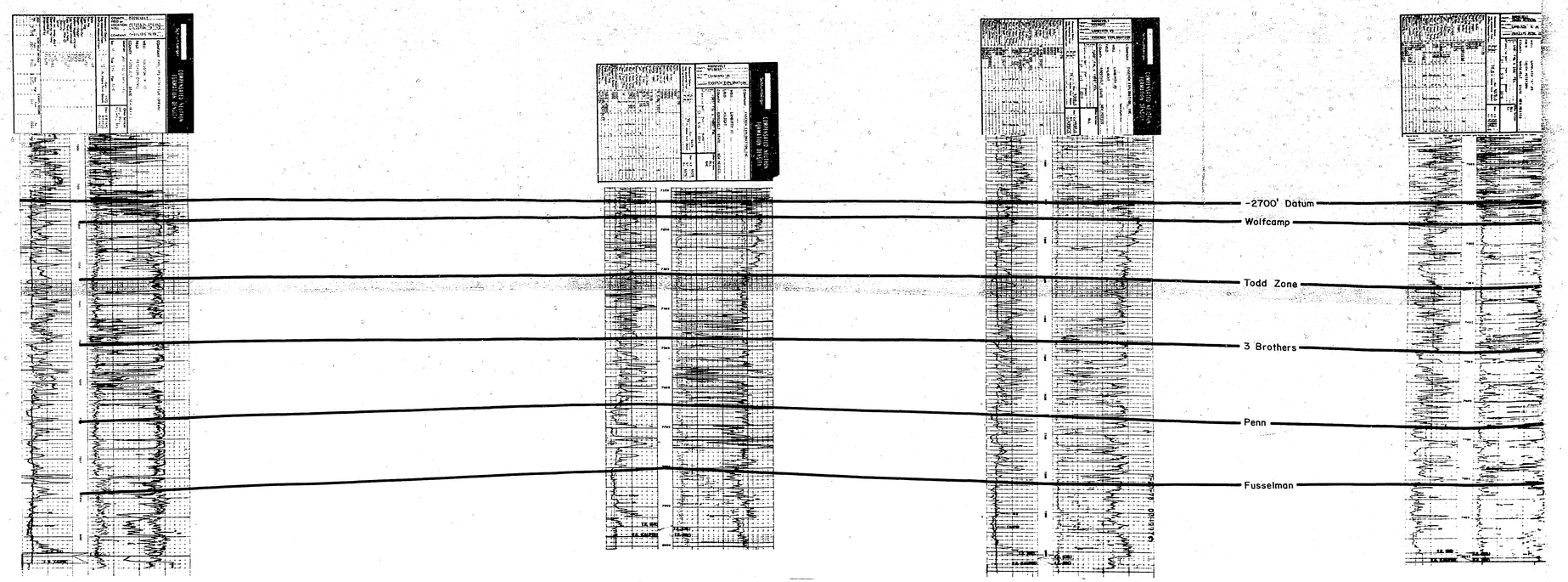

R-32-E
R-33-E
R-34-E
T 5 S
T 6 S
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 6
CASE NO. 7318
Submitted by Phillips
Hearing Date 7-29-81
PETERSON, SOUTH FIELD
ROOSEVELT COUNTY, NEW MEXICO
SCALE 1" = 2000'
FUSSELMAN COMPLETION
PENN COMPLETION
Cont. On Wolfcamp Structure
Cont. Int. 10' Subsea -2700' Datum

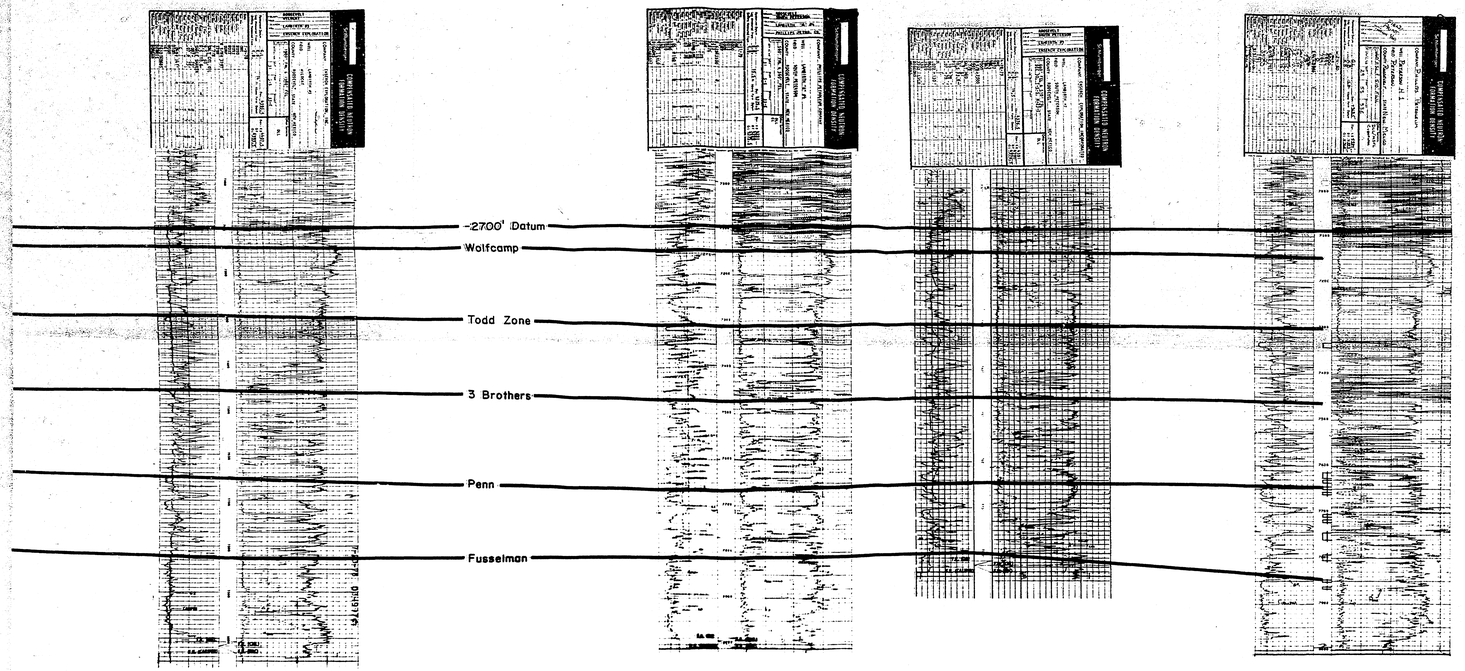

R-32-E
R-33-E
R-34-E
T 5 S
T 6 S
Phillips
Amoco
Enserch
Energy Reserves
Shell
Chevron
Coffee Pat.
Pogo Prod.
El Paso Nat.
Yates Pet.
R.L. Burns
Enserch Expl.
Lambirth B-1
Lambirth A-1
Peterson
Smerlenga "A"
Smerlenga "B"
Radcliff
Rader
C.W. Williams Jr.
Energy Trading
-2700
-2720
-2740
-2760
-2780
-2800
PETERSON, SOUTH FIELD
ROOSEVELT COUNTY, NEW MEXICO
SCALE 1" = 2000'
FUSSELMAN COMPLETION
PENN COMPLETION
Cont. On _____ Wolfcamp Structure
Cont. Int. ___10' Subsea ___2700' Datum
Ex. 6-6-46
Case 7518

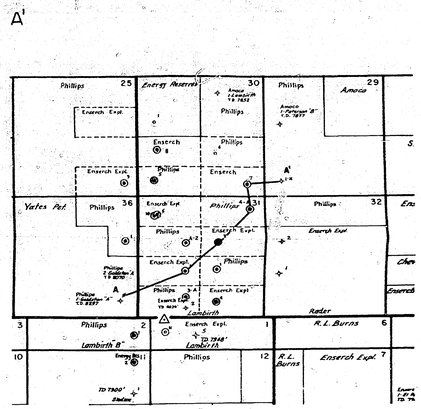

R-32-E
R-33-E
R-34-E
T 5 S
T 6 S
PETERSON, SOUTH FIELD
ROOSEVELT COUNTY, NEW MEXICO
SCALE 1" = 2000'
FUSSELMAN COMPLETION
PENN COMPLETION
Cont. Int ___10'
Subsea ___2700' Datum
Esh. & 4 f
Case 7318


R-32-E
R-33-E
R-34-E
T 5 S
T 6 S
Phillips
Amoco
Enserch
Energy Reserves
Enserch Expl.
Yates Pet.
Shell
Chevron
Cotton Pet.
El Paso Nat.
Pogo Prod.
R.L. Burns
Sun Oil
Lambirth "B"
Lambirth
Peterson
Saunders
Rudolph
Harris "A"
Weiner
Reder
PETERSON, SOUTH FIELD
ROOSEVELT COUNTY, NEW MEXICO
SCALE 1" = 2000'
WILDCAT COMPLETION
FIELD COMPLETION

A







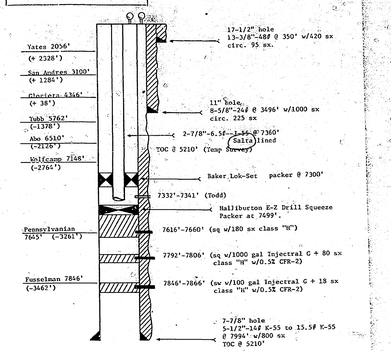
PETERSON (SOUTH) FIELD
ROOSEVELT COUNTY, NEW MEXICO
SW-NE CROSS SECTION

200'
100'
SCALE
200'
400'

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 7
CASE NO. 735
Submitted by
Hearing Date

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 2
CASE NO. 7318
Submitted by Phillips
Hearing Date 7-29-81

Peterson "M" No. 1
660' FSL and 510' FWL
Section 29, T-5-S, R-33-E
Roosevelt County, New Mexico



PETERSON 'H' NO. 1
Peterson (South) Field
Water Injection Calculations

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 9
CASE NO. 7318
Submitted by Phillips
Hearing Date 7-29-81

Proposed Injection Zone:	Wolfcamp (Todd)
Perforations:	7332'-7341'
Net Interval:	9'
Average Porosity:	15.6%
Formation Volume Factor for Water:	1.01
Static Fluid Level:	1800'
Specific Gravity of Fluid:	1.073; 0.465 psi/ft
BHT:	136°F

1. Estimated BHP of Todd Zone:

$$\left(\frac{7332 + 7341}{2} - 1800\right) \times 0.465 \approx 2575 \text{ psi}$$

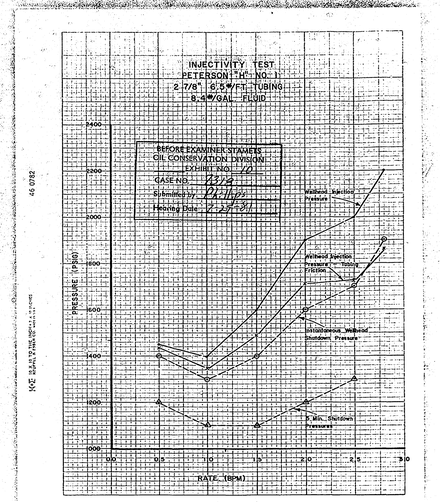
2. Maximum allowable pressure:

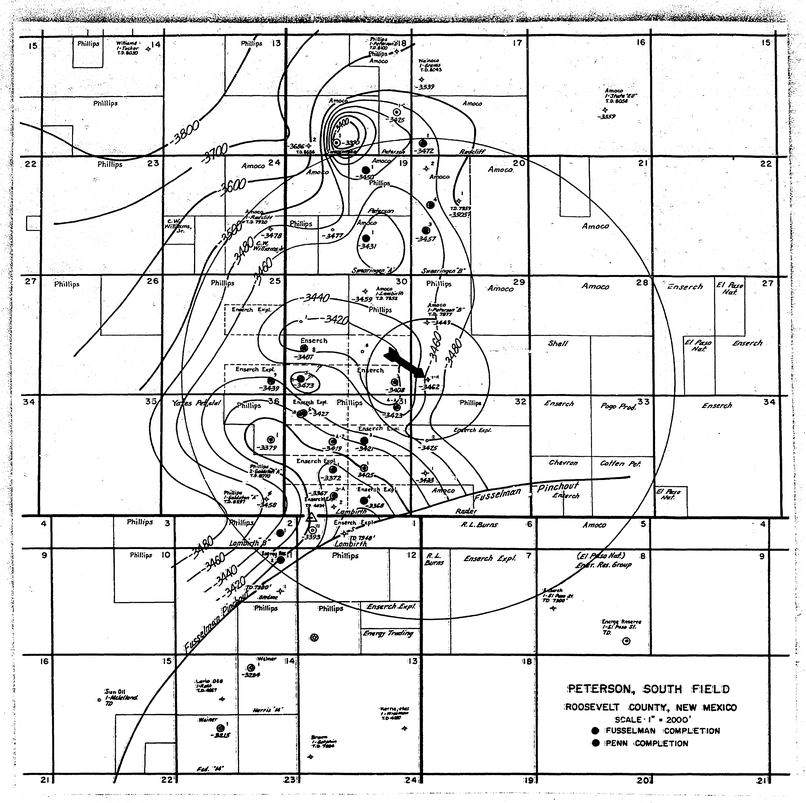
$$0.2 \times 7332 = 1466 \text{ psi}$$

3. Reservoir volume encroached by injected water:

$W_i = 7758Ah\emptyset/B_w$
$A = W_i B_w / 7758 h \emptyset$
$A = 0.000927 W_i$
$A = \pi r^2 / 43560$
$r = (43560A/\pi)^{\frac{1}{2}}$

Year	Acres (feet) encroached at 300 BWPD constant	13%/year increase
1	10.2 (376')	10.2 (376')
2	20.3 (531')	21.6 (547')
3	30.5 (650')	34.6 (693')
4	40.6 (750')	49.2 (826')
5	50.8 (839')	65.8 (955')
6	60.9 (919')	84.5 (1082')
7	71.1 (993')	105.6 (1210')
8	81.2 (1061')	129.5 (1340')
9	91.4 (1126')	156.5 (1479')
10	101.5 (1186')	187.0 (1610')
	0.22 miles	0.30 miles


INJECTIVITY TEST
PETERSON "H" NO. 1
2 7/8", 6.5#/FT. TUBING
8.4#/GAL. FLUID
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 12
CASE NO. 2372
Submitted by Petro-Lewis
Hearing Date 2-22-78
2400
2200
2000
1800
1600
1400
1200
1000
PRESSURE (PSIG)
Maximum Injection Pressure
Allowed Injection Pressure Minus Friction
Instantaneous Wellhead Shutdown Pressure
ISIP
5 Min. Observed Pressure
.50
.75
1.0
1.5
2.0
2.5
3.0
RATE (BPM)

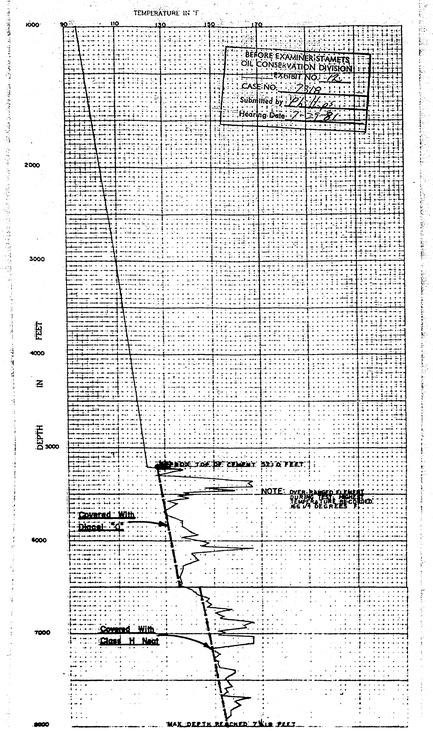

-3600
-3700
-3800
-3900
-3400
-3440
-3420
-3460
-3480
Fusselman Pinchout
Pinchout
Fusselman
Lambirth
Phillips
Amoco
Enserch
Shell
Chevron
Gulf
Pogo Prod.
El Paso Nat.
Yates Petrol.
Sun Oil
Wilmar
Harris "A"
Ed. "A"
PETERSON, SOUTH FIELD
ROOSEVELT COUNTY, NEW MEXICO
SCALE - 1" = 2000'
FUSSELMAN COMPLETION
PENN COMPLETION

JOHN W. WEST ENGINEERING CO.
412 NORTH DAL PASO, HOBBS, NEW MEXICO

TELEPHONE 3 3041
3 3175

TEMPERATURE SURVEY

OPERATOR: PHILLIPS PETROLEUM COMPANY.
LEASE: PETERSON "H"
WELL NO.: 1
FIELD:
DATE & TIME CEMENT JOB COMPLETED: 6-25-80 @ 9:25 PM
DATE & TIME SURVEY MADE: 6-26-80 @ 10:45 AM
SURVEY RUN BY: J.W.W.
DATUM: KELLY DRIVE BUSHING
WELL DATA: 450 SACKS CLASS H CEMENT, AND 350 SACKS CLASS 'H' CEMENT WITH DIACEL D, BEHIND 8000 FEET OF 5 1/2 INCH CASING IN A 7 7/8 INCH HOLE.



HALLIBURTON DIVISION LABORATORY
HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W80-1120

To: Phillips Petroleum Company
Box 1178
Lovington, New Mexico

Date: 10-13-80

This report is the property of Halliburton Company and neither the report nor any part thereof shall be published by anyone or disclosed without first securing the express written approval of laboratory management. It may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by:

Date Rec 10-13-80

Well No. Peterson "H" #1 Depth 7332-41' Formation Todd

County Roosevelt Field S. Peterson Source 5½" Casing

Resistivity	0.076 @ 74°F.		
Specific Gravity	1.086		
pH	4.7		
Calcium (Ca)	10,500		*MPL
Magnesium (Mg)	Nil		
Chlorides (Cl)	75,000		
Sulfates (SO_4)	1,400		
Bicarbonates (HCO_3)	Nil		
Soluble Iron (Fe)	140		

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 13
CASE NO. 7316
Submitted by Phillips
Hearing Date 7-29-81

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

cc:

By: W. L. Brewer
District

NOTICE

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HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W79-215

To: Phillips Petroleum Company
Box 1178
Lovington, New Mexico

Date: 2-28-79

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Submitted by:

Date Rec: 2-28-79

Well No. Lambirth "A" #1 Depth: 7970' Formation: Pusselman

County: Roosevelt Field: Peterson Source: Heater Treater

Resistivity	0.133 @ 74° F.	
Specific Gravity	1.069	
pH	6.4	
Calcium (Ca)	3,350	*MPL
Magnesium (Mg)	3,000	
Chlorides (Cl)	59,000	
Sulfates (SO_4)	1,600	
Bicarbonates (HCO_3)	855	
Soluble Iron (Fe)	70	

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

cc:

HALLIBURTON COMPANY

By: W. L. Brewer
CHEMIST

NOTICE

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HALLIBURTON DIVISION LABORATORY
HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. 160-320

To: Phillips Petroleum Company
Box 1178
Lovington, New Mexico

Date: 3-27-80

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Submitted by: _____ Date Rec. 3-27-80

Well No. Lambirth A #5 Depth As Marked Formation Penn

County Lea Field S. Peterson Source Swab

	7664-7748	7714-7738	
Resistivity	0.081 @ 70° F.	0.100 @ 70° F.	
Specific Gravity	1.076	1.061	
pH	6.2	5.7	
Calcium (Ca)	8,000	8,400	*MPL
Magnesium (Mg)	2,220	1,800	
Chlorides (Cl)	65,000	50,000	
Sulfates (SO_4)	800	850	
Bicarbonates (HCO_3)	33.5	855	
Soluble Iron (Fe)	60	80	

*Milligrams per liter

Remarks-

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

cc:

By: W. L. Brewer
CHEMIST

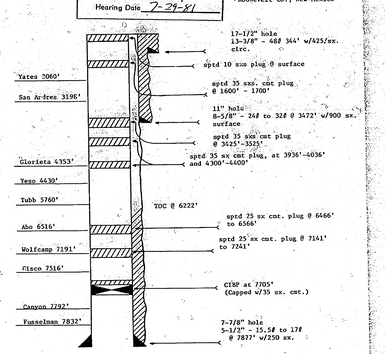
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BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 14
CASE NO. 738
Submitted by Phillips
Hearing Date 7-29-81

Date of Abandonment
2-17-76

AMOCO - Peterson "B" #1
1980' FSL and 660' FWL
Unit E; Section 29
T-5-S; R-33-E
- Roosevelt Co., New Mexico



Peterson "H" No. 1
Sec. 29, T-5-S, R-33-E
Roosevelt County, New Mexico

Well History

May 1, 1981

Location: 660' FSL 510' FWL Sec 29, T-5-S, R-33-E, Roosevelt County, New Mexico.

Bit size 11". Ran 8-5/8" 24# K-55 STC R-3 csg set @ 3496'. Cmt w/ 800 sx Cl H w/ 3QI DD 11.7 PPS + 200 H w/ 2I CaCl 15.7 pg. Circ 225 sxs.

Bit size 7-7/8". Ran 5-1/2" 15.5# K-55, 8rd, (4006. 86') x 100 jts 5-1/2" 14' K-55, 8rd, Set @ 7982'. Cmt w/ 350 sx H w/ 30I DD, 2I DCL. Tailed in w/ 450 sx H w/ 2I KCL. Plug to 7939' w/ 10 bbls 10I Acetic Acid + 185 BW. Temp survey by John West Engr TOC 5210'.

July 8, 1980

Perf'd 5-1/2" csg w/ 2 jet shots per foot at 7846-7852' and 7862-7866'. Ran 2-7/8" thg and pkr, set thg at 7801', pkr 7769'. Western trt'd dwn thg through 5-1/2" csg perfs 7846-7865' w/ 500 gals 15I Re HCl. Max press 3850#, min vacuum. Inj rate 1 BPM. SWbd 6 hrs, 2 BO, 57 BLW, 53 BSW. Ran Howco cmt retainer, set at 7825' on 2-7/8" thg. Howco acid perfs 7846-7866' w/ 1000 gals InJectrol "G" followed by 20 sxs Class "H" cmt w/ 5/10I CFR-2. Flushed w/ 45 BW. Max Press 1800#, holding 975#. Pulled out of retainer, reversed 2 sxs cmt. Spotted 10 bbls Acetic acid.

Dresser Atlas perf'd 5-1/2" csg w/ 2 JSPF, 7792-7806'. Ran 2-7/8" thg and pkr, set pkr at 7701', thg 7760'. Western treated dwn thg through 5-1/2" csg perfs 7792-7806' w/ 750 gals 15I HnHCl. Max press 4400#, min zero, ISIP zero, injection rate .75 BPM. SWbd 10 hrs, trace oil, 155 BSW. CBC ran tracer survey in 5-1/2" csg. Found fluid exit through perfs 7792-7806', channeling dwn to 7812'. Set Howco cmt ret at 7769'. Howco filled csg and thg w/ produced wtr, established inj rate of 7 BPM at 250# in 5-1/2" csg perfs 7792-7806'. Pmpd in 5000 gals InJectrol "G" at 1500# to 1800#, followed by 100 sxs Class "C" cmt w/ 5/10I CRF-2. With 62 sxs in formation, press increased to 4000#, holding at 3800#. Pulled thg out of ret, reversed 23 sxs. Circ'd thg and csg clean. Ran 4-3/4" bit, 4--3-1/2" DC's on 2-7/8" thg, tagged top cmt at 7757', drld cmt to 7769', started drlg on ret. Drld cmt ret at 7769', cmt to 7808'. Lowered bit to 7820', drld cmt to 7825'. Western spotted 10 bbls 10I Acetic acid.

Dresser Atlas perf'd 5-1/2" csg w/ 4 jet shots per foot, 7793-7801'. Set 2-7/8" thg at 7787', Baker Model "K" pkr at 7728'. Western treated dwn 2-7/8" thg through 5-1/2" csg perfs 7793-7801' w/ 250 gals 15I NeHCl. Max Pressure 3400#, min zero, inj rate 1/2 BPM. SWbd 10 hrs, trace oil, 87 BSW. Ran 2-7/8" thg and cmt ret; set ret at 7786'. Howco cmt'd dwn thg through csg perfs 7793-7801' w/ 1000 gals InJectrol "G" followed by 100 sxs Cl "H" cmt w/ 1/2I CFR-2. Sqzd 80 sxs in formation, reversed 20 sxs. Max press 4000#, holding 3800#.

August 1, 1980

Brasher Aclss perf'd 5-1/2" csg w/ 2 JSPF, 7616-7627', 7630-7636', 7646-7650', 7656-7662', 7676-7680', 7706-7710', 7716-7723', 7746-7760'. Ran tbg, pkr and BP, set BP at 7748', pkr at 7393'. Swbd 4 hrs, 41 BLW, no oil, swbd dry. Western spotted 1000 gals 15% NeHCl over 5-1/2" csg perfs 7606-7760'. Set pkr at 7288', pressured to 4000#, pkr leaked. Reset pkr at 7586', pressured to 3500# and leaked. Reversed acid to truck. Pulled tbg and pkr. Ran 2-7/8" tbg and new pkr. Western treated through 5-1/2" csg perfs 7606' to 7660' w/ 2500 gals 15% NeHCl flushed w/ 50 BW. Max press 4000#, min 3900#, inst SDP 3900#, inj rate 4 BPM. Swbd 4 hrs, 45 BLW, no oil. Swbd 10 hrs, 4 BO, 40 BLW. Swbg. Swbd 10 hrs, 6 BO, 23 BLW. Swbd 10 hrs, 6 BO, 8 BLW. Western trt'd down 2-7/8" tbg through 5-1/2" csg perfs 7616-7760' w/ 20,000 gals gelled 15% NeHCl as follows: A--5000 gals acid. B--15 ball sealers. C--5000 gals acid. D--10 ball sealers. E--10,000 gals acid. Flshd w/ 20,000 gals 2% KCl wtr. Max press 6900#, min 5000#, inst SDP 4150#. Inj rate 6.2 BPM. Swbd 6 hrs, trace oil, 8 BLW, swbd dry. Swbg. Swbd 6 hrs, no oil, 5 BLW, swbd dry. Lowered tbg to 7660'. Reverse circ'd w/ 75 bbls 2% KCL wtr. Western spotted 1000 gals 15% NeHCl over perfs 7616-7660'. Reset pkr at 7602', flshd acid w/ 50 bbls 2% KCl wtr. Max press 3600#, min 3500#, inst SDP 3400#, inj rate 1.5 BPM. Ran 2-7/8" tbg and ret. set ret at 7499'. Running tbg and pkr. Howco sqzd perfs 7616-7660' w/ 200 ex Class "H" cmt. Pressed 180 sx in perfs, reversed 20 sx. Max press 4000#, holding 4000#.

Welex perf'd 5-1/2" csg w/ 2 JSPF, 7332-7341'. Ran tbg and pkr, set pkr at 7308'. Swbd 8 hrs, no oil, 78 BW. Swbd 8 hrs, no oil, 85 BLW. Swbd 8 hrs, no oil, 75 BLW. Swbd 6 hrs, 80 BW, no oil. Western trt'd down tbg. Csg perf 7332-7341', 5000 gals 28% acid, flshd w/ 47 BW. MP 4400#, MP 2700#, SD 2500#. Rate 3 BPM. Ran injectivity test. Ran tracer survey. Hold well for disposal purposes.

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 16
CASE NO. 7318
Submitted by Phillips
Hearing Date 7-24-81

HALLIBURTON SERVICES

EZ Drill® Bridge Plug



EZ Drill® Bridge Plug

Halliburton's drillable Wedge plug, the EZ Drill®, offers improved operating performance at higher temperatures and pressures and faster removal from a well by either rotary or cable tool drilling methods.

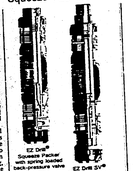
It runs in faster, because of the smaller OD of the tool, and drilling out time is significantly faster than comparable products. The non-rotating bridge plug has main structural parts composed of controlled cast iron, to enhance uniform drillability.

Important design features include:

- High temperature and pressure sealing element. This consists of a relatively soft rubber center packer between harder rubber rings and expandable metal shoes. The shoes expand with the other packer, to help prevent extrusion of the backers over the wedges at high pressures and temperatures.
- Smaller tool diameter. The design of the packer element permits the use of smaller tool diameters so that only one tool is required for a given casing size, regardless of its weight (wall thickness). This design also offers greater clearance with casing ID and, therefore, less danger of premature setting while going in the hole.
- Top drilling. When the top portion of the EZ Drill® bridge plug is drilled into, the pressure trapped or accumulated before operation is run are reached, allowing any pressure buildup below to bleed off gradually and be relieved through the mandrel into the casing. This is an integral feature of the tool's design and does not require an adapter. Floating mandrel. The mandrel upon which all internal parts are mounted is free to move with pressure. Forces due to well pressures, either from above or below the bridge plug, are thus applied directly to the slips and packer element, causing it to set tighter as pressures increase.
- Junk catcher. The lower end of the EZ Drill® bridge plug is made to help prevent cuttings and other debris from fouling the tool slips, to prevent premature setting while going in the hole.
- Quick removal. Each part of the EZ Drill® bridge plug is designed for quick removal from the well with either rotary or cable tools, i.e.;
  - A. Material used for each component is selected for the maximum drillability permitted by its strength requirements.
  - B. Packer, metal shoes and wedge elements are locked together to help prevent their spinning while being drilled.
  - C. Slips are grooved so that they will be broken up in small pieces, which can be circulated away, so that the drilling ability of the slips is not impaired.

EZ Drill bridge plugs are designed primarily to be set on electrical wire line—or tubular goods with necessary modifications.

EZ Drill® Squeeze Packers



EZ Drill® Squeeze Packer with spring loaded back-pressure valve

EZ Drill SV® Squeeze Packer with pressure balanced sliding valve

Hallibirton Services field proven EZ Drill® Squeeze Packers permit faster removal from the well by either rotary or cable tool methods without reduction in operating performance at even elevated temperatures and pressures.

In addition, OD of the tool is less and ID of the tool is greater than comparable products now in use, permitting faster running-in and quicker displacement of fluids at less pressure. Drilling out time is significantly quicker than comparable products.

The EZ Drill squeeze packer contains a spring loaded back pressure valve. The main structural parts of this tool are made of controlled cast iron.

EZ Drill® Packer
(Cont'd)

The EZ Drill SV squeeze packer contains a pressure-balanced sliding valve for control of fluid movement in the well. As with the other type, the main structural parts of this tool are made of controlled cast iron.

DESIGN FEATURES COMMON TO BOTH TYPES INCLUDE:

- High temperature and pressure sealing element. Consists of a combination soft rubber center packer between harder rubber rings and expandable metal shoes. The metal shoes expand with the rubber packer, help prevent extrusion of the packers over the wedges at high pressures and temperatures.
- Smaller tool diameter. The design of the packer element permits the use of smaller tool diameters, thus less danger of premature setting while going in hole.
- Floating Mandrel. The mandrel upon which all the external parts are mounted is free to move with pressure. Forces due to well pressures, either from above or below the packer, are thus applied directly to the slips and packer element, causing it to set tighter as pressures are increased.
- Junk Pusher. The lower end of EZ Drill® packers is made to push pieces of cuttings and other debris from fouling the tool slips; causing premature setting while going in the hole. The "Junk Pusher" is ribbed to provide good anchor in cement to resist the tool's rotation as it is being drilled out.
- Designed for quick removal. Each part of EZ Drill packers is designed for quick removal from the well with either rotary or cable tools.
  A. The material used for each component is selected for maximum drillability permitted by its strength requirements.
  B. The wedges, metal shoes and packer element are locked together to prevent their spinning while being drilled.
  C. The slips are grooved so that they will be broken up in small pieces, which can be circulated away from the bit. The holding ability of the slips is not impaired.

Fluid movement through EZ Drill SV® squeeze packers is controlled with a pressure-balanced "Sliding Valve" which replaces the spring-loaded back-pressure valve.

Operated by reciprocation of the tubing, the valve may be opened or closed, as desired, before and after squeeze cementing. Fluid movement through the valve will not affect its position. When the valve is in the up position, the packer element is sealed against fluid or movement in either direction. When the valve is in the down position, fluid may be pumped through the packer or pressure may be relieved from below it. When the valve is open an unrestricted fluid passage is provided through side ports in the tool. With interlocking valve fingers not exposed to cement slurry, the sliding valve is not likely to be cemented in place.

EZ Drills and EZ Drill SV® squeeze packers may be set on tubing (drill pipe), electrical wire line, or sand line. They may be converted for use as bridge plugs (no fluid movement in either direction through the tool) before running in the hole.

EZ DRILL® AND EZ DRILL SV® SQUEEZE PACKERS AND EZ DRILL® BRIDGE PLUGS

EZ Squeeze Packer Cat. No.	EZ-SV Squeeze Packer Catalog No.	EZ Drill Bridge Plug Catalog No.	RECOMMENDED Csg./Tbg. RANGE			Max. OD of Tool (inches)	ID (under E.Z. Drill® SV valve) (inches)
			Bore OD (inches)	Wall (lbs./ft.)			
802.303			2⅜	4.70		1.187	1.041
802.305			2½	5.80—10.20 Non-Up. Thg. 6.50—10.40 Up. Thg.		2.06	1.588
802.307			2½ L. Pipe Nom.	11.50—13.60 Non-Up. Thg. 11.60—13.70 Coupl. 11.60 Upset Thg. 12.95 Non. Up. Thg.		2.125	2.041
			3	9.20		2.44	2.259
802.309	802.339	803.639	3½ L. Pipe Nom.	9.3—10.3		2.56	2.500
	802.329		4½	13.5—15.1		3.56	3.500
802.311	802.341	803.641	5	11.5—15		3.87	4.500
802.313	802.343	803.643	5½	13 —20		4.37	5.044
802.315	802.345	803.645	6⅝	17 —28		5.06	6.184
802.319	802.349	803.648	7⅝	20 —39		5.80	6.125
	802.351	803.651	7	17 —38		6.12	7.125
			7⅞	26 —29		6.12	7.125
	802.353		8⅝	24 —49		7.06	8.097
	802.354		8⅝	28 —49		7.75	8.097
	802.357		10¾	32.75—60.7		9.06	10.192
	802.355		11¾	42 —65		9.87	11.150
	802.359		13⅜	48 —72		11.62	12.715

A

PETERSON, NORTH AREA — PETERSON FIELD — SOUTH PETERSON

ENSERCH
NO.1 FINLEY
NE/NE Sec.6, T-5-S, R-33-E
Elev. 4501' (adjusted)

PHILLIPS
NO.1 PETERSON "D"
NE/NE Sec. 18, T-5-S, R-33-E
Elev. 4469'

AMOCO
NO. 1 SWEARINGEN "C"
SE/SW Sec. 19, T-5-S, R-33-E
Elev. 4437'

AMOCO
NO. 1 SWEARINGEN "A"
NW/SE Sec. 19, T-5-S, R-33-E
Elev. 4416'

ENSERCH
NO. 3 LAMBIRTH
SW/NE Sec. 31, T-5-S, R-33-E
Elev. 4408'

ENSERCH
NO. 1 LAMBIRTH
NE/SW Sec. 31, T-5-S, R-3
Elev. 4422'

Wolfcamp Marker

TOP WOLFCAMP PAY

DATUM
THREE BROTHERS

Cisco

Mississippian

Basement

24 hr. flow gauge: F 61.80 + 4 BW + 150 MCFG
15 hr. flow gauge: F 73.80 + 13 BW + 200 MCFG 20/64" ck. TP 1025 #

TD. 8500'

No Tests

TD. 8100' (Siluro - Devonian)
3-19-73

IPF 271 BOPD, 10/64" ck. (7841-49') 3-18-76
Reworked 6-10-77, squeezed perfs. 7841-49'
Perf. 7829-36', IPF 164 BO + 70 BWPD
Reworked 9-1-77, squeezed perfs. 7829-36'
Perf. 7684-7706', IPF 150 MCFGPD 30/64" ck.

TD. 7989' (Siluro-Devonian)
3-18-76

IPCAOF 28.82 MMCFGPD (7705-7720')

TD. 8221' (Basement)
3-13-72

IPP 25.80+ 12 BWPD (7940-7849) 7-31-78
Reworked 10-26-78, PB 7790'
Perf. 7702-7716', IPF 5 MMCFGPD 24/64"

TD 8030' (Basement)
7-31-78

IPF 638' BOPD 1/4" ck. (7E
Fusselman Discovery - So. Pe

TD 7992' (Basem
6-4-78

SOUTH PETERSON FIELD

NEW HOPE, EAST FIELD → A'

ENSERCH
NO.3 LAMBIRTH
SW/NE Sec. 31, T-5-S, R-33-E
Elev. 4408'

ENSERCH
NO. 1 LAMBIRTH
NE/SW Sec. 31, T-5-S, R-33-E
Elev. 4422'

ENSERCH
NO. 4 LAMBIRTH
SW/SE Sec. 31, T-5-S, R-33-E
Elev. 4427'

ENSERCH
NO. 1 EL PASO-STATE
NW/SW Sec. 8, T-6-S, R-34-E
Elev. 4375'

MAGNOLIA
NO.1 MARTIN
SE/SE Sec. 29, T-6-S, R-34-E
Elev. 4355'

Wolfcamp Marker

TOP WOLFCAMP PAY

DATUM
THREE BROTHERS

Fusselman

"Tannehill Bold"

Montoya

Basement

IPP 2580+12 BWPD (7840-7849) 7-31-78
Reworked 10-26-78, PB 7790'
Perf. 7702-7715', IPF 5 MMCFGPD 24/64"

TD 8030' (Basement)
7-31-78

IPF 638' BOPD 1/4" ck. (7808-52') 6-4-78
Fusselman Discovery - So. Peterson Field

TD 7992' (Basement)
6-4-78

IPF 204 BO + 58 BWPD 18/64" ck (7696-7705') 9-6-78

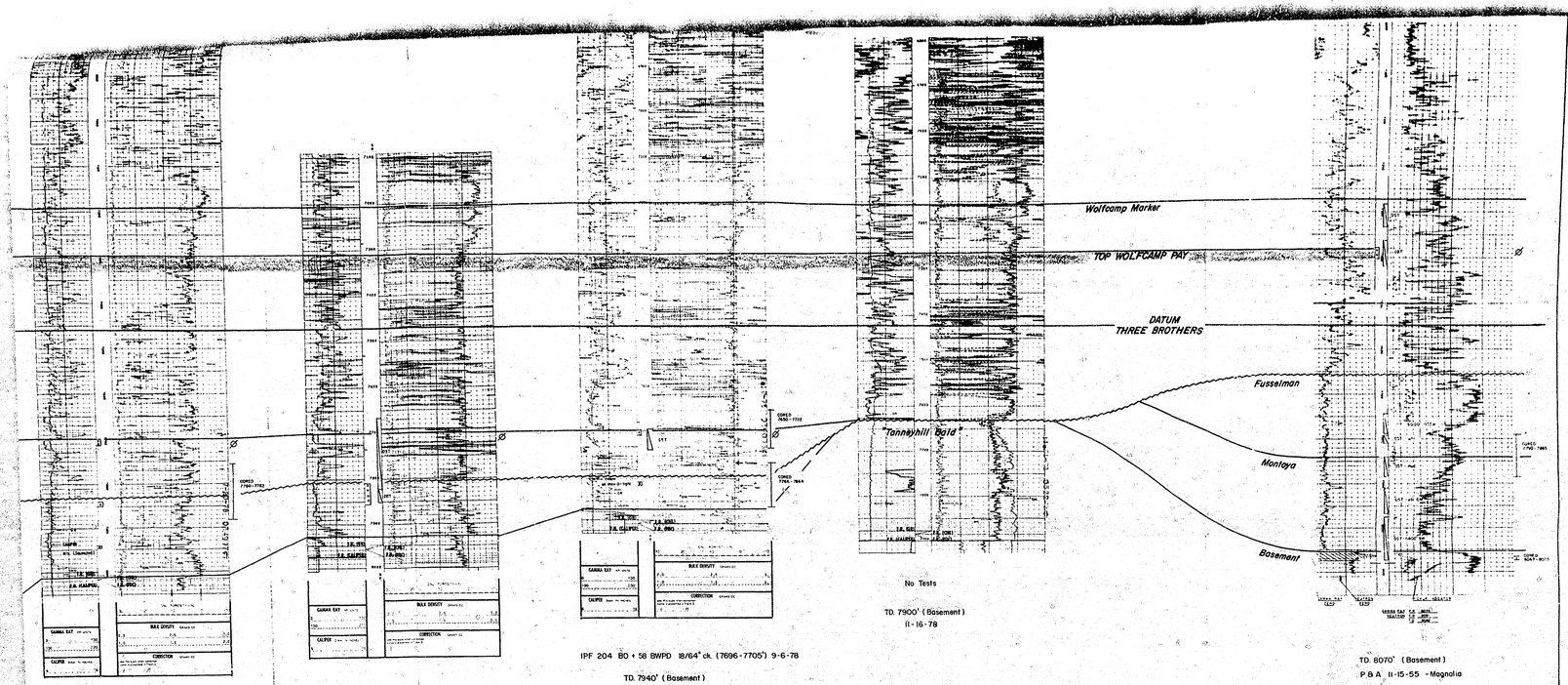
TD 7940' (Basement)
9-6-78

No Tests

TD 7900' (Basement)
9-15-78

TD 8070' (Basement)
P&A 11-15-55 - Magnolia

Reentered - H.L. Brown
Comp. 5-12-69 opposite perfs. @ 7381-7401'
IPCAF 3.45 MMCFGPD



IPP 25 BO + 12 BWPD (7840-7849) 7-31-78
Reworked 10-26-78, PB 7790'
Perf 7702-7715, IPF 5 MMCFGPD 24/64"

TD. 8030' (Basement)
7-31-78

IPF 636 BOPD 1/4" ck. (7808-52') 6-4-78
Fusselman Discovery - So. Peterson Field

TD. 7992' (Basement)
6-4-78

IPF 204 BO + 58 BWPD 18/64" ck. (7696-7705') 9-6-78

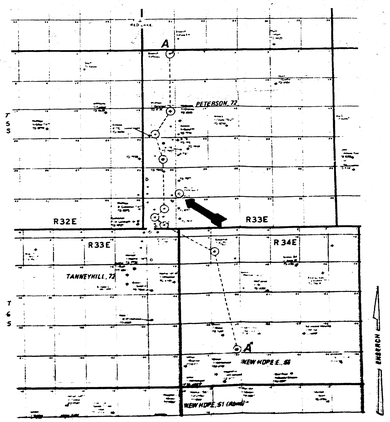
TD. 7940' (Basement)
9-6-78

No Tests

TD. 7900' (Basement)
11-16-78

TD. 8070' (Basement)
P & A 11-15-55 - Magnolia

Reentered - H.L. Brown
Comp. 5-12-69 opposite perfs. @ 7381-7401'
IPCAF 3.45 MMCFGPD



INDEX MAP
SCALE 1"=1000'

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
ENSERCH EXHIBIT NO. ____
CASE NO. 7348
Submitted by T. BROWN
Hearing Date 7-24-81

ENSERCH EXPLORATION, INC.
Docket No. 73-15
Exhibit ____
Date 7-24-81

ENSERCH EXPLORATION INC.
WEST TEXAS AREA

PETERSON, NORTH AREA - NEW HOPE AREA
ROOSEVELT COUNTY, NEW MEXICO

STRATIGRAPHIC CROSS SECTION

A - A'

DATUM: Top of Three Brothers

A

← PETERSON, NORTH AREA →

PETERSON FIELD

SOUTH PETERSON FI

ENSERCH
NO.1 FINLEY
NE/NE Sec.6, T-6-S, R-33-E
Elev. 4501' (adjusted)

PHILLIPS
NO.1 PETERSON "D"
NE/NE Sec.18, T-6-S, R-33-E
Elev. 4469'

AMOCO
NO.1 SWEARINGEN "C"
SE/SW Sec.18, T-6-S, R-33-E
Elev. 4437'

AMOCO
NO.1 SWEARINGEN "A"
NW/SE Sec.19, T-6-S, R-33-E
Elev. 4416'

ENSERCH
NO.1 LAMBIRTH
SW/NE Sec.31, T-6-S, R-33-E
Elev. 4406'

ENSERCH
NO.1 LAMBIRTH
NE/SW Sec.31, T-6-S, R-33-E
Elev. 4422'

Wolfcamp Marker

TOP WOLFCAMP PAY

DATUM
THREE BROTHERS

Cisco

Mississippian

Basement

24 hr. flow gauge, F 6.80 + 4 BW + 150 MCFG
15 hr. flow gauge, F 73.80 + 15 BW + 200 MCFG 20/64" ck. TP 1025 #

TD. 8500'

No Tests

TD. 8100' (Siluro-Devonian)
3-19-73

IPF 271 BOPD, 10/64" ck. (7841-49') 3-18-76
Reworked 6-10-77, squeezed perfs 7841-49'
Perf. 7823-30', IPF 164 BO + 70 BWPD
Reworked 9-1-77, squeezed perfs. 7823-38'
Perf. 7684-7706', IPF 150 MCFGPD 30/64" ck.

TD. 7989' (Siluro-Devonian)
3-18-76

IPCAOF 28.82 MMCFGPD (7705-7720')

TD 822' (Basement)
3-13-72

IPP 25.80 + 12 BWPD (7840-7849) 7-31-78
Reworked 10-26-78, PB 7790'
Perf 7702-7715', IPF 5 MMCFGPD 24/64"

TD 8030' (Basement)
7-31-78

IPF 638' BOPD 1/4" ck. (7808-
Fusselman Discovery - So Peterso

TD 7992' (Basement
6-4-78

SOUTH PETERSON FIELD

NEW HOPE, EAST FIELD →

A'

ENSERCH
NO.1 LAMBIRTH
SW/NE Sec. 31, T-5-S, R-33-E
Elev. 4408'

ENSERCH
NO. 1 LAMBIRTH
NE/SW Sec. 31, T-5-S, R-33-E
Elev. 4422

ENSERCH
NO. 4 LAMBIRTH
SW/SE Sec. 31, T-5-S, R-33-E
Elev. 4427

ENSERCH
NO. 1 EL PASO STATE
NW/SW Sec. 5, T-6-S, R-34-E
Elev. 4375'

MAGNOLIA
NO.1 MARTIN
SE/SE Sec. 29, T-6-S, R-34-E
Elev. 4355'

Wolfcamp Marker

TOP WOLFCAMP PAY

DATUM
THREE BROTHERS

Fusselman

Montoya

Basement

"Tannehill Gold"

IPP 2580+12 BWPD (7840-7849) 7-31-78
Reworked 10-26-78, PB 7790'
Perf 7702-7715', IPF 5 MMCFGPD 24/64"

TD 8030' (Basement)
7-31-78

IPF 638 BOPD /46° ck. (7808-52') 6-4-78
Fusselman Discovery - So Peterson Field

TD 7992' (Basement)
6-4-78

IPF 204 BO + 58 BWPD 18/64" ck. (7696-7705') 9-6-78

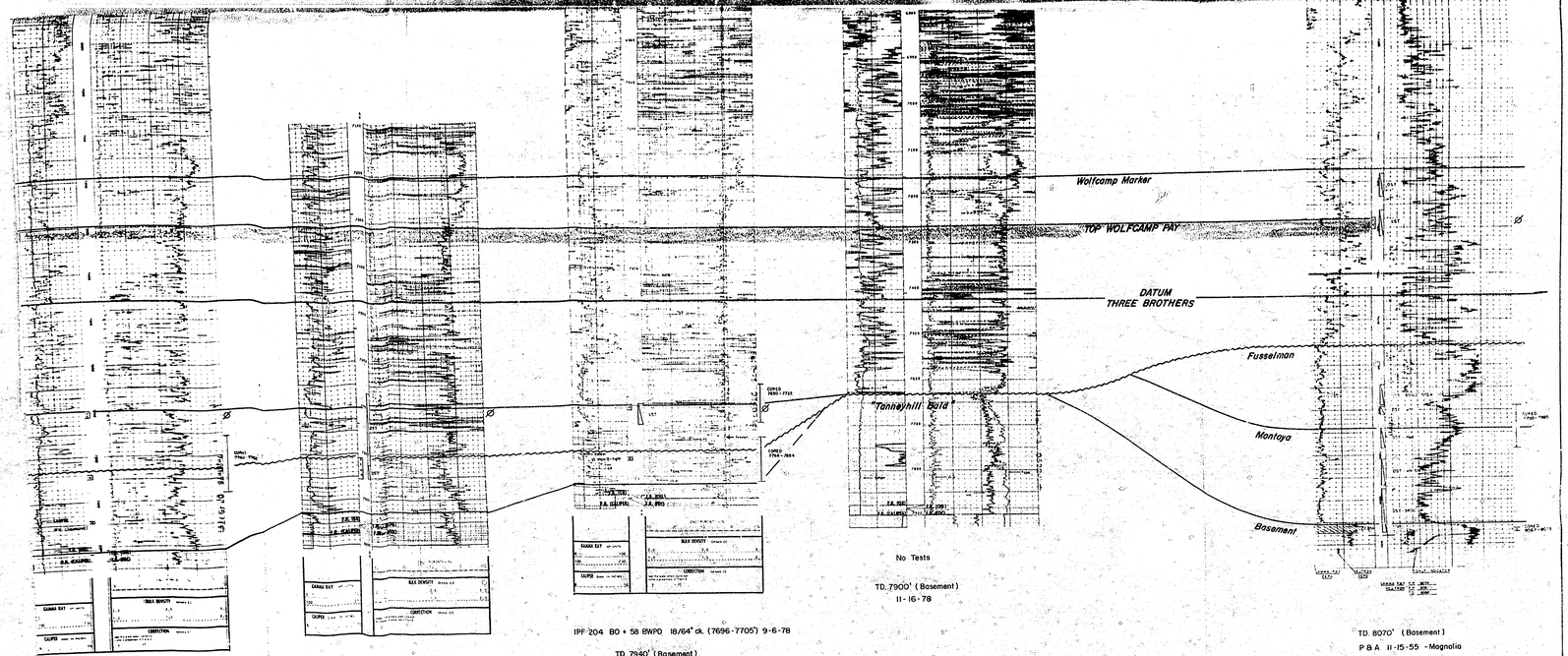
TD 7940' (Basement)
9-6-78

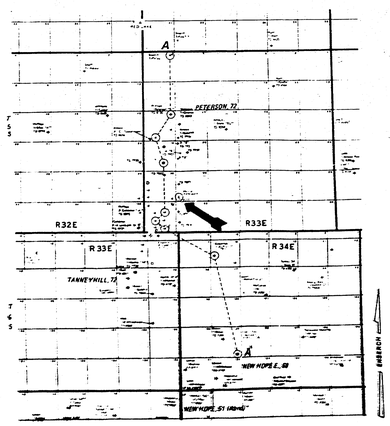
No Tests

TD 7900' (Basement)
11-16-78

TD 8070' (Basement)
P&A 11-15-55 - Magnolia

Reentered - H.L. Brown
Comp. 5-12-69 opposite perfs. @ 7381-7401'
IPCAF 3.45 MMCFGPD





ENSERCH EXPLORATION, INC.
Docket No. 7318
Exhibit
Date July 29 1976

ENSERCH EXPLORATION INC.
WEST TEXAS AREA

PETERSON, NORTH AREA – NEW HOPE AREA
ROOSEVELT COUNTY, NEW MEXICO

STRATIGRAPHIC CROSS SECTION
X – X'
DATUM: Top of Three Brothers

A

← PETERSON, NORTH AREA — PETERSON FIELD — SOUTH PETERSON FIE

ENSERCH
NO.1 FINLEY
NE/NE Sec. 6, T-5-S, R-33-E
Elev. 4501' (adjusted)

PHILLIPS
NO.1 PETERSON "D"
NE/NE Sec. 18, T-5-S, R-33-E
Elev. 4469

AMOCO
NO.1 SWEARINGEN "C"
SE/SW Sec. 18, T-5-S, R-33-E
Elev. 4437

AMOCO
NO.1 SWEARINGEN "A"
NW/SE Sec. 19, T-5-S, R-33-E
Elev. 4416'

ENSERCH
NO.3 LAMBIRTH
SW/NE Sec. 31, T-5-S, R-33-E
Elev. 4408'

ENSERCH
NO.1 LAMBIRTH
NE/SW Sec. 31, T-5-S, R-33-E
Elev. 4422'

Wolfcamp Marker

TOP WOLFCAMP PAY

DATUM
THREE BROTHERS

Cisco

Mississippian

Basement

24 hr. flow gauge, F 6.80 + 4 BW + 150 MCFG
15 hr. flow gauge, F 73 BO + 13 BW + 200 MCFG 20/64" ck. TP 1025 #

TD 8500'

No Tests

TD. 8100' (Siluro - Devonian)
3-19-73

IPF 271 BOPD, 10/64" ck (7841-49') 3-18-76
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TD. 7969' (Siluro-Devonian)
3-18-76

IPCAOF 28.82 MMCFGPD (7705-7720')

TD 8221' (Basement)
3-13-72

IPP 25 BO + 12 BWPD (7840-7849) 7-31-78
Reworked 10-26-78, PB 7790'
Perf. 7702-7715', IPF 5 MMCFGPD 24/64"

TD 8030' (Basement)
7-31-78

IPF 636 BOPD 1/4" ck. (7608-
Fusselman Discovery - So Peterso

TD 7992' (Basement)
6-4-76

SOUTH PETERSON FIELD

NEW HOPE, EAST FIELD

A'

ENSERCH
NO.3 LAMBIRTH
SW/NE Sec. 31, T-5-S, R-33-E
Elev. 4408'

ENSERCH
NO.1 LAMBIRTH
NE/SW Sec. 31, T-5-S, R-33-E
Elev. 4422'

ENSERCH
NO. 4 LAMBIRTH
SW/SE Sec. 31, T-5-S, R-33-E
Elev. 4427'

ENSERCH
NO.1 EL PASO-STATE
NW/SW Sec. 6, T-6-S, R-34-E
Elev. 4375'

MAGNOLIA
NO.1 MARTIN
SE/SE Sec. 29, T-6-S, R-34-E
Elev. 4355'

Wolfcamp Marker

TOP WOLFCAMP PAY

DATUM
THREE BROTHERS

Fusselman

Tannehill Bald

Montoya

Basement

IPP 25 BO + 12 BWPD (7840-7849) 7-31-78
Reworked 10-26-78, PB 7790'
Perf 7702-7715', IPF 5 MMCFGPD 24/64"

TD. 8030' (Basement)
7-31-78

IPF 636 BOPD 1/4" ck. (7808-52') 6-4-78
Fusselman Discovery So. Peterson Field

TD 7992' (Basement)
6-4-78

IPF 204 BO + 58 BWPD 18/64" ck. (7696-7705') 9-6-78

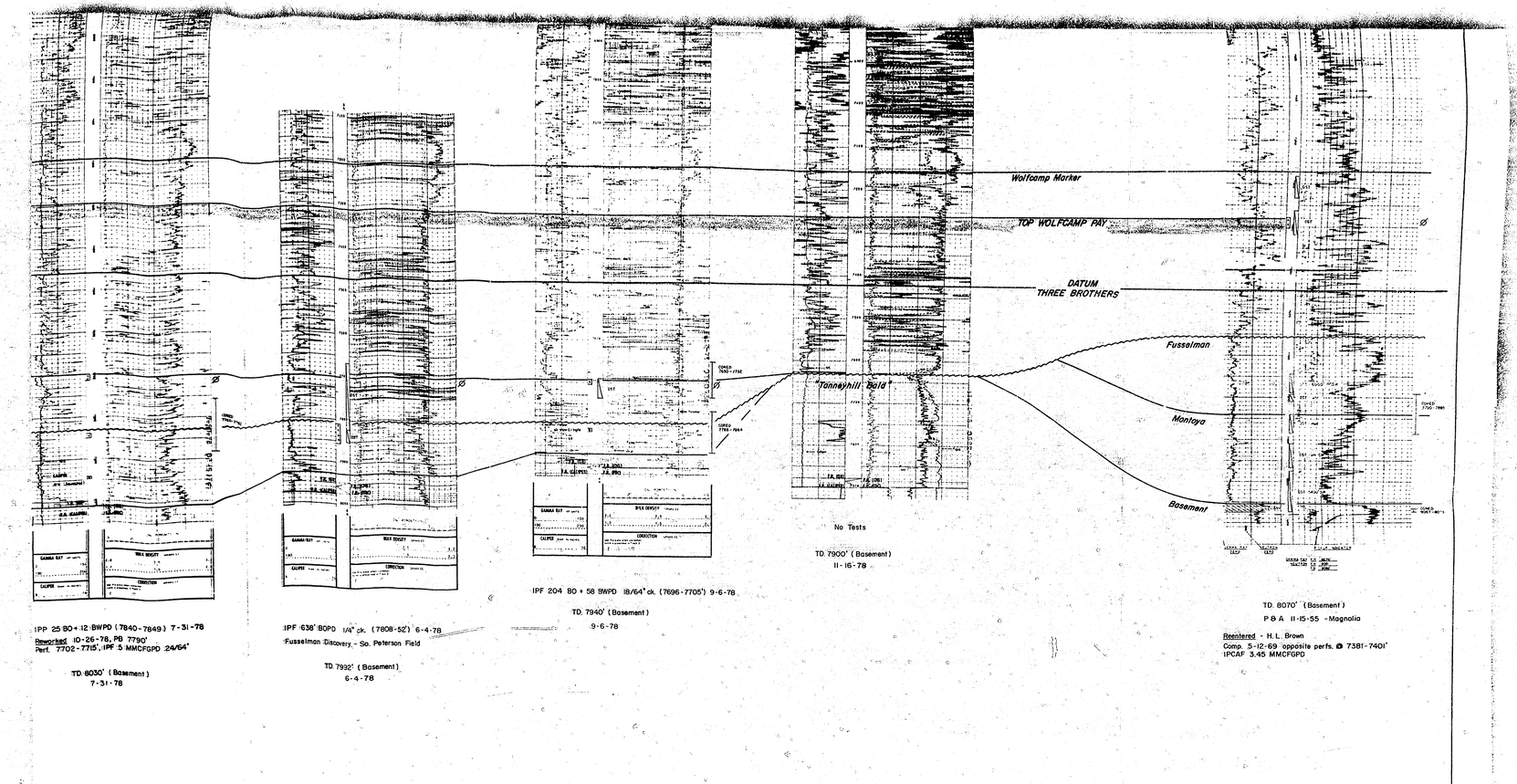
TD 7940' (Basement)
9-6-78

No Tests

TD. 7900' (Basement)
11-16-78

TD 8070' (Basement)
P.B.A 11-15-55 -Magnolia

Reentered - H.L. Brown
Comp 5-12-69 opposite perfs @ 7381-7401'
IPCAF 3.45 MMCFGPD



1PP 25 BO + 12 BWPD (7840-7849') 7-31-78
Reworked 10-26-78, PB 7790'
Perf. 7702-7715', IPF 5 MMCFGPD 24/64"

TD 8030' (Basement)
7-31-78

1PF 638' BOPD 1/4" ck. (7808-52') 6-4-78
Fusselman Discovery - So. Peterson Field

TD 7932' (Basement)
6-4-78

1PF 204 BO + 58 SWPD 18/64" ck. (7696-7705') 9-6-78

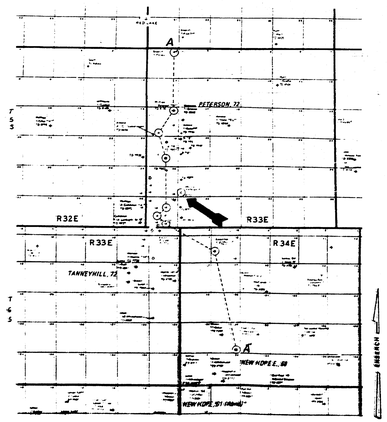
TD 7940' (Basement)
9-6-78

No Tests

TD 7900' (Basement)
11-16-78

TD 8070' (Basement)
P & A 11-15-55 - Magnolia

Reentered - H. L. Brown
Comp. 5-12-69 opposite perfs. @ 7381-7401'
1PCAF 3.45 MMCFGPD



INDEX MAP
SCALE 1"=8000'

ENSERCH EXPLORATION, INC.
Docket No. 926
Exhibit
Date 7/23/1979

ENSERCH EXPLORATION INC.
WEST TEXAS AREA

PETERSON, NORTH AREA - NEW HOPE AREA
ROOSEVELT COUNTY, NEW MEXICO

STRATIGRAPHIC CROSS SECTION

X - X'

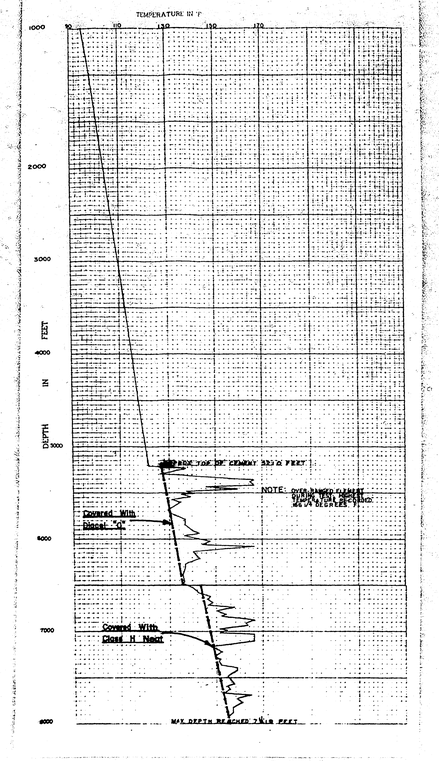
DATUM: Top of Three Brothers

JOHN W. WEST ENGINEERING CO.
612 NORTH DAL PASO, HOBBS NEW MEXICO

TELEPHONE 3-2662
3-2770

TEMPERATURE SURVEY

OPERATOR — Phillips Petroleum Company
LEASE — Peterson "H"
WELL NO. — 1
FIELD —
DATE & TIME CEMENT JOB COMPLETED — 6-25-80 @ 9:25 PM
DATE & TIME SURVEY MADE — 6-26-80 @ 10:45 AM
SURVEY RUN BY — J.W.W.
DATUM — Kelly Drive Bushing
WELL DATA — 450 sacks Class H Cement, and 350 sacks Class 'H' Cement with Diacel D, behind 8000 feet of 5 1/2 inch casing in a 7 7/8 inch hole.



GEARHART GAMMARAY INJECTOR PROFILE TEMPERATURE LOG

FILING NO

COMPANY Phillips Petroleum Company

WELL Peterson "E" No. 1 Lack Sub

FIELD South Peterson Pusselman

COUNTY Roosevelt STATE New Mexico

LOCATION 660' FSL & 510' Fwl.

OTHER SERVICES

SEC 29 TWP 5cS RGE 33cE

PERMANENT DATUM ELEV. ELEV. K.B.

LOG MEASURED FROM 15.6 Ft. ABOVE PERM. DATUM D.F.

DRILLING MEASURED FROM G.L.

Date	6-29-81			
Run No.	One			
Type Log	Injector	Temperature		
Depth-Driller	7499			
Depth-Logger	7484			
Bottom logged interval	7480			
Top logged interval	7300			
Type fluid in hole	Water			
Max rec. temp., deg. F				
Operating rig time	5 Hrs.			
Recorded by	Wheaton			
Witnessed by	Mr. Allred			

Bore-Hole Record

Run No.	Bit	From	To

Tubing Record

Size	Wgt.	From	To

Casing Record

Size	Wgt.	From	To

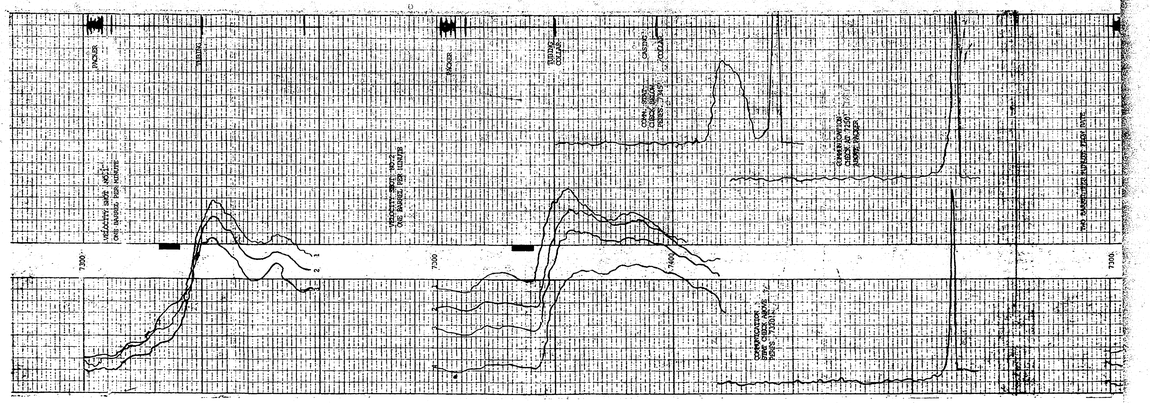
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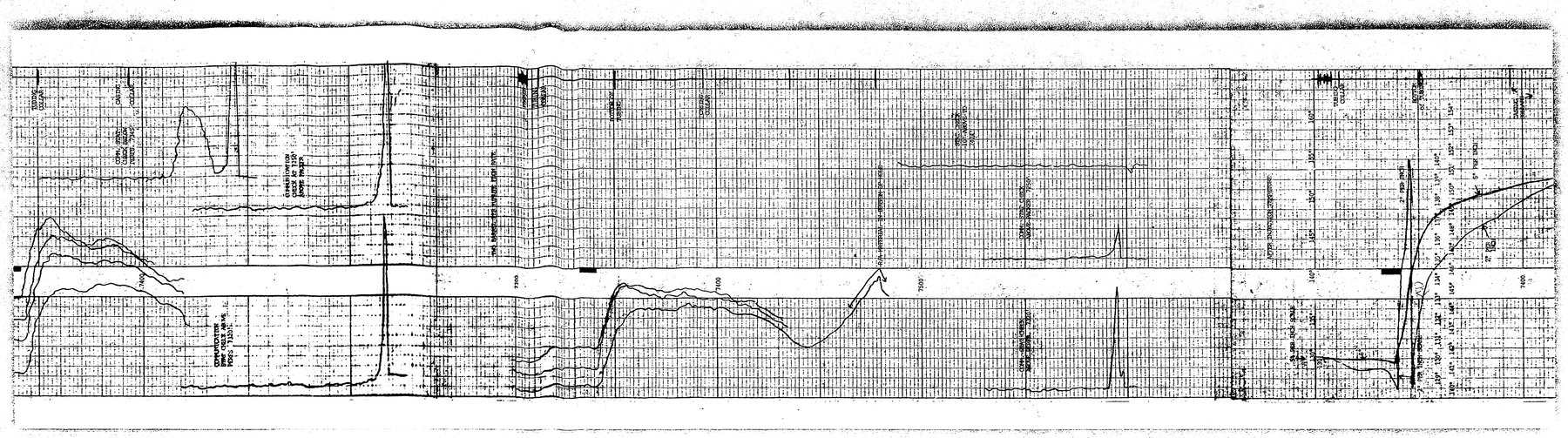
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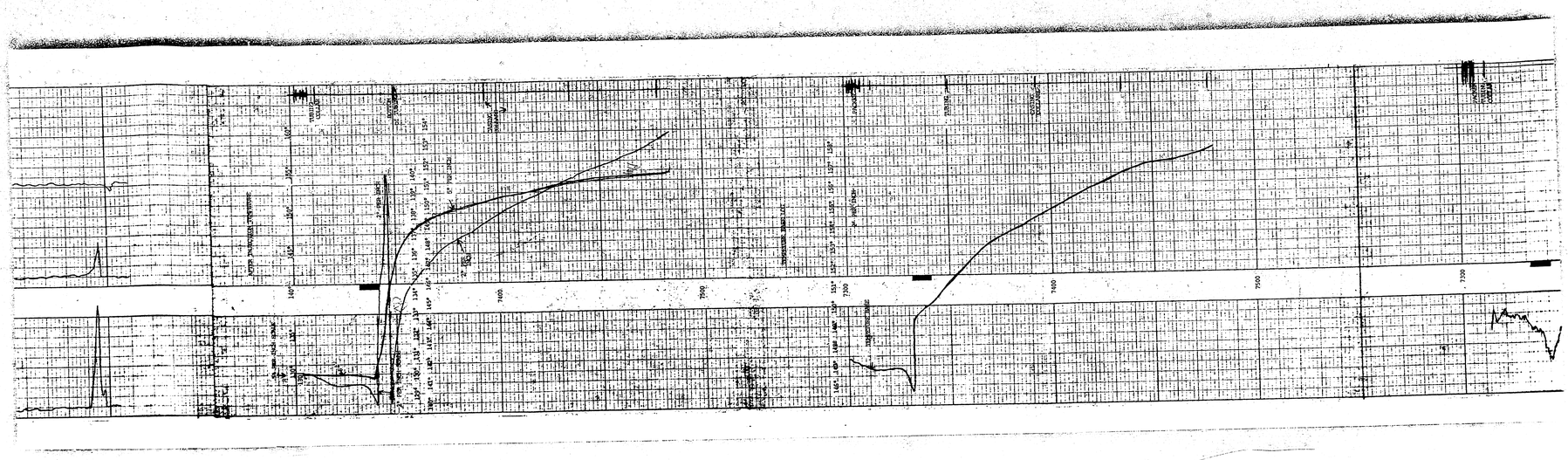
FORM 110-M

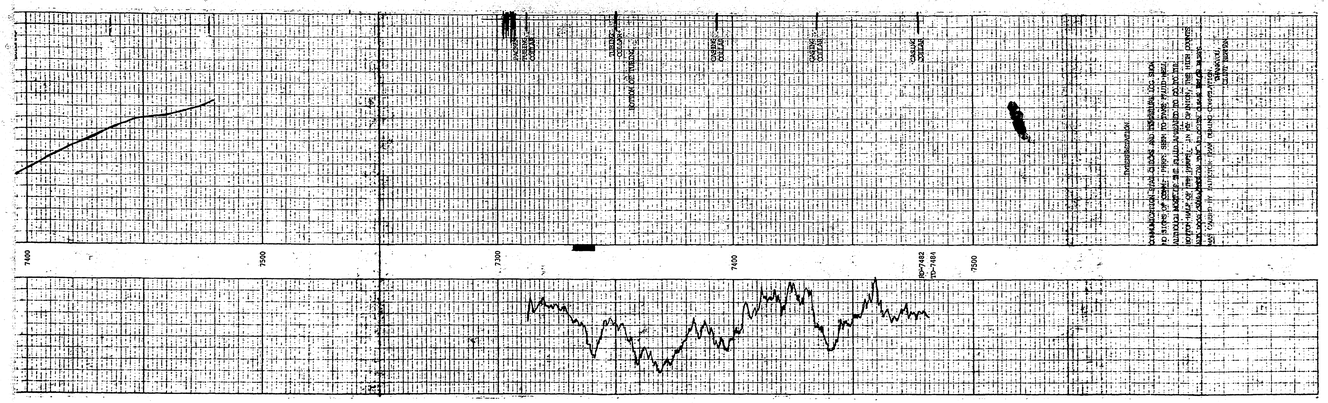
NOTICE: All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our General Terms and Conditions as set out in our current Price Schedule.

GEARHART INDUSTRIES, INC.

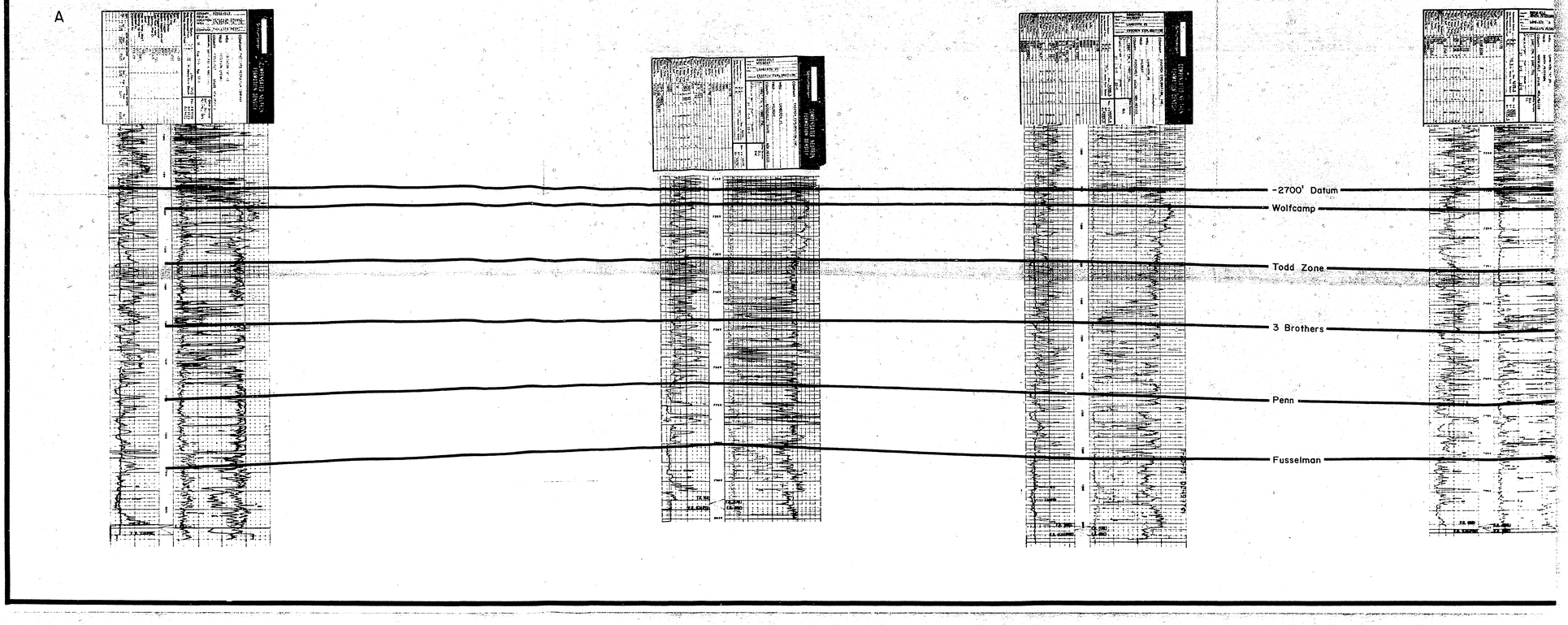


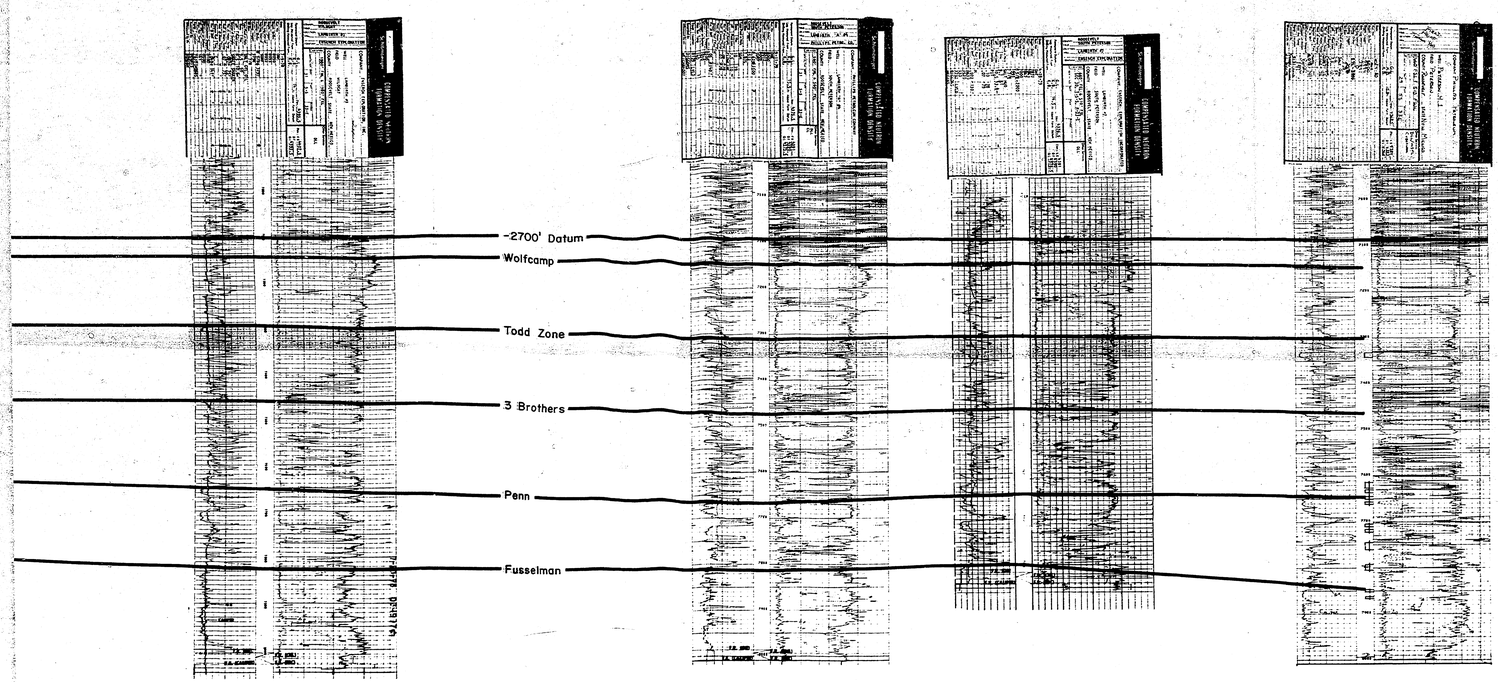




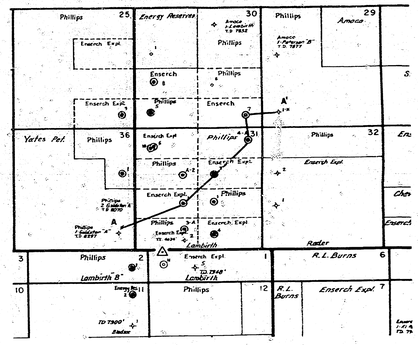

7400
7500
7300
7400
7500

A

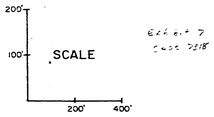




A'



PETERSON (SOUTH) FIELD
ROOSEVELT COUNTY, NEW MEXICO
SW-NE CROSS SECTION



Date of Abandonment
2-17-76

ANOCO - Peterson "B" #1
1980' FSL and 660' FWL
Unit E; Section 29
T-5-S; R-33-E
Roosevelt Co., New Mexico

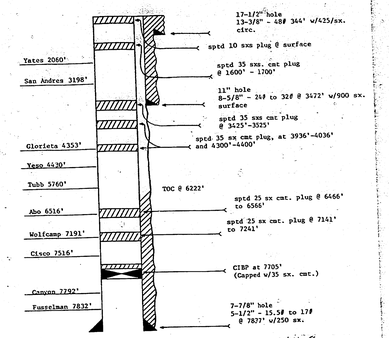
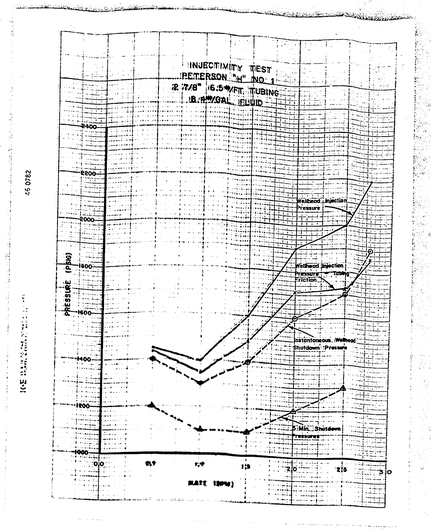
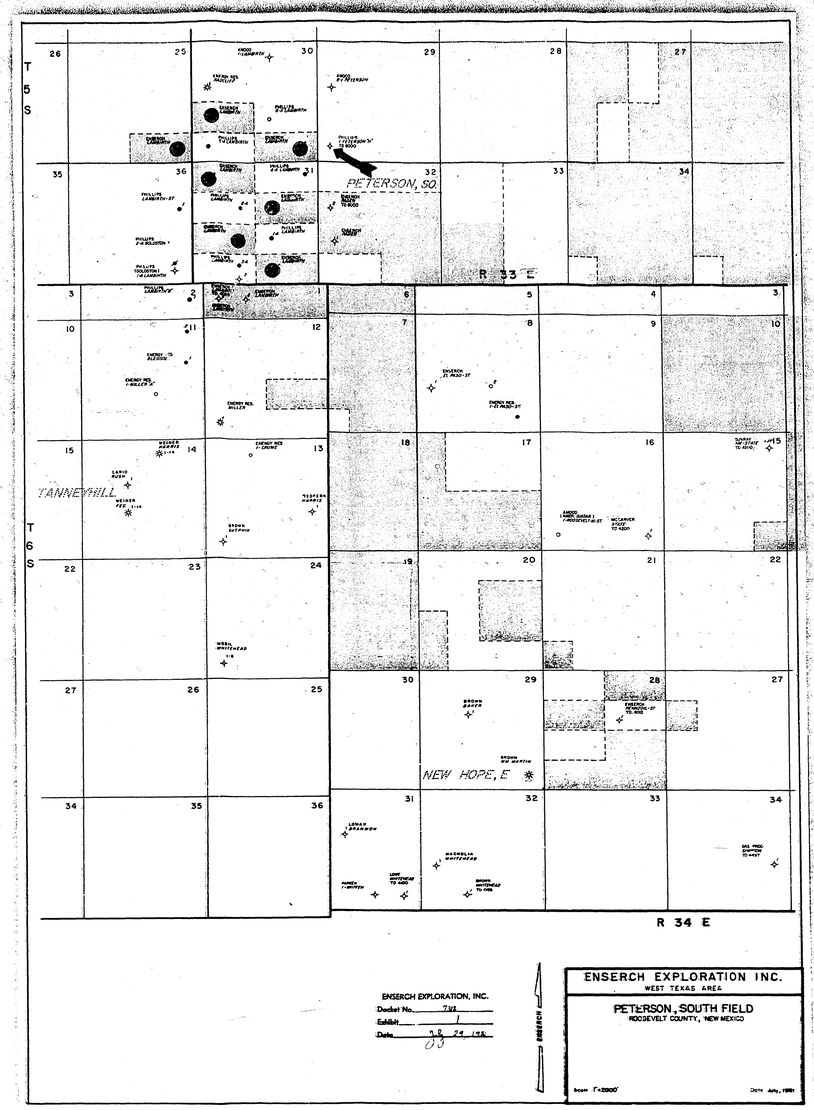
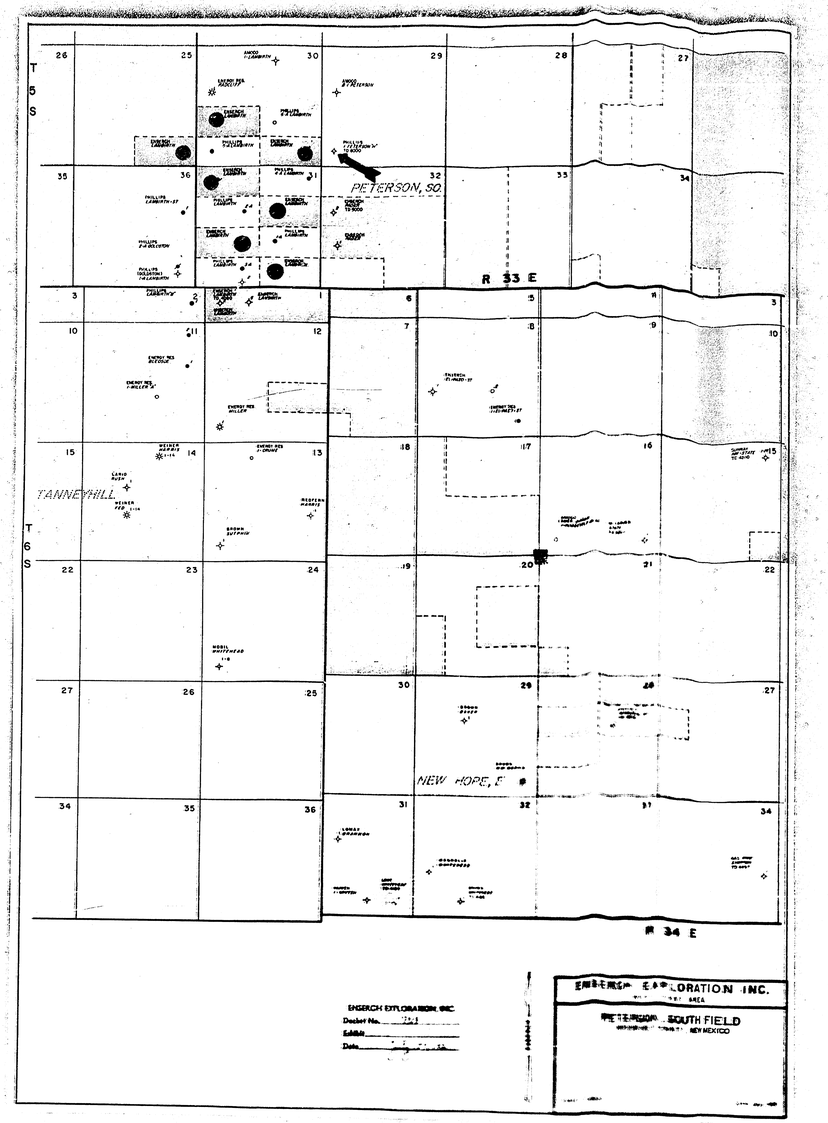
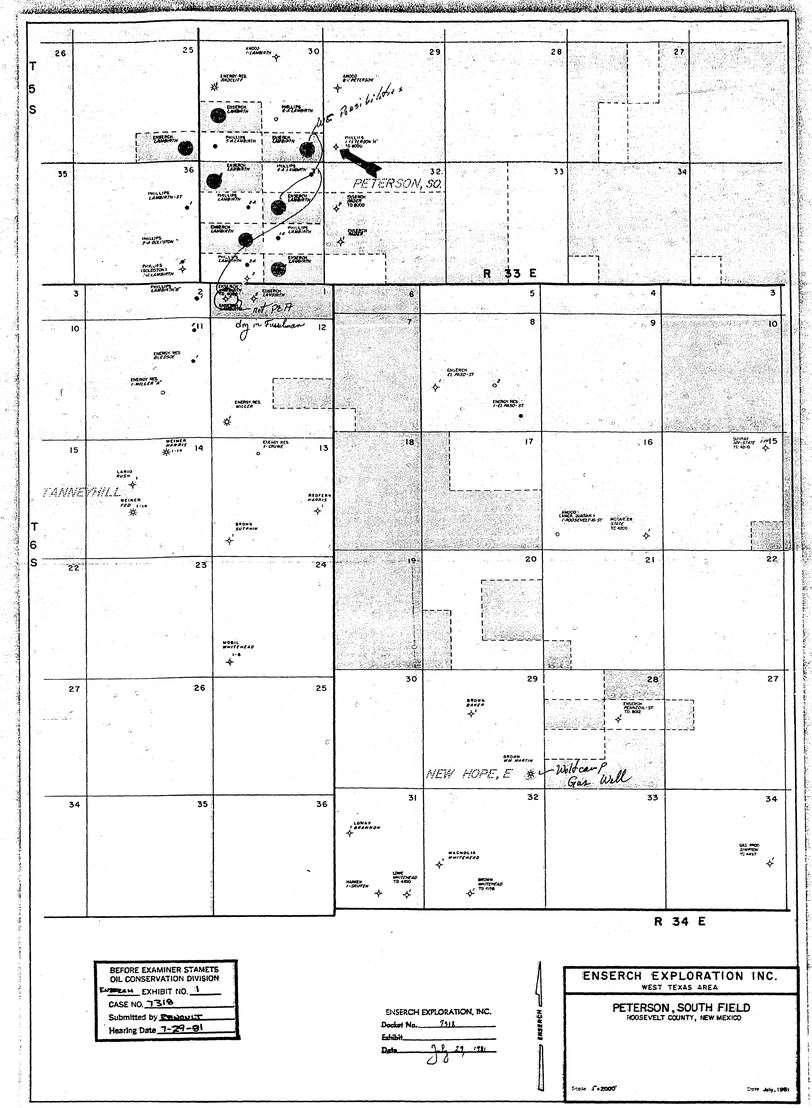


Exhibit 8
Case 7313

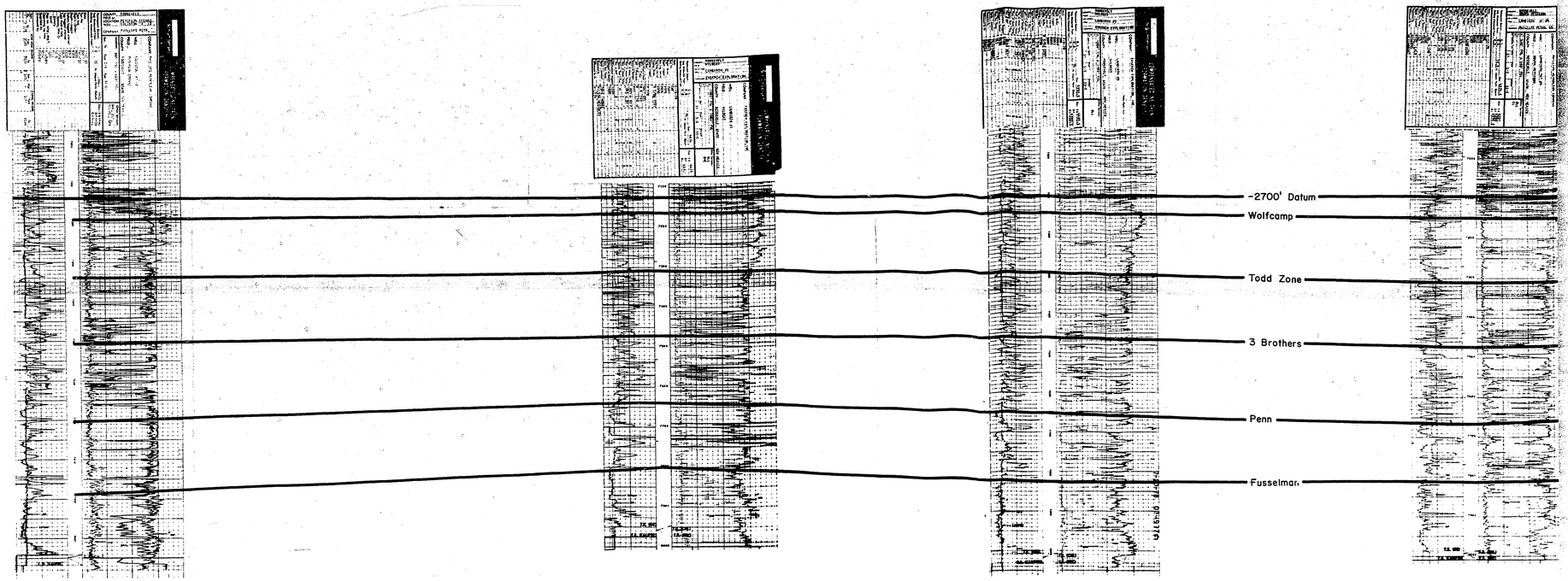

INJECTIVITY TEST
PETERSON "H" NO. 1
2 7/8" 6.5#/FT. TUBING
(B. RAMIREZ FLUID
PRESSURE (PSI)
2400
2200
2000
1800
1600
1400
1200
1000
Wellhead Injection Pressure
Wellhead Injection Pressure Corrected for Friction
Bottomhole Wellhead Shutdown Pressure
Min. Shutdown Pressure
RATE (BPM)

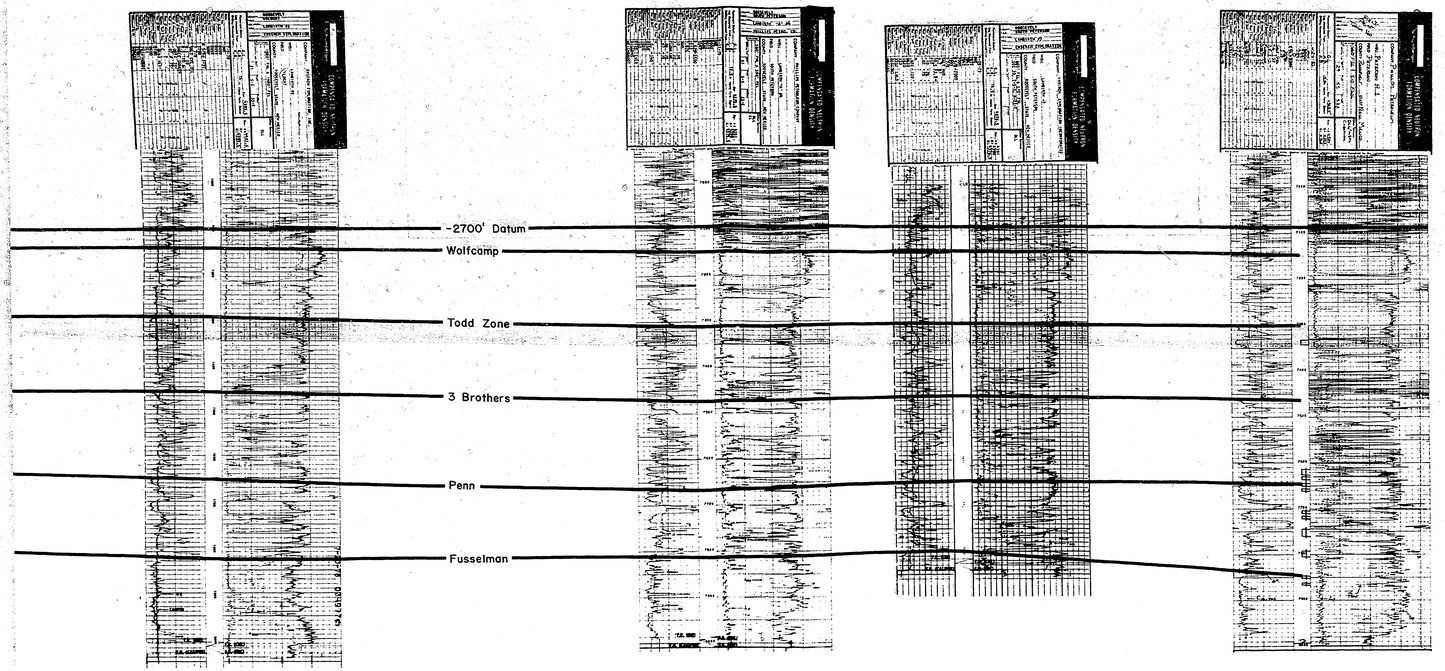

T 5 S
T 6 S
PETERSON, SO.
TANNEYHILL
NEW HOPE, E
R 33 E
R 34 E
ENSERCH EXPLORATION, INC.
Docket No. 7W
Exhibit 1
Date 9-24-82
ENSERCH EXPLORATION INC.
WEST TEXAS AREA
PETERSON, SOUTH FIELD
ROOSEVELT COUNTY, NEW MEXICO
Scale 1"=2000'
Date July, 1981


T 5 S
T 6 S
PETERSON, SO.
TANNEHILL
NEW HOPE, E.
R 33 E
R 34 E
ENERGY EXPLORATION, INC.
Docket No.
Exhibit
Date
ENERGY EXPLORATION INC.
AREA
PETERSON SOUTH FIELD
NEW MEXICO

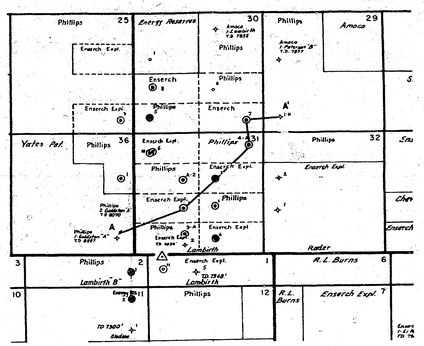

T 5 S
T 6 S
R 33 E
R 34 E
PETERSON, SO.
TANNEHILL
NEW HOPE, E
Witcar Gas Well
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 1
CASE NO. 7318
Submitted by Enserch
Hearing Date 7-29-81
ENSERCH EXPLORATION, INC.
Docket No. 7318
Exhibit
Date 7-29-81
ENSERCH
ENSERCH EXPLORATION INC.
WEST TEXAS AREA
PETERSON, SOUTH FIELD
ROOSEVELT COUNTY, NEW MEXICO
Scale 1"=2000'
Date July, 1981

A





A'



PETERSON (SOUTH) FIELD
ROOSEVELT COUNTY, NEW MEXICO
SW-NE CROSS SECTION

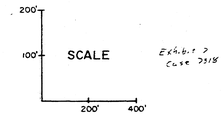


Exhibit 7
Case 7318

GEARHART — CAMMARAY INJECTOR PROFILE
TEMPERATURE LOG

FILING NO.

COMPANY Phillips Petroleum Company

WELL Peterson "B" No. 1 Lease SID

FIELD South Peterson Pennsylvan

COUNTY Roosevelt STATE New Mexico

LOCATION 660' FSL & 510' FEL — OTHER SERVICES

SEC 29 TWP 5oS RGE 33aE

PERMANENT DATUM — ELEV. — ELEV.: K.B. —
LOG MEASURED FROM 15.8 FT ABOVE PERM. DATUM — D.F. —
DRILLING MEASURED FROM — G.L. —

Date	6-29-81		
Run No.	One		
Type Log	Injector	Temperature	
Depth-Driller	7493		
Depth-Logger	7482		
Bottom logged interval	7482		
Top logged interval	7100		
Type fluid in hole	Water		
Max rec. temp., deg. F			
Operating rig time	5 Hrs.		
Recorded by	Lawson		
Witnessed by	Mr. Allred		

Bore-Hole Record				Tubing Record			
Run No.	Bit	From	To	Size	Wgt.	From	To

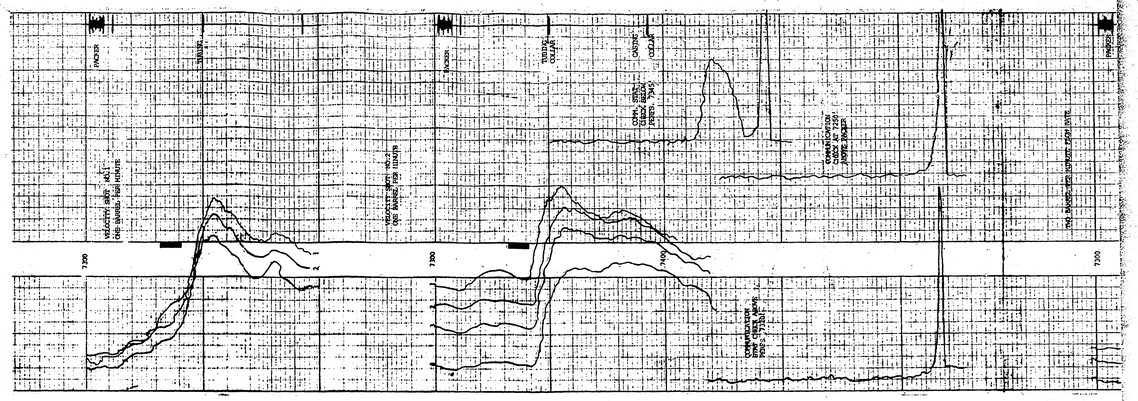
Casing Record				Liner			
Size	Wgt.	From	To	Size	Wgt.	From	To

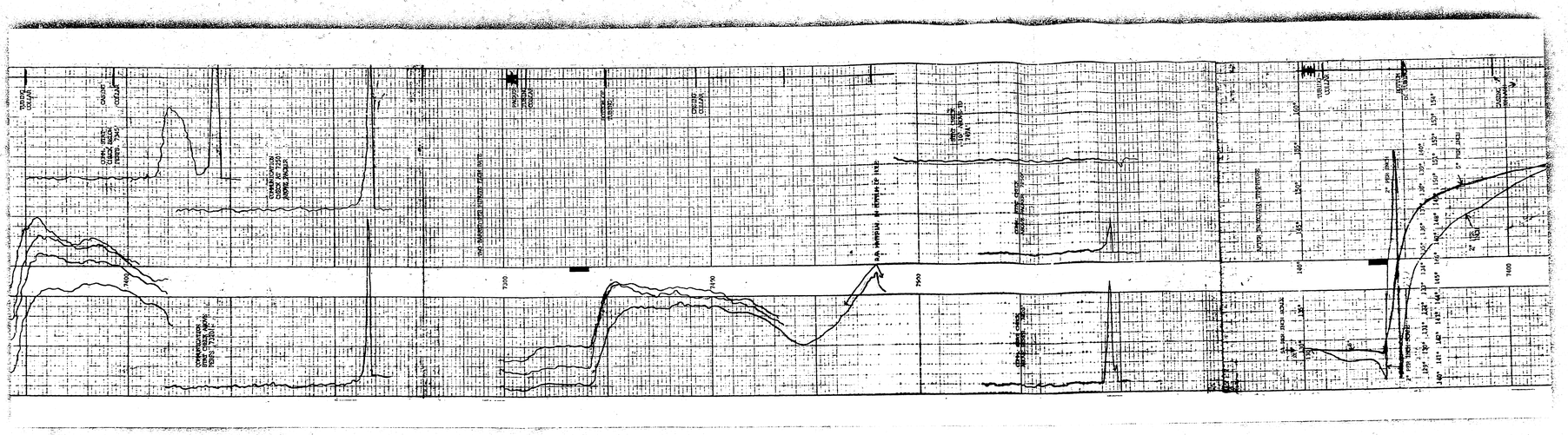
FORM 110-M

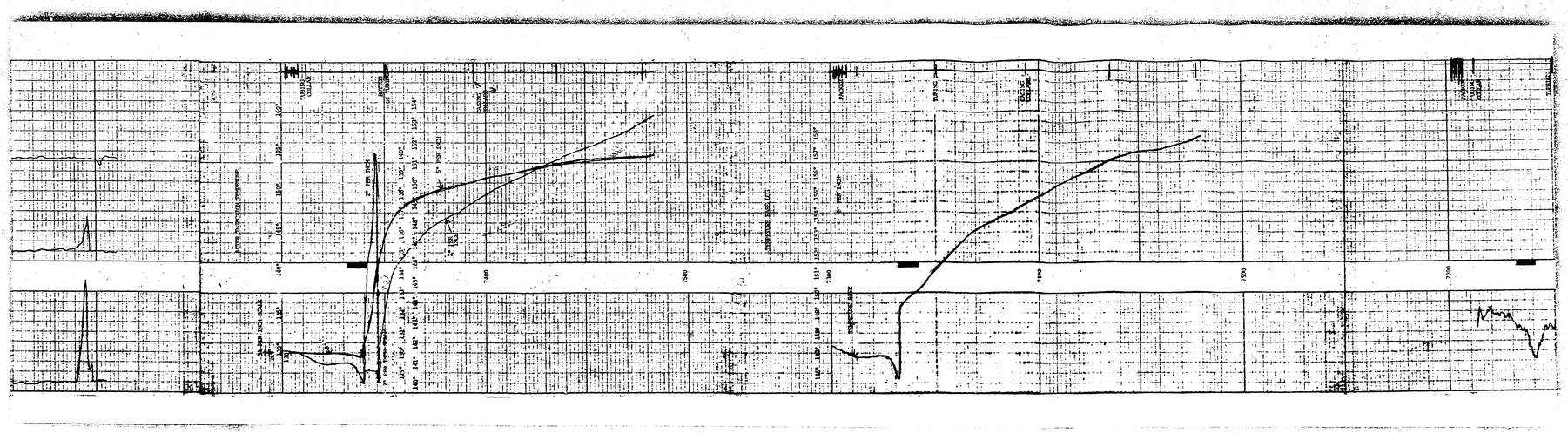
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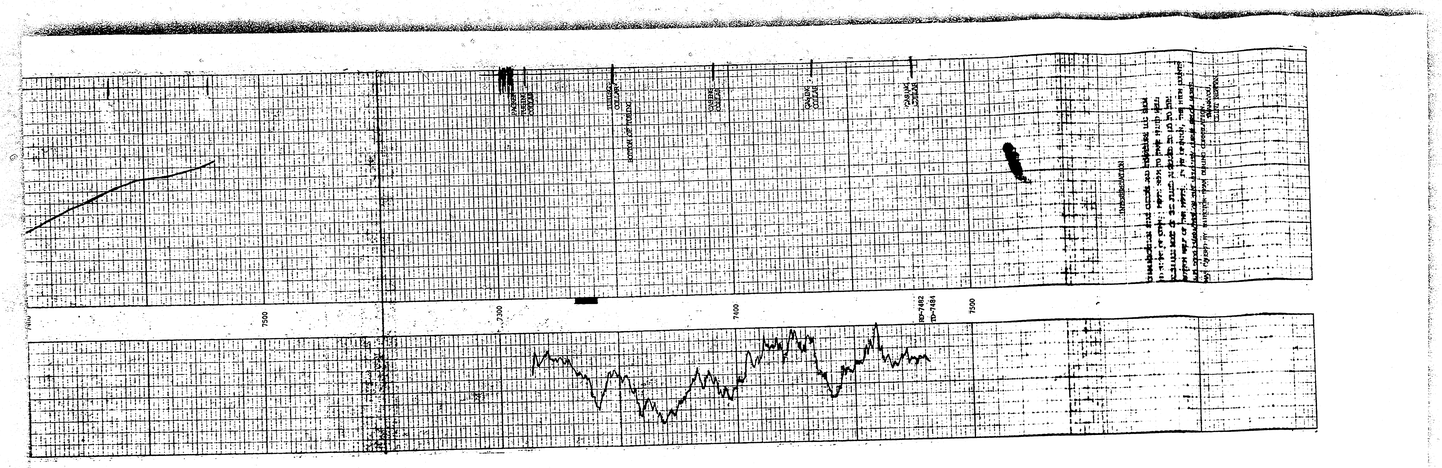
GEARHART INDUSTRIES, INC.

Exhibit 11
Cause 7313









JOHN W. WEST ENGINEERING CO.
412 NORTH DAL PASO, HOBBS, NEW MEXICO

TELEPHONE 3-2662
3-5178

TEMPERATURE SURVEY

OPERATOR	PHILLIPS PETROLEUM COMPANY
LEASE	PETERSON "H"
WELL NO.	1
FIELD	
DATE & TIME CEMENT JOB COMPLETED	6-25-80 @ 9:25 PM
DATE & TIME SURVEY MADE	6-26-80 @ 10:45 AM
SURVEY RUN BY	J.W.W.
DATUM	KELLY DRIVE BUSHING
WELL DATA	450 SACKS CLASS H CEMENT, AND 350 SACKS CLASS H CEMENT WITH DIACEL D., BEHIND 8000 FEET OF 5 1/2 INCH CASING IN A 7 7/8 INCH HOLE.

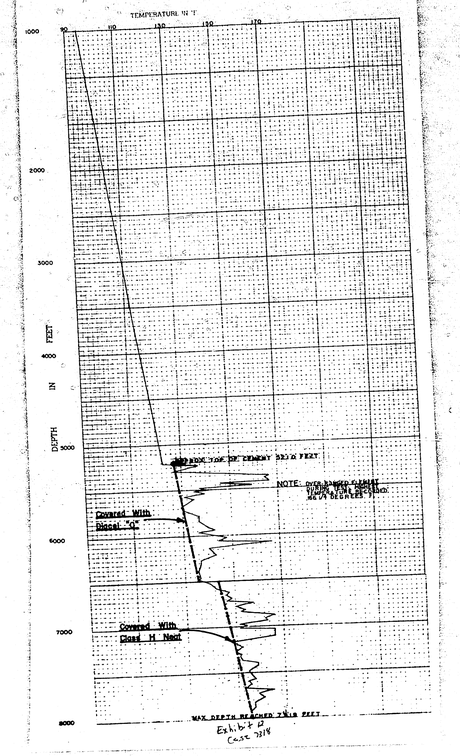


Exhibit D
Case 7818