[redacted]

M-d

Eastern Petroleum 1-2 STATE
NE/4-SW/4 Sec. 2 -Twp. 19N -R26E
Apache, County 81

County Apache

Area Pinta Dome

Lease No. State 2089

Well Name Eastern Petroleum Company 1-2 State

Location NE SW Sec 2 Twp 19N Range 26E Footage 1980 FSL 1980 FWL

Elev Gr 5740 KB Spud Date 6-8-59 ~~Complete~~ Status: He P Abandon Total Depth 1064

Contractor: Approx. Cost $

Drilled by Rotary X
Cable Tool

Casing Size	Depth	Cement
8 5/8	76'	75sx
4 ½	1041.4	100sx

Interval
Production Horizon 974-1000 Coconino

Initial Production Coconino Ggd. 4008 MCF

Helium Well

REMARKS: (OW WO)

River Frac 5000 GLNS/5000lbs. from 974'-1000'

See file for three cores & 1 DST.

1-1-68 Shut-in

Elec. Logs IE; Microlog

Applic to Plub ✓ Plugging Record ✓ Completion Report X

Sample Log
Sample Descript
Sample Set T-1177 P-621
Cores

Water well - accepted by

Bond Co. & No. U. S. Fidelity & Guaranty Company ~~27716-13-3746~~ NO NUMBER GIVEN

Bond Am't $ ~~10,000~~ 25,000 Cancelled ~~11-22-65~~ Date 27716-13-3883-65 Organization Report X

Filing Receipt 63024 dated 5-14-59 Well Book X Plat Book X

API # 02-001-05123 Loc. Plat X Dedication All Section 2

Sample 621

PERMIT NO. 81 Date Issued 5-19-59

Formation Tops	Scout	Sample	E. Log	Remarks
Coconino			973	

Core Analysis, DST charts, etc. _____

81

ARIZONA
APACHE CO.
PINTA DOME (D)

PETROLEUM INFORMATION
DENVER CASPER
ROCKY MOUNTAIN
OIL INFORMATION

Twp 19n-26e
Section 2
c ne sw
1980 n/s 1980 e/w

OPR: Eastern Pet. WELL #: 1 State-2 OWWO

ELEV: 5734 Gr
*TOPS: Log-Sample
Shinarump 811
Moenkopi 819
Coconino 973

DSTS. & CORES:
No cores or tests

SPUD: 8-30-60 COMPL: 9-16-60
TD: 1054 PB: 1040
CSG: 8-5/8" @ 76 w/75
$4\frac{1}{2}$" @ 1040 w/100
PERF: 974-991, 995-1000 w/2 per ft; abrasive jet w/2 holes ea @ 977, 982,987,$999\frac{1}{2}$; sd wtr fract.
PROD. ZONE:
Coconino 974-1000
INIT. PROD:
IPF 2002 MCFGPD, 1" ck, 1 hr test, CP 71#.

Contr: Monarch

Ariz 5-068260

*For Electric Logs on Rocky Mountain Wells—Ask Us!

81

ARIZONA
APACHE COUNTY
PINTA DOME (D)

PETROLEUM INFORMATION
DENVER CASPER
ROCKY MOUNTAIN
OIL INFORMATION

Twp 19n-26e
Section 2
ne sw

OPR: Eastern Pet. WELL #: 1 State-2

ELEV: 5734 Gr.

*TOPS: Log-~~Sample~~

Chinle surface
Chinle Conglomerate 711
Shinarump 811
Moenkopi 819
Coconino 973

DSTS. & CORES:

Crd 987-99, rec 4 sd, bubbling gas. Crd 991-1017, rec 26 sd bubbling gas. Crd 1017-1044 rec 27 sd, tight. DST 970-991, open 30 min, gas gauged 552 MCFPD after 30 min, rec 35 GCM, FP 63#, SIP (1 hr) 104#, HP 459#.

SPUD: 6-8-59 COMPL: 6-14-59

TD: 1054 PB:

CSG: 8-5/8" @ 76 w/75
4½" @ 1041 w/100

PERF:

PROD. ZONE:

INIT. PROD:

D & A.

*For Electric Logs on Rocky Mountain Wells—Ask Us!

A1-068240

AMENDMENT TO JANUARY 2, 1960, FILING

STATE OF ARIZONA
OIL AND GAS CONSERVATION COMMISSION
PHOENIX, ARIZONA

11

FORM O&G 52

Form Prescribed Under Oil and Gas Conservation Act of 1951

WELL COMPLETION REPORT

(File in Duplicate)

Operator Eastern Petroleum Company Field Pinta
Street 2520 First National Bank Building Pool
City Denver 2 State Colorado County Apache
Lease Name State of Arizona #2089 Well No. 1-2 Acres in Unit
Location 1980' E of W line, 1980' N of S line
Sec. 2 Twp. 19N Rge. 26E
Elevation DF 5740' GR Electric Log Run June 13, 1959 19
Number of ~~XXXXXXXXXX~~ Producing Wells on this Lease, including this well 2
Has Authorization to Transport Oil or Gas From Well, Form O&G 57 been filed? No

OFFICIAL COMPLETION GAUGE

Date Test Commenced 9-18- 19 60 Hour A. M. Date Test Completed 9-18- 19 60 Hour P. M
Length of Test 4 Hours Minutes
For Flowing Well: For Pumping Well:
Flowing pressure on Tbg. lbs./sq.in. Length of stroke used inches
Flowing pressure on csg. 100 lbs./sq. in. Number of strokes per min.
Size tbg. in. No. ft. run Size of working barrel inches
Size choke 4 points in. Type choke Size tubing in. No. ft. run
Length in. Shut in pressure
If flowing well, was this well flowed for the entire duration of this test without the use of swab or other artificial flow device? Yes If jetted, used cu. ft. gas per bbl. oil. Result of this test ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX~~ 2,450 MCFPD
Gas-oil ratio of this well is cu. ft. of gas per bbl. of oil.
Per cent water produced during this test
Gravity of oil produced during this test (Corrected to A.P.I. 60° F)
Name of Pipe Line or other carrier
If perforated: No. Shots 44 From 974 / 995 To 991 / 1000 Date Perforated
Date well Spudded June 8, 19 59. Date Well Completed September 12, 19 60.
Top Pay 973 Ft. Total depth of well 1054' Ft.

CASING LINER AND TUBING RECORD

String	Size	Wt./Ft.	Name and Type	Amount Ft. In.	Depth Set at	Perforated From	Perforated To

CEMENT AND TESTING RECORD

Size of Hole	String	Where Cement Placed	No. Sacks Cement	Method Used	Pressure Applied in Testing	Hardness of Cement Drilled	Type of Cement
6 3/4	4 1/2	T.D.	100	Howco	1000 lbs.		No Record

CHEMICAL OR SHOOTING RECORD BEFORE COMPLETION

Size	Chemical or	Quantity	Date	Depth From	Depth To
	Riverfrac	5000 glns/5000 lbs.	9-8-60	974	1000

AFFIDAVIT

I, J. Stoutner, being first duly sworn on oath state that I have knowledge of the facts and matter herein set forth and that the same are true and correct.

J. Stoutner
Representative of Company

STATE OF COLORADO)
CITYCOUNTY OF DENVER)) ss.

Subscribed and sowrn to and before me this 27th day of September 19 60
by J. Stoutner ~~XXXXXXXXXXX~~ [signature] Notary Public
My Commission expires: April 23, 1963

RECEIVED SEP 29 STATE O & G CONS. COMM.

81 4

PLUGGING RECORD

Operator: Kerr-McGee Corporation	Address: P. O. Box 250, Amarillo, TX 79105
Federal, State, or Indian Lease Number, or lessor's name if fee lease: State	Well No.: 1-2
Field & Reservoir: PINTA DOME/Coconino Sand	
Location of Well: NE-NE, Section 2, Twp 19N, Rge 20E	Sec-Twp-Rge or Block & Survey
County: Apache	

Application to drill this well was filed in name of	Has this well ever produced oil or gas	Character of well at completion (initial production): Oil (bbls/day)	Gas (MCF/day)	Dry?
Eastern Petroleum Co.	Yes-Helium	Unknown	Unknown	No

Date plugged:	Total depth	Amount well producing when plugged: Oil (bbls/day)	Gas (MCF/day)	Water (bbls/day)
4/15/77	1054'	0	20	0

Name of each formation containing oil or gas. Indicate which formation open to well-bore at time of plugging	Fluid content of each formation	Depth interval of each formation	Size, kind & depth of plugs used Indicate zones squeeze cemented, giving amount cement
N/A			

CASING RECORD

Size pipe	Put in well (ft.)	Pulled out (ft.)	Left in well (ft.)	Give depth and method of parting casing (shot, ripped, etc.)	Packers and shoes
8 5/8"	76'	0	76'	---	EZSV Retainer at 920'
4 1/2"	1041'	0	1041'	---	-----

Was well filled with mud-laden fluid, according to regulations? Yes

Indicate deepest formation containing fresh water.

NAMES AND ADDRESSES OF ADJACENT LEASE OPERATORS OR OWNERS OF THE SURFACE

Name	Address	Direction from this well:
Eastern Petroleum Co.	P. O. Box 291 Carmi, Illinois	East
Kerr-McGee Corporation	P. O. Box 250 Amarillo, TX 79105	North, South, West

In addition to other information required on this form, if this well was plugged back for use as a fresh water well, give all pertinent details of plugging operations to base of fresh water sand, perforated interval to fresh water sand, name and address of surface owner, and attach letter from surface owner authorizing completion of this well as a water well and agreeing to assume full liability for any subsequent plugging which might be required.

Well P & A by setting 4 1/2" EZSV cement retainer at 920' with 50 sxs Class "B" Cement pumped below cement retainer and 76 sxs. Class "B" Cement from retainer to surface.

Use reverse side for additional detail.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Engineering Assistant of the Kerr-McGee Corporation (company) and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

April 22, 1977
Date

Lynn Kelley
Signature

Lynn Kelley

APR 25 1977

O & G CONS. COMM.

Permit No. 0 81

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Plugging Record
File One Copy

Form No. 10

APPLICATION TO ABANDON AND PLUG

FIELD Pinta Dome

OPERATOR Kerr-McGee Corporation ADDRESS P. O. Box 250, Amarillo, TX 79105

Federal, State, or Indian Lease Number or Lessor's Name if Fee Lease State WELL NO. 1-2

SURVEY T-19N, R-27E SECTION 2 COUNTY Apache

LOCATION

TYPE OF WELL Gas (Helium) (Oil, Gas or Dry Hole) TOTAL DEPTH 1054'

ALLOWABLE (If Assigned) None

LAST PRODUCTION TEST OIL 0 (Bbls.) WATER 0 (Bbls.)

GAS 20 (MCF) DATE OF TEST 11-27-75

PRODUCING HORIZON Coconino Sand PRODUCING FROM 974' TO 991'
995' to 1000'

1. COMPLETE CASING RECORD

8-5/8" - cemented with 75 sx at 76'.

4-1/2" - cemented with 100 sx at 1041'.

2. FULL DETAILS OF PROPOSED PLAN OF WORK

1. Set cement retainer at 925'.
2. Squeeze 50 sx of cement below retainer. Equalize 20 sx cement from 925'-725'.
3. Pull tubing.
4. Fill casing to surface with cement.
5. Erect a 4" pipe marker as per Rule 202-A7.

If well is to be abandoned, does proposed work conform with requirements of Rule 202? yes If not, outline proposed procedure above.

DATE COMMENCING OPERATIONS Upon approval.

NAME OF PERSON DOING WORK ADDRESS

CORRESPONDENCE SHOULD BE SENT TO C. J. Breeden (Name) C J Breeden

District Manager (Title)

P. O. Box 250, Amarillo, TX 79105 (Address)

March 1, 1977 (Date)

Date Approved 3-7-77

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

By: W. E. Allen

Permit No. 81

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Application to Abandon and Plug
File Two Copies

Form No. 9

KERR-McGEE CORPORATION EXHIBIT NO. 6

SUMMARY OF SURFACE SHUT-IN PRESSURES, PSIG
Pinta Dome Coconino Sand Gas Pool,
Apache County, Arizona

Unit Number	Well Name	Initial 10/1/61	24 Hours 10/1/62	24 Hours 6/16/63	8 Hours 1/22/64	24 Hours 8/27/64	24 Hours 11/11/65	24 Hours 5/2/66	24 Hours 12/30/66	
I	State 4-A (State 4)	99.4	96.0	92.80	89.4	86.1	N.M.	77.2	N.M.	N.M.
II	State 1-28	98.8	95.6	92.43	89.3	85.8	78.6	76.8	73.9	64.5
III	Fee 1	99.3	95.5	92.20	89.2	85.6	78.5	77.0	73.1	64.4
IV	State 3-A (State 3)	99.1	95.4	92.20	89.0	81.2	N.M.	77.7	73.2	64.4
V	State 2	99.1	95.5	92.15	89.0	85.6	78.5	76.7	73.0	64.3
VI	State 1	99.1	95.4	92.19	88.7	85.4	78.5	77.0	73.1	64.4
VIII	Fee 2	99.3	95.7	92.45	89.2	85.8	78.7	77.1	73.3	64.4
IX	State 1-2	99.6	96.7	93.85	91.2	N.M.	83.2	81.6	77.1	69.4
X	State 1-10	99.6	96.5	N.M.	N.M.	N.M.	83.0	81.6	77.0	67.0
	Averages	99.3	95.8	92.53	89.4	85.1	79.9	78.1	74.2	65.4

N.M. - Not measured.

18

OPERATOR'S CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL OR GAS FROM LEASE

Lease	Field	Reservoir
Eastern State #1-2	Pinta Dome	Coconino
Survey or Sec-Twp-Rge	**County**	**State**
2-19N-26E	Apache	Arizona

Operator: Eastern Petroleum Company

ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:

Street	City	State
Box 291	Carmi	Illinois

Above named operator authorizes (name of transporter): Kerr-McGee Oil Industries, Inc.

Transporter's street address	City	State
Kerr-McGee Building	Oklahoma City	Oklahoma

Field address: Navajo, Arizona

Oil, condensate, gas well gas, casinghead gas

To transport 100 % of the Gas from said lease.

OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:

Name of gatherer	% transported	Product transported
None		

Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a, consolidation or subdivision of leases and give effective date of change.

No Changes

The undersigned certifies that the rules and regulations of the State of Arizona Oil & Gas Conservation Commission have been complied with in drilling and producing operations on this lease, except as noted above, and that the above transporter is authorized to transport the above specified percentage of the allowable oil or gas produced from the above described property, and that this authorization will be valid until further notice or until cancelled by the State of Arizona Oil & Gas Conservation Commission.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Secretary of the Eastern Petroleum Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

May 6, 1964
Date

Jesse N Edwards
Signature

Date approved: MAY 11 1964

By: John V Bannister
Executive Secretary
Oil & Gas Conservation Commission

Commissione 's Number:

File No. 81

STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION
Operator's Certificate of Compliance & Authorization to Transport oil or Gas from Lease
Form No. P-17 File three copies
Authorized by Order No. 4-8-59
Effective April 6, 1959

81

RECEIVED
1964
STATE O & G
CONS. COMM.
MAY 11 1964

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool PINTA Formation COCONINO SANDSTONE County APACHE

Initial ____ Annual ____ Special X Date of Test SEPT. 18, 1960

Company EASTERN PETROLEUM CO. Lease STATE Well No. 1-2

Unit I Sec. 2 Twp. 19N Rge. 26E Purchaser ____

Casing 4½ Wt. ____ I.D. ____ Set at 1019 Perf. 974 995 To 991 1000

Tubing ____ Wt. ____ I.D. ____ Set at ____ Perf. ____ To ____

Gas Pay: From ____ To ____ L ____ xG .920 -GL 937 Bar.Press. 12

Producing Thru: Casing ____ Tubing ____ Type Well ____
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: SEPT. 12, 1960 Packer ____ Reservoir Temp. EST 75°

OBSERVED DATA

Tested Through (Prover) (~~Choke~~) (~~Orifice~~) Type Taps ____

Flow Data						Tubing Data		Casing Data		
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
SI	2"							100.0	83	
1.	2"	1/2						96.0	82	1
2.	2"	1						71.0	83	1
3.	2"	1¼						34.6	82	1
4.	2"	1½						53.0	82	1
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	5.5233		108.0	.9786	.8076	TSTM	471
2.	22.0662		83.0	.9795	.8076	"	1449
3.	54.3653		46.6	.9786	.8076	"	2002
4.	35.6738		65.0	.9795	.8076	"	1834
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
P_c 1.690 EST. $(1-e^{-s})$ .066 P_c 112 P_c^2 12.544

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2 (1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	P_w P_c
1.	108.0	11.664	.796	.634	.042	11.706	.838		
2.	83.0	6.889	2.449	5.998	.396	7.285	5.259		
3.	46.6	2.172	3.383	11.445	.755	2.927	9.617		
4.	65.0	4.225	3.099	9.604	.634	4.859	7.685		
5.									

Absolute Potential: 2,450 MCFPD; n 0.633

COMPANY GEOLECTRIC, INC.
ADDRESS BOX 842 103 N. MAIN AZTEC, NEW MEXICO
AGENT and TITLE B. Hughes Agent
WITNESSED ____
COMPANY ____

REMARKS

RECEIVED SEP 29 1960 STATE O & G CONS. COMM.

81 5

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w). MCF/da. @ 15.025 psia and 60° F.

P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater. psia

P_w = Static wellhead working pressure as determined at the end of flow period. (Casing if flowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia

P_f = Meter pressure, psia.

h_w = Differential meter pressure, inches water.

F_g = Gravity correction factor.

F_t = Flowing temperature correction factor.

F_{pv} = Supercompressability factor.

n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t.

STATE OF ARIZONA
OIL AND GAS CONSERVATION COMMISSION
PHOENIX, ARIZONA

FORM O&G 53

Form Prescribed Under Oil and Gas Conservation Act of 1951

CAPACITY TEST REPORT
BACK PRESSURE TEST OF GAS WELL
(Critical Flow Prover or Orifice Meter)
OPEN FLOW POTENTIAL TEST

Date September 27, 19 61

Operator Eastern Petroleum Company Field Pinta

Lease State No. 1-2 Well Ac. None

Acres Under Well 640 Connection None

Reservoir Coconino County Apache

Sand Depth 973' Csg. @ 1019' Tubing@

Gr. of Gas 8.5% Helium Size Line and Meter or Prover

Is ~~Xxxxxxx~~ Pressure Corrected to sand face? No

Closed Pres. LBS.

Back Pressure Test

Orifice Size	Coeff 24 Hr.	Working Pressure psia	$(P_c^2 - P_W^2)$ Lb.	If Orifice Meter used Q, MCFPD @ 15.025 psia	Volume
1/2"	5.5233	108.0	838,000	471	
1"	22.0662	83.0	5,259,000	1,449	
1 1/2"	54.3653	46.6	9,617,000	2,002	
1 1/4"	35.6738	65.0	7,685,000	1,834	

Volume - 24 Hour MCF.

Open Flow Test

Shut In Pres. 112 psia Time Shut In 6 days

Producing Through casing

REMARKS
Water - Oil - Etc.
(Important)

TIME	READING	LIQUID USED	SPRING GAUGE
15 Min.	See back pressure chart on file		
20 Min.			
25 Min.			
30 Min.			

Test Until Two Readings Check

OPEN FLOW CAPACITY 2,450 MCF per 24 Hrs.

SIGNATURES
BOARD
CON.
CO. James H Allen
OTHER

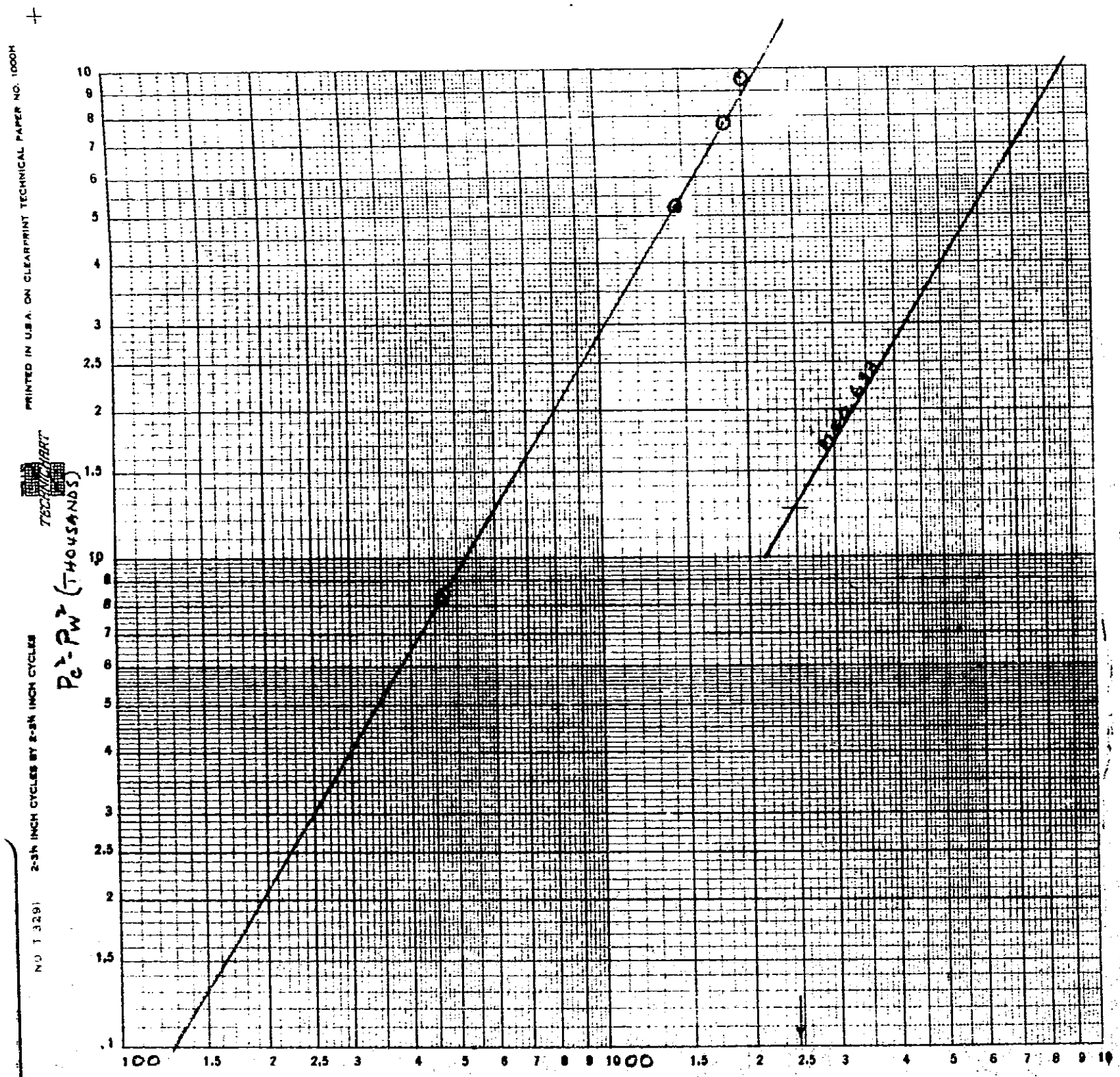
(ACCOMPANY THIS REPORT WITH A BACK PRESSURE CHART)

5/12/58

RECEIVED SEP 28 1961 STATE O & G CONS. COMM.

81 3

EASTERN PETROLEUM CO
STATE 1-2



Q @ 15.025 PSIA

8

WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

DESIGNATE TYPE OF COMPLETION:

New Well ☐ Work-Over ☐ Deepen ☐ Plug Back ☐ Same Reservoir ☐ Different Reservoir ☐ Oil ☐ Gas ☒ Dry ☐

DESCRIPTION OF WELL AND LEASE

Operator: Eastern Petroleum Company	Address: 2520 First Nat'l. Bank Bldg. Denver, Colo.
Lease Name: State of Arizona #2089	Well Number: #1-2 / Field & Reservoir: Pinta
Location: 1980 feet E of W Line, 1980 feet N of S Line	Sec.—TWP-Range or Block & Survey: Section 2, T19N, R26E
County: Apache	Permit number: 81 / Date Issued: May 19, 1959 / Previous permit number: / Date Issued:
Date spudded: June 8, 1959	Date total depth reached: June, 1959 / Date completed, ready to produce: / Elevation (DF, RKB, RT or Gr.) feet: 5740 K.B. / Elevation of casing hd. flange feet: 1' above G.L.
Total depth: 1054'	P.B.T.D.: 1019' / Single, dual or triple completion?: Single / If this is a dual or triple completion, furnish separate report for each completion.
Producing interval (s) for this completion: Coconino Sandstone	Rotary tools used (interval): 0' - 1054' / Cable tools used (interval):
Was this well directionally drilled?: No	Was directional survey made? / Was copy of directional survey filed? / Date filed:
Type of electrical or other logs run (check logs filed with the commission): Electrical Induction & Microlog	Date filed: December 4, 1959

CASING RECORD

Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)

Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled
Surface	10 3/4	8 5/8		76'	75	
Production	6 3/4	4 1/2		1041.40'	100	

TUBING RECORD

Size	Depth set	Packer set at
in.	ft.	ft.

LINER RECORD

Size	Top	Bottom	Sacks cement	Screen (ft.)
in.	ft.	ft.		

PERFORATION RECORD

Number per ft.	Size & type	Depth Interval
NOT PERFORATED		

ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD

Am't. & kind of material used	Depth Interval

INITIAL PRODUCTION

Date of first production: / Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump:)

Date of test	Hrs. tested	Choke size	Oil prod. during test	Gas prod. during test	Water prod. during test	Oil gravity
			bbls.	MCF	bbls.	° API (Corr)

Tubing pressure	Casing pressure	Cal'ted rate of Production per 24 hrs.	Oil	Gas	Water	Gas—oil ratio
			bbls.	MCF	bbls.	

Disposition of gas (state whether vented, used for fuel or sold): Shut In

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Secretarial Assistant of the Eastern Petroleum Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

January 2, 1960 — Date

J. Stoutner — Signature

M NW

STATE OF ARIZONA STATE LAND COMMISSIONER

Well Completion or Recompletion Report and Well Log

File two copies

Form No. P-7

Authorized by Order No. 4-6-59

Effective April 6, 1959

81

DETAIL OF FORMATIONS PENETRATED

Formation	Top	Bottom	Description*

* Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

RECEIVED FEB 17 1960 OIL & GAS STATE COMM. CONS.

INSTRUCTIONS:

Attach drillers log or other acceptable log of well.

This Well Completion or Recompletion report and well log shall be filed with the State Land Commissioner not later than thirty days after project completion.

Form No. P-7

Eastern Petroleum No. 1-2 State (continued)

Present Status: Shut-In

Cores:

No. 1 987 feet to 991 feet Cut 4 feet, recovered 4 feet.
2' Sandstone, buff, fine grained, subround to subangular, firm, good porosity, fair permeability.
2' Sandstone, white, very fine grained, subround to subangular, very firm, fair porosity, poor permeability.
Entire core was bubbling gas.

No. 2 991 feet to 1017 feet Cut 26 feet, recovered 26 feet.
2' Sandstone, buff, fine grained, subround to subangular, firm, fair porosity and permeability.
11' Sandstone, buff to brown, fine to medium grained, subround to subangular, good porosity and permeability.
7' Sandstone, buff to white, fine grained, subround to subangular, fair porosity and permeability.
6' Sandstone, buff, fine to medium grained, subround to subangular, few red fine to coarse round grains, some red clay on cross beds.
Entire core is bleeding gas.
Sandstone is crossbedded.

No. 3 1017 feet to 1044 feet Cut 26 feet, recovered 27 feet.
1' Sandstone, tan, fine grained, round to subround, very firm, low permeability, fair porosity.
10' Sandstone, buff, fine grained, round to subround, firm.
7' Sandstone, buff, fine to medium grained, subround to subangular.
9' Sandstone, ditto with small red oxide stains. Some green shale intercalated on bedding planes.
Appears by tasting to be a salt water level at 1018 feet.

Drill Stem Tests:

No. 1 970 feet to 991 feet (Coconino sandstone)
Open 30 minutes, helium-nitrogen gas to surface immediately;

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Eastern Petroleum No. 1-2 State (continued)

Flowed at the following rate:
5 minutes - 250 MCF/D
15 minutes - 286 MCF/D
25 minutes - 323 MCF/D
30 minutes - 552 MCF/D

Started unloading mud which was previously lost in the formation at the end of 27 minutes. The gas volume was increasing at the end of the test. Surface pressure when gas analysis sample taken was 93 psig.
Recovered 35 feet of gas cut mud.
Shut-in time, initial and final: 60 minutes.
Initial flowing pressure: 63 psig.
Final flowing pressure: 63 psig.
Initial shut-in pressure: 108 psig.
Final shut-in pressure: 104 psig.
Initial hydrostatic pressure: 477 psig.
Final hydrostatic pressure: 459 psig.

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APPLICATION FOR PERMIT TO DRILL, DEEPEN OR PLUG BACK

APPLICATION TO DRILL ☒ DEEPEN ☐ PLUG BACK ☐

NAME OF COMPANY OR OPERATOR: EASTERN PETROLEUM COMPANY

DATE: May 12, 1959

Address: 2520 1st. National Bank Bldg | City: Denver 2 | State: Colorado

DESCRIPTION OF WELL AND LEASE

Name of lease: State # 2089

Well number: 1-2

Elevation (ground): 5780

Well location (give footage from section lines): 1980 feet East of the West line, 1980 feetNorth of South line, Sec 2;

Section—township—range or block & survey: 19N; 26E.

Field & reservoir (If wildcat, so state): Pinta Dome Area

County: Apache

Distance, in miles, and direction from nearest town or post office: 7 miles South from Navaho, Arizona

Nearest distance from proposed location to property or lease line: 660 feet

Distance from proposed location to nearest drilling, completed or applied—for well on the same lease: 3700 feet

Proposed depth: 2500

Rotary or cable tools: Rotary

Approx. date work will start: May 20, 1959

Number of acres in lease: 1520.00

Number of wells on lease, including this well, completed in or drilling to this reservoir:

If lease, purchased with one or more wells drilled, from whom purchased: Name | Address

Status of bond: Blanket

Remarks: (If this is an application to deepen or plug back, briefly describe work to be done, giving present producing zone and expected new producing zone)

* Fill in Proposed Casing Program on other side

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Partner-Engineer of the Eastern Petroleum (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Signature: Paul Fullop

Permit Number: 81

Approval Date: May 19, 1959

Approved By: Obed M Larsen

Notice: Before sending in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided.

See Instruction on Reverse Side of Form

STATE OF ARIZONA STATE LAND COMMISSIONER

Application to Drill, Deepen or Plug Back

Form No. P-1 File two copies

Authorized by Order No. 4-6-59

Effective April 6, 1959

81 11

INSTRUCTIONS

READ CAREFULLY AND COMPLY FULLY

For the purpose of this determination attach hereto a neat, accurate plat, map or sketch of this lease, section, block or lot locating thereon the proposed site for this location. Plat shall be drawn to a scale which will permit the facile observation of all pertinent data. Show distances of the proposed well from the two nearest lease and section lines, and from the nearest wells on the same lease completed in or drilling to the same reservoir. If the location requested is not in conformance with the applicable well-spacing rules, show all off-setting wells to the proposed well, and the names and addresses of all adjoining lease or property owners.

In event plat is filed for the purpose of designating the drilling and producing unit, or proration unit, on which the proposed well is to be drilled, the boundaries of such unit shall be shown, also the boundaries of all other such units attributed to other wells on the same lease completed in or drilling to the same reservoir. The acreage contained within each unit shall also be shown.

Do not confuse survey lines with lease lines. The sketch or plat should show your entire lease if possible. If it is not practical to show the entire lease and the plat shows only a section, block or lot out of your lease, you should clearly show that same is only a part of the lease.

Designate scale to which plat or sketch is drawn. Also designate northerly direction on the sketch or plat.

PROPOSED CASING PROGRAM

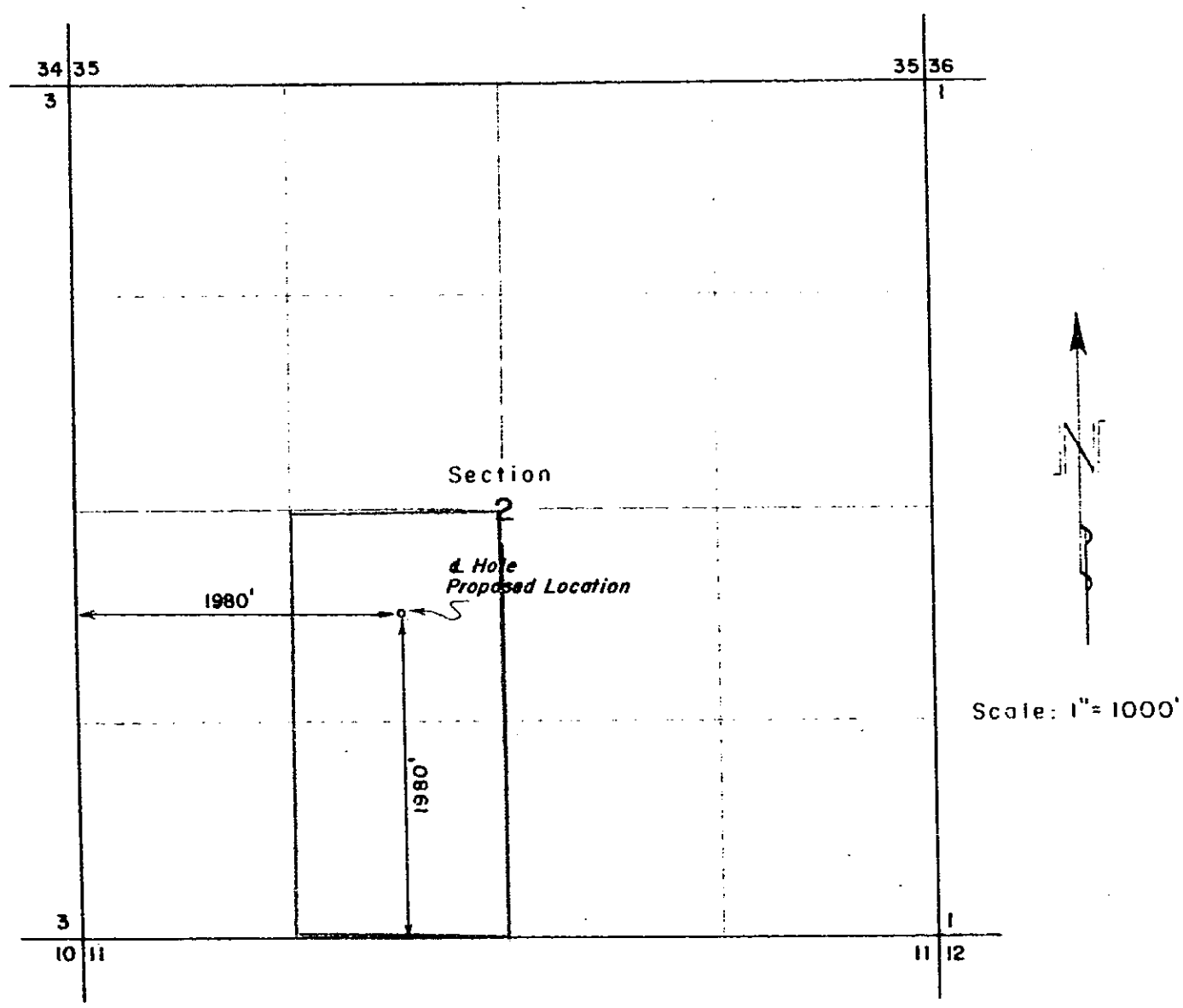
Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement
8 5/8"	24	H-40	Sur.	200	200	200
XXXX 4 1/2"	11	J-55	Sur.	T.D.	T.D.	200

Form No. P-1

MAY 13 3 11 PM 1959

STATE LAND DEPARTMENT

CERTIFICATE OF SURVEY



WELL LOCATION:

Located **1980** feet **East** of the **West** line and **1980** feet **North** of the **South** line of Section **2**
Township **19 North** Range **26 East** **Gila & Salt River** Meridian
Apache Co. Arizona
Existing ground elevation determined at **5750±** feet based on **U.S.G.S. Datum**

I hereby certify the above plat represents a survey made under my supervision and is accurate to the best of my knowledge and belief.

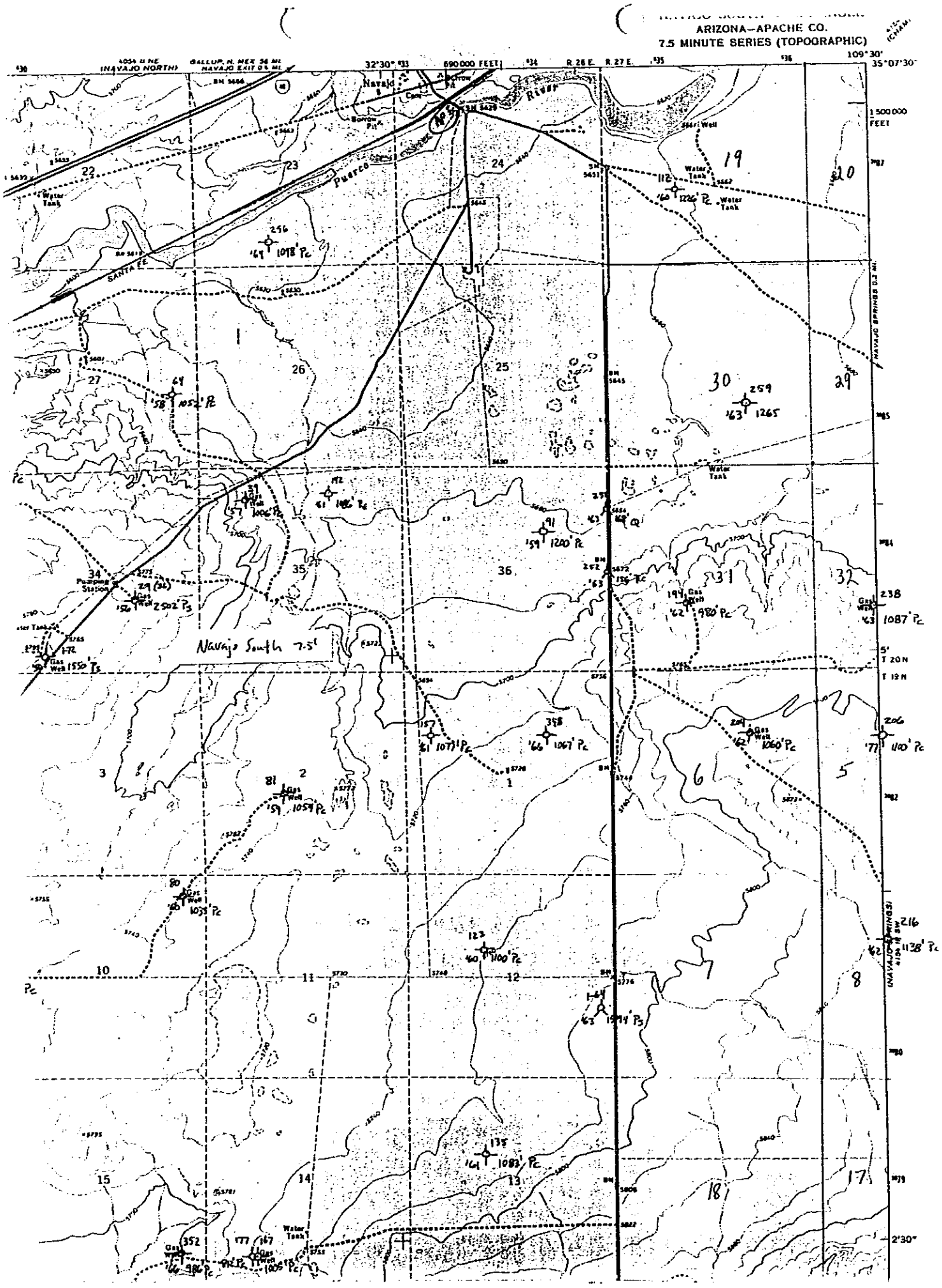
Elmer M. Clark

ELMER M CLARK
Registered Land Surveyor
Colo. 2279

E.M. CLARK & ASSOCIATES
Durango, Colorado
May 11, 1959

STATE LANDS DEPARTMENT

MAY 13 3 11 PM 1959


ARIZONA–APACHE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
Navajo South 7.5'
Puerco
SANTA FE
Water Tank
Pumping Station
Gas Well
Well
Borrow Pit
1 500 000 FEET
690 000 FEET
R. 26 E.
R. 27 E.
109°30'
35°07'30"
32°30"
T 20 N
T 19 N

EASTERN PETROLEUM CO. No. 1-2 State

973 to 1010' - 37 feet.

with the following characteristics worked out from core and log analysis:

Average Porosity 14.8%
Average Permeability..... 171 md.
Average Water Saturation..... 47.8%

1010 to 1019' - 9 feet.

with the following characteristics derived from core analysis:

Average Porosity..... 14.2%
Average Permeability..... 93.4 md.
Average Water Saturation..... 68.1%

Bugs's copy

GEOLOGICAL COMPLETION REPORT
EASTERN PETROLEUM COMPANY
STATE NO. 1-2
SECTION 2, T19N, R26E
APACHE COUNTY, ARIZONA

PN 81

By: Robert E. Lauth
Geological Consultant
Durango, Colorado
August 7, 1959

ROBERT E. LAUTH
Consulting Geologist

GEOLOGICAL COMPLETION REPORT
Eastern Petroleum Company
State No. 1-2
Section 2, T19N, R26E
Apache County, Arizona

WELL DATA

Rotary: Surface to total depth - mud drilled
Spud date: June 8, 1959
Date drilling completed: June 14, 1959
Initial production: Testing
Surface casing: 8 5/8" @ 76 feet with 75 sacks
Production casing: 4½" @ 1041.40 feet with 100 sacks
Contractor: Eastern Drilling Company
Leased rig of Apache Drilling Company, Denver, Colorado
Well location: NE - SW; 1980' FSL & 1980' FWL, Section 2, Township 19 North, Range 26 East, Apache County, Arizona
Elevation: 5734' ground
5740' rotary bushing
Total depth: 1054 feet
Plug back: 1019 feet

FORMATION TOPS

Formation	Depth	Elevation	Thickness
Chinle	Surface	+5740	811'
Chinle congl.	711'	+5029	50'
Shinarump congl.	811'	+4929	8'
Moenkopi	819' (154) (262)	+4921	154'
Coconino	973'	+4767	—

CORRELATION

Formation	Eastern Petr. 1-2 State SW 2-19N-26E	Eastern Petr. 1-10 State NE 10-19N-26E	Eastern Petr. 1-6 State NE 6-19N-26E
Chinle congl.	+5029	+5044	+4991
Coconino	+4767	+4768	+4713

Formation	Kerr McGee No. 1 State SW 34-20N-26E	Kerr McGee No. 2 State SE 34-20N-26E	Kerr McGee No. 3 State SE 4-19N-26E
Chinle congl.	+5040	+5052	+5031
Coconino	+4773	+4782	+4766

ROBERT E. LAUTH

DISCUSSION

The purpose of this report is to present geological information and basic data concerning the Eastern Petroleum Company, State No. 1-2 well located in the NE SW of Section 2, Township 19 North, Range 26 East, Apache County, Arizona.

Under surface pipe the hole was drilled to a depth of 1054 feet with a 6 3/4 inch bit. A fresh water sand was noted from 224 to 251 feet. Lost circulation was minor. Some mud was lost at a depth of 367 feet and approximately 100 barrels of mud was lost in the Coconino sandstone when total depth was reached.

Four and one-half inch casing was set and cemented at 1041.4 feet with 100 sacks of cement. Three cores and one drillstem test were taken in the Coconino sandstone. Details of these will be given in the report. Careful examination of the sample cuttings were made at the wellsite at the time of drilling.

A Schlumberger Electrical-Induction log was run from under surface casing to a depth of 1051 feet. A microlog was run from 86 to 1051 feet.

Final formation tops have been adjusted and picked from electrical log curves related to sample cutting examination and stratigraphic correlation.

STRATIGRAPHY

Attached to this report is the sample description made by the writer from 10 foot and 5 foot sample cuttings for the interval 210 to 1054 feet.

The lithology and correlation of the possible producing horizon (the Coconino sandstone) is discussed in the following paragraphs.

The Chinle conglomerate section is completely water wet, and, hence, will not be discussed.

Coconino sandstone 973' to 1054' (penetrated 81 feet)

The Coconino sandstone is massive, buff in color, and exhibits cross-bedding in the cores. A transition zone exists which is composed of dark red silty shales of the Moenkopi streaked with buff and tan colored reworked sandstones of the Coconino. This zone is present from 954 feet to 973 feet.

By log analysis and core analysis there is a maximum of 46 feet which will be productive of helium-nitrogen gas. Of this, nine feet is in the gas-water transition zone.

The upper thirty-seven foot zone has the following characteristics which are averaged from core and electrical-microlog analysis:

973 to 1010 feet - 37 feet

Average Porosity 14.8%
Average Permeability . . . 171 millidarcies
Average Water Saturation . 47.8%

The lower nine foot zone has the following characteristics averaged from core analysis:

1010 to 1019 feet - 9 feet

Average Porosity 14.2%
Average Permeability . . . 93.4 millidarcies
Average Water Saturation . 68.1%

A commercial helium-nitrogen producer can be made in the upper 37 feet of Coconino sandstone. An initial potential of two to two and a half million cubic feet per day would be reasonable to expect.

RECOMMENDED COMPLETION PROCEDURE

Four and one-half inch (OD), J-55, 9.5 lb. and P-110, 15.10 lb. used casing was set and cemented at 1041.40 feet with 100 sacks of cement. The top of the float collar is at 1019 feet. Centralizers were placed on the shoe joint and just above the pay zone. The plug was pumped to a depth of 510 feet with clear water. It is thought that the plug stopped at this point because of the mixed weight of casing and the amount of gel used in the cement rather than a leak in the pipe.

The different weight of pipe changes its internal diameter in the following dimensions:

J-55, 9.5 lb = 4.090" ID
P-110, 151 lb = 3.826" ID

The mixed weights of pipe appear to be scattered throughout the hole rather than in any one spot. In drilling cement and swabbing, caution must be used.

The following procedure is recommended in completing the Coconino sandstone zone:

1) Drill out the cement to the top of the float collar (1019'); there is 509 feet of cement to drill out. The bit size in drilling the cement must be under the smallest internal diameter of the pipe, namely, 3.826 inches to avoid hanging up.
2) Perforate with 2 shots per foot the intervals 974 to 991 and 995 to 1004 feet.
3) Wash with mud acid sufficient to cover completely all perforations plus an additional amount to penetrate back into the mud invaded zone, approximately 50 gallons.
4) Load the hole with water to help push the acid back into the formation. Allow to set for 4 to 8 hours.
5) Swab water and acid back using a Mission type swab rubber which will be flexible in the mixed string of pipe. Allow the well to blow dry.

From the characteristics of the electrical-induction and microlog core analysis and drillstem test data, the completion should be a natural one.

CONCLUSIONS

This test is considered to have adequately tested all the formations penetrated.

The Coconino sandstone from 973 to 1019 feet contains helium-nitrogen gas.

It is recommended that the intervals 974 to 991 and 995 to 1004 feet be perforated. The completion should be a natural one.

An initial potential of 2 to 2½ million cubic feet of gas per day is reasonable to expect.

The writer expresses his appreciation for the opportunity of making this well study and respectfully submits this report.

Robert E. Lauth

Robert E. Lauth
Geological Consultant
Durango, Colorado
August 7, 1959

CORE DESCRIPTION
Eastern Petroleum Company
State No. 1-2
Section 2, T19N, R26E
Apache County, Arizona
Elevation 5740' rotary bushing

Core No. 1 987 - 991 Cut 4 feet, recovered 4 feet.
Coring time (minutes per foot), 1, 2, 2, 2.
2' Sandstone, buff, fine grained, subround to subangular, firm, good porosity, fair permeability.
2' Sandstone, white, very fine grained, subround to subangular, very firm, fair porosity, poor permeability.
Entire core was bubbling gas.

Core No. 2 991 - 1017 Cut 26 feet, recovered 26 feet.
Coring time (minutes per foot), 2, 3, 3, 2, 2, 1, 2, 1, 2, 2, 3, 2, 2, 1, 2, 2, 2, 2, 2, 2, 3, 4, 3, 2, 3, 1.
2' Sandstone, buff, fine grained, subround to subangular, firm, fair porosity and permeability.
11' Sandstone, buff to brown, fine to medium grained, subround to subangular, good porosity and permeability.
7' Sandstone, buff to white, fine grained, subround to subangular, fair porosity and permeability.
6' Sandstone, buff, fine to medium grained, subround to subangular, few red fine to coarse round grains, some red clay on cross beds.
Entire core is bleeding gas.
Sandstone is crossbedded.

Core No. 3 1017 - 1044 Cut 26 feet, recovered 27 feet.
Coring time (minutes per foot), 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 3, 2, 2, 3, 2, 2, 3, 3, 4, 3, 3, 3, 3, 3.
1' Sandstone, tan, fine grained, round to subround, very firm, low permeability, fair porosity.

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10' Sandstone, buff, fine grained, round to subround, firm.
7' Sandstone, buff, fine to medium grained, subround to subangular.
9' Sandstone, ditto with small red oxide stains. Some green shale intercalated on bedding planes.
Appears by tasting to be a salt water level at 1018 feet.

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DRILLSTEM TEST RECORD
Eastern Petroleum Company
State No. 1-2
Section 2, T19N, R26E
Apache County, Arizona

DST No. 1 970 - 991 (Coconino sandstone)

Open 30 minutes, helium-nitrogen gas to surface immediately;
Flowed at the following rate:

5 minutes - 250 MCF/D
15 minutes - 286 MCF/D
25 minutes - 323 MCF/D
30 minutes - 552 MCF/D

Started unloading mud which was previously lost in the formation at the end of 27 minutes. The gas volum was increasing at the end of the test. Surface pressure when gas analysis sample taken was 93 psig.
Recovered 35 feet of gas cut mud.
Shut-in time, initial and final: 60 minutes.
Initial flowing pressure: 63 psig.
Final flowing pressure: 63 psig.
Initial shut-in pressure: 108 psig.
Final shut-in pressure: 104 psig.
Initial hydrostatic pressure: 477 psig.
Final hydrostatic pressure: 459 psig.

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DRILLING TIME RECORD
Eastern Petroleum Company
State No. 1-2
Section 2, T19N, R26E
Apache County, Arizona
Elevation 5740' rotary bushing

From	To	Minutes Per Ten Feet
210	300	7. 11, 6, 7, 14, 14, 15, 8, 8
300	400	10, 11, 6, 6, 6, 8, 8, 4, 4, 4
400	500	6, 8, 9, 11, 11, 16, 13, 11, 14, 12
500	600	12, 14, 15, 16, 24, 50, 28, 20, 24, 20
600	700	21, 22, 8, NR, 9, 9, 9, 18, 17, 27
700	800	11, 11, 8, 11, 14, 18, 16, 20, 20, 22
800	900	18, 64, 74, NR, 20, 17, 18, 22, 25, 20
900	980	22, 38, 35, 26, 27, 33, 26, 44
		Cored 987 to 1044
1044	1054 (Total depth) -	No record

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SAMPLE DESCRIPTION
Eastern Petroleum Company
State No. 1-2
Section 2, T19N, R26E
Apache County, Arizona
Elevation 5740' rotary bushing

Samples start at 210 feet in the Chinle formation.

210 - 220	100 siltstone and shale brick-red, trace of limestone nodules and coarse grained sandstone.
220 - 230	100 shale red, gray, some light green, in part silty, trace of white fine grained sandstone.
230 - 240	100 shale ditto, trace of white crystalline limestone.
240 - 250	40 sandstone white, fine grained, well cemented, micaceous, calcareous. 60 shale ditto.
250 - 260	60 sandstone ditto, hard and tight, trace of white crystalline limestone. 40 shale ditto, some brown silty.
260 - 270	70 sandstone white, clear, fine to coarse grained, loose, subround to angular. 30 limestone white, red, crystalline.
270 - 280	100 sandstone white to tan, predominately fine grained, loose, calcareous.
280 - 290	100 sandstone ditto. Some brown red chert.
290 - 300	Sample missing.
300 - 310	50 sandstone ditto. 50 shale light green, gray with limestone nodules.
310 - 320	Sample ditto.
320 - 330	50 sandstone ditto, medium grained. 30 limestone white crystalline. 20 shale ditto.
330 - 340	80 sandstone ditto. 10 limestone white crystalline. 10 shale ditto.
340 - 350	100 shale light green, in part micaceous, sandy, some gray and red, also calcareous.

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350 - 360	100 shale as above, in part sandy.
360 - 370	100 shale ditto.
370 - 380	60 sandstone white to tan, fine to medium grained, predominately medium grained, loose. 40 shale ditto. Trace of limestone white crystalline.
380 - 390	100 sandstone ditto, predominately fine grained, subround to subangular. Trace of limestone.
390 - 400	Trace of sandstone. 100 shale brick red and light green, some limestone nodules.
400 - 410	30 sandstone clear, fine to medium grained, loose, some very fine grained, some red and brown chert. 70 shale ditto, also lavender.
410 - 420	Trace of sandstone ditto. 100 shale as above.
420 - 430	100 shale ditto. Trace of red chert.
430 - 440	Trace of sandstone white, medium gained. 100 shale chocolate red, light green, slightly silty.
440 - 450	100 shale ditto, chocolate red, in part finely micaceous.
450 - 460	10 sandstone clear, fine to medium grained, loose, round to subround to subangular, some red and brown chert. 90 shale ditto.
460 - 470	20 sandstone ditto. 80 shale ditto.
470 - 480	30 sandstone ditto. 70 shale ditto.
480 - 490	10 sandstone ditto. 90 shale ditto.
490 - 500	30 sandstone clear, fine to coarse grained, subround to subangular, loose. Trace of gypsum. 70 shale gray, red, and lavender.
500 - 510	30 sandstone ditto. 70 shale ditto, light green.
510 - 520	20 sandstone ditto, some brown chert. 80 shale ditto, light green.
520 - 530	20 sandstone ditto, some very fine grained, white, well cemented. 80 shale ditto, light green.
530 - 540	10 sandstone ditto. 90 shale ditto, light green.
540 - 550	30 sandstone red, clear, fine to medium grained, loose, angular. 70 shale ditto, much red chert.
550 - 560	20 sandstone white to light green, fine grained, bound by clay cement. 80 shale ditto.

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560 - 570	50 sandstone ditto, much clear, fine grained, loose. 50 shale ditto, red and light green.
570 - 580	30 sandstone ditto. 70 shale as above.
580 - 590	30 sandstone ditto. 70 shale lavender and light green, some yellow sandy. Much red chert.
590 - 600	Trace of sandstone. 100 shale as above, light green, some yellow sandy, much red chert.
600 - 610	10 sandstone clear, fine grained, loose. 90 shale ditto.
610 - 620	10 sandstone ditto. 90 shale ditto, much gray and light green. Much red chert.
620 - 630	Trace of sandstone. 100 shale as above. Some red chert.
630 - 640	10 sandstone clear, very fine grained. 90 shale ditto.
640 - 650	Trace of sandstone. 100 shale gray, green, chocolate red. Some limestone.
650 - 660	100 shale ditto, varicolored.
660 - 670	Occasional coarse grained pebbles. 100 shale ditto, varicolored.
670 - 680	100 shale ditto, varicolored, some tan and red chert.
680 - 690	100 shale ditto, varicolored, predominately gray.
690 - 700	Trace of clear, very fine grained, loose sandstone. 100 shale ditto, varicolored. Trace of red, some gray micaceous chert.
700 - 710	Trace of clear, very fine grained, loose sandstone. 100 shale gray and light green.
710 - 720	30 sandstone clear, reddish, fine to medium grained loose, subround to subangular. 70 shale ditto. Some red chert.
720 - 730	100 sandstone tan to reddish, medium to coarse grained, round to angular. Trace of varicolored shale.
730 - 740	100 sandstone ditto, reddish, medium to coarse grained, round to angular. Much chert. Trace of varicolored chert.
740 - 750	90 sandstone ditto, some pebbles. 10 limestone gray, white crystalline. Much brown chert.
750 - 760	100 sandstone ditto, some pebbles. Very much red and brown chert.
760 - 770	100 sandstone ditto, fine to coarse grained, very much brown chert.

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770 - 780	100 sandstone tan to clear, fine to coarse grained, angular, loose.
780 - 790	100 sandstone ditto, some pebbles. Some red chert.
790 - 800	100 sandstone ditto, becoming fine grained. Some red chert.
800 - 810	100 sandstone ditto, clear, predominately coarse grained, subround to angular.
810 - 820	80 sandstone ditto. 20 shale red, finely grounded.
820 - 830	60 sandstone ditto. 40 shale red, gray, chocolate red, some yellow chert.
830 - 840	40 sandstone as above, predominately coarse grained. 60 shale chocolate brown, red, lavender, light green, some chert.
840 - 850	30 sandstone ditto, much pebbles, subround, also red, and white, fine grained, sandy, micaceous. 70 shale ditto.
850 - 860	80 sandstone red, white, fine grained, micaceous, cement. 20 shale red, gray, green.
860 - 870	80 sandstone ditto. 20 shale ditto - trace of chocolate brown, finely micaceous, and finely sandy.
870 - 880	50 sandstone ditto. 50 shale chocolate brown, finely micaceous, finely sandy.
880 - 890	30 sandstone ditto, some white fine grained. 70 shale ditto, very sandy.
890 - 900	Trace of sandstone. Trace of white crystalline limestone. 100 shale as above.
900 - 910	Trace of white, fine grained sandstone. 100 shale as above - chocolate brown, finely micaceous.
910 - 920	20 sandstone white to light green, fine grained, and well cemented. 80 shale ditto, chocolate brown and finely micaceous.
920 - 930	10 sandstone ditto. 90 shale ditto, chocolate brown, and finely micaceous.
930 - 935	30 sandstone light green and gray, fine grained, micaceous. 70 shale ditto - chocolate brown, finely micaceous.
935 - 940	40 sandstone ditto, also red and very fine grained. 60 shale ditto.

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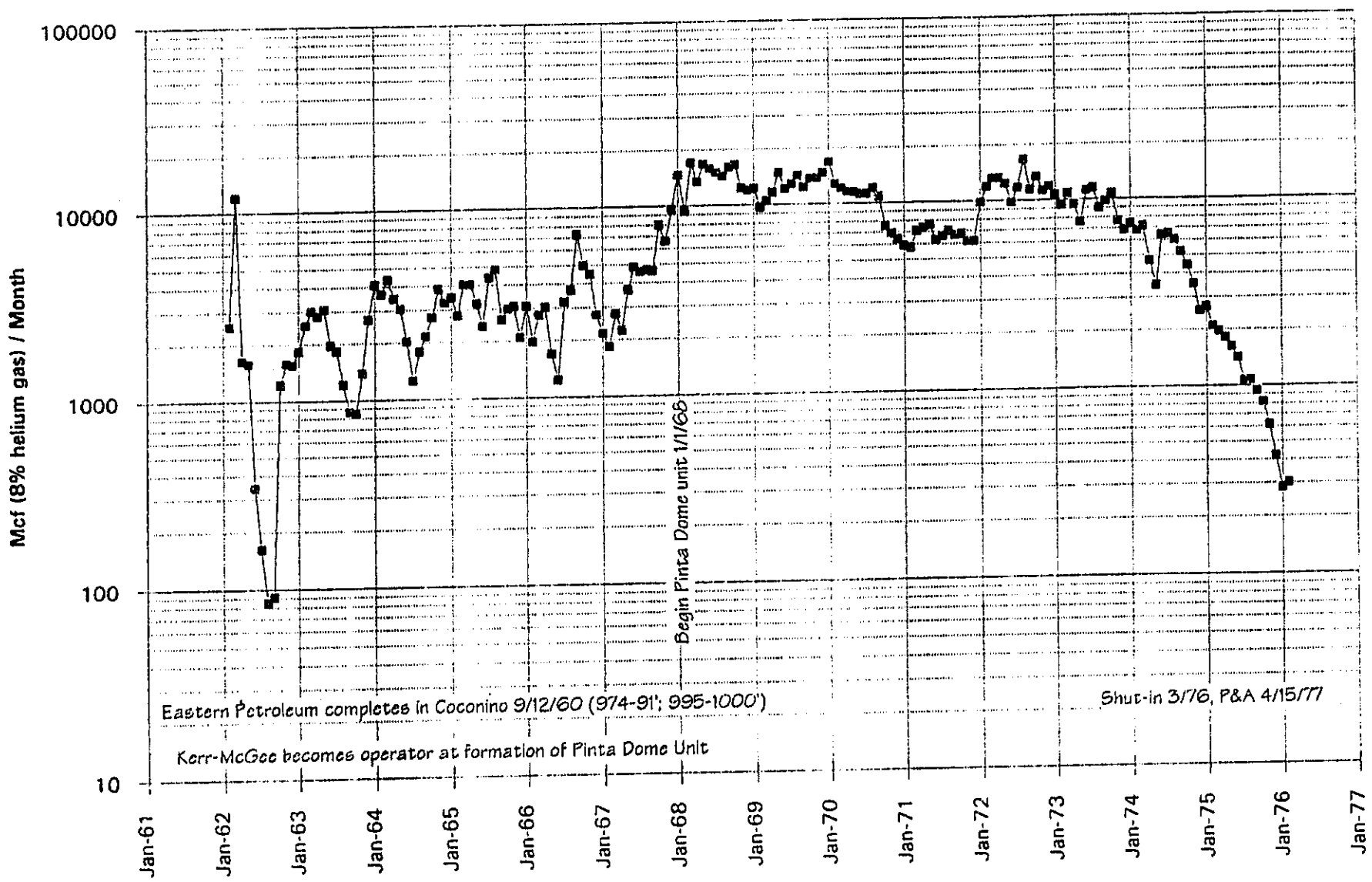
940 - 945	30 sandstone ditto. 70 shale ditto, some lavender, some chert.
945 - 950	10 sandstone ditto. 90 shale chocolate brown, micaceous.
950 - 955	10 sandstone red, very fine grained, micaceous. 90 shale ditto.
955 - 960	30 sandstone as above, some tan and very fine grained. 70 shale ditto.
960 - 965	50 sandstone ditto. 50 shale ditto.
965 - 970	10 sandstone white to buff, fine grained, subround to subangular. 60 sandstone red, very fine grained. 30 shale red to brown.
970 - 975	Trace of white sandstone. 10 sandstone brown, red, very fine grained. 90 shale chocolate brown, gray, green.
975 - 980	30 sandstone buff, fine grained, subround to subangular. 70 shale red, also chocolate brown, in part very sandy, micaceous.
980 - 985	60 sandstone clear, buff, medium grained, subround to subangular. 40 shale red as above.
Circ. sample @ 985	80 sandstone ditto. 20 shale red as above.
987 - 991	See Core No. 1.
991 - 1017	See Core No. 2.
1017 - 1044	See Core No. 3.
1044 - 1054	100 sandstone buff, fine to medium grained, subround to subangular.

973
Dy Cicomo

Note: When the core point at 987' was reached, it was found that a joint of pipe was in the string which was not tallied in. All sample records and drilling time records have been corrected for this depth discrepancy.

ROBERT E. LAUTH

Kerr-McGee 1-2 State (81)
ne sw 2-19n-26e, Pinta Dome, Arizona



1/29/98

State of Arizona
Arizona Geological Survey
845 North Park Avenue, #100
Tucson, Arizona 85719
(602) 882-4795

Fife Symington
Governor

Larry D. Fellows
Director and State Geologist

October 28, 1992

Mr. Merle Bohlander
1600 Turtle Creek
Pampa, Texas 79065

Dear Merle:

Enclosed is the information you requested, the last few years of production and the plugging records for the wells in the Pinta Dome Field. I have also enclosed a summary of surface shut-in pressures for the Pinta Dome Field.

Sincerely,

Steven L. Rauzi

Steven L. Rauzi
Oil & Gas Program Administrator

Enclosures

OFFICE OF
Oil and Gas Conservation Commission
STATE OF ARIZONA
8686 NORTH CENTRAL, SUITE 106
PHOENIX, ARIZONA 85020
PHONE: (602) 271-5161

March 7, 1977

Mr. C. J. Breeden
Kerr-McGee Corporation
P.O. Box 250
Amarillo, Texas 79105

Re: Form 9, Application to Abandon and Plug

Dear Mr. Breeden:

Attached are your approved copies of Form 9, Application to Abandon and Plug ten wells in the Pinta Dome Field, Apache County, Arizona.

Please advise me what date you plan to commence plugging operations.

Very truly yours,

William E. Allen
Director
Enforcement Section

WEA/vb
Enc.

~~86~~ 81

KERR-McGEE CORPORATION
626 AMARILLO PETROLEUM BUILDING
P. O. BOX 250 • AMARILLO, TEXAS 79105

PHONE
806 376-7256

February 28, 1977

RECEIVED
MAR 3 1977
O & G CONS. COMM.

Arizona Oil and Gas Conservation Commission
8686 North Central Avenue, Suite 106
Phoenix, Arizona 85020

RE: Form 9
Application to Abandon
and Plug

Gentlemen:

Attached are two copies each of Form 9, Application to Abandon and Plug, for 10 wells in the Pinta Dome Field, Apache County, Arizona. Plugging will commence when your approval is obtained and with availability of equipment to perform this work. If there are any questions, please advise.

Sincerely,

KERR-McGEE CORPORATION

C. J. Breeden
District Manager
Southwest District - North America

CJB/srm

Attachments

81

OFFICE OF
Oil and Gas Conservation Commission
STATE OF ARIZONA
4515 NORTH 7TH AVE.
PHOENIX, ARIZONA 85013
PHONE: (602) 271-5161

September 18, 1973

Mr. Robert Fullop
Eastern Petroleum Company
P. O. Box 226
Farmington, New Mexico 87401

Dear Mr. Fullop:

Will you please supply this Commission with any information that you might have regarding the recoverable reserves in the Navajo Springs Field?

This information will be considered confidential if you so desire.

Thank you for your cooperation.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rlb

81

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FEB 01 1971
O & G CONS. COMM.

RECEIVED
1971
O & G CONS. COMM.

January 28, 1971

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88

Mr. F. C. Ryan
State Land Department
1624 West Adams
Phoenix, Arizona 85007

Re: U.S.F.G. Bond 13374760
Amount - $4000.00

Dear Mr. Ryan:

I know we've had a few discussions regarding release of this bond which has been in effect for 10 years or so. It was taken out to cover the drilling of a well at that time. For some years now we have had a $25,000 blanket bond #13398363 in effect. I can think of no useful purpose this smaller bond can perform. The well in question was plugged and the location cleaned up. Surely the blanket bond is large enough to satisfy state requirements.

It's a bit hazy with me now but I believe the Land Department's attorney is the one who refused to authorize release.

Anything you may do in this regard will be appreciated.

Yours very truly,

EASTERN PETROLEUM COMPANY

J. N. Edwards

JNE:sjn

cc: Mr. John Bannister
Oil & Gas Conservation Comm.
4515 North 7th Avenue
Phoenix, Arizona 85013

Could you give us a hand here — Thanks

4628

X Chisholm
X Lambert

10
39
36
349
378
80
88
81

X

X Kerr-McGee State #1 (No Permit

June 12, 1969

Mr. Otto C. Barton
Kerr-McGee Corporation
P. O. Box K
Sunray, Texas 79086

Re: Pinta Dome Unit Wells

Dear Mr. Barton:

This letter constitutes permission from this Commission to suspend the annual testing for the captioned wells as provided by Rule 401 during June, 1969.

Sincerely,

John Bannister
Executive Secretary

JAL:jf

81

KERR-McGEE

POST OFFICE BOX 1388 • JUNCTION, TEXAS 76849

June 9, 1969

Oil and Gas Conservation Commission
State of Arizona
Room 202 - 1624 West Adams
Phoenix, Arizona 85007

Attention: Mr. James A. Lambert

Dear Sir:

In accordance with my telephone conversation with you and Mr. John Bannister today, we are hereby requesting the commissions approval to defer the annual testing requirements set forth in Rule 401 on all helium gas wells in the Pinta Dome Unit, Apache County, Arizona.

This field is a unit operation. Only six wells, Eastern State #1-2 and #1-28, Kerr-McGee State #1, #2, #3A, and Fee #1 have been produced, the other three wells, Eastern State 1-10, Kerr-McGee State #4A and Kerr-McGee Fee #2 have been shut-in since unit was formed on January 1, 1968.

Shut in pressures in this field are very low with none exceeding 60 p.s.i.g. Plant operation makes gas flow very erratic, rate of flow and line pressures are very seldom steady for over a few hours at one time. Also when plant is in full operation, line pressures and well operating pressures are never more than 1 to 5# less than well shut in pressures. These conditions make testing procedures as outlined in the testing manual impossible. The only way potential tests could be accomplished would be by venting gas to air which would constitute a waste of valuable natural resources.

We believe that a representative test of the wells in this field is almost impossible and that no useful purpose can be accomplished by flow tests of wells in this unit operation. Therefore we are making this request that annual tests on all wells in Pinta Dome unit be again deferred.

Yours very truly,

KERR-McGEE CORPORATION

Otto C. Barton
Division Superintendent
Oil and Gas Production

RECEIVED JUN 11 1969 STATE O & G CONS. COMM.

OCB/ds

81

X - Lambert
X - Chrono

OFFICE OF
Oil and Gas Conservation Commission
STATE OF ARIZONA
ROOM 202
1624 WEST ADAMS
Phoenix, Arizona 85007
PHONE: 271-5161

May 22, 1969

Mr. Otto C. Barton
Kerr-McGee Corporation
P. O. Box K
Sunray, Texas 79086

Re:		
	Kerr-McGee Fee #1	Permit #10
	Kerr-McGee Fee #2	Permit #39
	Kerr-McGee State #1 (Sec. 34 of 20826)	No Permit
	Kerr-McGee State #2	Permit #36
	Kerr-McGee State #3A	Permit #349
	Kerr-McGee State #4A	Permit #378
	Eastern State #1-10	Permit #80
	Eastern State #1-28	Permit #88
	Eastern State #1-2	Permit #81

X

Dear Mr. Barton:

In accordance with Rule 401 the Oil and Gas Conservation Commission, State of Arizona, has adopted procedures for the annual testing for all gas and/or helium wells.

The Commission's procedure is based upon and must be used in conjunction with the Manual of Back-pressure Testing of Gas Wells as issued by Interstate Oil Compact Commission, P. O. Box 53127, Oklahoma City, Oklahoma 73105.

The Commission has prepared, in addition, a supplement to the IOCC manual inasmuch as that manual is based upon a pressure base other than the 15.025 required by the State of Arizona. The supplement to the IOCC manual has made all necessary corrections to the IOCC manual to reflect the 15.025 pressure base.

81

The tests as required by Rule 401 shall be conducted during the month of June each year and reported in duplicate by July 10th of each year. Forms 18 and 20 will be used for this purpose.

Yours truly,

James A. Lambert
Administrative Assistant

JB:jf

Enc.

EASTERN PETROLEUM CO.
EASTERN DRILLING, INC.
TELEPHONE 38 24104 • P O BOX 201 • CARMI, ILLINOIS

September 25, 1968

Mr. James A. Lambert
Administrative Assistant
Oil & Gas Conservation Comm.
1624 West Adams, Room 202
Phoenix, Arizona 85007

Re: State #1-28
State #1-2

Dear Mr. Lambert:

I realize you are relatively new in your present position, but somewhere in your office is a copy of Plan of Unitization of Pinta Dome Coconino Sand Gas Pool approved by the Commission. Said Plan, among other things, provides that Kerr-McGee Corporation shall be the Operator and shall be charged with making timely reports to your office. Therefore, our reporting obligation ceased at that time.

However, I am late with the Navajo Springs Unit report. Looks like we're even.

Cordially,

EASTERN PETROLEUM COMPANY

J. N. Edwards

JNE:sjn

Enc.

RECEIVED
SEP 27 1968
STATE O & G
CONS. COMM.

81

September 23, 1968

Mr. Henry Fullup
Eastern Petroleum Company
Box 91
Carmi, Illinois

Re: Eastern Petrol Co. State #1-28
T20N, R26E, G & SRM
Sec. 28: SE/4 SE/4
Apache County, Arizona
Permit #88

Eastern Petrol Co. State 1-2
T19N, R26E, G & SRM
Sec. 2: NE/4 SW/4
Apache County, Arizona
Permit #81

Dear Mr. Fullup:

The rules and regulations of the Oil and Gas Conservation Commission of the State of Arizona state that a Monthly Producer's Report, form #16, shall be filed on each producing lease within the State for each calendar month. Our records indicate that invariably Eastern Petroleum Company must be reminded that their report has not been received. We expect to receive the report on or before the 15th of the subsequent month. All of the other companies reporting production are able to comply with this request. Please advise this office why your company has a problem in furnishing this report.

Yours truly,

James A. Lambert
Administrative Assistant

JAL:jf

S1 "John made phone call to Jess ~~Stewart~~ Edwards on 9/26. "Report in mail" — Given over the phone as a total production figure of 12,933 MCF for August. "Forgot to send in report".

Operator Eastern Petroleum Company

Bond Company U. S. Fidelity & Guaranty Co. Amount $10,000

Bond No. 27716-13-3746-60 Date Approved 8-1-60

Permits covered by this bond:

See this file

269	234
81	230
252	229
251	237
107	236
207	218
157	209
88	206
80	194
78	188
264	155
263	150
273	152
259	109
258	108
255	107
282	
250	
276	
284	
227	

CANCELLED

DATE ltr 11-22-65

OFFICE OF
Oil and Gas Conservation Commission
STATE OF ARIZONA
ROOM 202
1624 WEST ADAMS
Phoenix, Arizona 85007
PHONE: 271-5161

June 6, 1968

Kerr-McGee Corporation
P.O. Box K
Sunray, Texas 79086

Attention: Mr. Otto C. Barton

Re: Kerr-McGee #1 State
SW SW 34-20N-26E, Apache County, Permit

Kerr-McGee #2 State
NW SE 34-20N-26E, Apache County, Permit 36

Eastern Petroleum #1-2 State
NE SW 2-19N-26E, Apache County, Permit 81

Eastern Petroleum #1-28 State
SE SE 28-20N-26E, Apache County, Permit 88

Kerr-McGee #1 Fee
SW SE 33-20N-26E, Apache County, Permit 10

Eastern Petroleum #1-10 State
NE NE 10-19N-26E, Apache County, Permit 80

Kerr-McGee #2 Fee
NW NW 35-20N-26E, Apache County, Permit 39

Kerr-McGee #3A State
NE NE 4-19N-26E, Apache County, Permit 349

Kerr-McGee #4A State
SW NE 32-20N-26E, Apache County, Permit 378

Gentlemen:

In reply to your letter of May 22, 1968, this letter constitutes permission from this Commission to suspend until further notice the annual capacity testing of captioned helium gas wells comprising the Pinta Dome Coconino Sand Gas Pool Unit.

Very truly yours,

John Bannister
Executive Secretary

mr

KERR-McGEE

POST OFFICE BOX "K" • SUNRAY, TEXAS 79086

May 22, 1968

Oil & Gas Conservation Commission
of the State of Arizona
Room 202, 1624 West Adams Street
Phoenix, Arizona 85007

Attention: Mr. John Bannister
Executive Secretary

Gentlemen:

We are hereby requesting the Commissions approval to defer the annual testing requirements set forth in the rule 401 on all Helium Gas Wells in the Pinta Dome Unit, Apache County, Arizona.

This field is a unit operation and only those wells needed to supply the plants demand are produced. At present only four wells, Eastern State #1-28, Eastern State #1-2, KM State #1 and KM State #2 are being produced. The other five wells in the unit, Eastern State #1-10, KM State #3A and 4A and KM Fee #1 and #2 have been shut in since the unit was formed on January 1, 1968.

As our sales and production rates vary greatly over short periods of time and well pressures are very low, it is almont impossible to follow testing proceedures as outlined in the testing manual except by venting gas to the air while testing.

The venting of gas to air constitutes a waste of valuable natural resources. We feel that no useful purpose can be served by annual potential tests of wells in a unit opertion of this kind. Therefore we are making this request that annual tests be deferred on all wells in the Pinta Dome Unit. This includes both the four producing wells and five temporarily shut in wells listed above.

Yours very truly,
Kerr-McGee Corporation

Otto C. Barton

Otto C. Barton
Division Superintendent of Oil & Gas Prod.
Box K-Sunray, Texas-79086

Granted
5-29-68
JB

RECEIVED
MAY 23 1968
STATE O & G
CONS. COMM.

Our File No. 81

May 12, 1964

Eastern Petroleum Company
Box 291
Carmi, Illinois

Attention: Mr. J. N. Edwards

Re: Eastern State #1-2
Section 2 - T19N - R26E, Apache County

Gentlemen:

Enclosed for your files is an executed copy, with approval date of May 11, 1964, of Operator's Certificate of Compliance and Authorization to Transport Oil or Gas From Lease in connection with captioned well.

Very truly yours,

John Bannister
Executive Secretary

JB/mkc
Encl.

81

DENVER OFFICE 2520 FIRST NATIONAL BANK BUILDING MAIN 3-5259

EASTERN PETROLEUM CO.
EASTERN DRILLING, INC.

TELEPHONE 38 24104 · P.O. BOX 291 · CARMI, ILLINOIS

May 6, 1964

Mr. John Petty, Petroleum Geologist
Oil and Gas Conservation Commission
Room 202
1624 West Adams St.
Phoenix, Arizona

Dear Mr. Petty:

Certificate of Compliance for the three Pinta Dome wells are enclosed.

No Certificates are enclosed for Navajo Springs as no gas is being transported at this time.

Yours very truly,

EASTERN PETROLEUM COMPANY

J. N. Edwards

JNE:mf

Encls.

Files Nos. 80
81
88

O & G
COMM.

81

EASTERN PETROLEUM CO.
EASTERN DRILLING, INC.

2520 FIRST NAT'L. BANK BLDG.
DENVER 2, COLORADO
MA 3-5259

September 27, 1960

Mr. D. A. Jerome, Executive Secretary
Oil and Gas Conservation Commission
Suite 312 - 3500 North Central Avenue
Phoenix, Arizona

Re: Pinta Area
Apache County, Arizona

Dear Mr. Jerome:

Enclosed herewith please find duplicate copies of well completion reports for each of our Well Nos. 1-2, 1-10, and 1-28. Again thank you for your promptness in sending me the extra copies of this form.

Respectfully yours,

EASTERN PETROLEUM COMPANY
Rocky Mountain Division

Judith Stoutner

Judith Stoutner
Secretary to James W. Dean

Enclosures

RECEIVED
SEP 29 1960
STATE O & G
CONS. COMM.

81

May 18, 1959

Mr. Phil Johnson, State Geologist
P. O. Box 4126
University of Arizona, Geological Building
Tucson, Arizona

Re: Pinta Dome Area, Drilling Permits

Dear Phil:

In reference to our phone conversation of May 15 concerning the water sands in the drilling program which we have set up for the above captioned area, this letter will set out my understanding of your desires and our obligations.

Since we anticipate drilling with air, we will be limited to the amount of water that we can encounter and still continue air drilling operations. Therefore, if we are successful with our air drilling, it will mean that we have not encountered any great water problems. If, however, we are not successful with air, we will then mud up and continue drilling operations with mud as a drilling medium. It will be our obligation to carry our mud in such condition as to keep the waters confined within the sands.

In the event of a dry hole or production, we will of course consult with you on the plugging of the hole or on the running or setting of the production string. At this time you will advise us as to the plugging or covering of the water sands with cement if such conditions are encountered.

Trusting that this letter fulfills the requirements and understanding of this situation, I am

Respectfully yours,

EASTERN PETROLEUM COMPANY
Rocky Mountain Division

Paul Fullop
Division Engineer - Partner

Carbon Copy: Mr. Frederick C. Ryan, Supervisor
Oil and Gas Conservation
Capital Annex Office Building
Phoenix, Arizona

PF:JS

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MAY 19 1959
STATE LAND DEPT.

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MAY-14-59 63024 ⊙ ⊙80137 Ck 25.00

STATE OF ARIZONA
STATE LAND DEPARTMENT
STATE OFFICE BUILDING—PHOENIX, ARIZONA

STATEMENT RECEIPT OFFICE COPY

Eastern Petroleum Company
2520 1st National Bank Bldg.,
Denver 2, Colorado

SECTION	TOWNSHIP	RANGE
2	19 N	26 E

KIND ENTRY	LEASE—REFERENCE NO.
22	81

ACCOUNT NO. GRANT FUND	SUB	CARRYING CAPACITY OR STATIC WATER LEVEL	SEE OTHER SIDE FOR CODE DESCRIPTION: LAND CODE	CROP CODE	WATER CODE	BILLING DESCRIPTION	RATE	ACRES	$ AMOUNT
14 401	35					Drilling Permit Application			25 00

BILLING PERIOD FROM MO.	DAY	YR.	TO MO.	DAY	YR.	DATE BILLED MO.	DAY	YR.	DATE DUE MO.	DAY	YR.	TOTAL ACRES	TOTAL AMOUNT $
						5	13	59					25 00

IF PAYMENT IS MADE ON OR BEFORE THIS DATE → PAY THIS AMOUNT

SEE OTHER SIDE FOR LAW PERTAINING TO PENALTY AND INTEREST — A. C. 1939, 11-307

RENTAL AMOUNT SUBJECT TO PENALTY AND INTEREST IF NOT PAID ON OR BEFORE DATE DUE . . . ($)

5% PENALTY OF RENTAL AMOUNT . . . . . $

TOTAL RENTAL AMOUNT PLUS PENALTY . . . . ($)

10% INTEREST PER ANNUM OF RENTAL AMOUNT AND PENALTY — NUMBER OF DAYS DELINQUENT ( ) $

TOTAL AMOUNT DUE INCLUDING PENALTY AND INTEREST . . . . . $

CASH RECEIVED $

BALANCE DUE OR OVERPAYMENT $

PENALTY AND INTEREST	DISTRIBUTION
	$

TOTAL PENALTY AND INTEREST $

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