FORM MUST BE TYPED

SIDE ONE

COPY

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

Operator: License # 6234

Name: Petroleum Production Management, Inc.

Address 209 E. William, Suite 200

City/State/Zip Wichita, KS 67202

Purchaser: Pawnee Pipeline & Marketing, Inc.

Operator Contact Person: Frank E. Novy, Sr. V.P.

Phone (316) 265-4651

Contractor: Name: Murfin Drilling Company

License: 30606

Wellsite Geologist: Joe Baker

Designate **Type of Completion**
X New Well ____ Re-Entry ____ Workover

____ Oil ____ SWD ____ SIOW ____ Temp. Abd.
____ Gas ____ ENHR ____ SIGW
X Dry ____ Other (Core, WSW, Expl., Cathodic, etc)

If Workover:

Operator:

Well Name:

Comp. Date ____ Old Total Depth ____

____ Deepening ____ Re-perf. ____ Conv. to Inj/SWD
____ Plug Back ____ PBTD
____ Commingled Docket No.
____ Dual Completion Docket No.
____ Other (SWD or Inj?) Docket No.

10/22/94 Spud Date | 10/30/94 Date Reached TD | 10/31/94 Completion Date

API NO. 15- 093-21399

County Kearny

____ - C - SW - NW Sec. 16 Twp. 21S Rge. 35W X E W

1980 Feet from S (N) (circle one) Line of Section

660 Feet from E (W) (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:
NE, SE, (NW) or SW (circle one)

Lease Name Thornbrough Well # #2

Field Name Beymer North

Producing Formation

Elevation: Ground 3114' KB 3120'

Total Depth 4620' PBTD

Amount of Surface Pipe Set and Cemented at 8 5/8" @ 371' Feet

Multiple Stage Cementing Collar Used? ____ Yes X No

If yes, show depth set ____ Feet

If Alternate II completion, cement circulated from ____

feet depth to ____ w/ ____ sx cmt.

Drilling Fluid Management Plan D&A JH 8-11-95
(Data must be collected from the Reserve Pit)

Chloride content 30,000 ppm Fluid volume 4,100 bbls

Dewatering method used allowed to dry naturally

Location of fluid disposal if hauled offsite:

Operator Name

Lease Name License No.

____ Quarter Sec. ____ Twp. ____ S Rng. ____ E/W

County Docket No.

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission. 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). **One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED.** Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature Frank E. Novy

Title Senior Vice President Date 12-22-94

Subscribed and sworn to before me this 22nd day of December, 19 94.

Notary Public Connie L Crook

Date Commission Expires 12-12-96

CONNIE L. CROOK
NOTARY PUBLIC - STATE OF KANSAS
My Appt. Exp. 12-12-96

K.C.C. OFFICE USE ONLY
F ✓ Letter of Confidentiality Attached
C ✓ Wireline Log Received
C ✓ Geologist Report Received

Distribution
✓ KCC ____ SWD/Rep ____ NGPA
✓ KGS ____ Plug ✓ Other (Specify) FS

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DEC 22 1994
CONSERVATION DIVISION
WICHITA, KS

Form ACO-1 (7-91)

SIDE TWO

Operator Name Petroleum Production Management, Inc. Lease Name Thornbrugh Well # 2

Sec. 16 Twp. 21S Rge. 35W ☐ East ☒ West County Kearny

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken (Attach Additional Sheets.) ☒ Yes ☐ No

Samples Sent to Geological Survey ☒ Yes ☐ No

Cores Taken ☒ Yes ☐ No

Electric Log Run (Submit Copy.) ☒ Yes ☐ No

List All E.Logs Run:
DLL-MSFL
SDL-DSN (LOGS SUBMITTED W/CP-4)

☒ Log **Formation (Top), Depth and Datums** ☐ Sample

Name	Top	Datum
Heebner	3877'	-757
Toronto	3909'	-789
Lansing	3936'	-816
B/Kansas City	4395'	-1275
Marmaton	4424'	-1304
Beymer	4518'	-1398
Johnson	4546'	-1426
Cherokee	4564'	-1444

CASING RECORD ☐ New ☒ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12 1/4"	8 5/8"	23#	371'	60/40 poz	220	3% CC, 2% gel

ADDITIONAL CEMENTING/SQUEEZE RECORD

Purpose: ___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	Depth Top	Depth Bottom	Type of Cement	#Sacks Used	Type and Percent Additives

Shots Per Foot	**PERFORATION RECORD** - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	**Acid, Fracture, Shot, Cement Squeeze Record** (Amount and Kind of Material Used)	Depth
	NONE - Well P&A		

TUBING RECORD Size Set At Packer At | Liner Run ☐ Yes ☐ No

Date of First, Resumed Production, SWD or Inj. NONE - P&A | Producing Method ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

Disposition of Gas: **METHOD OF COMPLETION** Production Interval

☐ Vented ☐ Sold ☐ Used on Lease (If vented, submit ACO-18.)

☐ Open Hole ☐ Perf. ☐ Dually Comp. ☐ Commingled _____

☐ Other (Specify) _____ _____

DAILY WELL RECORD ORIGINAL

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WICHITA, KS

POOL _____ API NO. 15-093-21399

WC _____ AFE NO. _____

LEASE: Thornbrough #2 Sec. 16 Twp. 21S Rge. 35W Spot C SW NW

LOCATION: 1980 FNL 660 FWL 16-21S-35W

ELEVATION: 3114 GR 3120 KB County Kearny State Kansas

OPERATOR: Petroleum Production Management, Inc. Phone (316) 265-4651

CONTRACTOR: Murfin Drilling Co. Phone (316) 267-3241

CORRELATION WELL McCoy - Campbell 1-16 "A"

FORMATION TOPS	SAMPLE TOPS	LOG TOPS	CORRELATION LOG TOPS
Heebner	3870 -751	3877 -757	3892 -750
Toronto	3890 -771	3909 -789	3906 -764
Lansing	3930 -811	3936 -816	3950 -808
B/Kansas City	4392 -1273	4395 -1275	4405 -1263
Marmaton	4418 -1299	4424 -1304	4430 -1288
Beymer	4515 -1395	4518 -1398	4521 -1379
Johnson	4543 -1423	4546 -1426	4550 -1408
Cherokee	4561 -1441	4564 -1444	4569 -1427
Morrow			4810 -1668
Mississippi			4850 -1708
Miss. "C" Zone			
RTD	4620 -1500	4621 -1501	4991 -1849

DATE	REPORT
10-22-94	MIRT. Spud @ 2:15 p.m. w/12 1/4" bit. Set 8 5/8" - 23# @ 371' w/220 sx. 60/40 poz. 3% C.C. 2% gel. Circ. cmt. to surface. Plug dn. @ 8:00 p.m. Drilled out @ 8:00 a.m. 10-23-94. Dev. 3/4° @ 371'.
10-23-94	Drilling ahead.
10-24-94	Drilling @ 1780. Dev. 1/8° @ 856', 1/4° @ 1285'.
10-25-94	Drilling @ 2845'. Dev. 1/4° @ 2280'.
10-26-94	Drilling @ 3580'. Dev. 1/2° @ 3060'.
10-27-94	Drilling @ 4155'. MW - 9.4. Wtr. loss 12.0 cc. Viscosity 37. Chlorides 38,000.
10-28-94	Drilling @ 4450'. MW - 9.3. Wtr. loss 12.0. Viscosity 50. Chlorides 35,000. Dev. 1/2° @ 4450'.

ORIGINAL

10-28-94 Cont.

8:00 a.m. Preparing for DST #1 - 4387-4450 (Marmaton - Amazon Ditch Zone)

12:00 p.m. On. btm. Pkr. would not set - have misrun. POOH. Plan to raise pkr. approx. 8' & rerun tools.
DST #2 - 4377-4450' (Amazon Ditch) Open 60, SI 60, Open 60, SI 90. 1st open - weak blow, died in 25 min. 2nd open - no blow. Rec. 25' mud. IFP 70-70. ISIP 130#. FFP 70-70. FSIP 160#. Temp. 126°.

10-29-94 RTD 4531'. MW - 9.5. Wtr. loss 11.2 cc. Viscosity 47. Chlorides 26,000.

9:00 a.m. Preparing for DST #3.

5:00 p.m. DST #3 - 4506-4531' (Beymer) Open 60, SI 60, Open 60, SI 90. 1st open - weak blow, died in 31 min. 2nd open - no blow. Rec 70' wcm - no show. Chlorides 47,000 ppm. IFP 50-50. ISIP 926#. FFP 80-80. FSIP 936#. Temp. 128°. Resume drilling.

10-30-94 RTD 4565'. MW - 9.5. Wtr. loss 12.0 cc. Viscosity 47. Chlorides 30,000.

2:00 p.m. DST #4 - 4536-4565' (Johnson) Open 45, SI 45, Open 60, SI 90. 1st open - weak blow - 1/4" in bucket thruout. 2nd open - weak blow, died in 15 min. Rec. 130' wcm - no show. Chlorides 67,500 ppm. Chlorides of mud sample 25,000 ppm. IFP 50-60. ISIP 350#. FFP 80-90. FSIP 360#. Temp. 128°.

6:00 p.m. RTD 4620'. Condition hole to log.

9:00 p.m. RU HLS & ran DLL-MSFL-GR-caliper log - LTD 4621'. Ran CNCD-GR-caliper from TD to 3620'.

10-31-94 TD 4620'. LTD 4621'. Dev. 1/2° @ 4620'. MW - 9.5. Wtr. loss - 9.6 cc. Viscosity 48. Chlorides 25,000.

4:00 a.m. Logging complete. Log tops verify drillers except 3' deeper thruout Marmaton zones. Johnson zone clean but 10% porosity thruout 6', 60% salt wtr. saturation. No mud cake except btm. 2' of zone (below porous interval). Beymer zone - 4' of porosity in middle of zone - avg. 14% w/4 ohm resistivity - calculate 79% salt wtr. w/practically no interval within the Beymer showing mud cake. The field producing Amazon Ditch zone is pure tombstone w/approx. 2% porosity & slight indication of mud cake. One 2' interval within the Hasel's Folly does have crossover porosity of 18% but is an extremely thin zone showing very little mud cake & certainly not considered as a zone to set csg on. For whatever reason, this well is 10-20' low structurally to all surrounding wells & is recommended to be plugged & abandoned.

5:30 a.m. HLS TIH w/core bbl. - diamond core the following intervals:
Johnson Zone - 1 @ 4556' & 1 @ 4552'
Beymer Zone - 1 @ 4530' & 1 @ 4525'
Amazon Ditch Zone - 1 @ 4445'

10:00 a.m. Coring complete w/5 core minimum charge. 1 1/2" cores recovered showing dense limestone - no show oil, no odor.

10:30 a.m. Orders given to plug & abandon.

3:15 p.m. Allied Cementing begin plugging as follows:

2595' - 100 sx.	600' - 40 sx.	Rat hole - 15 sx.
2185' - 50 sx.	400' - 50 sx.	
1000' - 80 sx.	40' - 10 sx.	

6:30 p.m. Plugging complete. Orders given by Steve Middleton - KCC, Dodge City.

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