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SIDE ONE

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

API NO. 15- 191-22,156

County Sumner

App. SE SE NW SW Sec. 3 Twp. 35 Rge. 1 X East ___ West

1485 Ft. North from Southeast Corner of Section

4125 Ft. West from Southeast Corner of Section
(NOTE: Locate well in section plat below.)

Operator: License # 3667

Name: Source Petroleum

Address 200 W. Douglas,

Suite 820

City/State/Zip Wichita, KS 67202

Purchaser: EnMark

Operator Contact Person: John D. Howard, Jr.

Phone (316) 262-7397

Contractor: Name: ALLEN DRILLING COMPANY

License: 5418

Wellsite Geologist: Charles Schmaltz

Designate Type of Completion
X New Well ___ Re-Entry ___ Workover

___ Oil ___ SWD ___ Temp. Abd.
X Gas ___ Inj ___ Delayed Comp.
___ Dry ___ Other (Core, Water Supply, etc.)

If OWWO: old well info as follows:
Operator: N/A

Well Name: ___

Comp. Date ___ Old Total Depth ___

Drilling Method:
X Mud Rotary ___ Air Rotary ___ Cable

5/16/90 Spud Date | 6/2/90 Date Reached TD | 8/22/90 Completion Date

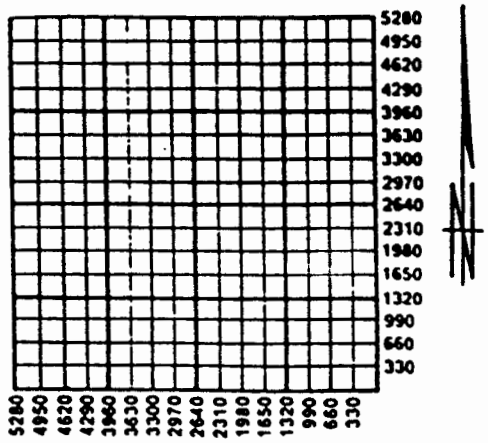
Lease Name BATES Well # 12

Field Name Meek North

Producing Formation Layton

Elevation: Ground 1103 KB 1108

Total Depth 4639 PBTD ___



Amount of Surface Pipe Set and Cemented at 262 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.

INSTRUCTIONS: This form shall be completed in triplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date of any well. Rule 82-3-130, 82-3-107 and 82-3-106 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 drillers time log 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. Any recompletion, workover or conversion of a well requires filing of ACO-2 within 120 days from commencement date of such work.

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 John D. Howard

John D. Howard

Title General Manager Date 9/13/90

Subscribed and sworn to before me this 13th day of September, 19 90.

Notary Public Virginia S. Fabian

Virginia S. Fabian

Date Commission Expires August 5, 1991

NOTARY PUBLIC STATE OF KANSAS

K.C.C. OFFICE USE ONLY
F ___ Letter of Confidentiality Attached
C ___ Wireline Log Received
C ___ Drillers Timelog Received

Distribution
KCC ___ SWD/Rep ___ NGPA
KGS ___ Plug ___ Other (Specify)

Form ACO-1 (7-89)

SIDE TWO

Operator Name Source Petroleum Lease Name BATES Well # 12

Sec. 3 Twp. 35 Rge. 1 ☒ East ☐ West County Sumner

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

Formation Description

☒ Log ☐ Sample

Name	Top	Bottom
Layton	2847	2941
KC	3053	3123
Marmaton	3216	3336
Miss	3467	3530
Kinderhook	3530	3542
Chattanooga	3542	3574
Simpson	3574	3699
Arbuckle	3699	4639

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" USED	28#	262'	STD	175	3% cc
Production	7-7/8"	5-1/2"	14#	3989'	EA-2	500	6#sk Gil

Shots Per Foot	PERFORATION RECORD Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	3794-3801	750 gls MOD 202	3794-3801
4	3827-32	600 gls MOD 202	3822-32
4	3728-33	None	
4	3703-07 CIBP 3685 DQ	500 gls MOD 202	3703-07
4	3397-3402 CIBP 3350	500 gls 7½% HCl	3397-3402
4	2900-04	None	

TUBING RECORD	Size	Set At	Packer At	Liner Run
	2 3/8"	2904'	NA	☐ Yes ☒ No

Date of First Production	Producing Method
8/22/90	☒ Flowing ☐ Pumping ☐ Gas Lift ☐ Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	-0-	160	-0-	NA	

Disposition of Gas:

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

METHOD OF COMPLETION

☐ Open Hole ☒ Perforation ☐ Dually Completed ☐ Commingled

☐ Other (Specify) _____

Production Interval

2900-04

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DST #5 2989-3037'
Tonganoxie
30-30 30-30
1st Open: strong blow off bottom in 3 min
2nd Open: strong blow off bottom in 2 min
Rec: 558' GIP, 20'GCM,
IHP: 1550 FHP: 1550
IFP: 58-58 FFP: 58-58
ISIP: 208 FSIP: 115
BHT 110°

DST #6 3095-3150'
Drum
30-30 30-30
1st Open: strong blow off bottom in 1 min
2nd Open: strong blow off bottom in 1 min
Gas to surface on final shut-in
Rec: 30' GCM w/scum of oil
IHP: 1585 FHP: 1573
IFP: 81-81 FFP: 81-81
ISIP: 823 FSIP: 754
BHT 112°

DST #7 3141-76'
Cleveland Sand
30-30 30-60
1st Open: strong blow
2nd Open: strong blow
Rec: 1380' gas in pipe, 35' thin mud
IHP: 1585 FHP: 1562
IFP: 46-46 FFP: 46-46
ISIP: 162 FSIP: 278
BHT 111°

DST #8 3337-3410'
Skinner Ss
30-30 60-60
1st Open: weak blow in 1 min
2nd Open: weak blow in 1½ min
Rec: 60' GIP, 10' GCM
IHP: 1665 FHP: 1645
IFP: 46-46 FFP: 46-46
ISIP: 69 FSIP: 58

DST #9 3475-95'
Mississippi
30-30 30-30
1st Open: very weak 3/4" blow
2ns Open: very weak 1/4" blow
Rec: 60' GIP, 15' GCM
IHP: 1791 FHP: 1768
IFP: 46-46 FFP: 46-46
ISIP: 69 FSIP: 58
BHT 118°

DST #10 3577-85'
Upper Simpson Sand
30-30 30-30
1st Open: strong blow off bottom in 1 min
2nd Open: strong blow off bottom in 1 min
IHP: 1814 FHP: 1802
IFP: 173-405 FFP: 487-568
ISIP: 731 FSIP: 731
BHT 118°

DST #11 3649-68'
Lower Simpson sand
30-30 60-60
1st Open: weak blow & building
to 3"
2nd Open: strong blow off bottom
in 1 min
Rec: 240' GIP, 35' VSOCM (5% O)
IHP: 1860 FHP: 1848
IFP: 58-58 FFP: 58-58
ISIP: 104 FSIP: 197
BHT 121°

DST #12 3752-3802'
Arbuckle
30-30 60-60
1st Open: weak blow building
to 6"
2nd Open: weak blow building to
strong in 25 min
Rec: 180' GIP, 105' SOCM (5% O)
IHP: 1929 FHP: 1906
IFP: 115-127 FFP: 127-139
ISIP: 1240 FSIP: 1355
BHT 121°

SOURCE PETROLEUM - DRILL STEM TEST DATA

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Attached to ACO-1
Bates #12
Appx SE SE NW SW, 3-35S-1E
Sumner County, Kansas

DST #1 2516-2529'
Stalnaker Sand
30-30 10-30
1st Open: Gas to surf in 3 min,
303 MCF in 10 min, 303 MCF in 20 min,
274 MCF in 27 min
2nd Open: Sprayed M & SW in 8 min
Rec: 630' TF, 90' free oil (45°+),
120' M & W cut oil (50% oil, 20% mud,
15% wtr, 15% gas), 420' SW
125,000 ppm (chlr)
IHP: 1192 FFP: 1192
IFP: 131-258 FFP: 305-305
ISIP: 952 FSIP: 941
BHT 106°
Mud prop 43 vis, 9.1 wt, 10.4 W.L.,
2000 chlr

DST #2 2860-67'
Layton Sand
30-30 10-
Missrun, plugged tool

DST #3 2860-67'
Upper Layton Sand
30-30 60-60
1st Open: Gas to surface in 9 min, 129 MCF in 19 min, 177 MCF in 29 min
2nd Open: 211 MCF in 10 min, 279 MCF in 20 min, 296 MCF in 30 min, 306 MCF in 40 min,
326 MCF in 50 min, 337 MCF in 60 min. Rec: 30' GCM
IHP: 1417 FHP: 1417
IFP: 30-97 FFP: 63-108
ISIP: 964 FSIP: 964
BHT 106°

DST #4 2889-2915'
Lower Layton Sand
30-30 30-30
1st Open: Gas to surface in 2 min, gauged 1,490,000 in 12 min,
1,626,000 in 22 min. 1,626,000 in 30 min
2nd Open: 1,760,000 in 10 min, HM mist in 15 min
Rec: 150' SW
140,000 ppm (chlr)
IHP: 1412 FHP: 1389
IFP: 429-454 FFP: 454-475
ISIP: 1078 FSIP: 1078
BHT 110°