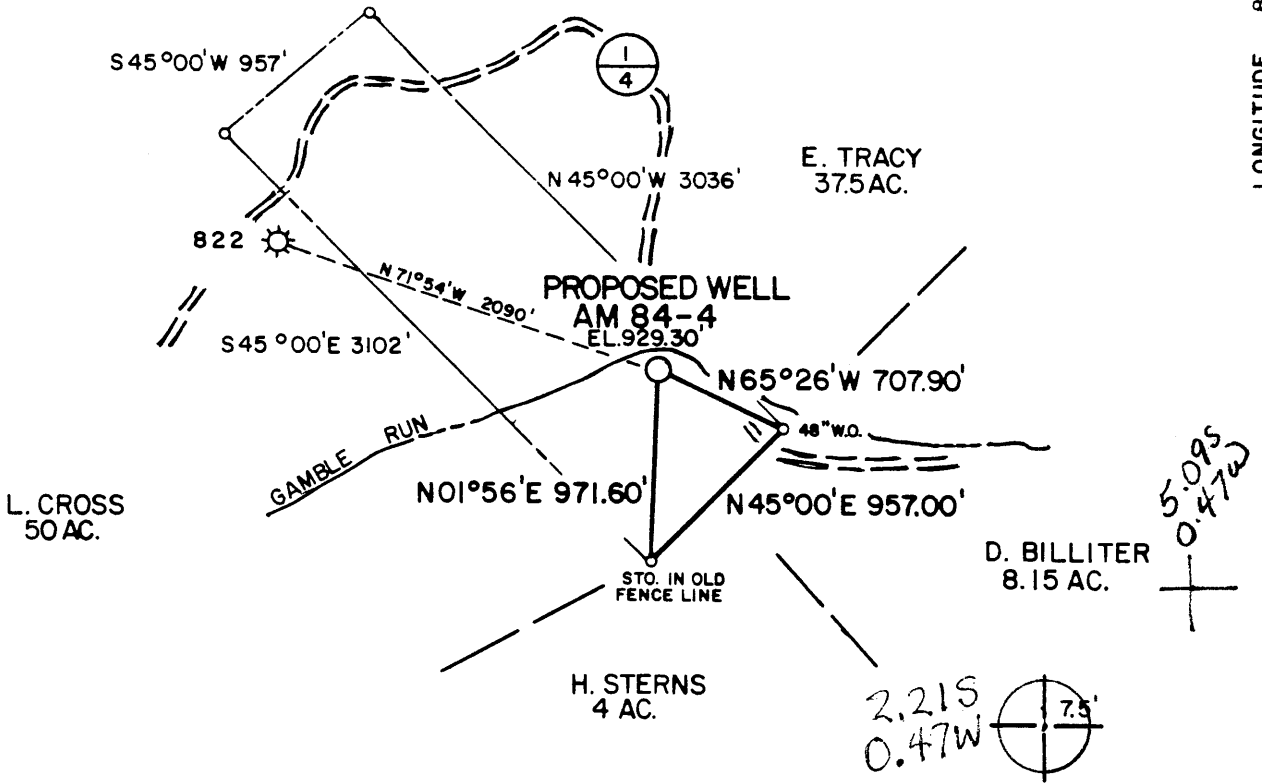


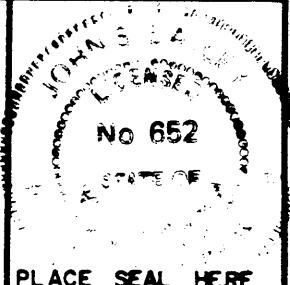
NORTH



WELL REFERENCE TIES
 AM 84-4 TO 20" POP. N25°50'E 66.4'
 AM 84-4 TO 10" POP. N63°41'W 90.3'

FILE NO. MSES 84-488
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION USGS DISK AT BUCK KNOB EL. 1345'

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.
 (SIGNED) John A. Bailey
 R.P.E. _____ L.L.S. 652



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6
 (8-78)



Department of Mines
 Oil & Gas Division

DATE SEPTEMBER 5, 19 84
 OPERATOR'S WELL NO. AM 84-4
 API WELL NO. _____
47 - 095 - 1089
 STATE COUNTY PERMIT

WELL TYPE: OIL _____ GAS X LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS", PRODUCTION X STORAGE _____ DEEP _____ SHALLOW X)
 LOCATION: ELEVATION 929.30' WATER SHED GAMBLE RUN
 DISTRICT LINCOLN COUNTY TYLER
 QUADRANGLE BADEN CITY 75 (1976) 528 New Martinsville 091 WCV
 SURFACE OWNER LEON BILLITER ACREAGE 65
 OIL & GAS ROYALTY OWNER LEON BILLITER LEASE ACREAGE 65
 LEASE NO. _____
 PROPOSED WORK: DRILL X CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
 PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION FIFTH SAND/GORDON ESTIMATED DEPTH 4000'
 WELL OPERATOR APPLIED MECHANICS CORP. 052 DESIGNATED AGENT C.L. STOUT
 ADDRESS RT. 1 BOX 41J BRIDGEPORT, W.V. 26330 ADDRESS RT. 1 BOX 41J BRIDGEPORT, W.V. 26330

SEP 17 1984



IV-35
(Rev 8-81)

Date November 4, 1984
Operator's
Well No. AM 84-4
Farm Lonnie Billiter
API No. 47 - 095 - 1089

State of West Virginia
Department of Mines
Oil and Gas Division

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas x / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production ___ / Underground Storage ___ / Deep ___ / Shallow ___ /)

LOCATION: Elevation: 929 Watershed Gamble Run
District: Lincoln County Tyler Quadrangle Paden City 7.5 (1976)

COMPANY Applied Mechanics Corporation
ADDRESS Rt. 1, Box 41-J; Bridgeport, W.Va. 26330
DESIGNATED AGENT Charles L. Stout
ADDRESS Same as above
SURFACE OWNER Lonnie Billiter
ADDRESS _____
MINERAL RIGHTS OWNER Lonnie Billiter
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK _____
Robert Lowther ADDRESS Middlebourne, W.Va.
PERMIT ISSUED September 5, 1984
DRILLING COMMENCED October 9, 1984
DRILLING COMPLETED October 13, 1984

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
11 3/4 13 1/8	30	30	
9 5/8			
8 5/8	1052	1052	275
7			
5 1/2			
4 1/2	2867	2867	318
3			
2			
Liners used			

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON _____

GEOLOGICAL TARGET FORMATION Gordon Sand Depth 2779-2826 feet
Depth of completed well 2930 feet Rotary x / Cable Tools _____
Water strata depth: Fresh 125 feet; Salt 1233 feet
Coal seam depths: 234 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Gordon Pay zone depth 2779-2826 feet
Gas: Initial open flow show _____ Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 354 Mcf/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 4 hours

Static rock pressure 1220 psig (surface measurement) after 48 hours shut in
(If applicable due to multiple completion--)

Second producing formation _____ Pay zone depth _____ feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ Mcf/d Oil: Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ hours

Static rock pressure _____ psig (surface measurement) after _____ hours shut in

APR 08 1985

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

[2782 - 84 3 holes
2794 - 99 6 holes
2821 - 24 3 holes

Fractured using 712 bbls H₂O
500 gallons acid
40,000# 20-40 sand
120,000 S.C.F. N₂

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all free and salt water, coal, oil and gas
Clay	red	soft	0	32	Fresh water 125
Shale	gray	soft	32	120	
Sand	white	hard	120	133	
Shale	gray	soft	133	234	
Coal	black	soft	234	244	
Shale	gray	soft	244	346	
Shale	red & gray	soft	346	589	
Lime	lt. brown	hard	589	605	
Shale	gray	soft	605	685	Salt water 1233
Lime	lt. brown	hard	685	706	
Shale	gray	soft	706	720	
Lime	lt. brown	hard	720	730	
Shale	gray	soft	730	736	
Shale	red	soft	736	815	
Shale	red & gray	soft	815	1015	
Lime	brown	hard	1015	1160	
Shale	dk. gray	soft	1160	1315	
Shale, sand	gray to white	soft	1315	1597	Electric log--1597 to T.D.
Sand (Maxton)	dk. gray	soft	1597	1633	
Sand & shale	gray	soft	1633	1716	
Lime	dk. gray	hard	1716	1804	
(Big Lime)					
Sand	white	hard	1804	1933	
(Big Injun)					
Sand & shale	gray	soft	1933	2183	
Sand	dk. gray	soft	2183	2277	
(Weir)					
Shale	gray	soft	2277	2779	
Sand	dk. gray	soft	2779	2836	
(Gordon)					
Shale	dk. gray	soft	2836	2930	T.D.

(Attach separate sheets as necessary)

Applied Mechanics Corporation

Well Operator

By: Charles L. Stout

Date: November 11, 1984

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic
detailed geological record of all formations, including



1) Date: September 5, 1984
 2) Operator's Well No. AM-84-4
 3) API Well No. 47 - 095 - 1089
 State County Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION

APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil / Gas / B (If "Gas", Production / Underground storage / Deep / Shallow)
 5) LOCATION: Elevation: 929.3 / Watershed: Gamble Run / District: Lincoln / County: Tyler / Quadrange: Paden City 7.5' (1976)
 6) WELL OPERATOR Applied Mechanics Corporation / 7) DESIGNATED AGENT C. L. Stout
 Address Route 1, Box 41-J / Address Route 1, Box 41-J
Bridgeport, WV 26330 / Bridgeport, WV 26330
 8) OIL & GAS INSPECTOR TO BE NOTIFIED / 9) DRILLING CONTRACTOR:
 Name Robert A. Lowther / Name Unknown
 Address General Delivery / Address _____
Middlebourne, WV
 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate / Plug off old formation / Perforate new formation / Other physical change in well (specify) _____
 11) GEOLOGICAL TARGET FORMATION, Fifth Sand/Gordon
 12) Estimated depth of completed well, 4000 feet
 13) Approximate trata depths: Fresh, -- feet; salt, -- feet.
 14) Approximate coal seam depths: -- Is coal being mined in the area? Yes / No

RECEIVED
SEP 11 1984
OIL & GAS DIVISION
DEPT. OF MINES

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor	11-3/4	H-40	42		X	20	20		Kinds
Fresh water									
Coal									Sizes
Intermediate	8-5/8	J-55	23	X		800	800	Circulate by rule 15.05 as required by rule 15.01	
Production	4-1/2	J-55	10.5	X			3900		
Tubing									Perforations:
Liners									Top Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-095-1089 Date September 12, 1984

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector, (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires September 12, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>8</u> BLANKET	Agent: <input checked="" type="checkbox"/>	Plat: <u>MS</u>	Casing: <u>MS</u>	Fee: <u>300</u>
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Margaret J. Hasse
Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

File

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.