

"I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all of the information required by Paragraph 5 of the rules and regulations of the Oil and Gas Section of the mining laws of West Virginia."

- NEW LOCATION.....
- DRILL DEEPER.....
- ABANDONMENT.....

Edward C. Caswell
 EDWARD C. CASWELL
 Texas Reg. No. 5998

COMPANY PHILLIPS PETROLEUM COMPANY
 ADDRESS BARTLESVILLE, OKLAHOMA
 FARM J. W. Manning
 TRACT _____ ACRES 75 LEASE NO. 108454
 WELL (FARM) NO. B-1 SERIAL NO. _____
 ELEVATION (SPIRIT LEVEL) 1881.0'
 QUADRANGLE Morgantown 5C
 COUNTY Monongalia DISTRICT Clinton
 ENGINEER Edward C. Caswell
 ENGINEER'S REGISTRATION NO. 5998 - Texas
 FILE NO. _____ DRAWING NO. _____
 DATE 12-1-1967 SCALE 1" = 500'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON
 WELL LOCATION MAP
 FILE NO. MON-312

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS, SCALE 1 TO 62,500. LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN

- DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

Deep Well (Ariskany)

Form OG-10



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
WELL RECORD

- Rotary
- Spudder
- Cable Tools
- Storage

Quadrangle Morgantown
 Permit No. MON-312

Oil or Gas Well Gas
 (KIND)

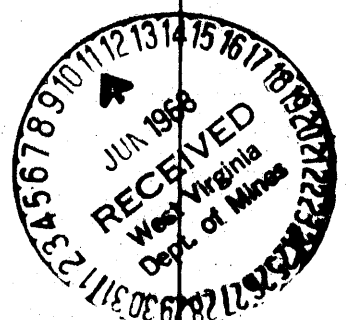
Company Phillips Petroleum
 Address Bartlesville, Oklahoma
 Farm Manning "B" Acres 75
 Location (waters) **See reverse side
 Well No. 1 Elev. 1881'
 District Clinton County Monongalia
 The surface of tract is owned in fee by **See reverse side
 Address _____
 Mineral rights are owned by **See reverse side
 Address _____
 Drilling commenced January 22, 1968
 Drilling completed February 10, 1968
 Date Shot None From _____ To _____
 With _____
 Open Flow /10ths Water in _____ Inch
 _____ /10ths Merc. in _____ Inch
 Volume 10,892 MCF/day (CAOFP) Cu. Ft.
 Rock Pressure 3162# lbs. 362 hrs.
 Oil None bbls. 1st 24 hrs.
 WELL ACIDIZED (DETAILS) **See reverse side
 WELL FRACTURED (DETAILS) See reverse side

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16 ^{4 1/2"}	Set @:		
13 3/8" ^{32'}	53.20'	33.12'	(50 Sax) by Halli.
10 9 5/8" ^{30'}	1001.42'	952.06'	(475 Sax) by Halli.
8 1/4"			
6 1/4"			Depth set
5 3/16" ^{11.60'}			
4 1/2" ^{11"}	7700'	7703.57'	(290 Sax) by Halli
3"			Perf. top. See attach
2"			Perf. bottom ment
Liners Used			Perf. top.
			Perf. bottom

Attach copy of cementing record.
 CASING CEMENTED 4 1/2" SIZE No. Ft. 2/6/68 Date
 Amount of cement used (bags) 290 sax
 Name of Service Co. Halliburton
 COAL WAS ENCOUNTERED AT None FEET _____ INCHES
 FEET _____ INCHES FEET _____ INCHES
 FEET _____ INCHES FEET _____ INCHES

RESULT AFTER TREATMENT (Initial open Flow or bbls.) See gas volume above 10,892 MCF
 ROCK PRESSURE AFTER TREATMENT _____ HOURS
 Fresh Water None Feet _____ Salt Water _____ Feet _____
 Producing Sand Chert & Oriskany Depth 7700' - PBTD 7665.21'

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Surface Soil	Sand	(DRILLER'S LOG)	0'	53'	GALMA RAY LOG:		50.428'
Sand & Shale			53'	132'	FORMATION:	FROM:	TO:
Shale, Lime			132'	212'	Big Lime	456'	645' +1425
Shale & Sand			212'	405'	Weir	760'	864'
Shale, Lime			405'	466'	50 Foot	935'	1035'
Sand & Shale			466'	586'	30 Foot	1053'	1088'
Shale, Lime			586'	4860'	Gordon	1319'	1327' Gas show
Shale			4860'	6946'	5th Sand	1625'	1633'
Tully Lime			6946'	7001'	Bayard	1693'	1743' Gas show
Lime & Shale			7001'	7090'	Speechley	2351'	2371' Gas show
Shale, Lime, Chert	Chert		7090'	7392'	Riley	3348'	34.65'
Chert			7392'	7503'	Benson	3623'	
Chert & Sand			7503'	7597'	Tully	6947'	7032'
Sand & Lime			7597'	7694'	Onondaga	7334'	7348' - 5453
Lime			7694'	7700'	Chert	7348'	7540'
			PBTD	7665.21'	Oriskany	7540'	7665' - 5459
					Helderberg		7665'
					Total Depth		7700' - 5819
					Plug Back		7665'

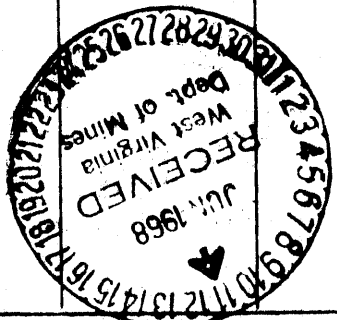


Show of gas @ 1325'
 Show of gas @ 1731' & 1740'
 Show of gas @ 2356' - 66
 7334
 1881
 -5453

JUN 18 1968

Formation	Color	Hard or Soft	Top \angle	Bottom	Oil, Gas or Water	Depth Found	Remarks
*LOCATION F/ REVERSE SIDE:							
27,600' S 39 Deg. 35'							
16,300' W 79 Deg. 50'							
Monongalia County, Clinton District, Morgantown Quadrangle.							
**MINERAL RIGHTS OWNED BY - F/ REVERSE SIDE:							
Geo. A. Federer, heirs - $\frac{1}{2}$ Greenland T. Federer, 101 Jones Ave., Morgantown, W. Va., 26504 - 100% gas, coal & other minerals & 12/16 of oil.							
Benjamin A. Mackey heirs, $\frac{1}{2}$ Wm. E. Mackey, 413 Junior Ave., Morgantown, W. Va., 26504 - 1/16 of oil.							
Loretta Boswell & E. Boswell, her husband, 442 S. Maple St., Akron, Ohio.							
***ACID TREATMENT DETAILS:							
Pmp'd 5 Bbls of Acetic acid into 4" csg perforations f/ 7549'-7579' @ 4950# press. - broke back to 4800# - pmp inj. rate 3 Bbls/min.							
****WELL FRACTURE DETAILS:							
Frac treated 4 1/2" csg perf. f/ 7357' to 7579' opposite Chert & Oriskany zones w/ 1486 Bbls of 3% gelled acid fluid; 45,000# of 20-40 sand plus allied additives & seven perf balls; max. pmp-in press. 4893#; min. pmp-in press. 4600#; avg pmp inj. rate 42 Bbls/min. - instant SIP 3200#; 10-min. SIP 2500#.							

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Date June 5, 1968

APPROVED _____, Owner

By A. S. HILES (Title) DIST. PROD. SUPT.

ASST. MGR.