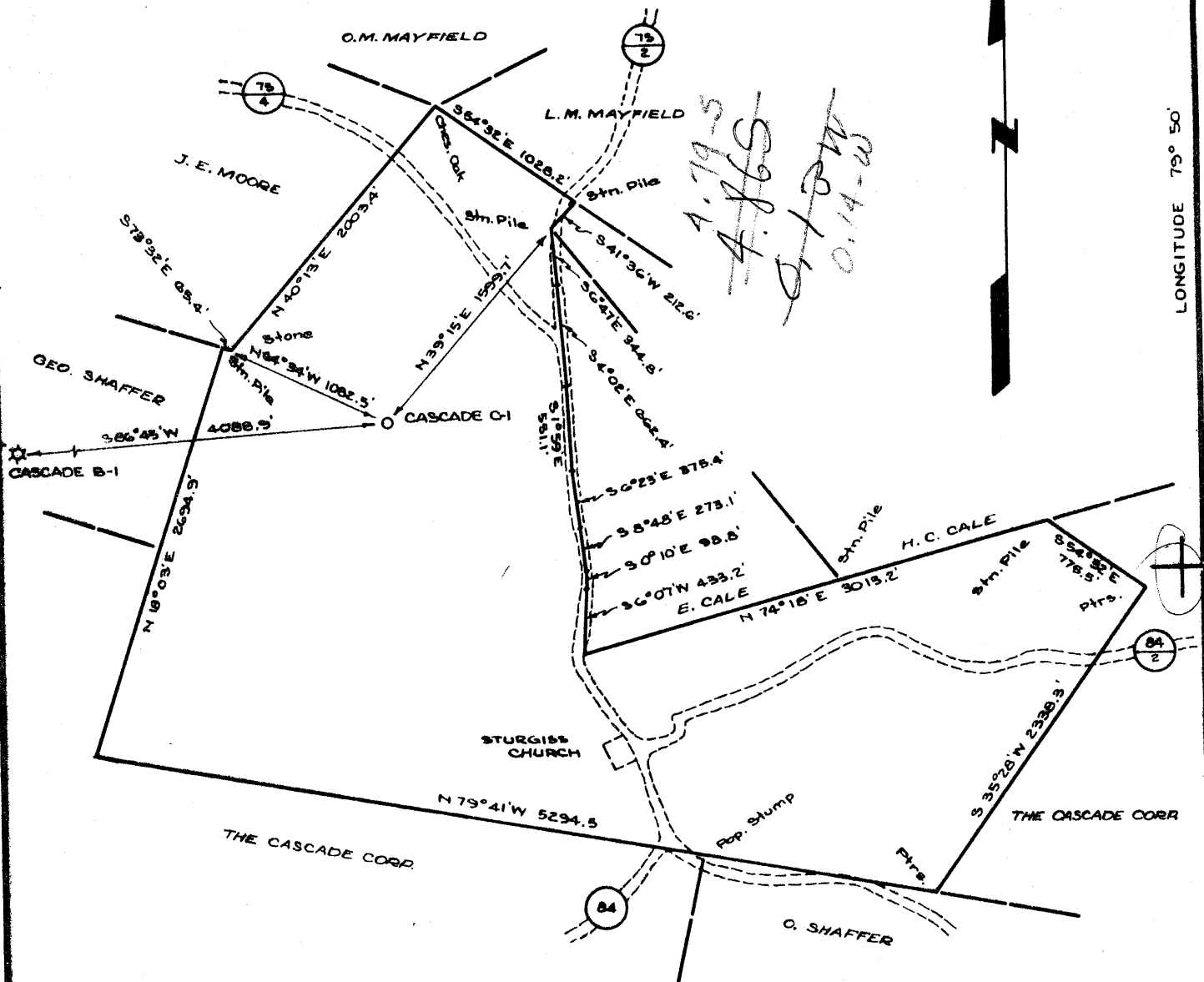


LONGITUDE 79° 50'



"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 THE CASCADE CORPORATION
 TRACT B ACRES 356.8 LEASE NO. 70087
 WELL (FARM) NO. C-1 SERIAL NO.
 ELEVATION (SPIRIT LEVEL) 2124'
 QUADRANGLE MORGANTOWN
 COUNTY MONONGALIA DISTRICT MORGAN
 ENGINEER Edward C. Caswell
 ENGINEER'S REGISTRATION NO. 5998-TEXAS
 FILE NO. DRAWING NO.
 DATE MARCH 22, 1968 SCALE 1" = 1000'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES

OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. MON-316

+ 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

Form OG-10



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Rotary
Spudder
Cable Tools
Storage

WELL RECORD

Oil or Gas Well Gas (KIND)

Quadrangle Morgantown

Permit No. MON-316

Company Phillips Petroleum
Address Bartlesville, Oklahoma
Farm Cascade "A"
Location (waters) 400' W of 79 Deg. 50'; 5250' N
Well No. 1 of 39 Deg. 35' Elev. 2124'
District Morgan County Monongalia
The surface of tract is owned in fee by The Cascade Corporation, Morgantown, West Virginia. Address 230 Spruce Street, Morgantown, West Virginia. Mineral rights are owned by Same. Address

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16	Set 2:		
13 13 3/4"	2 46'	31.58'	(65 Sax) by Halli
10 9 5/8"	10 1.15'	1005.70'	(350 Sax) by Halli
8 1/4"			
6 5/8"			Depth set
5 3/16"			
4 1/2 1 1/2"	11.60'	8173.83'	(200 Sax) by Halli
3			Perf. top See attach
2			Perf. bottom men
Liners Used			Perf. top 7852
			Perf. bottom 8049

Drilling commenced May 7, 1968
Drilling completed June 1, 1968
Date Shot None From To
With
Open Flow /10ths Water in Inch
/10ths Merc. in Inch
Volume 11,410 MCF/day (CAOFP) Cu. Ft.
Rock Pressure 3350# lbs. 236 hrs.
Oil None bbls., 1st 24 hrs.
WELL ACIDIZED (DETAILS) See reverse side.
WELL FRACTURED (DETAILS) See reverse side.

Attach copy of cementing record.
CASING CEMENTED 4 1/2" SIZE 8173.83' No. Ft. 5/29/68 Da
Amount of cement used (bags) 200 Sax
Name of Service Co. Halliburton
COAL WAS ENCOUNTERED AT FEET INCH
FEET INCHES FEET INCH
FEET INCHES FEET INCH

RESULT AFTER TREATMENT (Initial open Flow or bbls.) See gas volume above. 11,410 MCF
ROCK PRESSURE AFTER TREATMENT - 3350 # HOURS
Fresh Water 85' Feet Salt Water Feet
Producing Sand Onondaga Chert & Oriskany Sand Depth 8154' - PSTD 8118'

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
DRILLER'S LOG:							
Surface Soil, Sand Rock			0'	44'			
Sand			44'	180'			
Sandy Shale, Red Rock			180'	295'			
Red Rock & Shale			295'	505'			
Sand			505'	600'			
Sand, Sandy Shale			600'	725'			
Shale & Sand			725'	890'			
Sand			890'	1070'			
Sand, Sandy Shale			1070'	1220'			
Sand & Shale			1220'	1732'			
Sand, Sandy Shale			1732'	1960'			
Shale & Sand Streaks			1960'	2367'			
Sand & Shale			2367'	2650'			
Sand, Sandy Shale			2650'	2870'			
Sand			2870'	3060'			
Sand & Shale			3060'	3250'			
Shale			3250'	7343'			
Tully Lime			7343'	7440'			
Shale			7440'	7851'			
Lime			7851'	8035'			
Sand			8035'	8100'			
Lime			8100'	8154'			
			PSTD	8118'			
GAMA RAY LOG:							
FORMATION:							
						FROM:	TO:
						531'	720'
						875'	934'
						1084'	1176'
						1198'	1246'
						1445'	1451'
						1705'	
						1821'	1863'
						2521'	2544'
						3637'	3767'
						3997'	
						7342'	
						7733'	
						7833'	
						7843'	
						8030'	
						8084'	
						8155'	
						8154'	



CC: Consolidated Gas Supply Corp., 445 West Main St., Clarksburg, W. Va.
P.P. Co. - B'ville, Okla.

JUL 15 1968

Formation	Color	Hard or Soft	Top 6'	Bottom	Oil, Gas or Water	Depth Found	Remarks
<u>WELL ACIDIZED (DETAILS) F/ REVERSE SIDE:</u>							
5/30/68: Following perforating 4 1/2" csg opposite Oriskany Sand f/ 8040'-8049' - Halliburton pmp'd down 4 1/2" csg & broke Oriskany Sand down thru perforations @ 4300# - pmp'd 5 Bbls of acid into formation - avg pmp rate 5 Bbls/minute w/ two pmps @ 4400#.							
<u>WELL FRACTURED (DETAILS) F/ REVERSE SIDE:</u>							
5/31/68: Halliburton fraced well down 4 1/2" csg thru csg perforations f/ 7852'-8049' opposite Onondaga Chert & Oriskany Sand - fraced w/ 55,000# of 20-40 sand; 60,960 gal. of treating fluid (55,800 gal. of which was 3% acid gel) - used 2000# of WG6 & 300# of CW-1 - pmp'd into formation w/ one pmp @ 2400# - dropped five perf balls - had 522 Bbls of treating fluid in hole - perf balls on btm w/ 644 Bbls in - press. increased f/ 4100# to 4150#; dropped five more perf balls w/ 1148 bbls of fluid in - balls on btm w/ 1270 Bbls fluid in - had increase in press. f/ 4300# to 4400# - pmp inj. rate 45.4 Bbls/minute; max. T.P. 4900#; min. T.P. 4000#; displacement 4500#; inst. SIP 2700#; 5-min. SIP 2500#; hydraulic horsepower available 4725; hydraulic horsepower used 4698. (Ran Gamma Ray Log - logged over perforations f/ 7852'-8049' - all perforations on Onondaga Chert Section showed to take fluid - Oriskany showed did not take any frac treatment.)							

Date July 2, 1968

APPROVED

E. S. Miles
E. S. MILES

By

DIST. PROD. SUPT. (Title)