



Minimum Error of Closure 1 in 200

Source of Elevation U.S.G.S.B.M on R.R. Bridge 1000' SW - 603'

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

- Fracture.....
- New Location.....
- Drill Deeper.....
- Abandonment.....

Signed: Michael J. [Signature]
 Squares: N S E W

Map No. _____

Company Sundance Enterprises Inc.
 Address 225 4th St. Suite 4 East, Parkersburg
 Farm Eugene Mayo
 Tract _____ Acres 10 Lease No. _____
 Well (Farm) No. One Serial No. _____
 Elevation (Spirit Level) 587
 Quadrangle 15 Parkersburg T 1/2 EC
 County Wood District Williams
 Surveyor Engineer Michael J. [Signature]
 Surveyor's Registration No. 1227
 File No. _____ Drawing No. _____
 Date April 22, 1976 Scale 1" = 500'

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

WELL LOCATION MAP
 FILE NO. WOO-747

+ Denotes location of well on United States Topographic Maps, scale 1 to 24,000 latitude and longitude lines being represented by border lines as shown.

— Denotes one inch spaces on border line of original tracing. **47-107**

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

Date: Jan 12, 1981, 19

FORM IV-35
(Obverse)

Operator's
Well No. EM1-747

[08-78]

WELL OPERATOR'S REPORT 31
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

API Well No. 47 - 107 - 0747
State County Per

WELL TYPE: Oil X / Gas X / Liquid Injection / Waste Disposal /
(If "Gas", Production / Underground storage / Deep / Shallow X /)

LOCATION: Elevation: 708' Watershed: Ohio River
District: Williams County: Wood Quadrangle: Valley Mille

WELL OPERATOR AZTEC MINERALS, INC. DESIGNATED AGENT W. H. ALLEN
(Successor to Sundance Enterprises, Inc.)
Address P. O. Box 1365 Address P. O. Box 1365
PARKERSBURG, WV 26101 Parkersburg, WV 26101

PERMITTED WORK: Drill X / Convert / Drill deeper / Redrill / Fracture or stimulate
Plug off old formation / Perforate new formation
Other physical change in well (specify)

PERMIT ISSUED ON April 23, 19 76

OIL & GAS INSPECTOR FOR THIS WORK:

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

Name Donald Conner

Address Mineral Wells, WV

GEOLOGICAL TARGET FORMATION: Berea Depth 1864 feet

Depth of completed well, 2247 feet Rotary X / Cable Tools

Water strata depth: Fresh, feet; salt, 1442 feet.

Coal seam depths: N/A Is coal being mined in the area? NO

Work was commenced 4/23, 19 76, and completed 9/24, 19 80

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	8 5/8			X		150'	150'	cement to surface	Kinds
Fresh water									
Coal									Sizes
Intermediate									
Production	4 1/2			X		2097'	2097'	100 sks	Depths set
Tubing									
Liners									Perforations: 1864 Top 1869 Bottom

RECEIVED
JAN 14 1981

OIL & GAS DIVISION

DEPT. OF MINES

OPEN FLOW DATA

Producing formation Berea Pay zone depth 1864-1869 feet

Gas: Initial open flow, 600 Mcf/d Oil: Initial open flow, 25 Bbl/d

Final open flow, Mcf/d Final open flow, 10 Bbl/d

Time of open flow between initial and final tests, 6 hours

Static rock pressure, 600 psig (surface measurement) after 6 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 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

FEB 23 1981

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

Perforated 1864' to 1869' with shots.
Fractured with 20,000 # sand and 550 barrels of water.

WELL LOG

FORMATION	Color	Hard or Soft	34 Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Soil	Red	Soft	0	55	
Shale	Brown	Soft	55	133	
Sand	Brown	Soft	133	200	
Shale	Dk. Gry	Soft	200	241	
Sand	Brown	Med.	241	360	
Shale	Gry. Br.	Med.	360	380	
Sand	Gry.	Med.	380	400	
Shale	Gry.	Soft	400	446	
Sand	Lt. Gry.	Med.	446	480	
Shale	Gry.	Soft	480	556	
Sandy Shale	Gray	Med.	556	610	
Sand	Brown	Med.	610	616	
Shale	Gry.Red	Soft	616	688	
Sand	lt. Gry	Med.	688	696	
Shale	Dk. Gry	Soft	696	737	
Sand	Lt. Gry	Med.	737	829	
Shale	Red-Gry	med.	829	846	
Sand	Lt.Gry	Med.-Hd	846	932	
Sandy Shale	Gray	Med.	932	1022	
Sand	Lt. Gry	Med.-Hd.	1022	1043	
Shale	Rd.-Gry	Soft	1043	1062	
Sand	Lt. Gry	Med.	1062	1096	
Sandy Shale	Gray	Soft	1096	1186	
Shaley Sand	Gray	Med.-Hd.	1186	1273	
Sand	Lt. Gry.	Hard	1273	1304	
Shale	Dk.Gry	Med.	1304	1324	
Sand	lt.Gry	Med.	1324	1332	
Shale	Dk. Gry	med.	1332	1372	
Lime	White	Hard	1372	1478	Salt Water 1442-1474
Shale	Dk. Gry	Soft	1478	1832	
Coffee Shale	Dk. Brn	Soft	1832	1864	
Berea Sand	White	Hard	1864	1869	Show of Oil and Gas
Shale	Dk. Gry	Med.	1869	2189	
Gordon Sand	Gray	Med.Hd	2189	2207	Show of Gas
Shale	Gray	Med.Hd.	2207	2247	

(Attach separate sheets to complete as necessary)

AZTEC MINERALS, INC.

Well Operator

By

Its

General Manager

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 coal, encountered in the drilling of a well."



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE April 21, 1976

Surface Owner Eugene and Carmel C. Mayo
Address 1019 51 Street, Vienna, W.Va.
Mineral Owner Same
Address Same
Coal Owner Same
Address Same
Coal Operator None
Address _____

Company Sundance Enterprises, Inc.
Address 225 4th St., Parkersburg, W.Va.
Farm Mayo Acres 10
Location (waters) Ohio River
Well No. 1 Elevation 587'
District Williams County Wood
Quadrangle Valley Mills

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 27 of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 8-23-76.

INSPECTOR
TO BE NOTIFIED Donald Conner
ADDRESS Mineral Wells, W.Va.
PHONE 428-8172

Robert L. Stodd
Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated April 20, 1976 by Eugene C. and Carmel C. Mayo made to Associated Minerals, Inc. and recorded on the as yet unrecorded day of _____ 19____, in _____ County, Book _____ Page _____

XX NEW WELL _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE
_____ OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Very truly yours, SUNDANCE ENTERPRISES, INC.
(Sign Name) Walter H. Allen/BL
Well Operator
Address 225 4th Street
Street
of
Well Operator Parkersburg
City or Town
West Virginia 26101
State

*SECTION 3 If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

WV-747 PERMIT NUMBER
47-107

**THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION**

PROPOSED WORK ORDER TO XX DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) _____ RESPONSIBLE AGENT: _____
 NAME FWA _____ NAME Walter H. Allen _____
 ADDRESS Weston, West Virginia _____ ADDRESS 225 4th St., Parkersburg, W. Va. _____
 TELEPHONE _____ TELEPHONE 422-5418 _____
 ESTIMATED DEPTH OF COMPLETED WELL: 2,200 _____ ROTARY XX CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Gordon _____
 TYPE OF WELL: OIL _____ GAS _____ COMB. XX STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10			
9 - 5/8			
8 - 5/8	150'	150'	Circulate to surface
7			
5 1/2			
4 1/2		2,200'	75 sks
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 45 FEET _____ SALT WATER 135 FEET 140
 APPROXIMATE COAL DEPTHS None _____
 IS COAL BEING MINED IN THE AREA? No BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title