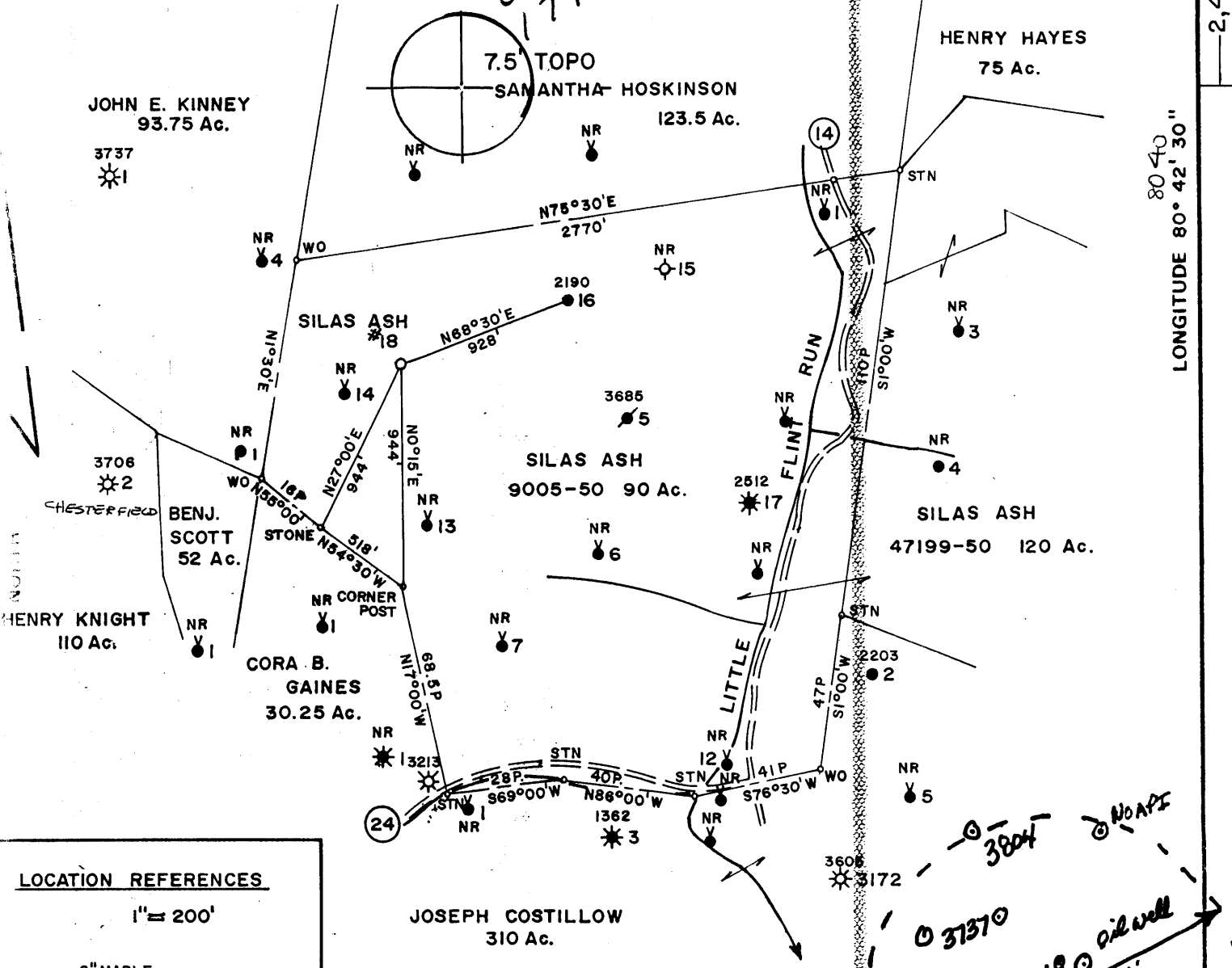


Janie 4/19/90

LATITUDE 39° 22' 30"
3925

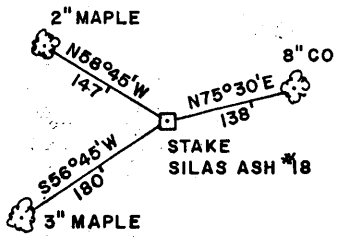
2,450'

LONGITUDE 80° 42' 30"

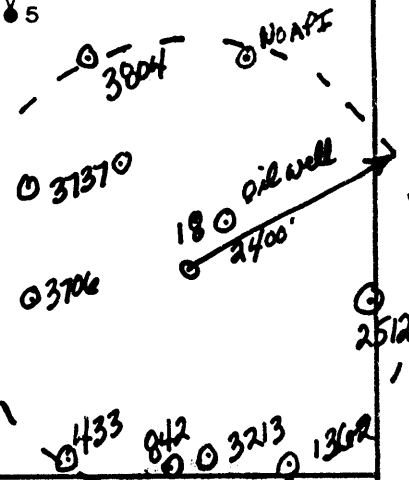


LOCATION REFERENCES

1" = 200'

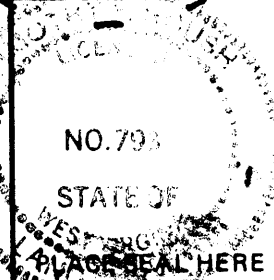


JOSEPH COSTILLOW
310 Ac.



FILE NO. 1684
 MAP NO. N37 SQ. S6 W7
 SCALE 1" = 800'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION SILAS ASH #16
 (47-017-2190)=1069.79

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) *Timothy Roush*
 TIMOTHY ROUSH PS. 793



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



DATE APRIL 19 1990
 OPERATOR'S WELL NO. 18
 API WELL NO. 47-017-3811
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION STORAGE ___ DEEP ___ SHALLOW
 LOCATION: ELEVATION 1135' WATER SHED LITTLE FLINT RUN
 DISTRICT GRANT 3 COUNTY DODDRIDGE
 QUADRANGLE SMITHBURG 7.5'
 SURFACE OWNER PAUL C. CHILLO ACREAGE 92 Ac.
 OIL & GAS ROYALTY OWNER THOMAS L. LIEWELLYN, AGENT LEASE ACREAGE 90 Ac.
 LEASE NO. 9005-50
 PROPOSED WORK: DRILL 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 BENSON ESTIMATED DEPTH 5400' *6-6 Swiger (Flint Run) (097)*
 WELL OPERATOR PENNZOIL PRODUCTS CO. DESIGNATED AGENT JAMES A. CREWS
 ADDRESS PO. BOX 5519 ADDRESS PO. BOX 5519

RECEIVED

Division of Energy

JUL 30 90

Permitting
Oil and Gas Section

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

24-Apr-90
API # 47- 17-03811

Well Operator's Report of Well Work

Farm name: CHILLEO, PAUL C.

Operator Well No.: SILAS ASH #18

LOCATION: Elevation: 1135.00 Quadrangle: SMITHBURG

District: GRANT County: DODDRIDGE
Latitude: 2450 Feet South of 39 Deg. 42Min. 30 Sec.
Longitude 9500 Feet West of 80 Deg. 42 Min. 30 Sec.

Company: PENNZOIL PRODUCTS COMPANY
P. O. BOX 5519
VIENNA, WV 26105-5519

Agent: JAMES A. CREWS

Inspector: MIKE UNDERWOOD
Permit Issued: 04/24/90
Well work Commenced: 06/05/90
Well work Completed: 06/12/90
Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 5453
Fresh water depths (ft) N/A

Salt water depths (ft) N/A

Is coal being mined in area (Y/N)? N
Coal Depths (ft): _____

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft. to surface
8-5/8"	1380'	1380'	
4-1/2"	5401'	5401'	250 sks.

OPEN FLOW DATA

Producing formation Benson Pay zone depth (ft) 5190
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 100 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure 1500 psig (surface pressure) after 118 Hours

Second producing formation _____ Pay zone depth (ft) _____
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 pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Curtis A. Lucas
For: PENNZOIL PRODUCTS COMPANY

By: Curtis A. Lucas, Adv. Engineering Tech.
Date: July 26, 1990

AUG 6 1990

O E M

Perforate: 5192-5200' - 16 holes

Fracture: w/500 gal. HCl, 700 Bbls. gelled H₂O, 10,000# 80/100 sand,
25,000# 20/40 sand

Sand & Shale	0 - 1418
Shale	1418 - 1653
Sand	1653 - 1692
Shale	1692 - 1724
Sand	1724 - 1744
Shale	1744 - 1854
Sand	1854 - 1896
Shale	1896 - 1932
Sand	1932 - 1974
Shale	1974 - 1990
Sand	1990 - 2020
Big Lime	2020 - 2197
Big Injun	2197 - 2326
Shale	2326 - 2456
Weir	2456 - 2547
Shale	2547 - 2659
Berea	2659 - 2681
Shale	2681 - 2800
Gordon	2800 - 2919
Shale	2919 - 5190
Benson	5190 - 5200
Shale	5200 - 5453
Total Depth	5453

12/01

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APR 06 1990

Page 1 of 4
Form WW2-A
(09/87)
File Copy

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

Date: April 4, 1990
Operator's well number
SILAS ASH NO. 18
API Well No: 47 - 017 - 3811
State - County - Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:
(a) Name Paul C. Chilleo
Address 605 Warwick Road
Fairless Hills, PA 19030
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector Mike Underwood
Address Rt. 2, Box 135
Salem, W. Va. 26426
Telephone (304)- 782-1043

5) (a) Coal Operator:
Name _____
Address _____
(b) Coal Owner(s) with Declaration
Name _____
Address _____
Name _____
Address _____
(c) Coal Lessee with Declaration
Name _____
Address _____

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

_____ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR
X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)
I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 4 on the above named parties, by:
_____ Personal Service (Affidavit attached)
X Certified Mail (Postmarked postal receipt attached)
_____ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.
Well Operator Pennzoil Products Company
By: Timothy P. Roush Timothy P. Roush
Its: Supervisor, Surveying/Mapping
Address P.O. Box 5519
Vienna, W. Va. 26105-5519
Telephone 304-422-6565

Subscribed and sworn before me this 4th day of April, 1990

Christie A. Lewis Notary Public
My commission expires JULY 2, 1990

22

017-3811
issued 4/24/90

FORM WW-2B

Page 3 of 4

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
WELL WORK PERMIT APPLICATION

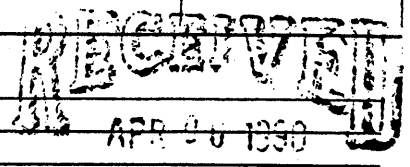
Expires 4/24/92

- 1) Well Operator: Pennzoil Products Company ⁶⁷³ 37450 (3) 610
- 2) Operator's Well Number: SILAS ASH NO. 18 3) Elevation: 1135'
- 4) Well type: (a) Oil X/ or Gas X/
(b) If Gas: Production X/ Underground Storage /
Deep / Shallow X/
- 5) Proposed Target Formation(s): Benson 435
- 6) Proposed Total Depth: 5400 feet
- 7) Approximate fresh water strata depths: N/A *CA75. C195'*
- 8) Approximate salt water depths: 1452' *1408'*
- 9) Approximate coal seam depths: 832-839'
- 10) Does land contain coal seams tributary to active mine? Yes / No X/
- 11) Proposed Well Work: Drill new well.
- 12) *Drill & Stimulate New Well*

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor						<i>38CS18-11.3</i>
Fresh Water	8-5/8"	H-40	20	1375'	1375'	To surface
Coal						<i>38CS18-11.2</i>
Intermediate						
Production	4-1/2"	K-55	11.6	5400'	5400'	50 Sks.
Tubing						<i>38CS18-11.1</i>
Liners						

PACKERS : Kind _____
Sizes _____
Depths set _____



For Division of Oil and Gas Use Only DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

09711
8
Fee(s) paid: Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-2B Bond Surety Agent