



1) Date: May 3, 19 84  
 2) Operator's Well No. H. Alexander #1  
 3) API Well No. 47 001 - 2049  
 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 X /  
 B (If "Gas", Production X / Underground storage      / Deep      / Shallow X /)
- 5) LOCATION: Elevation: 1673 Watershed: Raccoon Creek  
 District: Cove County: Barbour Quadrangle: Nestorville
- 6) WELL OPERATOR Swift Energy Co. 7) DESIGNATED AGENT Tim Bennett  
 Address P. O. Box 2201 Address P. O. Box 2201  
Clarksburg, WV 26301 Clarksburg, WV 26301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:  
 Name Phillip Tracy Name       
 Address Forest Festival Apt. 24 Address Unknown  
Elkins, WV 26241
- 10) PROPOSED WELL WORK: Drill X / Drill deeper      / Redrill      / Stimulate X  
 Plug off old formation      / Perforate new formation       
 Other physical change in well (specify)
- 11) GEOLOGICAL TARGET FORMATION, Haverty  
 12) Estimated depth of completed well, 5950 feet  
 13) Approximate trata depths: Fresh, 50-600 feet; salt, 1050 feet.  
 14) Approximate coal seam depths: 150; 300; 408 Is coal being mined in the area? Yes      / No X
- 15) CASING AND TUBING PROGRAM

**RECEIVED**  
 MAY 7 - 1984  
 OIL & GAS DIVISION  
 DEPT. OF MINES

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			X		30		Circulate	Kinds
Fresh water									
Coal									Sizes
Intermediate	8 5/8					930	930	To Surface	<u>NEAT</u>
Production	4 1/2					5500	5500	As Req.	Depths set
Tubing								<u>by rule 15.01</u>	
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY  
DRILLING PERMIT

Permit number 47-001-2049 Date May 8, 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 May 8, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>BLANKET</u>	Agent: <u>    </u>	Plat: <u>    </u>	Casing: <u>    </u>	Fee: <u>996</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





STATE OF WEST VIRGINIA

OFFICE USE ONLY

PERMIT MODIFICATIONS AND CONDITIONS (IF ANY) TO THE PROPOSED WELL WORK

RECEIVED  
MAY 7 1988  
X

DEPT. OF MINES  
OIL & GAS DIVISION

1) WELL LOCATION: B (ii) Gas, Production, 1013, Elevation, 1013, Water, Red, 1013, County, BARBOUR, District, GOVE, State, WV, Permit No., 47-001-2204, Designated Agent, P. O. Box 2204, Clarksville, WV 26301. 2) WELL OPERATOR: SWIFT ENERGY CO., 501 E. Box 2204, Clarksville, WV 26301. 3) DRILLING CONTRACTOR: Name, KILLICK ENERGY, Address, Forest Rest, Clarksville, WV 26301. 4) PROPOSED WELL WORK: Drill, 1013, Depth, 1013, Perform new formation, Plug old formation, Other physical change in well (specify), None. 5) GEOLOGICAL TARGET FORMATION: None. 6) ESTIMATED DEPTH OF COMPLETED WELL: 1013 feet. 7) APPROXIMATE TIME REQUIRED: 30-600 hours. 8) APPROXIMATE COST PER FOOT: \$300-\$400. 9) CASTING AND TUBING PROGRAM: None.

OFFICE USE ONLY

This part of Form IV-2(b) is to record the dates of certain occurrences and any follow-up inspections.

	Date	Date(s)
Application received		
Well work started		
Completion of the drilling process		
Well Record received		
Reclamation completed		

OTHER INSPECTIONS

Reason: \_\_\_\_\_  
Reason: \_\_\_\_\_

Inspection	Area	Plan	Casing	Log
1013	1013	1013	1013	1013



1) Date: May 3 1984  
2) Operator's Well No. H. Alexander #1  
3) API Well No. 47-001-2049  
State County Permit

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES, OFFICE OF OIL & GAS  
NOTICE OF APPLICATION FOR A WELL WORK PERMIT

4) SURFACE OWNER(S) OF RECORD TO BE SERVED  
(i) Name Dale Alexander  
Address Rt. 1  
Moatsville, WV  
(ii) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(iii) Name \_\_\_\_\_  
Address \_\_\_\_\_

5(i) COAL OPERATOR  
Address \_\_\_\_\_  
5(ii) COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
5(iii) COAL LESSEE WITH DECLARATION ON RECORD:  
Name \_\_\_\_\_  
Address \_\_\_\_\_

TO THE PERSON(S) NAMED ABOVE: You should have received this Form and the following documents:

- (1) The Application for a Well Work Permit on Form IV-2(B) (or Form IV-4 if the well is to be plugged, which sets out the parties involved in the drilling or other work, and describes the well and its location and, if applicable, the proposed casing and cementing program;
- (2) The plat (surveyor's map) showing the well location on Form IV-6; and
- (3) The Construction and Reclamation Plan on Form IV-9 (unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

THE REASON YOU RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON THE REVERSE SIDE OF THE COPY OF THE APPLICATION (FORM IV-2(B) OR FORM 4, DESIGNATED FOR YOU. HOWEVER, YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice that under Chapter 22 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Administrator of the Office of Oil and Gas, West Virginia Department of Mines, with respect to a well at the location described on attached Application and depicted on attached Form IV-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Administrator.

- 6) EXTRACTION RIGHTS  
Check and provide one of the following:  
 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.  
 The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)
- 7) ROYALTY PROVISIONS  
Is the right to extract, produce or market the oil or gas based upon a lease or leases or other contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes No
- If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.

See the reverse side for line item instructions, and for instructions concerning the required copies of the Notice and Application, plat, and Construction and Reclamation Plan.

The truth of the information on the Notice and Application is verified and sworn to and the Notice is signed on behalf of the Well Operator in my County and State by

WELL OPERATOR Swift Energy Co.  
By Tim Bennett  
Its Designated Agent  
Address P.O. Box 2201  
Clarksburg, WV 26301  
Telephone 622-7201

this 3 day of May, 1984.  
My commission expires 6-15, 1989.

Shary G. Surry  
Notary Public, Lincoln County,  
State of W.Va.



I N S T R U C T I O N S T O A P P L I C A N T

CONCERNING THE LINE ITEMS:

- 1) Date of Notice.
- 2) Your well name and number.
- 3) To be filled out by the Office of Oil & Gas.
- 4) & 5) Use separate sheet if necessary.
- 4) Surface owner(s) of record to be served with Notice and Application. However, see also Code § 22-4-1b(b) if "more than three tenants in common or other co-owners of interest described in subsection (a) of this section hold interests in such lands".
- 5(i) "Coal Operator" means any person, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine.
- 5(ii, iii) See Code § 22-4-20..
- 6) See Code § 22-4-11(c). However, in lieu of filing the lease(s) or other continuing contract(s), the Applicant may fill out the information in the space provided below.
- 7) See Code § 22-4-11(d, e).

CONCERNING THE REQUIRED COPIES FOR FILING AND SERVICE:

Filing. Code § 22-4-1k and Regulation 7.02 provide that the original and required copies of the Notice and Application must be filed with the Administrator, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-1k(d) and the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fees required by Code § 22-4-1a(c) and 22-3-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well on dwelling within 200 feet of the proposed well.

Service. In addition, service must be made on the surface owner(s) and the person(s) with an interest in the coal. See Code § 22-4-1m, 22-4-2, 22-4-2a, and 22-4-2b.

I N F O R M A T I O N S U P P L I E D U N D E R C O D E § 22-4-11(d)  
I N L I E U O F F I L I N G L E A S E ( S ) A N D O T H E R C O N T I N U I N G C O N T R A C T ( S )

Under the oath required to make the verification on the obverse side of this Notice, I depose and say that I am the person who signed the Notice for the Applicant, and that--

- (1) the tract of land is the same tract described in the Application to which this Notice applies, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

<u>Grantor, lessor, etc.</u>	<u>Grantee, lessee, etc.</u>	<u>Royalty</u>	<u>Book Page</u>
H. Alexander	Consol Gas	1/8	182-371
	Consol Gas - Swift Energy		

Farmout Agreement  
dated 3-1-84





19 84  
 Well No. H. Alexander #1  
 3) API Well No. 47001 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 X /  
 B (If "Gas", Production X / Underground storage \_\_\_\_\_ / Deep \_\_\_\_\_ / Shallow X /)
- 5) LOCATION: Elevation: 1673 Watershed: Raccoon Creek  
 District: Cove County: Barbour Quadrangle: Nestorville
- 6) WELL OPERATOR Swift Energy Co. 7) DESIGNATED AGENT Tim Bennett  
 Address P. O. Box 2201 Address \_\_\_\_\_  
Clarksburg, WV 26301 Clarksburg, WV 26301
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:  
 Name Phillip Tracy Name \_\_\_\_\_  
 Address Forest Festival Apt. 24 Address Unknown  
Elkins, WV 26241
- 10) PROPOSED WELL WORK: Drill X / Drill deeper \_\_\_\_\_ / Redrill \_\_\_\_\_ / Stimulate \_\_\_\_\_  
 Plug off old formation \_\_\_\_\_ / Perforate new formation \_\_\_\_\_  
 Other physical change in well (specify) \_\_\_\_\_
- 11) GEOLOGICAL TARGET FORMATION, Haverly  
 12) Estimated depth of completed well, 5950 feet  
 13) Approximate strata depths: Fresh, 50-600 feet; salt, 1050 feet.  
 14) Approximate coal seam depths: 150;300;408 Is coal being mined in the area? Yes \_\_\_\_\_ / No X
- 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		Kinds	Sizes
Conductor	<u>1 3/4</u>			<u>X</u>		<u>30</u>		<u>Circulate</u>		
Fresh water										
Coal										
Intermediate	<u>4 5/8</u>					<u>930</u>	<u>930</u>	<u>To Surface</u>		
Production	<u>4 1/2</u>					<u>5500</u>	<u>5500</u>	<u>As Req.</u>		
Tubing										
Liners										

The law requires a comment period for surface owners. However, the permit can be issued in less than 15 days from the filing of the Application if the surface owner(s) of record sign(s) the following "Voluntary Statement of No Objection" on a facsimile of this surface owner's copy of the Application.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners on the reverse side of this Application for a Well Work Permit, and that I have received copies of (1) a Notice of Application for a Well Work Permit on Form IV-2(A), (2) an Application for a Well Work Permit on Form IV-2(B), (3) a survey plat on Form IV-6, and (4) a Construction and Reclamation Plan on Form IV-9, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued based on those materials.

(For execution by corporation, partnership, etc.)

(For execution by natural persons)

NAME: \_\_\_\_\_  
 By \_\_\_\_\_  
 Its \_\_\_\_\_ Date \_\_\_\_\_

X H. Alexander Date: 5/8/84  
 (Signature)  
X Barbara Alexander Date: 5/8/84  
 (Signature)

Surface Owner



**INSTRUCTIONS TO SURFACE OWNERS  
AND  
EXPLANATION OF METHODS AND TIME LIMITS TO COMMENT  
ON OIL AND GAS WELL WORK PERMIT**

The well operator named in the Notice and this Application and the attached materials is applying for a permit from the State to do oil or gas well drilling or other well work. You are being served with these materials because surface owners have the right to file comments before the permit is issued. (**NOTE:** If the surface tract is owned by more than three persons, in multiple heirship for example, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22, Article 4 of the W. Va. Code. Permits are valid for 24 months.

If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator named in the materials and the Administrator of the Office of Oil and Gas in the West Virginia Department of Mines immediately.

**NOTE: You are not required to file any comment at all.**

**Where to file comments and obtain additional information:**

Administrator of the Office of Oil and Gas  
West Virginia Department of Mines  
1615 Washington Street East  
Charleston, West Virginia 25311  
(304) 348-2057

**Who may file comments?** If you wish to file comments, you must be an owner of record of (1) an interest in the surface tract on which the well already is or is about to be located, or (2) an interest in any other surface tract under the same oil or gas lease which will be utilized for roads or other land disturbances.

**Time limits for comments.** The law requires these materials to be delivered on or before the date the operator files his Application. You have **FIFTEEN (15) DAYS** after the filing date to file your comments as provided in **Methods for Filing Comments** below. You may call the Administrator's office at the above telephone number to be sure of the date. However, if you have been contacted by the well operator, and if you have signed a "voluntary statement of no objection" to any of the planned work described in these materials, then the permit may be issued at any time.

**Comments must be in writing.** Your comments must include your name, address and telephone number, the well operator's name and well number, and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

**Methods for filing comments.** Comments must be filed in person or received in the mail at the Administrator's office by the time stated above. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling.

The Administrator for Oil and Gas has the power to deny or condition a well work permit based on your comments on the following grounds:

- "(1) The proposed well work will constitute a hazard to the safety of persons; or
- "(2) The plan for soil erosion and sediment control is not adequate or effective; or
- "(3) Damage would occur to publicly owned lands or resources; or
- "(4) The proposed well work fails to protect fresh water sources or supplies."

**If you want a copy of the permit** as it is finally issued, or a copy of the order denying the permit, you should request a copy from the Administrator.

**List of Water Testing Laboratories.** The Administrator maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Administrator's office or an Oil and Gas Inspector to obtain a copy of the list.





IV-9  
(Rev 8-81)

DATE 5-2-84  
WELL NO. Alexander #1  
API NO. 47 -001 -2049

State of West Virginia  
Department of Mines  
Oil and Gas Division

CONSTRUCTION AND RECLAMATION PLAN

COMPANY NAME Swift Energy Company DESIGNATED AGENT Tim Bennett  
Address P. O. Box 2201, Clarksburg, WV Address 737 Karl St., Weston, WV 26452  
Telephone 622-7701 Telephone 269-3215  
LANDOWNER Dale Alexander SOIL CONS. DISTRICT \_\_\_\_\_  
Revegetation to be carried out by \_\_\_\_\_ OPERATOR \_\_\_\_\_ (Agent)

This plan has been reviewed by Tygart's Valley SCD. All corrections and additions become a part of this plan: 5/7/84 (Date)  
Jean Freeman (SCD Agent)

RECEIVED  
MAY 7 - 1984  
OIL & GAS DIVISION  
DEPT. OF MINE

ACCESS ROAD

LOCATION

Structure Culverts  
2-5% 500'-300' 11-15% 200'-100'  
Spacing 6-10% 300'-200' 16-20% 100'  
Page Ref. Manual 2-7  
Structure Drainage Ditch  
Spacing To Be Constructed Along Road  
Page Ref. Manual 2-12  
Structure Cross Drains  
Spacing 2%-250' 10%-80'  
5%-135' 15%-60'  
Page Ref. Manual 2-4

(A) Structure Diversion Ditch (1)  
Material Soil-(2% Max. Slope)  
Page Ref. Manual 2-12  
(B) Structure Drilling Pit (2)  
Material Soil  
Page Ref. Manual ----  
(C) Structure Sediment Trap (3)  
Material Soil  
Page Ref. Manual -----

All structures should be inspected regularly and repaired if necessary. All commercial timber is to be cut and stacked and all brush and small timber to be cut and removed from the site before dirt work begins.

REVEGETATION

Treatment Area I

Treatment Area II  
(Meadowland)

Lime 3 Tons/acre  
or correct to pH 6.5  
Fertilizer 600 lbs/acre  
(10-20-20 or equivalent)  
Mulch Hay 2 Tons/acre  
Seed\* Orchardgrass 12 lbs/acre  
Ky-31 Tall Fescue 30  
Birdsfoot Trefoil 10  
Waver 8 lbs/acre  
Domestic Rvegrass 5 10 lbs/acre  
Timothy

Lime 3 Tons/acre  
or correct to pH 6.5  
Fertilizer 600 lbs/acre  
(10-20-20 or equivalent)  
Mulch Hay 2 Tons/acre  
Seed\* Orchardgrass 20 lbs/acre  
Ky. Bluegrass  
White Clover 8 2 lbs/acre  
Redtop 5 10 lbs/acre  
Timothy

\*Inoculate all legumes such as vetch, trefoil and clovers with the proper bacterium. Inoculate with 3X recommended amount.


PLAN PREPARED BY Tim Bennett  
ADDRESS SWIFT ENERGY COMPANY  
P. O. Box 2201  
Clarksburg, WV 26301  
PHONE NO. 622-7701


NOTES: Please request landowners' cooperation to protect new seedling for one growing season. Attach separate sheets as necessary for comments.

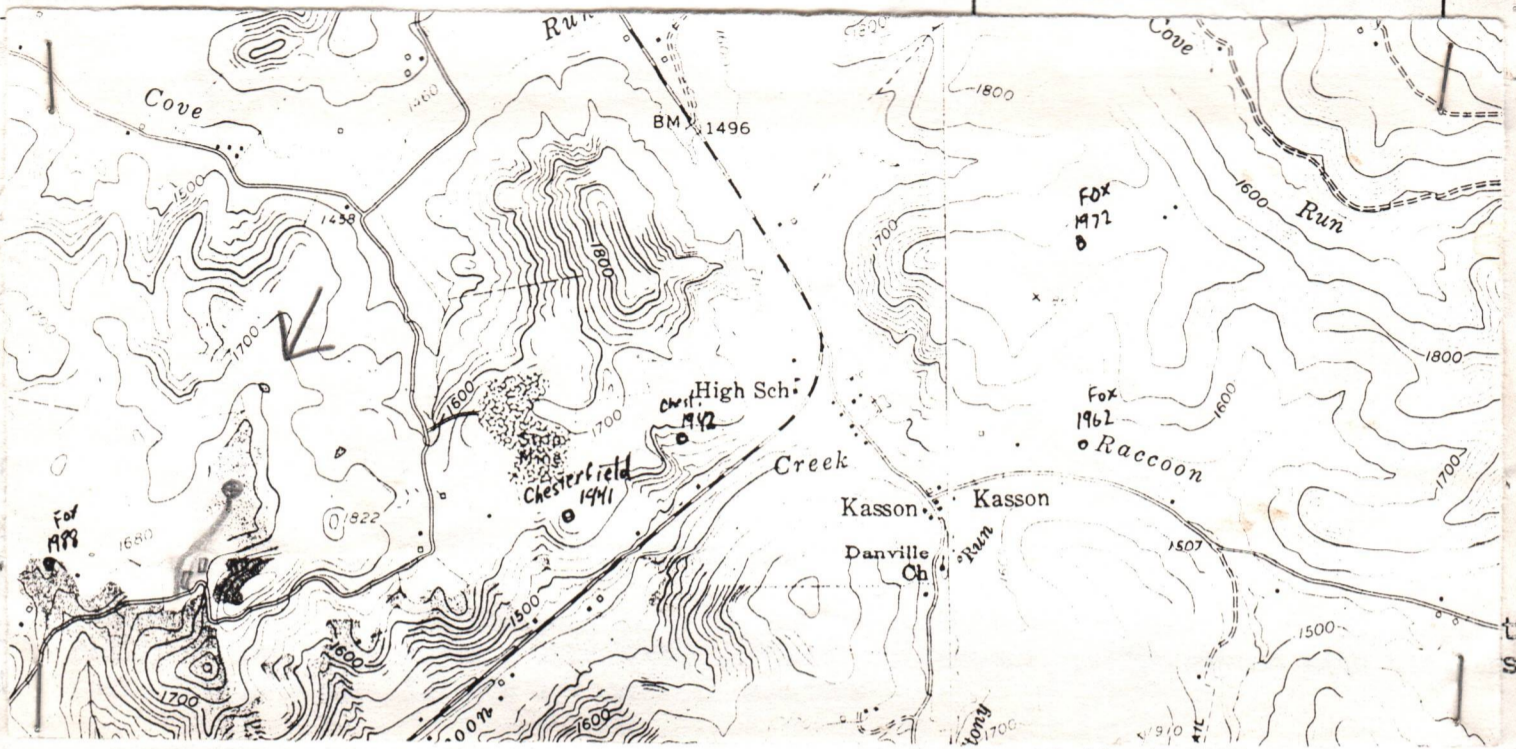


ATTACH OR PHOTOCOPY SECTION OF  
INVOLVED TOPOGRAPHIC MAP.  
QUADRANGLE Norcrossville 7.5'


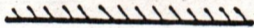









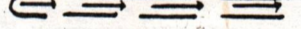
LEGEND

Well Site 

Access Road 



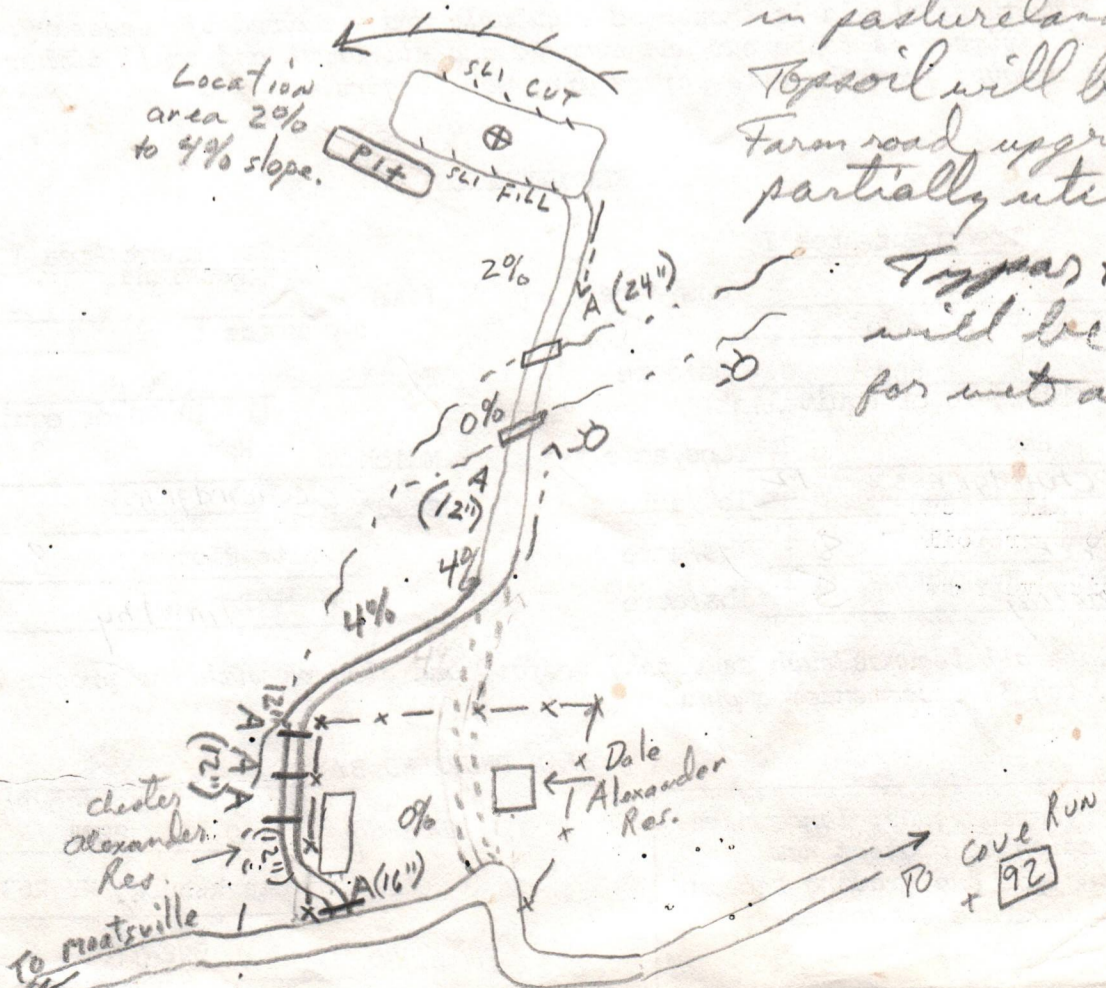
LEGEND

Property boundary 	Diversion 
Road 	Spring 
Existing fence 	Wet spot 
Planned fence 	Building 
Stream 	Drain pipe 
Open ditch 	Waterway 

Swift Energy Co. - H. Alexander #1

Location & road are  
in pastureland.  
Topsoil will be stockpiled.  
Farm road upgraded &  
partially utilized.

Trypas & stone  
will be used  
for wet area crossing



T.B.



AFFIDAVIT OF PERSONAL SERVICE ON SURFACE OWNER

STATE OF W.V.,  
COUNTY OF Barbour:

The undersigned, being first duly sworn, says that the undersigned served a true and complete copy of all sides of---

- (1) Notice on Form IV2A
- (2) Application on Form IV2B
- (3) Plat showing well location on Form IV6
- (4) Construction and Reclamation Plan on Form IV9--

with respect to operator's Well No. Alexander #1 located in Cove District, Barbour County, West Virginia, upon the person or organization named--

Mr & Mrs. Dale Alexander

**RECEIVED**

--by delivering the same in Barbour County, State of W.V. on the 7 day of May, 1984 in the manner specified below. MAY 7 - 1984  
OIL & GAS DIVISION  
DEPT. OF MINES

[COMPLETE THE APPROPRIATE SECTION]

For an individual:

- Handing it to him  + her  or, because he  / she  refused to take it when I offered it, by leaving it in his  / her  presence.
- Handing it to a member of his or her family above the age of 16 years named \_\_\_\_\_ who resides at the usual place of abode of the person to be served, and asking the family member to give it to the person to be served as soon as possible.

For a partnership:

- Handing it to \_\_\_\_\_, a partner of the partnership or, because the partner refused to take it when I handed it over, by leaving it in the presence of the partner.

For a limited partnership:

- Handing it to the general partner, named \_\_\_\_\_, or, because the general partner refused to take it when I tried to hand it over, by leaving it in the presence of the general partner.

For a corporation:

- Handing it to the corporation's employee  / officer  / director  / attorney in fact  / named \_\_\_\_\_.

David Smith  
(Signature of person executing service)



Taken, subscribed and sworn before me this 7<sup>th</sup> day of MAY, 1984.  
My commission expires FEBRUARY 3, 1988.

John B. Tonkin J.  
Notary Public

(AFFIX SEAL IF NOTARIZED IF OUTSIDE THE STATE)



Swift Energy Company

ZWENCO

1000 1/2 Street, N.W. Washington, D.C. 20004

10/15/78

RECEIVED

MAY 1 1978

DEPT. OF MINES  
OIL & GAS DIVISION

The attached report of the  
investigation of the  
accident at the  
mine on May 1, 1978.

This report is being  
submitted to you for  
your information.

Very truly yours,  
Director

Enclosure

cc - [illegible]

[illegible text]

[illegible]

[illegible]



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

06-01-84

Haverty - 5421-5460', 25,000 SCF N<sub>2</sub>, 10,000# 80-100 SD, 40,000# 20-40 SD, 500 GA, 466 BGW.  
 4th Elk - 5070-5084', 20,000 SCF N<sub>2</sub>, 10,000# 80-100 SD, 32,500# 20-40 SD, 500 GA, 461 BGW.  
 Alexander & Benson - 4234-4238', 4385-4387', 4411-4413', 20,000 SCF N<sub>2</sub>, 10,000# 80-100 SD,  
 32,000# 20-40 SD, 500 GA, 447 BGW.  
 Balltown - 3096-3135', 10,000# 20-40 SD, 500 GA, 504 BGW.

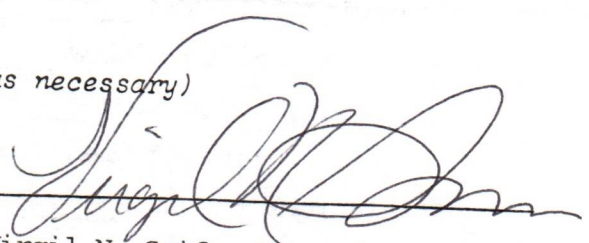
RECEIVED  
DEPT. OF MINES

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand & Shale			0	19	Water at 23' - 2" stream Wet at 55' Damp at 1167'
Coal			19	23	
Shale			23	59	
Coal			59	61	
Shale			61	285	
Coal			285	288	
Sandstone & Shale			288	1362	
Little Lime			1362	1378	
Shale			1378	1411	
Sandstone & Shale			1411	2712	
Bayard			2712	2803	
Sandstone & Shale			2803	4842	
3rd Elk			4842	4936	
Sandstone & Shale			4936	5999	
				T.D.	

(Attach separate sheets as necessary)

SWIFT ENERGY COMPANY  
Well Operator

  
Virgil N. Swift, Executive V.P.

By: \_\_\_\_\_  
Date: \_\_\_\_\_

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."





**RECEIVED**  
JAN 2 - 1985

OIL & GAS DIVISION  
**DEPT. OF MINES**

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date 12/10/84  
Operator's  
Well No. Alexander No. 1  
Farm \_\_\_\_\_  
API No. 47 - 001 - 2049

WELL OPERATOR'S REPORT  
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1673 Watershed Raccoon Creek  
District: Cove County Barbour Quadrangle Nestorville 7.5 min

COMPANY Swift Energy Company  
ADDRESS P.O. Box 2201, Clarksburg, WV 26301  
DESIGNATED AGENT Tim Bennett  
ADDRESS P.O. Box 2201, Clarksburg, WV 26301  
SURFACE OWNER Dale Alexander  
ADDRESS Box 108, Moatsville, WV 26405  
MINERAL RIGHTS OWNER Alexander, et al  
ADDRESS Box 108, Moatsville, WV 26405  
OIL AND GAS INSPECTOR FOR THIS WORK Phillip Tracy  
Forest Fest. #2 ADDRESS Elkins, WV 26241  
PERMIT ISSUED 05-08-84  
DRILLING COMMENCED 05-16-84  
DRILLING COMPLETED 05-21-84  
IF APPLICABLE: PLUGGING OF DRY HOLE ON  
CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED  
ON \_\_\_\_\_

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8		1000	260 sx
7			
5 1/2			
4 1/2		5954'	580 sx
3			
2 3/8"		5401'	
Liners used			

GEOLOGICAL TARGET FORMATION Haverty Depth 5950 feet  
Depth of completed well \_\_\_\_\_ feet Rotary XX / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh 23'; 55' feet; Salt \_\_\_\_\_ feet  
Coal seam depths: 19-23'; 59-61'; 285-288' Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Haverty/4th Elk\* Pay zone depth 5260 feet  
Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 823 Mcf/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 4 hours  
Static rock pressure 915 psig (surface measurement) after 12 hours shut in  
(If applicable due to multiple completion--)  
Second producing formation Alexander/Benson Pay zone depth 4345 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

\*Gas comingled from formations.

(Continue on reverse side)



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

RECEIVED

MAY 16 1984

INSPECTOR'S WELL REPORT OIL & GAS DIVISION

DEPT. OF MINES

Permit No. 001-2049

Oil or Gas Well  
(KIND)

Company <u>Sweet Energy</u>	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Address _____	Size			
Farm <u>H. Alexander</u>	16			Kind of Packer _____
Well No. <u>1</u>	13			
District <u>Cove</u> County <u>Barbar</u>	10			Size of _____
Drilling commenced _____	8 1/4			
Drilling completed _____ Total depth _____	6 5/8			Depth set _____
Date shot _____ Depth of shot _____	5 3/16			
Initial open flow _____ /10ths Water in _____ Inch	3			Perf. top _____
Open flow after tubing _____ /10ths Merc. in _____ Inch	2			Perf. bottom _____
Volume _____ Cu. Ft.	Liners Used			Perf. top _____
Rock pressure _____ lbs. _____ hrs.				Perf. bottom _____
Oil _____ bbls., 1st 24 hrs.	CASING CEMENTED _____ SIZE _____ No. FT. _____ Date _____			
Fresh water _____ feet _____ feet	NAME OF SERVICE COMPANY _____			
Salt water _____ feet _____ feet	COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES			
	_____ FEET _____ INCHES _____ FEET _____ INCHES			
	_____ FEET _____ INCHES _____ FEET _____ INCHES			

Drillers' Names \_\_\_\_\_

Remarks: Local

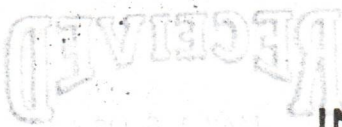
5-10-84  
DATE

Philip Long  
DISTRICT WELL INSPECTOR



FORM 20  
2/16/82

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



**INSPECTOR'S PLUGGING REPORT**

Permit No. \_\_\_\_\_

Well No. \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

FARM \_\_\_\_\_

DISTRICT \_\_\_\_\_

COUNTY \_\_\_\_\_

Filling Material Used \_\_\_\_\_

Liner	Location		Amount	Packer	Location		
PLUGS USED AND DEPTH PLACED			BRIDGES		CASING AND TUBING		
CEMENT-THICKNESS	WOOD-SIZE	LEAD	CONSTRUCTION-LOCATION		RECOVERED	SIZE	LOST

Drillers' Names \_\_\_\_\_

Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ DATE I hereby certify I visited the above well on this date.

\_\_\_\_\_ DISTRICT WELL INSPECTOR



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

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MAY 23 1984

INSPECTOR'S WELL REPORT

OIL & GAS DIVISION

Permit No. 601-2049

DEPT. OF MINES  
Oil or Gas Well  
(KIND)

Company Swift Energy  
 Address \_\_\_\_\_  
 Farm Alexander  
 Well No. 1  
 District Cove County Bartlow  
 Drilling commenced \_\_\_\_\_  
 Drilling completed \_\_\_\_\_ Total depth \_\_\_\_\_  
 Date shot \_\_\_\_\_ Depth of shot \_\_\_\_\_  
 Initial open flow \_\_\_\_\_ /10ths Water in \_\_\_\_\_ Inch  
 Open flow after tubing \_\_\_\_\_ /10ths Merc. in \_\_\_\_\_ Inch  
 Volume \_\_\_\_\_ Cu. Ft.  
 Rock pressure \_\_\_\_\_ lbs. \_\_\_\_\_ hrs.  
 Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
 Fresh water \_\_\_\_\_ feet \_\_\_\_\_ feet  
 Salt water \_\_\_\_\_ feet \_\_\_\_\_ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packér _____
13			
10			Size of _____
8 1/4			
6 5/8			Depth set _____
5 3/16			
3			Perf. top _____
2			Perf. bottom _____
Liners Used			Perf. top _____
			Perf. bottom _____

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. FT. \_\_\_\_\_ Date \_\_\_\_\_  
 NAME OF SERVICE COMPANY \_\_\_\_\_  
 COAL WAS ENCOUNTERED AT \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
 \_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
 \_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

Drillers' Names \_\_\_\_\_

Remarks: Starting hole

5-16-84  
DATE

Philip Drey  
DISTRICT WELL INSPECTOR



Form 20  
2/16/82

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

INSPECTOR'S PLUGGING REPORT

Permit No. \_\_\_\_\_

Well No. \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

FARM \_\_\_\_\_

DISTRICT \_\_\_\_\_

COUNTY \_\_\_\_\_

Filling Material Used \_\_\_\_\_

Liner	Location	Amount	Packer	Location		
PLUGS USED AND DEPTH PLACED			BRIDGES	CASING AND TUBING		
CEMENT-THICKNESS	WOOD-SIZE	LEAD	CONSTRUCTION-LOCATION	RECOVERED	SIZE	LOST

Drillers' Names \_\_\_\_\_

Remarks: \_\_\_\_\_

I hereby certify I visited the above well on this date.

DATE

DISTRICT WELL INSPECTOR



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

RECEIVED

MAY 23 1984

INSPECTOR'S WELL REPORT

OIL & GAS DIVISION  
DEPT. OF MINES

Permit No. 001-2049

Oil or Gas Well \_\_\_\_\_  
(KIND)

Company Sweet Energy  
 Address \_\_\_\_\_  
 Farm H. Alexander  
 Well No. 1  
 District Case County Dunbar  
 Drilling commenced \_\_\_\_\_  
 Drilling completed \_\_\_\_\_ Total depth 1020  
 Date shot \_\_\_\_\_ Depth of shot \_\_\_\_\_  
 Initial open flow \_\_\_\_\_ /10ths Water in \_\_\_\_\_ Inch  
 Open flow after tubing \_\_\_\_\_ /10ths Merc. in \_\_\_\_\_ Inch  
 Volume \_\_\_\_\_ Cu. Ft.  
 Rock pressure \_\_\_\_\_ lbs. \_\_\_\_\_ hrs.  
 Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
 Fresh water \_\_\_\_\_ feet \_\_\_\_\_ feet  
 Salt water \_\_\_\_\_ feet \_\_\_\_\_ feet

CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Size			
16			Kind of Packer _____
13			
10			Size of _____
8 1/4	<u>1000</u>	<u>1000</u>	
6 5/8			Depth set _____
5 3/16			
3			Perf. top _____
2			Perf. bottom _____
Liners Used			Perf. top _____
			Perf. bottom _____

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. FT. \_\_\_\_\_ Date \_\_\_\_\_  
 NAME OF SERVICE COMPANY \_\_\_\_\_  
 COAL WAS ENCOUNTERED AT \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
 \_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
 \_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

Drillers' Names \_\_\_\_\_

Remarks: \_\_\_\_\_

5-18-84  
DATE

Phillip Sway  
DISTRICT WELL INSPECTOR



FORM 20  
2/16/82

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

RECEIVED

INSPECTOR'S PLUGGING REPORT

Permit No. \_\_\_\_\_ Well No. \_\_\_\_\_

COMPANY \_\_\_\_\_ ADDRESS \_\_\_\_\_

FARM \_\_\_\_\_ DISTRICT \_\_\_\_\_ COUNTY \_\_\_\_\_

Filling Material Used \_\_\_\_\_

Liner			Location	Amount	Packer	Location		
PLUGS USED AND DEPTH PLACED			BRIDGES			CASING AND TUBING		
CEMENT-THICKNESS	WOOD-SIZE	LEAD	CONSTRUCTION-LOCATION			RECOVERED	SIZE	LOST

Drillers' Names \_\_\_\_\_

Remarks: \_\_\_\_\_

\_\_\_\_\_  
DATE I hereby certify I visited the above well on this date.

DISTRICT WELL INSPECTOR





**RECEIVED**  
APR 16 1985  
OIL & GAS DIVISION  
DEPT. OF MINES

**State of West Virginia**  
**Department of Mines**  
**Oil and Gas Division**  
**Charleston 25305**

FINAL INSPECTION REPORT  
INSPECTORS COMPLIANCE REPORT  
January 17, 1985

COMPANY Swift Energy Company  
P. O. Box 2201  
Clarksburg, West Virginia 26301

PERMIT NO 001-2049  
FARM & WELL NO Dale Alexander #1  
DIST. & COUNTY Cove/Barbour

RULE	DESCRIPTION	IN COMPLIANCE	
		YES	NO
23.06	Notification Prior to Starting Work	<input checked="" type="checkbox"/>	<input type="checkbox"/>
25.04	Prepared before Drilling to Prevent Waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>
25.03	High-Pressure Drilling	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16.01	Required Permits at Wellsite	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15.03	Adequate Fresh Water Casing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15.02	Adequate Coal Casing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15.01	Adequate Production Casing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15.04	Adequate Cement Strenght	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15.05	Cement Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>
23.02	Maintained Access Roads	<input checked="" type="checkbox"/>	<input type="checkbox"/>
25.01	Necessary Equipment to Prevent Waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>
23.04	Reclaimed Drilling Pits	<input checked="" type="checkbox"/>	<input type="checkbox"/>
23.05	No Surface or Underground Pollution	<input checked="" type="checkbox"/>	<input type="checkbox"/>
23.07	Requirements for Production & Gathering Pipelines	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16.01	Well Records on Site	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16.02	Well Records Filed	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7.05	Identification Markings	<input checked="" type="checkbox"/>	<input type="checkbox"/>

I HAVE INSPECTED THE ABOVE CAPTIONED WELL AND RECOMMEND THAT IT BE RELEASED:

SIGNED *Wanda B. Ellis*

DATE 4-17-85

Your well record was received and reclamation requirements approved. In accordance with Chapter 22, Article 4, Section 2, the above well will remain under bond coverage for the life of the well.

*T. H. ...*

Administrator-Oil & Gas Division

April 17, 1985

DATE



**APPLICATION FOR DETERMINATION OF THE MAXIMUM LAWFUL PRICE UNDER THE NATURAL GAS POLICY ACT (NGPA)**

1.0 API well number (If not assigned, leave blank. 14 digits.)	47-001 - 2049 -				
2.0 Type of determination being sought (Use the codes found on the front of this form.)	102 <small>Section of NGPA</small>	2 <small>Category</small>	<div style="font-size: 2em; font-weight: bold; transform: rotate(-5deg); display: inline-block;">RECEIVED</div> DEC 28 1984 <b>OIL &amp; GAS DIV.</b> <b>DEPT. OF MINES</b>		
3.0 Depth of the deepest completion location (Only needed if sections 103 or 107 in 2.0 above.)	5460 feet				
4.0 Name, address and code number of applicant (35 letters per line maximum. If code number not available, leave blank.)	Swift Energy Company <small>Name</small> 652 E. North Belt, #200 <small>Street</small> Houston TX 77060 <small>City State Zip Code</small>			3733 <small>Code</small>	
5.0 Location of this well (Complete (a) or (b)!) (a) For oil/gas wells (35 letters maximum for field name.) (b) For OCS wells	Cove District <small>Field Name</small> Barbour WV <small>County State</small>				
6.0 (a) Name and identification number of this well (35 letters and digits maximum.) (b) If code 4 or 5 in 2.0 above, name of the reservoir (35 letters maximum.)	Alexander No. 1				
7.0 (a) Name and code number of the purchaser (35 letters and digits maximum. If code number not available, leave blank.) (b) Date of the contract	Tennessee Gas Pipeline Co. <small>Name</small>				
(c) Estimated total annual production from the well	0 9 0 6 8 4 <small>Mo. Day Yr.</small> 25 Million Cubic Feet				
7.0 Contract price (As of filing date. Complete to 3 decimal places.)	S/MMBTU	(a) Base Price 3 . 8 4 5	(b) Tax - 0 . 3 0 7	(c) All Other Prices (Indicate (+) or (-).) + 0 . 3 0 7	(d) Total of (a), (b) and (c) 3 . 8 4 5
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	S/MMBTU	3 . 8 4 5	- 0 . 3 0 7	+ 0 . 3 0 7	3 . 8 4 5
9.0 Person responsible for this application:	Virgil N. Swift <small>Name</small>  <small>Signature</small> 12-10-84 <small>Date Application is Completed</small>				
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">                     Agency Use Only                      Date Received by Juris. Agency                      DEC 28 1984                 </div> Date Received by FERC	Executive V.P. <small>Title</small> 713/445-0844 <small>Phone Number</small>				

RECEIVED

DEC 28 1984

**OIL & GAS DIV.**  
**DEPT. OF MINES**



APPLICATION FOR DETERMINATION OF THE MAXIMUM LAWFUL PRICE UNDER THE NATURAL GAS POLICY ACT (NGPA)

1.0 API well number (If not assigned, leave blank. 14 digits.)	47 - 001 - 2049 -															
2.0 Type of determination being sought (Use the codes found on the front of this form.)	107 Section of NGPA	3 Category	<div style="font-size: 2em; font-weight: bold; transform: rotate(-5deg); display: inline-block;">RECEIVED</div> DEC 28 1984 OIL & GAS DIV. 37373 DEPT. OF MINES' Contr													
3.0 Depth of the deepest completion location. (Only needed if sections 103 or 107 in 2.0 above.)	5460 feet															
4.0 Name, address and code number of applicant. (35 letters per line maximum. If code number not available, leave blank.)	Swift Energy Company Name 652 E. North Belt, #200 Street Houston TX 77060 City State Zip Code															
5.0 Location of this well. (Complete (a) or (b) 1.) (a) For oil/gas wells (35 letters maximum for field name.) (b) For OCS wells	Cove District Field Name Barbour WV County State  Area Name Block Number  Date of Lease <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> </tr> <tr> <td style="text-align: center;">Mo.</td> <td style="text-align: center;">Day</td> <td style="text-align: center;">Yr.</td> <td colspan="3" style="text-align: center;">OCS Lease Number</td> </tr> </table>										Mo.	Day	Yr.	OCS Lease Number		
Mo.	Day	Yr.	OCS Lease Number													
(c) Name and identification number of this well. (35 letters and digits maximum.)	Alexander No. 1															
(d) If code 4 or 5 in 2.0 above, name of the reservoir. (35 letters maximum.)																
6.0 (a) Name and code number of the purchaser. (35 letters and digits maximum. If code number not available, leave blank.) (b) Date of the contract	Tennessee Gas Pipeline Co. Name		Buyer Code													
(c) Estimated total annual production from the well	(01910161814) Mo. Day Yr. 25 Million Cubic Feet															
7.0 Contract price. (As of filing date. Complete to 3 decimal places.)	S/MMBTU	(a) Base Price 5.902	(b) Tax -0.472	(c) All Other Prices (Indicate (+) or (-).) +0.472	(d) Total of (a), (b) and (c) 5.902											
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	S/MMBTU	5.902	-0.472	+0.472	5.902											
9.0 Person responsible for this application:	Virgil N. Swift Name Executive V.P. Title  Signature 12-10-84 Date Application is Completed 713/445-0844 Phone Number															

RECEIVED

DEC 28 1984  
OIL & GAS DIV. 37373  
DEPT. OF MINES' Contr

Agency Use Only  
 Date Received by Juris. Agency  

DEC 28 1984

 Date Received by FERC



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES OIL AND GAS DIVISION

DATE 12-10-84

OPERATOR'S  
WELL NO. Alexander No.1

API WELL NO.  
47 - 001 - 2049  
STATE COUNTY PERMIT

WELL CLASSIFICATION FORM

HIGH COST GAS WELL - DEVONIAN SHALE

NGPA SECTION 107

WELL OPERATOR Swift Energy Co.

DESIGNATED AGENT Tim Bennett

ADDRESS 652 E. North Belt, #200  
Houston, TX 77060

ADDRESS P.O. Box 2201  
Clarksburg, WV 26301

GAS PURCHASER Tennessee Gas Pipeline Co.

LOCATION Elevation 1673'

ADDRESS 5646 U.S. Steel Bldg., 600 Grant Street  
Pittsburgh, PA 15219

Watershed Raccoon Creek

Dist. Cove County Barbour Quad. Nestorville 7.5

Date of Contract 09-06-84

Gas Purchase Contract No. 1540

Date Surface Drilling Began: 5-16-84

Meter Chart Code \_\_\_\_\_

\* \* \* \* \*

Indicate the bottom hole pressure of the well and explain how this was calculated:

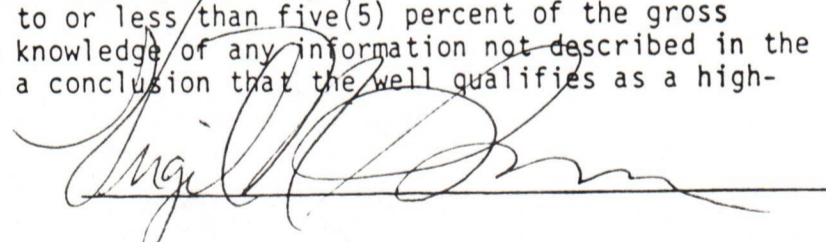
$$BHP = P_1 + P_1 (e^{(GL/53.34T)} - 1)$$

G = .7  
L = 5460'  
T = 586°R  
P<sub>1</sub> = 930 psia

BHP = 1051 psia

AFFIDAVIT

I, Virgil N. Swift, having been first sworn according to law, state that I have calculated the percentage of footage of the producing interval which is not Devonian Shale as indicated by a Gamma Ray index of less than 0.7 if Gamma Ray log described in subparagraph (3)(i) of (3)(ii)(A) has been filed, or as indicated by report in subparagraph (3)(ii)(B); I have demonstrated that the percentage of potentially disqualifying non-shale footage is equal to or less than five(5) percent of the gross Devonian age interval; and I have no knowledge of any information not described in the application which is consistent with a conclusion that the well qualifies as a high-cast natural gas well.



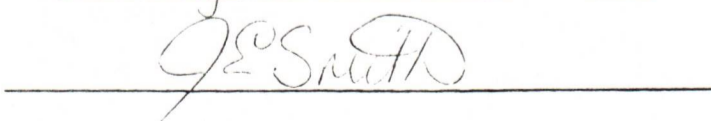
STATE OF WEST VIRGINIA ~~TEXAS~~

COUNTY OF HARRIS, TO-WIT:

I, J. E. SMITH, a Notary Public in and for the state and county aforesaid do certify that Virgil N. Swift, whose name is signed to writing above, bearing date the 10th day of December, 19, 84, has acknowledged the same before me, in my county aforesaid.

Given under my hand and official seal this 10th day of December, 19, 84.

My term of office expires on the 14th day of August, 19, 88.



NOTARY PUBLIC

(Notarial Seal)



DEVONIAN SHALE GAMMA RAY LOG ANALYSIS  
 APPLICATION FOR DETERMINATION OF THE MAXIMUM LAWFUL  
 PRICE UNDER THE NATURAL GAS POLICY ACT

Operator: Swift Energy Co. Agent: Tim Bennett  
 Type Determination being sought - 107 (Devonian Shale)  
 API Well No.: 47-001-2049 Well Name: Alexander No. 1  
 West Virginia Office of Oil and Gas County: Barbour  
 References: SJA File No.

Vol. \_\_\_\_\_ Page \_\_\_\_\_ Line \_\_\_\_\_

I. NOTE: A Gamma Ray Log has been marked with the (a) Shale Base Line, (b) a line representing 0.7 x (Shale Base Line), (c) intervals with Gamma Ray units less than 0.7 x (Shale Base Line) and that log is included with this analysis.

II. Gamma Ray elevation indices:

A. Shale Base Line (API Units)

1. GR Value at Base Line = 170 \* API Units
2. Remarks:

B. Gamma Ray Log Value at 0.7 x Value at Base Line

1. GR Value = 170 \* API Units
2. Calculation:  $\frac{0.7 \text{ (GR Value at Base Line)}}{0.7 \text{ (} \underline{170} \text{ *)} = \underline{119} \text{ API Units}$

III. Intervals with GR index less than 0.7 x (Value at Base Line):

Interval		Thickness of Interval Feet	Feet of less than* 0.7 (Shale Base Line) Feet
From**	To***		
1849	5980 T.D.	4131	192

Total Devonian Interval 4131

Total Less Than 0.7 (Shale Base) 192

$$\% \text{ Less Than } 0.7 \text{ (Shale Base Line)} = \frac{192}{4131} \times 100 = \underline{\underline{4.6}} \%$$

\*Marked on log included with analysis.  
 \*\*Top of Devonian Section Recorded on First Interval in this Column  
 \*\*\*Lesser of TD or Bottom of Devonian Section Recorded as last Inter  
 in this Column.



STATE OF WEST VIRGINIA

DEPARTMENT OF MINES, OIL AND GAS DIVISION

JAN 15 1985

COVER SHEET, STATE APPLICATION FOR WELL CLASSIFICATION

Date: 12/10, 19 84

AGENCY USE ONLY

Applicant's Name: Swift Energy Company

Address: 652 E. North Belt, #200  
Houston, TX 77060

Gas Purchaser Contract No. 1540

Date of Contract 09-06-84  
(Month, day and year)

First Purchaser: Tennessee Gas Pipeline Co.

Address: 5646 U.S. Steel Bldg., 600 Grant Street  
(Street or P.O. Box)  
Pittsburgh PA 77060  
(City) (State) (Zip Code)

FERC Seller Code 037373

WELL DETERMINATION FILE NUMBER  
841228 - 107-001-2049  
Use Above File Number on all  
Communications Relating to This Well

Designated Agent: Tim Bennett

Address: P.O. Box 2201  
Clarksburg, WV 26301

FERC Buyer Code

NAME AND TITLE OF PERSON TO WHOM QUESTIONS CONCERNING THIS APPLICATION SHALL  
BE ADDRESSED:

Name: Virgil N. Swift Executive V.P.  
(Print) (Title)

Signature: *Virgil N. Swift*

Address: 652 E. North Belt, #200  
(Street or P.O. Box)  
Houston TX 77060  
(City) (State) (Zip Code)

Telephone: (Area Code) (Phone Number)

(Certificate of Proof of Service to Purchaser)

NGPA Category Applied For

NGPA SECTION/SUBSECTION

- 102 New Natural Gas
  - 102-2 2.5 Mile Test
  - 102-3 1000 Foot Deeper Test
  - 102-4 New Onshore Reservoir
- 103 New Onshore Production Well
  - 103 New Onshore Production Well
- 107 High Cost Natural Gas
  - 107-0 Deep (more than 15,000 feet)
  - 107-1 Geopressured Brine
  - 107-2 Coal Seams
  - XX 107-3 Devonian Shale
  - 107-5 Production enhancement
  - 107-6 New Tight Formation
  - 107-7 Recompletion Tight Formation

- 108 Stripper Well Natural Gas
  - 108- Stripper Well
  - 108-1 Seasonally Affected
  - 108-2 Enhanced Recovery
  - 108-3 Temporary Pressure Buildup

AGENCY USE ONLY

QUALIFIED

RECEIVED

DEC 28 1984

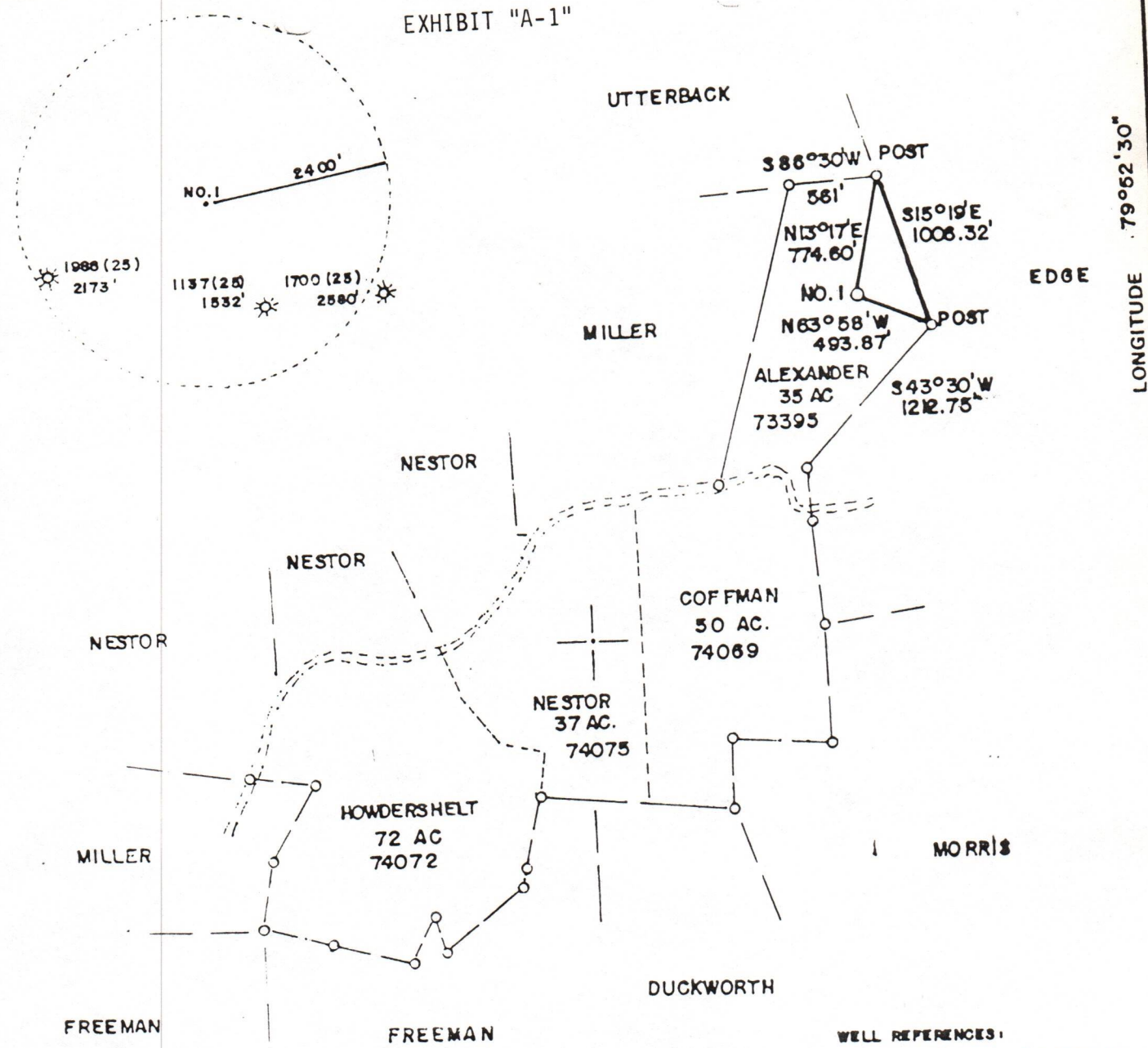
OIL & GAS DIV.  
DEPT. OF MINES

Date Received

Determination Date



EXHIBIT "A-1"

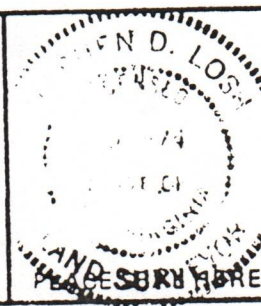


LAND SURVEYING SERVICES  
 RT. 2, BOX 215E  
 JANE LEW, WV 26378  
 PHONE: 304-745-4426

WELL REFERENCES:  
 S30°E, 210' TO A 14" Y. POPLAR  
 S13°W, 222.50' TO A 6" R. MAPLE

LE NO \_\_\_\_\_  
 DRAWING NO \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF  
 ACCURACY 1 in 200  
 PROVEN SOURCE OF  
 ELEVATION TOP OF KNOB 1050 S.E.  
 LOCATION ELEV. - 1822'

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) Stephen D. Losh  
 R.P.E. \_\_\_\_\_ L.L.S. 674  
 STEPHEN D. LOSH



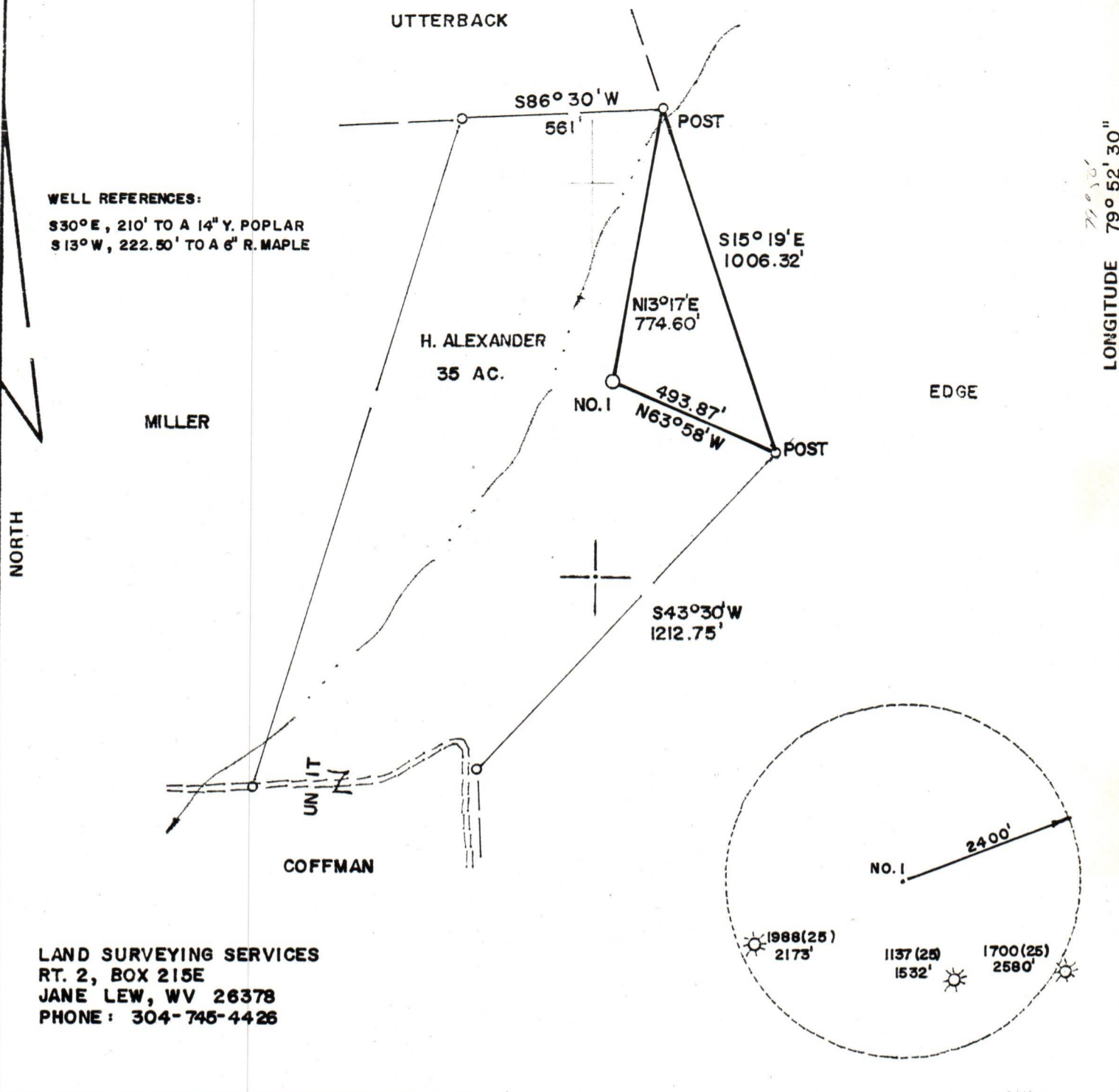
STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION



DATE APRIL 30 19 84  
 OPERATOR'S WELL NO. ALEXANDER, NO. 1  
 API WELL NO. 47-001  
 STATE \_\_\_\_\_ COUNTY \_\_\_\_\_ PERMIT \_\_\_\_\_

INDICATES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 ALL TYPE OF OIL \_\_\_\_\_ GAS X LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF PROD.) PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X  
 LOCATION ELEVATION 1673' WATER SHED: RACCOON CREEK  
 DISTRICT COVE COUNTY BARBOUR  
 QUADRANGLE NESTORVILLE 7.5 min.  
 SURFACE OWNER DALE ALEXANDER ACREAGE 17.50  
 OIL & GAS ROYALTY OWNER ALEXANDER, et al. (UNIT) LEASE ACREAGE 194  
 LEASE NO. 73395, 74069, 74075, 74072  
 PROPOSED WORK X DRILL \_\_\_\_\_ CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR  
 STIMULATE \_\_\_\_\_ PLUG OFF \_\_\_\_\_ FORMATION \_\_\_\_\_ PERFORATE NEW  
 FORMATION \_\_\_\_\_ OTHER \_\_\_\_\_ CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUG AND ABANDON \_\_\_\_\_ CLEAN UP \_\_\_\_\_  
 GET FORMATION ON HAVERTY TO BE 5950'  
 OPERATOR SWIFT ENERGY COMPANY DESIGNATED AGENT TIM BENNETT  
 ADDRESS P.O. BOX 2201 ADDRESS P.O. BOX 2201  
CLARKSBURG, WV 26301 CLARKSBURG, WV 26301





WELL REFERENCES:  
 S30° E, 210' TO A 14" Y. POPLAR  
 S 13° W, 222.50' TO A 6" R. MAPLE

LAND SURVEYING SERVICES  
 RT. 2, BOX 215E  
 JANE LEW, WV 26378  
 PHONE: 304-745-4426

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 400'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION TOP OF KNOB 1050' S.E. OF LOCATION ELEV. - 1822'

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) Stephen D. Losh  
 R.P.E. \_\_\_\_\_ L.L.S. 674  
 STEPHEN D. LOSH

PLACE SEAL HERE

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION



DATE APRIL 30, 19 84  
 OPERATOR'S WELL NO. ALEXANDER  
 API WELL NO. WELL NO. 1  
 47 - 001 - 2049  
 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 1673' WATER SHED RACCOON CREEK  
 DISTRICT COVE COUNTY BARBOUR  
 QUADRANGLE NESTORVILLE 7.5 min.

SURFACE OWNER DALE ALEXANDER ACREAGE 17.50  
 OIL & GAS ROYALTY OWNER HAYES ALEXANDER LEASE ACREAGE 35.00  
 LEASE NO. 73395

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 HAVERTY ESTIMATED DEPTH 5950'  
 WELL OPERATOR SWIFT ENERGY COMPANY DESIGNATED AGENT TIM BENNETT  
 ADDRESS P.O. BOX 2201 ADDRESS P.O. BOX 2201  
 CLARKSBURG, WV 26301 CLARKSBURG, WV 26301