

LATITUDE 39°17'30"

5,300'

LONGITUDE 80°50'00"

8,175'

*James P. Hulse*

36' WHITE OAK, STUMP

J. MEYER 45.67 AC.

A. CROUCH 10.85 AC.

N45°57'W 291.6'

N63°W 949.1'

NO. 1

S80°18'E 503.7'

30' WHITE OAK

W. STENDEL 12.5 AC.

M. LOWE 16.4 AC.

STONE

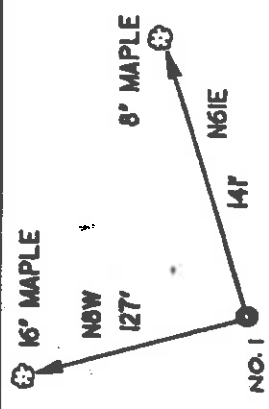
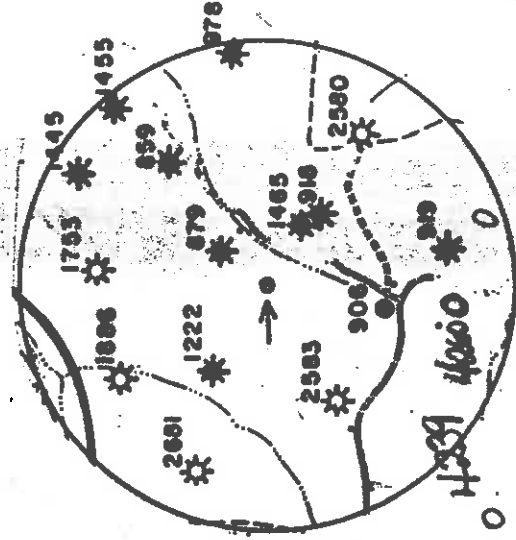
S75°30'E 792'

M. COX 8 AC.

WILHELM RUN

ROUTE 50/3

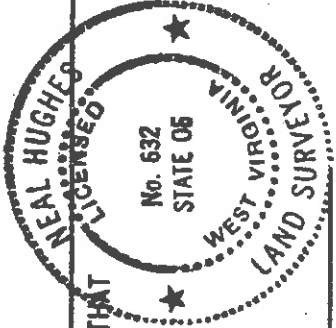
1.56  
1.00



REFERENCE POINTS

I THE UNDERSIGNED, DO 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 ENERGY.

L.L.S. *Neal Hulse*



(\*) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

DATE NOVEMBER 21, 19 96  
OPERATORS WELL NO. MUTSCHELKNAUS 1

API. WELL NO. 47-017-04325

MINIMUM DEGREE OF ACCURACY	1/200	FILE NO.	96-92	STATE OF WEST VIRGINIA	DEPARTMENT OF ENERGY	OIL AND GAS DIVISION
PROVEN SOURCE OF ELEVATION	KN08 1332'	SCALE	1" = 200'	STATE	COUNTY	PERMIT
WELL TYPE: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/>	ELEVATION	105'	IF 'GAS' PRODUCTION <input checked="" type="checkbox"/>	STORAGE	DEEP	SHALLOW
DISTRICT	CENTRAL	COUNTY	DODDRIDGE	QUADRANGLE	WEST UNION	
SURFACE OWNER	WALTER STENDEL & YVONNE STENDEL		ACREAGE	12.5		
ROYALTY OWNER	CLARENCE MUTSCHELKNAUS		LEASE ACREAGE	12.5		
PROPOSED WORK:	DRILL <input checked="" type="checkbox"/> CONVERT <input type="checkbox"/>	DRILL DEEPER <input type="checkbox"/>	REDRILL <input type="checkbox"/>	FRACTURE OR STIMULATE <input checked="" type="checkbox"/>	PLUG OFF OLD FORMATION <input type="checkbox"/>	PERFORATE NEW FORMATION <input type="checkbox"/>
PHYSICAL CHANGE IN WELL (SPECIFY)				CLEAN OUT AND REPLUG <input type="checkbox"/>	OTHER	TARGET FORMATION
				ALEXANDER		ESTIMATED DEPTH
						5600'
WELL OPERATOR	KEY OIL COMPANY	DESIGNATED AGENT	JAN CHAPMAN	DEC 6 1996	COUNTY NAME	PERMIT
ADDRESS	22 GARTON PLAZA	ADDRESS	22 GARTON PLAZA			
	WESTON, WV 26452		WESTON, WV 26452			

6-2-89

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

## Well Operator's Report of Well Work

Farm name: STENDEL, WALTER &amp; YVONNE      Operator Well No. : MUTSCHELKNAUS #1      1997

LOCATION: Elevation: 1,105.00      Quadrangle: WEST UNION      Permitting  
District: CENTRAL      County: DODDRIDGE      Office of Oil & Gas  
Latitude: 8175      Feet South of 39 Deg. 17 Min. 30 Sec.  
Longitude: 5300      Feet West of 80 Deg. 50 Min. 0 Sec.Company: KEY OIL COMPANY  
22 Garton Plaza  
WESTON, WV 26452-0000

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD  
Permit Issued: 12/02/96  
Well Work Commenced: 12/5/96  
Well Work Completed: 12/19/96Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth ( feet ) 5544'  
Fresh water depths ( ft ) None  
Salt water depths ( ft ) 464'Is coal being mined in area ( Y / N )? N  
Coal Depths ( ft ) : None Reported

## OPEN FLOW DATA

Producing formation	Balltown	3906' - 4593'
Gas: Initial open flow	Riley	4620' - 4688'
Final open flow	Benson	5060' - 5070'
Time of open flow between initial and final tests	Alexander	5306' - 5386'
Static rock pressure		1520 psig ( surface pressure ) after 96 Hours

Second producing formation	Commingled	Pay zone depth ( ft )
Gas: Initial open flow	MCF / d	Oil: Initial open flow
Final open flow	MCF / d	Oil: Final open flow
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.

For: KEY OIL COMPANY

By:   
Date: 4-22-97

PRESIDENT

MAY 25 1997

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
11 3/4"	129.05	129.05	70 sks To Surface
8 5/8"	2031.9	2031.9	600 sks To Surface
4 1/2"	5460	5460	360 sks
2 3/8"		5230	

Mutschelknaus #1 (47-017-04325 )  
 Four Stage Foam Frac - Halliburton

1st Stage: Alexander ( 10 holes ) ( 5350' - 5376' )      60 Quality Foam. 500 gal. 15% HCL.  
 60,000# 20/40 sand, 550,000 SCF N2,  
 813 bbls foam.

2nd Stage: Benson ( 10 holes ) ( 4893' - 4894' )      60 Quality Foam. 750 gal 15% HCL.  
 40,000# 20/40 sand, 417,000 SCF N2,  
 618 bbls foam.

3rd Stage: Riley ( 6 holes ) ( 4660.25' - 4664.25' )      60 Quality Foam. 500 gal 15% HCL.  
 Balltown ( 5 holes ) ( 4442' - 4555.75' )      5,000# 80/100 sand, 35,000# 20/40 sand,  
 438,000 SCF N2, 649 bbls foam.

4th Stage: Balltown ( 10 holes ) ( 3987.75' - 4101.75' )      60 Quality Foam, 750 gal 15% HCL.  
 5,000# 80/100 sand, 35,000# 20/40 sand,  
 390,000 SCF N2, 589 bbls foam.

WELL LOG

Fill & Clay	0	14	
Sand & Shale	14	70	
Red Rock	70	92	
Sand & Shale	92	157	
Red Rock	157	235	
Sand & Shale & Red Rock	235	900	½ H <sub>2</sub> O @ 464'
Red Rock	900	1100	
Sand & Shale	1100	1551	
Shale	1551	2075	
Little Lime	2075	2086	
Pencil Cave	2086	2110	
Big Lime	2110	2170	
Big Injun	2170	2240	
Shale	2240	2408	
Weir	2408	2533	
Shale	2533	2600	
Berea	2600	2606	
Sand & Shale	2606	3468	
Warren	3468	3541	
Shale	3541	3554	
Speechley	3554	3676	
Shale	3676	3906	
Balltown	3906	4593	
Shale & Sand	4593	4620	
Riley	4620	4688	
Shale	4688	5060	
Benson	5060	5070	
Sand & Shale	5070	5306	
Alexander	5306	5386	
Shale	5386	5544	
T.D.	5544		

Gas Checks

2010 No Show  
 2516 No Show  
 3324 No Show  
 3823 No Show  
 4476 No Show  
 4727 No Show  
 5258 No Show  
 5520 No Show

DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WELL WORK PERMIT APPLICATION

Well Operator: KEY OIL COMPANY 475 25655 ① 671

Operator's Well Number: MUTSCHELKNAUS #1 3) Elevation: 1105'

Well type: (a) Oil X / or Gas X /

(b) If Gas: Production X / Underground Storage X /  
Deep    / 439 Shallow X /

Proposed Target Formation(s): ALEXANDER

Proposed Total Depth: 5600 feet

Approximate fresh water strata depths: 100'

Approximate salt water depths: -0-

Approximate coal seam depths: N/A

Does land contain coal seams tributary to active mine? Yes    / No X /

Proposed Well Work: DRILL. STIMULATE. PRODUCE *J. M. Miller*

12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS	FOOTAGE INTERVALS	CEMENT			
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	11 3/4	ERM	42	40	0	380 SPH 1.3
Fresh Water	8 5/8	ERM	23	1105	1105	300 SKS. TO SURFACE
Coal						380 SPH 1.2.2
Intermediate						
Production	4 1/2	J-55	10.5		5500	450 SKS.
Tubing	1.5					380 SPH 1.1
Liners						RECEIVED NOV 26 1986 Environmental Protection

PACKERS : Kind Sizes Depths set NOV 26 1986

11/23  
 Fee(s) paid: *[Signature]* Well work Permit *[Signature]* Reclamation Fund *[Signature]* WPC2  
 Plat *[Signature]* WW-9 *[Signature]* Bond *[Signature]* Agent *[Signature]*  
 For Office of Oil and Gas Use Only Office of Oil & Gas  
 Permitting

1) Date: NOVEMBER 22, 1996  
2) Operator's well number  
MITSCHELKNAUS #1  
3) API Well No: 47 - 017 - 4325  
State County Permit

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served: 5) (a) Coal Operator:

(a) Name WALTER STENDEL Name  
Address P. O. BOX 145 Address  
WEST UNION, WV 26456

(b) Name (b) Coal Owner(s) with Declaration  
Address Name  
Address

(c) Name Name  
Address Address

6) Inspector MIKE UNDERWOOD (c) Coal Lessee with Declaration  
Address RT. 2 BOX 135 Name  
SALEM, WV 26426 Address  
Telephone (304)- 782-1043

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 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_ on the above named parties, by:

- X Personal Service (Affidavit attached)
- \_\_\_ Certified Mail (Postmarked postal receipt attached)
- \_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

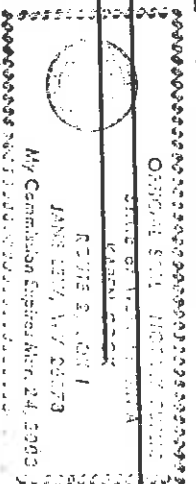
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information. **RECEIVED**

Well Operator KEY OIL COMPANY  
BY: *[Signature]* NOV 26 1996  
Its: PRESIDENT  
Address 22 GARTON PLAZA  
WESTON, WV 26452  
Telephone 304-269-7102  
Permitting  
Office of Oil & Gas

Subscribed and sworn before me this 22ND day of NOVEMBER, 1996. Notary Public

My commission expires MARCH 24, 2003



WV Division of  
Environmental Protection