



IV-35 (Rev\_8-81) CEIVE FEB 16 1988

> DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

State of West Wirgini
Department of Alines
Wil und Cas Bivision

Date 2/8/88
Operator's Well No. #2
Farm KERNS
API No. 47-085 -5683

FEB 2.2 1000

WELL OPERATOR'S REPORT

OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE:	: Oil X / Gas X / Liquid Injection (If "Gas," Production / Underground	/ Waste	e Disposal e/ Deep	/ 5/ Shai	11cw/)
T COMMICAL	Elevation: 840 Watershed So	with For	le of H	wahes	River
IICALION:	District: Grant county Ritch	Nie (	Duadrangle	MacFo	urlan 7.5
	District. Stant Control				
COMPANY D	erby Oil & Gas/Highland Resource	:0.5			
ADDRESS_T	2t. 83, Box 56, Ellenboro, WV 26346	Casing	Used in	Left	Cement fill up
DESIGNATE	D AGENT T. Stephen Landwigt	Tubing	Drilling	in Well	Cu. ft.
ADDRESS_	Same	Size			
SURFACE O	MNER Merlin C. Kerns	20-16 Cond.			1
ADDRESS	315 16th St., Parkers burg, W	13-10"	180	180	CTS
MINERAL R	RIGHTS OWNER Merlin C. Kerns, et al 26101	9 5/8	100		
ADDRESS		8 5/8	1850	1850	CTS
, .	GAS INSPECTOR FOR THIS WORK Samua	7	102		
Hersmo	an address Cauto, WV	5 1/2			
PERMIT IS	SSUED 6 82	4 1/2	5700	5700	200515
DRILLING	COMMENCED 12 4 82	3			
DRILLING	COMPLETED 12/10/82	2			
	CABLE: PLUGGING OF DRY HOLE ON				
	US PROGRESSION FROM DRILLING OR G. VERBAL PERMISSION OBTAINED	Liners used			
ON			<u> </u>	1	
	al target formation Devonian Shi				)- <u>5990</u> feet
		Rotary. X			•
	er strata depth: Fresh 30 feet;				
Coa	l seam depths: NA	. Is coal	being min	ned in th	e area?
OPEN FLO	W DATA				
Pro	ducing formation Devonian Sho	le Pa	y zone dej	oth 2280	-4990 feet
Gas	: Initial open flow 100 Mcf/d	Oil: In	itial ope	n flow 1.	O_Bb1/d
	Final open flow (SOO) Mcf/d				
	Time of open flow between init	ial and f	inal test	s 48 h	ours
Sta	tic rock pressure 950 psig(surface	e measure	ment) aft	er 24 ho	ours shut in
(If	applicable due to multiple completion	1)			
Sec	cond producing formation	Pa	y zone de	pth	feet
	: Initial open flow Mcf/d				
	Final open flow Mcf/d	Oil: Fi	nal open	flow	1\b1/d
	Time of open flow between ini-	tial and f	inal test	s1	ours
Sta	atic rock pressurepsig(surface	e measurer	ment) afte	<u> </u>	Spill Bride Bearing
			(Cont	ince on 1	ravarsa vida)

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

Well Fraced from 2280 to 4990 using a three stage Nz & CO2 treatment; 2 Mscf of Nz and 80,000 lbs of CO2
100 - .39" holes at random spacing in pay zone

#### WELL LOG

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Surface, sands & shaks	0	1540	
Big Line	1540	1620	ta.p
Big Injun	1620	1810	show oil
Wier Sand	1850	1890	,
Berea Sand	2170	2190	
Gantz Sand	2280	2300	show oil 2 gas
Gordon	2680°	2704	
Devonian Shale	2704	5700	Various shows oil zgas
7.0	·	EX®TD.	PECETVE FEB 1 6 1988
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(Attach separate sheets as necessary)

Well Operator

By: The Many Cost of Case of Ca

Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematio detailed geological record of all formations, including of a well."

FORM TUZ (12-81)

WELL TYPE:

Oil

WEST VIRGINIA OIL AND GAS CONSERVATION COMMIS-

1615 WASHINGTON STREET EAST CHAPLESTON, WV 25311

TELEPHONE: (304) 348-3092



Date:	Ap	ril	22	2	. •	19	82	
Operato Well N	cr's	KEI	RNS	#2	-			

API Well No. 47 - 085 -5683 County State

**Permit** 

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

OIL AND GAS WELL PERMIT APPLICATION

	(If "Gas", Production/	Underground storage/ Deep/ Shallow X /)
LOCATION:	Elevation: 840 1	Watershed: South Fork of Hughes River
	District: Grant	County: Quadrangle: MacFarlan 7½ Quad.
WELL OPERAT	OR HIGHLAND RESOURCES. INC	DESIGNATED AGENTStephen T. Landvoigt
Address	Box 56	Address Box 56
•	Ellenboro, WV 26346	Fllenboro, WV 26346
DIL & GAS ROYALTY OW	NER M.C.Kerns et. al.	COAL OPERATOR N.A.
Address	1315 16th St.	Address
	Parkersburg, WV 26101	
Acreage	104 ac.	COAL OWNER(S) WITH DECLARATION ON RECORD:
, •	NER M.C. Kerns	Name M.C. Kerns et. al.
Address	Same as mineral owners	Address Same as mineral owners
•	10/ 00	Name RECERVED
Acreage	104 ac. (IF MADE) TO:	Address
Address		MAY - 7 1982
Addless_		COAL LESSEE WITH DECLAR AND SAFERIES ON
OH & GAS II	NSPECTOR TO BE NOTIFIED	Name None
Name Deo		Address
	Rt. 1, Box 5	
	Sandridge, WV 25274	
The undersign		oil or gas purposes at the above location under a deed/ lease _X
_		9 81 , to the undersigned well operator from Petroleum
	vices, Inc. lease, or other contract has been record	
		e of the Clerk of the County Commission of Ritchie County, West
Va., in Lea	Book 140 at page S	3 349-59 permit is requested as follows:
PROPOSED	WORK: Drill X / Drill deeper	/ Redrill/ Fracture or stimulate/
	Plug off old formation	_/ Perforate new formation/
	Other physical change in well:	(specify)
		ork order on the reverse side hereof.
The above na	amed coal operator, coal owner(s), and coal	l lessee are hereby notified that any objection they wish to make or are required to
make by Code	\$22-4-3 must be filed with the Departme	ent of Mines within fifteen (15) days after the receipt of this Application by the
Department.		
Copies of thi	s Permit Application and the enclosed plat	and reclamation plan have been mailed by registered mail or delivered by hand to
the above nam	ed coal operator, coal owner(s), and coal l	essee on or before the day of the mailing or delivery of this Permit Application to
the Departmen	nt of Mines at Charleston, West Virginia	a.
PLEASE SUBI GEOPHYSICA TO:	MIT COPIES OF ALL L LOGS DIRECTLY	HIGHLAND RESOURCES. LINC.

President

## (Re-erse) **€** 2-83 :

### PROPOSED WORK ORDER

# THIS IS AN ESCIMATE ONLY ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-3S UPON COMPLETION

				Ad	dress .	·			
							-		
GEOLOGICAL									
Estimated	d depth	of comp	leted we	11,_ 5	990	fe	et Rotary	X / Cat	ole tools
Approxim	nate wat	er strata	depths:	Fresl	h,	30 feet	; salt, 180	0 feet.	
Approxin	nate coal	seam d	lepths:	N.A	•	ls coal	being mined	in the area? Yes	/ No
CASING AND	TUBING	G PROG	RAM						
CASING OR.	SPE Size	CIFICAT Grade	IONS   Weight   per ft	New	Used	FOOTAGE.	INTERVALS	CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
Conductor	1 1	3/4"		X		200	40'		A-1-
Conductor	85/9			1			200	CTS	Kinds
Fresh Water Coal	2 78			-			200	Cr3	61
Intermediate	8 5/8		<del> </del>	<del> </del>			22221		Sizes
	4½"	<u> </u>	<del> </del>	X			2000'	200 sk	
Production	72	<u> </u>	-	1^			5990'	200 sk	Depths set
Fubing			<del>                                     </del>				<u> </u>		
Liners			ļ <u>.</u>						Perforations:
			<u> </u>	ļ					Top Bottom
_									
the De preser "Recl	epartmen ribed by amation	t, accom Regulati Plan'', a	panied by ion 12, o applicable	y (i) a or in li e to the	plat in eu the e recla	the form presented the other mation require	cribed by Regul r security allowed by Code \$ 2	ar copies of Form IV-2 lation 11, (ii) a bond in wed by Code § 22-4-1 22-4-12b and Regulat	in one of the forms 2, (iii) Form IV-9, ion 23, (iv) unless
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