



STATE OF WEST VIRGINIA DEPARTMENT OF MINES

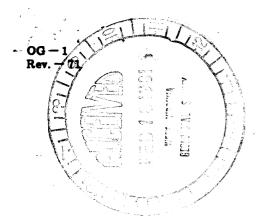
Oil and Gas Division

WELL RECORD Rotary_X Oil Quadrangle Romance Gas X Cable_ Recycling Comb. Permit No.047-039-3616 Water Flood Storage_ Disposal (Kind) Company D. C. Malcolm, Inc. Address 1006 Commerce Sq., Charleston, WV. Casing and Used in Left Cement fill up **Tubing** Farm Lawrence Jones Drilling in Well Cu. ft. (Sks.) Acres 66 Location (waters) Leatherwood Creek Elev_822KB Size Well No ._ 20-16 District Poca County Kanawha Cond. The surface of tract is owned in fee by_ Lawrence Jones 13-10" 9 5/8 230 230 to surface Address Charleston, W. Va. 8 5/8 Mineral rights are owned by Lawrence Jones 1600 1600 60 SX _ Address_ 5 1/2 Drilling Commenced 3-14-81

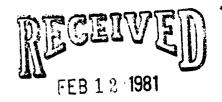
Drilling Completed 3-60-81 4 1/2 4850 4850 Drilling Completed 3-30 Initial open flow 25000 to 2850 · _cu. ft. _ Final production 68000 cu. ft. per day_ __bbls. Liners Used Well open 12 575 RP. _hrs. before test__ Well treatment details: Attach copy of cementing record. Perforate 2904-4702,w/35 shots Frac w/1500 gal acid, 182 bbls water, 15000# 80/100, 490,000 SCF Nitrogen 30,000# Coal was encountered at Feet. Fresh water. Salt Water Producing Sand Devonian Shale Depth 2140-4899 **Formation** Color Hard or Soft Top Feet **Bottom Fcet** Oil, Gas or Water * Remarks Sand & Shale 936 1478 Sand 936 Shale 1478 1548 Lime (Big Lime) 1548 1716 Sand (Injun) 1716 1738 Sand & Shale 1738 2130 2130 Shale (Subury) Devonian Shale 2140 2140 4899 Total Depth

(over)

* Indicates Electric Log tops in the remarks section.







OIL & GAS DIVISION DEPT. of MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES, Charleston, W. Va.		T	- 14 100a	
		DATE January 14, 1981 Company D. C. Malcolm, Inc.		
Surface Owner Lawrence E. Jones				
Address Charleston, W. Va.				. Charleston.W
Mineral Owner Lawrence E. Jones		Lawrence	e Jones	Acres _66
Address	Loca	tion (waters)	Leatherwo	od Creek
Coal Owner No coal	Well	No		Elevation 812
Address		Poca		County_Kanawha
Coal Operator	Quad	rangleRoma	ince 7.5'	
ERMIT MUST BE POSTED AT THE WELL SITE			•	
W. Va. Code, the location is hereby approved rilling renewed. This permit shall expire if	INSPECT	OR		
ions have not commenced by 10-13-81			artin Nic	hols
ions have not commenced by				
Inal Durgell	ADDRESS	Clendeni	<u>n. W. Va.</u>	
puty Director - Oil & Gas Division	PHONE	548-6993		
GENTLEMEN: The undersigned well operator is entitled to drill untitle thereto, (or as the case may be) under grant or Jones, et al made to D. C. Malco	r lease dated	uly 21 und recorded or	19 <u>77</u>	by Lawrence E.
The undersigned well operator is entitled to drill under grant or Jones, et al made to D. C. Malco 19, in Kanawha County, Book	r lease dated	uly 21 und recorded or e 735	19 <u>77</u>	by Lawrence E. day of
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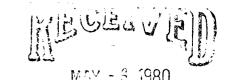
*SECTION 3.... If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, 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.

> 647-039-3616 - Ren' NUMBER BIANKET BUND

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

	•	RESPONSIBLE AGEN	FRACTURE-STIMULATE
DRILLING CONTRACTOR: (If Known) NAME		NAME D. C. M	
			Commerce Sq., Charlest
		TELEPHONE 343-	-9593 W. Va
	COMPLETED WELL: 2300		_ CABLE TOOLS
	FORMATION: Berea		
		COMB X	GE DISPOSAL
			LOOD OTHER
ENTATIVE CASING PROC	•	FI	
CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
0 - 16 3 - 10			
3 - 10 - 5/8	250	000	Compe
- 5/8	ار ک	250	Surface
	1750	1750	25 sx
½			
1/2	2300	2300	75 sx
	2300	2000	Perf. Top
iners		2300	Perf. Bottom
			Perf. Top Perf. Bottom
PPROXIMATE COAL DEPT COAL BEING MINED IN D DRILL:	rue	BY WHOM?	
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PPROXIMATE COAL DEPT COAL BEING MINED IN COAL BEING MINED FRACTURE STIMULAT COIL AND/OR GAS WELL BOND, PERMANENT PI COIL AND/OR GAS WELL ING ORIGINAL PERMIT	THE AREA? NO THE AREA? NO PIES OF OG - 1, \$100.00 PERM DRILL: IES OF OG - 1, SHOWING ORIGINATED. TE: LL ORIGINALLY DRILLED BEFORMANCE LAT AND ORIGINAL WELL RECORD OR AND PERFORMANCE TO NUMBER, AND PERFORMANCE	BY WHOM? BY WHOM! BY WHOM? BY WHOM! BY WHO	BOND AND PERMANENT COPY ND PERFORMANCE BOND. ON THE ORIGINAL WELL RECORD COPIES OG - 1, PERFORMANCE 29, FIVE COPIES OG - 1, SHOW- Inspector to be notified twenty-
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DEPARTMENT OF MINES

OL & GAS ... ON DEPT. OF M.NES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

Charleston, W. Va.	DATE May 5, 1980		
Surface Owner Lawrence E. Jones			
Add Charleston W Va	1006 (1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		
Mineral Owner Lawrence E. Jones	Farm Lawrence Jones		
A 2.2			
Coal Owner No coal			
		Elevation 812	
	District_POC8.	County Kanawha	
Coal Operator	Quadrangle Romance 7.5		
FRMIT MUST BE BOOTED AT			
ERMIT MUST BE POSTED AT THE WELL SITE			
W Vs. Co. 1 decordance with Chapter 22,			
W. Va. Code, the location is hereby approved	INSPECTOR	,	
drilling . This permit shall expire if	TO BE NOTIFIED Martin Nich	ols	
ans have not commenced by 1-13-81			
107 1 (1)	ADDRESS <u>Clendenin</u> , W. Va.		
	PHONE 548-6993	• • • • • • • • • • • • • • • • • • • •	
uty Director - Oil & Gas Division			
GENTLEMEN:		•	
The undersigned well operator is entitled to drill upon t	the above named farm or tract of land for	or oil and gas, having fee	
title thereto, (or as the case may be) under grant or lease	dated July 21. 1077	, Lowrence F	
Jones et al made to D. C. Malcolm, Inc	and recorded on the	day of	
19, in Kanawha County, Book199	Page 735	uay UI	
OIL AND CAS WELL OPERING	REDRILLFRACT	URE OR STIMULATE	
OIL AND GAS WELL ORIGINALLY DRILLE	REDRILL FRACT	URE OR STIMULATE	
The enclosed plat was prepared by a registered engineer	ED BEFORE JUNE 5, 1969.		
OIL AND GAS WELL ORIGINALLY DRILLE The enclosed plat was prepared by a registered engineer have been notified as of the above date.	ED BEFORE JUNE 5, 1969.		
The enclosed plat was prepared by a registered engineer have been notified as of the above date. The above named coal owners and/or operator are barely	or licensed land surveyor and all coal	owners and/or operators	
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STANGET HEAD

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

PROPOSED WORK ORDER TO	XDRILL	DEEPEN FI	RACTURE-STIMULATE	
DRILLING CONTRACTOR: (If Known)		RESPONSIBLE AGENT:		
NAME		NAME D. C. Malcolm		
ADDRESS		ADDRESS 1006 Commerce Square, Charlesto		
TELEPHONE				
ESTIMATED DEPTH OF COMPI	LETED WELL: 2300		CABLE TOOLS	
PROPOSED GEOLOGICAL FOR	MATION: Berea			
TYPE OF WELL: OIL_	GAS	COMB. X STORAGE	DISPOSAT	
			ODOTHER	
•	· · · · · · · · · · · · · · · · · · ·		ODOTHER	
TENTATIVE CASING PROGRAM		•		
CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN	CEMENT FILL UP	
20 - 16	DRILLENG *	WELL	OR SACKS - CUBIC FT.	
13 - 10				
9 - 5/8	250	050	G	
8 - 5/8	250	250	Surface	
7	1750	1750	00	
5 ½	1750	1750	25 sx	
4 1/2	2300	2300	75 sx	
3	Market 1980 19		Perf. Top	
2	2300	2300	Perf. Bottom	
Liners			Perf. Top	
			Perf. Bottom	
APPROXIMATE FRESH WATER APPROXIMATE COAL DEPTHS	DEPTHSFEET	SALT WATER _	FEET	
IS COAL BEING MINED IN TH	E AREA? no	PV WHOM2	*	
OF PLAT.		MIT FEE, PERFORMANCE BO	OND AND PERMANENT COPY	
TO DRILL DEEPER OR REDRIL SUBMIT FIVE (5) COPIES OF WELLS ORILLED PRIOR TO MUST ALSO BE SUBMITTE	OF OG - 1, SHOWING ORIG FO 1929, A PERMANENT (GINAL PERMIT NUMBER AND TOOPY OF THE PLAT AND T	D PERFORMANCE BOND. ON HE ORIGINAL WELL RECORD	
TO FRACTURE - STIMULATE:				
	DICINALLY DRULDS SSS			
BOND, PERMANENT PLAT	AND ORIGINAL WELL RE	ECORD.	OPIES OG - 1, PERFORMANCE O, FIVE COPIES OG - 1, SHOW-	
ING ORIGINAL PERMIT NU	MBER, AND PERFORMANC	E BOND.	, FIVE COPIES OG - 1, SHOW-	
Required forms must be filed four (24) hours in advance.	d within ninety (90) days of	completion for bond release.	Inspector to be notified twenty-	
			Transfer and the state of the s	
,				
The following waiver must labereof.	be completed by the coal or	perator if the permit is to be in	ssued within ten days of receipt	
WAIVER: I the undersigned, Age	nt for	Coal Company Owner	or Operator of the good water	
this lease have examine	ed and place on our mine r	naps this proposed well location	on.	
We the	Coal Company	have no objections to said wo	ell being drilled at this location,	
providing operator has o	complied with all rules and re	gulations in Articles 4, 5, and 7	, Chapter 22 of the West Virginia	
		Fo	r Coal Company	
			Official Title	