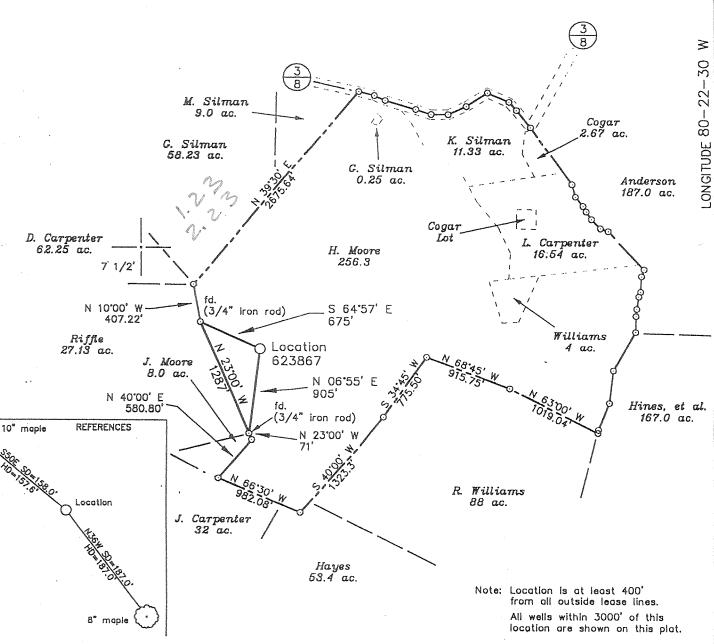


LATITUDE 38-40-00 N



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

I THE UNDERSIGNED, HERBY 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 PRESCIRBED BY THE DEPARTMENT OF ENERGY.

(SIGNED) feffur N. adams R.P.E. L.L.S. 791 NO. 791
STATE OF VIRO

STATE OF WEST VIRGINIA
Division of Environmental Protection
OFFICE OF OIL AND GAS

OPERATOR'S WELL NO. 623867
API WELL NO.

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL STATE COUNTY PERMI (IF "GAS") PRODUCTION X STORAGE DEEP X SHALLOW

LOCATION: ELEVATION <u>2110'</u> WATER SHED <u>Long Run</u>

DISTRICT <u>7 Hacker Valley</u> COUNTY <u>Webster</u>

QUADRANGLE <u>Hacker Valley</u>

SURFACE OWNER Helen C. Moore ACREAGE 256.3

OIL & GAS ROYALTY OWNER Helen C. Moore LEASE ACREAGE 256.30

LEASE NO. 1212431

PROPOSED WORK: DRILL X CONVERT DRILL DEEPER REDRILL FRACTURE OR

STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW

FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON__CLEAN OUT AND REPLUG___ TARGET FORMATION <u>Oriskany</u> ESTIMATED DEPTH <u>8,102</u>

WELL OPERATOR <u>Columbia Natural Resources, Inc.</u> DESIGNATED AGENT W. A. Watson, Jr. ADDRESS <u>P.O. Box 6070, Charleston, WV 25362</u> ADDRESS <u>P.O. Box 6070, Charleston, WV 25362</u>

. Box 6070, Charleston, WV 25362 ADDRESS P.O. Box 6070, Charleston, WV 25362

6-6

NET A FIRST

Reviewed AL73				
WR-35		DATE	: 09/23/99	8 LECEIVE
State of W	est Virginia	API#	: 4/-101-0008	S GEGETVE
Division of Enviro	onmental Prote	ction		
Section of	Oil and Gas			APR 2() 20
Well Operator's R	eport of Well	Work		W Division of
Farm name: MOORE, HELEN & EST OF J.	Operator	Well No.:	623867	7770
LOCATION: Elevation: 2,110.00	Quadran	ole: HACK	ER VALLEY	
LOCATION. Elevation. 2,110.00		5		A
District: HACKER VALLEY	County:	Webster		****
Latitude: 6500 Feet South of 38				
Longitude 11800 Feet West of 80	0 Deg. <u>22</u>	$\frac{2}{2}$ Min. $\frac{3}{2}$	0 Sec.	
Company: COLUMBIA NATURAL RESOURCES				
	Casing &	Used in	Left in well	Cement fill
	Tubing	drilling	150	up Cu. Ft.
Address: Rt. 1, Box 107-10	11-3/4	150	150	CTS
Buckhannon, WV 26201	8-5/8	2148 7532	2148 7532	185 SXS
Agent: R. Mark Hackett	4-1/2	7532	1532	100 3/3
Inspector: Craig Duckworth				
Date Permit Issued: 09/23/99				
Date Well Work Commenced: 11/08/99				
Date Well Work Completed: 02/28/00				
Verbal Plugging:				
Date Permission granted on:		1		
Rotary X Cable Rig				
Total Depth (feet): 7577				
Fresh Water depths (ft): None				
Salt water depths (ft): None				
Salt water depths (ft): None				
Is coal being mined in area (Y/N)? N				
Coal Depths (ft): 32-34, 140-147, 290-297	+	1		
Coal Depuis (it). 02-04, 140 141, 200 201	1	1	ı	ı
OPEN FLOW DATA				
Date Control Original Chart	Pay zone	denth (ft) 7	076 - 7320	
Producing formation Oriskany/Chert Gas: Initial open flow 0 MCF/d		pen flow	n/a Bbl/d	_
Gas: Initial open flow 0 MCF/d Final open flow 0 MCF/d		*	n/a Bbl/d	
Time of open flow between initial and fi	-	4 Hou		
	face pressure)		Hours	
Static fock Pressure 900 psig (sur	Tace pressure)	arter		
Second producing formation Benson	Pay zone	denth (ft)	4211 - 4217	
1 0		open flow	n/a Bbl/d	
Final open flow 60 MCF/d	Final of		n/a Bbl/d	
Time of open flow between initial and fi		·		
	face pressure)			
Static rock Pressure 970 psig (sur	ince pressure)	12		
	707701717	. 11 DDM	אדדם איי הי	ERFORATED
NOTE: ON BACK OF THIS FORM PUT THE BINTERVALS, FRACTURING OR STIMULATING	CLLOWING:	: I). DET		
LOG WHICH IS A SYSTEMATIC DETAILED	GEOLOGICA	AL RECORD	OF ALL F	ORMATIONS,
INCLUDING COAL ENCOUNTERED BY THE V	VELLBORE.			

COLUMBIA NATURAL RESOURCES, INC.

FORMATION RECORD:

0 to 1080 from Driller's Log Book, 1080 to TD from Gamma Ray Log

		ROCK TYPE
		(described rock types and other minerals
		penetrated and record occurrences of oil,
FROM	TO	gas and water from surface to total depth)
0	32	Sd. & Sh.
32	34	Coal
34	140	Sd. & Sh.
140	147	Coal
147	290	Sd. & Sh.
290	297	Coal
297	1080	Sd. & Sh.
1080	1120	Maxon
1120	1730	Sd. & Sh.
1730	1930	Greenbrier Limestone
1930	1960	Big Injun
1960	2620	Sd. & Sh.
2620	2630	5th Sd.
2630	2875	Sh.
2875	2885	Elizabeth Sd.
2885	4210	Sh.
4210	4218	Benson Sd.
4218	5840	Sh.
5840	5860	Elk Sd.
5860	7070	Sd. & Sh.
7070	7070	
7255	7270	Huntersville Chert Sd. & Sh.
7270		
7340	7340	Oriskany Sd.
/340	7577	T.T.
	7577	DTD
	7582	LTD
- Annual Control		
'		
	, and a second	

W	ľΑ	Γ	Έ	R

Depth (ft)	Amount	Type
None		

GAS CHECKS:

Depth(ft)	MCF/D
2050	NS
4510	NS
6832	103
7268	103

OIL SHOWS:

<u>Depth</u>	Amount
None	

PERFORATIONS:

Oriskany (27 holes) 7278' - 7320' KB. Chert (32 holes) 7076' - 7152' KB.

Benson (13 holes) 4211' - 4217' KB.

STIMULATION:

Oriskany /Chert- 15,000 # 80/100 sd. & 60,000 # 20/40 sd. w/30 # gel & 5% double FE acid solution throughout the job. Benson - 75 Q foam frac, 20 # gel, 50,000 lbs. 20/40 sand & 495,000 Scf N2. Set CIBP @ 4600'.

Plugged back on 02/16/00 as follows:

TD to 7200' (6% Gel)
Plug (7200' - 6800') 30 sxs Class A
6800' - 4600' (6% Gel)