

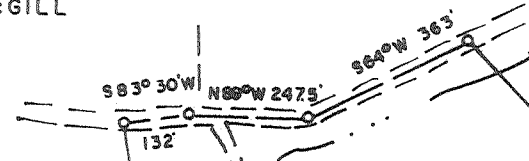
1740'

LATITUDE 39° 17' 30"

POWELL

WELL REFERENCES:  
S26°W, 102.50' TO 20" W.OAK  
S30°45'E, 100.50' TO 4" W.OAK

McGILL



SPURGEON

0.86  
0.32

S07°10'E  
1134.38'

N42°30'W  
2161.50'

LONGITUDE 80° 47' 30"

4570'

H. C. SPURGEON  
51 AC.

BATTON

NORTH

SOURWOOD &  
DOGWOOD PTRS.

S37°30'E  
495'

S34°56'E  
240.18'

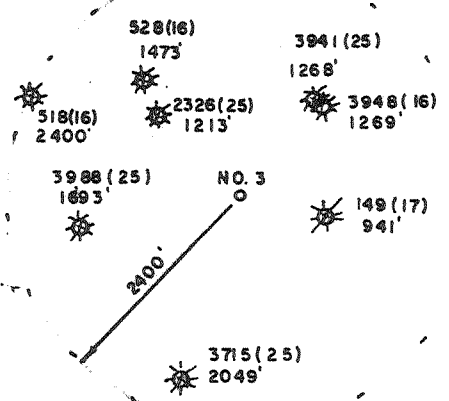
N06°W  
304.73'

S44°53'W  
149.80'

STONE

N75°E  
1650'

MEYER



LAND SURVEYING SERVICES  
21 CEDAR LANE  
BRIDGEPORT, WV 26330  
PHONE: 304-842-2018

374  
255

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

FILE NO. \_\_\_\_\_  
DRAWING NO. \_\_\_\_\_  
SCALE 1" = 400'  
MINIMUM DEGREE OF  
ACCURACY 1 in 200  
PROVEN SOURCE OF  
ELEVATION RD. INTER. 1800' N. OF.  
LOCATION ELEV. - 1037'

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 REGU-  
LATIONS ISSUED AND PRESCRIBED BY THE DEPART-  
MENT OF ENERGY.  
(SIGNED) \_\_\_\_\_  
R.P.E. \_\_\_\_\_ L.L.S. 674  
STEPHEN D. LOSH

PLACE SEAL HERE

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY  
OIL AND GAS DIVISION



DATE NOVEMBER 09, 19 93  
OPERATOR'S WELL NO. SPURGEON NO. 3  
API WELL NO.

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X

47 017 4067  
STATE COUNTY PERMIT

LOCATION: ELEVATION 987' WATERSHED PRITCHARD RUN  
DISTRICT WEST UNION COUNTY DODDRIDGE  
QUADRANGLE WEST UNION 7.5 min. SE

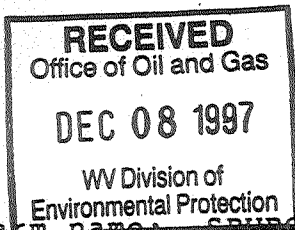
SURFACE OWNER LAURA J. SPURGEON ACREAGE 46.29  
OIL & GAS ROYALTY OWNER H. C. SPURGEON LEASE ACREAGE 51  
LEASE NO. \_\_\_\_\_

PROPOSED WORK: DRILL X 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 ALEXANDER ESTIMATED DEPTH 5350'  
WELL OPERATOR RARE EARTH ENERGY, INC. 740 DESIGNATED AGENT SAM S. SPATAFORE  
ADDRESS P. O. BOX 172 ADDRESS P. O. BOX 172  
CLARKSBURG, WV 26301 CLARKSBURG, WV 26301

NOV 22 1993  
6-0 99

COUNTY NAME PERMIT



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

Well Operator's Report of Well Work

Field Name: SPURGEON, LAURA J. Operator Well No.: SPURGEON #3

LOCATION: Elevation: 987.00 Quadrangle: WEST UNION

District: WEST UNION County: DODDRIDGE  
Latitude: 4570 Feet South of 39 Deg. 17Min. 30 Sec.  
Longitude: 1740 Feet West of 80 Deg. 47 Min. 30 Sec.

Company: RARE EARTH ENERGY, INC.  
P. O. BOX 172  
CLARKSBURG, WV 26301-0000

Agent: SAMUEL S. SPATAFORE

Inspector: MIKE UNDERWOOD  
Permit Issued: 11/12/93  
Well work Commenced: 12/18/93  
Well work Completed: 12/22/93  
Verbal Plugging  
Permission granted on: N/A  
Rotary X Cable        Rig  
Total Depth (feet) 5318  
Fresh water depths (ft) 81'  
        
Salt water depths (ft) NONE

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4	32'	32'	GFS DRIVE
8 5/8	1155'	1155'	CTS <sub>3</sub> 360ft
4 1/2	-----	5246'	2746' <sub>3</sub> 548ft

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): 240-245

OPEN FLOW DATA

Producing formation Alexander Riley Pay zone depth (ft) 5126'-4384'  
Gas: Initial open flow 0 MCF/d Oil: Initial open flow N/A Bbl/d  
Final open flow 14 MCF/d Final open flow N/A Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock Pressure        psig (surface pressure) after 72 Hours

Second producing formation Balltown, Bradford Pay zone depth (ft) 3990'-3228'  
Gas: Initial open flow comingle MCF/d Oil: Initial open flow N/A Bbl/d  
Final open flow comingle MCF/d Final open flow N/A Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock Pressure comingle psig (surface pressure) after 72 Hours

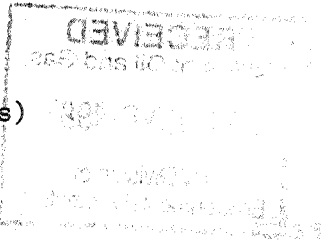
NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: RARE EARTH ENERGY, INC.

By: [Signature]  
Date:

PERFORATED INTERVALS

1st Stage - 5124 - 76 (3 shots), 5154-60 (7 shots), 5132-134 (3 shots)  
2nd Stage - 4812 - 114 (3 shots), 4804-106 (3 shots), 4448-4450 (3 shots)  
3rd Stage - 4036 - 140 (5 shots), 3826-130 (5 shots)  
4th Stage - 3402 - 106 (5 shots), 3278-82 (5 shots)



STIMULATION

1st Stage - 500 gal HCL acid, 460 BBL water, 30,900 # sand, 48,300 SCF N2  
2nd Stage - 500 gal HCL acid, 447 BBL water, 29,880 # sand, 30,007 SCF N2  
3rd Stage - 500 gal HCL acid, 449 BBL water, 28,280 # sand, 68.000 SCF N2  
4th Stage - 500 gal HCL acid, 543 BBL water, 26,400 # sand, 63,000 SCF N2

DRILLER FORMATIONS

	<u>Color</u>	<u>Top</u>	<u>Btm</u>	<u>Water 81', 1/4" Stream</u>
Topsoil	Brown	50	55	
Shale	Brown	55	80	
Sand	Brown	80	95	
Shale	Gray	95	120	
Red Rock, Sd, Shale	Red, Gray	120	290	
Coal	Black	290	295	
Sand, Shale	Gray	295	1578	
Sand	Brown	1578	1594	
Sand, Shale	Gray	1594	1650	
Little Lime	Gray	1812	1817	
Red Rock & Sand	Red	1817	1843	
Big Lime	Gray	1843	1926	
Sand	Gray	1926	2016	
Shale	Gray	2016	2576	
Sand	Black, Gray	2576	2650	
Shale	Gray, Brown	2650	5130	
Sitt, Shale	Gray	5130	5368TD	

LOG FORMATIONS

Little Lime	1804 - 1870
Big Lime	1870 - 1930
Injun	1930 - 2016
Weir	2170 - 2280
Beven	2360 - 2390
Balltown	3240 - 3440
Bradford	4400 - 4520
Riley	4660 - 4840
Benson	4860 - 4905
Alexander	5120 - 5205

Gas 4592, 2/10 - 1" Water  
4965, 2/10 - 1" Water  
TD, 2/10 - 1" Water



1) Date: NOVEMBER 9, 1993  
2) Operator's well number  
Spurgeon #3  
3) API Well No: 47 - 017 - 4067  
State - County - Permit

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
- (a) Name Laura J. Spurgeon  
Address Rt. 1, Box 38  
West Union, WV 26456
  - (b) Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (c) Name \_\_\_\_\_  
Address \_\_\_\_\_
- 5) (a) Coal Operator:  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- (b) Coal Owner(s) with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- (c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- 6) Inspector Mike Underwood  
Address Rt. 2, Box 135  
Salem, WV 26426  
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 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 7 on the above named parties, by:

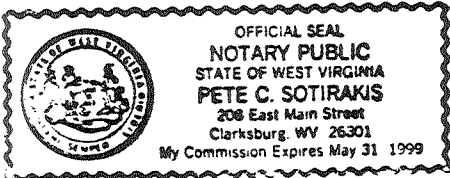
- X Personal Service (Affidavit attached)
- \_\_\_\_\_ Certified Mail (Postmarked postal receipt attached)
- \_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B 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, including the possibility of fine and imprisonment.

Well Operator Rare Earth Energy, Inc.  
By: Sam S. Spatafore II  
Its: Designated Agent  
Address P. O. Box 172  
Clarksburg, WV 26302-0172  
Telephone (304) 622-4001



Subscribed and sworn before me this 9TH day of November, 1993

*[Signature]*

Notary Public

My commission expires MAY 31, 1999