

WELL REFERENCES:  
 N27°30'W, 128.50' TO 8" R. OAK  
 N49°45'E, 176.50' TO 12" B. WALNUT

*Jamie 10/26/90*

10,600'

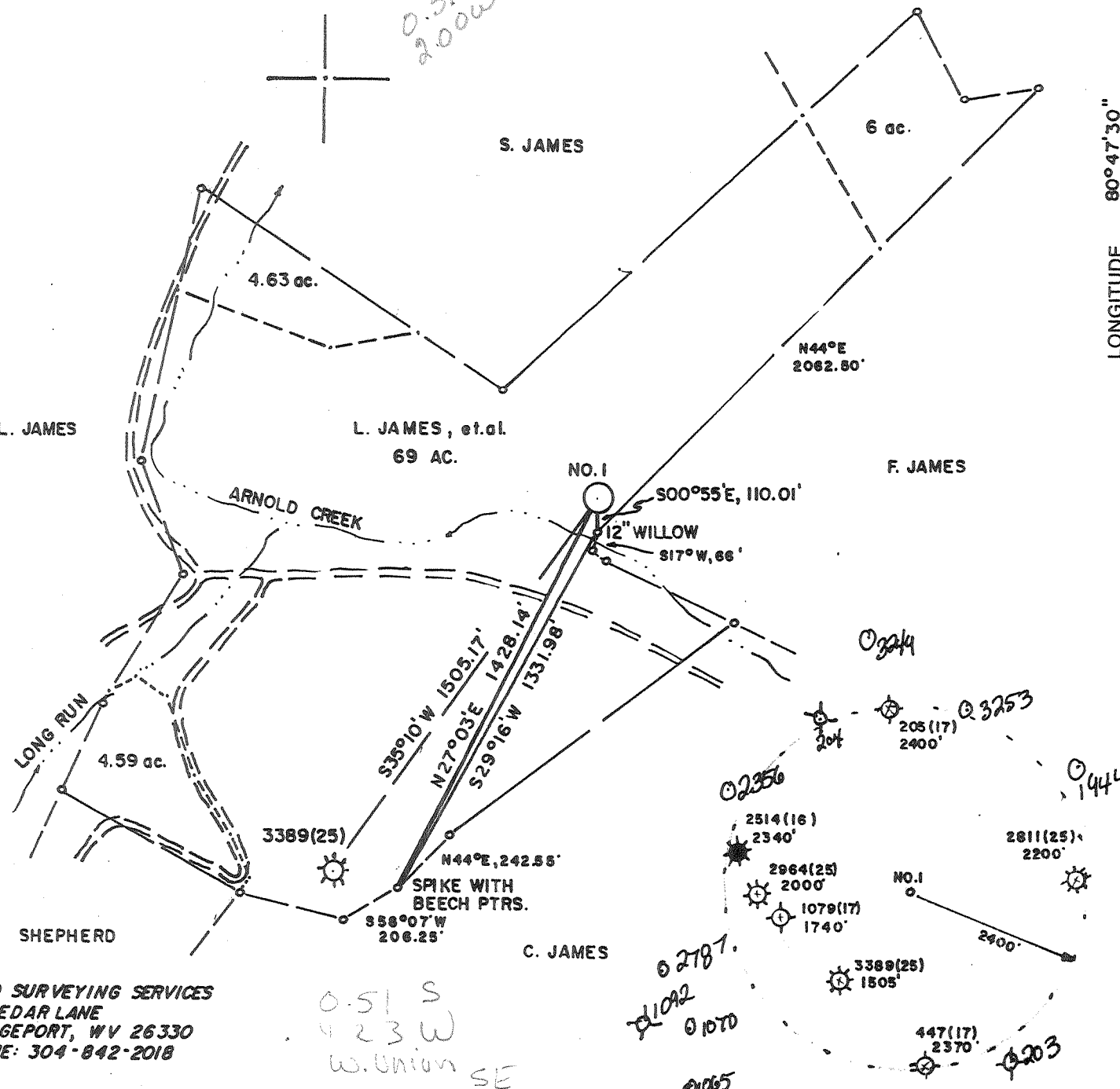
LATITUDE 39°20'00"

F. JAMES

2775'

LONGITUDE 80°47'30"

NORTH

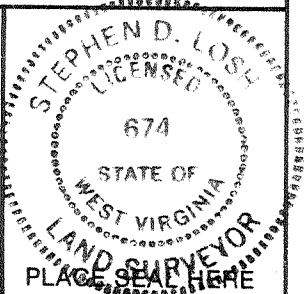


LAND SURVEYING SERVICES  
 21 CEDAR LANE  
 BRIDGEPORT, WV 26330  
 PHONE: 304-842-2018

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 in 2500  
 PROVEN SOURCE OF ELEVATION RD INTER. 1300' S.W. OF LOCATION ELEV. - 755'

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.  
 (SIGNED) *[Signature]*  
 R.P.E. \_\_\_\_\_ L.L.S. 674  
 STEPHEN D. LOSH



STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION



DATE OCTOBER 24, 19 90  
 OPERATOR'S WELL NO. JAMES NO. 1  
 API WELL NO.

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

LOCATION: ELEVATION 748' WATER SHED ARNOLD CREEK  
 DISTRICT CENTRAL 1 COUNTY DODDRIDGE  
 QUADRANGLE WEST UNION 7.5 min.

SURFACE OWNER CARLIE JAMES ACREAGE 69.07  
 OIL & GAS ROYALTY OWNER LAWRENCE JAMES, et.al. LEASE ACREAGE 69  
 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 5200'  
 WELL OPERATOR RARE EARTH ENERGY, INC. DESIGNATED AGENT ROBERT GARY HALL  
 ADDRESS P. O. BOX 172 ADDRESS P. O. BOX 172  
 CLARKSBURG, WV 26301 CLARKSBURG, WV 26301

OCT 30 1990

COUNTY NAME  
 PERMIT

6-6 Central Station (091)

State of West Virginia  
 DEPARTMENT OF ENERGY  
 Division of Oil and Gas

Well Operator's Report of Well Work

AUG 14 91  
 Permitting  
 #1 Gas Section

Farm name: JAMES, CARLIE Operator Well No.: JAMES #1  
 LOCATION: Elevation: 748.00 Quadrangle: WEST UNION  
 District: CENTRAL County: DODDRIDGE  
 Latitude: 2775 Feet South of 39 Deg. 20Min. 0 Sec.  
 Longitude 10600 Feet West of 80 Deg. 47 Min. 30 Sec.

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

Agent: ROBERT G. HALL

Inspector: MIKE UNDERWOOD  
 Permit Issued: 10/26/90  
 Well work Commenced: 11/1/90  
 Well work Completed: 11/7/90  
 Verbal Plugging  
 Permission granted on:  
 Rotary X Cable Rig  
 Total Depth (feet) 5091'  
 Fresh water depths (ft) 20, 40'  
 145'  
 Salt water depths (ft) None

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11-3/4"	98.90'	98.90'	77 CF
8-5/8"	1270.75'	1270.75'	330 CF
4-1/2"	--	5018.20	442 CF

Is coal being mined in area (Y/N)? N  
 Coal Depths (ft): None

OPEN FLOW DATA

Bradford, Riley, 2nd Riley,  
 Producing formation Benson & Alexander Pay zone depth (ft) See back  
 Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow -- Bbl/d  
 Final open flow 850 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests \_\_\_\_\_ Hours  
 Static rock Pressure 1300 psig (surface pressure) after \_\_\_\_\_ Hours  
 Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
 Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow \_\_\_\_\_ MCF/d Final open flow -- Bbl/d  
 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: RARE EARTH ENERGY, INC.

By: \_\_\_\_\_ Consultant  
 Date: \_\_\_\_\_

AUG 16 1991

STIMULATION SUMMARY

1st Stage - Alexander 4899-4949' (14 holes) 65 Quality foam frac; 50,000 lbs 20/40, 500 gal 15% HCl, 268 Bbls TWTR, 505 Mscf N2, BKDN-1800 psi, ATP-3040 PSI, AIR-30 BPM, ISI-1900 psi

2nd Stage - 2nd Riley, Benson 4509-4633' (16 holes) 65 Quality foam frac; 5,000 lbs 80/100, 40,000 lbs 20/40, 500 gal 15% HCl, 329 Bbls TWTR, 440 Mscf N2, BKDN-1350 psi, ATP-2940 psi, AIR-25 BPM ISI-Screen out

3rd Stage - Riley 4144-4247' (16 holes) 65 Quality foam frac, 5,000 lbs 80/100, 40,000 lbs 20/40, 500 gal 15% HCl, 398 Bbls TWTR, 400 Mscf N2, BKDN-2180 psi ATP-3140 psi, AIR-25 BPM, ISI-2000 psi

4th Stage - Bradford 3965-3972' (11 holes) 65 Quality foam frac; 20,000 lbs 20/40, 500 gal 15% HCl, 247 Bbls TWTR, 300 Mscf N2, BKDN-2150 psi, ATP-2890 psi, AIR-20 BPM, ISI-1770 psi

Formation depths, 0-1500', taken from driller's log book, depths, 1500-TD, taken from gamma ray log.

Fill	0-5'	5th Sand	2560-2568'	
Sand & Shale	5-19'	Shale	2568-3050'	3023'-
Sand	19-110'	Warren	3050-3086'	
Shale	110-113'	Shale	3086-3144'	
Sand	113-360'	Speechley	3144-3218'	
Sand & Shale	360-379'	Shale	3218-3425'	
Sand	379-495'	Balltown	3425-3665'	
Shale & RR	495-609'	Shale & Silt	3665-3767'	
Sand	609-613'	Bradford	3767-3979'	
Shale	613-727'	Shale	3979-4193'	
Sand & Shale	727-1175'	Riley	4193-4259'	
Sand	1175-1255'	Shale & Silt	4259-4429'	
Sand & Shale	1255-1587'	2nd Riley	4429-4602'	
Little Lime	1587-1601'	Shale & Silt	4602-4616'	
Shale	1601-1629'	Benson	4616-4683'	
Big Lime	1629-1686'	Shale	4683-4896'	4809'-
Big Injun	1686-1803'	Alexander	4896-4953'	
Sand & Shale	1803-1943'	Shale	4953-	TD-
Weir	1943-2056'	LTD-	5082'	
Shale & Silt	2056-2139'	DTD-	5091'	
Berea	2139-2147'			
Shale	2147-2358'			
Gordon	2358-2391'			
Shale	2391-2560'			

Gas checks  
taken at  
1712'-  
odor  
1806'-  
2119'-

11476

47-017-3859  
Issued 10/26/90

FORM WW-2B

Page 3 of 7

STATE OF WEST VIRGINIA *Expires 10/28/92*  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

- 1) Well Operator: Rare Earth Energy, Inc. 40900 (1) 670
- 2) Operator's Well Number: James No. 1 3) Elevation: 748
- 4) Well type: (a) Oil  or Gas   
(b) If Gas: Production  / Underground Storage   
Deep  Shallow
- 5) Proposed Target Formation(s): Alexander
- 6) Proposed Total Depth: 5055 feet
- 7) Approximate fresh water strata depths: 65, 250, 940 ?
- 8) Approximate salt water depths: 1190 *1170'*
- 9) Approximate coal seam depths: None *OK None Reported*
- 10) Does land contain coal seams tributary to active mine? Yes  / No
- 11) Proposed Well Work: drill and stimulate new well
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling		Left in well
Conductor	11-3/4			100	100	
Fresh Water						<i>380 SR 18 1/3</i>
Coal						<i>380 SR 18 1/2</i>
Intermediate	8-5/8		20/23	1225	1225	389
Production	4-1/2	S-55	10.5		5055	<i>380 SR 18 1/1 as needed</i>
Tubing						
Liners						

PACKERS : Kind \_\_\_\_\_  
 Sizes \_\_\_\_\_  
 Depths set \_\_\_\_\_  
 OCT 25 1990

For Division of Oil and Gas Use Only  
 Fee(s) paid: 31 Well Work Permit 31 Reclamation Fund 31 WPCP  
 Plat 31 WW-9 31 WW-2B 31 Bond 31 Agent

**REC**  
OCT 26 1990

1) Date: October 25, 1990  
2) Operator's well number  
James No. 1  
3) API Well No: 47 - 017 - 3859  
State - County - Permit

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

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 Carlie James  
Address Rt. 1, Box 277A  
West Union, WV 26456  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Mike Underwood  
Address Rt. 2, Box 135  
Salem, WV 26426  
Telephone (304)- 782-1043

5) (a) Coal Operator:  
Name None  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name None  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name None  
Address \_\_\_\_\_

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: Robert Gary Hall  
Its: Designated Agent  
Address P. O. Box 172  
Clarksburg, WV 26302-0172  
Telephone (304) 622-4001

Subscribed and sworn before me this 25th day of October, 1990

D. Tad Alonso Notary Public  
My commission expires June 13, 1994