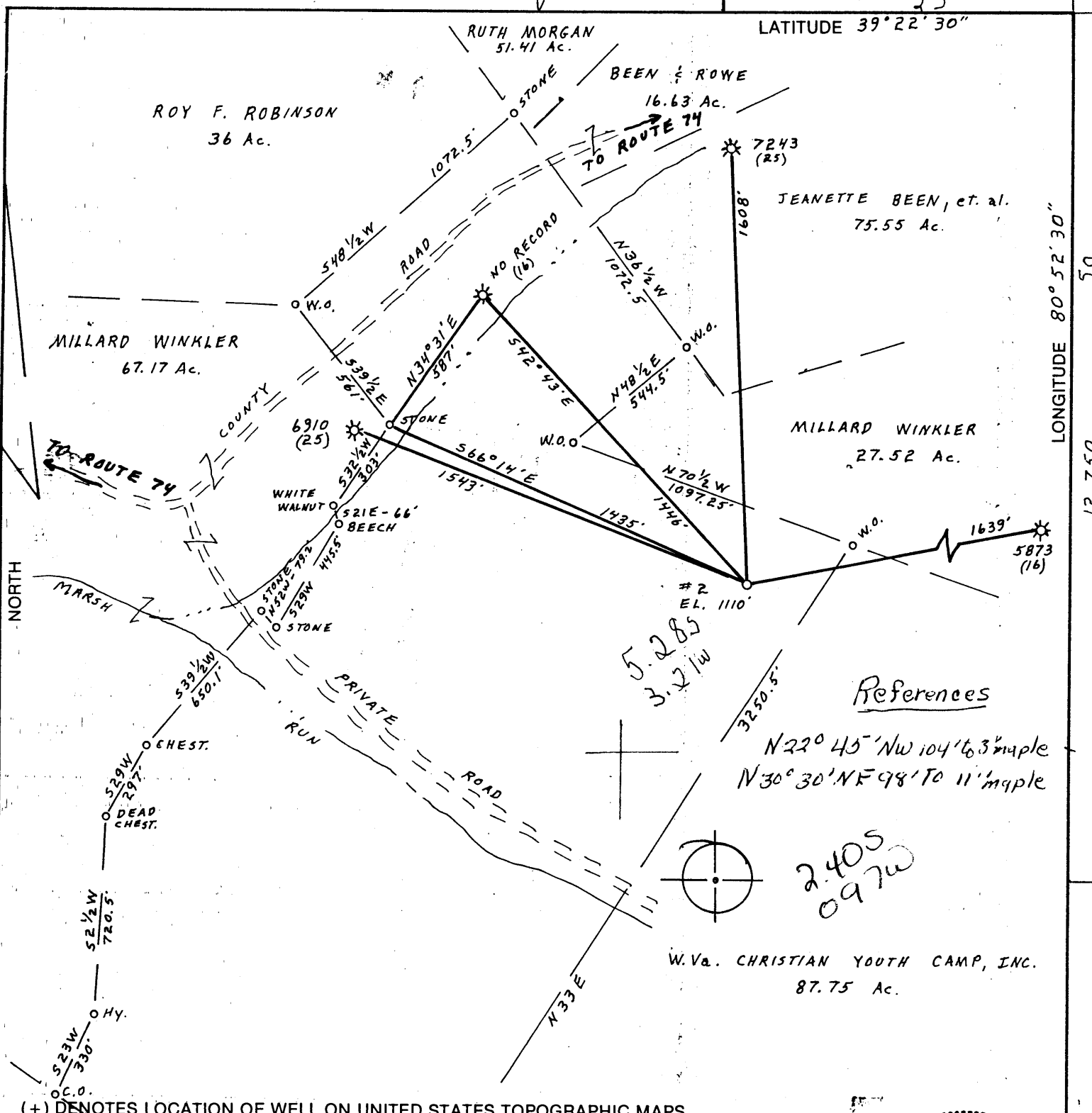


5,175 25

LATITUDE 39° 22' 30"

LONGITUDE 80° 52' 30"

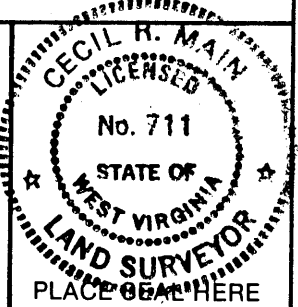
12,750



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

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200'
 PROVEN SOURCE OF ELEVATION WELL API # 7433
ELEV. 995'

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 MINES.
 (SIGNED) Cecil R. Main
 R.P.E. _____ L.L.S. 711



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE APRIL 18, 1987
 OPERATOR'S WELL NO. THOMAS #2
 API WELL NO. 47-085-7656
 STATE COUNTY PERMIT.

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1110 WATERSHED MARSH RUN OF NORTH FORK HUGHES RIVER
 DISTRICT CLAY COUNTY RITCHIE
 QUADRANGLE PENNSBORO 7.5' 539 133 5 West Union C
 SURFACE OWNER MILLARD E. & DORIS J. WINKLER ACREAGE 129.32
 OIL & GAS ROYALTY OWNER MARGARET A. THOMAS LEASE ACREAGE 135

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 ALEXANDER ESTIMATED DEPTH 5900'
 OPERATOR TRAK, INC. DESIGNATED AGENT GEORGE WILLIAMS
 ADDRESS Rt. 2 BOX 499 ADDRESS Route 2 BOX 499
Grafton W.Va. 26354 GRAFTON, W.Va. 26354

JUN 29 1987

COUNTY NAME PERMIT

IV-35
(Rev 8-81)

FERC
8/15/87



State of West Virginia
Department of Mines
Oil and Gas Division

Date July 27, 1987
Operator's
Well No. 2
Farm Margaret Thomas
API No. 47-085 - 7656

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas x / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production X / Underground Storage ___ / Deep ___ / Shallow x /)

LOCATION: Elevation: 1110' Watershed Marsh Run of North Fork of Hughes River
District: Clay County Ritchie Quadrangle Pennsboro 7.5'

COMPANY Trek, Inc.
ADDRESS Rt. 2, Box 499 Grafton, WV 26354
DESIGNATED AGENT George Williams
ADDRESS same
SURFACE OWNER Millard E. & Doris J. Winkler
ADDRESS _____
MINERAL RIGHTS OWNER Margaret A. Thomas
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK Samuel
Hersman ADDRESS Smithville, WV 26178
PERMIT ISSUED 6/26/87
DRILLING COMMENCED 7/1/87
DRILLING COMPLETED 7/8/87
IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON _____

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	273'	273'	148 CF
9 5/8			
8 5/8	1750'	1750'	460 CF
7			
5 1/2			
4 1/2	—	5378'	348 CF
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5287 - 5307 feet
Depth of completed well 5439 feet Rotary x / Cable Tools _____
Water strata depth: Fresh * feet; Salt * feet
Coal seam depths: * Not recorded Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation Riley, Benson, Alexander Pay zone depth 5288 - 5294 feet
Gas: Initial open flow 65 Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 200(est) Mcf/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ hours
Static rock pressure 1650 psig (surface measurement) after 24 hours shut in
(If applicable due to multiple completion--)
Second producing formation _____ Pay zone depth _____ feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ Mcf/d Oil: Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ hours
Static rock pressure _____ psig (surface measurement) after _____ hours shut in 1987

(Continue on reverse side)

0857656

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

FIRST STAGE: Alexander 5288 - 5294' (14 holes); 70 quality foam frac w/40,000# 20/40 sand
BKDN: 1650 psi, ATP 3150 psi, AIR 20 BPM (foam), ISIP 1200 psi, Total N₂ 420,000 Scf.

SECOND STAGE: Benson 4997 - 5002' (15 holes) 70 quality foam frac w/40,000 # 20/40 sand
BKDN: 1200 psi, ATP 3100 psi, AIR 20 BPM (foam), ISIP 1350 psi, Total N₂ 390,000 Scf

THIRD STAGE: Riley 4604 - 4638' (17 holes) 70 quality foam frac w/ 40,000# sand
BKDN: 1800 psi, ATP 3500 psi, AIR 24 BPM (foam) ISIP 1400 psi, Total N₂ 665,000 Scf

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
FOLLOWING DEPTHS TAKEN FROM GAMMA RAY LOG:					
no record			0	1900	
snad			1900	1918	
shale			1918	1932	
Little Lime			1932	1953	
shale			1953	1970	
Big Lime			1970	2023	
Keener			2023	2117	
Big Injun			2117	2174	
siltstone & shale			2174	2348	
Weir			2348	2464	
siltstone & shale			2464	4605	
Riley			4605	4639	
shale			4639	4997	
Benson			4997	5002	
shale			5002	5245	
✓ Alexander			5245	5307	Gas check @
shale			5307	5439 TD	5439' 110 Mcf/day
Well logged by Hitwell Surveys, Inc.					

(Attach separate sheets as necessary)

Trek, Inc.
Well Operator

By: Andrew D. Wiggins, Consultant
Date: July 27, 1987

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

NOV 9 1987

(Obverse)
7/85
RECEIVED
JUN 25 1987



1) Date: June 16, 1987, 19__
2) Operator's Well No. Thomas #2
3) API Well No. 47 -085-7656
State County Permit

STATE OF WEST VIRGINIA
DIVISION OF OIL & GAS DEPARTMENT OF ENERGY, OIL AND GAS DIVISION
DEPARTMENT OF ENERGY **APPLICATION FOR A WELL WORK PERMIT**

- 4) WELL TYPE: A Oil _____ / Gas XX /
B (If "Gas", Production XX / Underground storage _____ / Deep _____ / Shallow XX /)
- 5) LOCATION: Elevation: 1110 Watershed: Marsh Run of North Fork Hughes River
District: Clay / County: Richie 085 Quadrangle: Pennsboro 7.5' 538
- 6) WELL OPERATOR TREK INC. CODE: 49000 7) DESIGNATED AGENT George Williams
Address Rt 2 Box 499 Address Route 2 Box 499
Grafton, WV 26354 Grafton, WV 26354
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
Name Robert Lowther Name NA
Address General Delivery Address _____
Middlebourne, WV 26149
- 10) PROPOSED WELL WORK: Drill XX / Drill deeper _____ / Redrill _____ / Stimulate XX /
Plug off old formation _____ / Perforate new formation _____
Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Alexander
12) Estimated depth of completed well, 5900' feet
13) Approximate strata depths: Fresh, NA feet; salt, NA feet.
14) Approximate coal seam depths: NA Is coal being mined in the area? Yes _____ / No XX /

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor	11 3/4"	11		X		30'	250 ft	Cemented to Surface	as per Rule 15.05
Fresh water									
Coal									Sizes
Intermediate	8 5/8"	"		X		1200'	1200'	Cement to surface	surface
Production	4 1/2"	"		X			5900"	as required by rule 15.01	Depths set
Tubing									
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-085-7656

June 26 19 87

Date

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires June 26, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Board: <u>[Signature]</u>	Agent: <u>[Signature]</u>	Plat: <u>[Signature]</u>	Casing: <u>[Signature]</u>	Fee: <u>214</u> <u>207</u>	WPCP: <input checked="" type="checkbox"/>	S&E: <input checked="" type="checkbox"/>	Other: <input type="checkbox"/>
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John H. Johnston
Director, Division of Oil and Gas
[Signature]

NOTE: Keep one copy of this permit posted at the drilling location.