

LATITUDE 38-47-30

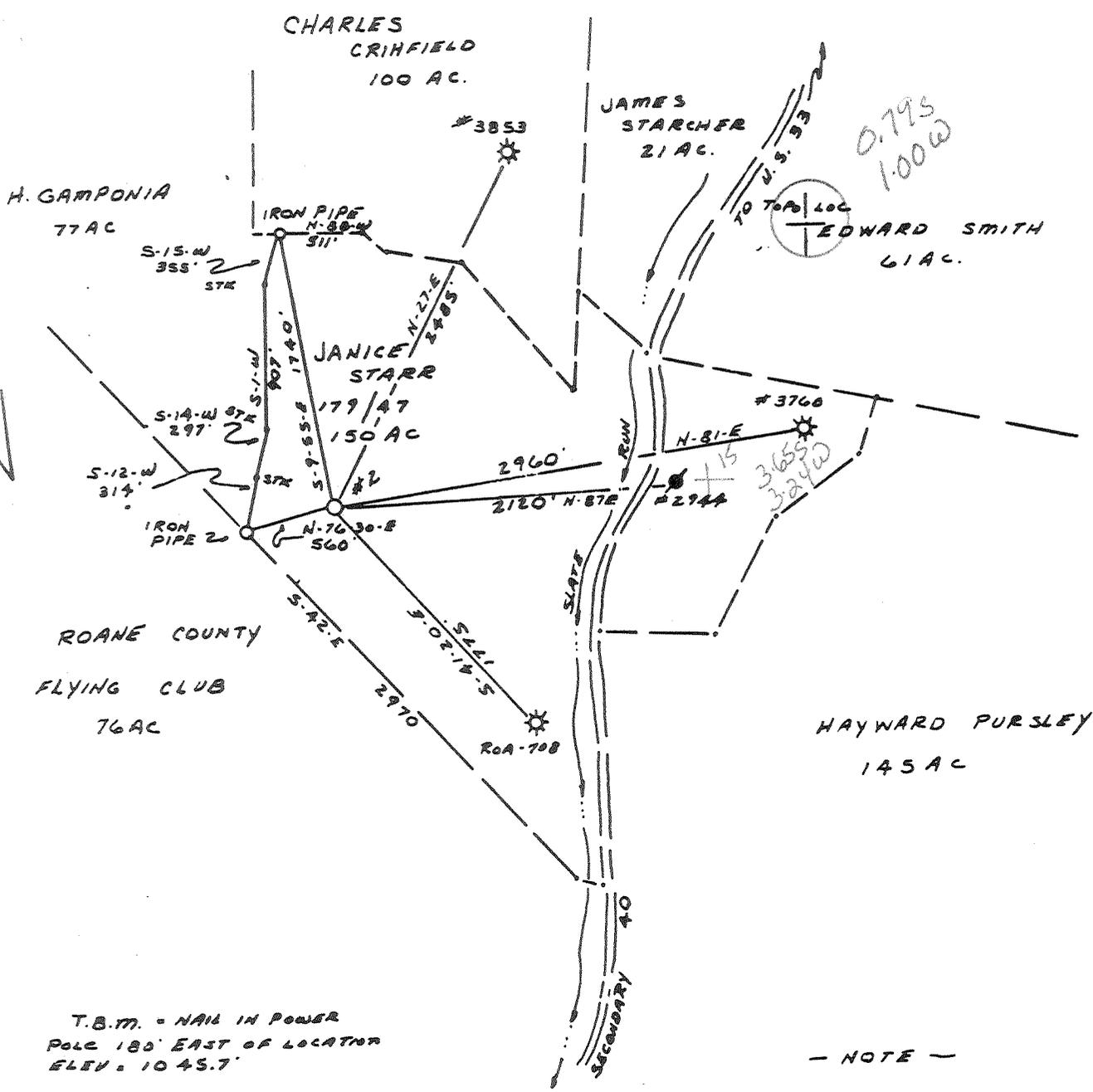
38°50'-15"

815'-15"

LONGITUDE 81-17-30

4150

NORTH



- NOTE -

NO OTHER KNOWN WELLS WITHIN 3000' OF THIS LOCATION.

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

FILE NO. _____
 DRAWING NO. 83-103-32
 SCALE 1"=1000'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION WELL NO. ROA-708
 ELEV. 865

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) William R. Roberts
 R.P.E. _____ L.L.S. 714

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE 12-30, 1983
 OPERATOR'S WELL NO. STARR NO. 2
 API WELL NO. _____

47-087-3856
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION 1038.5 WATERSHED SLATE RUN
 DISTRICT SPENCER COUNTY ROANE
 QUADRANGLE SPENCER 7 1/2' 415' SE

SURFACE OWNER JANICE STARR ACREAGE 150
 OIL & GAS ROYALTY OWNER JANICE STARR LEASE ACREAGE 150

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 ORISKANY ESTIMATED DEPTH 6200

WELL OPERATOR CENTRAL PACIFIC GROUP DESIGNATED AGENT PETROLEUM SERVICES, INC.
 ADDRESS 2115 KERN ST DEEP WELL ADDRESS P.O. BOX 4081
ERFENO CALIF. PARKERSBURG W.V. 26101

COUNTY NAME

PERMIT

FORM IV-6 (6-78)

H.T. HALL

6-4 Cover - Rush Run (Fisher) Jan 10 1984 (197)

RECEIVED

APR 5 - 1984



OIL & GAS DIVISION

DEPT. OF MINES

State of West Virginia

Department of Mines
Oil and Gas Division

Date March 23, 1984
Operator's
Well No. 2
Farm Starr
API No. 47-087-3856

IV-35
(Rev 8-81)

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 X / Shallow ___ /)

LOCATION: Elevation: 1037.5 Watershed Slate Run
District: Spencer County Roane Quadrangle Spencer 7.5

COMPANY The Central Pacific Group, Inc.

ADDRESS 2222 West Shaw, Suite 20 Fresno, CA 93711

DESIGNATED AGENT John Cushing

ADDRESS P.O. Box 4081, Parkersburg, WV 26101

SURFACE OWNER Janice Starr

ADDRESS P.O. BOX 158, SPENCER, W.VA.

MINERAL RIGHTS OWNER Janice Starr

ADDRESS P.O. BOX 158, SPENCER, W.VA.

OIL AND GAS INSPECTOR FOR THIS WORK Homer

Dougherty ADDRESS 927-4591

PERMIT ISSUED 1-3-84

DRILLING COMMENCED 1-18-84

DRILLING COMPLETED 1-25-84

IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON _____

Casing & Tubing Size	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16 Cond.			
11-3/4	287'	287'	125 sks
9 5/8			
8 5/8	2355'	2355'	500 sks
7			
5 1/2			
4 1/2	5968'	5968'	540 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Oriskany Depth 5967 feet

Depth of completed well 6002 feet Rotary ___ / Cable Tools ___

Water strata depth: Fresh ___ feet; Salt ___ feet

Coal seam depths: N/A Is coal being mined in the area? No

OPEN FLOW DATA
Producing formation DEVONIAN SHALE Pay zone depth 3622-5760 feet

Gas: Initial open flow show Mcf/d Oil: Initial open flow show Bbl/d

Final open flow 2,300 Mcf/d Final open flow show Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 1,000 psig (surface measurement) after 36 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

(Continue on reverse side)

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

1 STAGE	Marcellus Genessee 5760-5649	20	perfs-	60,000# sand	1,000 scf N ₂
2 STAGE	Sonyea 5594-5112	20	perfs-	60,000# sand	1,000 scf N ₂
3 STAGE	any other 5017-4594	20	perfs-	1,000,000 scf N ₂	
4 STAGE	4264-3622	20	perfs-	1,000,000 scf N ₂	

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
CONTINUED FROM BELOW:					
Sunbury			2570	2583	
5th Sand			2992	3012	
Huron			3200	4646	
Java			4646	4945	
Angola			4945	5165	
Rhinestreet			5165	5448 - 283	
Sonyea			5448	5644 - 196	
Genessee			5644	5704 - 60	
Mahantange			5704	5718 - 14	
Marcellus			5718	5770 - 52	
Onondaga LS			5770	5967 197	
Oriskany SS			5967		
T.D.				5971 -	6002 on front?
soil	bn	soft	0	10	
s.s.	bn	hard	50	58	
s.s.shale	bl	hard	58	166	
shale	bn	soft	166	250	
shale	bn	soft	250	679	
s.s.	wh	hard	679	872	
s.s.shale	bn	hard	872	940	
s.s.	bn	hsrd	940	1210	
shale	bn	hard	1210	1300	
s.s.	bn	hard	1300	1380	
s.s.shale	bn	hard	1380	1590	
s.s.	bn	hard	1590	1639	
shale	bn	soft	1639	1701	
s.s.	bn	hard	1701	1880	
salt sand			1880	1990	
salt sand			2010	2050	
maxton			2080	2110	
big lime			2120	2160	
big injun			2160	2250	
squaw			2270	2285	

5970
2583
3388

UD. ~ 2583
H ~ 3747
J ~ 4671
A ~ 4863
RH ~ 5152
OS ~ 5581
W ~ 5700
MARC ~ 5775

(Attach separate sheets as necessary)

The Central Pacific Group, Inc.

Well Operator

By: John Cushing Agent

Date: 3-27-84

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 ~~any~~, encountered in the drilling of a well."



1) Date: JANUARY 3, 19 84
 2) Operator's Well No. STARR # 2
 3) API Well No. 47 - 087 - 3856
 State County Permit

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

- 4) WELL TYPE: A Oil / Gas X /
 B (If "Gas", Production X / Underground storage / Deep X / Shallow)
- 5) LOCATION: Elevation: 1038.5 Watershed: SLATE RUN
 District: SPENCER County: ROANE Quadrangle: SPENCER 7.5
- 6) WELL OPERATOR THE CENTRAL PACIFIC GROUP, INC. 7) DESIGNATED AGENT JOHN CUSHING
 Address 2222 WEST SHAW, SUITE 20 Address 3901 BRISCOE RD/P.O. BOX 4081
FRESNO, CA. 93711 PARKERS, W.VA., 26101
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name HOMER DOUGHERTY Name THE COASTAL CORP.
 Address 927-4591 Address PARKERSBURG, W.VA.
- 10) PROPOSED WELL WORK: Drill X / Drill deeper / Redrill / Stimulate X
 Plug off old formation / Perforate new formation
 Other physical change in well (specify)
- 11) GEOLOGICAL TARGET FORMATION, ORISKANY
- 12) Estimated depth of completed well, 6200 feet
- 13) Approximate trata depths: Fresh, 80 feet; salt, 800 feet.
- 14) Approximate coal seam depths: N/A Is coal being mined in the area? Yes / No X
- 15) CASING AND TUBING PROGRAM

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 OIL & GAS DIVISION
 DEPT. OF MINES

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling		
Conductor	11-3/4			X		150 420'	150 420'	cir to sur NEAT
Fresh water								
Coal								Sizes
Intermediate	8-5/8			X		2100	2100	cir to sur
Production	4-1/2	sm1	10.5	X			6200	600 sks or as req. by rule
Tubing								Perforations: 15.6'
Liners								Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-087-3856 Date January 10, 1984

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 January 10, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

AGENT BOND	Agent: <u> </u>	Plat: <u> </u>	Casing <u> </u>	Fee <u>1559</u>
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 Administrator, Office of Oil and Gas