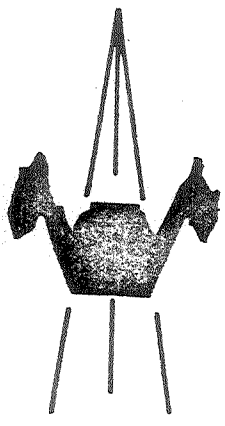
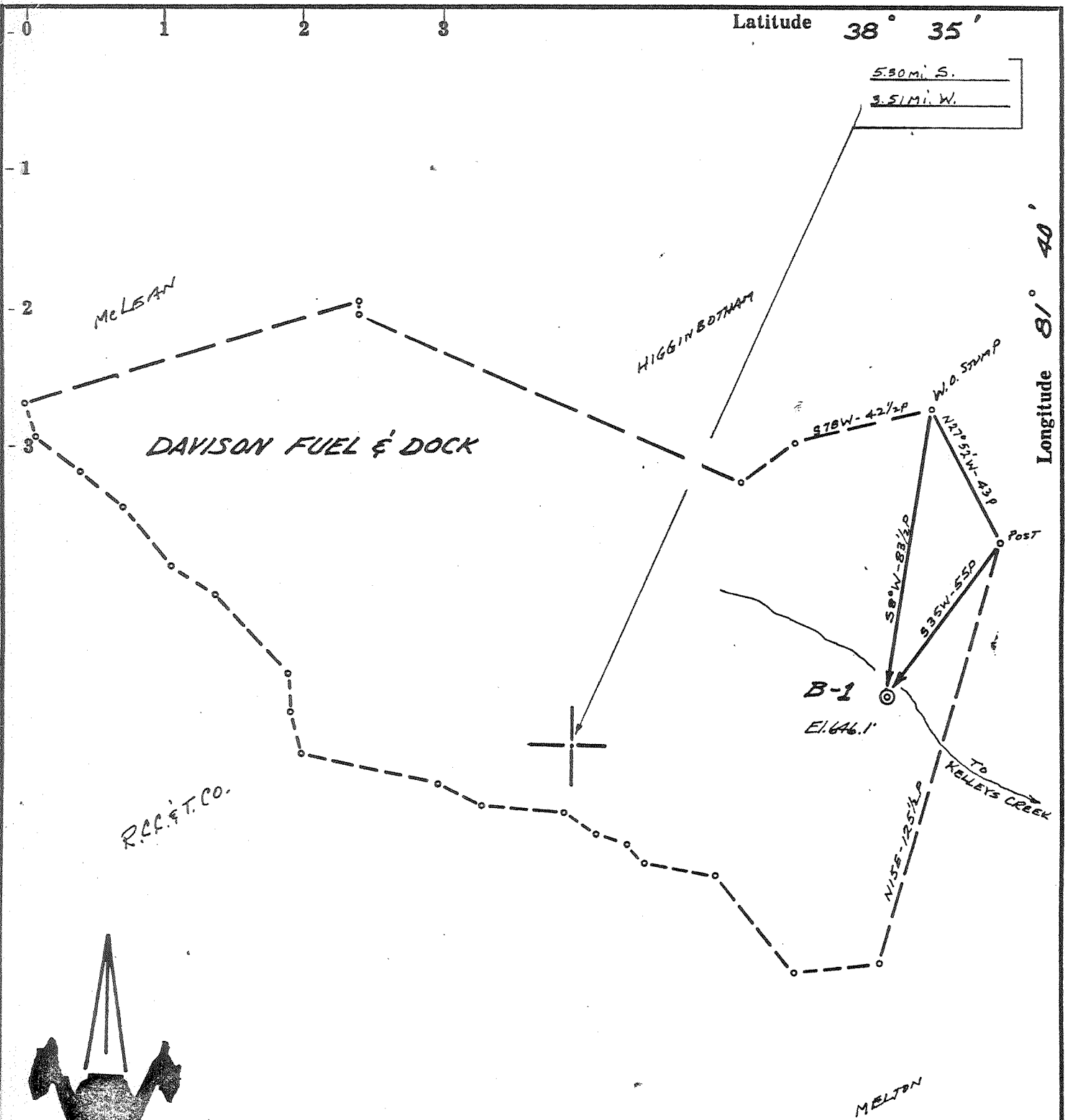


1/8/69CEN



- New Location
- Drill Deeper
- Abandonment
- Fracture
- Redrill

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Chet Waterman

Company Cabot Oil & Gas Co. of W. Va.
 Address CHARLESTON, W. VA.
 Farm DAVISON FUEL & DOCK
 Tract Part of Acres 2,406.29 Lease No. _____
 Well (Farm) No. B-1 Serial No. _____
 Elevation (Spirit Level) 646.1'
 Quadrangle KENNA
 County KANAWHA District UNION
 Engineer CHET WATERMAN
 Engineer's Registration No. 3788
 File No. 69003-1 Drawing No. _____
 Date 1/2/69 Scale 1" = 40p

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. KAN-2345-Frac.

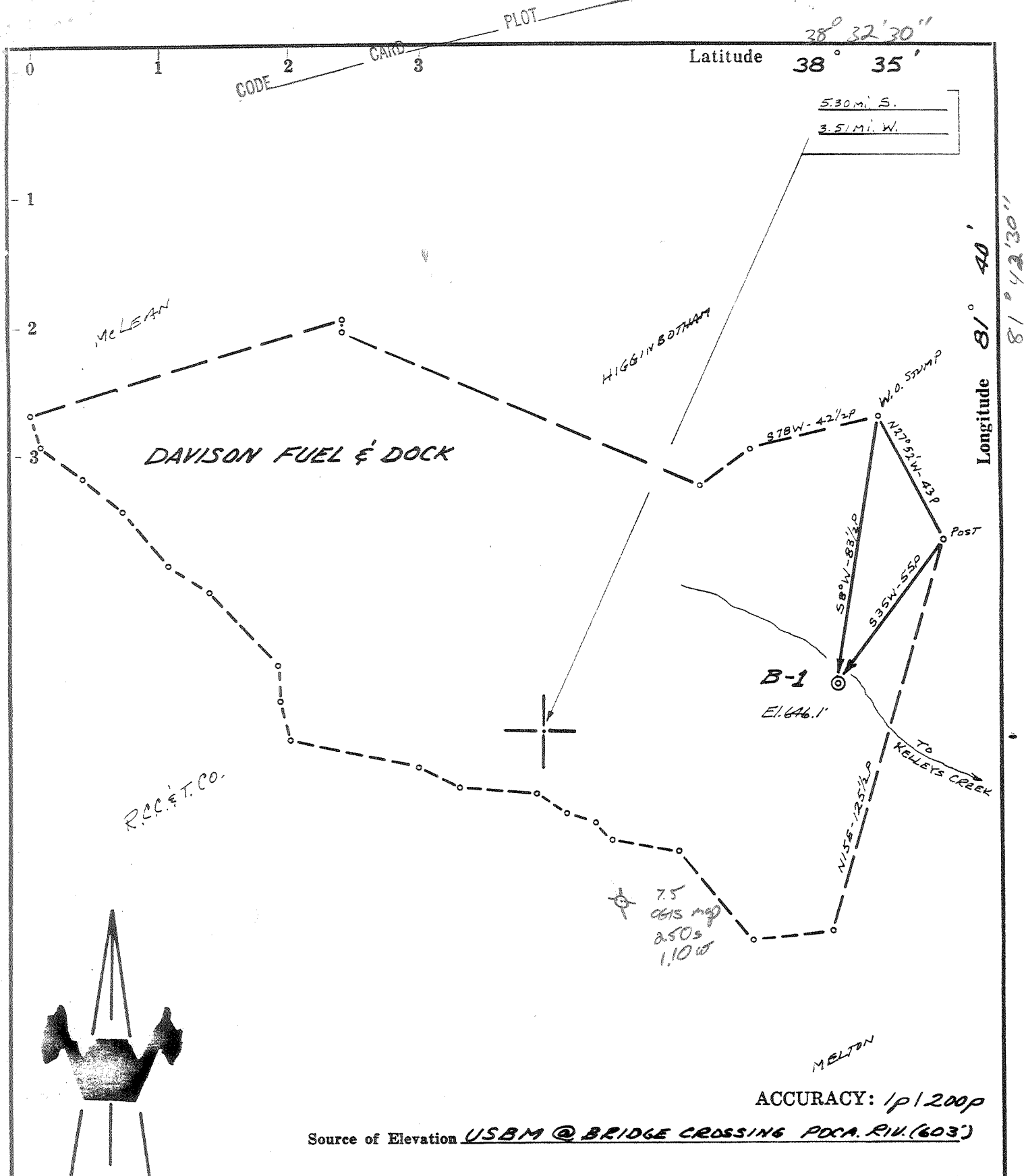
+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

— Denotes one inch spaces on border line of original tracing.

MAY 28 1985

47-039

KAN 2345-FRAC



- New Location
- Drill Deeper
- Abandonment
- Fracture
- Redrill

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Chet Waterman

Company Sabot Oil & Gas Co. of W. Va.
 Address CHARLESTON, W. VA.
 Farm DAVISON FUEL & DOCK
 Tract Part of Acres 2,406.29 Lease No. _____
 Well (Farm) No. B-1 Serial No. _____
 Elevation (Spirit Level) 646.1'
 Quadrangle KENNA SW Sissonville
 County KANAWHA District UNION
 Engineer CHET WATERMAN
 Engineer's Registration No. 3788
 File No. 69003-1 Drawing No. _____
 Date 1/2/69 Scale 1" = 40p

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

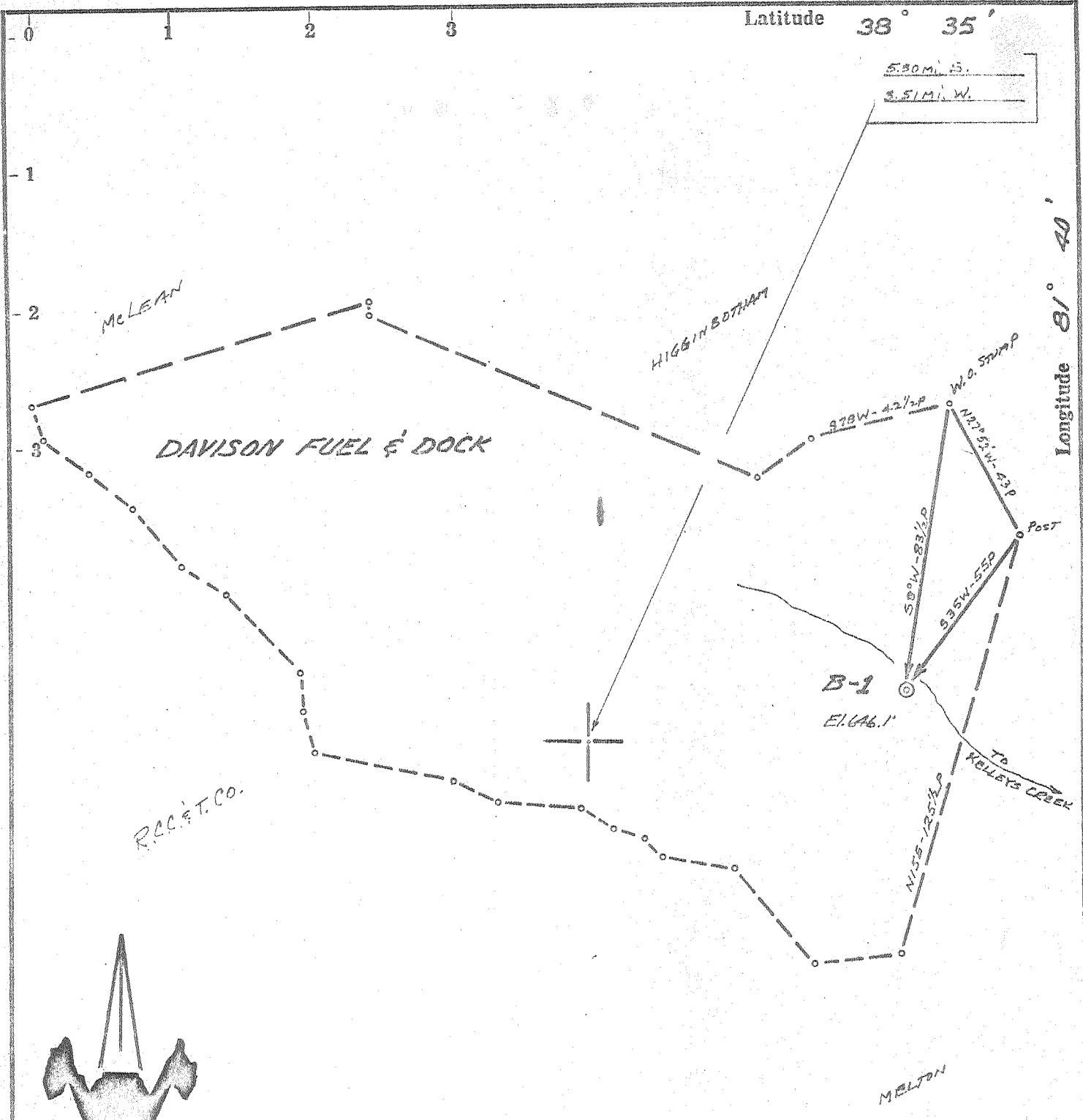
WELL LOCATION MAP
 FILE NO. KAN-2345-Frac.

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

— Denotes one inch spaces on border line of original tracing.

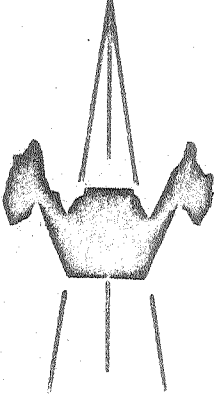
47-039 DEC 03 1969

DEEP WELL OWWO 6-6 Rocky Fork (312)



ACCURACY: 1/1200P

Source of Elevation USBM @ BRIDGE CROSSING POCA. RIV. (603)



- New Location
- Drill Deeper
- Abandonment
- Fracture
- Redrill

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Chet Waterman

Company APPALACHIAN EXPLORATION & DEVELOPMENT, INC.
 Address CHARLESTON, W.V.A.
 Farm DAVISON FUEL & DOCK
 Tract Part of Acres 2,406.29 Lease No. _____
 Well (Farm) No. B-1 Serial No. _____
 Elevation (Spirit Level) 626.1'
 Quadrangle KENNA SW
 County HONANHA District UNION
 Engineer CHET WATERMAN
 Engineer's Registration No. 3788
 File No. 69003-1 Drawing No. _____
 Date 1/2/69 Scale 1" = 400'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. KAN-2345

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

— Denotes one inch spaces on border line of original tracing.



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

- Rotary
- Spudder
- Cable Tools
- Storage

Permit No. Kanawha - 2345

WELL RECORD

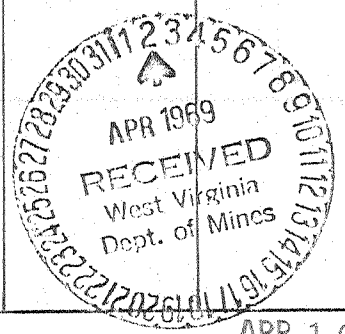
Oil or Gas Well Gas
(KIND)

Company Appalachian Exploration & Development, Inc.
 Address P.O. Box 628, Charleston, W.Va. 25322
 Operator Davison Fuel & Dock Acres _____
 Location (waters) Kelleys Creek
 Well No. B-1 Elev. 659 KB
 District Union County Kanawha
 The surface of tract is owned in fee by _____
 Address _____
 Mineral rights are owned by Davison Fuel & Dock Co.
Sunset Avenue Address North Bend, Ohio
 Drilling commenced February 15, 1969
 Drilling completed February 28, 1969
 Date Shot None From _____ To _____
 Open Flow 1/10ths Water in _____ Inch
1/10ths Merc. in _____ Inch
 Volume 8,000 (estimated) M Cu. Ft.
 Rock Pressure 1400 lbs. 72 hrs.
 Corrosion None bbls., 1st 24 hrs.
 WELL ACIDIZED (DETAILS) _____
 WELL FRACTURED (DETAILS) 500 gallons acid, 29,000# sand, 30,000 gallons water
 RESULT AFTER TREATMENT (Initial open Flow or bbls.) 56,000 MCF/ per day. Absolute open flow.
 ROCK PRESSURE AFTER TREATMENT 1380 HOURS 72
 Fresh Water None Feet _____ Salt Water _____ Feet _____
 Producing Sand Newburg Depth 5451

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer <u>None</u>
16			Size of <u>None</u>
13-3/8	60'	60'	Depth set <u>None</u>
10			Perf. top <u>None</u>
8-1/2	1793'	1793'	Perf. bottom _____
6-3/4			Perf. top _____
5-1/2	5430'	5430'	Perf. bottom _____
4-1/2			
3			
2-3/8	5434'	5434'	
Liners Used			

Attach copy of cementing record. (See back of sheet.)
 CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
 Amount of cement used (bags) _____
 Name of Service Co. Halliburton
 COAL WAS ENCOUNTERED AT None FEET _____ INCHES _____
 FEET _____ INCHES _____ FEET _____ INCHES _____
 FEET _____ INCHES _____ FEET _____ INCHES _____

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
sandstone		Soft	0	59			
sand & shale		"	59	685			
sand		"	685	850	5451	5451	
shale		"	850	970	659		
sand & shale		"	970	1270			
sand		"	1270	1510	5792		
lime		"	1510	1715			
sand		"	1715	1730			
shale		"	1730	2158			
lime		"	2158	2179			
shale		"	2179	4615			
lime		"	4615	5451			
sand (Newburg)		"	5451	5470	Gas	5451	





IV-35
(Rev 8-81)

RECEIVED
MAY 10 1985

State of West Virginia
Department of Mines
Oil and Gas Division

Date May 14, 1985
Operator's B-1
Well No. B-1
Farm Davison Fuel & Dock
API No. 47 - 039 - 2345-FRAC

OIL & GAS DIVISION
DEPT. OF MINES

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 / Underground Storage / Deep / Shallow X /)

LOCATION: Elevation: 646.1 Watershed Kelleys Creek
District: Union County Kanawha Quadrangle Sissonville

COMPANY Cabot Oil & Gas Corp. of West Virginia

ADDRESS P.O. Box 628, Charleston, WV 25322

DESIGNATED AGENT Robert E. Horrell

ADDRESS P.O. Box 628, Charleston, WV 25322

SURFACE OWNER Lena Higgenbotham

ADDRESS Rt. 4, Box 181
Charleston, WV 25312

MINERAL RIGHTS OWNER W.B. Cunningham

ADDRESS #2 Morris St., Charleston, WV 25301

OIL AND GAS INSPECTOR FOR THIS WORK Carlos

W. Hively ADDRESS 223 Pinch Ridge Road
Elkview, WV 25071

PERMIT ISSUED November 21, 1984

WORKOVER 11/26/84

DRILLING COMMENCED 11/26/84

WORKOVER 12/21/84

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"			
9 5/8			
8 5/8			
7			
5 1/2	Squeeze cem'd	4132'-3722'	
4 1/2			
X 2-7/8"	4174' w/5-1/2" Parmaco tensioner	X 2-7/8" @ 4174'	
X 1-1/2"		4711.25'	
Liners used			Seating nipple @ 4677'

GEOLOGICAL TARGET FORMATION ORISKANY/HURON SHALE Oris. 4701-4720'
DepthHS 3725-3920' feet

Depth of completed well PB = 4727' feet Rotary / Cable Tools

Water strata depth: Fresh feet; Salt feet

Coal seam depths: Is coal being mined in the area?

OPEN FLOW DATA

Producing formation ORISKANY Pay zone depth 4701-4720 feet

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

4 hrs. Final open flow (157) 399 Mcf/d Oil: Final open flow Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure 1250 psig (surface measurement) after hours shut in

(If applicable due to multiple completion--)

Second producing formation HURON SHALE Pay zone depth 3725-3920 feet

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

4 hrs. Final open flow (242) Mcf/d Oil: Final open flow Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure 900 psig (surface measurement) after hours shut in

(Continue on reverse side)

242
157
399
MCF
FOF
for well

MAY 28 1985

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

26/84 - MIRU Pool Well Service. Pulled 2-3/8" tbg. Set Baker P1, 5-1/2" permanent bridge plug 750' and dumped 2 sks Cal-Seal to plug back Newburg. Ran GR, CBL. LTD 4727', TOC 4160'. Shot squeeze perfs from 4130-4132'. R/U HOWCO, & squeeze w/110 sks, Class A, 3% CaCl2 w/3/4 of 1% CFR2. Shot squeeze perfs from 3720-3722'. R/U HOWCO, ran 35 sks. 50/50 poz w/10% salt & 3/4 of 1% CFR2. Did not pump out squeeze perfs. Drilled out cement. R/U HOWCO N₂ to 5-1/2" & pumped 80,000 Scf @ 6000 Scf/min. for injection test. Perf. Oriskany from 4701-4709' (6 holes), 4713-4720 (6 holes). Spotted 4 bbl 15% HCL. Dumped 8 bbl. 15 HCL. BD Oriskany @ 3800 psi. Displaced acid 1/4 BPM @ 3800 psi. Flowed back. 12/11/84 - R/U HOWCO. Pumped 1000 gals., 15% HCL. BD Oriskany, 3800 psi treated w/290 sks. 20/40 sand, max. 1-1/4#/gal, TF 688 bbls, SL 538 bbls, cross-link fluid AIR 11 BPM, ATP 4658 psi, max 5400 psi. ISIP 3400 psi, 15 min. - 3100 psi. Perf Shale 3738', 3748', 3790', 3808', 3826', 3835', 3843', 3850', 3875', 3880', 3898', 3906', 3920' (15 holes). Ran 4146' 2-7/8" EUE tbg. w/HOWCO RBP & Rtts pkr. Spotted 750 gal. 15% HCL. BD Shale @ 2750 psi & treated w/959,000 Scf N₂. AIR 20,000 Scf/min N₂. ATP 2720 psi, max 2800 psi. ISIP 1370 psi, 15 min. 1300 psi. Released thru 1" choke. Retrieved BP & RTTS pkr. Ran 139 jts. 2-7/8" EUE tbg w/Parmco tension pkr. set @ 4167' KB. Ran 139 jts. 1-1/2" w/seating nip.

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Perf jt 4711.25'.			4677.35	MIRU Pool Well	Pulled 1-1/2" tbg. Lowered 2-7/8" pkr. & reset. Ran 139 jts. 1-1/2" tbg. 4711'. SICIP 900 psi (Shale). 4 hr. O/F. 33/10 H ₂ O thru 242 Mcf/d. SITP 840 psi (Oriskany). SICIP 1250 psi. 4 hr. O/F 14/10 H ₂ O thru 2", 157 MCF/d.
			PBTD	4727'	

PLUGGED BACK NEWBURG

SEE ATTACHED ORIGINAL WELL RECORD

- from contour maps & nearby logs:
- Berea 2184
 - WOU 2220
 - W. Union 3320
 - Wava 4190
 - Maple 4390
 - Wines 4700
 - Onyx 5010
 - Wessex 5220
 - Wavelus 5260
 - Wandoo 5290

(Attach separate sheets as necessary)

Cabot Oil & Gas Corporation of West Virginia
Well Operator
By: David G. McKinley
Date: May 14, 1985

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."



1) Date: October 29, 19 84
 2) Operator's Well No. Davison Fuel & Dock B-1
 3) API Well No. 47 - 039 - 2345 -FRAC
 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
 B (If "Gas", Production Underground storage Deep Shallow)
- 5) LOCATION: Elevation: 646.1 Watershed: Kelleys Creek
 District: Union County: Kanawha Quadrangle: Sissonville
- 6) WELL OPERATOR Cabot Oil & Gas Corp. of WV 7) DESIGNATED AGENT Robert E. Horrell
 Address P.O. Box 628 Address P.O. Box 628
Charleston, WV 25322 8150 Charleston, WV 25322
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR
 Name Rodney G. Dillon Name UNKNOWN
 Address P.O. Box 7 Address _____
Williamstown, WV 26187 375-3747
- 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate
 Plug off old formation / Perforate new formation
 Other physical change in well (specify) Plug back Newburg
- 11) GEOLOGICAL TARGET FORMATION, Oriskany & Huron Shale
- 12) Estimated depth of completed well, 5000 feet
- 13) Approximate strata depths: Fresh, N/R feet; salt, _____ feet.
- 14) Approximate coal seam depths: N/R Is coal being mined in the area? Yes / No
- 15) CASING AND TUBING PROGRAM WORKOVER

RECEIVED
 OCT 30 1984
 OIL & GAS DIVISION
 DEPT. OF MINES

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS PROPOSED	
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		Kinds	Sizes
Conductor	13"					EXISTING	60'	45 sks.	Baker Model	R
Fresh water										
Coal	8"					EXISTING	1793'	600 sks.	2-3/8 x 5-1/2	
Intermediate										
Production	5-1/2"	J-55	17#			EXISTING	5430'	200 sks.	4000'	
Tubing	2"					EXISTING	5434'	to be pulled		
Liners										
Tubing	2"		4.7	X		PROPOSED	4750'	ON PACKER		

- Pump cement plug from 5470-5000' to plug back Newburg.
- Squeeze cement 5-1/2" csg. 4100-3500'.

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-039-2345-FRAC Date November 21, 19 84

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 November 21, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing:	Fee:
30	TS	MN	MN	14011

Margaret J. Hass
 Administrator, Office of Oil and Gas

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

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

File