

UNITED STATES BUREAU OF LAND MANAGEMENT
LEASE-360 AC.
WELL USA-S-1S/T

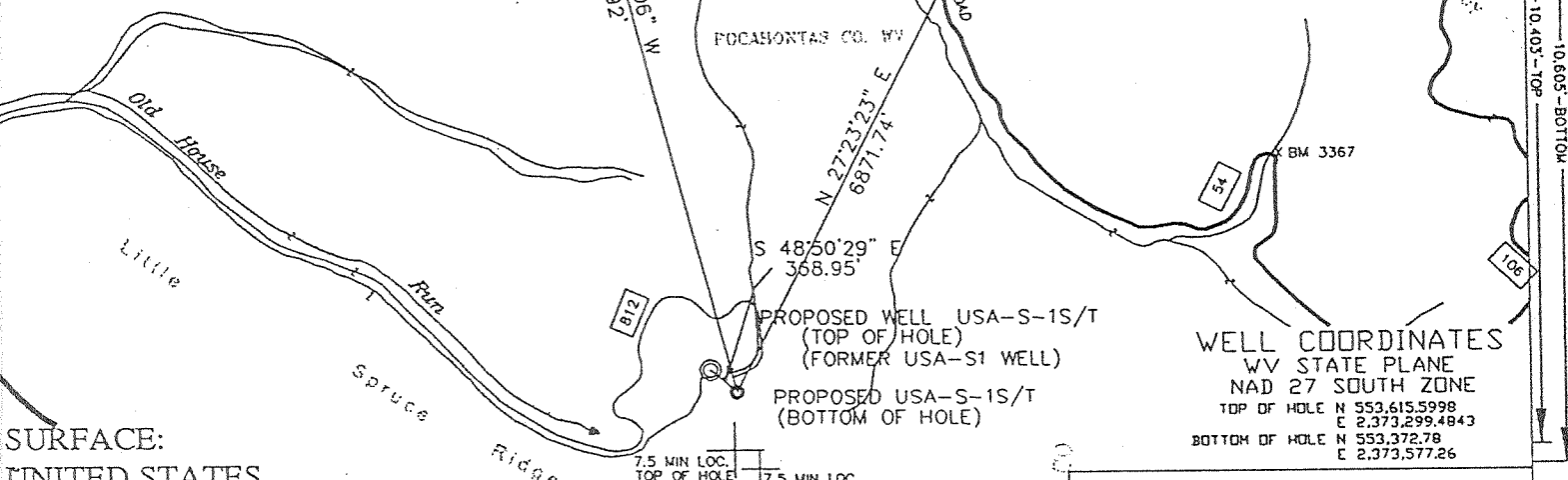
8,000'-BOTTOM

LATITUDE 38° 32' .30"

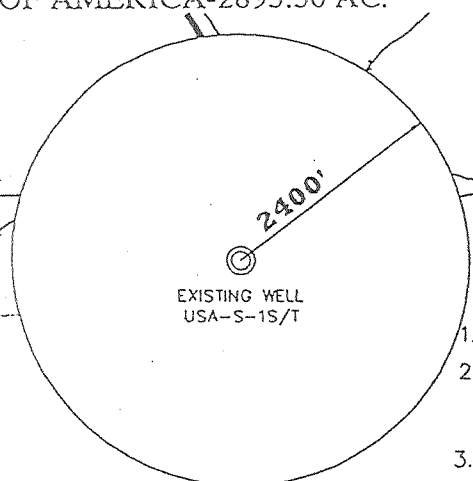
LONGITUDE 79° 40' 00"



MONONGAHELA NATIONAL FOREST



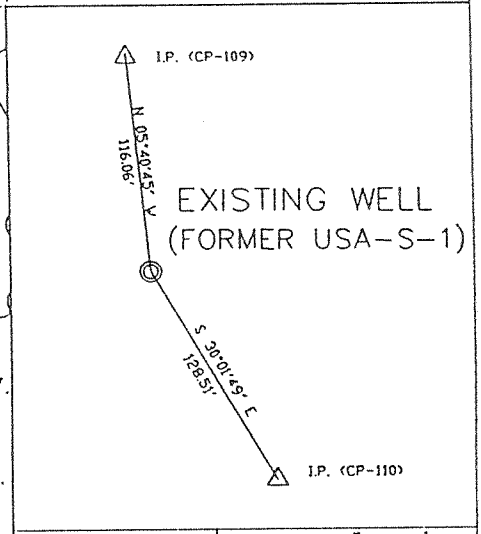
SURFACE:
UNITED STATES OF AMERICA-2895.50 AC.



NOTES ON SURVEY

1. SURVEY MERIDIAN ON WV STATE PLANE-NAD27.
2. PROPERTY INFO TAKEN FROM INFORMATION PROVIDED BY CO&G CORP AND INFO ON RECORD IN POCAHONTAS COUNTY COURTHOUSE.
3. LAT./LONG. FROM STATE PLANE CONVERSION TO GEOGRAPHIC.

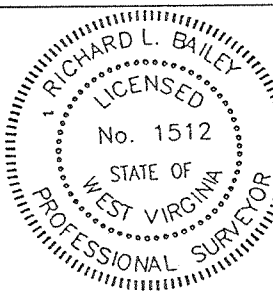
WELL COORDINATES
WV STATE PLANE
NAD 27 SOUTH ZONE
TOP OF HOLE N 553.615,5998
E 2,373,299.4843
BOTTOM OF HOLE N 553.372.78
E 2,373,577.26



REFERENCES | SCALE: 1"=100'

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) *Richard L. Bailey* 4-25-01
R.P.E. _____ R.P.S.



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

DATE APRIL 13 20 01
OPERATOR'S WELL NO. USA-1-1S/T
API WELL No. 47 - 075 - 000249
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 : 2500
FILE NO. LBL-G205-01
SCALE: 1" = 2000'
PROVEN SOURCE OF ELEVATION NGS BM "GREENBRIER-EL-2780"
DRAWING NO. USA-1ST.DWG

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



WELL TYPE: OIL _____ GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF "GAS") PRODUCTION STORAGE _____ DEEP _____ SHALLOW _____
LOCATION: ELEVATION 3854.92 WATER SHED OLD HOUSE RUN / BUFFALO FORK
DISTRICT GREENBANK COUNTY POCAHONTAS
QUADRANGLE THORNWOOD 7.5' QUAD
SURFACE OWNER UNITED STATES OF AMERICA ACREAGE 2895.50
OIL & GAS ROYALTY OWNER U.S. BUREAU OF LAND MANAGEMENT LEASE ACREAGE 360.00
LEASE NO. BLM-A-22929
PROPOSED WORK: DRILL 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 5815' MD
WELL OPERATOR CABOT OIL & GAS DESIGNATED AGENT JOHN ABSHIRE
ADDRESS 900 LEE ST. E. SUITE 1500 ADDRESS 900 LEE ST. E. SUITE 1500
CHARLESTON, WEST VIRGINIA 25301 CHARLESTON, WV 25301

JAN 25 2002

POLA 0024 P

UNITED STATES BUREAU
OF LAND MANAGEMENT
LEASE-360 AC.
WELL USA-S-1S/T

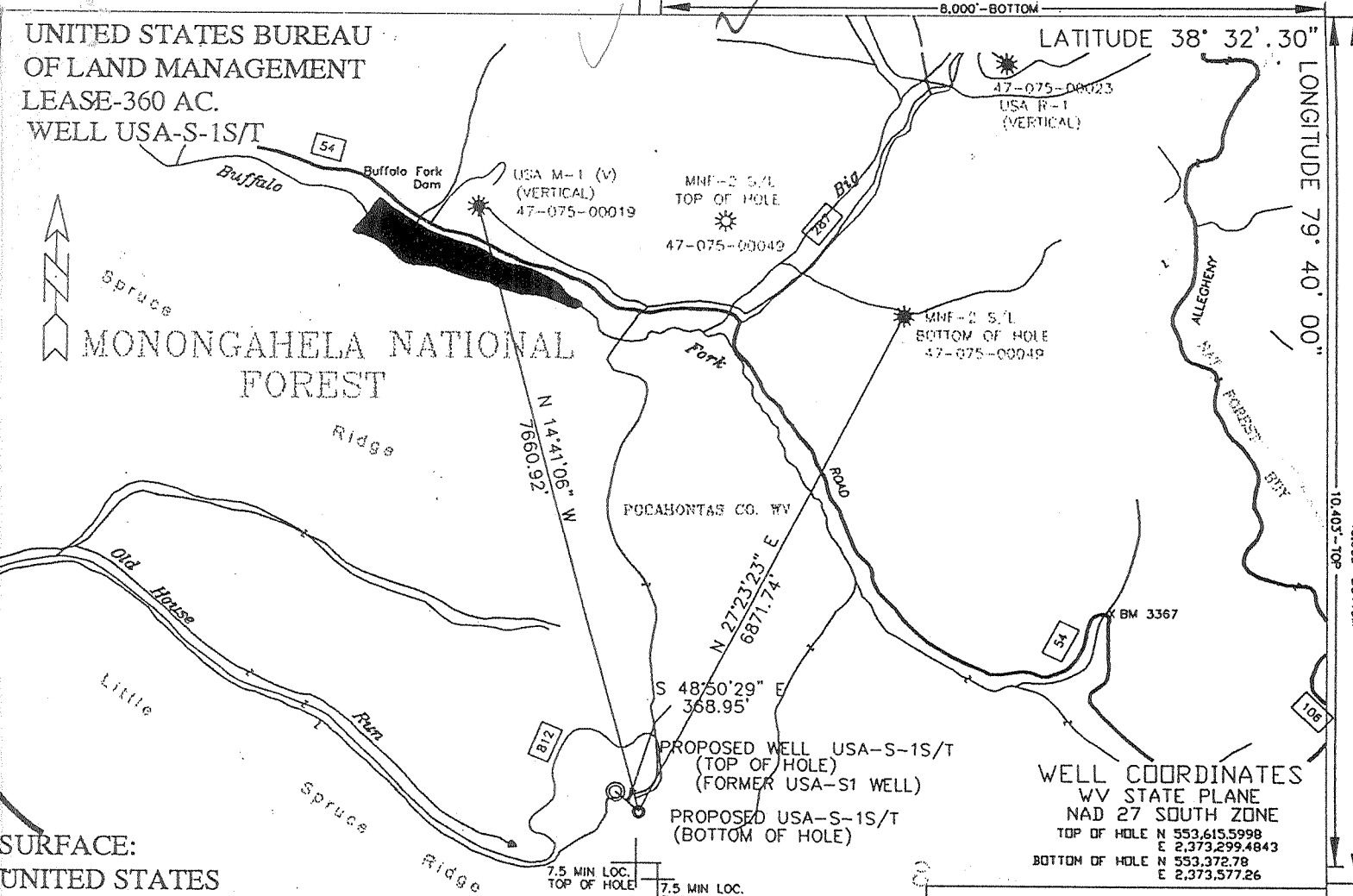
8,000'-BOTTOM

LATITUDE 38° 32' .30"

LONGITUDE 79° 40' 00"

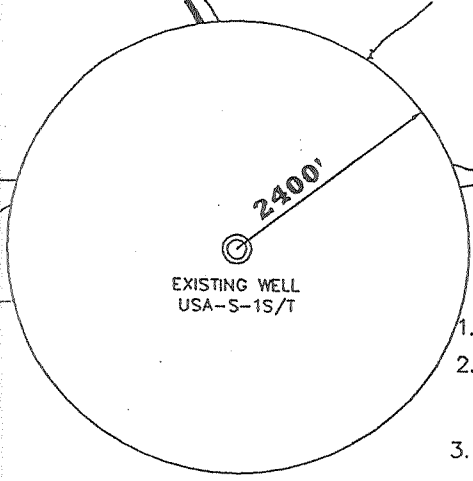


MONONGAHELA NATIONAL FOREST



WELL COORDINATES
WV STATE PLANE
NAD 27 SOUTH ZONE
TOP OF HOLE N 553,615.5998
E 2,373,299.4843
BOTTOM OF HOLE N 553,372.78
E 2,373,577.26

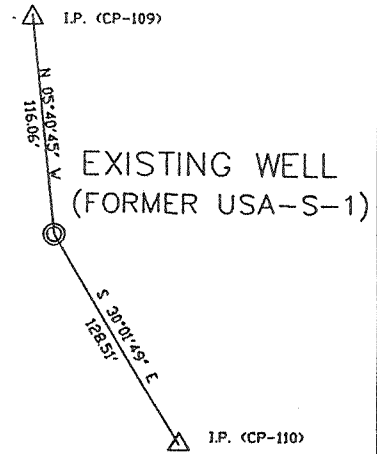
SURFACE:
UNITED STATES
OF AMERICA-2895.50 AC.



1975
1.534

NOTES ON SURVEY

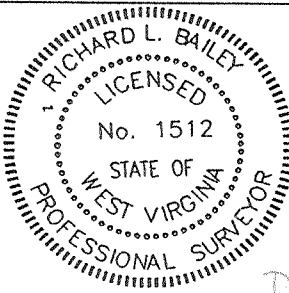
1. SURVEY MERIDIAN ON WV STATE PLANE-NAD27.
2. PROPERTY INFO TAKEN FROM INFORMATION PROVIDED BY CO&G CORP AND INFO ON RECORD IN POCAHONTAS COUNTY COURTHOUSE.
3. LAT./LONG. FROM STATE PLANE CONVERSION TO GEOGRAPHIC.



REFERENCES | SCALE: 1"=100'

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) *Richard L. Bailey* 4-25-01
R.P.E. _____ R.P.S.



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

DATE APRIL 13 20 01
OPERATOR'S WELL NO. USA-1-1S/T
API 47 - 075 - 00024
WELL No. STATE COUNTY PERMIT

Directional well

MINIMUM DEGREE OF ACCURACY 1 : 2500
FILE NO. 1BL-G205-01
SCALE: 1" = 2000'
PROVEN SOURCE OF ELEVATION NCS BM "GREENBRIER-EL-2780"
DRAWING NO. USA-1ST.DWG

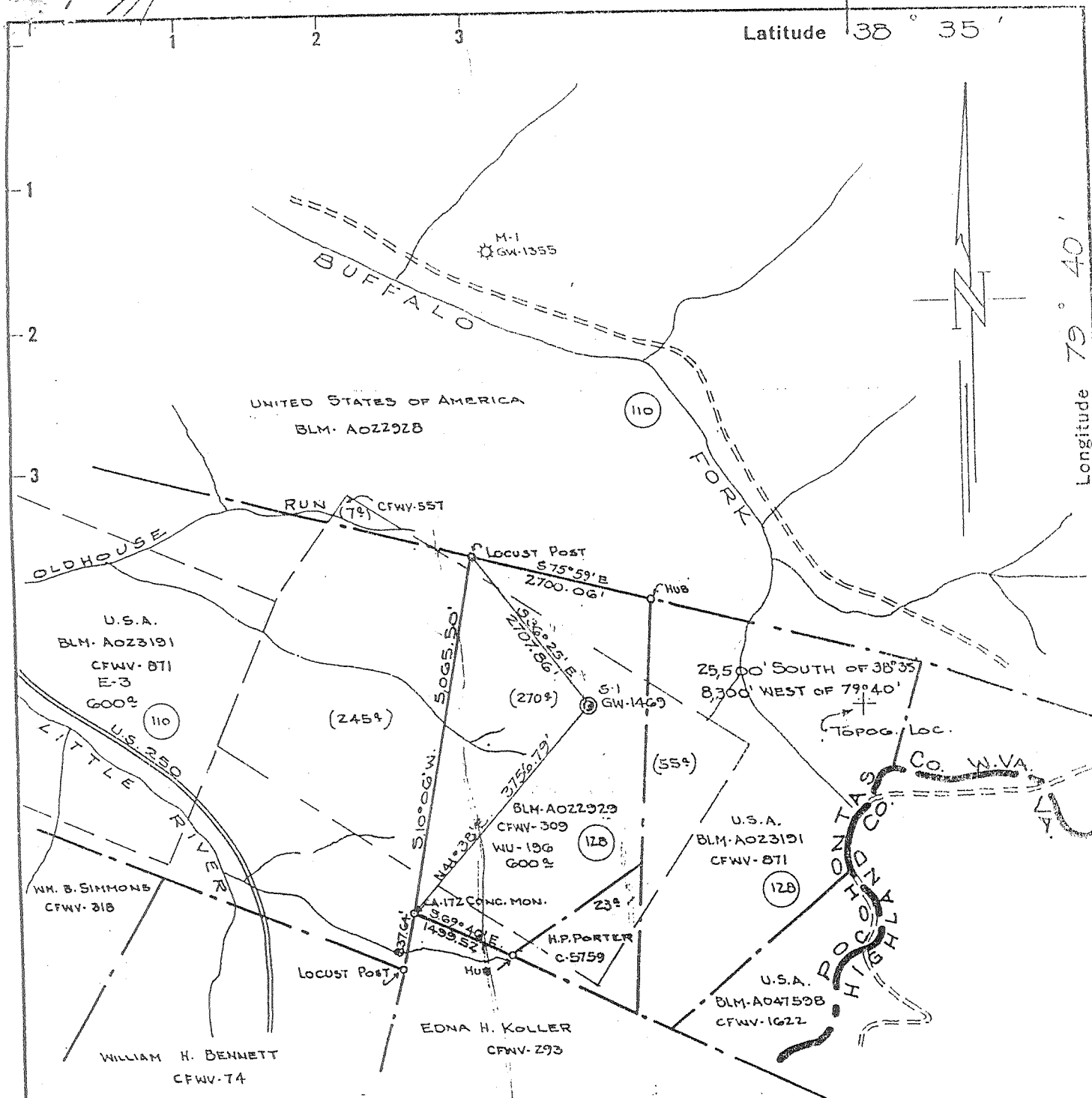
STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



WELL TYPE: OIL _____ GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF "GAS") PRODUCTION STORAGE _____ DEEP _____ SHALLOW _____
LOCATION: ELEVATION 3854.92 WATER SHED OLD HOUSE RUN / BUFFALO FORK
DISTRICT GREENBANK COUNTY POCAHONTAS
QUADRANGLE THORNWOOD 7.5' QUAD
SURFACE OWNER UNITED STATES OF AMERICA ACREAGE 2895.50
OIL & GAS ROYALTY OWNER U.S. BUREAU OF LAND MANAGEMENT LEASE ACREAGE 360.00
LEASE NO. BLM-A-22929
PROPOSED WORK: DRILL 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 5815' MD
WELL OPERATOR CABOT OIL & GAS DESIGNATED AGENT JOHN ABSHIRE
ADDRESS 900 LEE ST. E. SUITE 1500 ADDRESS 900 LEE ST. E SUITE 1500
CHARLESTON, WEST VIRGINIA 25301 CHARLESTON, WV 25301

Deep well

POLA 0024 W



Latitude 38° 35'
 Longitude 79° 40'

SP-312- S-1 N46°12'E - 542.13'

NOTE: ELEVATION TAKEN FROM U.S.G.S. "B 61" ELEVATION 3197.45'. ABOUT 0.9 MILES S.E. ALONG U.S. HIGHWAY 250 FROM THE C. & O. R.R. STATION AT BARTOW, POCAHONTAS COUNTY, ABOUT 60' EAST OF CENTER OF THE JUNCTION OF TWO CREEKS IN THE TOP OF THE SOUTH END OF THE CONCRETE HEADWALL OF CULVERT 326+65 15' WEST OF E HIGHWAY 250 A STANDARD DISK, STAMPED "B 61 1935."

THE ACCURACY OF THIS SURVEY IS WITHIN THE LIMITS PRESCRIBED BY THE OIL AND GAS DIVISION OF THE DEPARTMENT OF MINES.

New Location
 Drill Deeper
 Abandonment

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.

Company CITIES SERVICE OIL COMPANY
 Address P.O. Box 873 CHARLESTON, W.VA.
 Farm UNITED STATES OF AMERICA
 (PT. OF WU-196-600² BLM-A022929)
 Tract 128 Acres 270 Lease No. CFWV-309
 Well (Farm) No. S-1 Serial No. GW-1462
 Elevation (Spirit Level) 3849.87 *Thomaswood*
 Quadrangle SPRUCE KNOB 3 5490 W-158
 County POCAHONTAS District GREENBANK
 Engineer Wendell S. Moore
 Engineer's Registration No. 2113
 File No. _____ Drawing No. W-3-64
 Date 24 JAN. 64 Scale 1" = 2000'

75' loc
 197538³²
 155W 79°40'
 calc 15 loc
 STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

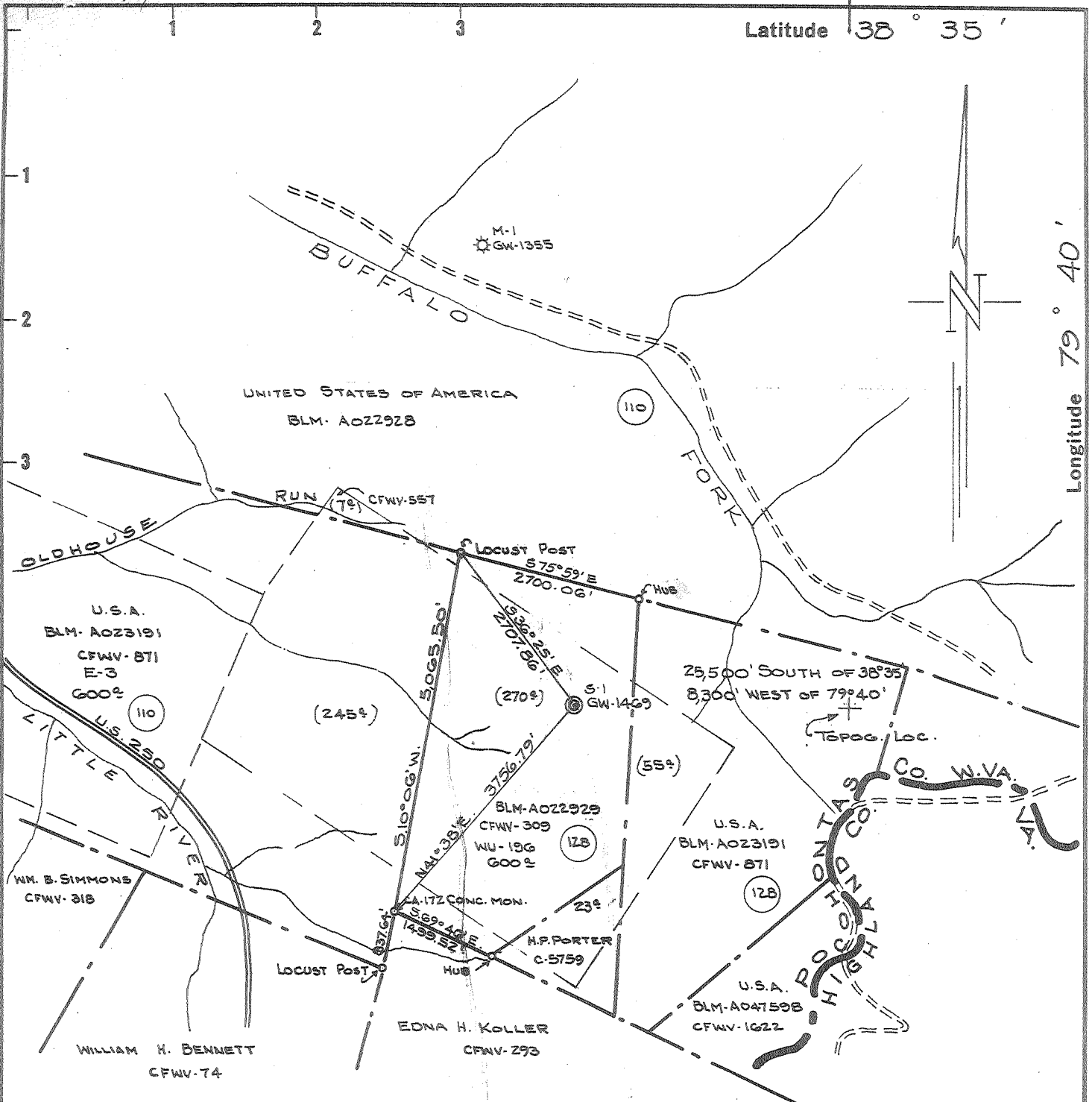
WELL LOCATION MAP
 FILE NO. POCA-24

+ Denotes location of well on United States Topographic Maps, scale 1 to 62500 latitude and longitude lines being represented by border lines as shown.

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

Samples some received 6-6 322

Deep Well



SP-312- S-1 N46°12'E. - 542.13'

NOTE: ELEVATION TAKEN FROM U.S.G.S. "B 61" ELEVATION 3197.45'. ABOUT 0.9 MILES S.E. ALONG U.S. HIGHWAY 250 FROM THE C. & O. R.R. STATION AT BARTON, POCAHONTAS COUNTY, ABOUT 60' EAST OF CENTER OF THE JUNCTION OF TWO CREEKS IN THE TOP OF THE SOUTH END OF THE CONCRETE HEADWALL OF CULVERT 326+65 15' WEST OF E HIGHWAY 250 A STANDARD DISK, STAMPED "B 61 1935."

THE ACCURACY OF THIS SURVEY IS WITHIN THE LIMITS PRESCRIBED BY THE OIL AND GAS DIVISION OF THE DEPARTMENT OF MINES. 9 SE (2-13)

New Location
 Drill Deeper
 Abandonment

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.

Company CITIES SERVICE OIL COMPANY
 Address P.O. Box 873 CHARLESTON, W.VA.
 Farm UNITED STATES OF AMERICA
 (PT. OF WU-196-600² BLM-A022929)
 Tract 128 Acres 270 Lease No. CFWV-309
 Well (Farm) No. S-1 Serial No. GW-1469
 Elevation (Spirit Level) 3849.87
 Quadrangle SPRUCE KNOB 3^{SW} 5490 W-158
 County POCAHONTAS District GREENBANK
 Engineer Wendell S. Moore
 Engineer's Registration No. 2113
 File No. _____ Drawing No. W-2-64
 Date 24 JAN. 64 Scale 1" = 2000'

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

WELL LOCATION MAP
 FILE NO. POCA-24

+ Denotes location of well on United States Topographic Maps, scale 1 to 62500 latitude and longitude lines being represented by border lines as shown.

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

Samples some received 6-6 322

Deep Well



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION 12

Rotary
Spudder
Cable Tools
Storage

Quadrangle Spruce Knob 9 SW

WELL RECORD

Permit No. Poca-24

Oil or Gas Well Gas

(KIND)

Company Cities Service Oil Company
Address P. O. Box 873, Charleston 23, W. Va.
Farm U. S. of America Acres 600
Location (waters) Oldhouse Branch
Well No. S-1, GW-1469 Elev. 3849.87'
District Green Bank County Pocahontas
The surface of tract is owned in fee by Director, Bureau of Land Mangmt.
Interior Building Address Washington, D. C.
Mineral rights are owned by same

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
20" 94#	19'	19'	Kind of Packer
13 3/8" 48#	521'	521'	none
9-5/8" 36#	2518'	2518'	Size of
8 1/4"			
7" 23#	5765'	5765'	Depth set
5 3/16"			
3"			Perf. top
2 3/8" 4.7#	5905'	5905'	Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Drilling commenced 5-20-64
Drilling completed 7-12-64
Date Shot not shot From _____ To _____
With _____
Open Flow /10ths Water in _____ Inch
/10ths Merc. in _____ Inch
Volume shows (Temperature Log) Cu. Ft.
Rock Pressure _____ lbs. _____ hrs.
Oil _____ bbls., 1st 24 hrs.
WELL ACIDIZED see reverse side
WELL FRACTURED see reverse side

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
see reverse side
COAL WAS ENCOUNTERED AT none FEET _____ INCHES
FEET _____ INCHES FEET _____ INCHES
FEET _____ INCHES FEET _____ INCHES

RESULT AFTER TREATMENT 3/10 W. 2" = 73 MCF (Oriskany)
ROCK PRESSURE AFTER TREATMENT 7 days 1640#
Fresh Water 155-160' Feet Salt Water 1030' Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Rock			0	60			
Sand and Lime			60	105			
Sandy Shale			105	215	F. water	155-160'	2 blr /hr. approx.
Sand			215	230			
Sandy Shale			230	250			
Sandy Lime			250	280			
Sandy Shale			280	405			
Sand			405	470			
Sandy Shale			470	540			
Sand			540	550			
Sandy Lime			550	760			
Sandy Shale			760	1015			
Sand			1015	1135	S. water	1030'	small am't
Shaley Sand			1135	1265			
Shale and Lime			1265	1425			
Green Sand & Shale			1425	1535			
Sandy Shale			1535	1630			
Sand and Shale			1630	1670			
Green Sand			1670	1705			
Sandy Shale			1705	1770			
Shale			1770	1860			
Sandy Shale			1860	2035			
Shale and Lime			2035	2135			
Sandy Shale			2135	2870			
Sandy Lime			2870	2907			
Sandy Shale			2907	3115			
Lime and Shale			3115	3233			



(over)

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Shale			3233	3285			
Lime and Shale			3285	3375			
Sandy Shale			3375	3885			
Lime and Sandy Shale			3885	3970			
Sandy Shale			3970	4520			
Shale			4520	5020			
Tully Lime			5020	5045			
Shale and Sandy Lime			5045	5704		5796'	Temperature Log shows gas:
Oriskany Sand			5704	5855		5825'	
Helderberg Lime			5855	5960			
Total depth-----				5960' DLM=			
				5951' Schl. Meas.			
Samples show:							
Oriskany			5704	5893			
Schlumberger shows:							
Oriskany			5704	5935'			
CASING RECORD							
5-28-64	Ran 13-3/8" casing at 510' DLM-cemented with 125 sacks						
6-9-64	Ran 9-5/8" casing with shoe at 2500' SLM, 3 centralizers every 3rd joint. Cemented with 100 sacks. Pumped plug to 10' of bottom.						
7-7-64	Ran 7" casing at 5,709' with Guide shoe on bottom, 3 centralizers to 5,709'. Cemented with 100 sacks. Pumped plug with 223 bbls. water to 5,660'.						
Set 1st whipstock at 2,908' - 2nd at 3,024' and 3rd at 3,233'							
7-12-64	Ran Schlumberger Logs: Gamma Ray, Temperature, Neutron, Caliper, Induction and Density.						
ACIDIZED ORISKANY SAND 7-13-64							
Ran 2" EUE tubing to 5,940'. Loaded hole with 223 bbls. water. Opened braden head and displaced water with acid to bring up to 20' of 7" casing point. Acidized with 10,000 gallons retarded acid and 10,000 gallons regular acid. Pressure started at 2,600#-went to 3,500# during treatment. Averaged 3-1/2 to 4 bbls/minute. Displaced acid. Used 150,000 SCF of Nitrogen with treatment. Left in 45 minutes-opened-flowed back-left open. No increase in gas after acidizing.							
FRACTURED ORISKANY SAND 7-16-64							
Fraced with 12,000# 20-40 sand, 578 bbls. sand laden fluid and 152,000 SCF of Nitrogen, 60 bbls. flush. Pumped in at 3700#. Average injection rate 13-1/2 bbls/minute. Started sand 1/8#/gallon. Went to 1#/gallon maximum. Had 2,700# pressure when shut in. Opened - flowed back and died.							
Set swabbing pole 7-30-64 - swabbed and tested							
Final open flow 10-6-64 - 3/10 W. 2" = ²³¹ 23 MCF (Oriskany)							

Date October 9, 19 64

APPROVED Cities Service Oil Company, Owner
 By W. S. Moore, Division Sup't
 (Title)

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

AB

Farm name: US Dept of Interior

Operator Well No.: U.S.A. S-1

LOCATION: Elevation: 3855' Quadrangle: Thornwood
District: Greenbank County: Pocahontas
Latitude: 10,403' feet South of 38° DEG. 32' MIN. 30" SEC.
Longitude: 8,254' feet West of 79° DEG. 40' MIN. 0" SEC.

Company: Cabot Oil & Gas Corporation
900 Lee Street East, Suite 500
Charleston, WV 25301

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill up Cu. Ft.
See existing	records		
PLUGGED	PLUGGED		

Agent: John Abshire
Inspector: Craig Duckworth
Permit Issued: _____
Well Work Commenced: 10/31/01
Well Work Completed: 11/28/01
Verbal Plugging YES
Permission granted on: 11/26/01
Rotary X Cable _____
Total Depth (feet) 6082'
Fresh Water Depths (ft) _____
Salt Water Depths (ft) _____
Is coal being mined in area (Y / N)? _____
Coal Depths (ft) _____

OPEN FLOW DATA

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

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: CABOT OIL & GAS CORPORATION

APR 12 2002

By: Ray Rudolph Operations Manager
Date: 4-3-02

POCA 0024D

FORMATION	TOP MD/TVD	BASE MD/TVD	REMARKS
SHALE	0 / 0	1215 / 1215	
SILT/SHALE	1215 / 1215	2506 / 2500	
SHALE	2506 / 2500	4508 / 4324	
SILTSTONE	4508 / 4324	4630 / 4436	
SHALE	4630 / 4436	5122 / 4895	
SILTSTONE	5122 / 4895	5135 / 4907	
SHALE	5135 / 4907	5227 / 4995	
LIME/SHALE	5227 / 4995	5500 / 5247	
SILTSTONE	5500 / 5247	5527 / 5271	
LIME/SHALE	5527 / 5271	5678 / 5410	
NEEDMORE SHALE	5678 / 5410	5740 / 5466	
HUNTERSVILLE	5740 / 5466	5800 / 5570	
SHALE	5800 / 5570	5840 / 5557	
1 ST ORISKANY	5840 / 5557	5920 / 5630	
2 ND ORISKANY	5920 / 5630	6007 / 5708	
3 RD ORISKANY	6007 / 5708	6082' / 5752' TD	

APR 05 1992

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 SECTION OF OIL AND GAS

API:
 47-075-00024 P

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE IN TRIPLICATE, one copy mailed to the Division, one copy to be retained by the Well Operator and the third copy (and extra copies if required) should be mailed to each coal operator at their Respective addresses.

Farm name: US Dept. of Interior
 Operator Well No.: USA S-1
 LOCATION: Elevation: 3855' Quadrangle: Thornwood
 District: Greenbank County: Pocahontas
 Latitude: 10,403' feet South of 38° DEG. 32' MIN. 30" SEC.
 Longitude: 8,254' feet West of 79° DEG. 40' MIN. 0" SEC.

Well Type: OIL GAS
 Company: Cabot Oil & Gas Corp. Coal Operator _____
 900 Lee Street, E. Ste. 500 or Owner _____
 Charleston, WV 25301
 Agent: John W. Abshire Coal Operator _____
 or Leasee _____

Permit Issued: Verbal Plugging Continuous

AFFIDAVIT

STATE OF WEST VIRGINIA,

County of Kanawha ss: Alex Sicilia and Lee Hornsby being

First duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by the above named well operator, and participated in the work of plugging and filling the above well and filling the above well, and Craig Duckworth Oil and Gas Inspector representing the Director, say that said work was commenced on the 20rd day of November 20 01, and that the well was plugged and filled in the following manner:

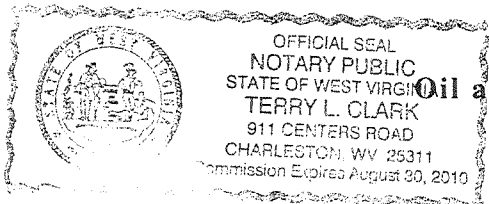
TYPE	FROM	TO	PIPE REMOVED	LEFT
Gel	6060'	6040'		
Cement - Class A	6040'	5700'	400' of 9-5/8"	19' of 20"
Gel	5700'	2800'		
Cement - Class A	2800'	2498'	2986' of 7"	518' of 13 3/8"
Gel	2498'	2365'		
Cement - Class A	2365'	2229'		2118' of 9-5/8"
Gel	2229'	450'		(from 400'-2518')
Cement - Class A	450'	285'		
Gel	285'	120'		
Cement	surface	120'		

Description of monument: Buried API plate (BLM.Forest Service request)
 and that the work of plugging and filling said well was completed on the 27th day of November, 20 01
 And further deponents saith not. W. Sicilia

Sworn and subscribe before me this 15th day of January, 20 02
 My commission expires: August 30, 2010

Terry L. Clark
 Notary Public
Craig Duckworth

Oil and Gas Inspector:



FEB 01 2002

POCA 0024-P

WR-38
 7-Nov-01
 WV Department of Environmental Protection
 RECEIVED
 Office of Oil & Gas
 JAN 24 2002
 WV Department of Environmental Protection