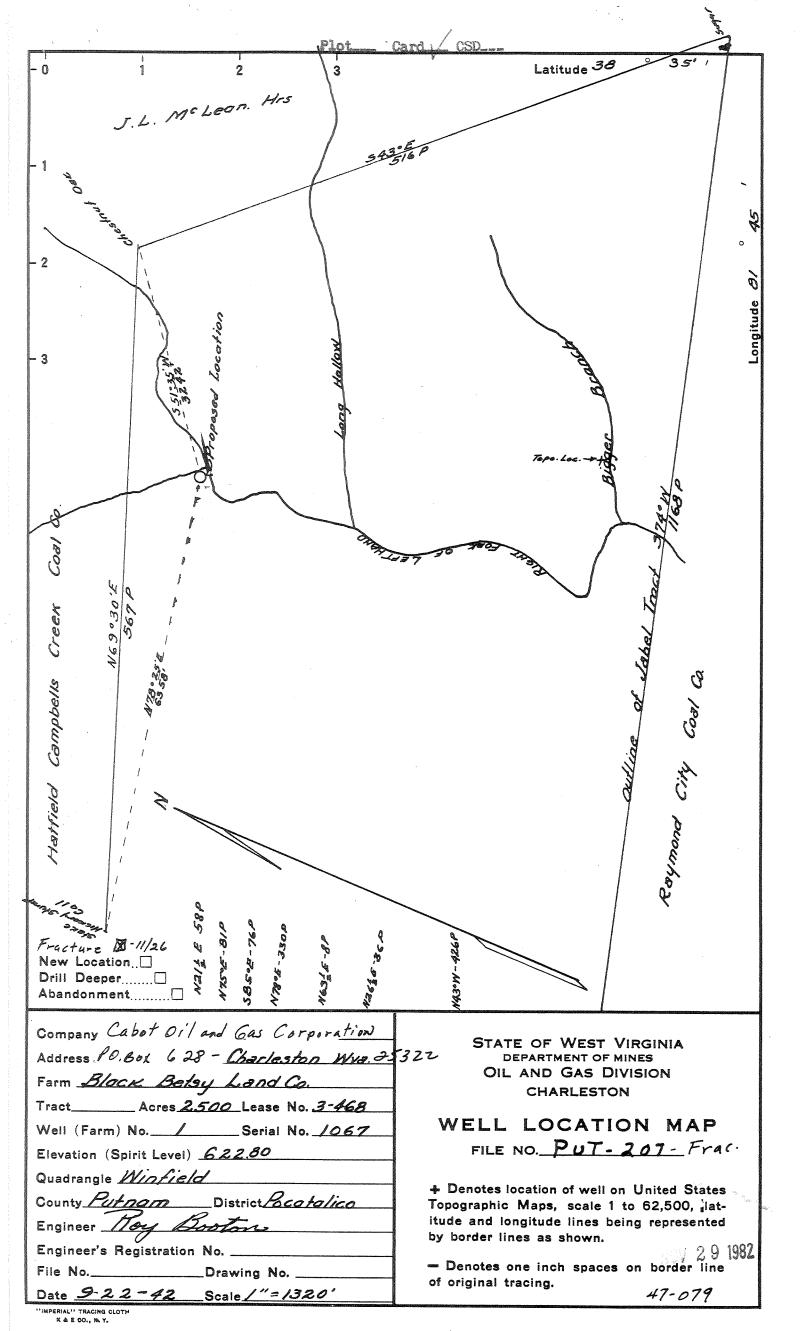
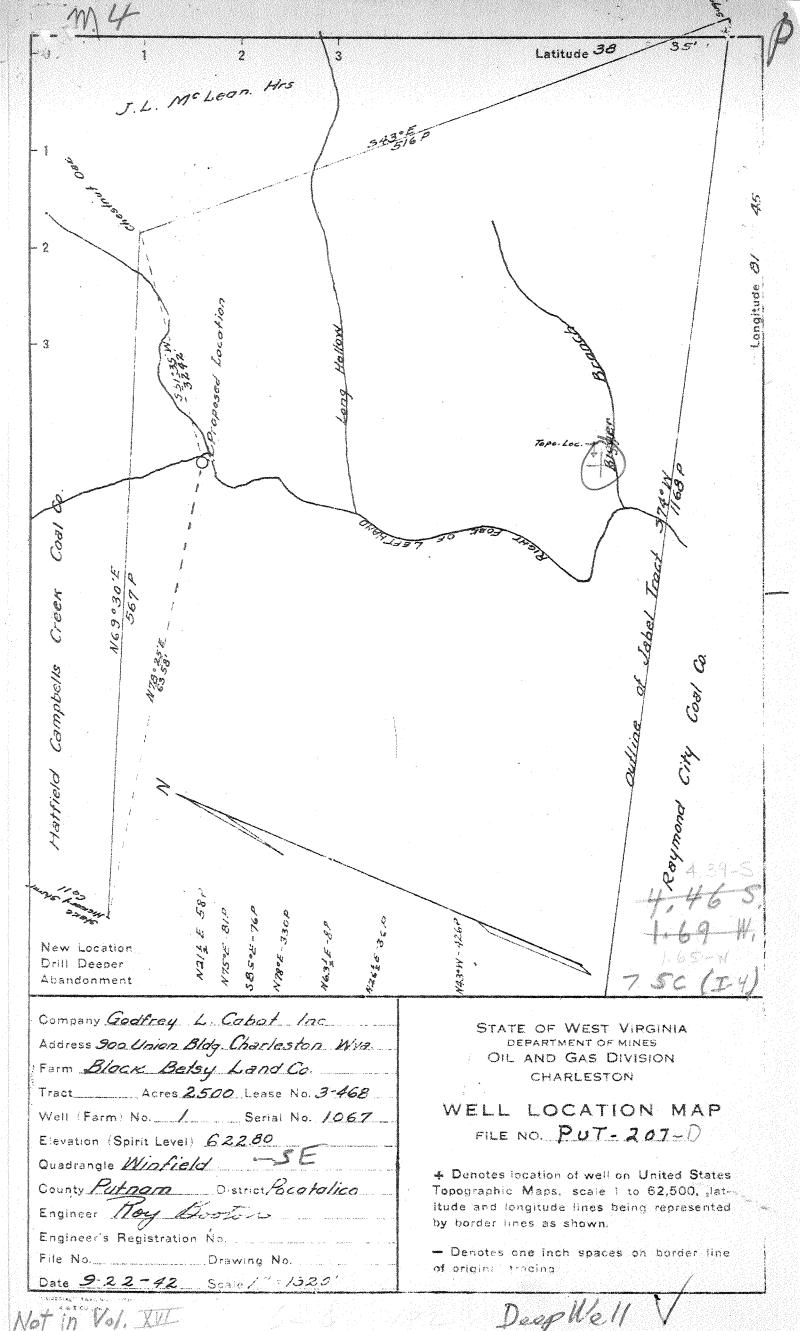
6-6 Elk-Pora (Sis





WEST VIRGINIA DEPARTMENT OF MINES OIL & GAS DIVISION WELL RECORD

```
Permit No. Put 207
                                                                       Gas Well
  Winfield Quad.
                                                                  CASING & TUBING
  Company
                                                               20" 21 21
13 3/8 460 460
                            Godfrey L. Cabot, Inc.
 Address
                            Charleston, W. Va.
                           Black Betsey Coal Co. Acres - 103 1525 1525 1690 1690
 Farm
 Location
                                          Elev. 623
 Well No
                          Pocatalico Putnam County
 District
                                                              Bottom joint welded.
 Surface
                                                              E.W. Line pipe as
 Mineral
                                                              tubing.
 Commenced
                           Oct. 5,1942
Oct. 30,1942
 Completed
                                                              10\frac{3}{4} x12" casing shoe
 Date shot
                           Acidizing-11-2-42;11-14-42
                                                              Tubed and shut in
                           2000 Gals. Depth 1616 to 1675 11-2-42
 Flow
                           B. Acidizing 622 M l hr. after blowing
                           After acidizing 232 M (1 day A.A.) Gas anchor Packer
 Rock Pressure
                           750 lbs. 15 hrs. Big Lime
                                                               3 \times 11\frac{1}{2} \times 7'' \times 16''
 Water
                           13091
                                                               Depth 1600, Anchor 3"
                                                              Perf. top 1662 1690
1681 1690
 Sand
                                    20
 White Slate
                           20
                                   75
 Red Rock
                           75
 Sand
                           150
                                   165
 Red Rock
                           165
                                   240
 White Slate
                           240
                                   260
 Red Rock
                           260
                                   275
 White Slate
                           275
                                   290
 Sand
                           290
                                   $20
 Red Rock
                           320
                                   365
 Slate, Thite
                           365
                                   410
 Sand
                           410
                                   495
 Slate, White
                          495
                                   536
 Sand, White
                          536
                                   548
Coal
                          548
                                   552~
 White Slate
                           552
                                  625
 Lime
                           625
                                   645
 White Slate
                           645
                                   701
 Sand
                          701
                                   835
 Slate & Shells
                          835
                                  900
 Sand
                          900
                                  935
 Slate, Black
                          9 35
                                  950
                        950
Lime, Shells & Slate
                                   1160
 Sand
                          1160
                                   1171
Slate & Shells
                          1171
                                  1238
Sand Sales
                          1238
                                  1520
>Slate - P. Carre
                          1520
                                  1526
Big Lime
                                  1790
                          1526
TOTAL DEPTH
                                   1790
GAUGES
10-26-42 1636-38
                         Gas no Gauge at well
           1652
                          Gas. No Gauge at well
          1663
                          445M
Shut in for rock pressure test.
10-29-42 15 hr. R.P. 750#
10-30-42
           1666 557 M
           1667 504 M Probably not blown down
           1675 474 M
           1697 T.D. 474 M
```

WEST VIRGINIA DEPARTMENT OF MINES OIL & GAS DIVISION WELLRECORD

Permit No. Put 207 D Winfield Quad.		Gas Well CASING & TUBING
Company Address Farm Location	Godfrey L. Cabot, Inc. Charleston, W.Va. Black Botsey Land Company Acres	8" 24# 1878 1878 7" 24# 4570 4570
Well No. District Commenced Completed	1-serial 1067 Elev. 623 Pocatalico Putnam County July 28:1952 Sept. 22:1952	B.H.Packer and Screw Down Packer at 1730
Volume Rock Pressure Date shot	4,700 MCF 30 min after shot	B.H.Packer at 4570! ts.
Water	1785° H.F.;	See original well record for other casing.

DRILLED DEEPER

Deepening	started	at	16913
-----------	---------	----	-------

Big Lime	1526	1740		
Big Injun	1740	1795		
Slate	1795	1817		
Broken Lime	1817	1852		
Lime	1842	1932		
Slate & Shells	1932	2189		
Brown Shalo	2189	2211		
Berea	2211	2225		
Slate & Shells	2225	3152		
Brown Shale -	3152	3231		
Slate & Sholls	3231	3415		
Brown Shale - 813	3415	3518		
Slate & Shells	351 8	3690		
Brown Shalo	3690	3753		
White Slate	3753	3812		
Brown Shale	3812	389 5	t com	11653
Slate & Shells-818	3895	4054	4597	1 22
Brown Shale	4054	4080	(Control of the second s
White Slate	4080	4327	and the second s	-U030
Brown Shale	4327	45487	The state of the s	1 200
Corniferous	4547	4653	J. Francisco	
Oriskany	4653			
TeDo		4674		,
Gas 3430 56 MCF		A CONTRACTOR		
Gas 3741 increased t	o 76 MCF	The Could be a second		
Gas 4665-4668; 2,992	MCF	" thoolee with 3500"		

Producing Sand Record Oriskany 4665 to 4668 2,992 MCF

7:-35 (Rev d-oi) AUG 2 2 1984

nte of Mest Nirginia Well No.

Bepartment of Mines

Date

Operator's Black Betsy

August 14, 1984

API No. 47 -079 - 0207-FRAC

OIL & GAS DIVISION

Gil and Cas Zivision

DEPT. OF MINES
WELL OPERATOR'S REPORT

White Lines	(If "Gas," Production	1 XX/ Undergrou	nd Storag	e/ Deer	/ Sha	1104 ^{XX} /)
LOCATION:	Elevation: 622.80	Watershed He	izer Creel	k		
	District: Pocatalico	County Putna	m	Quadrangle	<u>winfiel</u>	1
		-				
Cabo	ot Oil & Gas Corporation	of WV				
**************************************	628, Charleston, WV 25	Control Contro	Casing	Used in	Left	Cement
DESIGNATED	AGENT Robert E. Horrell		Tubing	Drilling	in Well	fill up Cu. ft.
ADDRESS Box	628, Charleston, WV 25		Size		٠	
SURFACE OWN	P. Benjamin Grosscup. NERP. Benjamin Grosscup.	, ur., a	20-16 Cond.			
NDDRESS 37	Woodland Ave., Greensbu	urg, PA 15601	13-10"			
INERAL RIC	GHIS OWNER Cabot 0il & (Gas Corp. of WV	9 5/8			
ADDRESS BOX	628, Charleston, WV 25	5322	8 5/8			
oil and gas	5 INSPECTOR FOR THIS W	- And and the Control of the Control	7 -	SOUREZE C	emented (ee details
o1comb	ADDRESS RR #1, Box 28		5 1/2	1340026 0	Lincificed (Les decarrs
PERMIT ISSU	JED 5/22/84	25523				
ORKOVER XXIIIXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			4 1/2			
ORKOVER C	OMPLETED 8/2/84		1 1/2	3823.00	3823.00	
	BLE: PLUGGING OF DRY I		1 1/2		3023.00	
CONTINUOUS REWORKING.	PROGRESSION FROM DRILL VERBAL PERMISSION OB		Liners		·	
M	**************************************		used			
GEOLOGICAL	TARGET FORMATION	Huron Shale		Dep	th 3690-40	080 feet
	-	362 feet R	Cotary XX	/ Cable	**************************************	
	strata depth: Fresh		***************************************	 feet		
	seam depths:	And a served and an additional distribution of the served	**************************************	being min	ed in the	area?
open flow i	About 2011, Employee to play \$2,000 and \$2,0	Managaman Managaman da		,		
	cing formation Devor	nian Shale	200	.	., 2225 1	2010 -
	Initial open flow	- Contraction of the Contraction				
4 nr.	Final open flow					
** - *** *	Time of open flo			•		
	c rock pressure 725	•		ment) afte	<u> h</u> ou	rs shut in
	pplicable due to multi	•		_		a
	d producing formation_					
Gas:	Initial open flow					**************************************
	Final open flow				low	Bbl/d
. ·	Time of open flo				hc	xirs SEP 24
Stati	c rock pressure	psig(surface	measureme	ent) after	hou	rs shut in

hours shut in

DETALLS OF PERFORATED INTERNALS, FRACTURING OR STIPLLIGING, PHISICAL CANKE, 210. RIH w/1-1/2" tbg. and set 7" RBP @ 4540'. Perforated 12 holes from 4055-4058'. Cement 7" w/95 sks. 50/50 poz, Class A w/6# coalite/sk. 6% salt, 2% CaCl2 and 3/4 of 1% D-31. Shot four squeeze perfs @ 4040'. RIH w/128 jts. of 3-1/2" tbg. 3/4 of 1% D-31. Shot four squeeze perfs @ 4040'. RIH w/128 jts. of 3-1/2" tbg and 7" cement retainer. Retainer set @ 4007'. Pumped 5 bbls. of gelled water and 105 sks. 50/50 poz, Class A 10% salt. 3% CaCl2, 3/4 of 1% D-31. R/U McCullough and shot 4 squeeze perfs @ 3705'. RIH w/117 jts. 3-1/2" tbg. and set 7" cement retainer @ 3664'. Pumped thru 3-1/2" tbg. 8 bbls. gelled H20 and 62 sks. 50/50 poz, Class A, 10% salt, 2% CaCl2 and 0.75% D-31. Shot 4 squeeze perfs @ 3646'. R/U B. J. Hughes. Pumped 42 sks. 50/50 poz, Class A 10% salt, 3% CaCl2, 0.75% D-31. Drilled out cement and retainer @ 3664'. Milling on cement retainer @ 4024'. Twisted off - left 6-1/2 bladed mill and 4DC in hole - could not recover top of fish @ 3884'. Oriskany plugged and abandoned. Perforated w/3-1/8" Dyna jet @ 3430', 3432', 3448', 3450', 3459'.

WELL LOG WOLK OVER TO

		•	3616-3860
FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
(10 holes). RIH w/7" RTTS and w/24,000 SCF N2 @ 600 psi. Pu and B/D @ 3010 psi. ISIP 1390 SCF N2 @ 32,000 SCF/min. Foam of 20740 sand as follows: 250 2#/gal., 6,000 gals. @ 2-1/2#/bbls. of H2O and acid. Average rate 15,900 SCF/min. ISIP 122 Opened well @ 7:00 p.m. thru 1	111 jts. of mped 500 gal #, after 5 m fraced w/3-D gals. foam gal. Flushe pe foam rate 0#, after 5 /8" choke.	3-1/2" tbg. s. 15% HCL do in 1300#, 1/2" w/440 bb pad, 5,000 g d w/30 bbls. 36 BPM. Aver min 510#, Tripped out o	, 3818-38', 3846', 3853, 3859', Set pkr. @ 3387'. Loaded backside wn 3-1/2"tbg. Loaded 3-1/2" w/N2 15 min 1110#. Pumped 1,000,000 ls. of 75 quality foam and 300 sks. als. 20/40 @ 1#/gal., 5,000 gals. @ foam and 15 bbls. H ₂ O. Total 160 age H ₂ O rate 9 BPM. Average N ₂ 10 min 450#; 15 min 420#. f hole w/3-1/2" tbg. Ran 113 jts. 3838' K.B. Seating nipple set @

See attached original well record.

(Attach separate sheets as necessary)

CABOT OIL & GAS CORPORATION OF WEST VIRGINIA

Well Operator best & Donell

Date: Robert E. Horrell

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

WELL RECORD

Map Square Lot No. Warrant No. 12 12-29 M 1057 OPERATING DISTRICT SERIAL NO. No. 1 FARM Black Betsey Land Co. LEASE NO. STATE W. Va. TAX DISTRICT Pocatalico COUNTY Pubnem DRILLING COMPLETED DRILLING COMMENCED Seg note CONTRACTOR PRODUCING SAND RECORD ROCK PRESSURE RECORD Big Lime Sand, from 1636 to 1662 Init. Prod. 154 M. C. F. G Sand 720 lbs., in 15 hrs. ig Lina Sand, from 1,665 to 1,668 Init. Prod. 2,992 M. C. F. G Orishany lbs., in 20 hrs. rickany Sand 1295 Init. Prod. M. C. F. G Sand OPEN FLOW Time, Condition Sand, from to lbs., in hrs. CASING RECORD OPEN FLOW
Time, Condition: Oriskany; 30 Min.A.S. WEIGHT USED IN HOW CASING SET SIZE 10ths Mercury in inch opening 21 21 20" 35.57 Volume 4,700 M. C. F. 85 85 16 63.72 24 HOUR PRODUCTION TEST 700 460 13" 1.8 AFTER TUBING 1557 35.75 1557 10 1370 EH Packer & Screw Down Packer O Line Pressure 8 M. C. F. 24 1573 Bbls. Oil in 24 Hours L57d B.H.Packer. 4570 711 24 TUBED AND SHUT IN Date Packer, Size Size Anchor Set. Depth SHOOTING RECORD Add Shot with 40 qts. from 4653 to 4674 Date 9-23-52 Bottom BOTTOM STEEL LINE HARD OR OIL. GAS OR WATER FOUND REMARKS Perf. Top Bottom ELEVATION: COLOR TOP FORMATION NOTE: Drilled from surface 20 0 to 1690;10/5/12 to 13/33/42, nd 75 20 tite Slate by C. L. Samte. od yook 150 75 165 150 ind Drilled from 1690 to 4674 165 240 by W. L. Heeter, Spencer, W. 7/28/52 to 9/22/52. d Rock 260 21,0 Lite Slate 275 260 ied Rock 290 275 mite Slate Big Line acidized with 2000 320 290 iand gals. O.F. one day after 365 320 acidizing 232 Mer. Big Line .d Rock وليا 365 depleted and Big Lime ri hts Elate, White 495 山口 Band transferred to United Fuel Slate, White Sand, White 495 536 for storage purposes. 536 548 548 55**2** 62**5** Coal 552 mite Slate 625 645 Ling 645 701 Thite Slate AUG 2 2 1984 835 701 Ernd 835 900 Slate & Shells OIL & GAS DIVISION 935 900 Sand DEPT. OF MINES 935 950 Slate, Black 1160 Line, Shells & Slate 950 1160 Sand 1238 1171 Slate & Shells 1520 1379 Water! 1238 Sand 1526 1520 Slate 1526 1690 Sig Line ななないない 1526 1740 Pig Lino 1705 Holo full. Mater 1740 1795 Big Injun 1317 1795 Clate 1842 1317 Oroken Lime 1912 1932 Lime 2189 1932 Sinte & Sholls 2169 2211 Drown Shale OPERATING DIST. SERIAL NO. 1367 FARM Black Betsey

RIAL NO 1037F	'ARMii	Lack Be	tscy		NO	OPER TOWN	ATING DIS	T. LOT NO. WARRANT NO.
FORMATION	COLOR	TOP	воттом	STEEL LINE MEASURE- MENTS	MARD OR SOFT	OIL. GAS OR WATER	DEPTH FOUND	REMARKS
rea ate & Shells orm Shale ate & Shells own Shale ate & Shell corn Shale ite Slate corn Shale ate & Shells rown Shale ite Slate ite Slate rown Shale ite Slate		2211 2225 3152 3231 3415 3518 3690 3753 3812 3895 4054 4000	2225 3152 3231 3415 3518 3690 3753 3812 3895 4054 4080 4327	MENTE		Gns Gns	31;30 371;1	56 Nof. Increa ed to 76 Mcf.
cown Shale		4545	3653	4672		Gas	4665-1	368; 2,992 Mcf.
riskany		1,553	կ67կ	4012				
otal Pepth		engangar enganda rota	- Commence of the Commence of	de la companya de la	gy	ennominary), a social vita soc		
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PROVED ____

DATE_

FOREMAN

1)	Date:	March 23	19_	84	_
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2) Operator's Well No. Black Betsy #1

3) API Well No. 47 079 0207-FRAC State County Permit

File

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

B (If "Gas") Production Underground storage Deep Shallow X) LOCATION: Elevation 522,801	4) WELL TY	PE: A C	oil/	Gas	<u>X/</u>				
Survice: Pocatallico County: Putnam Oudrangle: Winfield NetLoPERATOR Cabot 0il & Gas Corp. of WV Address P.O. Box 628 Charleston, WV 25322 Soll & Gas Inspector To BE NOTIFIED Name Jerry Holcomb Address Box 5 B Indore WV 25111 587-7299 PROPOSED WELL WORK: Drill John Address P.O. Box 628 Indore WV 25111 587-7299 PROPOSED WELL WORK: Drill John Address WINKOWN Address Box 5 B Indore WV 25111 587-7299 Prefronte new formation X 1 W 1 W 25 GAS DIVIS Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Other physical change in well (specify) Isolate Oriskany with Alubing and Packer Oriskany Well oriskany with Alubing Oriskany original		B (1	f "Gas", Produ	ction		/ Underground	d storage	/ Deep	/ ShallowX/)
Address P.O. BOX 628 Charleston, WV 25322 8) Oll & GAS INSPECTOR TO BE NOTIFIED Name JEPTY HOLORID Address BOX 5.8 Indore, WV 25111 587-7299 (b) PROPOSED WELL WORK: Drill Drill deeper, Perforate new formation With Address BOX 5.8 Indore, WV 25111 587-7299 (c) PROPOSED WELL WORK: Drill Drill deeper, Perforate new formation With Address With Alubing and Packer (d) PROPOSED WELL WORK: Drill Drill deeper, Perforate new formation With Address With Alubing and Packer (e) PROPOSED WELL WORK: Drill Drill deeper, Perforate new formation With Address With Alubing and Packer (e) PROPOSED WELL WORK: Drill Drill deeper, Perforate new formation With Address With Alubing and Packer (e) PROPOSED WELL WORK: Drill Drill deeper, Perforate new formation With Address With Alubing and Packer (e) PROPOSED WELL WORK: Drill Drill deeper, Perforate new formation With Address With Alubing and Packer (e) PROPOSED WELL WORK: Drill Drill deeper, Perforate new formation With Address With Alubing and Packer (e) PROPOSED WELL WORK: Drill With Address With Alubing and Packer (e) PROPOSED WELL WORK: Drill With Address With Alubing and Packer (e) PROPOSED WELL WORK: With Alubing and Packer (c) PROPOSED WELL WORK: WIT	5) LOCATIO								,
6) WELL OPERATOR Cabot 011 & Gas Corp. of W Address P.O. Box 628 Charleston, WV 25322 6) OIL & GAS INSPECTOR TO BE NOTIFIED Name Jerry Holcomb Address Rox 5 B Indore, WV 25111 587-7299 (o) PROPOSED WELL WORK: Drill Drill deeper Redrill Stimulate X 011 & GAS DIVIS Plug off old formation. Perforate new formation X INFO PET OF MIN Other physical change in well (specify) Isolate Orriskany with Aubing and Packer 1) GEOLOGICAL TARGET FORMATION. Huron Shale 1) Estimated depth of completed well, 4674 feet 1) Approximate truta depths: Fresh. N/A feet: salt, 1309 feet. 1) Approximate truta depths: Fresh. N/A feet salt feet. N/A feet. Salt feet. Salt feet. Sal								Quadrangle: _	Winfield
Charleston, WV 25322 Signature of the continued of the c	6) WELL OF	PERATOR_	<u>Cabot 0il</u>	<u>& Gas</u>	Corp	<u>of W</u> V	7) DESIGNATE	dagent <u>Rober</u>	t E. Horrell
Solit & GAS INSPECTOR TO BE NOTIFIED SHELLING CONTRACTOR: Name UNKNOWN Address Rox 5 B	Addres	s <u>P.</u> () <u> Box 628</u>		-		Address		
Solit & GAS INSPECTOR TO BE NOTIFIED SHELLING CONTRACTOR: Name UNKNOWN Address Rox 5 B	•	_Cha	ırlestőň,	WV 25	3 <u>22 *</u>	1 00 194 y	សន្តិសិលា។ ជំ ស្កាស ិសា 	Charleston,	WATE 6025 11 V/ 5
Address BOX 5 R Indore WV 25111 587-7299 O) PROPOSED WELL WORK: Drill Drill deeper Redrill Stimulate X OIJ & GAS DIVIS Plug off old formation Perforate new formation X DEPT OF MILE Plug off old formation Perforate new formation X DEPT OF MILE Plug off old formation Perforate new formation X DEPT OF MILE Plug off old formation Perforate new formation X DEPT OF MILE Plug off old formation Perforate new formation X DEPT OF MILE Plug off old formation Perforate new formation X DEPT OF MILE Plug off old formation Perforate new formation X DEPT OF MILE Plug off old formation Perforate new formation X DEPT OF MILE Plug off old formation Perforate new formation X DEPT OF MILE Plug off old formation Perforate new formation X DEPT OF MILE Plug off old formation Perforate new formation X DEPT OF MILE Plug off old formation Perforate new formation X DEPT OF MILE Plug off old formation Perforate new formation X DEPT OF MILE Peet Salt 1309 Feet Peet Salt 1309 Feet PACKERS Peet Salt 1309 Feet PACKERS PACKER	8) OIL & GA	AS INSPEC	TOR TO BE NO	TIFIED				ONTRACTOR:	14 Pagarit
Indore, WV 25111 587-7299 O PROPOSED WELL WORK: Drill Drill Drill Stimulate X Olj. & GAS DIVIS	Name	<u>Jerry F</u>	lolcomb				Name <u> </u>	<u>NKNOWN</u>	
PROPOSED WELL WORK: Drill Drill deeper Redrill Stimulate X OIL & GAS DIVIS Plus off old formation. Perforate new formation X I DEPT of Mile Other physical change in well (specify) Lsolate Oriskany with Alubing and Packer 1) GEOLOGICAL TARGET FORMATION, Human Shale 12) Estimated depth of completed well, 46.74 feet sailt, 1309 feet. 13) Approximate trate depths: Fresh, N/A feet; sailt, 1309 feet. 14) Approximate trate depths: Fresh, N/A feet; sailt, 1309 feet. 15) CASINO AND TUBING PROGRAM WORKOVER CASINO AND TUBING PROGRAM WORK	Addres	s <u>B</u> C	x 5 B		· · · · · · · · · · · · · · · · · · ·		Address		MAR 2 7 19 194
Plug off old formation. Other physical change in well (specify) Isolate Oriskany with Aubing and Packer Other physical change in well (specify) Isolate Oriskany with Aubing and Packer 1) GEOLOGICAL TARGET FORMATION, Huron Shale 12) Estimated depth of completed well, 4674 feet 13) Approximate trata depths: Fresh, N/A feet; salt, 1309 feet. 14) Approximate coal seam depths: 548 Is coal being mined in the area? Yes No X 50 CASINO AND TUBING PROGRAM WORKOVER SEEDIFICATIONS FOOTAGE INTERVALS Canductor 20 ¹¹ 35 PRESENT Canductor PRESENT 21 Ninds Baker Fresh water 16 64 PRESENT 35 Model De-1/2. The water 16 64 PRESENT 460 Sizes 2-324 X 7 ¹¹ Intermediate 10 36 PRESENT 1557 Proposed @ 2-1/2 Intermediate 10 36 PRESENT 1557 Proposed @ 2-1/2 Intermediate 10 36 PRESENT 4570 Intermediate 10 36 PRESENT 4570 Depths set 4075 Proposed @ 2-1/2 Intermediate 10 36 PRESENT 4570 Depths set 4075 PRESENT 4570 Date Date Intermediate 10 PRESENT 4570 Date Date District Oil and Gas Inspector, Refer to o. 8) Price to construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the prope strict oil and gas inspector 24 hours before actual permitted work has commenced.) May 22, 1986 PRESENT PRESENT 10 Addition, the well operator or his contractor shall notify the prope strict oil and gas inspector 24 hours before actual permitted work has commenced.) May 22, 1986 PRESENT PRESENT 10 Addition, the well operator or his contractor shall notify the prope strict oil and gas inspector 24 hours before actual permitted work has commenced.) Proposed work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and prosecuted with due diligence works have been actual permitted work has commenced prior to that date and prosecuted with due diligence works have been accurate and prosecuted with due diligence works and properties and properties with the permitted work is commenced prior to that date and prosecuted		_Ir	ndore, WV	25111	587-	<u> 7299 </u>			
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Plate Cosing Float		May	22, 1986						
Bond: Agent: Plat: Casing Fee	ermit expires _					unless we	ll work is commenced	prior to that date and	prosecuted with due diligence.
Bond: Agent: Plat: Casing Fee				T					
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Administrator, Office of Oil and Gas	OTE. V		this manualt	1 المماد الم		9	Adm	inistrator, Office of C	il and Gas

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

OFFICE	Ŧ	TOT	ONIT	W
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PERMIT MODIFICATIONS AND CONDITIONS (IF ANY) TO THE PROPOSED WELL WORK PROPOSED WORK ORDER

**	1	1		0	9	ing.	鰀	1	1	

Reason:

(29) Squeeza cament 7" through Huron Shale (50' below to 200' above)

- 3) Perforate & Stimulate Huron
- 6) Run tubing & packer
- 5) Produce Oriskany & Huron separately

OFFICE USE ONLY

This part of Form IV-2(b) is to record the dates of certain occurrences and any follow-up inspections.

			ing routew up inspec	
	te			Date(s)
Application received		Follow-up ins	pection(s)	
Well work started		9 9	,,	
Completion of the drilling				
process (Augustus and Augustus Augustus)		9.9	9.5	
Well Record received		,,	. 99	
Reclamation completed		5 9	> >	
OTHER INSPECTIONS				
				%
Reason:				J. M. 11 . 1 . 1 . 1 . 1

DRILLING CONTRACTOR:



)	Date:	ve	mb	er	16			, 1
)	Operator's	10.78		1-		-	43	

Well No. 47

3) API Well No. 47 County Permit

STATE OF WEST VIRGINIA DEPARTMENT OF MINES, OH, AND GAS DIVISION

				DI	EPART	MENT O	F MINES, OIL A	ND GAS DIVISION	ON		
	Unknown	1		Single residence	OIL A	AND GAS	WELL PERMIT	APPLICATION			
4)	WELL TYPE:	A Oil	V2/13.1	/ Gas _	XX						
		B (If	'Gas'', P	roduction _			Underground ste		_/ Deep	/ Shallow	/)
5)	LOCATION:		ition:		2.80			deizer Cree			
		Distr		Pocatali		2000	County:	itnam		Winfield	A.Ph. St. St.
6)	WELL OPER	ATOR_	BAN	Oil & C	अवस्त्र (LOED.	11	DESIGNATED	TAOLITI	20000000000000000000000000000000000000	PENAL
	Address	Char	lestor	100	2532	2		Address	Charleston		22
	OIL & CAS								H. Baird	Whitehead	to dis
7)	OIL & GAS ROYALTY O	WNER	Cabot	coil a	Gas	Corp.	12	COAL OPERA	TOP NOT O		
	Address	P.O.	Вож 6					Address	TOR		
		Char	lestor	1, WV 2	2532	2		71441035		n bosenten	
	Acreage	2,50					13	COAL OWNER	R(S) WITH DECLA	RATION ON RI	ECORD:
8)	SURFACE OV	VNER_	Benjan	in Gros	sscuj	9		Name	V. Cunningh		
	Address	BOX						Address	431 McKinl	ey Ave.	
				, OH 4	4404(J			Charleston	, WV 2531	.4
	Acreage	2,49	0,0					Name T	THE STATE OF THE S		
9)	FIELD SALE	(IF MAD	E) TO:				INTE	Address	13 111		
	Address		38/2				- ///		3111		
								I be a second of the second of	WITH DECLARA	TION ON RECO	ORD:
(0)	OIL & GAS II	NSPECTO	in the San White	the second second	D			Name 2 198	2 M/A		
	Name	Ban .		rboursv	2533-	b - 6757 1	25504	Address		100 St.	
	Address	304-	736-49		The state of the s		OII	& GAS DIVIS	ION		
6)	DRODOGED I				D ::: 1					W.W.	
3)	PROPOSED V	WORK:				The late and			ture or stimulate_		
								w formation			
6	CEOI OCICA	TAROT		hysical chan			y) wn Shale		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
0)	GEOLOGICA					500					
	17) Estimated18) Approxim					N/A	feet	alt 1309	6		
				# 45 A 40 B	,			,	feet.	,	
	19) Approxim						Is coal	being mined in the	area? Yes	/ No	311
(0)	CASING AND	TUBING	G PROGI	RAM	(WOR	KOVER)					
	CASING OR		SI	PECIFICATION	NS	1	FOOTAGE	INTERVALS	CEMENT FILL-UP	PACKE	RS
	TUBING TYPE	Size	Grade	Weight per ft.		Used	For drilling	Left in well	OR SACKS (Cubic feet)		
-	Conductor	20"	- Crude	35	110#	0.504	. o. arming	21	(Cubic leet)	Kinds	
-	Fresh water	16	55000	64				85		Killus	
-	Coal	1.3		48				4 60		Sizes	
1	Intermediate	10		36				1557			
	Production	8		24				1878		Depths set	
	Tubing	7		24				4570			
1	Liners									Perforations:	
T	ubing	2"		4.6				4400	PROPOSED	Тор	Bottom
			N. A.							- 10 M 10	198
77.00									A SPECIAL PROPERTY.		
1)	EXTRACTION	RIGHT	S						And the second second	and training them	
	Check and prov	vide one o	of the foll	owing:							
	Included	is the lea	ise or leas	ses or other					right to extract oil	or gas.	
	The requ	uirement o	of Code 2				e reverse side for				
2)	ROYALTY PR			n n n l	1 .	. 1		INDEAD WAS ARE			
	similar provision	n for cor	nnensatio	narket the oi	or ga	the oil or	on a lease or other	continuing contract	et or contracts provider related to the volume	ing for flat well i	oyalty or any
	produced or ma				nel of	the off of	gas in place which	n is not innerently	related to the volu	the of on or gas	so extracted,
f th					eeded.	If the answ	ver is Yes, you m	ay use Affidavit Fo	orm IV-60.		
3)	Required Copie	es (See rev	erse side.)							
24)									y registered mail or		
					I lessee	on or bef	ore the day of the	mailing or deliver	ry of this Permit Ap	plication to the l	Department of
	Mines at Char				11	1		0.	1 + 12/11	day 10	
1	Notary:	POS	A 4 1	· Escot	7114	2/			which the first		
Ī	My Commission	Expires	1307 100	11/1/1	175	des		Its:	rict Product	lion Super	Intunden
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						DI	RILLING PEF	Move			19
eri	nit number	alson 260							Da	te	152
his	permit covering	the well	operator	and well lo	cation	shown hel	ow is evidence of	nermission grante	d to drill in accorda		inent legal re
									given to the District		
(Re	efer to No. 10) Pi	rior to the	construct	ion of roads	s, locati	ions and pi	ts for any permitt	ed work.In addition	, the well operator o		
rop	per district oil ar	nd gas ins	pector 24	nours befor	re actua	al permitte	d work has comn	nenced.)	No.		
poor	nit expires						unless dril	ing is commenced	prior to that date and	prosecuted with	due diligence
I	Bond:	Agent	:	Plat:		Casing	Fee		A) A		
								Ad	ministrator, Office of	f Oil and Gas	
0								Au	ministrator, Office o	on and Gas	

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