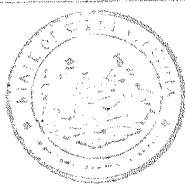


FILE NO. _____
 DRAWING NO. _____
 SCALE 1"=1320'
 MINIMUM DEGREE OF ACCURACY _____
 PROVEN SOURCE OF ELEVATION _____

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.
 (SIGNATURE) Sam J. Matthews
 R.P.E. _____ L.L.S. 217

PLACE SEAL HERE

(*) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6 (8-78)



DATE MAR 25, 19 80
 OPERATOR'S WELL NO. GW-293 (A-50)
 API WELL NO. _____
47 - 017 - 2141
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL _____ GAS _____ LIQUID INJECTION X WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION _____ STORAGE _____ DEEP _____ SHALLOW X
 LOCATION: ELEVATION 1095' WATER SHED LEFT EK. OF ARNOLDS CK
 DISTRICT WEST UNION COUNTY ODDRIIDGE
 QUADRANGLE OXFORD 7 1/2' Holbrook NE 15
 SURFACE OWNER _____ ACREAGE _____
 OIL & GAS ROYALTY OWNER MAXWELL 'A' LEASE ACREAGE _____
 LEASE NO. _____
 PROPOSED WORK: DRILL _____ CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
F.E.R.C. FILING
 PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION _____ ESTIMATED DEPTH _____
 WELL OPERATOR CITIES SERVICE Co DESIGNATED AGENT SAM J. MATTHEWS
 ADDRESS PO BX 873 ADDRESS PO BX 873
CHARLESTON WV CHARLESTON WV

6-6 Straight Fork-Bluestone Creek (133)

Reconditioned 5-28-58 to 6-18-58

Gas was gauging 42MCF-ripped pipe and pulled 3" tubing - 7" casing was not leaking. 78# 24 hours-80# 42 hours junked 4 pieces 3-1/2" tubing 77'2" and replaced with 78'9" -total tubing now in well 2549'2"

Bridged hole- top of bridge 1900'

Set packer at 1845' in Big Lime-gas would not gauge in 1"-1 hour pressure 30# - 24 hours 215# - 72 hours 230#.

6-9-58 Fractured the Big Injun. Pumped in 54 barrels of kerosene to break down formation. Stated with 2000# -increased to 2500#-broke to 1700#. Gelled 2,000 gallons kerosene and 2800# 20-40 sand. Maximum pressure 1900#-minimum 1600#. Pumped in 38 barrels flush at 1600# to 2000#. Final pressure 1600#. shut in on 1100#.

6-12-58 Released packer and pulled tubing.

6-18-58 Re-ran 3" tubing and set Parmaco Special Gas Anchor Packer at approx. 1840'

Dodd 2141

300'	Lime Rock	330	343	15
350'	Sand	345	360	15
360'	Slate	360	370	10
370'	Red Rock	370	400	30
400'	Lime	400	410	10
410'	Slate	410	490	80
490'	Lime	490	550	60
550'	Slate	550	560	10
560'	Red Rock	560	580	20
580'	Lime Gritty	580	596	16
596'	Slate	596	610	14
610'	Red Rock	610	642	32
642'	Lime Broken	642	650	8
650'	Red Rock	650	700	50
700'	Lime	700	710	10
710'	Slate	710	720	10
720'	Red Rock	720	745	25
745'	Lime	745	770	25
770'	Shale	770	800	30
800'	Red Rock	800	845	45
845'	Lime	845	865	20
865'	Shale	865	880	15
880'	Slate	880	890	10
890'	Lime	890	900	10
900'	Pink Rock	900	940	40
940'	Lime	940	945	5
945'	Slate	945	995	50
995'	Little Dunkard Sand	995	1000	5
1000'	Slate	1000	1038	38
1038'	Lime Broken	1038	1058	20
1058'	Slate	1058	1105	47
1105'	Big Dunkard Sand	1105	1120	15
1120'	Shale	1120	1185	65
1185'	Gas Sand	1185	1200	15
1200'	Shale	1200	1220	20
1220'	Lime Rock Gritty	1220	1250	30
1250'	Shale	1250	1300	50
1300'	Lime	1300	1315	15
1315'	Shale	1315	1335	20
1335'	Lime	1335	1380	45
1380'	Shale	1380	1395	15
1395'	Slate & Lime	1395	1415	20
1415'	2nd. Salt Sand	1415	1465	50
1465'	Slate	1465	1500	35
1500'	Lime	1500	1510	10
1510'	Shale	1510	1520	10
1520'	Lime	1520	1535	15
1535'	3rd. Salt Sand	1535	1560	25
1560'	Slate	1560	1590	30
1590'	4th. Salt Sand	1590	1625	35
1625'	Little Gas	1625	1652	27
1652'	Slate	1652	1675	23
1675'	Maxon Sand	1675	1695	20
1695'	Slate	1695	1710	15
1710'	Lime	1710	1713	3
1713'	Slate	1713	1728	15
1728'	Lime	1728	1733	5
1733'	Pink Rock	1733	1765	32
1765'	Little Lime	1765	1770	5
1770'	Pencil Cave	1770	1780	10
1780'	Blue Monday Sand	1780	1783	3
1783'	Slate	1783	1840	57
1840'	Big Lime	1840	1935	95

Big Injun Sand	1840	1935	95
Gas - 8/10 Water in 2" 19 mcf	1890		
Black Slate	1935	1955	20
Blue Lime Stone	1955	2090	135
Canal Sand	2090	2190	100
Slate	2190	2200	10
Lime	2200	2240	40
Slate	2240	2260	20
Lime	2260	2275	15
Slate	2275	2285	10
Lime	2285	2380	95
Thirty Foot Sand	2380	2395	15
Slate	2395	2410	15
Fifty Foot Sand	2410	2423	13
Slate Black	2423	2430	7
White Lime	2430	2460	30
Slate	2460	2477	17
Lime	2477	2495	18
Slate	2495	2498	3
Gordon Stray Sand	2498	2506	8
Slate	2506	2516	10
Gordon Sand - top hard -	2516	2524	8
Gas - 3/8 Million feet	2523	2526	3 Pay
Slate	2523	2526	
Total depth	2526'		

134 m 2520'

FORMATION	COLOR	HARD OR SOFT	No. OF SAMPLE BOTTLE	TOP	BOTTOM	AMOUNT
Oil And Red Rock	RED	Soft		0	13	13
Red Rock & Lime	Red & White	Soft		50	300	250
Lime Rock	Gray & Hard	Hard		300	330	30
Sand	White	Hard		330	345	15
Slate	Black	Soft		345	360	15
Red Rock	Red	Soft		360	370	10
Lime	Gray	Hard		370	400	30
Slate	White	Soft		400	410	10
Lime	Gray	Hard		410	490	80
Slate	Black	Soft		490	550	60
Red Rock	Red	Soft		550	560	10
Lime Grity	White	Hard		560	580	20
Slate	Black	Soft		580	595	15
Red Rock	Red	Soft		595	610	14
Lime Broken	White	S&H		610	642	32
Red Rock	Red	Soft		642	650	8
Lime	White	Hard		650	700	50
Slate	White	Soft		700	710	10
Red Rock	Red	Soft		710	720	10
Lime	White	Hard		720	745	25
Shale	Black	Soft		745	770	25
Red Rock	Red	Soft		770	800	30
Lime	White	Hard		800	845	45
Shale	Black	Soft		845	865	20
Slate	White	Soft		865	880	15
Lime	White	Hard		880	890	10
Pink Rock	Pink	Soft		890	900	10
Lime	Gray	Hard		900	940	40
Slate	Black	Soft		940	945	5
Little Dunkard Sand	White	Hard		945	995	50
Slate	White	Soft		995	1000	5
Lime Broken	White	Soft		1000	1038	38
Slate	Black	Soft		1038	1058	20
Big Dunkard Sand	White	Hard		1058	1105	47
Shale	Black	Soft		1105	1120	15
Gas Sand	Gray	Hard		1120	1185	65
Shale	Black	Soft		1185	1200	15
Lime Rock Grity	Gray	Hard		1200	1220	20
Shale	Black	Soft		1220	1250	30
Lime	White	Hard		1250	1300	50
Shale	Black	Soft		1300	1315	15
Lime	White	Hard		1315	1335	20
Shale	Black	Soft		1335	1380	45
Slate & Lime	H & S	H & S		1380	1395	15
2nd Salt Sand	White	Hard		1395	1415	20
Slate	Black	Soft		1415	1465	50
Lime	Gray	Hard		1465	1500	35
Shale	Black	Soft		1500	1510	10
Lime	White	Hard		1510	1520	10
3rd Salt Sand	White	Hard		1520	1535	15
Slate	Black	Soft		1535	1560	25
4th Salt Sand	White	Hard		1560	1590	30
4th Salt Sand	White	Hard		1590	1590	0
Little Gas	Black	Soft		1578	1625	35
Slate	Black	Soft		1590	1625	35
Maxon Sand	Gray	Hard		1625	1652	27
Slate	White	Soft		1652	1675	23
Lime	White & Grity	Hard		1675	1710	25
Slate	White	Soft		1710	1713	3
Lime	White	Hard		1713	1728	15
Pink Rock	Pink	Soft		1728	1733	5
Little Lime	White	Hard		1733	1765	32
Pencil Cave	Black	Soft		1765	171770	5
Blue Monday Sand	Blue	Hard		1770	1780	10
Slate	Black	SOFT		1780	1783	3
Big Lime	White	Hard		1783	1840	57

017-2141

Log	Material	Hard	1845	1855	Depth
Gas			1890	8/10 Water In 2" Pipe	119 Me f
Slate	Black	Soft	1835	1885	20 feet
Blue	Line Stone	Hard	1955	2000	155 "
Wants	Sand	Hard	2090	2190	100 "
Slate		Soft	2190	2200	10 "
Line		Hard	2200	2240	40 "
Slate		Soft	2240	2260	20 "
Line		Hard	2260	2275	15 "
Slate		Soft	2275	2285	10 "
Line		Hard	2285	2380	95 "
Thirty	Foot Sand	Hard	2380	2395	15 "
Slate		Soft	2395	2410	18 "
Fifty	Foot Sand	Hard	2410	2423	13 "
Slate	Black	Soft	2423	2430	7 "
Line	White	Hard	2430	2460	30 "
Slate		Soft	2460	2477	17 "
Line		Hard	2477	2495	8 1/2 "
Slate		Soft	2495	2498	3 "
Gorden	Stray Sand	Hard	2498	2506	8 "
Slate		Soft	2506	2516	10 "
Gorden	Sand Top	Hard	2516	2524	8 "
Gas	3 1/2 Million Feet		2518	2523	5 Feet Pay
Slate			2523	2526	

TOTAL DEPTH ~~2526~~ 2526

CASING PUT IN WELL 10" 306.7' - 8 1/4 Casing 1089 Feet 6 5/8 - 1827.9'

WELL WAS TUBED WITH 3" TUBING PERFORATION JOINT ON BOTTOM 16 FOOT & 2"

712 Feet Of Anker Below Packer OIL WELL SUPPLY PACKER

WELL WAS TURNED IN THE LINE OCTOBER 1 /1929

STARTED RIGING UP AUGUST 15/1929 COMPLETED DRILLING SEPTEMBER 27/1929

WELL WAS DRILLED BY THE COLUMBINAN . CARBON CO. OF NEW YORK, N.Y.

CONTRACTOR F.S.GREATHOUSE. OF WESTON, WEST, VIRGINIA.

DRILLERS ON WELL O.L.PRATT. OF WESTON, W.VA . & F.S.G.

TOOLDRESSERS GEO. McGAFFICK. " & H.C.KNIGHT. OF WEST UNION W.V.

RECORD COPYED FROM ORIGINAL WELL RECORD BY F.S.GREATHOUSE.

OF HOLE, TOP LOG, STATE UNDER REMARKS, WHEN, HOW, AND BY WHOM PLUGGED.
 STATE UNDER REMARKS ANYTHING OF INTEREST NOT COVERED IN LOG.
 IF SPACE PROVIDED FOR REMARKS IS NOT SUFFICIENT WRITE ON BOTTOM OF LAST SHEET OF LOG.