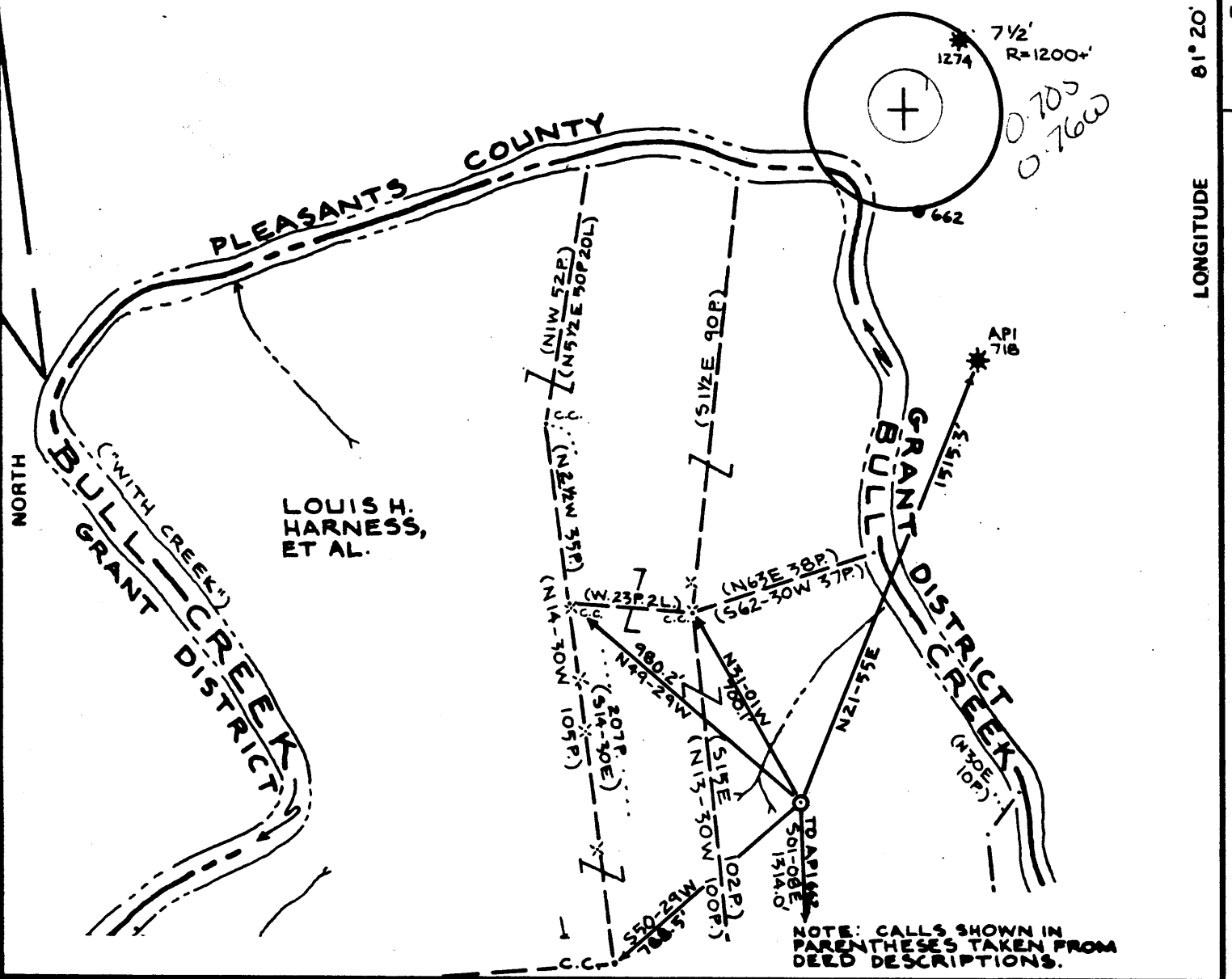


C.C.: CALCULATED CORNER CODE _____ CARD _____ PLOT _____ LATITUDE 39° 20'
 FROM FENCE LOCATION &
 DEED CALLS. NO PHYSICAL
 EVIDENCE FOUND.

LOCATION TIES: 10" SUGAR N44E 119' (SL)
 9" ASH N40W 81.9' (SL)

0.705
 0.760
 0.705
 0.760



LOUIS H. HARNES, ET AL.

FILE NO. 85113
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION USGS MONUMENT "791"

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 Ambrose
 R.P.E. _____ L.E.S. 568

PLACE SEAL HERE

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



DATE 13 FEBRUARY, 19 85
 OPERATOR'S WELL NO. HARNES #4
 API WELL NO. 47-107-1357
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION STORAGE _____ DEEP _____ SHALLOW _____
 LOCATION: ELEVATION 718 WATER SHED BULL CREEK
 DISTRICT UNION & COUNTY WOOD
 QUADRANGLE WILLOW ISLAND Marietta 15' 508
 SURFACE OWNER LOUIS H. HARNES, ET AL. ACREAGE 40
 OIL & GAS ROYALTY OWNER _____ LEASE ACREAGE 215
 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) _____

1985

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 5000'
 WELL OPERATOR GUYANOGA EXPLORATION DESIGNATED AGENT ROGER HUNTER
 ADDRESS ROUTE 1 MARIETTA OHIO 45750 (71) ADDRESS P.O. BOX 1386 CHARLESTON WEST VIRGINIA 25325

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

M/P

Well Operator's Report of Well Work

Farm name: Anderson Operator Well No.: Harness #4

LOCATION: Elevation: 718 Quadrangle: Willow Island 7.5'

District: Union County: Wood
Latitude: 3625 Feet South of 39 Deg. 19 Min. 24.1 Sec.
Longitude 3975 Feet West of 81 Deg. 20 Min. 50.7 Sec.

Company: GasSearch Corporation

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: #13 Industrial Blvd.	9 5/8"	207'	207'	to surface
Parkersburg, WV 26101	7"	1933'	1933'	to 1000'
Agent: Noble Zickefoose	4 1/2		3859'	to 1490'
Inspector: Larry Parrish				
Date Permit Issued: 7/11/01				
Date Well Work Commenced: 7/19/01				
Date Well Work Completed: 7/20/01				
Verbal Plugging:				
Date Permission granted on:				
Rotary Cable Rig				
Total Depth (feet): 3871				
Fresh Water Depth (ft.): None Recorded				
Salt Water Depth (ft.): 1680'				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.):				

RECEIVED
 Office of Oil & Gas
 Permitting

OCT 04 2001

 WV Department of
 Environmental Protection

OPEN FLOW DATA

Producing formation Berea-Gordon Pay zone depth (ft) 2076' to 2472'
Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d
Final open flow N/A MCF/d Final open flow N/A Bbl/d
Time of open flow between initial and final tests N/A Hours
Static rock Pressure N/A psig (surface pressure) after N/A Hours

Second producing formation Berea-Balltown Pay zone depth (ft) 2076' to 3592'
Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d
Final open flow 250 MCF/d Final open flow 3 Bbl/d
Time of open flow between initial and final tests N/A Hours
Static rock Pressure 240 psig (surface pressure) after 24 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.

Signed: *Noble Zickefoose*
By: Noble Zickefoose
Date: 10/01/01

OCT 19 2001

WOOD 1357 F

1st Stage (1985): Berea, Gantz, Gordon (2076' to 2472') 11,000 lb
20-40 Sand, 1385 BBL fluid

2nd Stage (2001): Berea, Gantz, Gordon, Speechly, Balltown
(2076' to 3592') 500 MCFN₂

<u>FORMATION</u>	<u>TOP FEET</u>	<u>BOTTOM FEET</u>	<u>REMARKS</u>
Red Rock, Clay, Sand, Shale	0	970	
Salt Sand	970	1343	
Shale	1343	1427	
Maxon	1427	1453	
Shale	1453	1496	
Big Injun-Squaw	1496	1765	
Sand, Shale	1765	2076	
Berea	2076	2086	
Shale	2086	2189	
Gantz	2189	2196	
Shale	2196	2296	
Thirty Foot Sand	2296	2342	
Shale	2342	2441	
Gordon	2441	2473	
Shale	2473	3200	
Speechly	3200	3400	
Balltown	3400	3600	
Shale	3600	3871 -- TD	

WR-35

RECEIVED
DEC 16 1985



DIVISION OF OIL & GAS
DEPT. OF ENERGY

State of West Virginia
DEPARTMENT OF ENERGY
Oil and Gas Division

Date 12/13/85
Operator's Well No. #4
Farm Harness
API No. 47 - 107 - 1357

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil X / Gas X / Liquid Injection / Waste Disposal /
(If "Gas," Production / Underground Storage / Deep / Shallow X /)

LOCATION: Elevation: 718 Watershed Bull Creek
District: Union County Wood Quadrangle Willow Island

COMPANY Cuyahoga Exp. & Dev. Corp.
ADDRESS Route #1, Marietta, Ohio 45750
DESIGNATED AGENT Roger Hunter
ADDRESS P.O. Box 1386, Charleston, WV 25325
SURFACE OWNER Lulu Harness et al
ADDRESS Highland Ave. Williamstown, WV 26187
MINERAL RIGHTS OWNER Lulu Harness et al
ADDRESS Highland Ave., Williamstown, WV 26187
OIL AND GAS INSPECTOR FOR THIS WORK Mike
Underwood ADDRESS Salem, WV 26426
PERMIT ISSUED 3-5-85
DRILLING COMMENCED 5-1-85
DRILLING COMPLETED 5-6-85
IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
CN N/A

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8	207'	207'	207'
8 5/8			
7	1933'	1933'	1000'
5 1/2			
4 1/2	3859'	3859'	1926'
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 3871' feet
Depth of completed well 3871' feet Rotary X / Cable Tools
Water strata depth: Fresh N/A feet; Salt est. 1680 feet
Coal seam depths: N/A Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Berea Pay zone depth 2074'-2089' feet
Gas: Initial open flow N/A Mcf/d Oil: Initial open flow N/A Bbl/d
Final open flow N/A Mcf/d Final open flow N/A Bbl/d
Time of open flow between initial and final tests N/A hours
Static rock pressure N/A psig (surface measurement) after N/A hours shut in
(If applicable due to multiple completion--)
Second producing formation Gantz Pay zone depth 2188'-2196' feet
Gas: Initial open flow N/A Mcf/d Oil: Initial open flow N/A Bbl/d
Final open flow N/A Mcf/d Oil: Final open flow N/A Bbl/d
Time of open flow between initial and final tests N/A hours
Static rock pressure N/A psig (surface measurement) after N/A hours shut in

DEC 30 1985
(Continue on reverse side)

GORDON PAY ZONE DEPTH 2440' - 2476'

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

PERFORATION: 8'-8 holes, ^{Berea} 2076' - 2084', 4' 4 holes, ^{Gantz} 2192' - 2196', 6' 6 holes, 2444'-2450'
 4' 4 holes, 2456' - 2460', 6' 6 holes, 2455'-2472'. Gordon

FRAC: Breakdown 1300 psi

3 pump trucks

115 sacks of 20/40 sand

KCL

NDL-100

Dura Surf

Unislik

Pensurf

Cla-Check

1000 gal 15 % HCL

Avg. psi 2262

Avg. rate 42.5 bbl per min

Total fluid 58,190 gal.

FRAC: Berea Bantz and Gordon Frac Together

Frac down 4½ casing

3 pump trucks F

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Red Rock & Clay			0'	800'	
First Salt Sand			970'	996'	
Second Salt Sand			1098'	1241'	
Third Salt Sand			1285'	1343'	
Maxton ^{GER & P}			1427'	1453'	
Big Injun-Squaw			1496'	1765'	
Weir			1820'	1842'	
Welsh Stray			1986'	2017'	
Berea			2076'	2086'	
Devonian Shale			2086'		
Gantz			2189'	2196'	
Thirty-foot			2296'	2342'	
Gordon			2441'	2473'	
Speechly			3506'	3530'	
Total Depth				3871'	
from nearby well, top thickness Ups Dev width, 2086 1250 Low Huron 3336					Huron @ D.

(Attach separate sheets as necessary)

Cuyahoga Exploration & Development Corporation

Well Operator

By: Timothy Hudson Field Co-ordinator

Date: _____

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."

107-1352 Frac
 Issued 8/19/91
 Page of
 Expires 8/19/93

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
WELL WORK PERMIT APPLICATION

- 1) Well Operator: GasSearch Corporation ⁴⁵⁷⁶ 19005 (8) 685
- 2) Operator's Well Number: Malone #2 3) Elevation: 704'
- 4) Well type: (a) Oil X/ or Gas X/
 (b) If Gas: Production X/ Underground Storage /
 Deep / Shallow X/
 423
- 5) Proposed Target Formation(s): Balltown, Speechly, Gordon, 30Ft., Gantz
- 6) Proposed Total Depth: 3825 feet
- 7) Approximate fresh water strata depths: 105'
- 8) Approximate salt water depths: 1588
- 9) Approximate coal seam depths: None
- 10) Does land contain coal seams tributary to active mine? Yes / No X
- 11) Proposed Well Work: Squeeze cement from 2620' to 1800'; drill out cement in 4-1/2" from 3030' to 3750'; perforate and then stimulate Balltown - Gantz.
- 12) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	11-3/4"		38	60'	60'	to surface
Fresh Water	9-5/8"		36	200'	200'	to surface
Coal						
Intermediate	7"		20	1910'	1910'	151 c.f.
Production	4-1/2"	J-55	10.5		3825'	216.5 c.f.
Tubing						
Liners						

PACKERS : Kind
 Sizes
 Depths set

RECEIVED
 AUG 16 1991

For Division of Oil and Gas Use Only DIVISION OF OIL & GAS
 DEPARTMENT OF ENERGY

Fee(s) paid: Well Work Permit Reclamation Fund WPCP

Plat WW-9 WW-2B Bond Agent
 (Type) Blanket

0001095
 22

RECEIVED
AUG 16 1991

Page 1 of _____
Form W2-A
(09/87)
File Copy

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

Date: 08/12/91
Operator's well number
Malone #2
API Well No: 47 - 107 - 1352
State - County - Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:
(a) Name Lois M. Kelley
Address Route #3, Box 387
St. Marys, WV 26170
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector Glen P. Robinson
Address Box 1
Belleville, WV 26133
Telephone (304)- 863-8766

5) (a) Coal Operator:
Name _____
Address _____
(b) Coal Owner(s) with Declaration
Name _____
Address _____
(c) Coal Lessee with Declaration
Name _____
Address _____

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

_____ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR
x Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

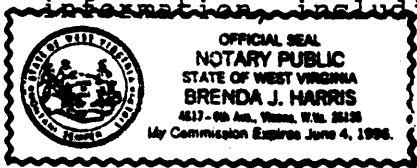
I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through _____ on the above named parties, by:

- X Personal Service (Affidavit attached)
- _____ Certified Mail (Postmarked postal receipt attached)
- _____ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Well Operator GasSearch Corporation
By: Noble Zehrfos
Its: Agent
Address 7845 Emerson Avenue
Parkersburg, WV 26101
Telephone (304) 464-4666

Subscribed and sworn before me this 12 day of August, 1991

Brenda J. Harris Brenda J. Harris Notary Public
My commission expires June 4, 1996

RECEIVED

MAR 1 1985



1) Date: February 26, 19 85
 2) Operator's Well No. Harness #4
 3) API Well No. 47 - 107 - 1357
 State _____ County _____ Permit _____

**STATE OF WEST VIRGINIA
 OIL & GAS DIVISION
 DEPT. OF MINES**
**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: 718 Watershed: Bull Creek
 District: Union County: Wood Quadrangle: Willow Island
- 6) WELL OPERATOR Cuyahoga Exp. & Dev. Corp. 7) DESIGNATED AGENT Roger Hunter
 Address Route 1 Address P. O. Box 1386
Marietta, OH 45750 Charleston, WV 25325
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Mike Underwood Name Not yet determined
 Address Route 2, Box 135 Address _____
Sahem, WV 26426
- 10) PROPOSED WELL WORK: Drill / Drill deeper _____ / Redrill _____ / Stimulate
 Plug off old formation _____ / Perforate new formation
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Devonian Shale/Benson Formation
- 12) Estimated depth of completed well, 5,000 feet
- 13) Approximate strata depths: Fresh, 100 feet; salt, 1,500 feet.
- 14) Approximate coal seam depths: not applicable Is coal being mined in the area? Yes _____ / No

15) CASING AND TUBING PROGRAM

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		38.0	X		60'	60'	Kinds <u>CETS NGAT</u>
Fresh water	9 5/8		36.0	X		200'	200'	
Coal								Sizes
Intermediate	7		20.0	X		2500'	2500'	300 sacks
Production	4.5		10.5	X		5000'	5000'	300 sacks
Tubing								Depths set
Liners								Perforations: Top Bottom

**OFFICE USE ONLY
 DRILLING PERMIT**

Permit number 47-107-1357 Date March 5, 19 85

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 March 5, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
<u>52</u>	<u>MW</u>	<u>MW</u>	<u>MW</u>	<u>1240</u>

Margaret J. Hassie
 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