



Commonwealth of Virginia
Department of Mines, Minerals, and Energy
Division of Gas and Oil
P.O. Drawer 159, Lebanon, VA 24266
Telephone: (276) 415-9700

Tracking Number: 2258
Company: Range Resources-Pine Mountain
File Number: RU-0592
Operations Name: V-530068
Operation Type: Gas
Drilling Report Type: Original

DRILLING REPORT (DGO-GO-14)

1. Drilling Data

Date drilling commenced: 9/24/2009 Drilling Contractor: S.W. Jack
Date drilling completed: 10/2/2009 Rig Type: Rotary Cable
Driller's Total Depth (feet): 5600.00
Log Total Depth (feet): 5578.00 Formation At Total Depth Weir

2. Final Location Plat (as required by 4 VAC25-150-360.C.)

Permitted State Plane X: 10412095.0000 Final Plat State Plane X: 10412095.3200
Permitted State Plane Y: 3554860.0000 Final Plat State Plane Y: 3554857.7500

Plat Previously Submitted Or...

List of Attached Items:

Description	FileName
V-530068 Final Plat	V-530068 Final Plat.pdf

3. Geological Data

Fresh Water At:

Depth (in feet)	Rate	Unit of Measure
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Salt Water At:

Depth (in feet)	Rate	Unit of Measure
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Coal Seams:

List of Attached Items:

Description	FileName
V-530068 Coal	Coal.xls

Gas and Oil Shows:

List of Attached Items:

Description	FileName
V-530068 Gas Shows	Shows.xls

4. Electric Logs (As required by 4VAC25-150-280.A)

List all logs run: Hi Res GR/Dens/Temp/Audio/PE/Caliper Data Pack

Did logs disclose vertical locations of a coal seam?

5. Survey Results (As required by 4VAC25-150-280.B.2)

List of Attached Items:

Description	FileName
V-530068 Survey	Survey.xls

6. Casing and Tubing Program

List of Attached Items:

Description	FileName
V-530068 Casing	Casing.xls

7. Remarks

Use this space to note any conditions or occurrences, such as lost circulation, fishing jobs, junk left in hole, sidetracks, squeeze jobs, etc., not shown above. Include data and depth of condition/occurrence.

Mine Void @ 606' – 622'

8. Drillers Log

Compiled By: Range Resources - Pine Mountain, Inc.

List of Attached Items:

Description	FileName
V-530068 Driller's Log	530068 Log.xls

9. Comments

depth of Big Lime on gas and oil shows does not match up with driller's log. [1/12/2010, jal]
correct coal seam button on page 3. [1/12/2010, jal]
check driller's total depth on page 1 and TD on page 3. [1/12/2010, jal]

10. Signature

Permitee: Range Resources-Pine Mountain Date: 1/27/2010

Signed By: Laura Murray Title: Permit Specialist

INTERNAL USE ONLY

Submit Date: 1/27/2010

Status: A

Date: 3/30/2010

Final PDF Date: 4/5/2010

Well Coordinates: (Geographic N27)
37.028698° -82.169377°

Latitude 37° 02' 30"

760'

Lease No. 906889 / T-866
Daniel Kiser
172.50 Acres
Heartwood Forestland Fund IV, L.P. - surface
Range Resources-Pine Mountain, Inc. - oil & gas
Gas 11.79 Ac. 10.46%

--- Mineral Line
- - - - - Surface Line

1250'R

VC-536449 *

Lease No. 906889 / T-459
Breeding Brothers
314.51 Acres
Heartwood Forestland Fund IV, L.P. - surface
ACIN LLC - coal
Alpha Land & Reserves LLC - coal lessee
WBRD LLC - coal
Dickenson-Russell Coal Company LLC - coal lessee
Range Resources-Pine Mountain, Inc. - oil & gas
Gas 100.00 Ac. 88.74%

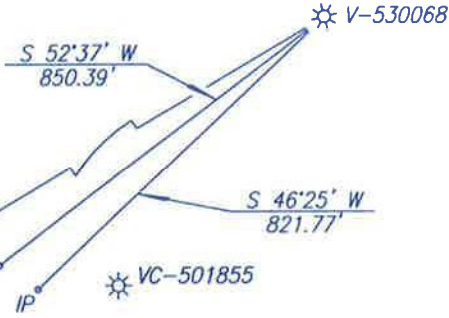
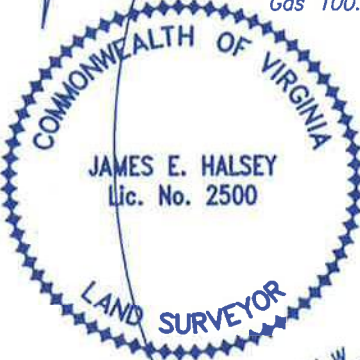
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①

VC-551315 *

Longitude 82° 10' 00"

4,730'



Lease No. 905499L
H.F. Kiser Heirs- surface, oil & gas
87.50 Acres
Lease No. 906889 / TC-214
Elihu L. Kiser
209.02 Acres
Gas 0.90 Ac. 0.80%

Note: The boundary lines shown hereon are based on deeds, plats and maps of record and do not depict a current boundary survey.

The undersigned hereby certifies that the final location is within ten (10') feet of the location shown on the well plat dated 6-11-2009.

Well Coordinates: (VA St. Plane S. Zone, NAD 83)
N 3,554,857.75 E 10,412,095.32

Well Coordinates: (VA St. Plane NAD27, S. Zone, Calculated from NAD 83 coordinates)
N 273,982.69 E 929,109.25

Well Coordinates: (Clinchfield Coal Co., Calculated from NAD 83 coordinates)
S 25,941.80 E 62,434.57

FINAL PLAT

Area of Unit = 112.69 Ac.

Well elevation determined by GPS survey from HARN Monument P-424

WELL LOCATION PLAT

COMPANY Range Resources - Pine Mountain, Inc. WELL NAME AND NUMBER V-530068
TRACT NO. LS. No. 906889/T-459 ELEVATION 2,418.48' QUADRANGLE Duty
COUNTY Russell DISTRICT Castlewood SCALE 1" = 400' DATE 10-08-2009

This Plat is a new plat ___; an updated plat ___; or a final location plat x

+ Denotes the location of a well on United States topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.

James E. Halsey
Licensed Professional Engineer or Licensed Land Surveyor

Coal Seams

				MINING IN AREA		
NAME	TOP	BOTTOM	THICKNESS	YES	NO	MINED OUT
Mine Void	606	622	16		NO	YES
Coal	1177	1180	3		NO	
Coal	1268	1272	4		NO	
Coal	1540	1546	6		NO	
Coal	1979	1982	3		NO	
Coal	2311	2314	3		NO	

Gas and Oil Shows

FORMATION	Depth	THICKNESS	IPF (MCFD/BOPD)	PRESSURE	HOURS TESTED
Ravenclyff	3322		876 mcf		
Big Lime	4598		781 mcf		
	TD		1274 mcf		

Survey Results

Depth of Survey	Direction/Distance/Degree From True Vertical
225'	$\frac{1}{4}^{\circ}$
411'	$\frac{1}{4}^{\circ}$
684'	$\frac{1}{4}^{\circ}$
881'	$\frac{1}{2}^{\circ}$
1027'	$\frac{3}{4}^{\circ}$
1231'	$\frac{3}{4}^{\circ}$
1504'	$\frac{3}{4}^{\circ}$
1723'	$\frac{3}{4}^{\circ}$
1284'	$\frac{3}{4}^{\circ}$
2005'	1°
2221'	1°
2347'	1°

Driller's Log

Geologic Age	Formation	General		Depth		Thickness	Remarks
		Lithology	Color	Top	Bottom		
Pennsylvanian		Sandy shale		0	606	606	
Pennsylvanian		Mine Void		606	622	16	
Pennsylvanian		Sandy shale		622	1177	555	
Pennsylvanian		Coal		1177	1180	3	
Pennsylvanian		Sandy shale		1180	1268	88	
Pennsylvanian		Coal		1268	1272	4	
Pennsylvanian		Sandy shale		1272	1540	268	
Pennsylvanian		Coal		1540	1546	6	
Pennsylvanian		Sandy shale		1546	1979	433	
Pennsylvanian		Coal		1979	1982	3	
Pennsylvanian		Sandy shale		1982	2311	329	
Pennsylvanian		Coal		2311	2314	3	
Pennsylvanian		Sandy shale		2314	3022	708	
Mississippian	Ravencliff	Sandstone		3022	3138	116	
Mississippian		Limestone		3138	3238	100	
Mississippian		Sandy shale		3238	3699	461	
Mississippian	Maxton	Sandstone		3699	3770	71	
Mississippian		Sandy shale		3770	3962	192	
Mississippian		Sandstone		3962	3998	36	
Mississippian		Sandy shale		3998	4150	152	
Mississippian		Sandstone		4150	4190	40	
Mississippian		Sandy shale		4190	4254	64	
Mississippian	Little Lime	Limestone		4254	4478	224	
Mississippian		Shale		4478	4550	72	
Mississippian	Big Lime	Limestone		4550	5150	600	
Mississippian	Weir	Siltstone		5150	5451	301	
Devonian	Weir Shale	Shale		5451			
					5578 TD		