

#### west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, S.E. Charleston, WV 25304 (304) 926-0450 fax: (304) 926-0452

Jim Justice, Governor Austin Caperton, Cabinet Secretary www.dep.wv.gov

## PERMIT MODIFICATION APPROVAL Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC POST OFFICE BOX 12359

SPRING, TX 773914954

Re: Permit Modification Approval for MELVIN KAHLE OHI 5H

47-069-00220-00-00

Fresh Water Casing Modified

### SWN PRODUCTION COMPANY, LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926-0450

James A. Martin

Chief

Operator's Well Number: MELVIN KAHLE OHI 5H Farm Name: KAHLE, MELVIN W. & CAROL M. U.S. WELL NUMBER: 47-069-00220-00-00 Horizontal 6A / New Drill

Date Issued:

Promoting a healthy environment.

WW-6B (04/15)

API NO. 47- 069

OPERATOR WELL NO. Melvin Kahle OHI 5H
Well Pad Name: Melvin Kahle OHI

18)

# CASING AND TUBING PROGRAM

TYPE		New				DIEDVIALO	
	Size	or	Grade	Weight per ft.	FOOTAGE: For	INTERVALS:	CEMENT:
	(in)	Used	Sidde	<u>(lb/ft)</u>	Drilling (ft)	Left in Well (ft)	Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	J-55	94#	100'	100'	CTS
Fresh Water	13 3/8"	New	J-55				
		IVEV	J-55	48#	650'	650'	609 sx/CTS
Coal	9 5/8"	New	J-55	36#	1999'	1999'	752 sx/CTS
Intermediate	7"	New	HCP-110	20#	If Needed	If Needed	If Needed/As Needed
Production	5 1/2"	New	HCP-110	20#	14,532'	14,532'	load 645 ex Tall 1939 sw/100' inside inside
Tubing	2 3/8"	New	P-110	4.7#	Approx. 6323'	Approx. 6323'	1.5
Liners							

C. 200 12.18

TYPE	T		****				
•	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	30"	0.25	2120	81	Class A	
Fresh Water	13 3/8"	17.5"	0.380	2740	633	Class A	1.19/50% Excess
Coal	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/50% Excess
Intermediate	7"	8 3/4"	0.317	4360	3250	Class A	1.20/50% Excess
Production	5 1/2"	8 3/4"	0.361	12360	9500	Class A	
Tubing	2 3/8"	4.778"	0.190	Approx 8193'	Approx 8193'		
Liners							

# **PACKERS**

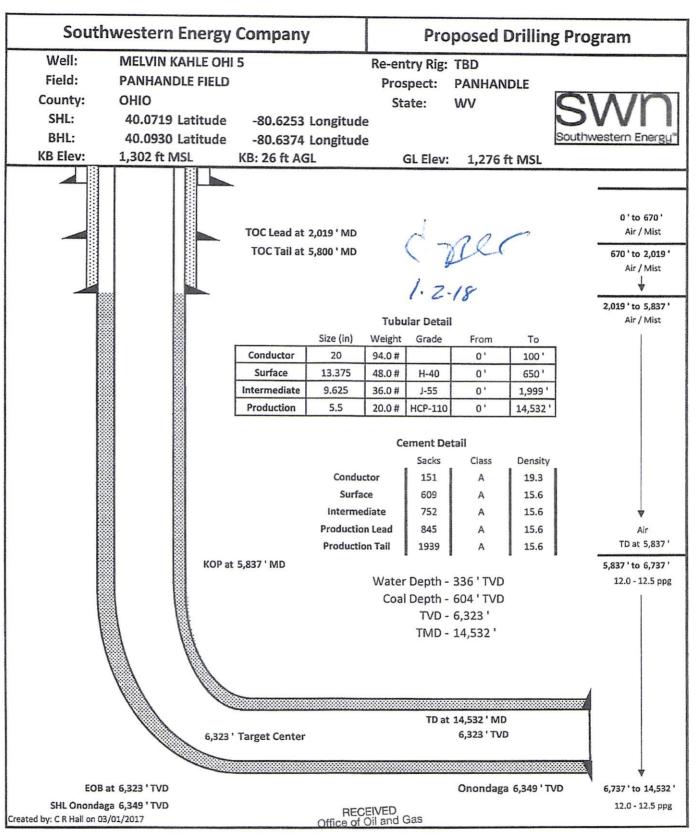
Kind:	10K Arrowset AS-1X	
Sizes:	5 1/2"	
Depths Set:		

RECEIVED Office of Oil and Gas

JAN 2 2013

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