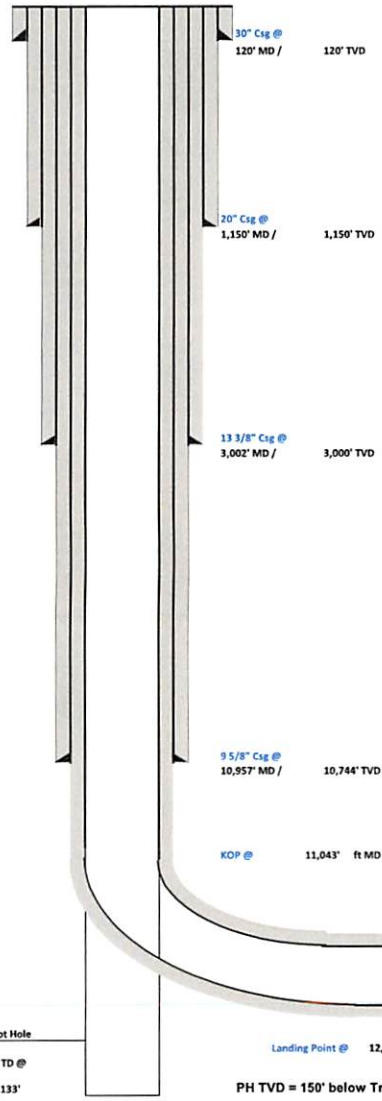


4705102499



WELL NAME: Breckenridge S-19HU
 STATE: WV COUNTY: Marshall
 DISTRICT: Cameron
 DF Elev: 1,370' GL Elev: 1,370'
 TD: 23,780'
 TH Latitude: 39.830269
 TH Longitude: -80.626651
 BH Latitude: 39.802159
 BH Longitude: -80.610644



FORMATION TOPS	
Formation	Depth TVD
Deepest Fresh Water	1,048'
Sewickley Coal	952'
Pittsburgh Coal	1,042'
Big Lime	2,245'
Berea	2,863'
Tully	6,862'
Marcellus	6,982'
Onondaga	7,034'
Salina	7,773'
Lockport	8,744'
Utica	11,620'
Point Pleasant	11,861'
Landing Depth	11,911'
Trenton	11,983'
Pilot Hole TD	12,133'

CASING SUMMARY							
Type	Hole Size (in)	Csg Size (in)	Depth (MD)	Depth (TVD)	Weight (lb/ft)	Grade	Top of Cement
Conductor	36	30	120'	120'	BW	BW	Surface
Surface	26	20	1,150'	1,150'	106.5	J55	Surface
Intermediate 1	17 1/2	13 3/8	3,002'	3,000'	54.5	J55	Surface
Intermediate 2	12 1/4	9 5/8	10,957'	10,744'	47	HPP110	Surface
Production	8 1/2	5 1/2	23,780'	12,106'	23	HCP110	Surface

CEMENT SUMMARY				DRILLING DETAILS	
	Sacks	Class	Density	Fluid Type	Centralizer Notes
Conductor	338	A	15.6	Air	None
Surface	1,984	A	15.6	Air	3 Centralizers at equal distance
Intermediate 1	2,292	A	15	Air	1 Centralizer every other jt
Intermediate 2	2,962	A	14.5	Air	1 Centralizer every other jt
Production	4,985	A	15	Air / SOBM	1 every other joint in lateral; 1 per joint in curve; 1 every other jt to sfc

Pilot Hole
PH TD @
12,133'

Landing Point @ 12,580' MD / 11,911' TVD
PH TVD = 150' below Trenton Top

Lateral TD @ 23,780' ft MD
12,106' ft TVD

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Office of Oil and Gas
NOV 15 2021
WV Department of
Environmental Protection