

**A. P. D. (cont.)**  
**Thirteen Point Surface Use Plan**  
**INDIAN HILLS UNIT # 36**

**DRILLING PROGRAM**  
**MARATHON OIL COMPANY**  
**INDIAN HILLS UNIT # 36**

1. Estimated KB Elevation: 3693' KB

<u>FORMATION</u>	<u>-----TOP-----</u>		<u>-----BASE-----</u>		<u>FLUID CONTENT</u>
	<u>MEASURED</u>	<u>SUBSEA</u>	<u>MEASURED</u>	<u>SUBSEA</u>	
Queen	Surface	+3693'	650'	+3043'	water
San Andres	650'	+3043'	2250'	+1443'	water
Glorietta	2250'	+1443'	2355'	+393'	
Delaware	3300'	+393'	4300'	- 607'	
Bone Spring	4300'	-607'	5950'	-2257'	oil gas
Wolfcamp	5950'	-2257'	7520'	-3827'	oil gas
B/Permian Shale	7520'	-3827'	7530'	-3837'	
U. Penn	7530'	-3837'	8219'	-4526'	gas, oil, water
Strawn	8219'	-4526'	8899'	-5206'	
Atoka	8899'	-5206'	9209'	-5516'	
Morrow	9209'	-5516'	9600'	-5907'	gas, oil, water

  

<u>FORMATION</u>	<u>---EST PSIG</u>	<u>SBHP--- PPG EMW</u>	<u>EST DEG f</u>	<u>SBHT PPM</u>	<u>H2S</u>	<u>---SIGNIFICANCE--- (obj, marker, etc.)</u>
Bone Springs	1210	8.5		500		marker
Wolfcamp	1680	9.0		5000		marker
B/Permian Shale	1810	9.0				marker
U. Penn	2050	9.0		500		objective pay
Morrow	3460	9.2				objective pay

2. See (1) above.  
 If any unexpected water or mineral bearing zones are encountered, they will be reported, evaluated, and protected as circumstances and regulations require.

3. **Pressure Control Equipment:**

9-5/8" Surface: 11" 3M annular tested to 300#/3000#, 11" 3M dual rams, choke manifold and mud cross, tested to 300#/3000#.

Auxiliary Equipment:

Surface Hole: Annular or rotating head w/air rig.

Intermediate Hole: N/A

Production Hole: Flow indicator, PVT, H<sub>2</sub>S Sensors, air packs, stroke counter, rotating head.

BOP systems will be consistent with API RP 53. Blowout preventers will be installed and tested prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers and casing will be pressure tested before drilling casing cement plugs. Upper and lower kelly cocks with valve handle ,safety valve and subs to fit all drill string connections in use will be available on rig floor.