



Drilling Prognosis Report

MANCHESTER STATE UNIT #1

API/UWI 9900000076299999		County EDDY		State NEW MEXICO		N/S Dist (ft) 760.0		N/S Ref FNL		E/W Dist (ft) 660.0		E/W Ref FWL													
Ground Elevation (ft) 4,060.00		Orig KB Elev (ft) 4,079.00		Lease Number VA-2600		Surface Legal Location SEC 20/TWN 19S/RNG 23E/UNT D																			
Directions To Well																									
Wellbore - Original Hole																									
Wellbore Name Original Hole		Parent Wellbore		Bottom Hole Legal Location 20-19S-23E		NS Dist (ft) 760.0		NS Flag FNL		EW Dist (ft) 660.0		EW Flag FWL		Hole Direction VERTICAL		KO MD (ftK...)		Kick Off Method							
Wellbore Sections																									
Section		Conductor		Size (in) 26		Depth Top Proposed (ftKB) 19.0		Depth Btm Proposed (ftKB) 59.0																	
Section		Surface		Size (in) 17 1/2		Depth Top Proposed (ftKB) 59.0		Depth Btm Proposed (ftKB) 350.0																	
Section		Intermediate		Size (in) 12 1/4		Depth Top Proposed (ftKB) 350.0		Depth Btm Proposed (ftKB) 1,500.0																	
Section		Production		Size (in) 8 3/4		Depth Top Proposed (ftKB) 1,500.0		Depth Btm Proposed (ftKB) 8,100.0																	
Formations																									
Formation Name										Prog Top MD (ftKB)															
SAN ANDRES										235.00															
GLORIETA										1,435.00															
YESO UPPER										1,535.00															
TUBB										2,790.00															
YESO LOWER										2,890.00															
ABO										3,425.00															
WOLFCAMP PAY										4,585.00															
BASE WOLFCAMP PAY										4,675.00															
WOLFCAMP SHALE										4,715.00															
CISCO										5,985.00															
STRAWN										7,375.00															
ATOKA										7,615.00															
MORROW MIDDLE										7,835.00															
MORROW LOWER										7,885.00															
MORROW CLASTIC										7,935.00															
CHESTER /LM/										8,015.00															
TD										8,100.00															
Job Description																									
Target Depth (ftKB) 8,100.0		Target Formation CHESTER /LM/		Job Category New Drilling		Primary Job Type New Well				Primary Wellbore Affected Original Hole															
AFE Number 062780		Total AFE Amount		Status 1 Drilling																					
Job Contacts																									
Title		Contact Name		Phone Office		Phone Home		Phone Mobile																	
Mud Program																									
Depth Start (ftKB)		Depth End (ftKB)		Mud Type		Weight Min (lb/gal)		Weight Max (lb/gal)		Funnel Viscosity Min (s/qt)		Funnel Viscosity Max (s/qt)		Wtr Loss Min (mL/3...)		Wtr Loss Max (mL/3...)		Oil Percent Min (%)		Oil Percent Max (%)		Chlorides Min (mg/L)		Chlorides Max (mg/L)	
0.0		350.0		Fresh Water/Air Mist		8.40		8.40		28		28													
350.0		1,500.0		Fresh Water/Air Mist		8.40		8.40		28		28													
1,500.0		3,400.0		Cut Brine		8.60		9.20		28		28										59,999.999			
3,400.0		7,375.0		Cut Brine/6% KCL		9.20		9.80		28		28										59,999.999			
7,375.0		8,100.0		Salt Gel/Starch		9.60		9.90		32		38				12.0						59,999.999			
Instructions																									
Samples: 10' Samples from Intermediate Casing to TD																									
Logging: PLATFORM EXPRESS/HALS/NGT; POSSIBLE FMI and ROTARY SIDEWALL CORES																									
DST's: Yes																									
Cores: None Anticipated																									
Mudlogging: TBD																									
KEEP LOCATION CLEAN, FILL OUT YPC SAFETY BOOK WEEKLY. NOTIFY OCD OF BUILDING LOCATION, SPUD, RESUME DRILLING, CEMENTING CASING, BOP TEST, ETC.																									
USE ONLY VENDORS ON YPC'S APPROVED VENDORS LIST FOR THE SERVICES YPC IS RESPONSIBLE FOR.																									
PRESSURE CONTROL EQUIPMENT: 5K psi system nipples up and tested on 9 5/8" casing.																									
MAXIMUM ANTICIPATED BHP: 0'-350' 155 PSI 350'-1500' 655 PSI 1500'-8100' 4170 PSI																									
H2S IS NOT ANTICIPATED																									
CASING DESIGN FACTORS: BURST 1.0 TENSILE 1.8 COLLAPSE 1.125																									



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Casing - Conductor - 58.0 - Wellbore - Original Hole													
Comment													
String Nominal OD (in) 20			Weight/Length (lbs/ft) 94.00			Set Depth (ftKB) 58.0			Wellbore Original Hole				
OD (in) 20	Wt (lbs/ft) 94.00	Grade H-40	Top Connection Thread	Top (ftKB) 18.0	Bottom (ftKB) 58.0	Length (ft) 40.00	P (collaps... 520.0	Burst Pres...	Max Tensil...	ID (in) 19.124	Drift (in)	Mk-up Tq (...)	Max Tq (ft-...
Casing - Surface - 350.0 - Wellbore - Original Hole													
Comment													
String Nominal OD (in) 13 3/8			Weight/Length (lbs/ft) 48.00			Set Depth (ftKB) 350.0			Wellbore Original Hole				
OD (in) 13 3/8	Wt (lbs/ft) 48.00	Grade H-40	Top Connection Thread ST&C	Top (ftKB) 0.0	Bottom (ftKB) 350.0	Length (ft) 350.00	P (collaps... 740.0	Burst Pres... 1,730.0	Max Tensil... 322	ID (in) 12.715	Drift (in) 12.559	Mk-up Tq (...) 3,220	Max Tq (ft-... 4,030
Casing - Intermediate - 1,500.0 - Wellbore - Original Hole													
Comment													
String Nominal OD (in) 9 5/8			Weight/Length (lbs/ft) 36.00			Set Depth (ftKB) 1,500.0			Wellbore Original Hole				
OD (in) 9 5/8	Wt (lbs/ft) 36.00	Grade J-55	Top Connection Thread ST&C	Top (ftKB) 0.0	Bottom (ftKB) 1,500.0	Length (ft) 1,500.00	P (collaps... 2,020.0	Burst Pres... 3,520.0	Max Tensil... 394	ID (in) 8.921	Drift (in) 8.765	Mk-up Tq (...) 3,940	Max Tq (ft-... 4,930
Casing - Production - 8,100.0 - Wellbore - Original Hole													
Comment													
String Nominal OD (in) 5 1/2			Weight/Length (lbs/ft) 15.50			Set Depth (ftKB) 8,100.0			Wellbore Original Hole				
OD (in) 5 1/2	Wt (lbs/ft) 17.00	Grade J-55	Top Connection Thread LT&C	Top (ftKB) 0.0	Bottom (ftKB) 100.0	Length (ft) 100.00	P (collaps... 4,910.0	Burst Pres... 5,320.0	Max Tensil... 247	ID (in) 4.892	Drift (in) 4.767	Mk-up Tq (...) 2,470	Max Tq (ft-... 3,090
OD (in) 5 1/2	Wt (lbs/ft) 15.50	Grade J-55	Top Connection Thread LT&C	Top (ftKB) 100.0	Bottom (ftKB) 6,800.0	Length (ft) 6,700.00	P (collaps... 4,040.0	Burst Pres... 4,810.0	Max Tensil... 217	ID (in) 4.950	Drift (in) 4.825	Mk-up Tq (...) 2,170	Max Tq (ft-... 2,710
OD (in) 5 1/2	Wt (lbs/ft) 17.00	Grade L-80	Top Connection Thread LT&C	Top (ftKB) 6,800.0	Bottom (ftKB) 8,100.0	Length (ft) 1,300.00	P (collaps... 6,280.0	Burst Pres... 7,740.0	Max Tensil... 338	ID (in) 4.892	Drift (in) 4.767	Mk-up Tq (...) 3,410	Max Tq (ft-... 4,260
Cement Job -- Conductor, 58.0ftKB, Proposed: Yes - Wellbore - Original Hole													
Stage Number	Description Conductor			Top (ftKB) 18.0		Bottom (ftKB) 58.0		Wellbore Original Hole					
Slurries - <Fluid Type??>													
Amount (sacks)		Class			Weight (lb/gal)			Yield (ft³/sack)					
Cement Job -- Surface, 350.0ftKB, Proposed: Yes - Wellbore - Original Hole													
Stage Number	Description Surface			Top (ftKB) 18.0		Bottom (ftKB) 350.0		Wellbore Original Hole					
Slurries - <Fluid Type??>													
Amount (sacks)		Class			Weight (lb/gal)			Yield (ft³/sack)					
400		C			14.80			1.35					
Additive CaCl2		Amount		Amount Units		Concentration		Conc Unit label					
						2.0		%					
Cement Job -- Intermediate, 1,500.0ftKB, Proposed: Yes - Wellbore - Original Hole													
Stage Number	Description Intermediate			Top (ftKB) 18.0		Bottom (ftKB) 1,500.0		Wellbore Original Hole					
Slurries - Lead													
Amount (sacks)		Class			Weight (lb/gal)			Yield (ft³/sack)					
180		H			14.60			1.52					
Slurries - Lead													
Amount (sacks)		Class			Weight (lb/gal)			Yield (ft³/sack)					
325		C Lite			12.50			2.04					
Slurries - Tail													
Amount (sacks)		Class			Weight (lb/gal)			Yield (ft³/sack)					
200		C			14.80			1.33					
Cement Job -- Production, 8,100.0ftKB, Proposed: Yes - Wellbore - Original Hole													
Stage Number	Description Production			Top (ftKB) 1,100.0		Bottom (ftKB) 8,100.0		Wellbore Original Hole					
Slurries - Lead													
Amount (sacks)		Class			Weight (lb/gal)			Yield (ft³/sack)					
850		C Lite			12.50			1.94					
Slurries - Tail													
Amount (sacks)		Class			Weight (lb/gal)			Yield (ft³/sack)					
1,225		C			13.20			1.57					