

DAN A. HUGHES COMPANY COMPANY, L.P.

**DAHC-SAN FRANCISCO CR. #1
Staked Location: NW1/4 SE1/4 SECTION 24-T39N-R5E
RIO GRANDE COUNTY, COLORADO**

DRILLING PLAN

ESTIMATED TOPS OF GEOLOGICAL MARKERS:	
FORMATION	DEPTH
Conejos	Surface
Blanco Basin	5722
Mancos	5845
Dakota Silt	6080
Morrison	6230
Junction Creek	6500

CASING PROGRAM:							
HOLE SIZE	CASING SIZE	FROM	TO	WEIGHT	GRADE	THREAD	Condition
20"	16"	0'	80'	Conductor			
12-1/4"	9-5/8"	Surface	~1,100'	36#	J-55	LT&C	New
7-7/8"	5-1/2"	Surface	~6600'	17#	J-55	LT&C	New

CASING PROGRAM:							
CASING SIZE	WEIGHT	GRADE	THREAD	COLLAPSE	BURST		
20"	Conductor						
9-5/8"	36#	J-55	LT&C	2020	3520		
5-1/2"	17#	J-55	LT&C	4910	5320		

All casing strings below the conductor shall be pressure tested to 0.22 psi/ft. of casing string length or 1500 psi, whichever is greater, but not to exceed 70% minimum internal yield.

MUD PROGRAM:							
TYPE	FROM	TO	WEIGHT	VISCOSITY	Ph	FLUID LOSS	REMARKS
Spud Mud	Surface	1,100'	8.4#-8.7#	34-50	8-10	NC	WBM-gel&lime
Lignosulfonate	1100'	6600'	8.7#-9.4#	40-50	8-10	NC-6	WBM-polymer system

CLOSED LOOP SYSTEM WILL BE USED ON THIS WELL. CUTTINGS WILL BE DISPOSED OF PROPERLY.

Sufficient quantities of mud material will be maintained on site or be readily accessible for the purpose of assuring well control.

Electronic/mechanical mud monitoring equipment will be utilized and will include a pit volume totalizer(PVT), stroke counter & flow sensor.

PRESSURE CONTROL EQUIPMENT:	
All well control equipment shall be in accordance with Onshore Order #2 for 5M systems. Well control will be rigged up after setting surface casing.	
The minimum specs for pressure control equipment that will be provided are follows: (1) 5000# BOP with 4" or 4-1/2" Pipe Rams, (2) 5000# BOP with blind rams, & (3) Annular.	
Auxiliary equipment to be used: (1) Upper kelly cock with handle available (2) Stabbing valve.	
The choke manifold will include appropriate valves and adjustable chokes. The kill line will have one check valve.	
Ram type preventers will be pressure tested to full working pressure(utilizing a tester & test plug) at: (1) initial installation, (2) whenever any seal subject to test pressure is broken, (3) following related repairs, (4) 30 day intervals.	
The annular preventer will be pressure tested to 50% of the rated working pressure.	
All pressure tests shall be maintained at least 10 minutes or until provisions of tests are met, whichever is longer.	
Annular preventers shall be functionally operated at least weekly.	
Pipe and blind rams shall be activated each trip.	
A BOPE pit level drill be conducted weekly for each drilling crew.	
All tests and drill will be recorded/documented in the drilling log.	
Remote controls shall be readily accessible to the driller. Master controls shall be at the accumulator.	
The accumulator will have sufficient capacity to open the HCR valve, close all rams plus the annular preventer, and retain 200 psi above pre-charge pressure without the use of closing unit pumps. The system will have 2 independent power sources to close the preventers in accordance with the 5M system requirements outlined in Onshore Order #2.	

CEMENTING PROGRAM:			
CASING	HOLE VOLUME+ EXCESS	CEMENT SX	CEMENT TYPE
9-5/8" (LEAD CMT)	700'(0.3132 cuft/ft)(100%)= 438.48 cuft	215	EXTENDACEM™ SYSTEM+5% salt 12.8ppg 2.04 cuft/sx
9-5/8" (TAIL CMT)	400'(0.3132 cuft/ft)(100%)= 250.56 cuft	212	HALCEM™ SYSTEM 15.6ppg 1.18 cuft/sx
9-5/8" (Shoe Joint)	80'(0.4340 cuft/ft) = 34.72 cuft	29	HALCEM™ SYSTEM 15.6ppg 1.18 cuft/sx
9-5/8" (Top Out)	If required		Class "C" cement + 2% CaCl2 14.5 ppg 1.41 cuft/sx
5-1/2" (LEAD CMT)	3500'(0.1733 cuft/ft)(50%)= 910 cuft	450	EXTENDACEM™ SYSTEM+5% salt + retarder 12.8ppg 2.04 cuft/sx
5-1/2" (TAIL CMT)	2000'(0.1733 cuft/ft)(50%)= 520 cuft	440	HALCEM™ SYSTEM+ 10% salt + retarder+dispersant 15.6ppg 1.18 cuft/sx

After cementing, but before commencing any test, the casing string will stand cemented until cement has reached a compressive strength of 500 psi at the shoe. Wait on Cement(WOC) times will be recorded in the drillers log.

EVALUATION PROGRAM:
Open Hole logs: Gamma Ray/Nuetron/Density/Resisitivity from 6600' to 1100'. Possibly take cores or Formation Tests from wireline tools.

ABNORMAL CONDITIONS:
All shows of fresh water will be adequately protected and reported.
Mud Logger will be attached after setting of surface casing to detect any GAS.
No anticipated abnormal pressures or temperatures are expected to be encountered.
No hydrogen sulfide expected.
Anticipated bottom-hole pressure is approximately 3226 psi(9.4 ppg EMW)

OTHER INFORMATION:
The anticipated starting date to spud is UPON APPROVAL (We have no drill dates between 12/15/2011-3/31/2012)
The duration of the drilling & completion operations will be approximately 45 days.

DAN A. HUGHES COMPANY, L.P.

**DAHC-SAN FRANCISCO CR. #1
RIO GRANDE COUNTY, COLORADO**

DRILLING WELL PLAN

SEPTEMBER 7, 2011

Prepared By: _____
JEFF ILENG P.E.
OPERATIONS MANAGER

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1.0 GENERAL INFORMATION

WELL NAME: DAHC- SAN FRANCISCO CR. #1

COUNTY: Rio Grande County, Colorado

WI: Dan A. Hughes Co.

LOCATION: NW1/4 SE1/4 SECTION 24-T39N-R5E

API NUMBER:

PERMIT NUMBER:

WATER DEPTH:

CLASSIFICATION: Wildcat

PROPOSED TD: 6600'

TARGET HORIZONS: Dakota & Morrison

AFE NUMBER:

DRY HOLE COST :

COMPLETED COST:

EST. DRILLING DAYS : 25 days Dry Hole / 20 days Casing

RIG: Aztec Drilling Rig #545

ENGINEER: Jeff Ilseng: Off (361) 358-3752
Hm (361)387-9141
Mob (361) 362-3304

GEOLOGIST: John Humston Off (361)358-3752
Hm (361)358-6255
Mob (361)362-7250

2.0 INTRODUCTION

The DAHC-San Francisco Cr. #1 is a Wildcat well planned to test the Dakota & Morrison Sands.

Set 16" conductor @ 80'

Drill out with 12-1/4" bit & run 9-5/8" 36# J55 LT&C surface casing to 1100'.

Will drill out w/7-7/8" bit to a Depth of 6600' & run 5-1/2" 17# J55 LT&C casing.

DIRECTIONS:

From Del Norte, Colorado, Turn south off of Hwy 160 onto French Street. Travel south on French street which will turn into CR 13 which will also be called San Francisco Creek Road upon entering subdivision approx. 6.5 miles. Turn right(west) on Wagon Wheel Road and go 0.47 miles to rig on left.

3.0 OPERATIONS

3.1 HOLE SECTION: 12-1/4", 0' - 1100'

Note: Notify Authority's 12 hrs prior to running casing. Document on the Daily Drilling Report.

1. Set 16" conductor @ 80'. PU 12-1/4" bit. Drill to 1100' with BHA. Take inclination surveys every 250'. Freshwater protection depth is _____'.
2. Run 9-5/8" 36# J55 LT&C casing with float equipment. (Note: Centralize w/ 2 Turbolizers on each of the bottom 4 jts & 1 turbolizer every 4th joint to Surface). Cement the 9-5/8" Casing to surface as per recommendation while reciprocating pipe 20'.
3. WOC.
4. Install casing head. NU 5M BOP's . Test BOP's..

3.2 HOLE SECTION: 7-7/8", 1100' – 6600'

1. PU 7-7/8" bit & stabilizers & drill out cement & float equipment. Drill 10' of new formation. Test shoe to 10.0# EMW. Attach Mud logger @ 1100'. Break over mud @ 2000' to 6 cc. Drill ahead to 6600' and POOH. Make sure to make frequent wiper trips every 24 to 36 hrs while drilling.
2. Log well according to Geologist.
3. RIH w/5-1/2" 17# J55 LT&C from 0' – 6600'. (Note: Centralize w/ 2 Turbolizers on each of the bottom 4 jts & 2 per joint 100' above & below any productive pay. Reciprocate pipe 20' while cementing per recommendation while reciprocating pipe 20'.
4. WOC. ND BOP's & drop casing slips. Weld on head & NU tree. RDMO drilling rig.

3.3 Drilling Plan

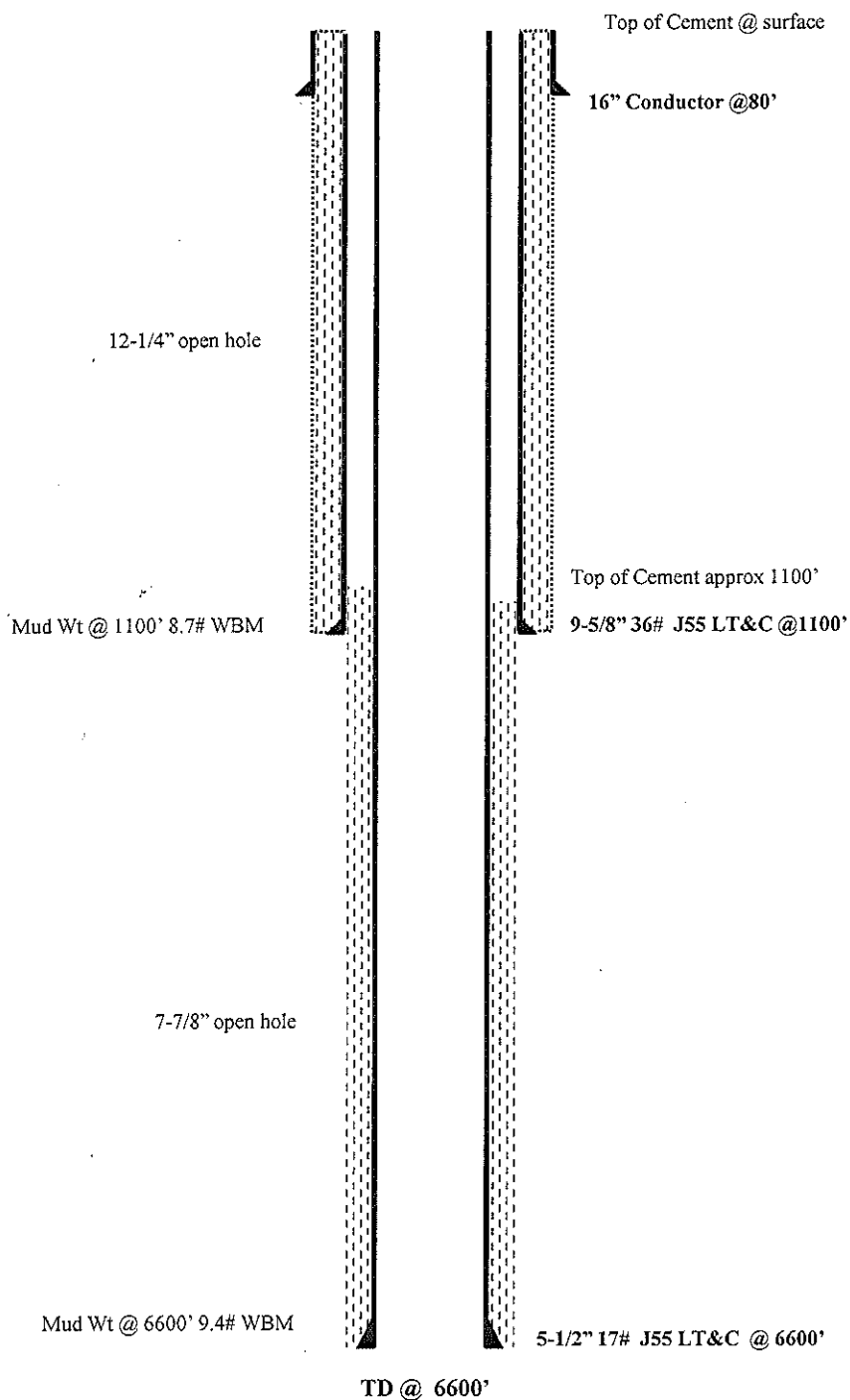
See Attached Drilling Plan Summary Sheet.

3.4 Wellbore Diagram

See Attached Wellbore Schematic.

Elev: 8552' GL

PROPOSED WELLBORE SCHEMATIC



DAN A. HUGHES COMPANY, L.P.

DAHC-San Francisco Cr. #1
Del Norte, Colorado

RIO GRANDE COUNTY, COLORADO
BY: JEFF ILSENG DATE: 9/1/11

Staked Location: NW1/4SE1/4, Section 24, Township 39N Range 5E, 1756' FSL x 2546' FEL

AWS RIG #545 LAY OUT

