

Oxy USA, Inc.  
**Sheep Mountain Unit 4-26-E**  
**API No. 05-055-06077**  
SHL: 2,082' FSL 123' FWL (NW/4 SW/4)  
BHL: 1,946' FNL 1,421' FWL (SE/4 NW/4)  
Sec. 26 T27S R70W  
Huerfano County, Colorado  
Surface Ownership: Federal  
Federal Mineral Lease: COC010646  
Federal Participating Area: COC47683C  
Sheep Mountain Federal Unit: COC47683X

**DAKOTA FORMATION RECOMPLETION PROCEDURES**

GL: 9,176' KB: 19'

TD: 5,700' 5,085  
PBSD: 5,660' 5,094'

CONDUCTOR CASING:  
EXISTING CASING SET@ 59' (1 JOINT); OD=30"

SHORT SURFACE CASING:  
EXISTING CASING SET@ 180' (5 JOINTS) , OD=16" , 500 SX CLASS C + 2% CaCl

SURFACE CASING:  
EXISTING CASING SET@ 1,227' (30 JOINTS) , OD=10 3/4" , 45#/FT, K-55 BTC, WITH 800 SX CLASS C + 2% CaCl + 1/4#/SX FLOCELE – CIRCULATED 35 BBLS

PRODUCTION CASING:  
EXISTING CASING SET @ 5,697' (131 JOINTS), OD = 7 5/8" , 26.4 #/FT, K-55 BTC, 2 STAGE JOB DV TOOL SET @ 4,055'; STAGE 1: 410 SX 50:50 POZMIX CLASS H; STAGE 2 + 625 SX CLASS C + 110 SX 50:50 POZMIX CLASS C; TOC: 2,000 CALCULATED

PACKER:  
EXISTING PACKER Set @ 5,375'

TUBING:  
EXISTING TUBING SET @5,356' (166 JTS ) , OD = 4 1/2" , 11.6 #/FT, K-55 TK-2 COATING + NIPPLES

CBL RUN ON: 8/14/1984 SUNDRY NOTICE

FORMATION	LOG TOP (MD)	
NIOBRARA	3,234'	
IGNEOUS	3,902'	
NIOBRARA	4,064'	
FORT HAYS	4,098'	
IGNEOUS	4,108'	
FORT HAYS	4,134'	
CODELL	4,180'	
CARLILE	4,250'	
IGNEOUS	4,292'	
CARLILE	4,475'	
GREENHORN	4,584'	
GRANEROS	4,726'	
DAKOTA	4,844'	CORED INTERVAL: 4,860' – 5,499'
MORRISON	5,122'	
RALSTON	5,330'	
ENTRADA	5,430'	
IGNEOUS	5,560'	
ENTRADA	5,584'	
SANGRE DE CRISTO	5,640'	

**CURRENT PERFORATIONS**

		JSPF
ENTRADA	5,430' – 5,450'	4
	5,457' – 5,534'	4
	5,540' – 5,544	4
	5,550' – 5,560'	4
	5,584' – 5,640'	4
<b>TOTAL PERFORATIONS: 668</b>		

MAXIMUM DEVIATION: 38° 21' @ 3200 (MD)

**Preliminary Prognosis**

Test Anchors – Reset if needed.

Check Entrada Pressure - Shut-in and record pressures prior to rig up.

Disconnect wellhead from flowline, blind it off; lockout/tag valves on compressor header.

Move in pulling unit and ancillary equipment, set frac tanks.

Set Otis S-2 profile @ 52', 3.81" ID, remove wellhead and set BOP, test to 2,000 psi.

Rig up pulling unit.

On wireline set profile nipple (3.725" ID) in permanent packer set @ 5,355'.

Pull out of hole with 4 1/2" IPC string, 120 joints. Change rams to 2 7/8".

Pick up RBP on 2 7/8" work string and run in hole to 5,350'. Set RBP.

Circulate hole with FW + 2 % KCL. Dump 5 sxs of sand on top of plug, come out of hole, stack work string.

Rig up lubricator, go in with perf guns and get on depth based on 4/12/1984 compensated neutron – litho density run by Schlumberger.

**Preliminary Proposed Perforations:**

Top	Bottom	Depth
4,850'	4,940'	90'
5,010'	5,120'	110'
		200' TOTAL
Density 4 JSPF		
Total Shots = 800		

**Perforation Details:**

3 1/8" gun barrel

3 1/8" GeoDynamic 19 gram RDX charges

.51" entrance hole

42.07" penetration

**Proposed Procedures:**

Rig up coil tubing unit, run to 5,130'. Bow well dry.

Shut-in well for 24 hours – Record pressure at surface.

Rig down pulling unit.

Rig up portable tester, keep well on test for a minimum of 7 days.

Rig up pulling unit.

Kill well with FW + 2 % KCL.

Go in with 2-7/8" work string circulated sand and retrieve RBD set @ 5,350'.

Pick up 4-1/2" production tubing. Run in hole and stab in permanent packer @ 5,365'.

Remove profile nipple set @ 5,355'. Make sure well is dead. Unstab.

Come out of the hole with 4-1/2" tubing.

Pick up 7-5/8" packer and on/off tool. Run in the hole with 4-1/2" production tubing.

Set packer @ 4,820'

Rig up coil tubing unit. Run in to 5,640'. Blow well dry. Come out of hole. Lay down CT unit.

Set surface nipple.

Remove BOP. Set wellhead. Pull surface nipple.

Rig down pulling unit.

Clean location.