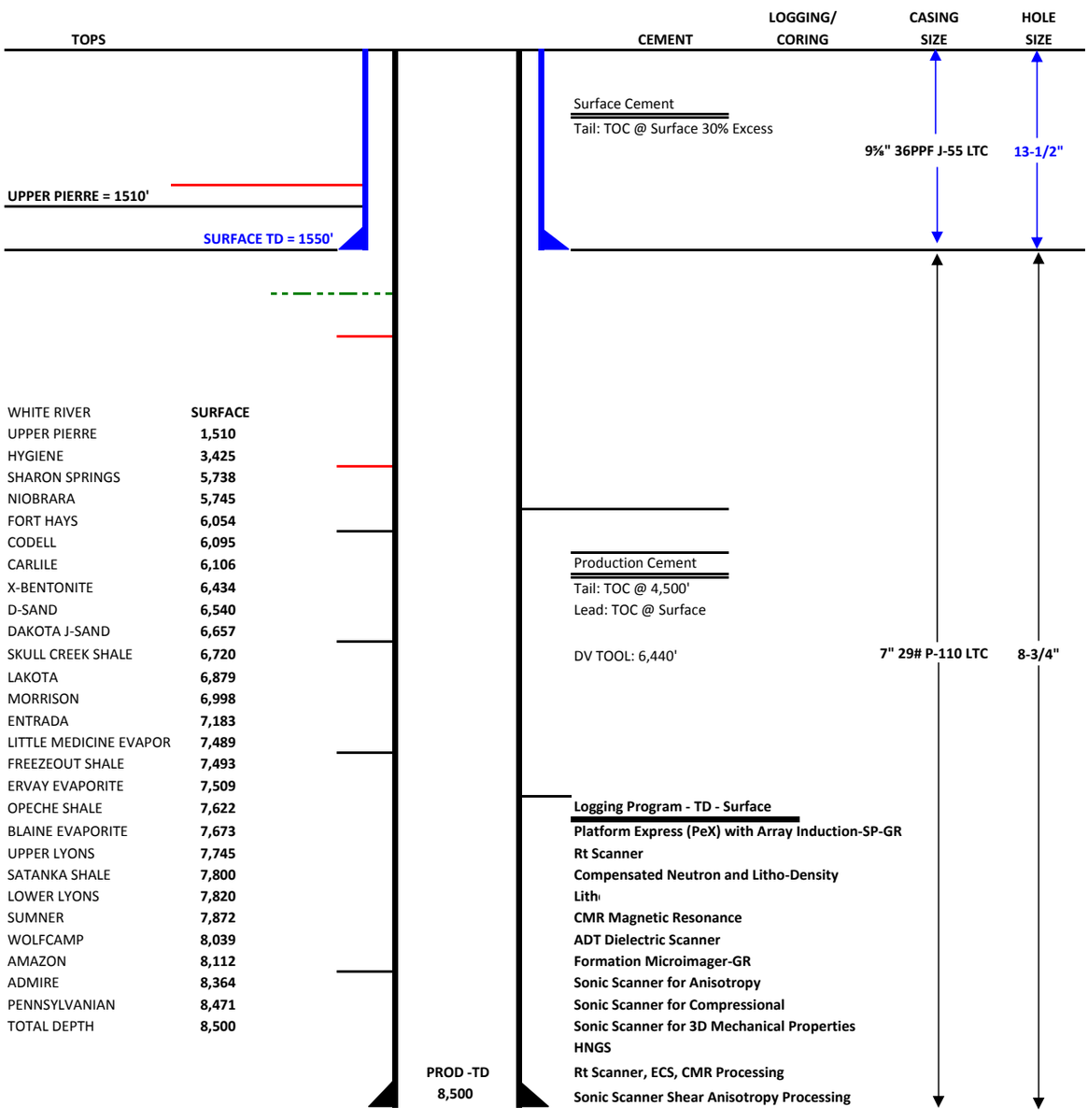
COMPANY:	**WHITING OIL AND GAS CORP**	**DATE:**	October 3, 2014
WELL:	**RAZOR 21 SWD #1**	**MD/TVD**	8500' / 8500'
FIELD - COUNTY, STATE:	REDTAIL - WELD, COLORADO	**AFE:**	
SHL:	2317 FEL 2595 FSL-NWSE 21-T10N-R58W	**BHL:**	same as SHL
OBJECTIVE ZONE:	PENNSYLVANIAN	**GR:**	4,820
RIG:	Pioneer 54	**KB**	4,839



Whiting Oil & Gas Corp.
Razor 21 SWD #1 Drill Plan
Vertical – Pennsylvanian Well
October 3, 2014

Summary:

The Razor 21 SWD #1 well will be a vertical Pennsylvanian well. The well will be drilled to 8,500'MD/TVD TD and 7" casing will be run and cemented. This is a stratigraphic test well of lower targets and will be converted to a SWD well later.

Surface Location: 21-T10N-R58W
2595' FSL 2317' FEL
Weld County, Colorado

Bottom Location: Same as SHL

DRILLING PROGRAM

1. ESTIMATED TOPS OF GEOLOGICAL MARKERS:

Ground Level 4,820' Estimated KB 4,839' (18.5')

FORMATION	TVD	SSTVD
WHITE RIVER	SURFACE	
UPPER PIERRE	1,510	3329
HYGIENE	3,425	1414
SHARON SPRINGS	5,738	-900
NIOBRARA	5,745	-907
FORT HAYS	6,054	-1216
CODELL	6,095	-1257
CARLILE	6,106	-1268
X-BENTONITE	6,434	-1596
D-SAND	6,540	-1702
DAKOTA J-SAND	6,657	-1819
SKULL CREEK SHALE	6,720	-1882
LAKOTA	6,879	-2041
MORRISON	6,998	-2160
ENTRADA	7,183	-2345
LITTLE MEDICINE EVAPORITE	7,489	-2651
FREEZEOUT SHALE	7,493	-2655
ERVAY EVAPORITE	7,509	-2671
OPECHE SHALE	7,622	-2784
BLAINE EVAPORITE	7,673	-2835
UPPER LYONS	7,745	-2907
SATANKA SHALE	7,800	-2962
LOWER LYONS	7,820	-2982
SUMNER	7,872	-3034
WOLFCAMP	8,039	-3201
AMAZON	8,112	-3274
ADMIRE	8,364	-3526
PENNSYLVANIAN	8,471	-3633
TOTAL DEPTH	8,500	-3662

PRESSURE CONTROL EQUIPMENT

A. Type: Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer with 5,000 psi Casinghead and 5,000 psi Tubinghead.

B. Testing Procedure:

The annular preventer will be pressure tested to 50% of stack rated working pressure for ten (10) minutes or until provisions of test are met, whichever is longer. The BOP, choke manifold, and related equipment will be pressure tested to approved BOP stack working pressure (if isolated from surface casing by a test plug) or to 70% of surface casing internal yield strength (if BOP is not isolated by a test plug). Pressure will be maintained for ten (10) minutes or until the requirements of the test are met, whichever is longer. At a minimum, the Annular and Blow-Out Preventer pressure tests will be performed:

1. When the BOPE is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

Annular will be function tested weekly, and pipe & blind rams activated each trip, but not more than once per day. All BOP drills & tests will be recorded in IADC driller's log.

C. Choke Manifold Equipment:

All choke lines will be straight lines whenever possible at turns, tee blocks will be used or will be targeted with running tees, and will be anchored to prevent whip and vibration.

D. Accumulator:

Accumulator will have sufficient capacity to open hydraulically-controlled choke line valve (if so equipped), close all rams plus annular preventer, and retain a minimum of 200 psi above pre-charge on the closing manifold without the use of closing unit pumps. The fluid reservoir capacity will be double accumulator capacity and the fluid level will be maintained at manufacturer's recommendations. Accumulator pre-charge pressure test will be conducted prior to connecting the closing unit to the BOP stack.

E. Miscellaneous Information:

Choke manifold and BOP extension rods with hand wheels will be located outside rig sub-structure. Hydraulic BOP closing unit will be located at least twenty-five (25) feet from the wellhead but readily accessible to the driller. Exact locations and configurations of the hydraulic BOP closing unit will depend upon the particular rig contracted to drill this hole.

A flare line will be installed after the choke manifold with the discharge point of the flare line to a separate pit located at least 125 feet away from the wellbore and any existing production facilities.

A volume monitoring system with alarms will be used to monitor pit gains/losses along with visual backup.

2. PROPOSED CASING PROGRAM

A. Casing Program: All New

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Coupling OD	Burst (psi)	Collapse (psi)	Tension (Body/Joint) (klbs)	Depth Set (md)
13-1/2"	9-5/8"	36	J-55	LT&C	10.625"	3,520	2,020	564/453	0 – 1,550'
8-3/4"	7"	29	P110	LT&C	7.656"	11,220	8,530	797/929	0 – 8,500'

9-5/8" surface casing will have centralizers as follows:

1. Install a bowspring centralizer at the first and second collars above the guide shoe.
2. Install one bowspring centralizer every third joint above the second collar.
3. Centralizer and basket placed 120' below the surface (or at the bottom of the third joint below the surface).
4. Centralizer and basket placed 80' below the surface (or at the bottom of the second joint below the surface).

7" production casing will have centralizers as follows:

1. Install a bowspring centralizer at the first and second collars above the guide shoe.
2. After that centralize every third joint to surface with single bow spring centralizers.

7" production string will have a DV tool at 6,440'.

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

B. Casing Design Parameters:

Surface Casing

Interval	Size	Wt	Grade	Burst (psi)[a]/SF	Collapse (psi)[b]/SF	Tension (klb)[c]/SF
0' – 1,550'	9-5/8"	36.0 lb/ft	J-55	3,520/3.23	2,020/2.78	453/9.41

a. based on frac gradient at shoe of 14.0 ppg
b. based on full evacuation with 9.0 ppg fluid on backside
c. based on casing string weight in 9.0 ppg mud
String Weight in 9.0 ppg mud ≈ 48,133 lbs

Production Casing

Interval	Size	Wt	Grade	Burst (psi)[a]/SF	Collapse (psi)[b]/SF	Tension (klb)[c]/SF
0' – 8,500'	7"	29.0 lb/ft	P-110	11,220/1.73	8,530/1.75	797/3.82

a. based on 6,500 psi frac pressure.
b. based on full evacuation with 11 ppg pore pressure on backside
c. based on casing string weight in 10.0 ppg mud
String Weight in 10.0 ppg mud ≈ 208,866 lbs.

3. PROPOSED CEMENTING PROGRAM

Surface Casing

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	XC (%)	WEIGHT (ppg)	YIELD (ft^3/sx)
9-5/8"	Lead	1,550'	Type III Cement + 0.08 lbs/sack Static Free + 1% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 60.4% Fresh Water.	705	30	14.5	1.40

A cement top job is required if cement fallback is greater than 10' below ground level.

Production Casing Stage 2

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	XC (%)	WEIGHT (ppg)	YIELD (ft^3/sx)
7"	Lead	4,500'	(35:65) Poz (Fly Ash):Class G Cement + 0.06 lbs/sack Static Free + 0.1% bwoc R-3 + 46.46% bwoc LW-6 + 1% bwoc FL-25 + 0.5% bwoc Sodium Metasilicate + 5% bwoc CSE-2 + 85% Fresh Water.	340	30	10.5	2.64
7"	Tail	1,940'	315 cu-ft; 101 sacks (35:65) Poz (Fly Ash):Class G Cement + 0.06 lbs/sack Static Free + 54.44% bwoc LW-6 + 1% bwoc FL-25 + 0.5% bwoc Sodium Metasilicate + 20% bwoc Silica Sand, 100 mesh, Sacked + 5% bwoc CSE-2 + 100.6% Fresh Water.	140	35	10.5	3.12

Production Casing Stage 1

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	XC (%)	WEIGHT (ppg)	YIELD (ft^3/sx)
7"	Tail	2,060'	315 cu-ft; 101 sacks (35:65) Poz (Fly Ash):Class G Cement + 0.06 lbs/sack Static Free + 54.44% bwoc LW-6 + 1% bwoc FL-25 + 0.5% bwoc Sodium Metasilicate + 20% bwoc Silica Sand, 100 mesh, Sacked + 5% bwoc CSE-2 + 100.6% Fresh Water.	150	35	10.5	3.12

Cement volumes for the 7" Production Casing will be calculated to provide a top of cement to Surface.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

4. MUD PROGRAM

Depth (MD)	Mud System	MW	PV	YP	FL
0 -1,550'	Water, Gel/Lime Sweeps	8.4 – 8.5	0 - 6	0 - 4	NC
1,550' – 8,500'	LSND	8.7 – 10	8 - 20	8 - 14	10 - 12

5. EVALUATION PROGRAM

Cores: None planned.

DST: None planned.

Surveys: Deviation surveys every 500' to TD in both surface and production holes.

Mud Logger:
Samples: 100' samples surface to 500' above Niobrara
50' samples from Niobrara to TD

Open Hole Logging Program:

Logging Program - TD - Surface

Platform Express (PeX) with Array Induction-SP-GR
Rt Scanner
Compensated Neutron and Litho-Density
Litho Scanner
CMR Magnetic Resonance
ADT Dielectric Scanner
Formation Microimager-GR
Sonic Scanner for Anisotropy
Sonic Scanner for Compressional
Sonic Scanner for 3D Mechanical Properties
HNGS
Rt Scanner, ECS, CMR Processing
Sonic Scanner Shear Anisotropy Processing

6. ABNORMAL CONDITIONS

No abnormal pressures are anticipated. No H_2S gas is anticipated.

Anticipated bottom hole pressure is 3,681 psi (0.433 psi/ft) at 8,500' TVD in the Pennsylvanian and the maximum anticipated surface pressure equals approximately 1,811 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

7. ANTICIPATED STARTING DATES

A. Anticipated Starting Dates:

Dirt work startup: November 2014

Spud: November 2014

Duration: 15 – 20 days