STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3
AMENDED REPORT ☑

APPLICATION FOR PERMIT TO DRILL	
	1. WELL NAME and NUMBER Threemile 24-33H
2. TYPE OF WORK DRILL NEW WELL ◉ REENTER P&A WELL ○ DEEPEN WELL ○	**3. FIELD OR WILDCAT** HATCH POINT
4. TYPE OF WELL Oil Well Coalbed Methane Well: NO	**5. UNIT or COMMUNITIZATION AGREEMENT NAME** THREEMILE
6. NAME OF OPERATOR WHITING OIL & GAS CORPORATION	**7. OPERATOR PHONE** 303 390-4095
8. ADDRESS OF OPERATOR 1700 Broadway, Suite 2300, Denver, CO, 80290	**9. OPERATOR E-MAIL** scottw@whiting.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU-79184	**11. MINERAL OWNERSHIP** FEDERAL ◉ INDIAN ○ STATE ○ FEE ○
	12. SURFACE OWNERSHIP FEDERAL ◉ INDIAN ○ STATE ○ FEE ○
13. NAME OF SURFACE OWNER (if box 12 = 'fee')	**14. SURFACE OWNER PHONE (if box 12 = 'fee')**
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')	**16. SURFACE OWNER E-MAIL (if box 12 = 'fee')**
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')	**18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS** YES ○ (Submit Commingling Application) NO ◉
	19. SLANT VERTICAL ○ DIRECTIONAL ○ HORIZONTAL ◉

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	556 FSL 1904 FWL	SESW	33	29.0 S	22.0 E	S
Top of Uppermost Producing Zone	556 FSL 1904 FWL	SESW	33	29.0 S	22.0 E	S
At Total Depth	990 FSL 660 FEL	SESE	20	29.0 S	22.0 E	S

21. COUNTY SAN JUAN	**22. DISTANCE TO NEAREST LEASE LINE (Feet)** 660	**23. NUMBER OF ACRES IN DRILLING UNIT** 40
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 3400	**26. PROPOSED DEPTH** MD: 19546 TVD: 8835
27. ELEVATION - GROUND LEVEL 6090	**28. BOND NUMBER** UTB000148	**29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE** Municipal Water from Moab City

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

☑ **WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER**	☑ **COMPLETE DRILLING PLAN**
☐ **AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)**	☐ **FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER**
☑ **DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)**	☑ **TOPOGRAPHICAL MAP**

NAME Terri Hartle	**TITLE** Admin/Regulatory (Western Land Services)	**PHONE** 435 896-5501
SIGNATURE	**DATE** 01/18/2010	**EMAIL** Terri.Hartle@Westernls.com
API NUMBER ASSIGNED 43037500000000	**APPROVAL**  Permit Manager	

Proposed Hole, Casing, and Cement						
String	**Hole Size**	**Casing Size**	**Top (MD)**	**Bottom (MD)**		
I1	17.5	13.375	0	3450		
Pipe	**Grade**	**Length**	**Weight**			
	Grade J-55 LT&C	2900	61.0			
	Grade HCK-55 ST&C	530	61.0			

Proposed Hole, Casing, and Cement						
String	**Hole Size**	**Casing Size**	**Top (MD)**	**Bottom (MD)**		
Surf	24	20	0	500		
Pipe	**Grade**	**Length**	**Weight**			
	Grade J-55 ST&C	500	94.0			

Proposed Hole, Casing, and Cement						
String	**Hole Size**	**Casing Size**	**Top (MD)**	**Bottom (MD)**		
I2	12.25	9.625	0	6400		
Pipe	**Grade**	**Length**	**Weight**			
	Grade P-110 LT&C	6400	43.5			

Proposed Hole, Casing, and Cement						
String	**Hole Size**	**Casing Size**	**Top (MD)**	**Bottom (MD)**		
I3	8.5	7	0	6300		
Pipe	**Grade**	**Length**	**Weight**			
	Grade N-80 LT&C	6300	29.0			
	Grade HCN-80 LT&C	2512	29.0			

WHITING OIL & GAS CORPORATION
THREEMILE #24-33H
DRILL PLAN

Surface Location: 556' FSL & 1904' FWL
SESW Section 33-T29S-R22E
San Juan County, Utah

Summary:

The Threemile 24-33H well is a horizontal well with a vertical pilot hole to test the Cane Creek formation for hydrocarbon production. The pilot hole will be drilled to the Pinkerton Trail formation at TD depth of 8,835' TVD if no abnormal pressure is encounter in the Cane Creek formation. If abnormal pressure is encountered in the Cane Creek, the pilot hole will TD at the bottom of the Cane Creek section. Three cores will be cut in the pilot hole, Shale 13 – 90' core, Shale 19 – 120' core, and Cane Creek to Pinkerton Trail – 350' core. After the vertical hole is cored and logged, the well will be plugged back to a KOP of 7,912' TVD and a lateral drilled. The lateral will land at 8,485' TVD in the Cane Creek Formation. Vertical section for the horizontal section is 11,302' with 10,729' of usable lateral section.

Surface section will be 24" OH with 20" casing set at 500'. The first intermediate section will be drilled with a 17-1/2" bit from 500' to 3,427' and 13-3/8" casing set just in the Elephant Canyon to cover the Red Beds. The second intermediate section will be drilled with a 12-1/4" bit from 3,427' to 6,392' and 9-5/8" casing set in the first salt in the Ismay Member. The well will be drilled vertically to the Pinkerton Trail formation using a 8-3/4" bit. Cores will be taken as listed above.

After the vertical pilot hole is logged, a cement plug will be set in the openhole and the wellbore kicked off to drill a horizontal lateral in the Cane Creek formation. A kick off plug will be pump in the openhole at 7,912' and the well kicked off to build the curve section. The curve section will be built to 90 degrees and the third intermediate casing being 7" will be landed in the Cane Creek zone. Casing will be cemented lateral section drilled with a 6" bit. The lateral section will be completed using swell packers in the openhole and a liner/packer system in the 7" casing.

1. ESTIMATED TOPS OF GEOLOGICAL MARKERS

Ground Level 6,090' Estimated KB 6,120' (30')

Formation	Est Top-TVD	Est Top-SS	Lithology	Potential	Hazard
Wingate SS	0'	6,120'	SS		
Chinle Fm	2,361'	3,759'	Red Beds SS,SL		
Moenkopi Fm	2,661'	3,459'	Red Beds SS,SL		
Organ Rock	2.993'	3,127'	Red Beds SS,SL		
Elephant Can Fm	3,387'	2,733'	SS, Sh, Ls		
Honaker Trail	4,394'	1,726'	Ls, Sh		
La Sal Ls	5,602'	518'	Ls		
Ismay	6,062'	58'	Ls, Sh, Dol, Anhy		
Desert Creek Mbr	6,352'	(232')	Ls, Sh, Dol, Anhy, Hal		
Akah	6,570'	(450')	Dol, Sh, Hal		
Cane Creek Zn	8,485'	(2,365')	Anhy,SH, Ss	Oil-Gas	Hi Press
Pinkerton Trail	8,785'	(2,665)	Ls, Dol, SS, SH		

Est Pilot TD	8,835' TVD
Est Lateral TD	19,541' MD

Bottom Hole Location: 990' FSL & 660' FEL
SESE Section 20-T29S-R22E
San Juan County, Utah

2. PRESSURE CONTROL EQUIPMENT

A. Type: Diverter
Twenty (20") inch 500 psi rotating head

Twenty inch rotating head used as a diverter while drilling the 17-1/2" through the Red Beds.

B. Type: BOPE
Thirteen and five eights (13-5/8") inch 10,000 psi double ram hydraulic BOP with Blind and Pipe rams.
Thirteen and five eights (13-5/8") inch 10,000 psi single ram hydraulic BOP with Pipe rams.
Thirteen and five eights (13-5/8") inch 5,000 psi annular preventer
*See attached drawing

Rotating Head
13-3/8", 2,500 psi

Wellhead
13-3/8" casing, 5,000 psi Casing head, (A Section)
9-5/8" casing, 10,000 psi Casing spool, (B Section)

After the 13-3/8" casing is landed at 3,427', the 5,000 psi casing head will be welded on and the 10,000 psi casing spool (B Section) will be bolted up to the casing head. The 10,000 psi BOP stack will be bolted up to the upper 10,000 psi flange on the B Section. Once the 9-5/8" casing is landed at 4,300', the packoff will be place around the 9-5/8" casing in the B Section. This will give a full 10,000 psi working pressure through the B Section and the BOP. *See attached drawings.

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. *See attached drawing.

D. Accumulator:
Accumulator will have sufficient capacity to open a hydraulically-controlled choke line valve; 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 well bore and any existing production facilities.

2. PROPOSED CASING DESIGN PROGRAM

A. Casing Program: All New

Section	Interval	Hole Size	Footage	Description
Surface	0' – 500'	24"	500'	20" 94# J-55 STC
1st Intermediate	0' – 2,900'	17-1/2"	2,900'	13-3/8" 61.0# J-55 STC
	2,900' – 3,430'	17-1/2"	530	13-3/8" 61.0# HCK-55 STC
2nd Intermediate	0' – 6,400'	12-1/4"	6,400'	9-5/8" 43.50# P-110 LTC
3rd Intermediate	0' – 6,300'	8-1/2"	6,300'	7" 29# N-80 LTC
	6,300' – 8,812' MD	8-1/2"	2,512'	7" 29# HCN-80 LTC
Production	8,812' – 19,541' MD	6"	10,729'	4-1/2" 11.6# HCP-110 LTC

20" Surface casing will have five (5) centralizers as follows: Centralizer #1 set on middle of joint #1 by stop ring, and Centralizers #2 - #5 set across collars of joints #2, #4, #6 and one centralizer set in the conductor.

13-3/8" Intermediate casing will have nineteen (19) centralizers as follows: Centralizer #1 set on middle of joint #1 by stop ring, Centralizer #2 set across the Collar joint of joint #2. Centralizer set across the collar joint on every fifth joint to surface.

9-5/8" Intermediate casing will have twenty-four (24) centralizers as follows: Centralizer #1 set on middle of joint #1 by stop ring, Centralizer #2 set across the Collar joint of joint #2. Centralizer set across the collar joint on every fifth joint to 3430'. Centralizer set across the collar joint on every tenth joint to surface.

7" Intermediate casing will have twenty-seven (16) 7" x 8-3/4" centralizers.
a) Four (4) centralizers every other jt casing point to KOP.
b) Twelve (12) centralizers every third (3rd) jt.

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:

20" Surface Casing

Interval	Description	Burst (psi)[a]	Collapse (psi)[b]	Tension (klb)[c]
0' – 500'	20" 94# J-55 STC	2,110/1.54	520/2.22	783/19.35

a. based on Methane gas kick to surface, 0.0329 psi/ft
b. based on full evacuation with 9.0 ppg fluid on backside
c. based on casing string weight in 9 ppg mud
String Weight in 9.0 ppg mud ≈ 40,542 lbs

13-3/8" Intermediate Casing

Interval	Description	Burst (psi)[a]	Collapse (psi)[b]	Tension (klb)[c]
0' – 2,900'	13-3/8" 61# J-55 LTC	3,090/1.47	3,090/1.14	595/2.66
2,900' – 3,430'	9-5/8" 40# HCN-80 LTC	5,750/1.47	4,230/1.16	798/3.01

a. based on BLM Burst Rules, 0.22 psi/ft.
b. based on full evacuation with 9.0 ppg fluid on backside
c. based on casing string weight in 9 ppg mud
String Weight in 9.0 ppg mud ≈ 177,300 lbs

9-5/8" Intermediate Casing

Interval	Description	Burst (psi)[a]	Collapse (psi)[b]	Tension (klb)[c]
0' – 6,400'	9-5/8" 43.5# P-110 LTC	8,700/1.26	4,420/1.21	1,106/3.21

a. based on BLM Burst Rules, 0.22 psi/ft.
b. based on full evacuation with 10.0 ppg fluid on backside
c. based on casing string weight in 10.0 ppg mud.
String Weight in 10.0 ppg mud ≈ 230,000 lbs.

7" Intermediate Casing

Interval	Description	Burst (psi)[a]	Collapse (psi)[b]	Tension (klb)[c]
0' – 6,300'	7" 29# N-80 LTC	8,160/1.40	7,020/1.11	597/4.23
6,300'-8,812' MD	7" 29# HCN-80 LTC	8,160/1.81	9,200/1.10	655/3.32

a. based on BLM Burst Rules, 0.22 psi/ft.
b. based on full evacuation with 15.0 ppg fluid on backside
c. based on casing string weight in 15.0 ppg mud.
String Weight in 15.0 ppg mud ≈ 166,000 lbs.

4-1/2" Production Liner Casing

Interval	Description	Burst (psi)[a]	Collapse (psi)[b]	Tension (klb)[c]
7,800' – 19,541'	4-1/2" 11.60# HCP-100 LTC	10,690/3.19	8,650/1.15	279/2.34

a. based on BLM Burst Rules, 0.22 psi/ft.
b. based on full evacuation with 15.0 ppg fluid on backside
c. based on casing string weight in 15.0 ppg mud.
String Weight in 15.0 ppg mud ≈ 119,000 lbs.

4. PROPOSED CEMENTING PROGRAM

All slurries tested for compatibility, compression strengths, and pumping times based on actual job conditions.

20" Surface: TOC Surface, (100% Excess)

Tail: 960 cu-ft; 409 sx Versacem System + 0.3% D-Air 3000 + 0.125 lbm/sk Poly-E-Flake

Displacement: 177.6 bbls Fresh Water @ 8.34 ppg

Cement Properties	Tail Slurry
Slurry Weight (ppg)	12.30
Slurry Yield (cf/sack)	2.35
Amount of Mix water (gps)	13.42

13-3/8" Intermediate: TOT 2,930', TOL Surface, 50% excess

Lead: 3041 cu-ft; 1035 sacks Versacem System + 0.3% D-Air 3000 + 0.125 lbm/sk Poly-E-Flake

Tail: 521 cu-ft; 289 sacks Versacem System + 0.3% D-Air 3000 + 0.125 lbm/sk Poly-E-Flake

Displacement: 530.3 bbls Fresh Water @ 8.34 ppg

Cement Properties	Lead Slurry	Tail Slurry
Slurry Weight (ppg)	11.50	13.50
Slurry Yield (cf/sack)	2.94	1.80
Amount of Mix water (gps)	17.85	9.35

9-5/8" Intermediate: TOT 5,900', TOL 3,200' (200' into 13-3/8" casing), (50% Excess)

Lead: 1230 cu-ft; 556 sacks Halliburton Light Premium + 1% Bentonite + 18% Salt + 0.125 lbm/sk Poly_e_Flake

Tail: 235 cu-ft; 199 sacks Premium Cement 94 .bm/sk + 0.3% Halad®-413 + 0.3% Halad®-344 + 0.3% D-Air 3000 + 6% Salt + 0.1% Bersaset + 0.3% Super CBL + 0.3% HR-5

Displacement: 485 bbls Water @ 8.34 ppg

Cement Properties	Lead Slurry	Tail Slurry
Slurry Weight (ppg)	12.50	15.80
Slurry Yield (cf/sack)	2.21	1.18
Amount of Mix water (gps)	11.69	5.00

7" Intermediate: TOT 7,8000' MD, TOL 6,200' (200' into 9-5/8" casing), (35% Excess)

Lead: 272 cu-ft; 240 sacks 75/25 Poz Premium + 18% Salt + 5 lbm/sk Barite + 0.4% HR-5 + 0.2% CFR-3

Tail: 171 cu-ft; 132 sacks Elasticem System

Displacement: 327 bbls Water @ 8.34 ppg

Cement Properties	Lead Slurry	Tail Slurry
Slurry Weight (ppg)	15.00	15.50
Slurry Yield (cf/sack)	1.13	1.30
Amount of Mix water (gps)	4.14	4.92

5. LINER PACKER SYSTEM

The 4-1/2" liner system will use a swell packer run on 4-1/2" 11.6# HCP-110 LTC casing. The number of swell packers will depend on the total length of the lateral. Usually, a frac stage is ~500'. The 4-1/2" casing will run back to surface with a isolation packer at 7,700' in the vertical section of the 7" casing.

6. MUD PROGRAM

Depth	Mud System	MW (ppg)	PV (cp)	YP (lb/100ft2)	FL (ml/30min)
0 -500'	Air	NA	NA	NA	NA
500'-3,430'	Air/Mist	NA	NA	NA	NA
3,430' – 6,400'	Sat Salt	9.2 – 10.0	5 - 20	5 - 25	15 - 30
6,400' – 8,812'	Oil Based Mud	12.0 – 15.0	15 - 30	9 - 25	>6
8,812' – 19,541'	Oil Based Mud	8.6 – 12.2	15 - 30	9 - 25	>6

Surface hole (0' – 500') will be drilled by the surface rig which will also set the conductor and drill mouse hole. Surface rig will use air to drill 500' and set casing.

Intermediate hole (500' – 3,430') will be drilled with the drilling rig using an air/foam package.
Air/foam package will consist of compressors, booster, and foam unit. (See attached drawing and data). Package will compress 3200 SCFM of and air and a fluid package capable of pumping 60 gpm nominal, of fluid to 600 psig. This same package will move 2100 SCFM two staged @ 1500 psig.

Special Drilling Operations

- Rotating Head
- Blooie line discharge 100 feet from wellbore and securely anchored
- Straight run on blooie line
- Compressors located in the opposite direction from the blooie line
- Compressors located a minimum of 100 feet the wellbore

6. TESTING, LOGGING AND CORE PROGRAMS

Cores: Shale 13 – 90'
Shale 19 – 120'
Cane Creek to Pinkerton Trail – 350'

DST: None planned

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

Mud Logger: From 4,700' to TD.

Samples: 30' samples 4,700' to TD

Open Hole Logging Program:	Induction w/GR Log	TD to Surface Casing
	Density Compensated Neutron	TD to 4,700'

7. ANTICIPATED ABNORMAL PRESSURES OR TEMPERATURES:

No abnormal temperatures are anticipated. BHT at 8,835' TVD, estimated at 150°F. Temperature based on BHT in the Threemile 43-18H, 131°F at 7,730' TVD.

No H_2S is anticipated.

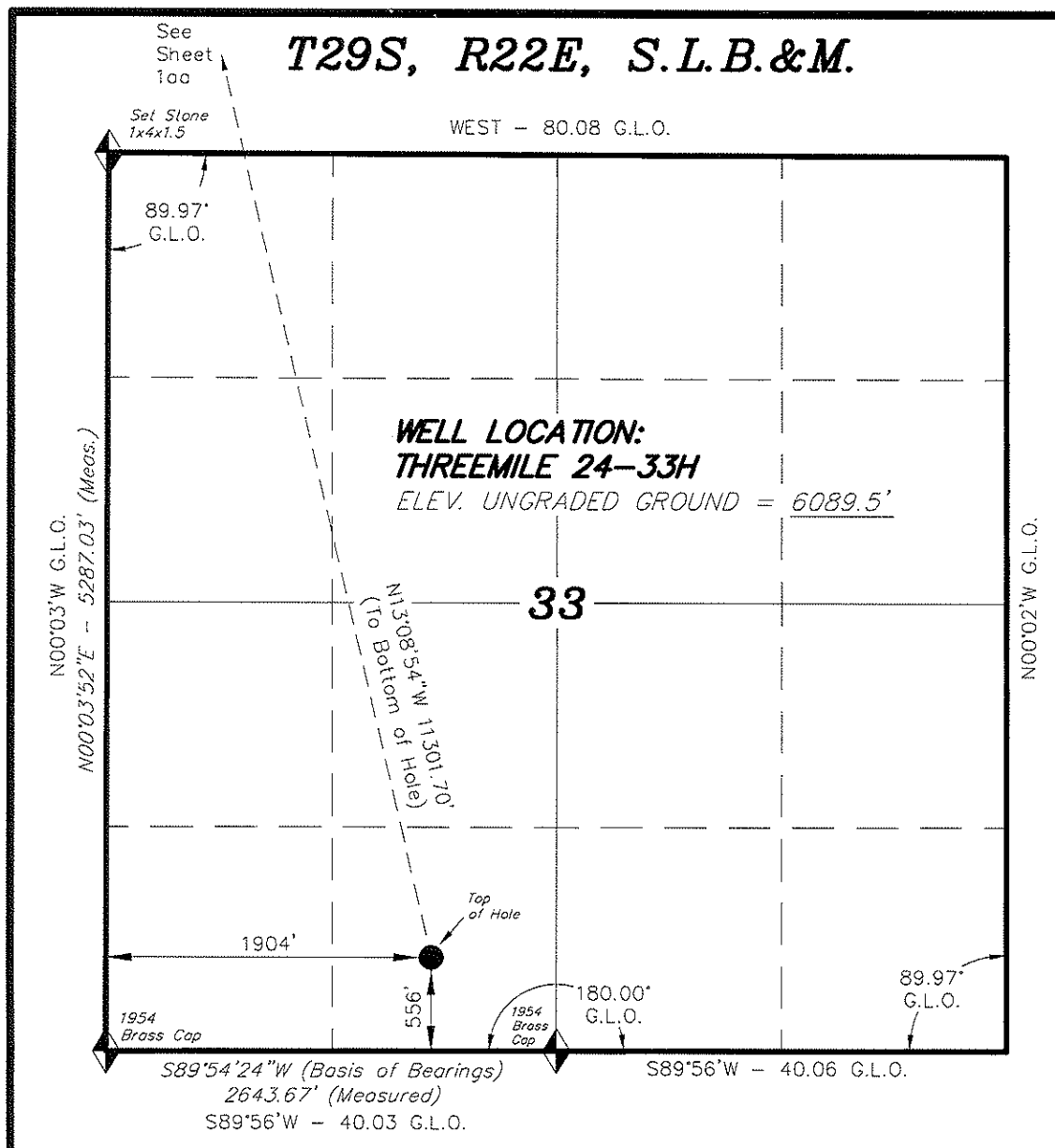
If overpressure is present in the Cane Creek formation, maximum anticipated bottom hole pressure equals approximately 7,466 psi (calculated at 0.85 psi/foot) in the Cane Creek zone at TD Depth of 8,784' TVD. Maximum anticipated surface pressure equals approximately 5,534 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

If overpressure is not present in the Cane Creek zone, maximum anticipated bottom hole pressure equals approximately 3,825 psi (calculated at 0.433 psi/foot) in the Pinkerton Trail zone at TD Depth of 8,835'. Maximum anticipated surface pressure equals approximately 1,882 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

8. ANTICIPATED STARTING DATE AND DURATION:

Dirt work startup:	June 2010
Spud:	July 2010
Duration:	45 - 60 days

T29S, R22E, S.L.B.&M.



= SECTION CORNERS LOCATED

BASIS OF ELEVATIONS IS CAT TRIANGULATION STATION LOCATED IN THE SE 1/4 OF SECTION 33, T29-1/2S, R22E, S.L.B.&M. REPORTED FROM THE NATIONAL GEODETIC SURVEY AS BEING 6279 FEET (NAVD 88).

NAD 83 (SURFACE LOCATION)	
LATITUDE = 38°13'47.80"	(38.229945)
LONGITUDE = 109°30'28.04"	(109.507789)
NAD 27 (SURFACE LOCATION)	
LATITUDE = 38°13'47.85"	(38.229958)
LONGITUDE = 109°30'25.62"	(109.507117)

WHITING OIL & GAS CORPORATION

WELL LOCATION, THREEMILE 24–33H, LOCATED AS SHOWN IN THE SE 1/4 SW 1/4 OF SECTION 33, T29S, R22E, S.L.B.&M. SAN JUAN COUNTY, UTAH.

1000' 500' 0' 1000'
BAR SCALE

N

NOTES:
1. Bearings are based on Global Positioning Satellite observations.

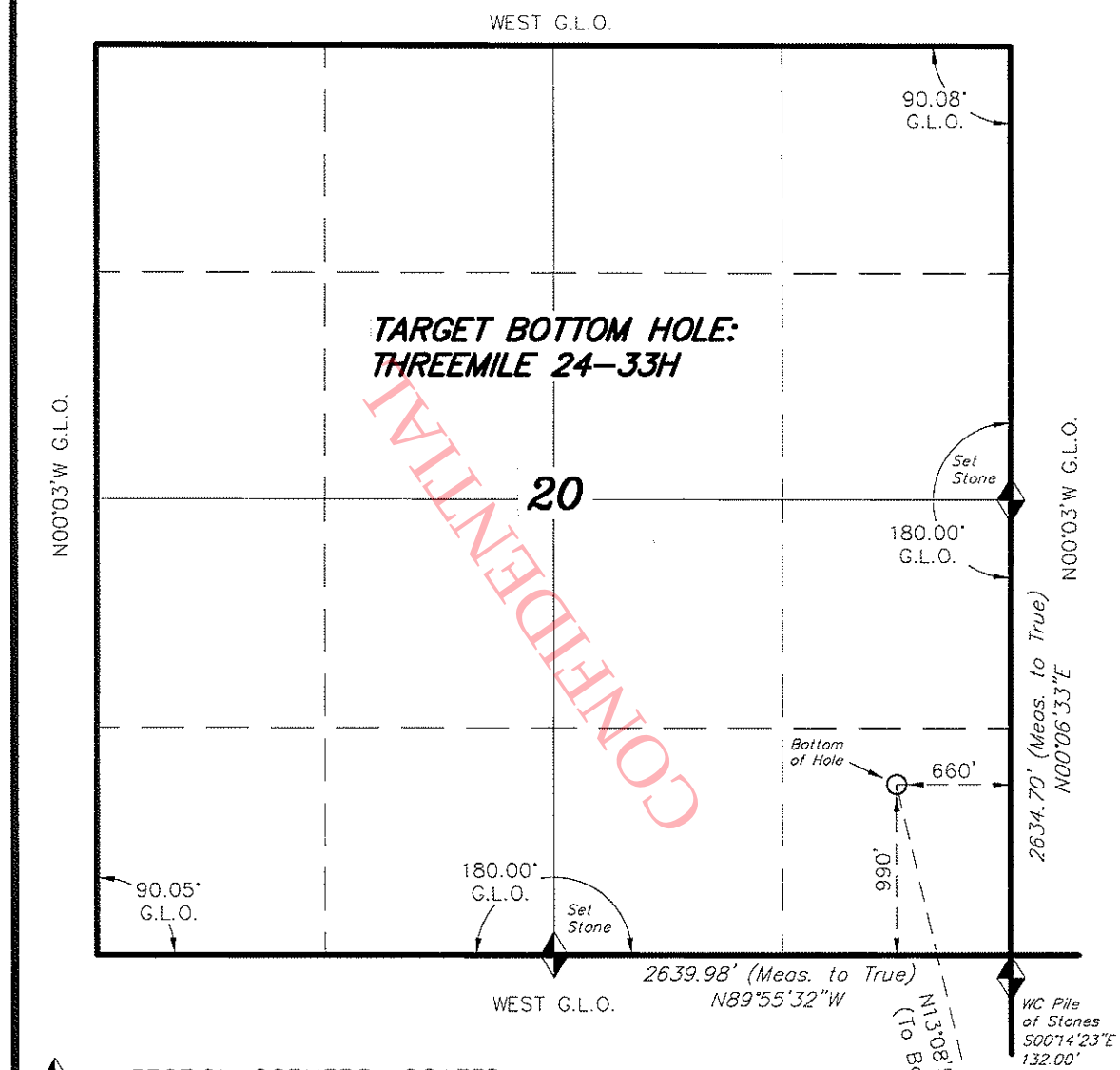
THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION, THE LOCATION HAS BEEN STAKED ON THE GROUND AS SHOWN ON THE PLAT, AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR No. 189377 STATE OF UTAH
STACY W. STEWART
REGISTERED LAND SURVEYOR
REGISTRATION NO. 189377
STATE OF UTAH

TRI STATE LAND SURVEYING & CONSULTING
180 NORTH VERNAL AVE. – VERNAL, UTAH 84078
(435) 781–2501

DATE SURVEYED: 07–21–09	SURVEYED BY: C.D.S.	SHEET 1a OF 8
DATE DRAWN: 07–22–09	DRAWN BY: F.T.M.	
REVISED:	SCALE: 1" = 1000'	

T29S, R22E, S.L.B.&M.



= SECTION CORNERS LOCATED

NAD 83 (BOTTOM HOLE LOCATION)	
LATITUDE = 38°15'36.59"	(38.260164)
LONGITUDE = 109°31'00.30"	(109.516749)
NAD 27 (BOTTOM HOLE LOCATION)	
LATITUDE = 38°15'36.64"	(38.260178)
LONGITUDE = 109°30'57.88"	(109.516078)

BASIS OF ELEVATIONS IS CAT TRIANGULATION STATION LOCATED IN THE SE 1/4 OF SECTION 33, T29-1/2S, R22E, S.L.B.&M. REPORTED FROM THE NATIONAL GEODETIC SURVEY AS BEING 6279 FEET (NAVD 88).

WHITING OIL & GAS CORPORATION

TARGET BOTTOM HOLE, THREEMILE 24–33H, LOCATED AS SHOWN IN THE SE 1/4 SE 1/4 OF SECTION 20, T29S, R22E, S.L.B.&M. SAN JUAN COUNTY, UTAH.

1000' 500' 0' 1000'
BAR SCALE

N

NOTES:
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DATE SURVEYED: 07–21–09	SURVEYED BY: C.D.S.	SHEET 1aa OF 8
DATE DRAWN: 07–22–09	DRAWN BY: F.T.M.	
REVISED:	SCALE: 1" = 1000'	

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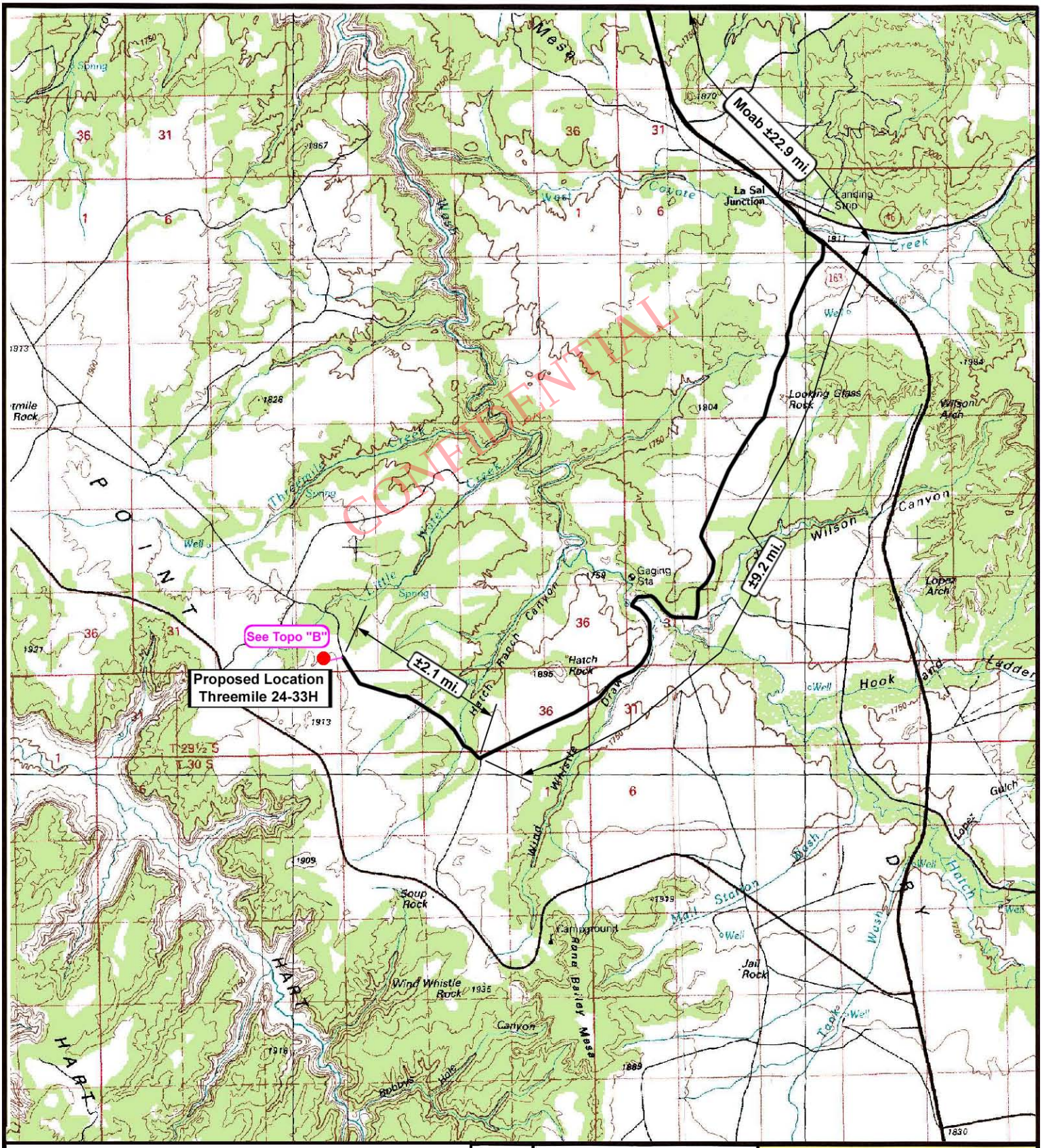


Whiting Oil & Gas Corporation

Threemile 24-33H
SEC. 33, T29S, R22E, S.L.B&M

Tri-State Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

Legend

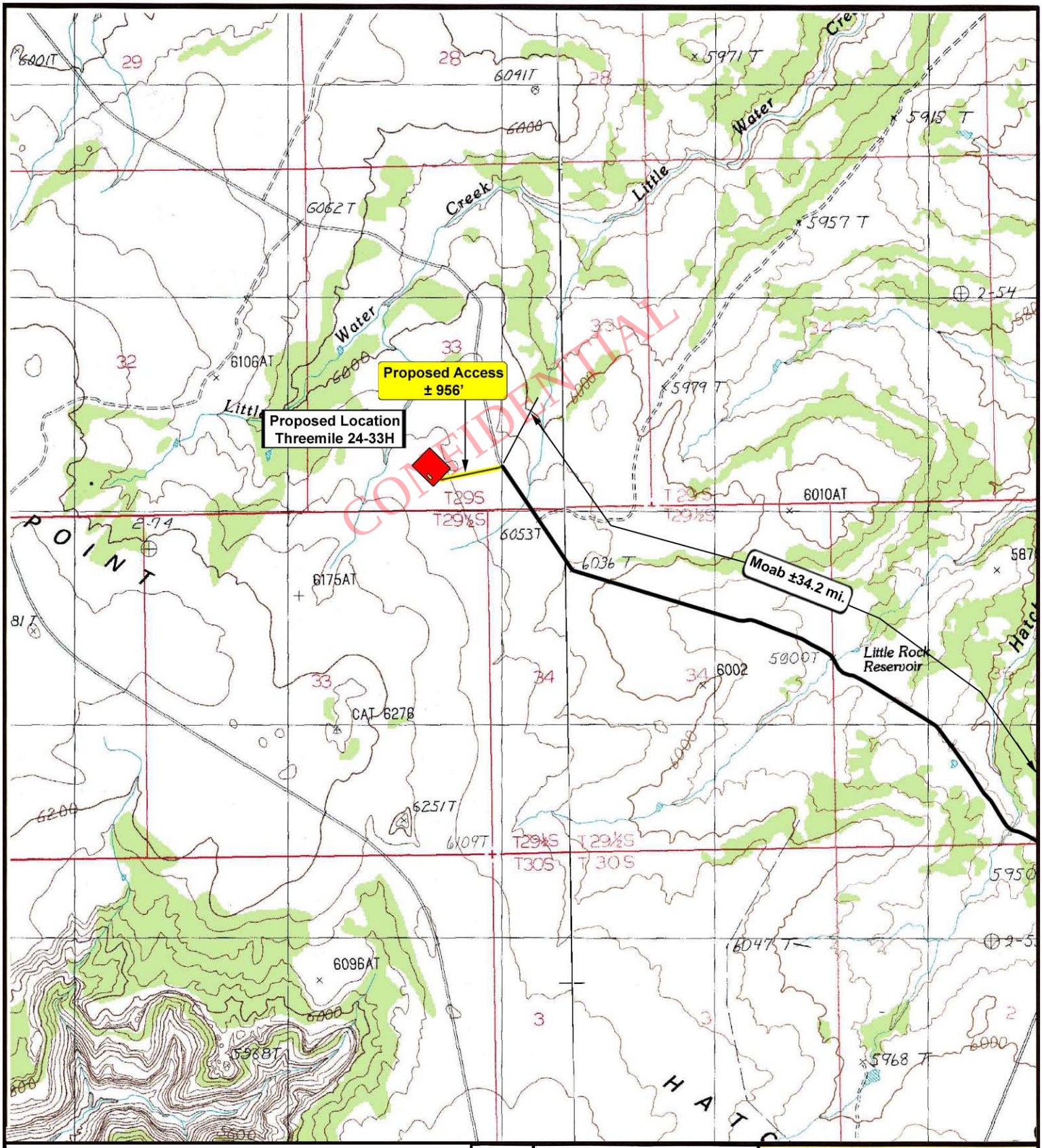
- Existing Road
- Proposed Access

SCALE: 1" = 100,000
DRAWN BY: JAS
DATE: 10-26-2009

TOPOGRAPHIC MAP "A"

SHEET 7 OF 8

'APIWellNo:43037500000000'



Whiting Oil & Gas Corporation

Threemile 24-33H
SEC. 33, T29S, R22E, S.L.B&M

N

Tri-State Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

Legend

- Existing Road
- Proposed Access

SCALE: 1" = 2,000'
DRAWN BY: JAS
DATE: 10-26-2009

TOPOGRAPHIC MAP "B"

SHEET 8 OF 8

Whiting Petroleum Corporation

San Juan County, UT
Section 33-29S-22E
Threemile 24-33H
Hatch Point

Plan: Pilot Hole

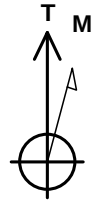
Standard Planning Report

04 January, 2010

'APIWellNo:43037500000000'

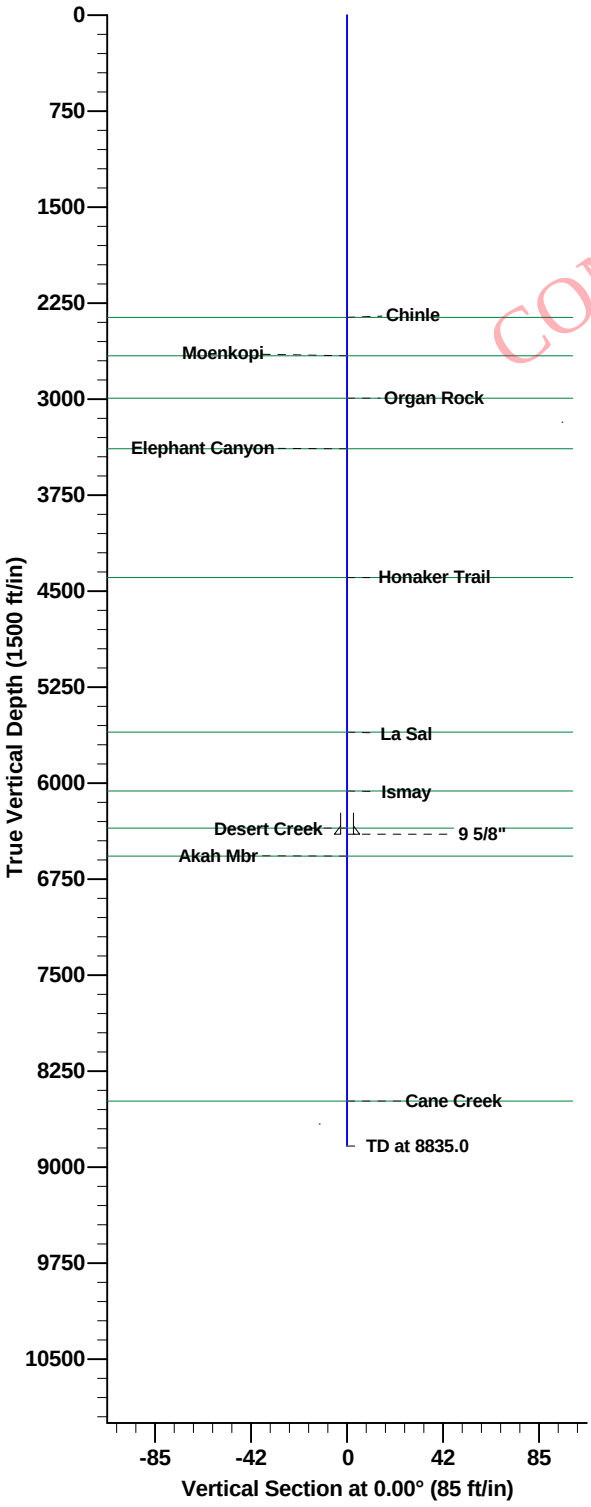
Whiting Petroleum Corporation
Threemile 24-33H
San Juan County, UT
Pilot Hole

PROJECT DETAILS: San Juan County, UT	
Geodetic System:	US State Plane 1927 (Exact solution)
Datum:	NAD 1927 (NADCON CONUS)
Ellipsoid:	Clarke 1866
Zone:	Utah South 4303



Azimuths to True North
Magnetic North: 10.99°

Magnetic Field
Strength: 51519.0snT
Dip Angle: 64.44°
Date: 2009/12/09
Model: IGRF200510



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2361.0	2361.0	Chinle
2661.0	2661.0	Moenkopi
2993.0	2993.0	Organ Rock
3387.0	3387.0	Elephant Canyon
4394.0	4394.0	Honaker Trail
5602.0	5602.0	La Sal
6062.0	6062.0	Ismay
6352.0	6352.0	Desert Creek
6570.0	6570.0	Akah Mbr
8485.0	8485.0	Cane Creek

Planning Report

Database:	EDM 2003.16 Single User Db	**Local Co-ordinate Reference:**	Well Threemile 24-33H
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Project:	San Juan County, UT	**MD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Site:	Section 33-29S-22E	**North Reference:**	True
Well:	Threemile 24-33H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hatch Point		
Design:	Pilot Hole		

Project San Juan County, UT

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Utah South 4303		

Site Section 33-29S-22E

Site Position:		**Northing:**	575,292.79 ft	**Latitude:**	38° 13' 47.551 N
From:	Lat/Long	**Easting:**	2,572,449.12 ft	**Longitude:**	109° 30' 25.503 W
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	1.22 °

Well Threemile 24-33H

Well Position	**+N/-S**	0.0 ft	**Northing:**	575,292.79 ft	**Latitude:**	38° 13' 47.551 N
	+E/-W	0.0 ft	**Easting:**	2,572,449.12 ft	**Longitude:**	109° 30' 25.503 W
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	6,120.0 ft	**Ground Level:**	6,090.0 ft

Wellbore Hatch Point

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2009/12/09	10.99	64.44	51,519

Design Pilot Hole

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	0.00

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
8,835.0	0.00	0.00	8,835.0	0.0	0.0	0.00	0.00	0.00	0.00	

Planning Report

Database:	EDM 2003.16 Single User Db	**Local Co-ordinate Reference:**	Well Threemile 24-33H
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Project:	San Juan County, UT	**MD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Site:	Section 33-29S-22E	**North Reference:**	True
Well:	Threemile 24-33H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hatch Point		
Design:	Pilot Hole		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,361.0	0.00	0.00	2,361.0	0.0	0.0	0.0	0.00	0.00	0.00
Chinle									
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,661.0	0.00	0.00	2,661.0	0.0	0.0	0.0	0.00	0.00	0.00
Moenkopi									
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,993.0	0.00	0.00	2,993.0	0.0	0.0	0.0	0.00	0.00	0.00
Organ Rock									
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,387.0	0.00	0.00	3,387.0	0.0	0.0	0.0	0.00	0.00	0.00
Elephant Canyon									
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,394.0	0.00	0.00	4,394.0	0.0	0.0	0.0	0.00	0.00	0.00

Planning Report

Database:	EDM 2003.16 Single User Db	**Local Co-ordinate Reference:**	Well Threemile 24-33H
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Project:	San Juan County, UT	**MD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Site:	Section 33-29S-22E	**North Reference:**	True
Well:	Threemile 24-33H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hatch Point		
Design:	Pilot Hole		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Honaker Trail									
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,602.0	0.00	0.00	5,602.0	0.0	0.0	0.0	0.00	0.00	0.00
La Sal									
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,062.0	0.00	0.00	6,062.0	0.0	0.0	0.0	0.00	0.00	0.00
Ismay									
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,352.0	0.00	0.00	6,352.0	0.0	0.0	0.0	0.00	0.00	0.00
Desert Creek									
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
9 5/8"									
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,570.0	0.00	0.00	6,570.0	0.0	0.0	0.0	0.00	0.00	0.00
Akah Mbr									
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,485.0	0.00	0.00	8,485.0	0.0	0.0	0.0	0.00	0.00	0.00
Cane Creek									

Planning Report

Database:	EDM 2003.16 Single User Db	**Local Co-ordinate Reference:**	Well Threemile 24-33H
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Project:	San Juan County, UT	**MD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Site:	Section 33-29S-22E	**North Reference:**	True
Well:	Threemile 24-33H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hatch Point		
Design:	Pilot Hole		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00
8,835.0	0.00	0.00	8,835.0	0.0	0.0	0.0	0.00	0.00	0.00
8835' TMD									

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TM 24-33	0.00	0.00	8,485.0	11,003.0	-2,600.2	586,237.92	2,569,615.01	38° 15' 36.322 N	109° 30' 58.103 W
- plan misses by 11306.1ft at 8485.0ft MD (8485.0 TVD, 0.0 N, 0.0 E)									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,400.0	6,400.0	9 5/8"	9-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,361.0	2,361.0	Chinle		0.00	
6,570.0	6,570.0	Akah Mbr		0.00	
6,352.0	6,352.0	Desert Creek		0.00	
5,602.0	5,602.0	La Sal		0.00	
8,485.0	8,485.0	Cane Creek		0.00	
2,661.0	2,661.0	Moenkopi		0.00	
6,062.0	6,062.0	Ismay		0.00	
3,387.0	3,387.0	Elephant Canyon		0.00	
4,394.0	4,394.0	Honaker Trail		0.00	
2,993.0	2,993.0	Organ Rock		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
8,835.0	8,835.0	0.0	0.0	8835' TMD

Whiting Petroleum Corporation

San Juan County, UT
Section 33-29S-22E
Threemile 24-33H
Hatch Point

Plan: Horizontal Plan

Standard Planning Report

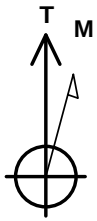
04 January, 2010

San Juan County, UT
Section 33-29S-22E
Threemile 24-33H
Hatch Point
Horizontal Plan

'API Well No: 43037500000000'

San Juan County, UT

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Utah South 4303

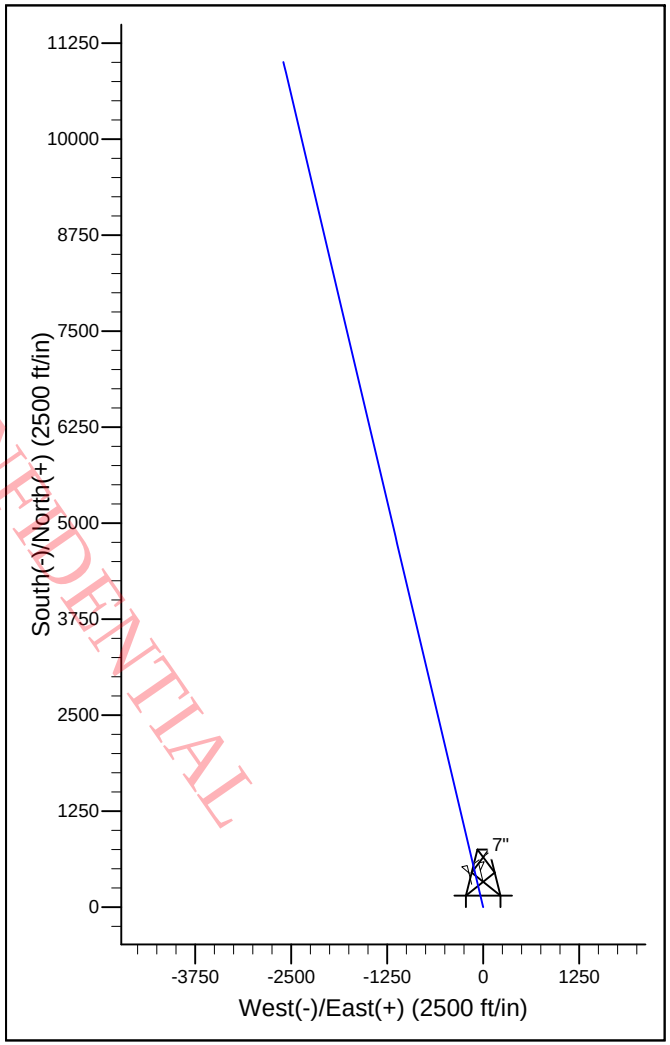


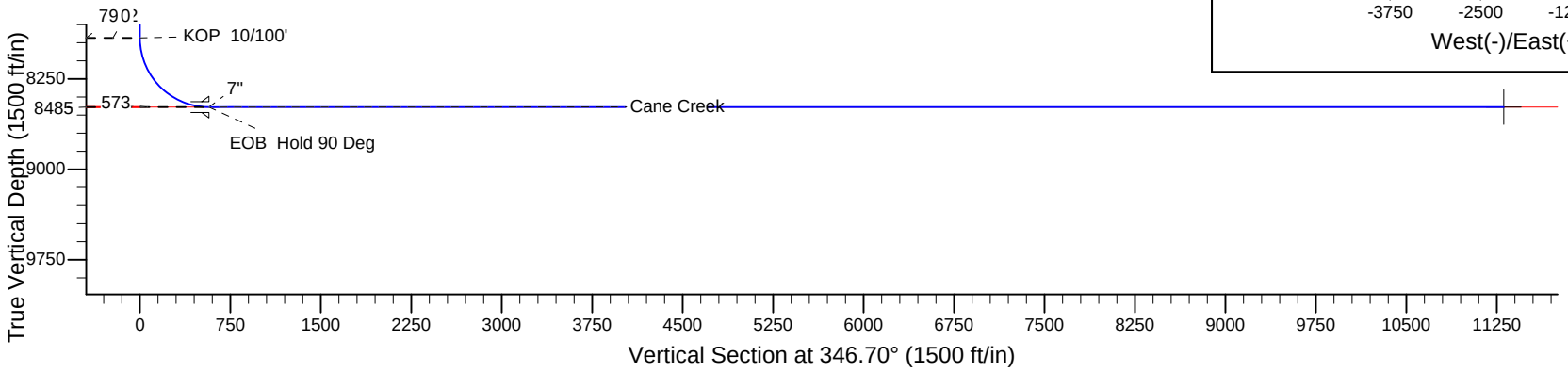
Azimuths to True North
Magnetic North: 10.99°

Magnetic Field
Strength: 51519.0snT
Dip Angle: 64.44°
Date: 2009/12/09
Model: IGRF200510

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
7912.0	0.00	0.00	7912.0	0.0	0.0	0.00	0.00	0.0	
8812.0	90.00	346.70	8485.0	557.6	-131.8	10.00	346.70	573.0	
19545.2	90.00	346.70	8485.0	11002.9	-2601.0	0.00	0.00	11306.1	TM 24-33





Planning Report

Database:	EDM 2003.16 Single User Db	**Local Co-ordinate Reference:**	Well Threemile 24-33H
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Project:	San Juan County, UT	**MD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Site:	Section 33-29S-22E	**North Reference:**	True
Well:	Threemile 24-33H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hatch Point		
Design:	Horizontal Plan		

Project San Juan County, UT

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Utah South 4303		

Site Section 33-29S-22E

Site Position:		**Northing:**	575,292.79 ft	**Latitude:**	38° 13' 47.551 N
From:	Lat/Long	**Easting:**	2,572,449.12 ft	**Longitude:**	109° 30' 25.503 W
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	1.22 °

Well Threemile 24-33H

Well Position	**+N/-S**	0.0 ft	**Northing:**	575,292.79 ft	**Latitude:**	38° 13' 47.551 N
	+E/-W	0.0 ft	**Easting:**	2,572,449.12 ft	**Longitude:**	109° 30' 25.503 W
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	6,120.0 ft	**Ground Level:**	6,090.0 ft

Wellbore Hatch Point

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2009/12/09	10.99	64.44	51,519

Design Horizontal Plan

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	346.70

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
7,912.0	0.00	0.00	7,912.0	0.0	0.0	0.00	0.00	0.00	0.00	
8,812.0	90.00	346.70	8,485.0	557.6	-131.8	10.00	10.00	0.00	346.70	
19,545.2	90.00	346.70	8,485.0	11,002.9	-2,601.0	0.00	0.00	0.00	0.00	TM 24-33

Planning Report

Database:	EDM 2003.16 Single User Db	**Local Co-ordinate Reference:**	Well Threemile 24-33H
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Project:	San Juan County, UT	**MD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Site:	Section 33-29S-22E	**North Reference:**	True
Well:	Threemile 24-33H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hatch Point		
Design:	Horizontal Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,912.0	0.00	0.00	7,912.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP 10/100'									
8,000.0	8.80	346.70	7,999.7	6.6	-1.6	6.7	10.00	10.00	0.00
8,100.0	18.80	346.70	8,096.6	29.7	-7.0	30.6	10.00	10.00	0.00
8,200.0	28.80	346.70	8,188.0	69.0	-16.3	70.9	10.00	10.00	0.00
8,300.0	38.80	346.70	8,271.0	123.0	-29.1	126.4	10.00	10.00	0.00
8,400.0	48.80	346.70	8,343.1	190.3	-45.0	195.6	10.00	10.00	0.00
8,500.0	58.80	346.70	8,402.1	268.7	-63.5	276.2	10.00	10.00	0.00
8,600.0	68.80	346.70	8,446.2	356.0	-84.1	365.8	10.00	10.00	0.00
8,700.0	78.80	346.70	8,474.0	449.3	-106.2	461.7	10.00	10.00	0.00
8,800.0	88.80	346.70	8,484.8	545.9	-129.0	561.0	10.00	10.00	0.00
8,812.0	90.00	346.70	8,485.0	557.6	-131.8	573.0	10.00	10.00	0.00
EOB Hold 90 Deg - Cane Creek - 7"									
8,900.0	90.00	346.70	8,485.0	643.2	-152.1	661.0	0.00	0.00	0.00
9,000.0	90.00	346.70	8,485.0	740.5	-175.1	761.0	0.00	0.00	0.00
9,100.0	90.00	346.70	8,485.0	837.9	-198.1	861.0	0.00	0.00	0.00
9,200.0	90.00	346.70	8,485.0	935.2	-221.1	961.0	0.00	0.00	0.00
9,300.0	90.00	346.70	8,485.0	1,032.5	-244.1	1,061.0	0.00	0.00	0.00
9,400.0	90.00	346.70	8,485.0	1,129.8	-267.1	1,161.0	0.00	0.00	0.00
9,500.0	90.00	346.70	8,485.0	1,227.1	-290.1	1,261.0	0.00	0.00	0.00
9,600.0	90.00	346.70	8,485.0	1,324.5	-313.1	1,361.0	0.00	0.00	0.00
9,700.0	90.00	346.70	8,485.0	1,421.8	-336.1	1,461.0	0.00	0.00	0.00
9,800.0	90.00	346.70	8,485.0	1,519.1	-359.1	1,561.0	0.00	0.00	0.00
9,900.0	90.00	346.70	8,485.0	1,616.4	-382.1	1,661.0	0.00	0.00	0.00
10,000.0	90.00	346.70	8,485.0	1,713.7	-405.1	1,761.0	0.00	0.00	0.00
10,100.0	90.00	346.70	8,485.0	1,811.0	-428.1	1,861.0	0.00	0.00	0.00
10,200.0	90.00	346.70	8,485.0	1,908.4	-451.1	1,961.0	0.00	0.00	0.00
10,300.0	90.00	346.70	8,485.0	2,005.7	-474.1	2,061.0	0.00	0.00	0.00
10,400.0	90.00	346.70	8,485.0	2,103.0	-497.1	2,161.0	0.00	0.00	0.00
10,500.0	90.00	346.70	8,485.0	2,200.3	-520.1	2,261.0	0.00	0.00	0.00
10,600.0	90.00	346.70	8,485.0	2,297.6	-543.1	2,361.0	0.00	0.00	0.00
10,700.0	90.00	346.70	8,485.0	2,395.0	-566.1	2,461.0	0.00	0.00	0.00
10,800.0	90.00	346.70	8,485.0	2,492.3	-589.1	2,561.0	0.00	0.00	0.00
10,900.0	90.00	346.70	8,485.0	2,589.6	-612.2	2,661.0	0.00	0.00	0.00
11,000.0	90.00	346.70	8,485.0	2,686.9	-635.2	2,761.0	0.00	0.00	0.00
11,100.0	90.00	346.70	8,485.0	2,784.2	-658.2	2,861.0	0.00	0.00	0.00
11,200.0	90.00	346.70	8,485.0	2,881.5	-681.2	2,961.0	0.00	0.00	0.00
11,300.0	90.00	346.70	8,485.0	2,978.9	-704.2	3,061.0	0.00	0.00	0.00
11,400.0	90.00	346.70	8,485.0	3,076.2	-727.2	3,161.0	0.00	0.00	0.00
11,500.0	90.00	346.70	8,485.0	3,173.5	-750.2	3,261.0	0.00	0.00	0.00
11,600.0	90.00	346.70	8,485.0	3,270.8	-773.2	3,361.0	0.00	0.00	0.00
11,700.0	90.00	346.70	8,485.0	3,368.1	-796.2	3,461.0	0.00	0.00	0.00
11,800.0	90.00	346.70	8,485.0	3,465.4	-819.2	3,561.0	0.00	0.00	0.00
11,900.0	90.00	346.70	8,485.0	3,562.8	-842.2	3,661.0	0.00	0.00	0.00
12,000.0	90.00	346.70	8,485.0	3,660.1	-865.2	3,761.0	0.00	0.00	0.00
12,100.0	90.00	346.70	8,485.0	3,757.4	-888.2	3,861.0	0.00	0.00	0.00
12,200.0	90.00	346.70	8,485.0	3,854.7	-911.2	3,961.0	0.00	0.00	0.00
12,300.0	90.00	346.70	8,485.0	3,952.0	-934.2	4,061.0	0.00	0.00	0.00
12,400.0	90.00	346.70	8,485.0	4,049.4	-957.2	4,161.0	0.00	0.00	0.00
12,500.0	90.00	346.70	8,485.0	4,146.7	-980.2	4,261.0	0.00	0.00	0.00
12,600.0	90.00	346.70	8,485.0	4,244.0	-1,003.2	4,361.0	0.00	0.00	0.00
12,700.0	90.00	346.70	8,485.0	4,341.3	-1,026.2	4,461.0	0.00	0.00	0.00

Planning Report

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Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Project:	San Juan County, UT	**MD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Site:	Section 33-29S-22E	**North Reference:**	True
Well:	Threemile 24-33H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hatch Point		
Design:	Horizontal Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,800.0	90.00	346.70	8,485.0	4,438.6	-1,049.2	4,561.0	0.00	0.00	0.00
12,900.0	90.00	346.70	8,485.0	4,535.9	-1,072.3	4,661.0	0.00	0.00	0.00
13,000.0	90.00	346.70	8,485.0	4,633.3	-1,095.3	4,761.0	0.00	0.00	0.00
13,100.0	90.00	346.70	8,485.0	4,730.6	-1,118.3	4,861.0	0.00	0.00	0.00
13,200.0	90.00	346.70	8,485.0	4,827.9	-1,141.3	4,961.0	0.00	0.00	0.00
13,300.0	90.00	346.70	8,485.0	4,925.2	-1,164.3	5,061.0	0.00	0.00	0.00
13,400.0	90.00	346.70	8,485.0	5,022.5	-1,187.3	5,161.0	0.00	0.00	0.00
13,500.0	90.00	346.70	8,485.0	5,119.9	-1,210.3	5,261.0	0.00	0.00	0.00
13,600.0	90.00	346.70	8,485.0	5,217.2	-1,233.3	5,361.0	0.00	0.00	0.00
13,700.0	90.00	346.70	8,485.0	5,314.5	-1,256.3	5,461.0	0.00	0.00	0.00
13,800.0	90.00	346.70	8,485.0	5,411.8	-1,279.3	5,561.0	0.00	0.00	0.00
13,900.0	90.00	346.70	8,485.0	5,509.1	-1,302.3	5,661.0	0.00	0.00	0.00
14,000.0	90.00	346.70	8,485.0	5,606.4	-1,325.3	5,761.0	0.00	0.00	0.00
14,100.0	90.00	346.70	8,485.0	5,703.8	-1,348.3	5,861.0	0.00	0.00	0.00
14,200.0	90.00	346.70	8,485.0	5,801.1	-1,371.3	5,961.0	0.00	0.00	0.00
14,300.0	90.00	346.70	8,485.0	5,898.4	-1,394.3	6,061.0	0.00	0.00	0.00
14,400.0	90.00	346.70	8,485.0	5,995.7	-1,417.3	6,161.0	0.00	0.00	0.00
14,500.0	90.00	346.70	8,485.0	6,093.0	-1,440.3	6,261.0	0.00	0.00	0.00
14,600.0	90.00	346.70	8,485.0	6,190.3	-1,463.3	6,361.0	0.00	0.00	0.00
14,700.0	90.00	346.70	8,485.0	6,287.7	-1,486.3	6,461.0	0.00	0.00	0.00
14,800.0	90.00	346.70	8,485.0	6,385.0	-1,509.3	6,561.0	0.00	0.00	0.00
14,900.0	90.00	346.70	8,485.0	6,482.3	-1,532.4	6,661.0	0.00	0.00	0.00
15,000.0	90.00	346.70	8,485.0	6,579.6	-1,555.4	6,761.0	0.00	0.00	0.00
15,100.0	90.00	346.70	8,485.0	6,676.9	-1,578.4	6,861.0	0.00	0.00	0.00
15,200.0	90.00	346.70	8,485.0	6,774.3	-1,601.4	6,961.0	0.00	0.00	0.00
15,300.0	90.00	346.70	8,485.0	6,871.6	-1,624.4	7,061.0	0.00	0.00	0.00
15,400.0	90.00	346.70	8,485.0	6,968.9	-1,647.4	7,161.0	0.00	0.00	0.00
15,500.0	90.00	346.70	8,485.0	7,066.2	-1,670.4	7,261.0	0.00	0.00	0.00
15,600.0	90.00	346.70	8,485.0	7,163.5	-1,693.4	7,361.0	0.00	0.00	0.00
15,700.0	90.00	346.70	8,485.0	7,260.8	-1,716.4	7,461.0	0.00	0.00	0.00
15,800.0	90.00	346.70	8,485.0	7,358.2	-1,739.4	7,561.0	0.00	0.00	0.00
15,900.0	90.00	346.70	8,485.0	7,455.5	-1,762.4	7,661.0	0.00	0.00	0.00
16,000.0	90.00	346.70	8,485.0	7,552.8	-1,785.4	7,761.0	0.00	0.00	0.00
16,100.0	90.00	346.70	8,485.0	7,650.1	-1,808.4	7,861.0	0.00	0.00	0.00
16,200.0	90.00	346.70	8,485.0	7,747.4	-1,831.4	7,961.0	0.00	0.00	0.00
16,300.0	90.00	346.70	8,485.0	7,844.8	-1,854.4	8,061.0	0.00	0.00	0.00
16,400.0	90.00	346.70	8,485.0	7,942.1	-1,877.4	8,161.0	0.00	0.00	0.00
16,500.0	90.00	346.70	8,485.0	8,039.4	-1,900.4	8,261.0	0.00	0.00	0.00
16,600.0	90.00	346.70	8,485.0	8,136.7	-1,923.4	8,361.0	0.00	0.00	0.00
16,700.0	90.00	346.70	8,485.0	8,234.0	-1,946.4	8,461.0	0.00	0.00	0.00
16,800.0	90.00	346.70	8,485.0	8,331.3	-1,969.4	8,561.0	0.00	0.00	0.00
16,900.0	90.00	346.70	8,485.0	8,428.7	-1,992.5	8,661.0	0.00	0.00	0.00
17,000.0	90.00	346.70	8,485.0	8,526.0	-2,015.5	8,761.0	0.00	0.00	0.00
17,100.0	90.00	346.70	8,485.0	8,623.3	-2,038.5	8,861.0	0.00	0.00	0.00
17,200.0	90.00	346.70	8,485.0	8,720.6	-2,061.5	8,961.0	0.00	0.00	0.00
17,300.0	90.00	346.70	8,485.0	8,817.9	-2,084.5	9,061.0	0.00	0.00	0.00
17,400.0	90.00	346.70	8,485.0	8,915.3	-2,107.5	9,161.0	0.00	0.00	0.00
17,500.0	90.00	346.70	8,485.0	9,012.6	-2,130.5	9,261.0	0.00	0.00	0.00
17,600.0	90.00	346.70	8,485.0	9,109.9	-2,153.5	9,361.0	0.00	0.00	0.00
17,700.0	90.00	346.70	8,485.0	9,207.2	-2,176.5	9,461.0	0.00	0.00	0.00
17,800.0	90.00	346.70	8,485.0	9,304.5	-2,199.5	9,561.0	0.00	0.00	0.00
17,900.0	90.00	346.70	8,485.0	9,401.8	-2,222.5	9,661.0	0.00	0.00	0.00
18,000.0	90.00	346.70	8,485.0	9,499.2	-2,245.5	9,761.0	0.00	0.00	0.00
18,100.0	90.00	346.70	8,485.0	9,596.5	-2,268.5	9,861.0	0.00	0.00	0.00

Planning Report

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Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Project:	San Juan County, UT	**MD Reference:**	WELL @ 6120.0ft (Original Well Elev)
Site:	Section 33-29S-22E	**North Reference:**	True
Well:	Threemile 24-33H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hatch Point		
Design:	Horizontal Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
18,200.0	90.00	346.70	8,485.0	9,693.8	-2,291.5	9,961.0	0.00	0.00	0.00
18,300.0	90.00	346.70	8,485.0	9,791.1	-2,314.5	10,061.0	0.00	0.00	0.00
18,400.0	90.00	346.70	8,485.0	9,888.4	-2,337.5	10,161.0	0.00	0.00	0.00
18,500.0	90.00	346.70	8,485.0	9,985.7	-2,360.5	10,261.0	0.00	0.00	0.00
18,600.0	90.00	346.70	8,485.0	10,083.1	-2,383.5	10,361.0	0.00	0.00	0.00
18,700.0	90.00	346.70	8,485.0	10,180.4	-2,406.5	10,461.0	0.00	0.00	0.00
18,800.0	90.00	346.70	8,485.0	10,277.7	-2,429.5	10,561.0	0.00	0.00	0.00
18,900.0	90.00	346.70	8,485.0	10,375.0	-2,452.6	10,661.0	0.00	0.00	0.00
19,000.0	90.00	346.70	8,485.0	10,472.3	-2,475.6	10,761.0	0.00	0.00	0.00
19,100.0	90.00	346.70	8,485.0	10,569.7	-2,498.6	10,861.0	0.00	0.00	0.00
19,200.0	90.00	346.70	8,485.0	10,667.0	-2,521.6	10,961.0	0.00	0.00	0.00
19,300.0	90.00	346.70	8,485.0	10,764.3	-2,544.6	11,061.0	0.00	0.00	0.00
19,400.0	90.00	346.70	8,485.0	10,861.6	-2,567.6	11,161.0	0.00	0.00	0.00
19,500.0	90.00	346.70	8,485.0	10,958.9	-2,590.6	11,261.0	0.00	0.00	0.00
19,545.2	90.00	346.70	8,485.0	11,002.9	-2,601.0	11,306.1	0.00	0.00	0.00
TM 24-33									

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TM 24-33 - plan hits target - Point	0.00	0.00	8,485.0	11,003.0	-2,600.2	586,237.92	2,569,615.01	38° 15' 36.322 N	109° 30' 58.103 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
8,812.0	8,485.0	7"	7	8-3/4

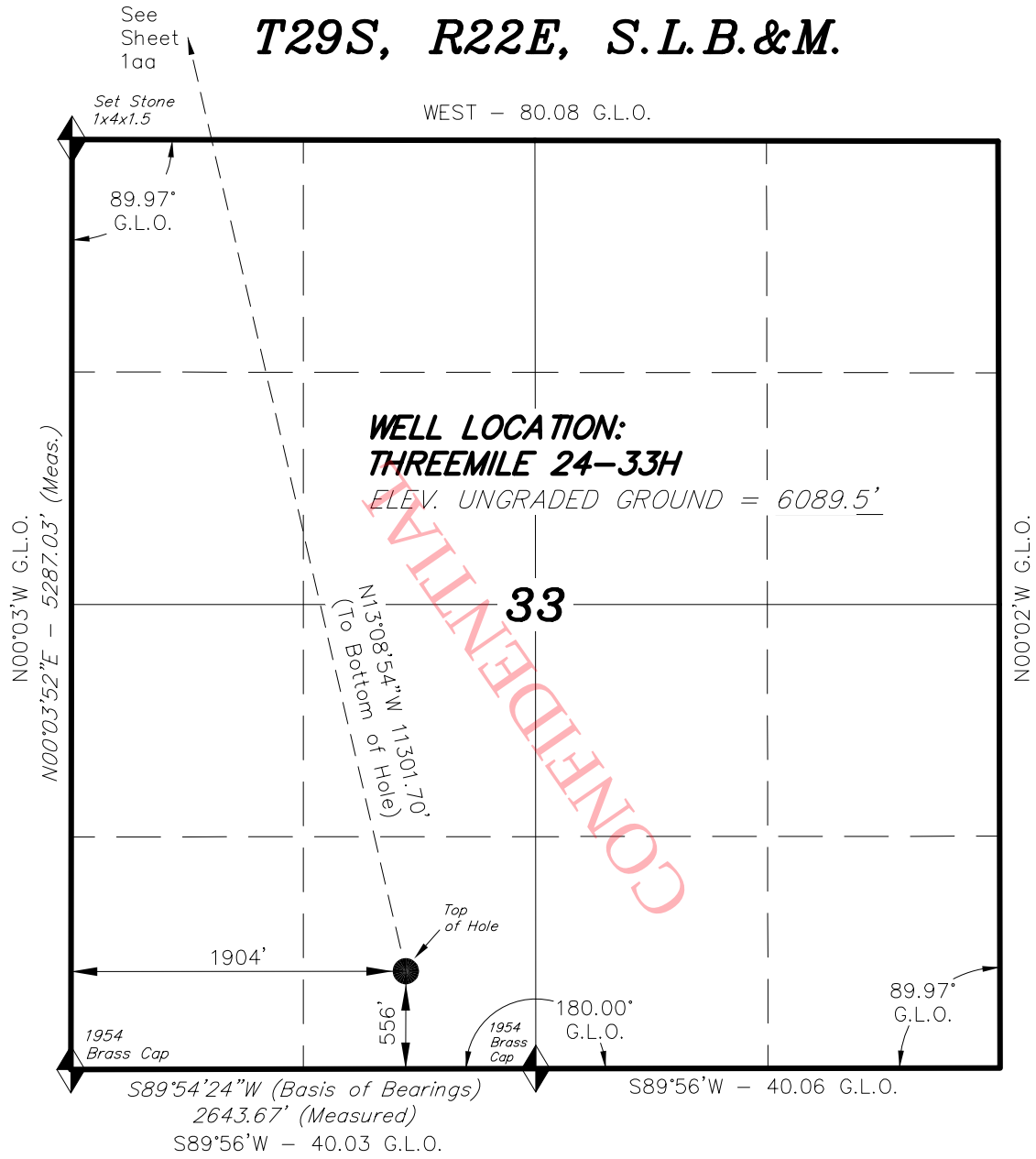
Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
8,812.0	8,485.0	Cane Creek		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
7,912.0	7,912.0	0.0	0.0	KOP 10/100'
8,812.0	8,485.0	557.6	-131.8	EOB Hold 90 Deg
19,545.3				19,545' TMD

T29S, R22E, S.L.B.&M.



= SECTION CORNERS LOCATED

BASIS OF ELEVATIONS IS CAT TRIANGULATION STATION LOCATED IN THE SE 1/4 OF SECTION 33, T29-1/2S, R22E, S.L.B.&M. REPORTED FROM THE NATIONAL GEODETIC SURVEY AS BEING 6279 FEET (NAVD 88).

NAD 83 (SURFACE LOCATION)
LATITUDE = 38°13'47.80" (38.229945)
LONGITUDE = 109°30'28.04" (109.507789)
NAD 27 (SURFACE LOCATION)
LATITUDE = 38°13'47.85" (38.229958)
LONGITUDE = 109°30'25.62" (109.507117)

WHITING OIL & GAS CORPORATION

WELL LOCATION, THREEMILE 24–33H, LOCATED AS SHOWN IN THE SE 1/4 SW 1/4 OF SECTION 33, T29S, R22E, S.L.B.&M. SAN JUAN COUNTY, UTAH.

1000' 500' 0' 1000'

BAR SCALE

N

NOTES:

1. Bearings are based on Global Positioning Satellite observations.

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THE LOCATION HAS BEEN STAKED ON THE GROUND AS SHOWN ON THE PLAT AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR No. 189377 STATE OF UTAH

STACY W. STEWART

REGISTERED LAND SURVEYOR
REGISTRATION No. 189377
STATE OF UTAH

TRI STATE LAND SURVEYING & CONSULTING
180 NORTH VERNAL AVE. – VERNAL, UTAH 84078
(435) 781–2501

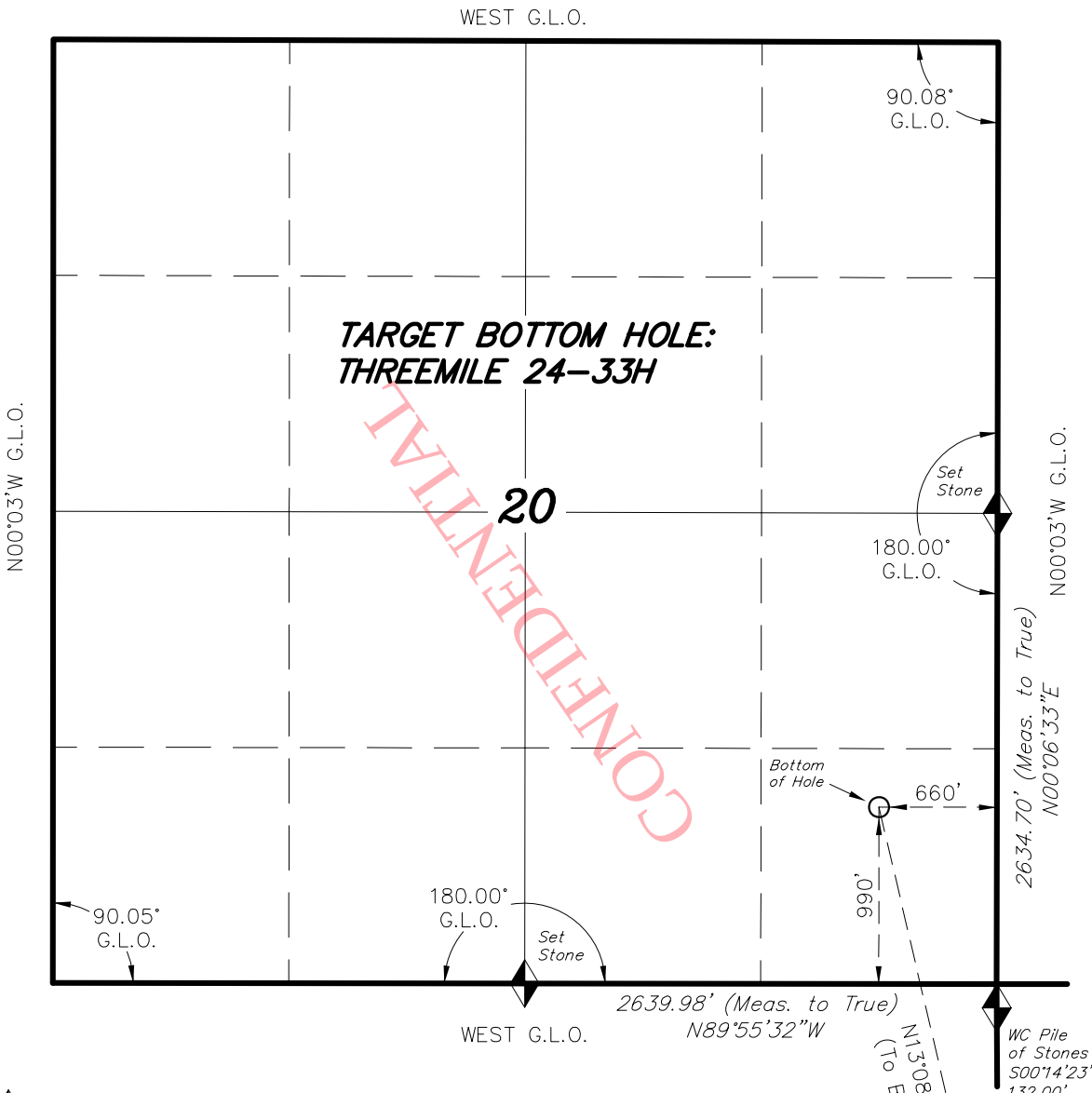
DATE SURVEYED: 07–21–09	SURVEYED BY: C.D.S.	SHEET 1a OF 8
DATE DRAWN: 07–22–09	DRAWN BY: F.T.M.	
REVISED:	SCALE: 1" = 1000'	

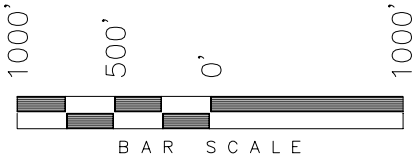
'APIWellNo:43037500000000'

T29S, R22E, S.L.B.&M.

WHITING OIL & GAS CORPORATION

TARGET BOTTOM HOLE, THREEMILE 24–33H, LOCATED AS SHOWN IN THE SE 1/4 SE 1/4 OF SECTION 20, T29S, R22E, S.L.B.&M. SAN JUAN COUNTY, UTAH.

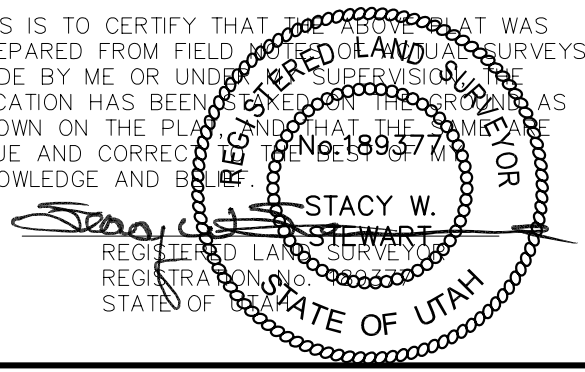




NOTES:

1. Bearings are based on Global Positioning Satellite observations.

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THE LOCATION HAS BEEN STAKED ON THE GROUND AS SHOWN ON THE PLAT AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



STACY W. STEWART
REGISTERED LAND SURVEYOR
REGISTRATION No. 189377
STATE OF UTAH

= SECTION CORNERS LOCATED

NAD 83 (BOTTOM HOLE LOCATION)	
LATITUDE = 38°15'36.59"	(38.260164)
LONGITUDE = 109°31'00.30"	(109.516749)
NAD 27 (BOTTOM HOLE LOCATION)	
LATITUDE = 38°15'36.64"	(38.260178)
LONGITUDE = 109°30'57.88"	(109.516078)

BASIS OF ELEVATIONS IS CAT TRIANGULATION STATION LOCATED IN THE SE 1/4 OF SECTION 33, T29–1/2S, R22E, S.L.B.&M. REPORTED FROM THE NATIONAL GEODETIC SURVEY AS BEING 6279 FEET (NAVD 88).

TRI STATE LAND SURVEYING & CONSULTING
180 NORTH VERNAL AVE. – VERNAL, UTAH 84078
(435) 781–2501

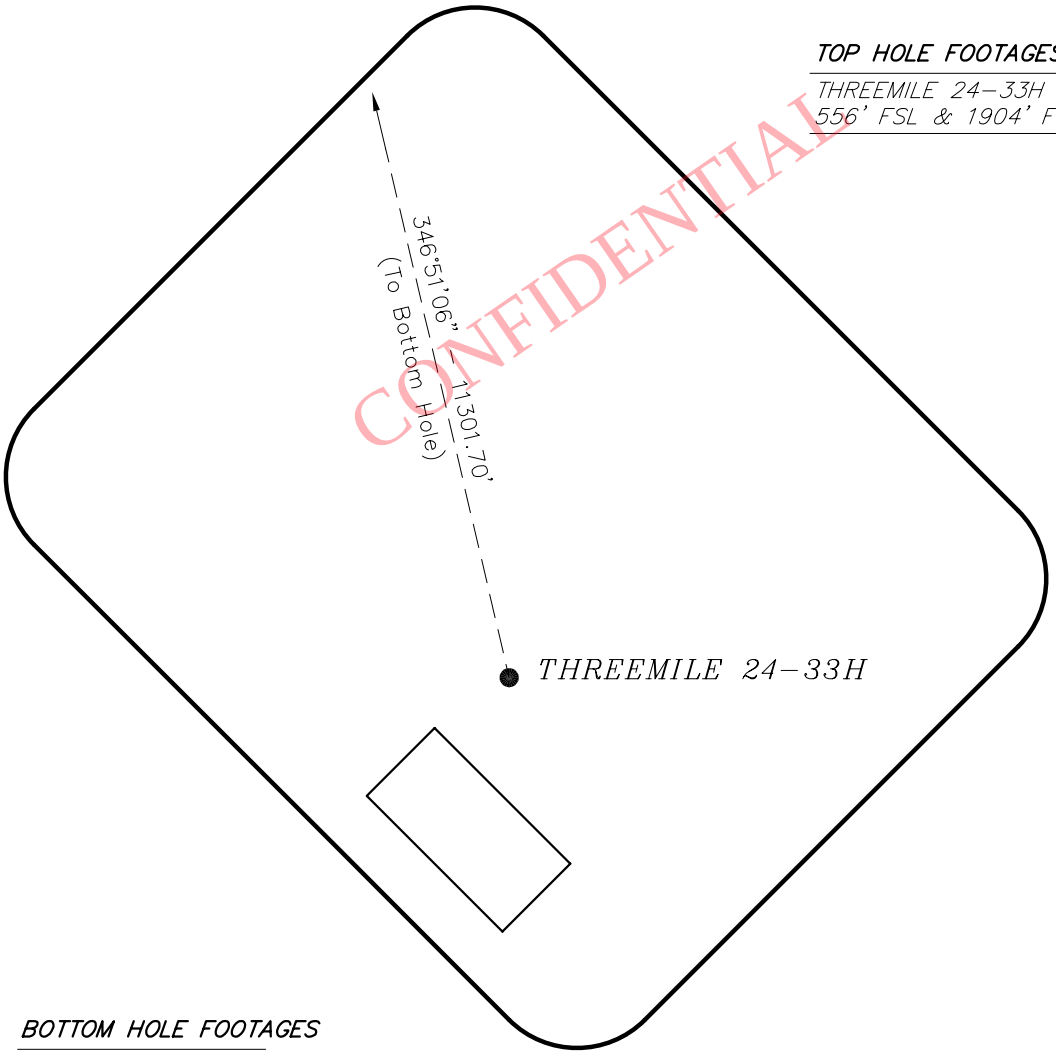
DATE SURVEYED: 07–21–09	SURVEYED BY: C.D.S.	SHEET 1aa
DATE DRAWN: 07–22–09	DRAWN BY: F.T.M.	
REVISED:	SCALE: 1" = 1000'	OF 8

'APIWellNo:43037500000000'

WHITING OIL & GAS CORPORATION

WELL PAD INTERFERENCE PLAT
WELL PAD THREEMILE 24-33H
Section 33, T29S, R22E, S.L.B.&M.

N



TOP HOLE FOOTAGES
THREEMILE 24-33H
556' FSL & 1904' FWL

BOTTOM HOLE FOOTAGES
THREEMILE 24-33H
990' FSL & 660' FEL

Note:
Bearings are based on G.P.S. observations.

LATITUDE & LONGITUDE
Proposed Surface position of Wells (NAD 27)

WELL	LATITUDE	LONGITUDE
24-33H	38.229958°	109.507117°

RELATIVE COORDINATES
From top hole to bottom hole

WELL	NORTH	EAST
24-33H	11005'	-2571'

LATITUDE & LONGITUDE
Proposed Bottom hole location (NAD 27)

WELL	LATITUDE	LONGITUDE
24-33H	38.260178°	108.516078°

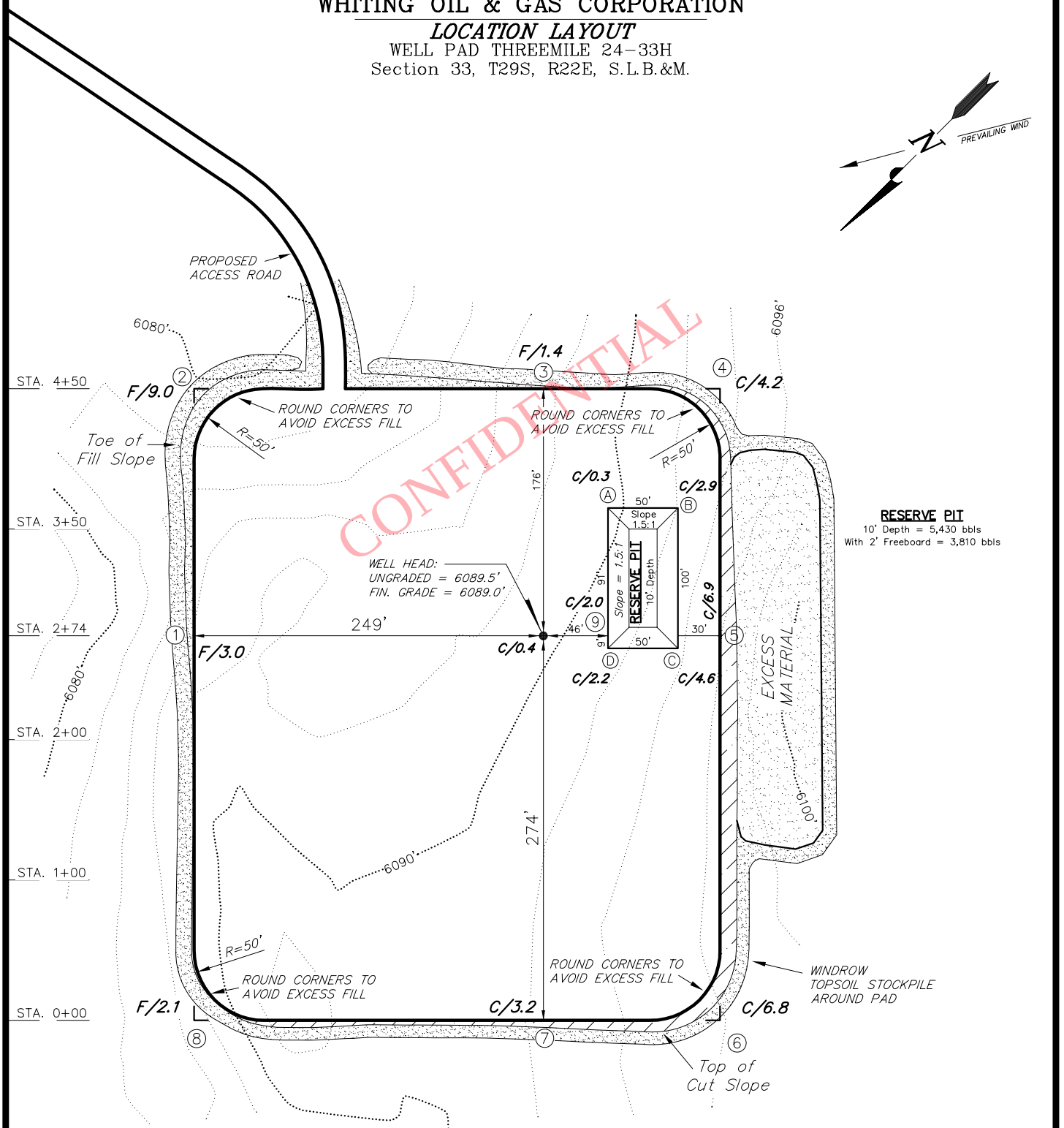
SURVEYED BY: C.D.S.	DATE SURVEYED: 07-21-09	Tri State Land Surveying, Inc. (435) 781-2501 180 NORTH VERNAL AVE. VERNAL, UTAH 84078	SHEET 2 OF 8
DRAWN BY: F.T.M.	DATE DRAWN: 07-22-09		
SCALE: 1" = 100'	REVISED: L.C.S. 10-26-09		

'APIWellNo:43037500000000'

WHITING OIL & GAS CORPORATION

LOCATION LAYOUT

WELL PAD THREEMILE 24-33H
Section 33, T29S, R22E, S.L.B.&M.



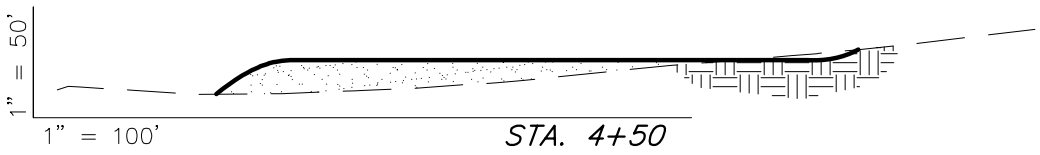
SURVEYED BY: C.D.S.	DATE SURVEYED: 07-21-09	Tri State Land Surveying, Inc. (435) 781-2501	SHEET 3 OF 8
DRAWN BY: F.T.M.	DATE DRAWN: 07-22-09	180 NORTH VERNAL AVE. VERNAL, UTAH 84078	
SCALE: 1" = 100'	REVISED: F.T.M. 10-30-09		

'APIWellNo:43037500000000'

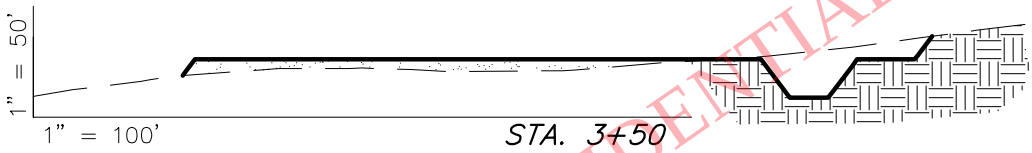
WHITING OIL & GAS CORPORATION

CROSS SECTIONS

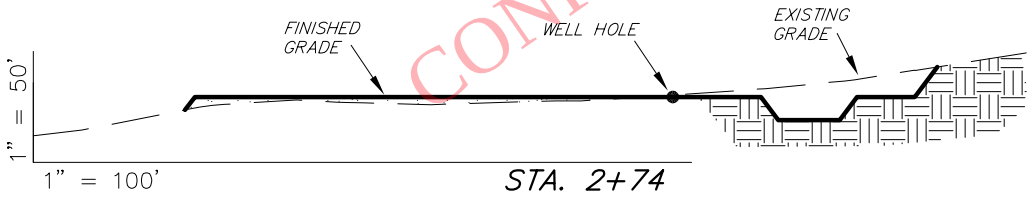
WELL PAD THREEMILE 24-33H
Section 33, T29S, R22E, S.L.B.&M.



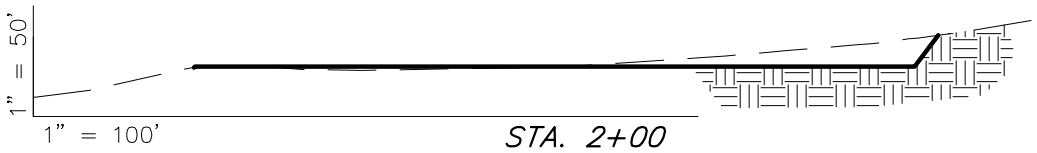
STA. 4+50



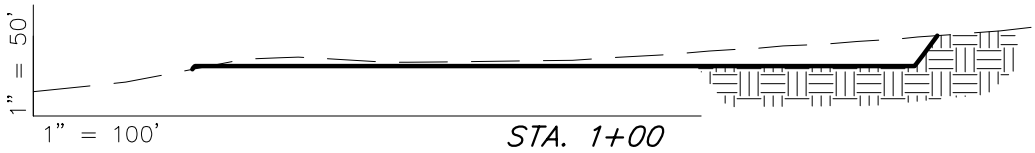
STA. 3+50



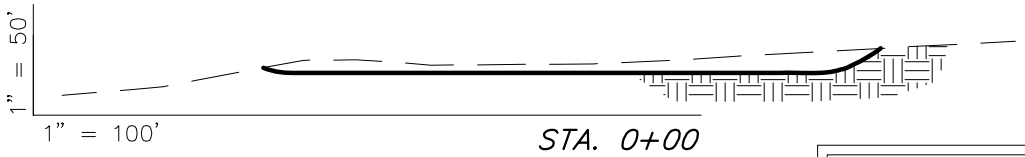
STA. 2+74



STA. 2+00



STA. 1+00



STA. 0+00

ESTIMATED EARTHWORK QUANTITIES
(No Shrink or swell adjustments have been used)
(Expressed in Cubic Yards)

ITEM	CUT	FILL	8" TOPSOIL	EXCESS
PITS	1,130	0	Topsoil is not included in Pad Cut	1,130
PAD	8,460	8,460		0
TOTALS	9,590	8,460	4,380	1,130

NOTE:
UNLESS OTHERWISE NOTED ALL
CUT/FILL SLOPES ARE AT 1.5:1

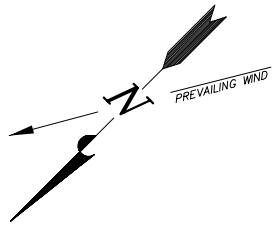
SURVEYED BY: C.D.S.	DATE SURVEYED: 07-21-09	Tri State Land Surveying, Inc. (435) 781-2501 180 NORTH VERNAL AVE. VERNAL, UTAH 84078	SHEET 4 OF 8
DRAWN BY: F.T.M.	DATE DRAWN: 07-22-09		
SCALE: 1" = 100'	REVISED: L.C.S. 10-26-09		

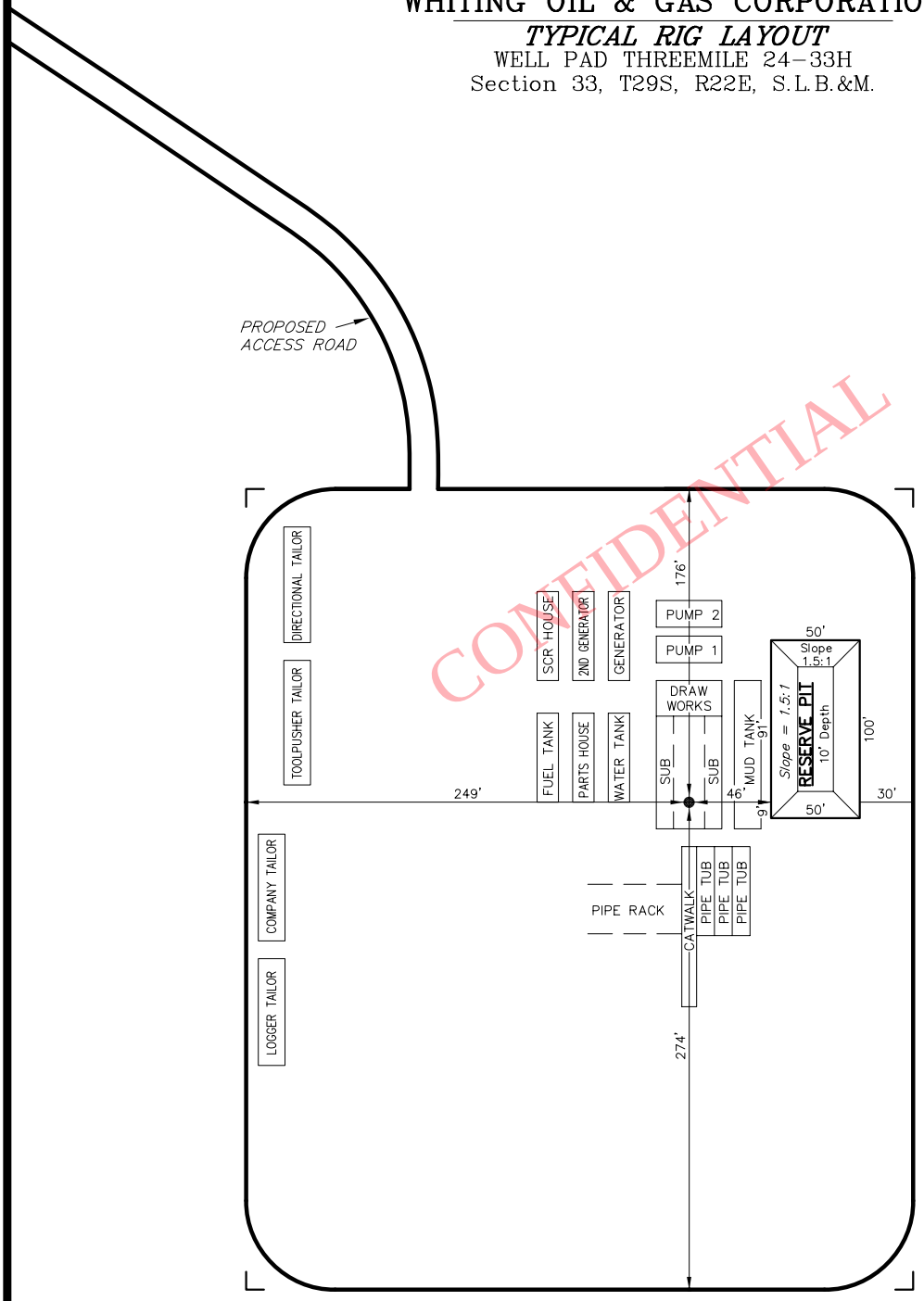
'APIWellNo:43037500000000'

WHITING OIL & GAS CORPORATION

TYPICAL RIG LAYOUT

WELL PAD THREEMILE 24-33H
Section 33, T29S, R22E, S.L.B.&M.





RESERVE PIT
10' Depth = 5,430 bbls
With 2' Freeboard = 3,810 bbls

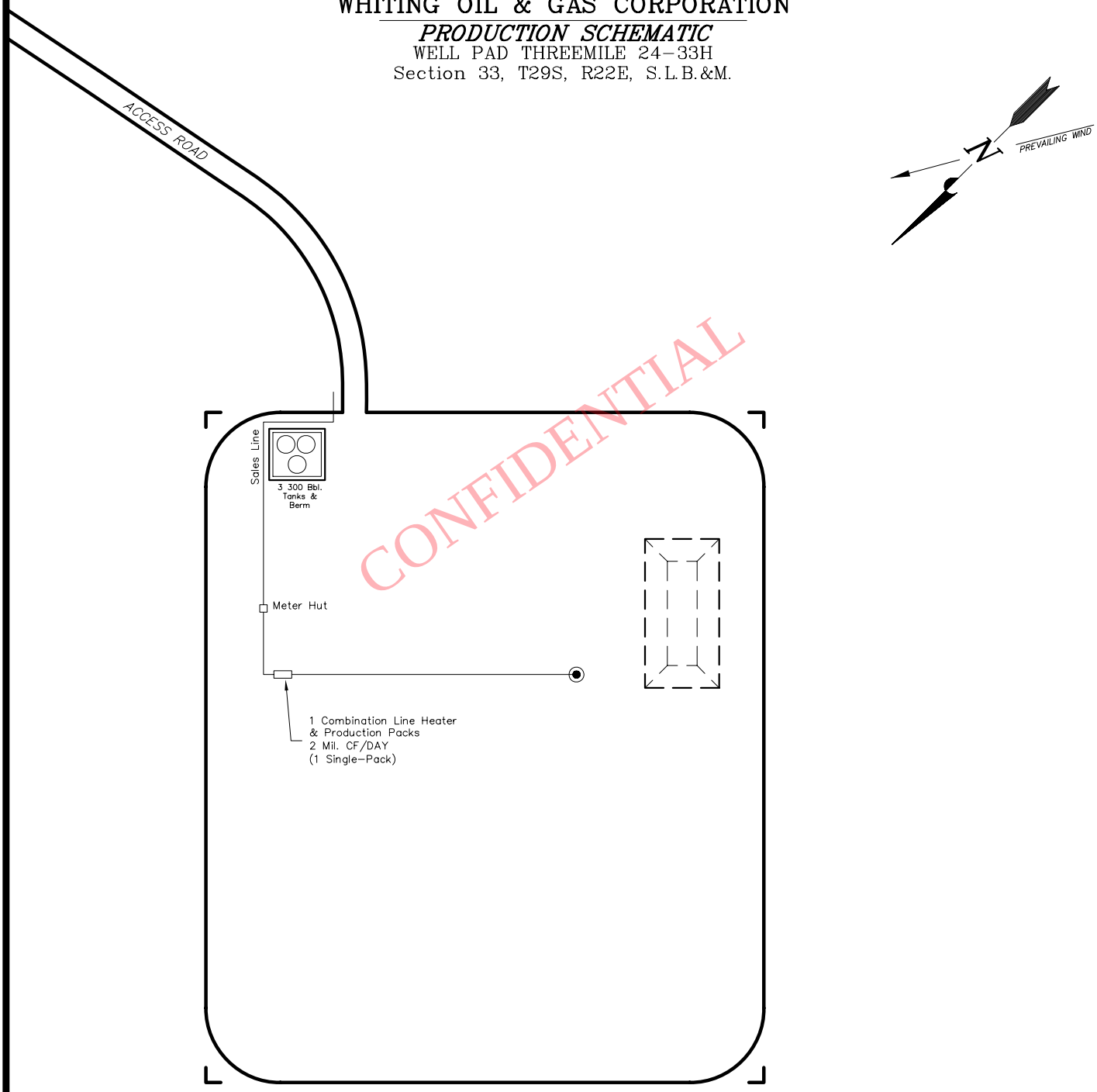
SURVEYED BY: C.D.S.	DATE SURVEYED: 07-21-09	Tri State Land Surveying, Inc. (435) 781-2501 180 NORTH VERNAL AVE. VERNAL, UTAH 84078	SHEET 5 OF 8
DRAWN BY: F.T.M.	DATE DRAWN: 07-22-09		
SCALE: 1" = 100'	REVISED: F.T.M. 10-30-09		

'APIWellNo:43037500000000'

WHITING OIL & GAS CORPORATION

PRODUCTION SCHEMATIC

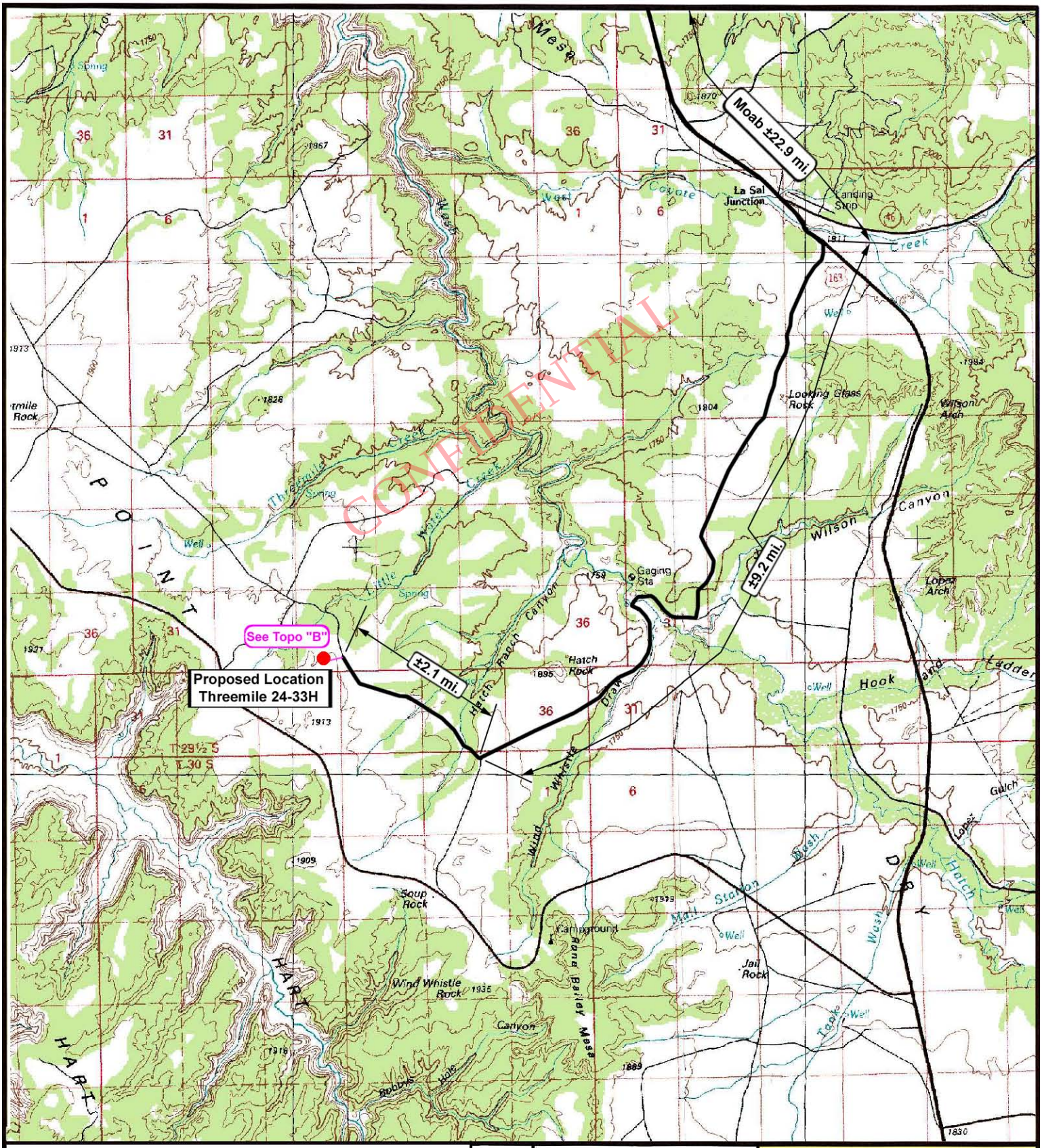
WELL PAD THREEMILE 24-33H
Section 33, T29S, R22E, S.L.B.&M.



Note:
Actual Equipment Layout and Reclaimed Pad Surface Area May Change do to Production Requirements or Site Conditions.

SURVEYED BY: C.D.S.	DATE SURVEYED: 07-21-09	Tri State Land Surveying, Inc. (435) 781-2501 180 NORTH VERNAL AVE. VERNAL, UTAH 84078	SHEET 6 OF 8
DRAWN BY: F.T.M.	DATE DRAWN: 07-22-09		
SCALE: 1" = 100'	REVISED: F.T.M. 10-30-09		

'APIWellNo:43037500000000'



Whiting Oil & Gas Corporation

Threemile 24-33H
SEC. 33, T29S, R22E, S.L.B&M

Tri-State Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

Legend

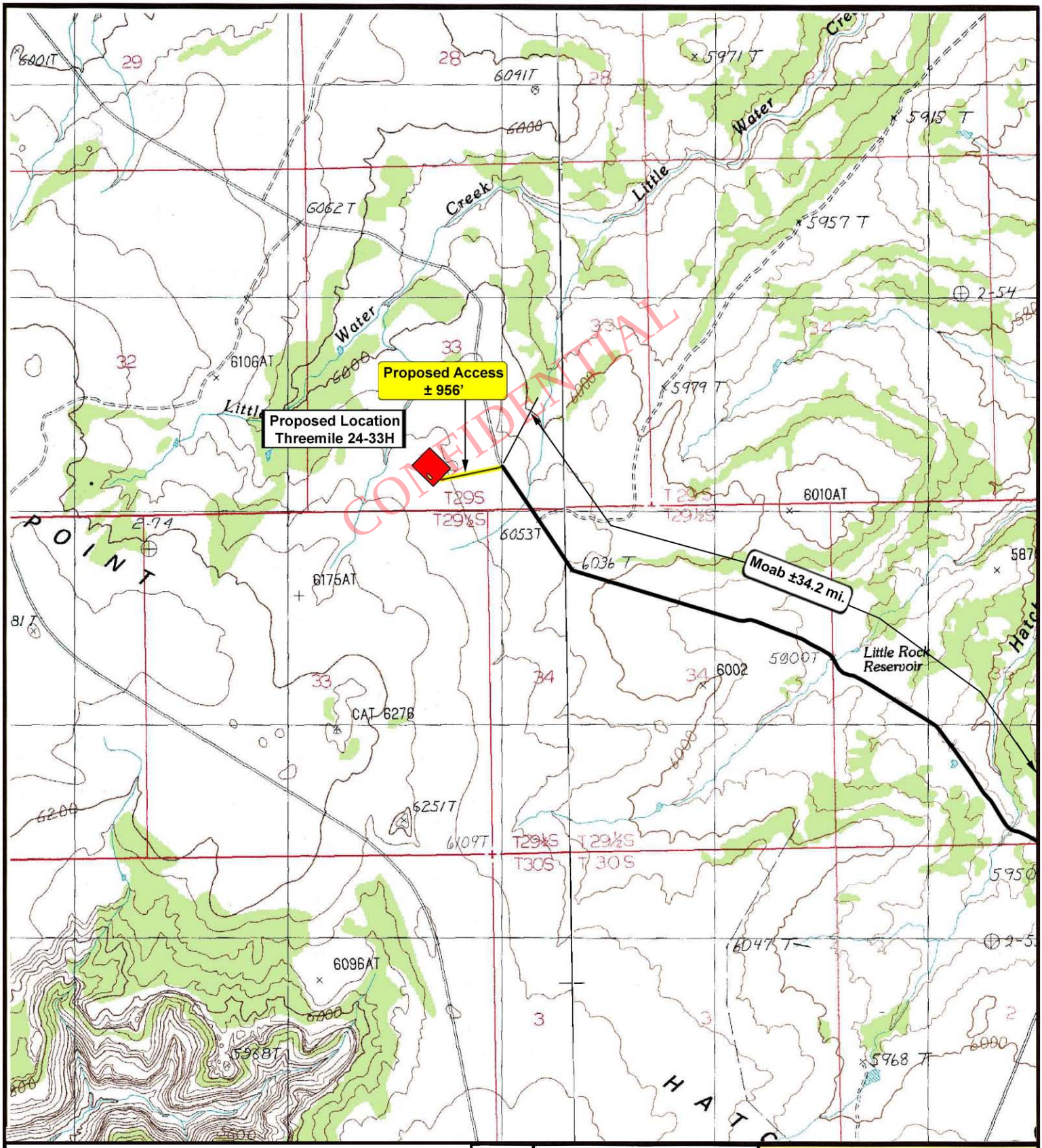
- Existing Road
- Proposed Access

SCALE: 1" = 100,000
DRAWN BY: JAS
DATE: 10-26-2009

TOPOGRAPHIC MAP "A"

SHEET 7 OF 8

'APIWellNo:43037500000000'



Whiting Oil & Gas Corporation

Threemile 24-33H
SEC. 33, T29S, R22E, S.L.B&M

N

Tri-State Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

Legend

- Existing Road
- Proposed Access

SCALE: 1" = 2,000'
DRAWN BY: JAS
DATE: 10-26-2009

TOPOGRAPHIC MAP "B"

SHEET 8 OF 8

Bureau of Land Management
Moab Field Office
Moab, Utah
Surface Use Plan of Operations

Company: Whiting Oil and Gas Corporation; Well No. Threemile 24-33H

Location: Sec. 33, T 29 S, R 22 E SLM

Lease No. UTU-84059

On-Site Inspection Date: 10/21/09

All operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR § 3100 & 43 CFR § 3160), Onshore Oil and Gas Orders, the approved plan of operations and the conditions of approval. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

SURFACE USE PLAN

The dirt contractor will be provided with an approved copy of the surface use plan of operations before initiating construction.

1. Existing Roads:

a. Proposed route to location (submit a map depicting access and well location, 1:100,000 scale).

See attached Topographic Map A (Sheet 7) and Topographic Map B (Sheet 8).

b. Location of proposed well in relation to town or other reference point:

The well location is approximately 10 miles SW of LaSal Junction south of Moab, Utah.

c. Plans for improvement and/or maintenance of existing roads:

Access will be from the Looking Glass Road. Where soil conditions dictate the use of stabilizing material, 6 inches of 4 inch minus granular borrow will be used.

d. Other: NA

2. <u>Planned Access Roads (1:24,000 scale: 12 inch surveyor stakes)</u>:

a. Location (centerline): Refer to construction diagram, Sheet 3 and Topographic Map B (Sheet 8).

b. Length of new access to be constructed: 0.181 miles on lease

c. Length of existing roads to be upgraded: 0 miles

d. Maximum total disturbed width: approximately 50 feet (Sheet 4)

e. Maximum travel surface width: 30 feet

f. Maximum grades: 6%

g. Turnouts: 0

h. Surface materials: Existing natural surface materials

i. Drainage (crowning, ditching, culverts, etc): None

j. Cattleguards: None

k. Length of new and/or existing roads which lie outside the lease or unit boundary for which a BLM right-of-way is required: 0 miles

l. Other:

Surface disturbance and vehicular travel will be limited to the approved location and access road. Any additional area needed must be approved by BLM in advance.

If a right-of-way is necessary, no surface disturbing activities shall take place on the subject right-of-way until the associated APD is approved. The holder will adhere to conditions of approval in the Surface Use Program of the approved APD, relevant to any right-of-way facilities.

If a right-of-way is secured, boundary adjustments in the lease or unit shall automatically amend this right-of-way to include that portion of the facility no longer contained within the lease or unit. In the event of an automatic amendment to this right-of-way grant, the prior on-lease/unit conditions of approval of this facility will not be affected even though they would now apply to facilities outside of the lease/unit as a result of a boundary adjustment. Rental fees, if appropriate shall be recalculated based on the conditions of this grant and the regulations in effect at the time of an automatic amendment.

If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change) the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligations determined by the BLM.

If the well is productive, the access road will be brought to Resource (Class III) Road Standards within 60 days of dismantling the rig. If upgraded, the access road must be maintained at these standards until the well is properly abandoned. If this time frame cannot be met, the Field Office Manager will be notified so that temporary drainage control can be installed along the access road.

3. Location of Existing Wells: On a map (1:24,000 scale), show the location of all water, injection, disposal, producing and drilling wells within a one mile radius of the proposed well, and describe the status of each.

There are no wells within a one mile radius of the proposed well. The Threemile 43-18H well is 1.8 miles NW from the proposed well and the Hatch Point #1 well is 2.7 miles NW from the proposed well.

4. Location of Production Facilities:

a. On-site facilities: If the well is a producer on-site facilities will be applied for and installed.

All or part of this equipment could be on a location:

There will be 5-400 BBL oil tanks and 2-400 BBL salt water tanks.
I high pressure 36" x 10' 3 phase separator
1 low pressure 30" x 10' 3 phase separator
1-6' x 20' heater treater
1-3 phase high pressure gas production unit
1 gas dehydrator
1 gas compressor
2 transfer pumps for handling produced fluids
1 large beam pumping unit and engine

b. Off-site facilities: None

c. Pipelines: None. If a pipeline becomes necessary it would be applied for at a later date.

d. Other: All permanent (in place for six months or longer) structures constructed or

installed (including oil well pump jacks) will be painted a flat, non-reflective color to match the standard environmental colors, as determined by the Authorized Officer. All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded. Colors will be as follows: Colors will match the surrounding soils and vegetation.

All site security guidelines identified in 43 CFR § 3162.7-5 and Onshore Oil and Gas Order No. 3 shall be followed.

If a gas meter run is constructed, it will be located on lease within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and will be buried downstream of the meter until it leaves the pad. Meter runs will be housed and/or fenced. The gas meter shall be calibrated prior to first sales and shall be calibrated quarterly thereafter. All gas production and measurement shall comply with the provisions of 43 CFR § 3162.7, Onshore Oil and Gas Order No. 5, and American Gas Association (AGA) Report No. 3.

If a tank battery is constructed on this lease, it will be surrounded by a berm of sufficient capacity to contain 1½ times the storage capacity of the largest tank. All loading lines and valves will be placed inside the berm surrounding the tank battery. All oil production and measurement shall conform to the provisions of 43 CFR § 3162.7 and Onshore Oil and Gas Order No. 4. If water is produced from the well; steel coated water tanks will be used.

5. Location and Type of Water Supply: All water needed for drilling purposes will be obtained from (describe location and/or show on a map):

Municipal water will be purchased from the town of Moab, Utah.

6. Source of Construction Material: Pad construction material will be obtained from (if the source is Federally owned, show location on a map):

Materials needed will be obtained from a private source.

The use of materials under BLM jurisdiction will conform to 43 CFR § 3610.2-3.

7. Methods of Handling Waste Disposal: Describe the methods and locations proposed for safe containment and disposal of waste material, e.g. cuttings, produced water, garbage, sewage, chemicals, etc.

The reserve pit will be lined with (native material, bentonite, synthetic material): The pit will be lined with 12 mil, or greater depending on the pit substrate, thick polyethylene nylon reinforced liner material.

The reserve pit will be located: See construction diagrams, Sheet 3. The pit walls will be

sloped at no greater than 2 to 1.

The reserve pit shall be located in cut material, with at least 50% of the pit volume being below original ground level. Three sides of the reserve pit will be fenced before drilling starts. The fourth side will be fenced as soon as drilling is completed, and shall remain until the pit is dry. As soon as the reserve pit has dried, all areas not needed for production will be rehabilitated.

The reserve pit will be used for the disposal of waste mud and drill cuttings. All borehole fluids will be contained in the reserve pit. All appropriate measures will be taken to prevent leakage into the substratum or onto the surface. All appropriate measures will be taken to prevent overflow, and a minimum of 2 feet of freeboard will be maintained in the reserve pit. It will be constructed on the well pad. See construction diagrams, Sheet 3.

Wastewater will not be discharged on the surface at this site and the drilling of the well will not require a wastewater management plan.

All rubbish and debris will be kept in containers on the well site, and will be hauled to an approved disposal site upon completion of drilling and completion operations and as needed during such operations. There will be no chemical disposal of any type.

Self-contained, portable toilets will be used for human waste, and the waste will be disposed at an approved landfill. Sanitation will comply with local and state regulations for the disposal of human waste.

8. Ancillary Facilities:

No permanent camps of facilities, only trailers, garbage containers and portable toilets.

9. Well Site Layout: Depict the pit, rig, cut and fill, topsoil, etc. on a plat with a scale of at least 1"=50'.

See construction diagrams, Sheet 5.

All wells, whether drilling, producing, suspended, or abandoned, will be identified in accordance with 43 CFR § 3162.6.

Access to the well pad will be from: See construction diagrams, Sheet 3.

The blooie line will be located: At least 100 feet from the well head.

To minimize the amount of fugitive dust and spray escaping from the blooie pit, the following blooie line deflection method will be employed: water injection

10. Plans for Restoration of the Surface:

The top 2 to 3 inches of topsoil material will be removed from the location and stockpiled separately on: adjacent to the pad, see construction diagrams, Sheet 3.

Topsoil along the access road will be reserved in place adjacent to the road.

Immediately upon completion of drilling, all equipment that is not necessary for production shall be removed.

The reserve pit and that portion of the location not needed for production will be reclaimed.

Before any dirt work to restore the location takes place, the reserve pit must be completely dry.

All road surfacing will be removed prior to the rehabilitation of roads.

Reclaimed roads will have the berms and cuts reduced and will be closed to vehicle use.

All disturbed areas will be recontoured to replicate the natural slope.

The stockpiled topsoil will be evenly distributed over the disturbed area.
The abandonment marker will be one of the following, as specified by BLM:

1) at least four feet above ground level,
2) at restored ground level, or
3) below ground level.

In any case the marker shall be inscribed with the following: operator name, lease number, well name and surveyed description (township, range, section and either quarter-quarter or footages).

Reclamation of the surface will commence as soon after construction, drilling and well completion are concluded, as is practicable. In the event of a dry hole, the drill site and roadways will be restored to their original condition within 180 days after plugging date of the well, depending on weather and other extenuating circumstances.

All junk, debris, or other foreign material must be removed before initiating any dirt work to restore the location. The fence around the reserve pit will be maintained in good repair during the drilling operations and will be completed by constructing the fourth side while the pit is drying. It will remain in place until the pit is completely dry and the site restoration begins. All fences will be four strand barbed wire.

The reserve pit and that portion of the location and access road not needed for production or production facilities will be reclaimed. All stockpiled topsoil, in proportion to the area being reclaimed, will be used in reclaiming areas without an on-going operation.

Site reclamation will include:

- Removing the road base material from the access road and any other surface that may be covered by such material;
- Recontouring the location to approximate natural contours, to the extent practicable; evenly redistributing stockpiled topsoil over the recontoured areas;
- Scarifying recontoured areas, including the access road, by use of a disk or harrow prior to seeding; and
- Drilling or broadcasting seeds.

The seed mix and rate used will be that recommended by the Authorized Officer. Seed will be drilled where-ever possible. If the seed is broadcast, then a harrow or some other implement will be dragged over the seeded area to assure seed coverage. The seed will be certified, pure live seed, and the seed tags will be available if requested by the Authorized Officer. Certified weed free seed will be used to rehabilitate reclaimed land.

All hillsides and other places where the contractor has moved earthen materials to facilitate operations, will be restored to as near original condition as practical. The surface of the re-contoured land will be left in a slightly roughened condition to collect precipitation and to promote seed germination. The site will be fenced with four strand barbed until vegetation is reestablished.

Road base material, used in the construction of the access road and pad, will be removed from the site and disposed in a proper manner. If the reserve pit has adequate capacity, then some or all of the gravel will be buried in the reserve pit, provided that the gravel is not contaminated by oil or other waste materials. The access road will be recontoured using of an excavator or similar equipment, rather than simply ripping the surface.

Culverts will be removed from the site and disposed in an approved landfill. The concrete cellar will be removed from the site and similarly disposed in a landfill, or with the approval of the Authorized Officer may be broken down into small pieces and buried during the recontouring on the site.

During the life of the project and until the site is released from liability for reclamation, the project will be inspected at least annually for noxious weeds. If invasive noxious weeds are found, the weeds will be treated to eliminate further reproduction (spread), and treatment shall continue until the weeds have been eradicated. If noxious weeds are found, the BLM will be notified of their occurrence.

11. <u>Surface and Mineral Ownership</u>:

The surface of the proposed well site is Federaly owned and is administered by the Bureau of Land Management, United States Department of Interior.

12. Other Information:

a. Archeological Concerns:

A cultural survey was completed by Western Land Services and no sites were identified.

The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the BLM Field Office. Within five (5) working days, the BLM will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places;

- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and

- a time frame for the BLM to complete an expedited review under 36 CFR § 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the BLM are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the BLM will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The BLM will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the BLM that the required mitigation has been completed, the operator will then be allowed to resume construction.

b. Other:

Heavy equipment, used to construct and rehabilitate the well pad and access road, will be cleaned and/or sprayed to remove any noxious or invasive weeds and seeds, prior to being moved to the project site. Any other equipment and vehicles, that have been used in other locations, where noxious weeds or seeds could have attached to the equipment, will also be sprayed and/or cleaned.

Any accumulation of hydrocarbons in the reserve pit will be removed and recovered for sale unless it is determined by the Authorized Officer to be waste oil. All waste oil will be disposed of properly at approved facilities.

For reclamation, the pit liner, which is exposed above the cuttings, will be cut and removed from the site and disposed in an authorized landfill. The reserve pit will be backfilled to slightly above grade to allow for settling of the unconsolidated fill material.

All equipment and vehicles will be confined to the access roads and well pad.

Any facilities in an existing right of way that are damaged as a result of the oil and gas operations will be repaired or replaced.

Fire suppression equipment will be available to suppress any wildfires caused by construction or related activities. In the event of a wildfire, the Moab Fire Center will be notified (435)259-1850.

Threemile 24-33H

Hatch Point

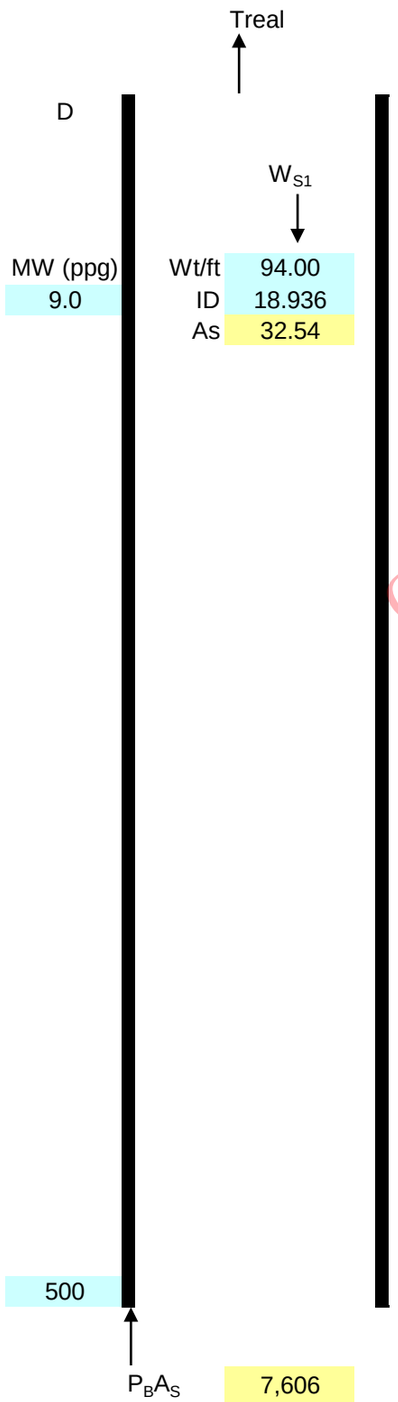
San Juan County, Utah

Casing Design

'APIWellNo:43037500000000'

Tensile Design Equation

Well Name: Threemile #24-33H
Casing Size: 20.000 in



Design Equation

0	=<	Depth	=<	500
Load =	47,000	-	94.00 * D	
Backup =	-7,606			
Sc =	**39,394**	**-**	**94.00 * D**	

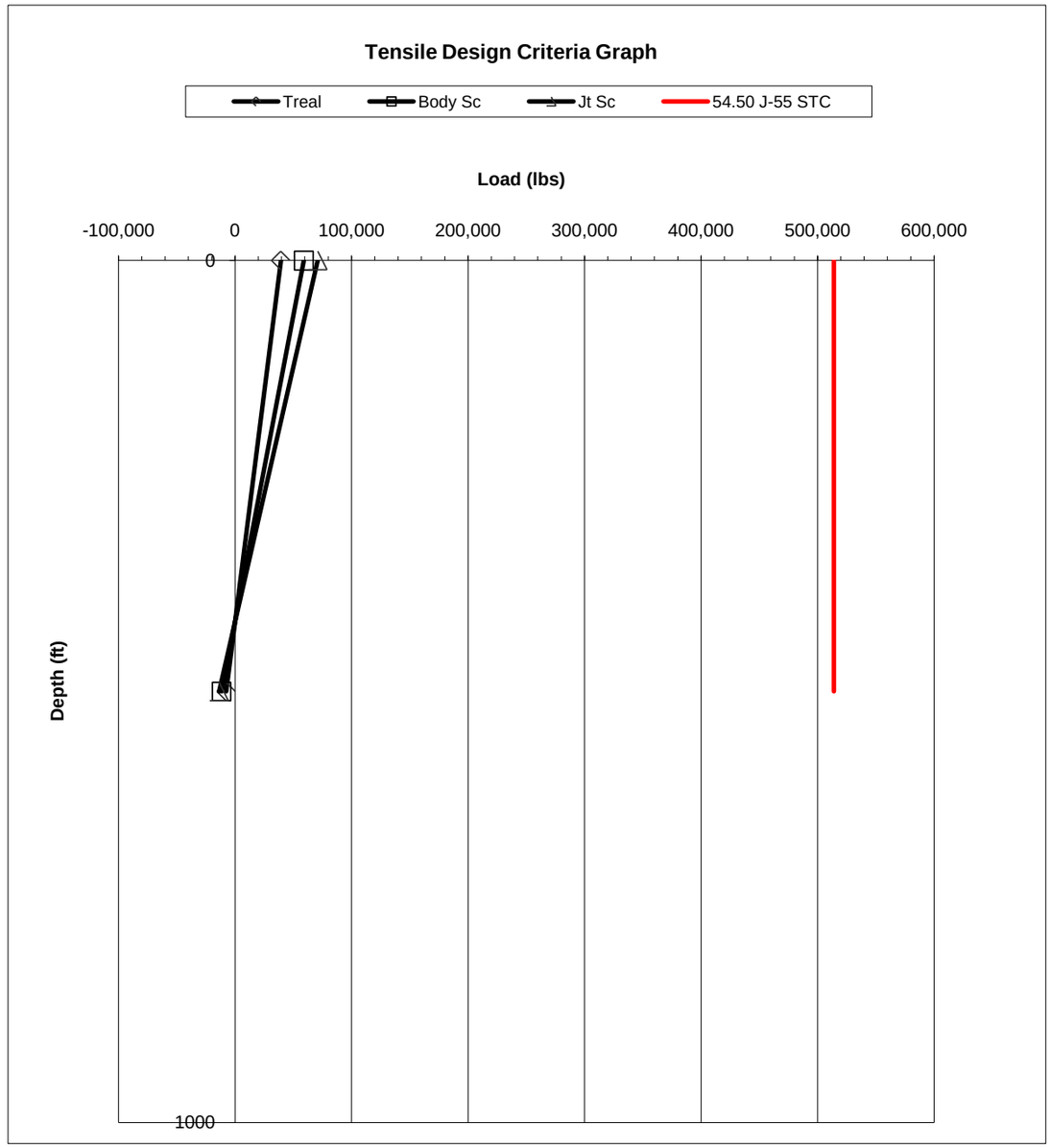
Design Factors

Body:	1.5
Joint:	1.8

Depth	Treal	Body Sc	Jt Sc
0	39,394	59,091	70,909
500	-7,606	-11,409	-13,691
SF			7.249

Pipe Data

Depth	Jt Sc 54.50 J-55 STC
0	514,000
500	514,000



'APIWellNo:43037500000000'

COLLAPSE CALCULATION

Well Name:	Threemile #24-33H	
Casing Size:	20.000	in
Casing Wt:	94.00	lb
Depth:	500	ft
OMW:	9.00	ppg
DF:	1.1	

Design Criteria Eqn: Sc >= DF(Load - Backup)
Load Eqn: 0.468 * Depth
Backup Eqn: 0.000 * Depth

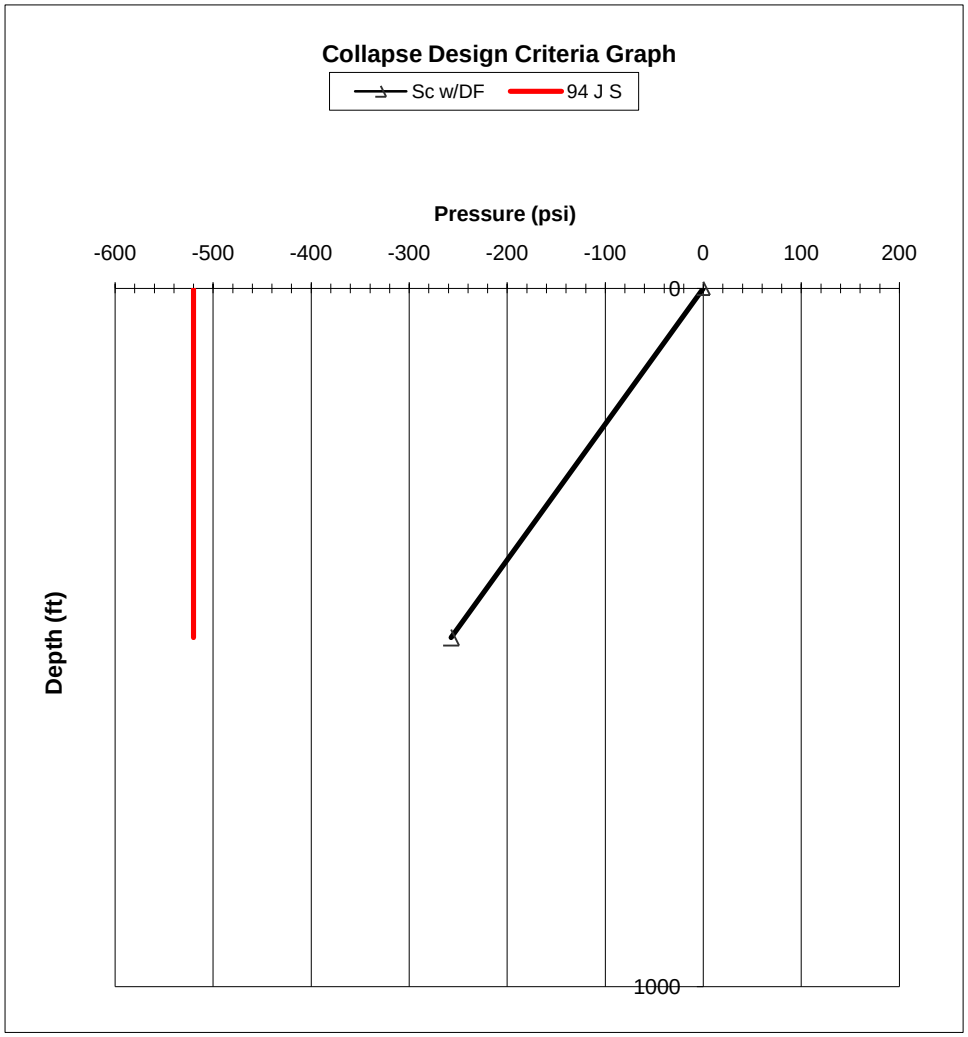
D	L	B	Sc
0	0	0	0
500	-234	0	-257

Input Pipe Grades

Grade	Wt	Pcollapse
J-55 STC	94.00	520

Pipe Table

D	94 J S
0	-520
500	-520
SF	2.022



'APIWellNo:43037500000000'

BURST CALCULATION SURFACE OR INTERMEDIATE

Well Name:	Threemile #24-33H	
Casing Size:	20.000	in
Casing Wt:	94.00	lb
Csg Depth:	500	ft
Hole Depth:	3,430	ft
MW:	9.000	ppg
Tsurface:	60	deg F
Tgrad:	1.2	deg F/100 ft
DF:	1.1	

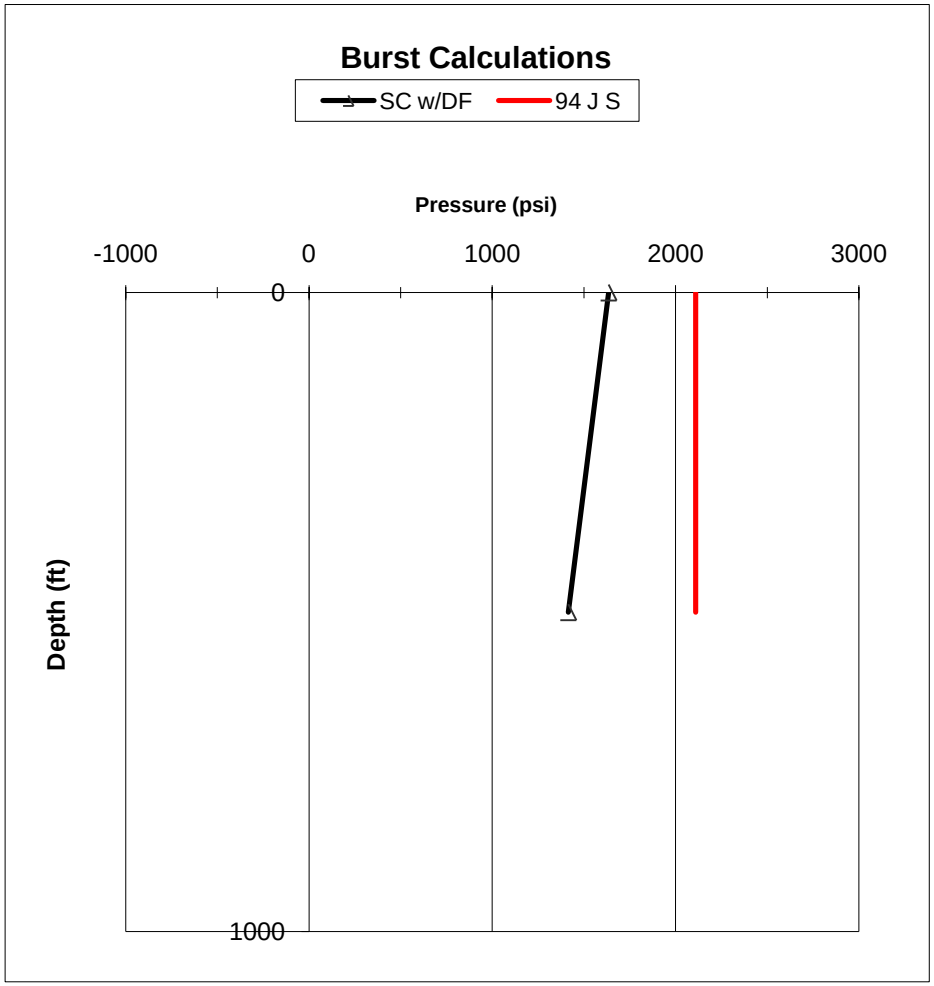
BBG (Burst Backup Gradient) Freshwater 0.433 psi/ft
Assume gas Methane

BHP:	1,604	psi
Tbh:	101.16	°F
Pgas:	0.0345	psi/ft
Psurface:	1,485	psi
Pcsg shoe:	1,503	psi

D	L	BBG	Sc
0	1485	0	1634
500	1503	-217	1415

Input Pipe Grades		
Grade	Wt	Pburst
J-55 STC	94.00	2110

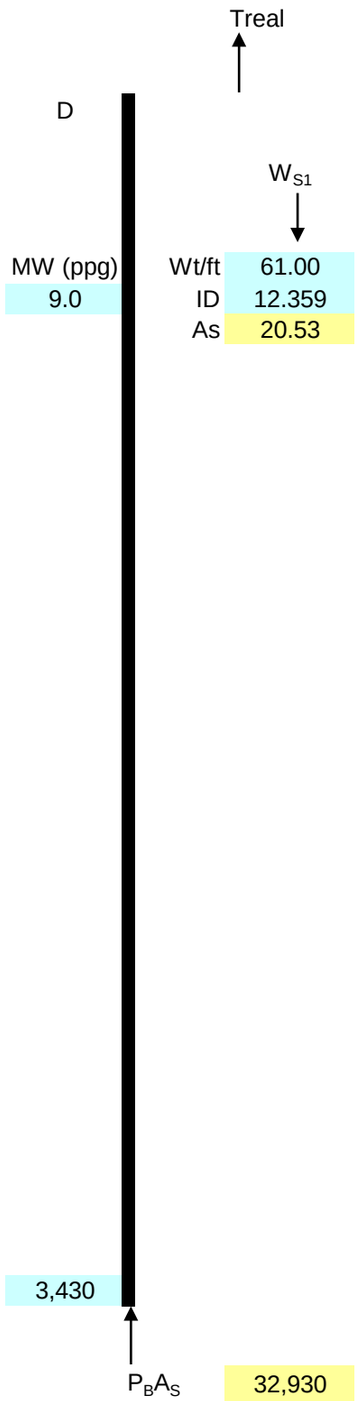
Pipe Table		
D	94 J S	
0	2110	0
500	2110	0
SF	1.29	0.00



'APIWellNo:43037500000000'

Tensile Design Equation

Well Name: Threemile #24-33H
Casing Size: 13.375 in



Design Equation

0	=<	Depth	=<	3,430
Load =	209,230	-	61.00 * D	
Backup =	-32,930			
Sc =	**176,300**	**-**	**61.00 * D**	

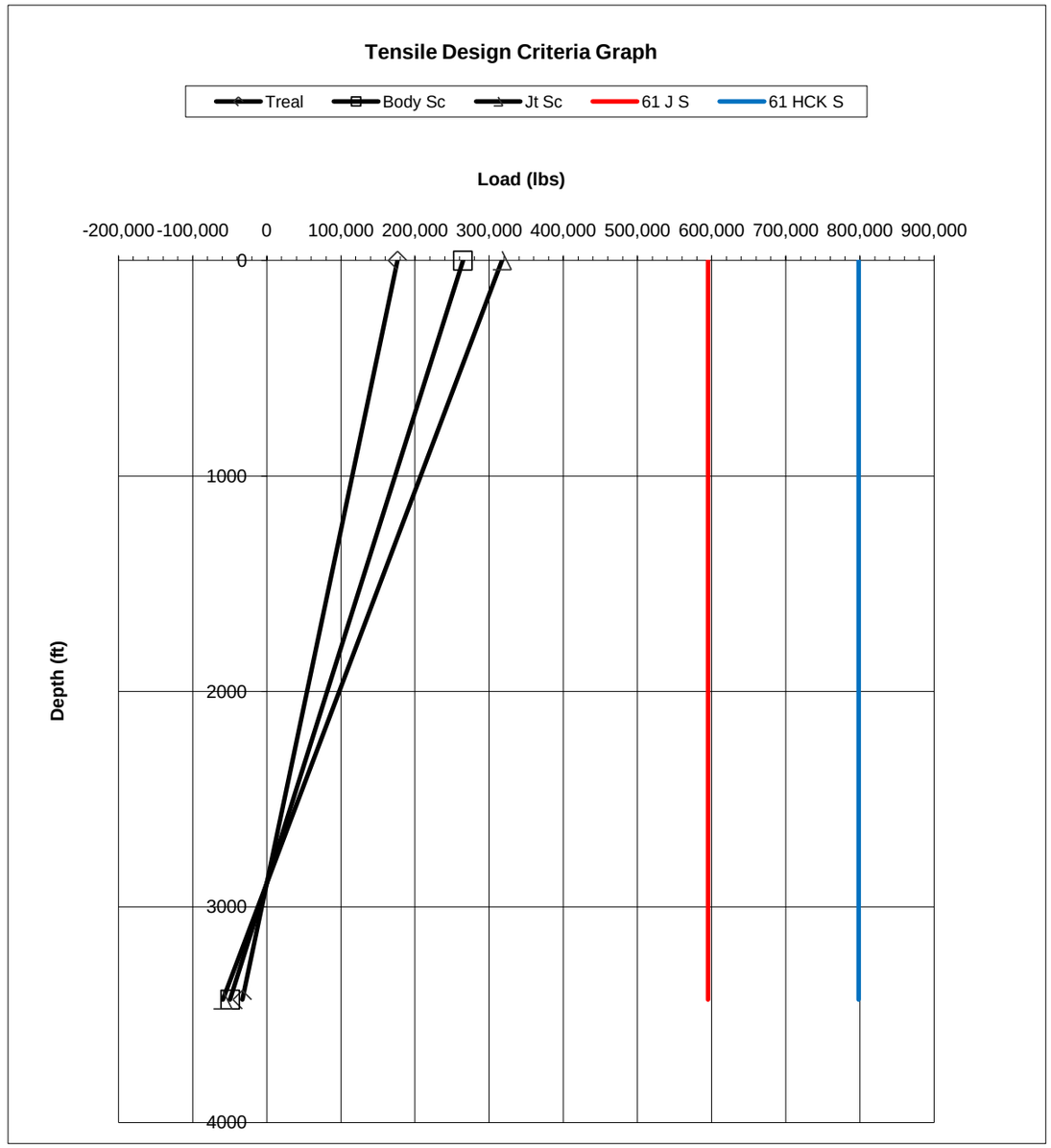
Design Factors

Body:	1.5
Joint:	1.8

Depth	Treal	Body Sc	Jt Sc
0	176,300	264,449	317,339
3,430	-32,930	-49,396	-59,275
SF			1.875

Pipe Data

	Jt Sc	
Depth	61 J S	61 HCK S
0	595,000	798,000
3,430	595,000	798,000



'APIWellNo:43037500000000'

COLLAPSE CALCULATION

Well Name:	Threemile #24-33H	
Casing Size:	13.375	in
Casing Wt:	61.00	lb
Depth:	3,430	ft
OMW:	9.00	ppg
DF:	1.1	

Design Criteria Eqn: Sc >= DF(Load - Backup)
Load Eqn: 0.468 * Depth
Backup Eqn: 0.000 * Depth

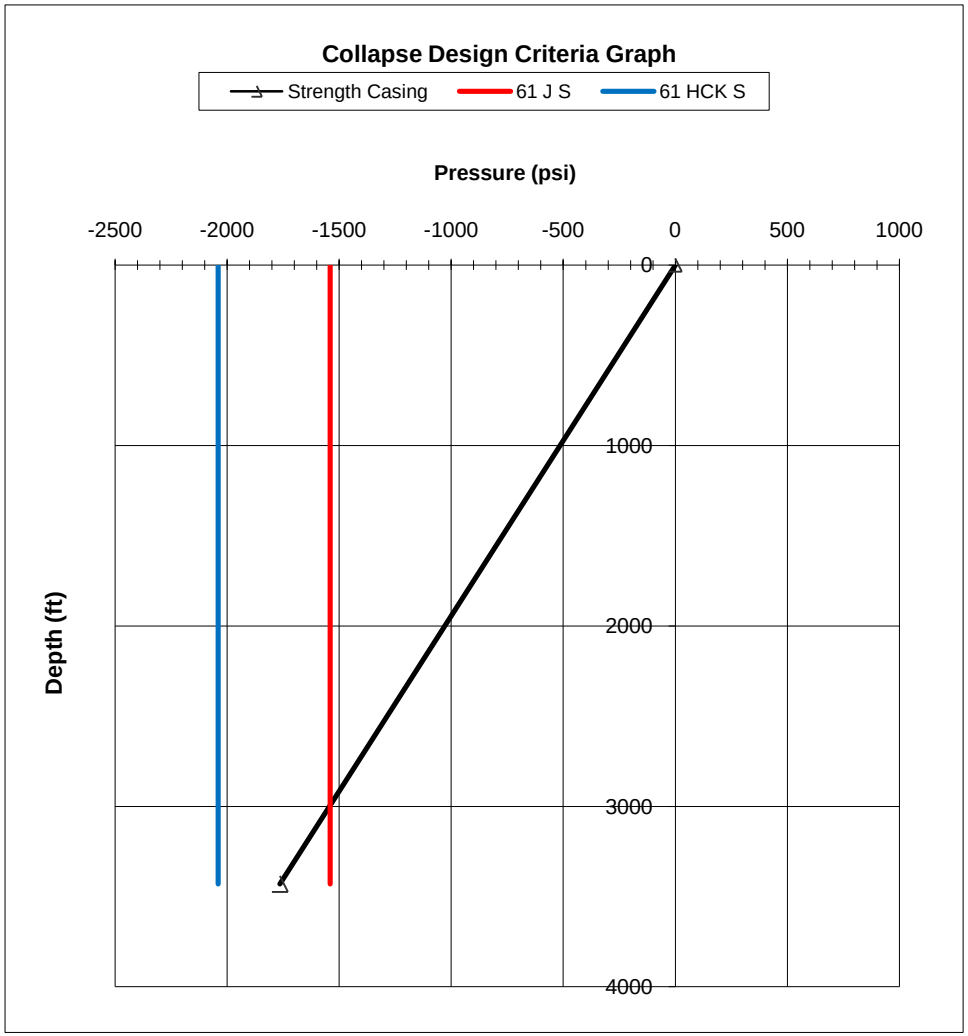
D	L	B	Sc
0	0	0	0
3,430	-1604	0	-1764

Input Pipe Grades

Grade	Wt	Pcollapse
J-55	61.00	1540
HCK-55	61.00	2040

Pipe Table

D	61 J S	61 HCK S
0	-1540	-2040
3,430	-1540	-2040
SF	0.873	1.156



'APIWellNo:43037500000000'

BURST CALCULATION SURFACE OR INTERMEDIATE

Well Name:	Threemile #24-33H	
Casing Size:	13.375	in
Casing Wt:	61.00	lb
Csg Depth:	3,430	ft
Hole Depth:	6,400	ft
MW:	10.000	ppg
Tsurface:	60	deg F
Tgrad:	1.2	deg F/100 ft
DF:	1.1	

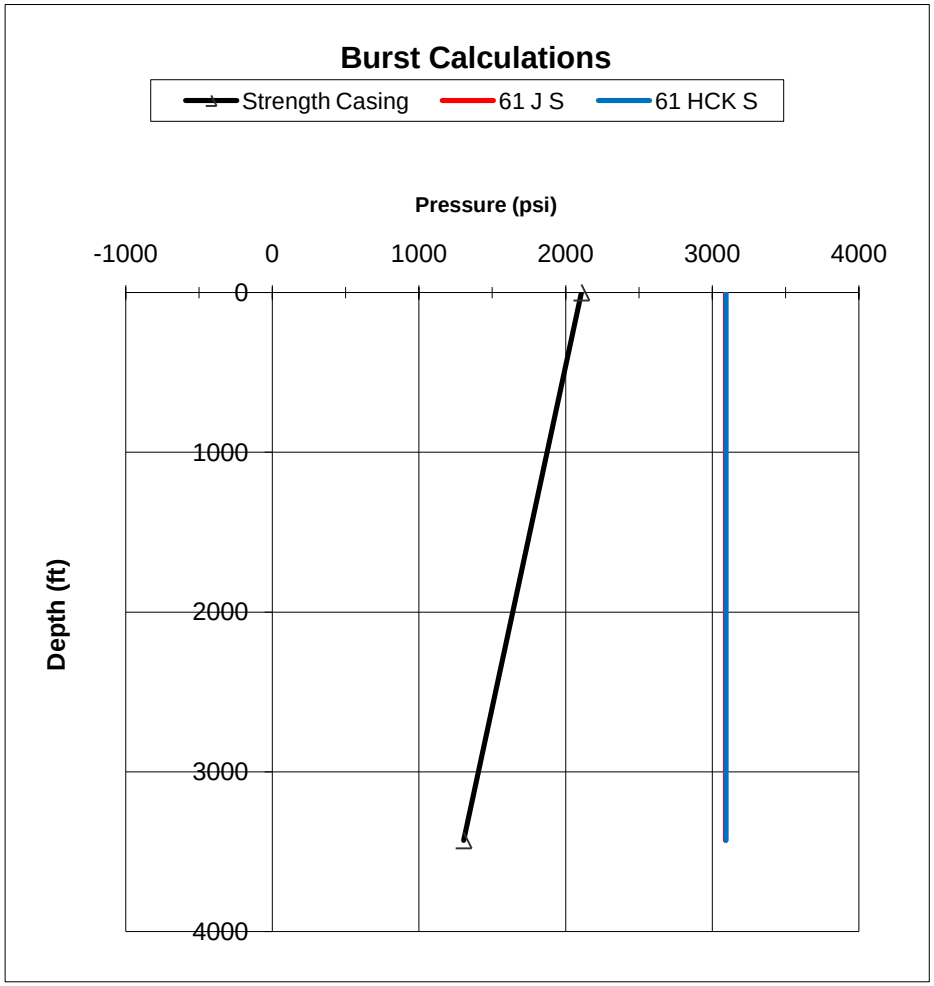
BBG (Burst Backup Gradient) Freshwater 0.433 psi/ft
Burst by BLM Rules

BHP:	3,325	psi
Tbh:	136.8	°F
Pgrad:	0.22	psi/ft
Psurface:	1,917	psi
Pcsg shoe:	2,671	psi

D	L	BBG	Sc
0	1917	0	2108
3,430	2671	-1485	1305

Input Pipe Grades		
Grade	Wt	Pburst
J-55 STC	61.00	3090
HCK-55 STC	61.00	3095

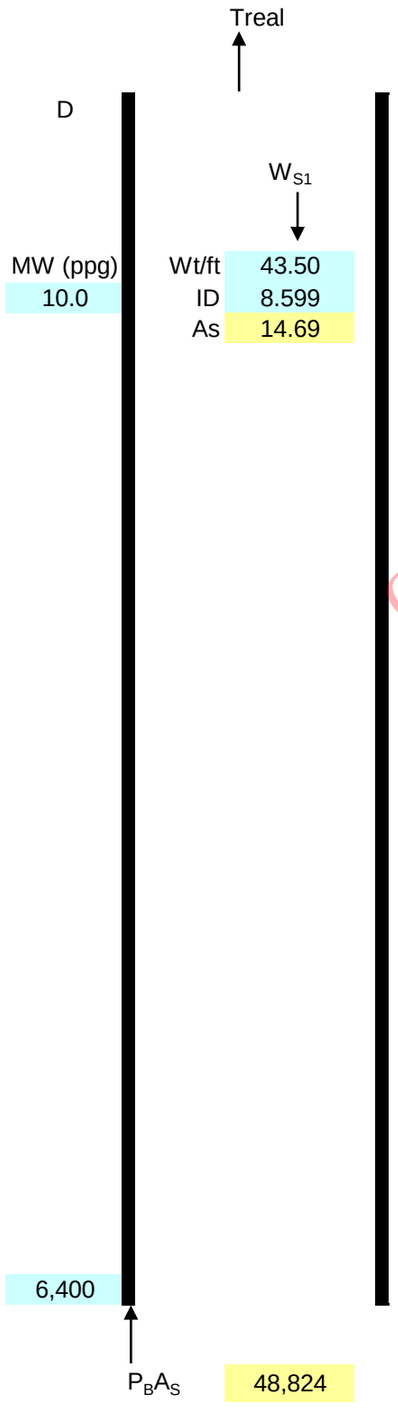
Pipe Table		
D	61 J S	61 HCK S
0	3090	3095
3,430	3090	3095
SF	1.47	1.47



'APIWellNo:43037500000000'

Tensile Design Equation

Well Name: Threemile #24-33H
Casing Size: 9.625 in



Design Equation

0	=<	Depth	=<	6,400
Load =	278,400	-	43.50 * D	
Backup =	-48,824			
Sc =	**229,576**	**-**	**43.50 * D**	

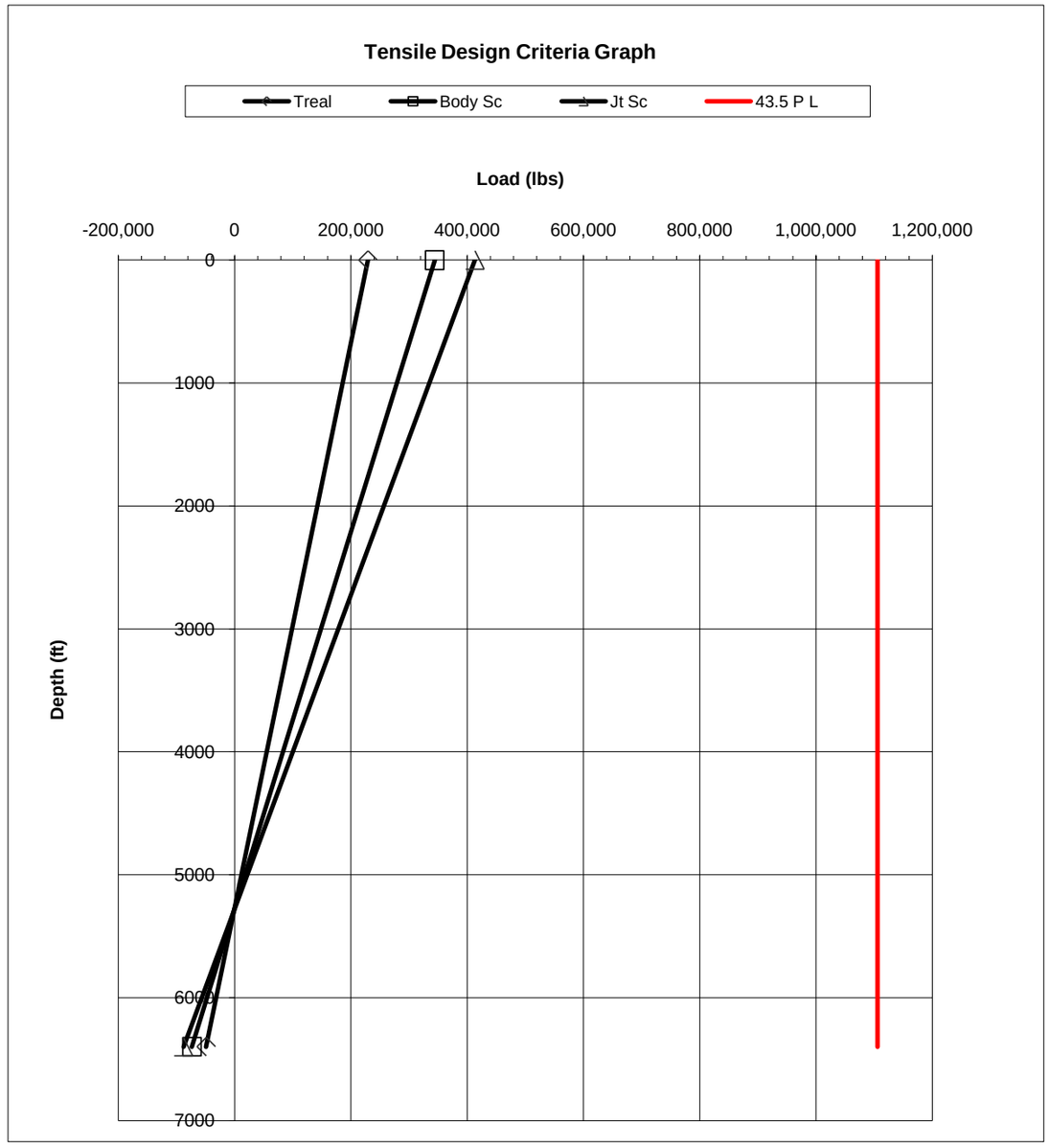
Design Factors

Body:	1.5
Joint:	1.8

Depth	Treal	Body Sc	Jt Sc
0	229,576	344,364	413,237
6,400	-48,824	-73,236	-87,883

Pipe Data

Depth	Jt Sc 43.5 P L
0	1,106,000
6,400	1,106,000



'APIWellNo:43037500000000'

COLLAPSE CALCULATION

Well Name:	Threemile #24-33H	
Casing Size:	9.625	in
Casing Wt:	43.50	lb
Depth:	6,400	ft
OMW:	10.00	ppg
DF:	1.1	

Design Criteria Eqn: Sc >= DF(Load - Backup)
Load Eqn: 0.519 * Depth
Backup Eqn: 0.000 * Depth

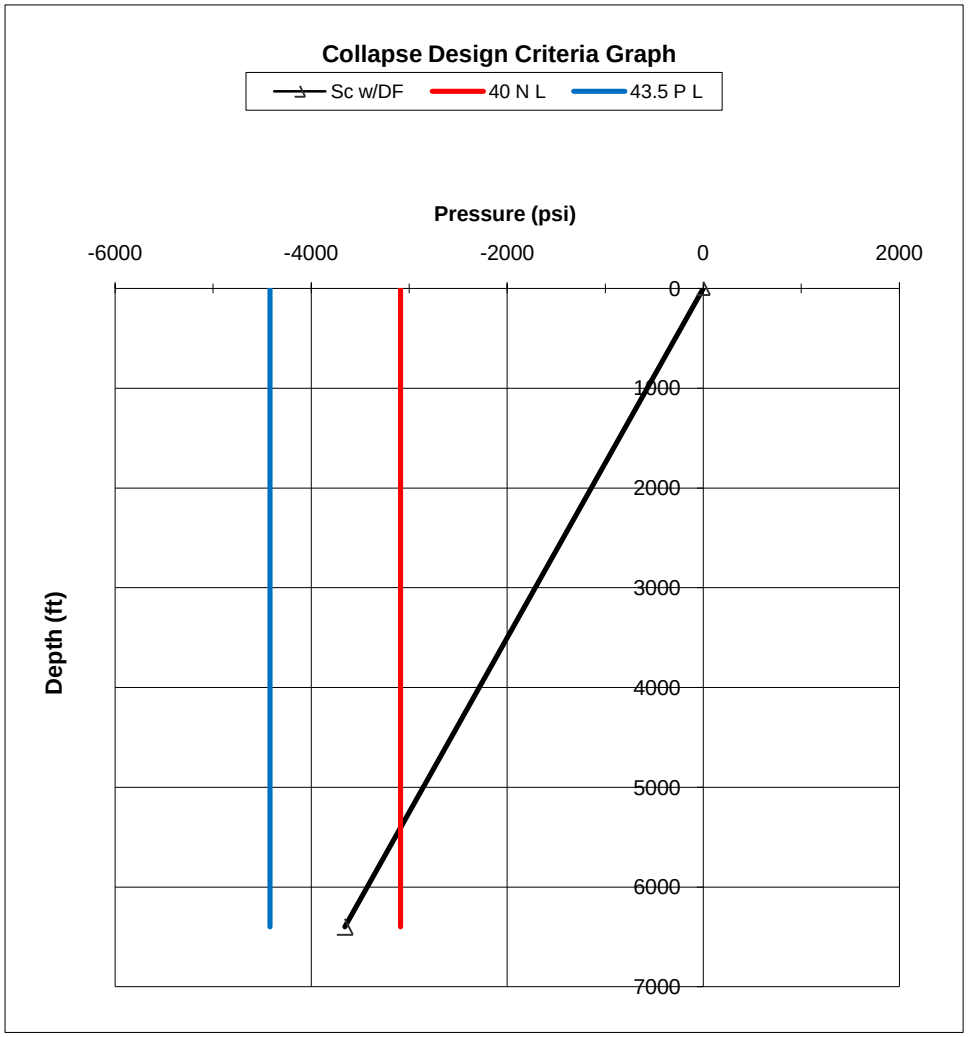
D	L	B	Sc
0	0	0	0
6,400	-3325	0	-3657

Input Pipe Grades

Grade	Wt	Pcollapse
N-80 LTC	40.00	3090
P-110	43.50	4420

Pipe Table

D	40 N L	43.5 P L
0	-3090	-4420
6,400	-3090	-4420
SF	0.84	1.21



'APIWellNo:43037500000000'

BURST CALCULATION SURFACE OR INTERMEDIATE

Well Name:	Threemile #24-33H	
Casing Size:	9.625	in
Casing Wt:	43.50	lb
Csg Depth:	6,400	ft
Hole Depth:	8,485	ft
MW:	18.50	ppg
Tsurface:	60	deg F
Tgrad:	1.2	deg F/100 ft
DF:	1.1	

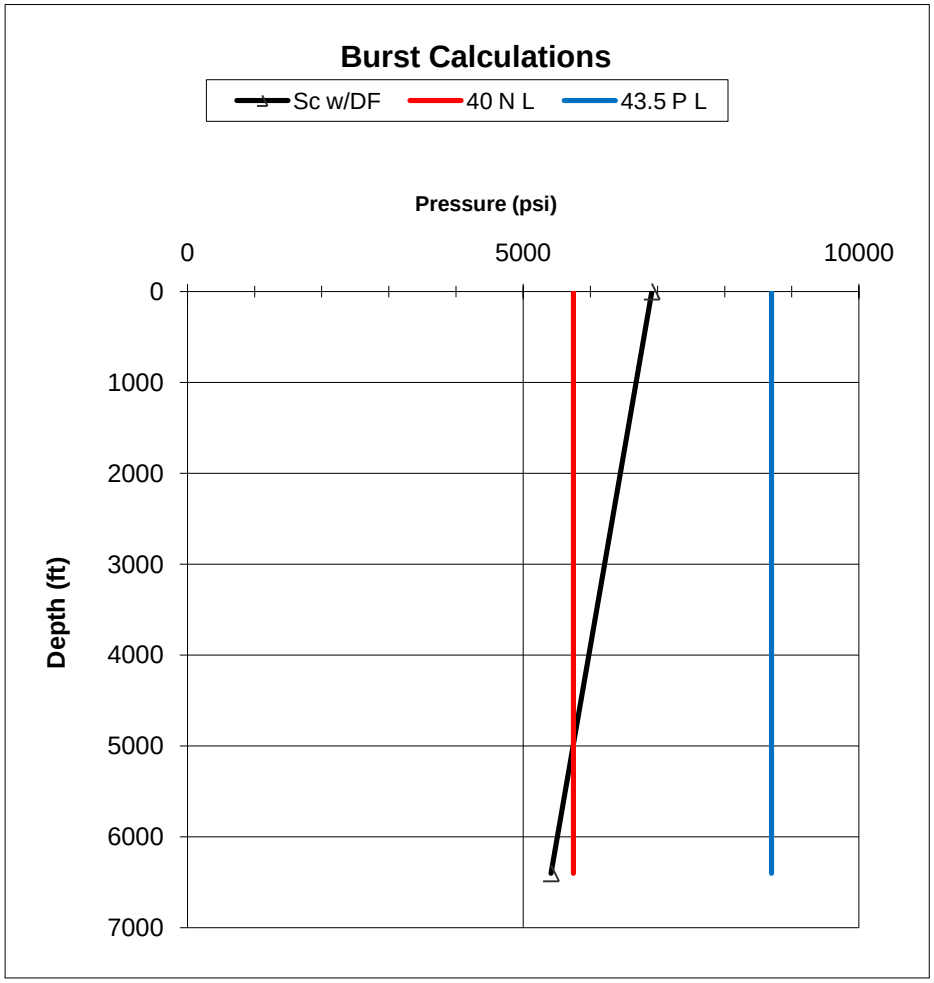
BBG (Burst Backup Gradient) Freshwater 0.433 psi/ft
Burst by BLM Rules

BHP:	8,154	psi
Tbh:	161.82	
Pgrad:	0.22	psi/ft
Psurface:	6,288	psi
Pcsg shoe:	7,696	psi

D	L	BBG	Sc
0	6288	0	6916
6,400	7696	-2771	5417

Input Pipe Grades		
Grade	Wt	Pburst
N-80 LTC	40.00	5750
P-110	43.50	8700

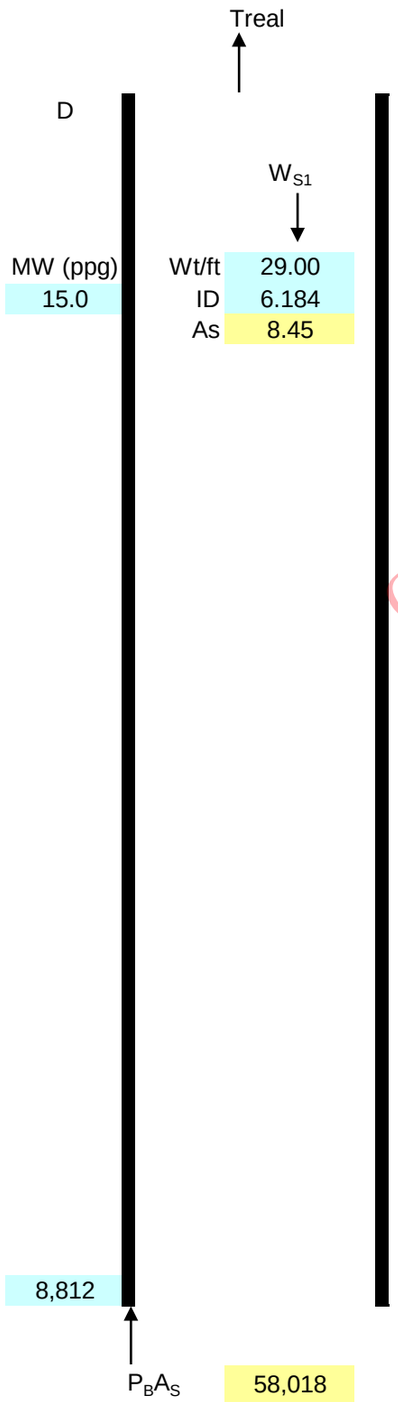
Pipe Table		
D	40 N L	43.5 P L
0	5750	8700
6,400	5750	8700
SF	0.83	1.26



'APIWellNo:43037500000000'

Tensile Design Equation

Well Name: Threemile #24-33H
Casing Size: 7.000 in



Design Equation

0	=<	Depth	=<	8,812
Load =	255,548	-	29.00 * D	
Backup =	-58,018			
Sc =	**197,530**	**-**	**29.00 * D**	

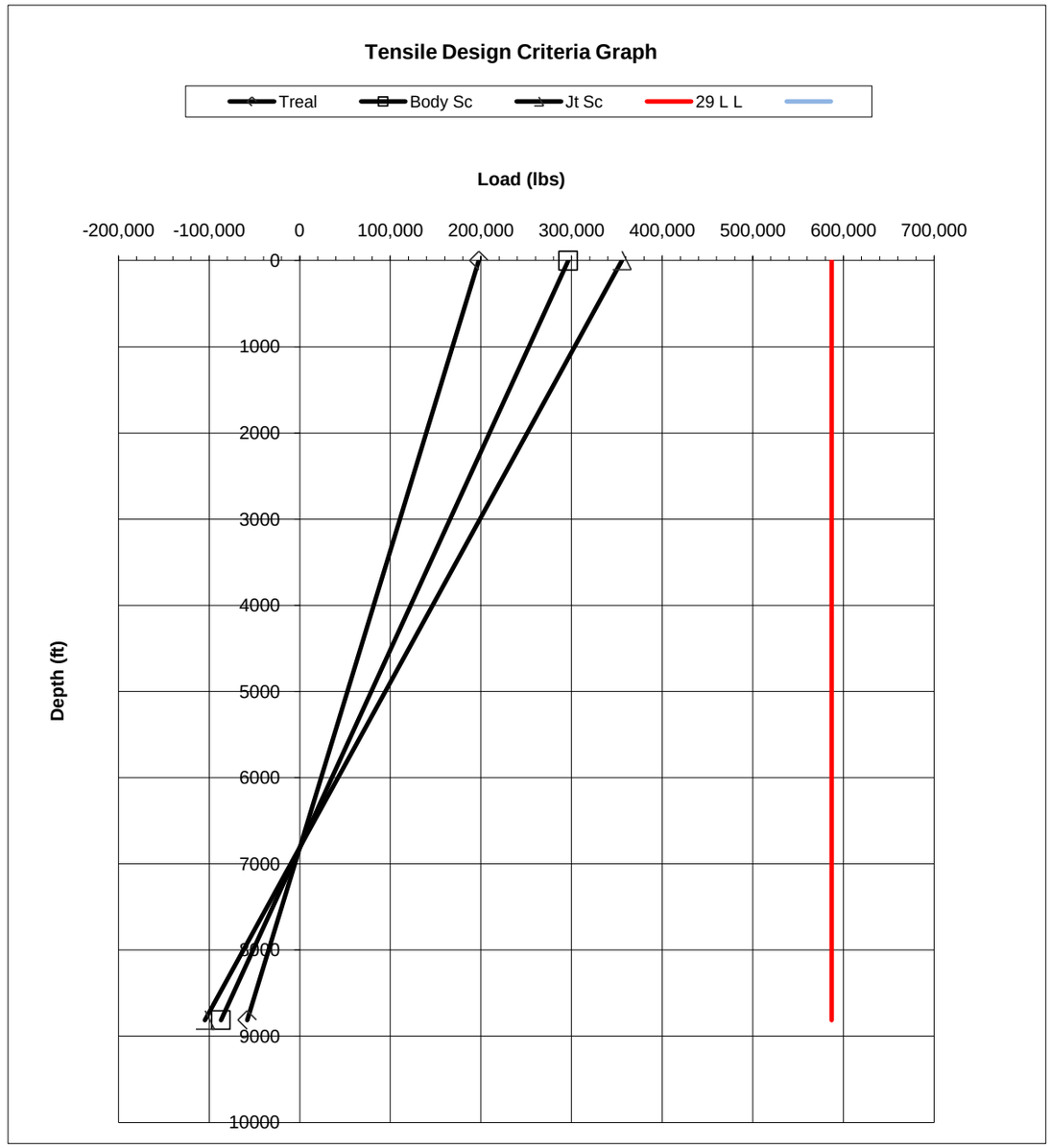
Design Factors

Body:	1.5
Joint:	1.8

Depth	Treal	Body Sc	Jt Sc
0	197,530	296,295	355,554
8,812	-58,018	-87,027	-104,433

Pipe Data

Depth	Jt Sc 29 L L
0	587,000
8,812	587,000



'APIWellNo:43037500000000'

COLLAPSE CALCULATION

Well Name:	Threemile #24-33H	
Casing Size:	7.000	in
Casing Wt:		lb
Depth:	8,812	ft
Salt Grad:	0.95	psi/ft
OMW:	18.29	ppg
DF:	1.0	

Design Criteria Eqn: Sc >= DF(Load - Backup)
Load Eqn: 0.950 * Depth
Backup Eqn: 0.000 * Depth

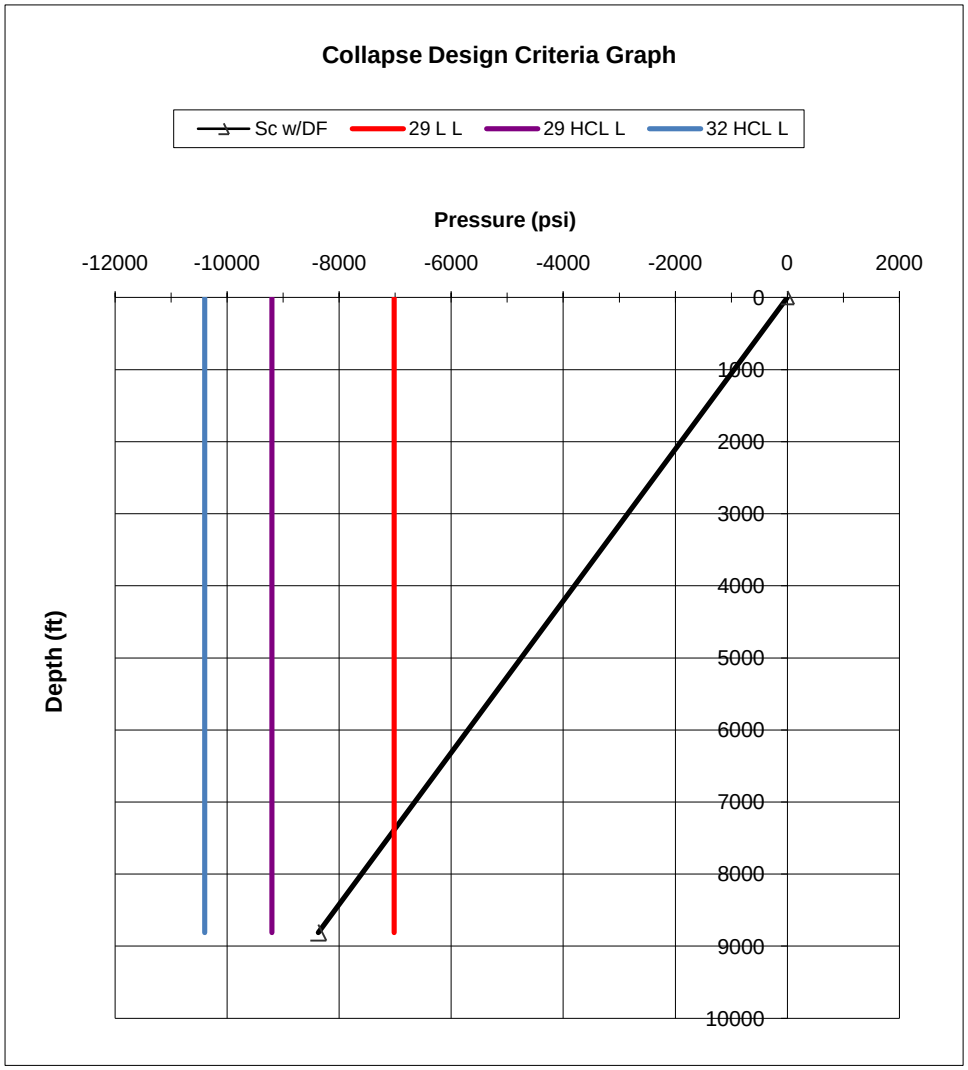
D	L	B	Sc
0	0	0	0
8,812	-8371	0	-8371

Input Pipe Grades

Grade	Wt	Pcollapse
L-80	29.00	7020
HCL-80	29.00	9200
HCL-80	32.00	10400

Pipe Table

D	29 L L	29 HCL L	32 HCL L
0	-7020	-9200	-10400
8,812	-7020	-9200	-10400
SF	0.84	1.10	1.24



'APIWellNo:43037500000000'

BURST CALCULATION

Well Name:	Threemile #24-33H	
Casing Size:	7.000	in
Casing Wt:	29.00	lb
Depth:	8,812	ft
OMW:	18.28	ppg
Tsurface:	60	deg F
Tgrad:	1.2	deg F/100 ft
DF:	1.1	

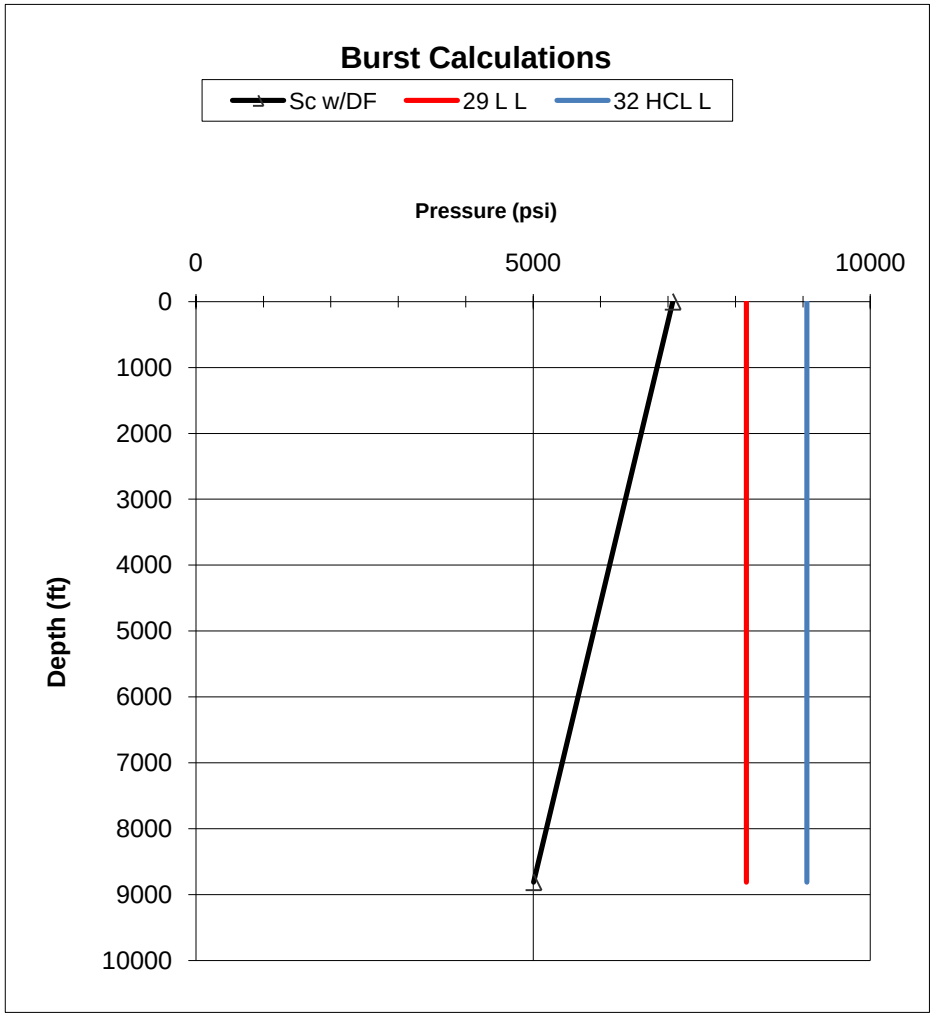
BBG (Burst Backup Gradient) Freshwater 0.433 psi/ft
Assume Burst by BLM Rules

BHP:	8,368	psi
Tfm:	165.744	
Pgrad:	0.22	psi/ft
Psurface:	6,429	

D	L	BBG	Sc
0	6429	0	7072
8,812	8368	-3816	5008

Input Pipe Grades		
Grade	Wt	Pburst
L-80 LTC	29.00	8160
HCL-80 LTC	32.00	9060

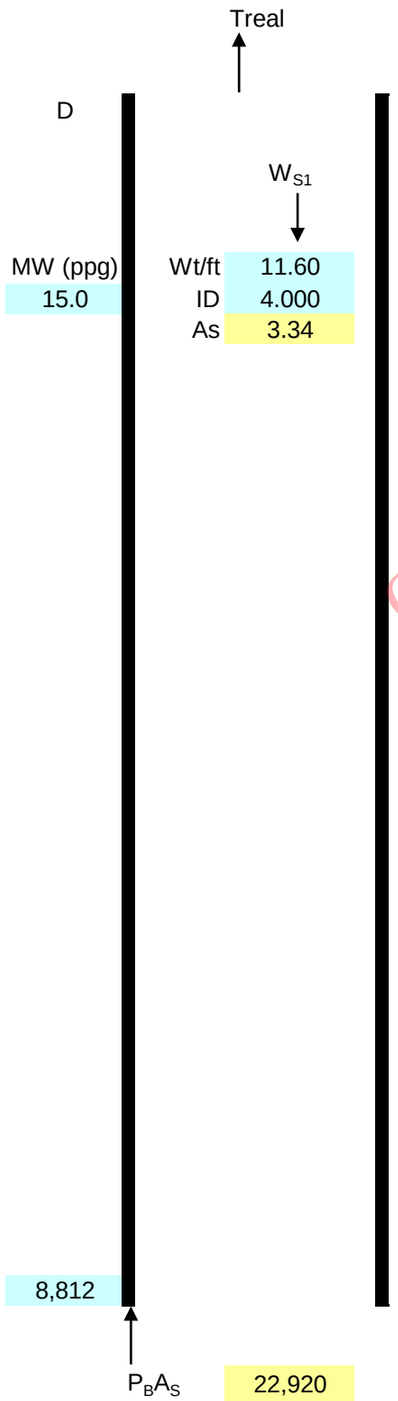
Pipe Table		
D	29 L L	32 HCL L
0	8160	9060
8,812	8160	9060
SF	1.63	1.81



'APIWellNo:43037500000000'

Tensile Design Equation

Well Name: Threemile #24-33H
Casing Size: 4.500 in



Design Equation

0	=<	Depth	=<	8,812
Load =	102,219	-	11.60 * D	
Backup =	-22,920			
Sc =	**79,299**	**-**	**11.60 * D**	

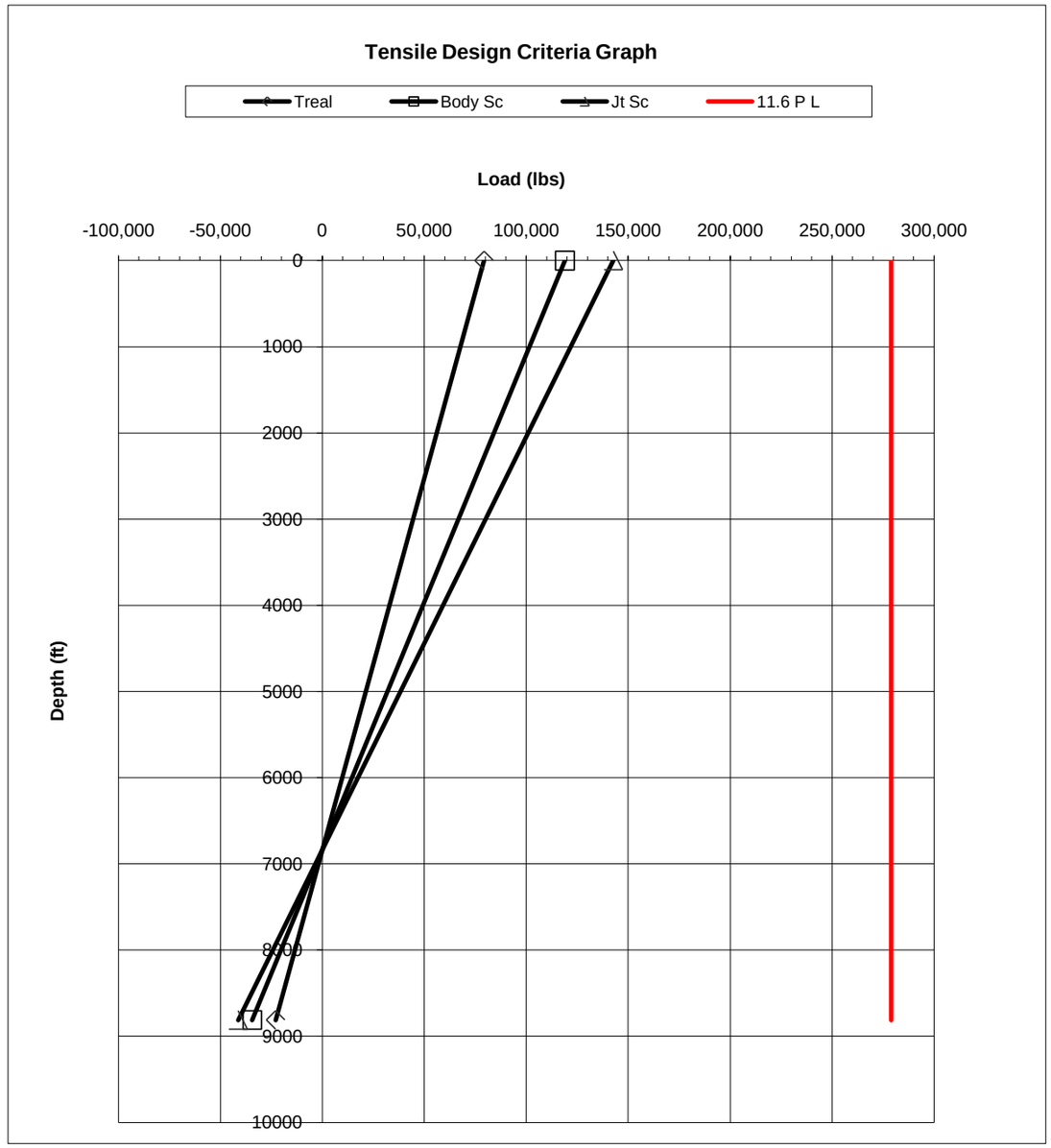
Design Factors

Body:	1.5
Joint:	1.8

Depth	Treal	Body Sc	Jt Sc
0	79,299	118,949	142,739
8,812	-22,920	-34,380	-41,256

Pipe Data

Depth	Jt Sc 11.6 P L
0	279,000
8,812	279,000



'APIWellNo:43037500000000'

COLLAPSE CALCULATION

Well Name:	Threemile #24-33H	
Casing Size:	4.500	in
Casing Wt:	11.60	lb
Depth:	8,812	ft
OMW:	15.00	ppg
DF:	1.1	

Design Criteria Eqn: Sc >= DF(Load - Backup)
Load Eqn: 0.779 * Depth
Backup Eqn: 0.000 * Depth

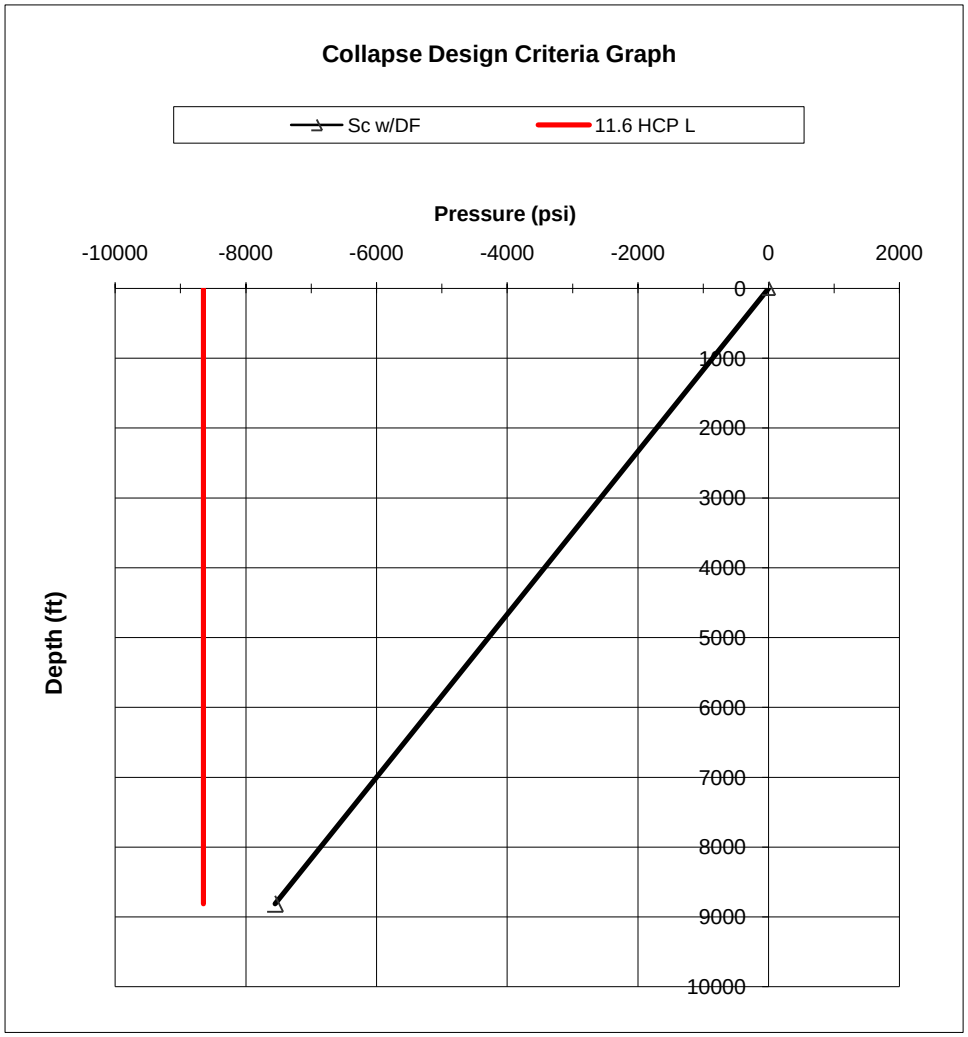
D	L	B	Sc
0	0	0	0
8,812	-6866	0	-7553

Input Pipe Grades

Grade	Wt	Pcollapse
HCP-110	11.60	8650

Pipe Table

D	11.6 HCP L		
0	-8650	0	0
8,812	-8650	0	0
SF	1.15	0.00	0.00



'APIWellNo:43037500000000'

BURST CALCULATION

Well Name:	Threemile #24-33H	
Casing Size:	4.500	in
Casing Wt:	11.60	lb
Depth:	8,812	ft
OMW:	15.00	ppg
Tsurface:	60	deg F
Tgrad:	1.2	deg F/100 ft
DF:	1.1	

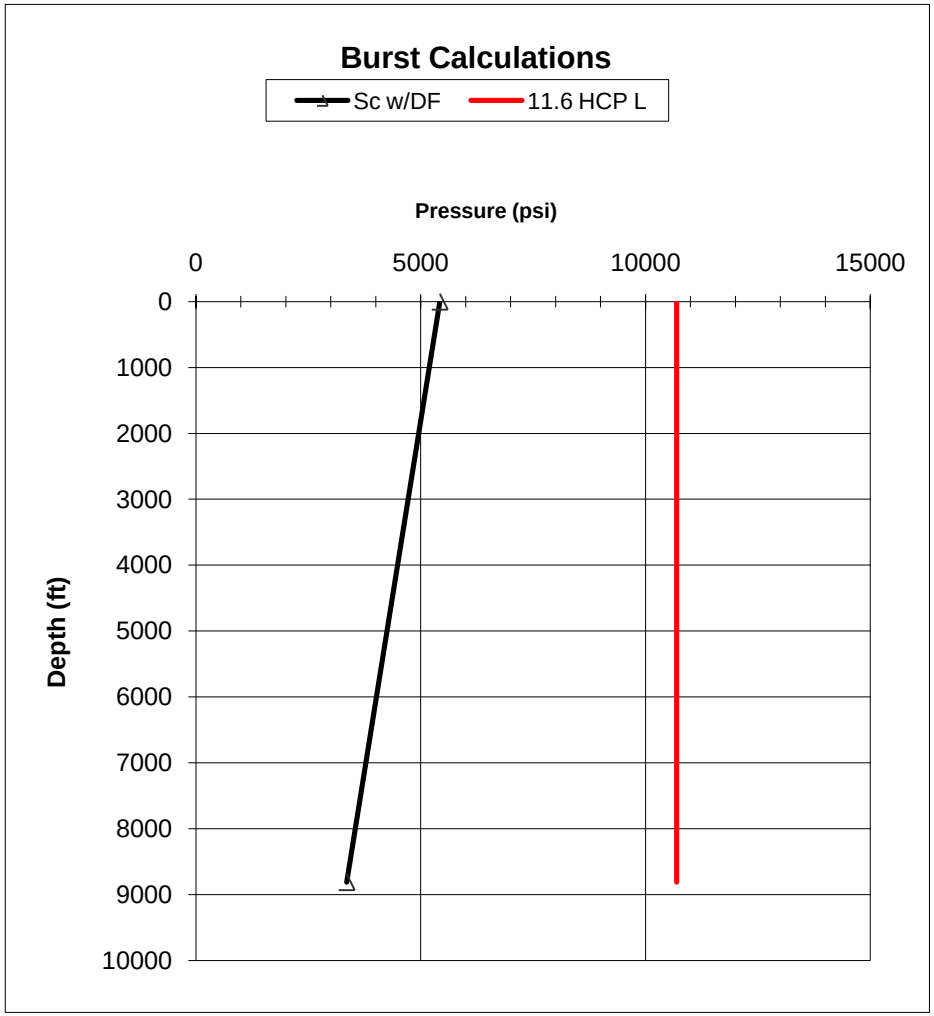
BBG (Burst Backup Gradient) Freshwater 0.433 psi/ft
Assume Burst by BLM Rules

BHP:	6,866	psi
Tfm:	165.744	
Pgrad:	0.22	psi/ft
Psurface:	4,928	

D	L	BBG	Sc
0	4928	0	5421
8,812	6866	-3816	3356

Input Pipe Grades		
Grade	Wt	Pburst
HCP-110	11.60	10690

Pipe Table		
D	11.6 HCP L	
0	10690	0
8,812	10690	0
SF	3.19	0.00



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Anchor

Drilling Fluids USA, Inc.

ADVANTAGE DRILLING FLUIDS

Mud Program

Whiting Petroleum Corporation

Threemile 24-33 (Hatch Point)

San Juan County, Utah

December 11, 2009

Prepared for:
Mr. Dana Greathouse

Table of Contents

Scot Stretch
Advantage Drilling Fluids
1831 Lefthand Circle, Suite C
Longmont, CO 80504

December 11, 2009

Mr. Dana Greathouse
Whiting Petroleum Corporation
1700 Broadway, Suite 2300
Denver, CO 80202-2301

RE: Mud Program – Threemile 24-33 (Hatch Point)

Advantage Drilling Fluids would like to thank Whiting Petroleum Corporation for the opportunity to bid on this project. Attached are recommendations, in the form of a mud program, for the up coming well. If you have any questions or concerns please contact myself or anyone else with Advantage Drilling Fluids. We look forward to working with Whiting Petroleum Corporation on a successful project.

Sincerely,

Scot Stretch
VP Business Development and Technology
O (303) 827-2700
C (303) 818-2667
scot.stretch@advantagedrillingfuilds.com

Advantage Drilling Fluids Personnel and Facilities:

Field Technical Representative: To be assigned …

Field Operations Supervisors: VP Operations - Mr. Brett Griffin – De Beque, CO 970.270.1880
Area Manager Russ Paiz – De Beque, CO Cell 970.778.0865
Area Manager Shawn Jones – De Beque, CO Cell 970.778.0866

Technical Services: VP B.D. and Technology Mr. Scot Stretch - Longmont, CO 303.818.2667
B.D. Mr. Isaac Womack - Longmont, CO 303.204.1463

Safety Leader: COO - Mr. Dick Kelley – Longmont, CO 303.827.2700

Manager: CEO - Mr. Jack Cantley - Longmont, CO 970.593.8563

Warehouse and Yard Facilities:

Office - (970) 283-0404
Fax - (970) 283-0505

348,001ft^2 fenced yard 2 forklifts
2 full time warehouse personnel

Truck Service:

Drum, sack and bulk product delivery

9 trucks including

- 2 tractor trailer
- 6 tandems
- 1 bulk barite pneumatic trailer
- 8 water hauler tandems

Access to 5 contractors for addition hauling

Storage Capacity:

Approximately 44,000 sacks
Approximately 550 ton of bulk barite

PREVENTATIVE PLANNING

The following is a list of potential issues while drilling in this area. This discussion is provided as a guideline to better understand the area and to help Whiting Petroleum successfully drill this well.

24" Surface (0-500')

Drilled using an Air Drilling Surface Rig

17 ½" Intermediate Hole Interval (500'- 3,430')

Loss Circulation - Seepage and sever lost circulation through the Chinle, Moenkopi, and Organ formations.

Tight Hole - Drilling bentonitic (red bed) shale that swell resulting in severely increased fluid rheology.

Pack off – While drilling with high penetration rates cuttings can build up around the BHA. Adjust pump rates and increase sweep schedule in order to improve hole cleaning.

12 ¼" Intermediate Hole Interval (3,430'- 6,400')

Calcium Contamination – Possible Calcium contamination from anhydrite and/or gypsum in the formation. Treat as needed with soda ash to control.

Loss Circulation - Seepage losses through this interval are not uncommon.

Wash out – Salt and plastic flowing shale stringers will be encountered. Drill with a field brine in order to minimize hole trouble.

Tight Hole - Drilling bentonitic shale that swell resulting in severely increased fluid rheology.

Pack off – While drilling with high penetration rates cuttings can build up around the BHA. Adjust pump rates and increase sweep schedule in order to improve hole cleaning.

8 ½" Pilot Hole Interval (6,400' – 8,835') and 8 ½" Intermediate Hole Interval (7,912' – 8,812')

Stuck Pipe - Differentially stuck pipe across under balanced zones. Maintain a HPHT filtration rate of 15-20 ml and maximum of 6-8% LGS.

Salt Zones – Use field brine (MgCl/CaCl/NaCl) in the water phase to minimize precipitating salt. Sack Calcium Chloride can be added to increase WPS to control swelling shale. Spotting fresh water pills across salt sections will reduce the chances of tight hole due to flowing salt.

Over Pressure - Maintain at minimum a fluid density of 12.0 ppg and anticipate 15.0 ppg by TD. Check to see if the well is flowing periodically.

Lost Circulation – There are possible losses in this interval. Treat with LCM as listed in this program, avoid over treatment as this will only increase ECD and add to the problem.

Hole Stability - Sloughing and/or hole instability problems due to swelling shale. Maintain recommended Water Phase Salinity and allow filter cake build up across permeable zones.

6" Production Hole Interval (8,812' – 19,541')

Stuck Pipe - Differentially stuck pipe across under balanced zones. Maintain HPHT filtration rate of 15-20 ml and maximum of 6-8% LGS.

Salt Zones – Use field brine (MgCl/CaCl/NaCl) in the water phase to minimize precipitating salt. Spotting fresh water pills across salt sections will reduce the chances of tight hole due to flowing salt.

Over Pressure - Maintain at minimum a fluid density of 12.0 ppg and anticipate 15.0 ppg by TD. Check to see if the well is flowing periodically.

Lost Circulation – There are possible losses in this interval. Treat with LCM as listed in this program, avoid over treatment as this will only increase ECD and add to the problem.

Hole Stability - Sloughing and/or hole instability problems due to swelling shale. Maintain recommended Water Phase Salinity and allow filter cake build up across permeable zones.

Torque and Drag – With good directional work and consistent formation, torque and drag should not be a problem with OBM.

DRILLING FLUIDS PROGRAM

The following drilling fluids are recommended to drill this well:

HOLE SIZE	DRILLING FLUID SYSTEM	FLUID WEIGHT (PPG)	INTERVAL
24"	Air Hammer	Air	0'-500'
17 ½"	Air/Mist, Water, Spud Mud	Air – 9.2	500' – 3,430'
12 ¼"	Salt Saturated	9.2 – 10.0	3,430' – 6,400'
8 ½" – Pilot	Anco-Mul (Oil Base Mud)	12.0 – 15.0	6,400' – 8,835'
8 ½"	Anco-Mul (Oil Base Mud)	12.0 – 15.0	7,915' – 8,812'
6"	Anco-Mul (Oil Base Mud)	12.0 – 15.0+	8,812' – 19,541'

24" Surface (0-500')

An air drilling operation will be used to drill to casing point.

17 ½" Intermediate Hole Interval (500'- 3,430')

Continue drilling with the air hammer until hammer waters out. Switch to roller cone and mud up as needed to control the wellbore from sloughing.

12 ¼" Intermediate Hole Interval (3,430'- 6,400')

Clean surface pits of all drilled solids and contaminates. Fill the pits with field brine and begin circulate the reserve pit before drilling out of the 13 3/8" casing and be ready to switch to mud as the hole conditions indicate.

Pre-treat the active system with 0.1 ppb Bachide 320 to kill any bacteria.

For mud-up and fluid property maintenance mix the following products listed in order of addition:

1. Field brine - as needed for volume building
2. Bachide 320 - 0.1-ppb
3. PHPA - 1.0 ppb
4. Gel - 5.0 – 10.0 ppb in pre-hydration tank for filter cake
5. Sea Mud/Salt Gel - Only if need – prehydrated gel is better
6. Caustic - as needed to maintain pH
7. PAC-R/ Drispac - 0.25 - 0.5 ppb
8. Barite - as needed for fluid density

Add 1-2 vis Cups of PHPA down drill string on connections. To help inhibit drilled shale and increase hole cleaning. Add 1-2 gal of PHPA over suction or in polymer hoper on charger pump every 80-100 ft drilled. Pay close attention to hole cleaning and hook load on connections. If connections are tight pump the following high-vis sweep:

1. 60-70 bbls active mud
2. 1-2 ppb PHPA
3. 20-25 sxs gel or as needed to increase viscosity to 45-50 sec/qt
   *if formation is swelling increase PHPA in sweeps to 3-4ppb

Offset wells have not encountered large losses in this interval. However, always pay close attention to well bore conditions. Pump sweeps of sawdust/ Calcium Carbonate at 5-10 ppb for minor seepage and sweeps of Chem Seal at 10 ppb and sawdust at 15 ppb for more severe losses. Know and follow the LCM recommendation listed in this program.

If mud rings form add SAPP to disperse. Add at the suction over a circulation or slug the drill pipe on connections. If bit balling occurs sweep hole with a 10 ppb Wal-Nut sweep. Mixing 20-30 bbl sweeps containing 3-15% Drilling Detergent is also an option for bit balling.

When total depth (TD) is reached make a wiper trip to the shoe to clean the well bore and increase the ability to run a string of 9 5/8" casing to TD.

Brines are fairly abrasive fluid, lubrication might be needed. If hole is tight or excessive torque and drag is encountered, use ADV Lube at 4-5% by volume or as needed. Diesel can be added at a 2-3% concentration **(with Whiting prior approval)**, maintain concentration to TD.

8 ½" Pilot Hole Interval (6,400' – 8,835')

8 ½" Intermediate Hole Interval (7,912' – 8,812')

6" Production Interval (8,812' – 19,541')

Drilling Cane Creek Salt and Shale sections with OBM – Important Info

The Cane Creek Salt section is best described as polysalt. Polysalts normally consist of Sylvite (KCL), Bischofite ($MgCl_2 \cdot 6H_2O$) and Carnallite ($K \cdot MgCl_3 \cdot 6H_2O$). Some polysalts are invariably pressured and can require 15.0+ ppg to stabilize.

Most OBM mud systems require calcium hydroxide to convert fatty acid to water-soluble soap for emulsion control and stabilization.

Magnesium chloride will displace Calcium Chloride if the pH, of the water phase, is above 8.3. With the addition of lime (alkalinity), to the system, it will convert Magnesium Chloride to Magnesium Oxide that can be removed at the shaker. During this reaction the remaining Calcium and Chloride ions combine to create Calcium Chloride. No additions of Calcium Chloride will be need until Magnesium Chloride contamination is controlled. This reaction is limited by the amount of free water present in the water phase. Additions of fresh water, base oil, emulsifier, and wetting agents will be needed to fight the increase in WPS to prevent super saturation of the system. The results of this reaction/contamination will be noticed in the reduction of the OWR (oil/water ratio).

From above, the addition of lime to the system can be effective in removing magnesium contamination. The problem is that as the Magnesium Hydroxide is removed from the system it takes the emulsifiers with it. So, rapid lime additions or lots of excess lime in the system will destabilize the mud systems emulsion rapidly. As we drill the Magnesium Slat sections additions of non-lime dependent emulsifiers and oil wetting agents ***must be made*** to the system to stabilize it and prevent water wetting of the system solids/barite. At this point, having no water in the (water free) HPHT is more important that the actual ES meter reading. This happens because all of the excess ions present during these reactions will affect the ES reading and make it inaccurate. It is important to maintain the excess lime concentration above 3 ppb when drilling these evaporates. Lime addition rate could be as high as 2-3 pallets (100 – 150 sack) per day.

If the Magnesium Chloride is not removed from the system, the in and out temperature changes cause releasing of crystallization (re-crystallized salts have very large surface area – hard on emulsifiers) and leads to water-wetting of solids.

Field brine can be used as the make up water for the base mud. This will help control the Magnesium Chloride contamination. Also blending in fresh OBM mud (with fresh water in water phase) into the system during these sections to help reduce the possibility of super saturation/thick mud.

Displacement

Prior to displacement, a sufficient amount of OBM/Anco-Mul should be on location. Whiting should have 1,200 bbls +/- from last well available of this interval. We recommend displacing the cement used to for the 9 5/8" casing with the Whiting OBM instead if water/salt mud. This will potential save rig time and overall well cost.

After the 9 5/8" casing has been set, all mud tanks should be dumped and thoroughly cleaned and each gate on the mud tanks must be tightly closed and sealed with silicone caulking or packed tightly with fresh gel to insure that no leakage will occur once the oil mud is placed into the tanks.

After the mud tanks have been properly sealed, oil mud can be transferred from the 400 barrel frac tanks. The mud transfer should be through a 4 inch line, as a 2 inch line is too small. The rig's yellow dog pump (if rated for hydrocarbons) should be used so that mud can be transferred quickly.

One of the 400 barrel tanks for diesel should be placed higher than the mud tanks so that diesel fuel can be gravity fed through a 2 inch line into the rig's mud tanks or an explosion proof pump should be installed. This 2 inch line should be equipped with a faucet handle so that the quantity of diesel added to the mud can be accurately controlled. Another method to add the diesel is to use a transfer pump with a bypass.

System Maintenance

The Anco-Mul system with field brine added to the water phase offers the best guarantee for a gauge well bore through salt sections in this area. The invert emulsion drilling fluid will maximum lubricity while drilling and allow for maximum rates of penetration, shale inhibition and low fluid weights.

The Electrical Stability (ES) of this system should be maintained above 800 volts. The Electrical Stability along with the HTHP filtrate is a measurement of how "tight" the emulsion is between the oil phase and water phase of the Invert. The tighter the emulsion, the better the lubricity and stability of the system.

Maintaining a low drilling fluid rheology will minimize ECD's (equivalent circulating densities) and reduce the chances for lost circulation/seepage. Be prepared to increase the drilling fluid density from 12.0 ppg to 15.0 ppg with Barite as wellbore conditions indicate.

Treatments:

Anco-Mul S - 2.0 - 3.0 ppb for emulsion stability.
Anco-Mul P - 1.0 - 1.5 ppb for additional emulsion and HPHT stability.
Anco-Mul OW - 2.0 - 4.0 ppb to Oil wet Barite and any drilled solids. **Always add while weighting up.**
Bentone 910 - 3.0 - 4.0 ppb for viscosity increases, take care not to over treat.
NaCl/CaCl - maintain 270K-325K WPS
Lime – Should be maintained above 3 ppb while drilling MgCl salts
Treat with Gilsonite/asphaltite to maintain 15-20 ml/30min HTHP, if needed.

Drilling Salt Sections

Each connection should be reamed after having been drilled through a salt section, but it may be required to drill 3-5' and ream prior to drilling additional new hole. If stuck pipe should occur, spot a fresh water pill opposite the drill collars to dissolve the under-gauge salt in order to free the pipe. The water will then be incorporated into the oil based mud system, which will require the addition of emulsifiers, wetting agents and diesel to condition the mud back to the desired properties.

Losses and Influxes

It is imperative to control hydrostatic pressure as close to balanced as possible. Mud weights as high as 18.5 ppg have been seen in this interval. To control seepage, mix 1-2 ppb Nutshell, 2-4 ppb Calcium Carbonate and or 2-4 ppb Mica. For sever losses in production zones mix 3-4 ppb course Calcium Carbonate and 4-5 ppb Magma Fiber. Fine fibrous material such as Anco-Fiber can be used, but an increase in the wetting agent will be needed to oil wet the material.

Solids Control Equipment

Dress the shale shakers with the finest mesh screens possible. Initially, 120-175 mesh screens should be run switching to 175-310 as the drilling fluid shears and the emulsion tightens resulting in a thinner smother fluid. Two dryer shakers and a catch tank should be placed at the end of the shaker to collect any mud that runs over the flow line shakers. Pump any lost mud back into the mud pits with a centrifugal pump. Two variable high speed centrifuges (capable of 1800 rpm) should also be included as an integral part of the solids control system.

The shaker screens will require frequent cleaning to prevent blinding and excessive oil mud run-off. Cleaning can be accomplished by spraying diesel directly onto the screens with a high pressure gun. If a brush is used, it should have soft bristles (not a wire brush) to avoid damaging the screens.

Minimize the drilling fluid rheology and reduce the cement / drilling fluid interface for cementing operations. A two (2)-stage cement plan will be incorporated to maximize cementing efficiencies and reduce fluid losses. The Anco-Mul oil mud can be saved and stored on location in 400 bbl tanks for use on future wells.

Horizontal Section

High angle wells have shown large cutting loads through out the build. Statistically 45° is the hardest angle for hole cleaning. To ensure proper hole cleaning maintains viscosity of the active system at 38-45 sec/qt with Bentone 910 additions.

For additional hole cleaning maintain a sweep schedule consisting of 40 - 60 bbl low vis sweeps immediately followed by 40 - 60 bbl hi-vis sweeps. Pay close attention to the shakers when sweeps come back to surface to make sure there is adequate hole cleaning. If tight connections are seen switch to a low vis weighted (1.5 to 2.0 ppg over active system) followed immediately by hi-vis sweep. The objective is to create turbulent flow on the low side of the hole with the low vis sweep and then carrying capacity with the hi-vis sweep. The weighted sweeps with create buoyancy for the cuttings increasing the efficiency of removing cuttings. Take care to keep a log of the effectiveness of the different sweep schedules to record what method works best in the area.

Make short trip at TD to allow for a string of 4 ½" 11.6# P-110 to TD, with swell packers to be set in the 7" casing at ~7,770'.

Description of Oil Base Mud Additives:

Anco-Mul S - The main constituent in the relaxed Anco-Mul system. This product contains both a wetting agent and a secondary emulsifier. Additions will be required to oil wet all solids in the system (barite and drilled solids). It will also be used to reverse the effects of water contamination, increase the ES and remove free water from the HTHP, when used in conjunction with Anco-Mul P. Normal concentrations for building new mud will be 0.75 to 1.5 gallons per barrel. Daily maintenance levels for the active system may require 0.04 to 0.125 gpb.

Anco-Mul P - The primary emulsifier to maintain the Electrical Stability and the HTHP properties of this relaxed system. Normal concentrations for building new mud will be 0.25 to 0.5 gallons per barrel. Daily maintenance levels for the active system may require 0.025 to 0.075 gpb.

Anco-Mul OW – A surfactant that functions as an extremely powerful oil-wetting agent for the Anco-Mul diesel based drilling fluid system.

Bentone 910 (Mul Vis) - This is an organophillic bentonite clay, used to increase the yield point for hole cleaning ability in the system. Normal concentrations of 3 to 4 ppb will provide the yield point values we have recommended.

Lime - This is used as a saponifying agent for the emulsifiers, as well as to treat out carbonates that may be encountered from the formation. We recommend an excess lime concentration of at least 3-4 ppb to allow maximum effectiveness of the oil mud emulsifiers and to provide a safety factor for potential influxes of contaminants.

Sodium/Calcium Chloride - Will be used as the osmotic control agent in the water phase for hole stability. The total water phase salinity (NaCl and $CaCl_2$) is recommended at 275,000 to 325,000 mg/l. This concentration will be maintained or increased as conditions dictate through the use of sack Sodium/Calcium Chloride.

Whiting Threemile 24-33

Formations	Casing MD (ft)	Hole Casing Size (in)	Mud Properties
Conductor set @ 60'			Conductor
Wingate		24" Hole	Interval: 0 - 500 ft (preset with air rig)
Surface Casing	500'	20" 94# J-55 STC Casing	System: Air
			17 1/2" Intermediate:
Chinle	2,361'		Interval: 500 - 3,430 ft
			System: Air, Water, Gel Caustic, PAC
Moenkopi	2,661'		Density: 8.8-9.2 ppg
			Viscosity: 45 - 65 sec/qt
			Fluid Loss: 12-15 ml/30 min
			pH: 8.0 - 9.5
Organ Rock	2,993'		Plastic Viscosity: 20 - 40 cP
			Yield Point: 15 - 30 lb/100ft2
			10 Second Gels 5-10 lb/100ft
Elephant Canyon	3,387'		10 Minute Gels 10-20 lb/100ft
		17 1/2" Hole	Hole
17 1/2" Intermediate	3,430'	13 3/8" 54.5# J-55 STC	Casing
			12 1/4" Intermediate:
Honaker Trail	4,394'		Interval: 3,430 - 6,400 ft
			System: Saturated NaCl Salt Mud
			Density: 9.2-10.0 ppg
			Viscosity: 30-50 sec/qt
La Sal LS	5,602'		Fluid Loss: 15 - 30+ ml/30 min
			pH: 8.0 - 9.0
			Plastic Viscosity: 5-20 cP
			Yield Point: 5-25 lb/100ft2
			10 Second Gels 5-18 lb/100ft
Ismay mbr (Paradox)	6,062'		10 Minute Gels 15-25 lb/100ft
			Chloride: 170K+ mg/l
Desert Creek Member	6,352'		
		12 1/4" Hole	Hole
12 1/2" Intermediate	6,400'	9 5/8" 40# N-80 & HCN-80	Casing
			8 1/2" Pilot hole and 8 1/2" Intermediate:
Akah mbr	6,570'		Interval: 6,400 - 8,812 ft
			System: ANCO MUL
			Density: 12.0 - 15.0 ppg
			Viscosity: 45-75 sec/qt
			Fluid Loss: 6 or less ml/30 min
			Plastic Viscosity: 15-30 cP
			Yield Point: 9-15 lb/100ft2
			10 Second Gels 7-15 lb/100ft
			10 Minute Gels 10-20 lb/100ft
			HPHT: 15 - 20 ml/30
			ES: 800 - 1,200 Volts
			WPS: 270K - 325K ppm
			OWR: 90/10 - 85/15
Cane Creek (Alkali Gulch)	8,486'		
	8,812'	8 1/2" 7" 29# N-80 LTC	Hole Casing
			6" Production:
			Interval: 8,812 - 19,541 ft
			System: ANCO MUL
			Density: 12.0 - 15.0 ppg
			Viscosity: 50-75 sec/qt
			Fluid Loss: 6 or less ml/30 min
			Plastic Viscosity: 15-30 cP
			Yield Point: 9-25 lb/100ft2
			10 Second Gels 10-20 lb/100ft
			10 Minute Gels 15-25 lb/100ft
			HPHT: 15 - 20 ml/30
			ES: 800 - 1,200 Volts
			WPS: 270K - 325K ppm
			OWR: 90/10 - 85/15
		6"	Hole
Production Casing	19,541'	4 1/2" 11.6# P-110 LTC	Casing

Advantage Drilling Fluids - December 11, 2009

Lost Circulation Recommendation:

Measures should be taken to prevent loss circulation. The first line of defense is mud weight. Do not drill in an over balanced situation. Doing so will cause losses. However, losses are not always preventable. The following is a basic guide line for fighting losses. Knowing the process, acting quickly, and having the proper LCM on location with help lessen the over all impact of the losses.

Preventative Maintenance:

Add to active system:
2-6 sxs/hr Calcium Carbonate (40)
2-4 sxs/hr Mica,
Chem Seal can also be added

>10 Bbl/Hr losses:

Sweep Hole:
10 ppb Calcium Carbonate (40/250)
1-5 ppb Chem Seal

>10-40 Bbl/Hr:

Spot LCM pill over suspected loss zone:
5 ppb Calcium Carbonate (40/250)
15 ppb Magma Fiber
5-15 ppb Sawdust
5-15 ppb Chem Seal

>40 Bbl/Hr:

Spot LCM pill over suspected loss zone:
15-25 ppb Fiber Seal
15 ppb Magma Fiber
5 ppb Mica M
5 ppb Calcium Carbonate (40/250)
10 ppb Poly Swell

These products and concentrations are subject changed due to rig site activity and availability. When a material is used to combat losses it is important to properly record its results. Formation, depth, and the estimated reduction of losses should be recorded so a log can be generated and the proper LCM can be used in future wells. This will help lower future well costs.

Water or Gas influxes:

Influxes from the formation should be taken very seriously. This well will be drilled with under balanced to balanced mud weights. This practice is good for increasing ROP, but influxes are common. It is important to keep a minimum supply of barite on location to weight up the system 0.5 ppb, however, Advantage Drilling Fluids recommends enough barite to weight up 1.0 ppb, if the there is adequate storage capacity on location.

HALLIBURTON

Whiting Oil & Gas Corp Ebusiness
Do Not Mail - 1700 Broadway Ste2300
Denver, Colorado 80290

Threemile 24-33H

San Juan County, Utah
United States of America
S:33 T:29S R:22E

Multiple String Cement Recommendation

Prepared for: Mr. Dana Greathouse

December 17, 2009
Version: 3

Submitted by:
Matt Collins
Halliburton
1125 17th Street #1900
Denver, Colorado 80202
1.303.899.4702

HALLIBURTON

HALLIBURTON

Halliburton appreciates the opportunity to present this proposal and looks forward to being of service to you.

Foreword

Enclosed is our recommended procedure for cementing the casing strings in the referenced well. The information in this proposal includes well data, calculations, materials requirements, and cost estimates. This proposal is based on information from our field personnel and previous cementing services in the area.

Halliburton Energy Services recognizes the importance of meeting society's needs for health, safety, and protection of the environment. It is our intention to proactively work with employees, customers, the public, governments, and others to use natural resources in an environmentally sound manner while protecting the health, safety, and environmental processes while supplying high quality products and services to our customers.

We appreciate the opportunity to present this proposal for your consideration and we look forward to being of service to you. Our Services for your well will be coordinated through the Service Center listed below. If you require any additional information or additional designs, please feel free to contact myself or our field representative listed below.

Prepared and Submitted by:

Matt Collins
Account Representative

SERVICE CENTER:	Grand Junction
PSL DISTRICT MANAGER:	Shaun Burns
SERVICE COORDINATORS:	Jon Trout, Jered Brady
CEMENT ENGINEERS:	Mark Sullivan, Jeremy Talarovich, Andrew Wilke, Mark Sauter
PHONE NUMBER:	970-523-3600

HALLIBURTON

Cementing Best Practices

1. Cement quality and weight: You must choose a cement slurry that is designed to solve the problems specific to each casing string.

2. Waiting time: You must hold the cement slurry in place and under pressure until it reaches its' initial set without disturbing it. A cement slurry is a time-dependent liquid and must be allowed to undergo a hydration reaction to produce a competent cement sheath. A fresh cement slurry can be worked (thickening or pump time) as long as it is in a plastic state and before going through its' transition phase. If the cement slurry is not allowed to transition without being disturbed, it may be subjected to changes in density, dilution, settling, water separation, and gas cutting that may lead to a lack of zonal isolation and possible bridging in the annulus.

3. Pipe movement: Pipe movement may be one of the single most influential factors in mud removal. Reciprocation and/or rotation mechanically breaks up gelled mud and changes the flow patterns in the annulus to improve displacement efficiency.

4. Mud properties (for cementing):

Rheology:

Plastic Viscosity (PV) < 15 centipoise (cp)
Yield Point (YP) < 10 lb/100 ft2
These properties should be reviewed with the Mud Engineer, Drilling Engineer, and Company Representative(s) to ensure no hole problems are created.

Gel Strength:

The 10-second/10-minute gel strength values should be such that the 10-second and 10-minute readings are close together or flat (i.e., 5/6). The 30-minute reading should be less than 20 lb/100 ft². Sufficient shear stress may not be achieved on a primary cement job to remove mud left in the hole if the mud were to develop more than 25 lb/100 ft² of gel strength.

Fluid Loss:

Decreasing the filtrate loss into a permeable zone enhances the creation of a thin, competent filter cake. A thin, competent filter cake created by a low fluid loss mud system is desirable over a thick, partially gelled filter cake. A mud system created with a low fluid loss will be more easily displaced. The fluid loss value should be < 15 cc's (ideal would be 5 cc's).

5. Circulation: Prior to cementing circulate full hole volume twice, or until well conditioned mud is being returned to the surface. There should be no cutting in the mud returns. An annular velocity of 260 feet per minute is optimum (SPE/IADC 18617), if possible.

6. Flow rate: Turbulent flow is the most desirable flow regime for mud removal. If turbulence cannot be achieved pump at as high a flow rate that can practically and safely be used to create the maximum flow energy. The highest mud removal is achieved when the maximum flow energy is obtained.

7. Pipe Centralization: The Cement will take the path of least resistance, therefore proper centralization is important to help prevent the casing from contacting the borehole wall. A minimum standoff of 70% should be targeted for optimum displacement efficiency.

8. Rat hole: A weighted viscous pill placed in the rat hole prior to cementing will minimize the risk of higher density cement mixing with lower density mud when the well is static.

9. Top and Bottom plugs: A top and bottom plug are recommended to be run on all primary casing jobs. The bottom plug should be run after the spacer and ahead of the first cement slurry.

10. Spacers and flushes: Spacers and/or flushes should be used to prevent contamination between the cement slurry and the drilling fluid. They are also used to clean the wellbore and aid with bonding. To determine the volume, either a minimum of 10 minutes of contact time or 1000ft. of annular fill, whichever is greater, is recommended. **For drilling operations using diesel-based drilling fluids**, we suggest Tuned Spacer III. This is a water-based spacer designed to eliminate the use of diesel thereby mitigating environmental impact and reducing job cost. This spacer can be customized to the desired density and rheology (PV and YP) in order to better to remove mud and filter cake from the hole. This will result in the best zonal isolation by providing superior cement-to-casing and cement-to-formation bonds.

HALLIBURTON

Job Information — Surface Casing

Well Name: Threemile	Well #: 24-33H
24" Surface Hole	0 - 500 ft (MD) 0 - 500 ft (TVD)
Inner Diameter	24.000 in
Job Excess	100 %
20" Surface Casing	0 - 500 ft (MD) 0 - 500 ft (TVD)
Outer Diameter	20.000 in
Inner Diameter	19.124 in
Linear Weight	94 lbm/ft
Casing Grade	J-55
Mud Type	Air

HALLIBURTON

Calculations — Surface Casing

Spacer:

Total Spacer	= 112.29 ft^3
	= 20.00 bbl

Cement : (500.00 ft fill)

500.00 ft * 0.9599 ft^3/ft * 100 %	= 959.93 ft^3
Primary Cement	= 959.93 ft^3
	= 170.97 bbl

Shoe Joint Volume: (0.00 ft fill)

0.00 ft * 1.9947 ft^3/ft	= 0.00 ft^3
	= 0.00 bbl
Tail plus shoe joint	= 959.93 ft^3
	= 170.97 bbl
Total Tail	= 409 sks

Total Pipe Capacity:

500.00 ft * 1.9947 ft^3/ft	= 997.37 ft^3
	= 177.64 bbl

Displacement Volume to Shoe Joint:

Capacity of Pipe - Shoe Joint	= 177.64 bbl - 0.00 bbl
	= 177.64 bbl

HALLIBURTON

Job Recommendation — Surface Casing

Fluid Instructions

Fluid 1: Water Spacer

Gel Water

0.5 gal/bbl LGC-35 CBM (Gelling Agent)

Fluid Density:	8.34 lbm/gal
Fluid Volume:	20 bbl

Fluid 2: Primary Cement

VERSACEM (TM) SYSTEM

0.3 % D-AIR 3000 (Defoamer)

0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)

Fluid Weight	12.30 lbm/gal
Slurry Yield:	2.35 ft^3/sk
Total Mixing Fluid:	13.42 Gal/sk
Top of Fluid:	0 ft
Calculated Fill:	500 ft
Volume:	170.97 bbl
Calculated Sacks:	409.18 sks
Proposed Sacks:	410 sks

Fluid 3: Mud

Displacement Fluid

Fluid Density:	8.34 lbm/gal
Fluid Volume	177.64 bbl

Detailed Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	Spacer	Gel Water	8.3		20 bbl
2	Cement	VersaCem (Rockies LT)	12.3		410 sks
3	Mud	Displacement Fluid	8.3		177.64 bbl

HALLIBURTON

Job Information — Intermediate Casing

Well Name: Threemile	Well #: 24-33H
20" Surface Casing	0 - 500 ft (MD) 0 - 500 ft (TVD)
Outer Diameter	20.000 in
Inner Diameter	19.124 in
Linear Weight	94 lbm/ft
Casing Grade	J-55
17 1/2" Intermediate Hole	500 - 3430 ft (MD) 500 - 3430 ft (TVD)
Inner Diameter	17.500 in
Job Excess	50 %
13 3/8" Intermediate Casing	0 - 2900 ft (MD) 0 - 2900 ft (TVD)
Outer Diameter	13.375 in
Inner Diameter	12.515 in
Linear Weight	61 lbm/ft
Casing Grade	J-55
13 3/8" Intermediate Casing	2900 - 3430 ft (MD) 2900 - 3430 ft (TVD)
Outer Diameter	13.375 in
Inner Diameter	12.515 in
Linear Weight	61 lbm/ft
Casing Grade	HCK-55
Mud Type	Spud Mud

Spacer:

Total Spacer	= 112.29 ft^3
	= 20.00 bbl

Cement : (2930.00 ft fill)

500.00 ft * 1.019 ft^3/ft * 0 %	= 509.52 ft^3
2400.00 ft * 0.6946 ft^3/ft * 50 %	= 2500.70 ft^3
30.00 ft * 0.6946 ft^3/ft * 50 %	= 31.26 ft^3
Total Lead Cement	= 3041.47 ft^3
	= 541.71 bbl
Sacks of Cement	= 1035 sks

Cement : (500.00 ft fill)

500.00 ft * 0.6946 ft^3/ft * 50 %	= 520.98 ft^3
Tail Cement	= 520.98 ft^3
	= 92.79 bbl

Shoe Joint Volume: (0.00 ft fill)

0.00 ft * 0.8543 ft^3/ft	= 0.00 ft^3
	= 0.00 bbl
Tail plus shoe joint	= 520.98 ft^3
	= 92.79 bbl
Total Tail	= 289 sks

Total Pipe Capacity:

2900.00 ft * 0.8543 ft^3/ft	= 2477.35 ft^3
530.00 ft * 0.8543 ft^3/ft	= 452.76 ft^3
	= 521.87 bbl

Displacement Volume to Shoe Joint:

Capacity of Pipe - Shoe Joint	= 521.87 bbl - 0.00 bbl
	= 521.87 bbl

HALLIBURTON

Job Recommendation — Intermediate Casing

Fluid Instructions

Fluid 1: Water Spacer

Gel Water

Fluid Density:	8.34 lbm/gal
Fluid Volume:	20 bbl

Fluid 2: Lead Cement

VERSACEM (TM) SYSTEM
0.3 % D-AIR 3000 (Defoamer)
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)

Fluid Weight	11.50 lbm/gal
Slurry Yield:	2.94 ft^3/sk
Total Mixing Fluid:	17.85 Gal/sk
Top of Fluid:	0 ft
Calculated Fill:	2930 ft
Volume:	541.71 bbl
Calculated Sacks:	1035.22 sks
Proposed Sacks:	1040 sks

Fluid 3: Tail Cement

VERSACEM (TM) SYSTEM
0.3 % D-AIR 3000 (Defoamer)
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)

Fluid Weight	13.50 lbm/gal
Slurry Yield:	1.80 ft^3/sk
Total Mixing Fluid:	9.35 Gal/sk
Top of Fluid:	2930 ft
Calculated Fill:	500 ft
Volume:	92.79 bbl
Calculated Sacks:	289.11 sks
Proposed Sacks:	290 sks

Fluid 4: Mud

Displacement Fluid

Fluid Density:	8.34 lbm/gal
Fluid Volume	521.87 bbl

Detailed Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	Spacer	Gel Water	8.3		20 bbl
2	Cement	VersaCem (Rockies LT)	11.5		1040 sks
3	Cement	VersaCem (Rockies LT)	13.5		290 sks
4	Mud	Displacement Fluid	8.3		521.87 bbl

HALLIBURTON

Job Information — Intermediate Casing

Well Name: Threemile	Well #: 24-33H
13 3/8" Intermediate Casing	0 - 2900 ft (MD) 0 - 2900 ft (TVD)
Outer Diameter	13.375 in
Inner Diameter	12.515 in
Linear Weight	61 lbm/ft
Casing Grade	J-55
13 3/8" Intermediate Casing	2900 - 3430 ft (MD) 2900 - 3430 ft (TVD)
Outer Diameter	13.375 in
Inner Diameter	12.515 in
Linear Weight	61 lbm/ft
Casing Grade	HCK-55
12 1/4" Intermediate Hole	3430 - 6400 ft (MD) 3430 - 6400 ft (TVD)
Inner Diameter	12.250 in
Job Excess	50 %
9 5/8" Intermediate Casing	0 - 6400 ft (MD) 0 - 6400 ft (TVD)
Outer Diameter	9.625 in
Inner Diameter	8.755 in
Linear Weight	43.50 lbm/ft
Casing Grade	P-110
Mud Type	Saturated Salt

HALLIBURTON

Calculations — Intermediate Casing

Spacer:

314.00 ft * 0.349 ft^3/ft * 0 %	= 109.58 ft^3
330.00 ft * 0.349 ft^3/ft * 0 %	= 115.16 ft^3
Total Spacer	= 224.58 ft^3
	= 40.00 bbl

Cement : (2670.00 ft fill)

200.00 ft * 0.349 ft^3/ft * 0 %	= 69.80 ft^3
2470.00 ft * 0.3132 ft^3/ft * 50 %	= 1160.36 ft^3
Total Lead Cement	= 1230.16 ft^3
	= 219.10 bbl
Sacks of Cement	= 556 sks

Cement : (500.00 ft fill)

500.00 ft * 0.3132 ft^3/ft * 50 %	= 234.89 ft^3
Tail Cement	= 234.89 ft^3
	= 41.84 bbl

Shoe Joint Volume: (0.00 ft fill)

0.00 ft * 0.4181 ft^3/ft	= 0.00 ft^3
	= 0.00 bbl
Tail plus shoe joint	= 234.89 ft^3
	= 41.84 bbl
Total Tail	= 199 sks

Total Pipe Capacity:

6400.00 ft * 0.4181 ft^3/ft	= 2675.59 ft^3
	= 476.54 bbl

Displacement Volume to Shoe Joint:

Capacity of Pipe - Shoe Joint	= 476.54 bbl - 0.00 bbl
	= 476.54 bbl

Fluid Instructions

Fluid 1: Water Based Spacer

TUNED SPACER III	Fluid Density:	11.50 lbm/gal
146.5 lbm/bbl Barite (Heavy Weight Additive)	Fluid Volume:	40 bbl

Fluid 2: Lead Cement

Halliburton Light Premium	Fluid Weight	12.50 lbm/gal
1 % Bentonite (Light Weight Additive)	Slurry Yield:	2.21 ft^3/sk
18 % Salt (Salt)	Total Mixing Fluid:	11.69 Gal/sk
0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)	Top of Fluid:	3230 ft
	Calculated Fill:	2670 ft
	Volume:	219.10 bbl
	Calculated Sacks:	556.13 sks
	Proposed Sacks:	560 sks

Fluid 3: Tail Cement

Premium Cement	Fluid Weight	15.80 lbm/gal
94 lbm/sk Premium Cement (Cement)	Slurry Yield:	1.18 ft^3/sk
0.3 % Halad(R)-413 (Low Fluid Loss Control)	Total Mixing Fluid:	5.00 Gal/sk
0.3 % Halad(R)-344 (Low Fluid Loss Control)	Top of Fluid:	5900 ft
0.3 % D-AIR 3000 (Defoamer)	Calculated Fill:	500 ft
6 % Salt (Salt)	Volume:	41.84 bbl
0.1 % Versaset (Thixotropic Additive)	Calculated Sacks:	198.89 sks
0.3 % Super CBL (Gas Migration Control)	Proposed Sacks:	200 sks
0.3 % HR-5 (Retarder)		

Fluid 4: Mud

Displacement Fluid	Fluid Density:	8.34 lbm/gal
	Fluid Volume	476.54 bbl

Detailed Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	Spacer	TUNED SPACER III	11.5		40 bbl
2	Cement	Lead Cement	12.5		560 sks
3	Cement	Tail Cement	15.8		200 sks
4	Mud	Displacement Fluid	8.3		476.54 bbl

HALLIBURTON

Job Information — Intermediate

Well Name: Threemile	Well #: 24-33H
9 5/8" Intermediate Casing	0 - 6400 ft (MD) 0 - 6400 ft (TVD)
Outer Diameter	9.625 in
Inner Diameter	8.755 in
Linear Weight	43.50 lbm/ft
Casing Grade	P-110
8 1/2" Intermediate Hole	6400 - 8812 ft (MD) 6400 - 8485 ft (TVD)
Inner Diameter	8.500 in
Job Excess	35 %
7" Intermediate Casing	0 - 6300 ft (MD) 0 - 6300 ft (TVD)
Outer Diameter	7.000 in
Inner Diameter	6.184 in
Linear Weight	29 lbm/ft
Casing Grade	N-80
7" Intermediate Casing	6300 - 8812 ft (MD) 6300 - 8485 ft (TVD)
Outer Diameter	7.000 in
Inner Diameter	6.184 in
Linear Weight	29 lbm/ft
Casing Grade	HCN80
Mud Type	Oil Based

Spacer:

1489.00 ft * 0.1508 ft^3/ft * 0 %	= 224.55 ft^3
Total Spacer	= 224.58 ft^3
	= 40.00 bbl

Cement : (1612.00 ft fill)

100.00 ft * 0.1508 ft^3/ft * 0 %	= 15.08 ft^3
100.00 ft * 0.1508 ft^3/ft * 0 %	= 15.08 ft^3
1412.00 ft * 0.1268 ft^3/ft * 35 %	= 241.72 ft^3
Total Lead Cement	= 271.88 ft^3
	= 48.42 bbl
Sacks of Cement	= 240 sks

Cement : (1000.00 ft fill)

1000.00 ft * 0.1268 ft^3/ft * 35 %	= 171.19 ft^3
Tail Cement	= 171.19 ft^3
	= 30.49 bbl

Shoe Joint Volume: (0.00 ft fill)

0.00 ft * 0.2086 ft^3/ft	= 0.00 ft^3
	= 0.00 bbl
Tail plus shoe joint	= 171.19 ft^3
	= 30.49 bbl
Total Tail	= 132 sks

Total Pipe Capacity:

6300.00 ft * 0.2086 ft^3/ft	= 1314.03 ft^3
2512.00 ft * 0.2086 ft^3/ft	= 523.95 ft^3
	= 327.36 bbl

Displacement Volume to Shoe Joint:

Capacity of Pipe - Shoe Joint	= 327.36 bbl - 0.00 bbl
	= 327.36 bbl

Fluid Instructions

Fluid 1: Water Based Spacer

TUNED SPACER III

0.7 gal/bbl	Musol(R) A (Mutual Solvent)	Fluid Density:	15 lbm/gal
0.4 gal/bbl	Dual Spacer Surfactant B (Surfactant)	Fluid Volume:	40 bbl
348.9 lbm/bbl	Barite (Heavy Weight Additive)		

Fluid 2: Lead Cement

75/25 Poz Premium

18 %	Salt (Salt)	Fluid Weight	15 lbm/gal
5 lbm/sk	Barite (Heavy Weight Additive)	Slurry Yield:	1.13 ft^3/sk
0.4 %	HR-5 (Retarder)	Total Mixing Fluid:	4.14 Gal/sk
0.2 %	CFR-3 (Dispersant)	Top of Fluid:	6200 ft
		Calculated Fill:	1612 ft
		Volume:	48.42 bbl
		Calculated Sacks:	239.97 sks
		Proposed Sacks:	240 sks

Fluid 3: Tail Cement

ELASTICEM (TM) SYSTEM

Fluid Weight	15.50 lbm/gal
Slurry Yield:	1.30 ft^3/sk
Total Mixing Fluid:	4.92 Gal/sk
Top of Fluid:	7812 ft
Calculated Fill:	1000 ft
Volume:	30.49 bbl
Calculated Sacks:	131.89 sks
Proposed Sacks:	135 sks

Fluid 4: Mud

Displacement Fluid

Fluid Density:	0 lbm/gal
Fluid Volume	327.36 bbl

Detailed Pumping Schedule

Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Estimated Avg Rate bbl/min	Downhole Volume
1	Spacer	TUNED SPACER III	15.0		40 bbl
2	Cement	Lead Cement	15.0		240 sks
3	Cement	ElastiCem	15.5		135 sks
4	Mud	Displacement Fluid			327.36 bbl

Conditions

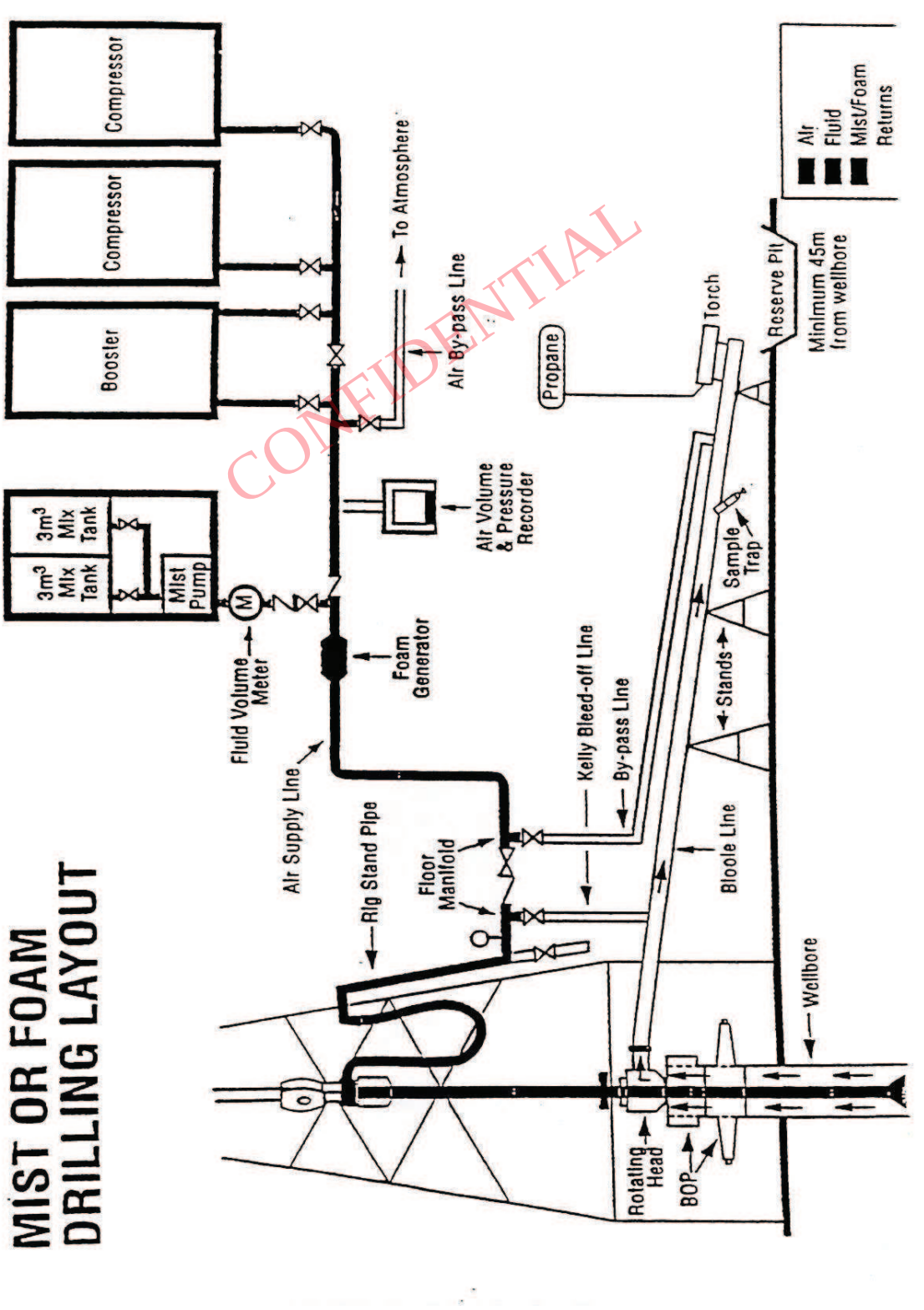
NOTE

The cost in this analysis is good for the materials and/or services outlined within and shall be valid for 30 days from the date of this proposal. In order to meet your needs under this proposal with a high quality of service and responsive timing, Halliburton will be allocating limited resources and committing valuable equipment and materials to your area of operations. Accordingly, the discounts reflected in this proposal are available only for materials and services awarded on a first-call basis. Alternate pricing may apply in the event that Halliburton is awarded work on any basis other than as a first-call provider.

The unit prices stated in the proposal are based on our current published prices. The projected equipment, personnel, and material needs are only estimates based on information about the work presently available to us. At the time the work is actually performed, conditions then existing may require an increase or decrease in the equipment, personnel, and/or material needs. Charges will be based upon unit prices in effect at the time the work is performed and the amount of equipment, personnel, and/or material actually utilized in the work. Taxes, if any, are not included. Applicable taxes, if any, will be added to the actual invoice.

It is understood and agreed between the parties that with the exception of the subject discounts, all services performed and equipment and materials sold are provided subject to Halliburton's General Terms and Conditions contained in our current price list, (which include LIMITATION OF LIABILITY and WARRANTY provisions), and pursuant to the applicable Halliburton Work Order Contract (whether or not executed by you), unless a Master Service and/or Sales Contract applicable to the services, equipment, or materials supplied exists between your company and Halliburton, in which case the negotiated Master Contract shall govern the relationship between the parties. A copy of the latest version of our General Terms and Conditions is available from your Halliburton representative or at: http://www.halliburton.com/terms for your convenient review, and we would appreciate receiving any questions you may have about them. Should your company be interested in negotiating a Master Contract with Halliburton, our Law Department would be pleased to work with you to finalize a mutually agreeable contract. In this connection, it is also understood and agreed that Customer will continue to execute Halliburton usual field work orders and/or tickets customarily required by Halliburton in connection with the furnishing of said services, equipment, and materials.
Any terms and conditions contained in purchase orders or other documents issued by the customer shall be of no effect except to confirm the type and quantity of services, equipment, and materials to be supplied to the customer.
If customer does not have an approved open account with Halliburton or a mutually executed written contract with Halliburton, which dictates payment terms different than those set forth in this clause, all sums due are payable in cash at the time of performance of services or delivery of equipment, products, or materials. If customer has an approved open account, invoices are payable on the twentieth day after date of invoice.

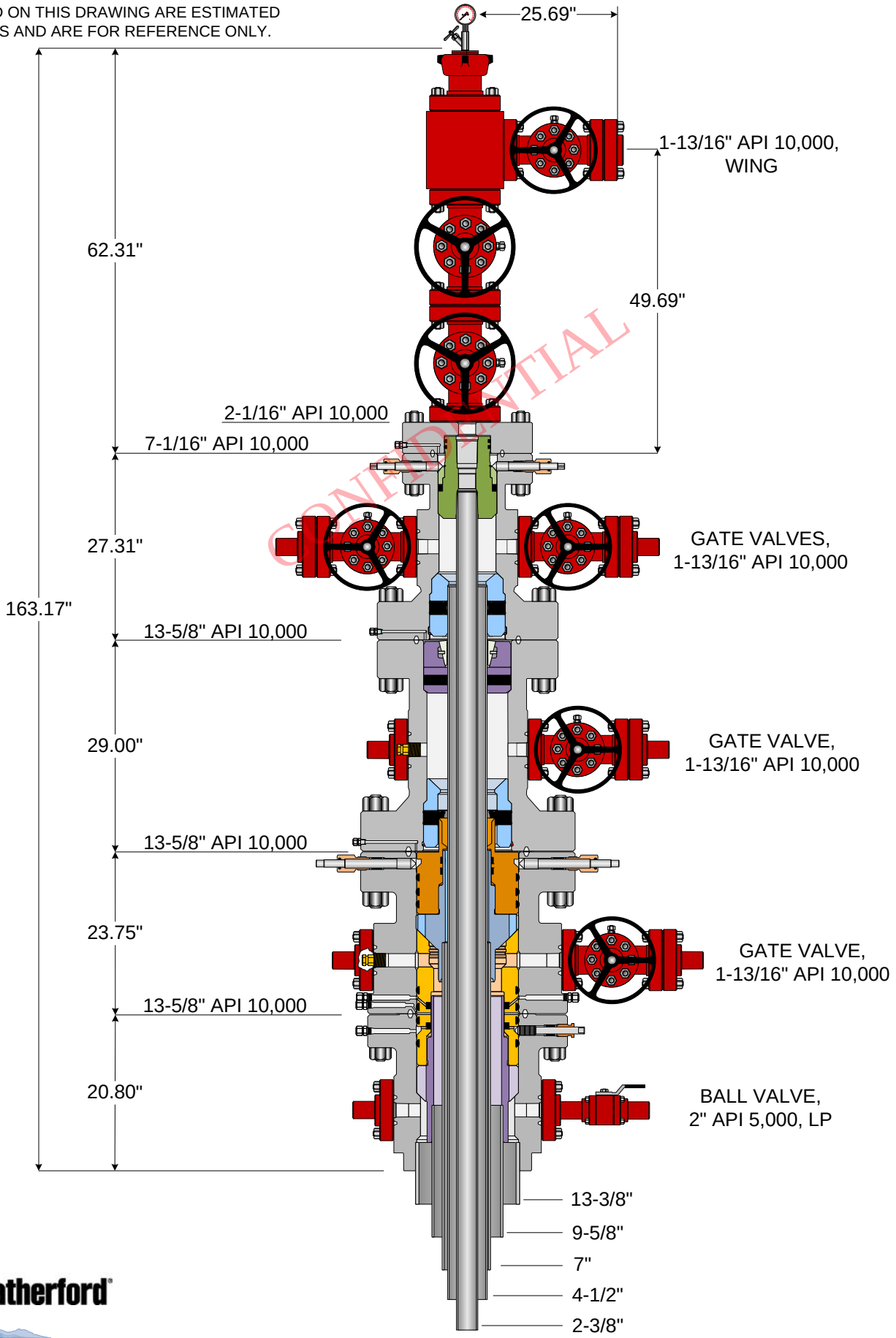
Customer agrees to pay interest on any unpaid balance from the date payable until paid at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event Halliburton employs an attorney for collection of any account, customer agrees to pay attorney fees of 20% of the unpaid account, plus all collection and court costs.



LAYOUT # 2

'APIWellNo:43037500000000'

THIS DRAWING IS NOT TO SCALE. THE DIMENSIONS REFLECTED ON THIS DRAWING ARE ESTIMATED DIMENSIONS AND ARE FOR REFERENCE ONLY.



Weatherford

Customer:	Project:	Date:	Quote: TBD Project: TBD	Drawn By:
WHITING PETROLEUM CORP.	THREE MILE 24-33	DEC., 2009		JJ

'APIWellNo:43037500000000'

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

February 22, 2010

Memorandum

To: Assistant Field Office Manager Resources, Moab District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 Plan of Development Threemile Unit, San Juan County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following well is planned for calendar year 2010 within the Threemile Unit, San Juan County Utah.

API #	WELL NAME	LOCATION
(Proposed PZ Cane Creek)		
43-037-31913	Threemile 24-33H	Sec 33 T29S R22E 0556 FSL 1904 FWL BHL Sec 20 T29S R22E 0990 FSL 0660 FEL

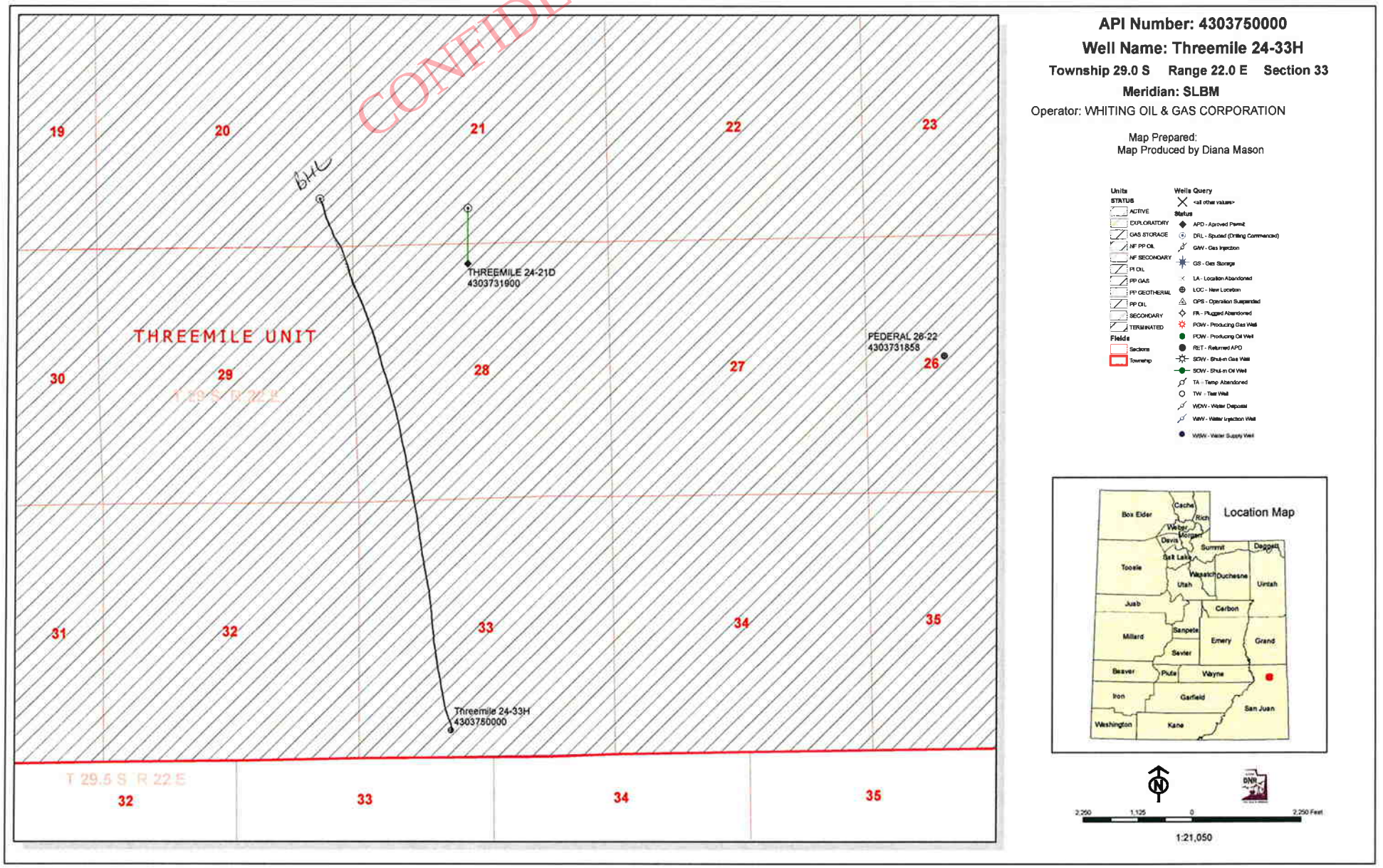
This office has no objection to permitting the well at this time.

/s/ Michael L. Coulthard

bcc: File - Threemile Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:2-22-10

'APIWellNo:43037500000000'



API Number: 4303750000

Well Name: Threemile 24-33H

Township 29.0 S Range 22.0 E Section 33

Meridian: SLBM

Operator: WHITING OIL & GAS CORPORATION

Map Prepared:
Map Produced by Diana Mason

2,250 1,125 0 2,250 Feet

1:21,050

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 1/18/2010 **API NO. ASSIGNED:** 43037500000000

WELL NAME: Threemile 24-33H

OPERATOR: WHITING OIL & GAS CORPORATION (N2680) **PHONE NUMBER:** 435 896-5501

CONTACT: Terri Hartle

PROPOSED LOCATION: SESW 33 290S 220E **Permit Tech Review:** ☑

SURFACE: 0556 FSL 1904 FWL **Engineering Review:** ☐

BOTTOM: 0990 FSL 0660 FEL **Geology Review:** ☑

COUNTY: SAN JUAN

LATITUDE: 38.22994 **LONGITUDE:** -109.50710

UTM SURF EASTINGS: 630669.00 **NORTHINGS:** 4232175.00

FIELD NAME: HATCH POINT

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-79184 **PROPOSED PRODUCING FORMATION(S):** CANE CREEK

SURFACE OWNER: 1 - Federal **COALBED METHANE:** NO

RECEIVED AND/OR REVIEWED:

- ☑ **PLAT**
- ☑ **Bond:** FEDERAL - UTB000148
- ☐ **Potash**
- ☐ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☑ **Water Permit:** Municipal Water from Moab City
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ☐ **Intent to Commingle**

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit: THREEMILE

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☑ **Drilling Unit**

Board Cause No: R649-3-2

Effective Date:

Siting:

- ☑ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations: 4 - Federal Approval - dmason
15 - Directional - bhill

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Permit To Drill

****

Well Name: Threemile 24-33H
API Well Number: 43037500000000
Lease Number: UTU-79184
Surface Owner: FEDERAL
Approval Date: 3/4/2010

Issued to:
WHITING OIL & GAS CORPORATION, 1700 Broadway, Suite 2300, Denver, CO 80290

Authority:
Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of R649-3-2. The expected producing formation or pool is the CANE CREEK Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:
This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

General:
Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:
State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

Notification Requirements:
The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at https://oilgas.ogm.utah.gov

Reporting Requirements:

API Well No: 43037500000000

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

Approved By:

For Gil Hunt
Associate Director, Oil & Gas

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

March 23, 2011

Scott Webb
Whiting Oil & Gas Corporation
1700 Broadway, Suite 2300
Denver, CO, 80290

Re: APD Rescinded – Threemile 24-33H, Sec. 33, T. 29S, R. 22E
San Juan County, Utah API No. 43-037-50000

Dear Mr. Webb:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on March 4, 2010. On March 23, 2011, you requested that the division rescind the state approved APD. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective March 23, 2011.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason
Environmental Scientist

cc: Well File
Bureau of Land Management, Moab

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