



IDAHO OIL AND GAS CONSERVATION COMMISSION

Application For Permit to Drill, Deepen or Plug Back

APPLICATION TO: Drill (\$2,000) [X] Deepen (\$500) [] Plug Back (\$500) []

NAME OF COMPANY OR OPERATOR: Alta Mesa Services, LP Date: 05-23-14

Address: 15021 Katy Frwy., Suite 400

City: Houston State: TX Zip Code: 77094 Telephone: 713-680-0991

Contact Name: Ronda Louderman Email Address: rlouderman@altamesa.net

2014 MAY 27 AM 9:03 DEPT OF LANDS BOISE, IDAHO

DESCRIPTION OF WELL AND LEASE

Name of Lease: ML Investments Well Number: 1-11 Elevation (ground) 2,391.8 feet

Well Location: Section: 11 Township: 8 North Range: 4 West (or block and survey)

(give footage from Section lines): 2,740' from North Section Line and 160' from West Section Line

Field and Reservoir (if wildcat, so state): Willow County: Payette

Distance, in miles, and direction from nearest town or post office: 5.16 miles North

Nearest distance from proposed location to property or lease line: 2,740' from North Section Line and 160' from West

Section Line Distance from proposed location to nearest drilling, completed or applied for on the same lease: N/A

Proposed depth: 5,500' Rotary or cable tools: Rotary

Planned logging tools: Mud Logging only while drilling. After: Gamma Ray; Propagation Resistivity; Density, Neutron Porosity, Electron Capture Spectroscopy; Sonic; and Percussion sidewall cores will be completed by wireline.

Approx date work will start: June 20, 2014 Number of acres in lease(s): 640

Number of wells on lease, including this well, completed in or drilling to this reservoir: 1

If lease purchased with one or more wells drilled, complete the following information:

Purchased from (name) N/A

Address of above

Status of bond

Remarks: (If this is an application to deepen or plug back, briefly describe work to be done, giving present producing zone and expected new producing zone) N/A

CERTIFICATE: I, the undersigned, state that I am the Regulatory Coordinator

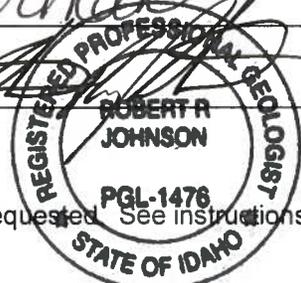
of Alta Mesa Services, LP

(company) and that I am authorized by said company to make this application and that this application was prepared under my supervision and direction and that the facts stated herein are true, correct and complete to the best of my knowledge.

Date: 5-23-14 Signature: Ronda Louderman

Permit Number: Approval Date: 6-24-2014 Approved by:

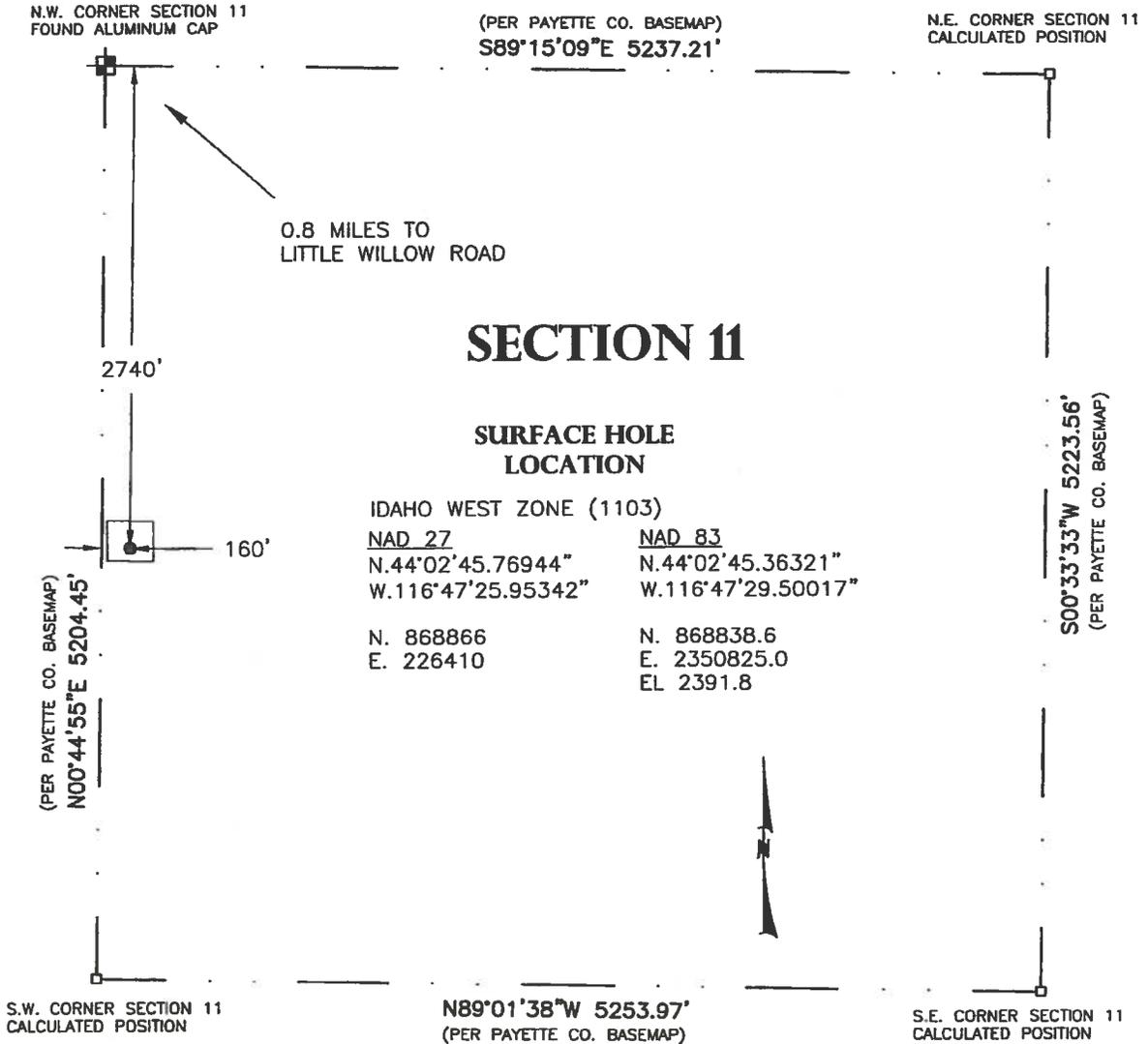
API Number: 11-075-20025



NOTICE: Before sending in this form, be sure that you have given all information requested. See instructions on back.

LOCATION EXHIBIT MAP OF SECTION 11

LOCATED IN A PORTION OF SECTION 11
TOWNSHIP 8 NORTH, RANGE 4 WEST, BOISE MERIDIAN
PAYETTE COUNTY, IDAHO
2014



N.W. CORNER SECTION 11
FOUND ALUMINUM CAP

(PER PAYETTE CO. BASEMAP)
S89°15'09"E 5237.21'

N.E. CORNER SECTION 11
CALCULATED POSITION

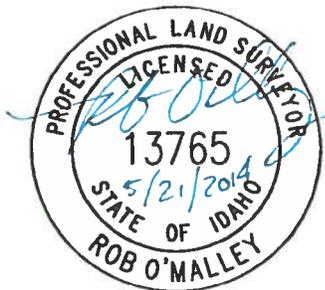
(PER PAYETTE CO. BASEMAP)
N00°44'55"E 5204.45'

S00°33'33"W 5223.56'
(PER PAYETTE CO. BASEMAP)

S.W. CORNER SECTION 11
CALCULATED POSITION

N89°01'38"W 5253.97'
(PER PAYETTE CO. BASEMAP)

S.E. CORNER SECTION 11
CALCULATED POSITION



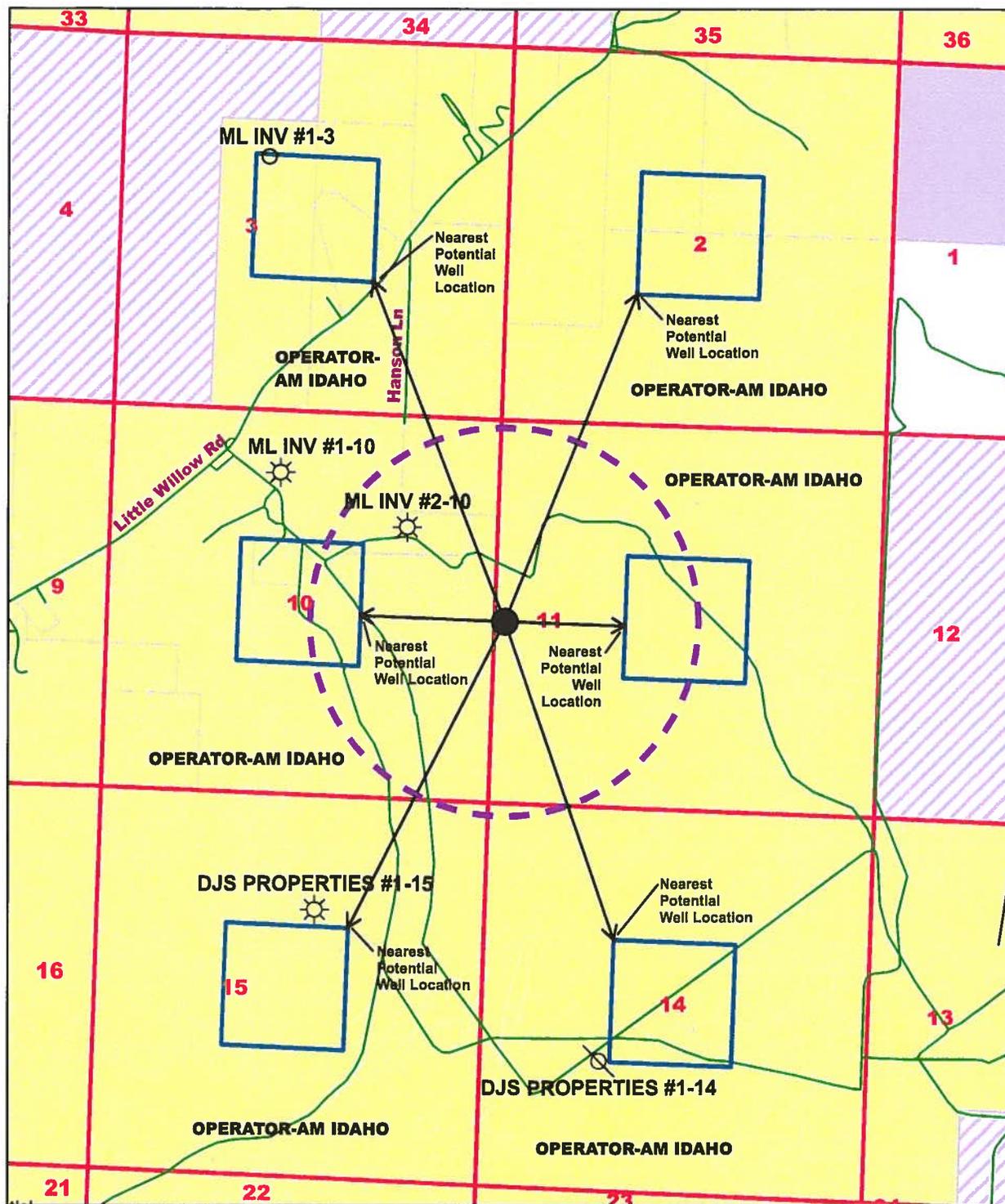
9777 CHINDEN BOULEVARD
BOISE, IDAHO 83714-2008

PHONE: (208) 323-2288

FAX: (208) 323-2399

E-FILE: H:\130216-801\Acodding\Survey

DATE: 21-May-14 JOB: 130216



ML Investments 1-11

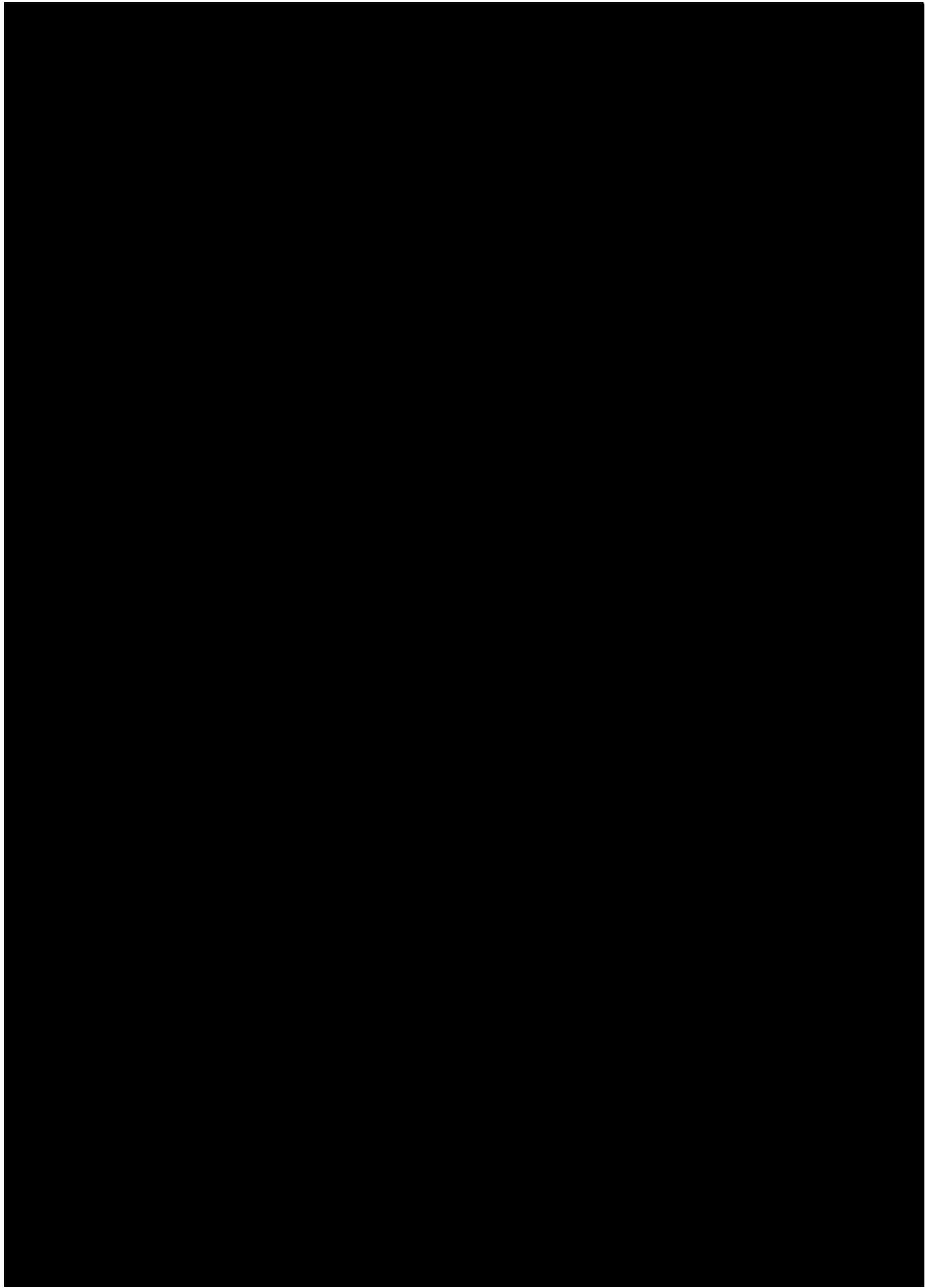
Located in Section 11, T8N R4W, BM, Payette County, ID
05/30/14

Legend

- Legal Location
- - - Anticipated Well Drainage Zone (1 Mile Diameter Circle)
- Section Lines
- Roadways
- Property Boundary
- AM Idaho
- BLM owns surface and minerals
- BLM owns mineral rights only
- Proposed Bottom Hole Well Location



1 inch equals 2,000 feet



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MASS GRADING EXHIBIT MAP OF ML INVESTMENTS SECTION 11

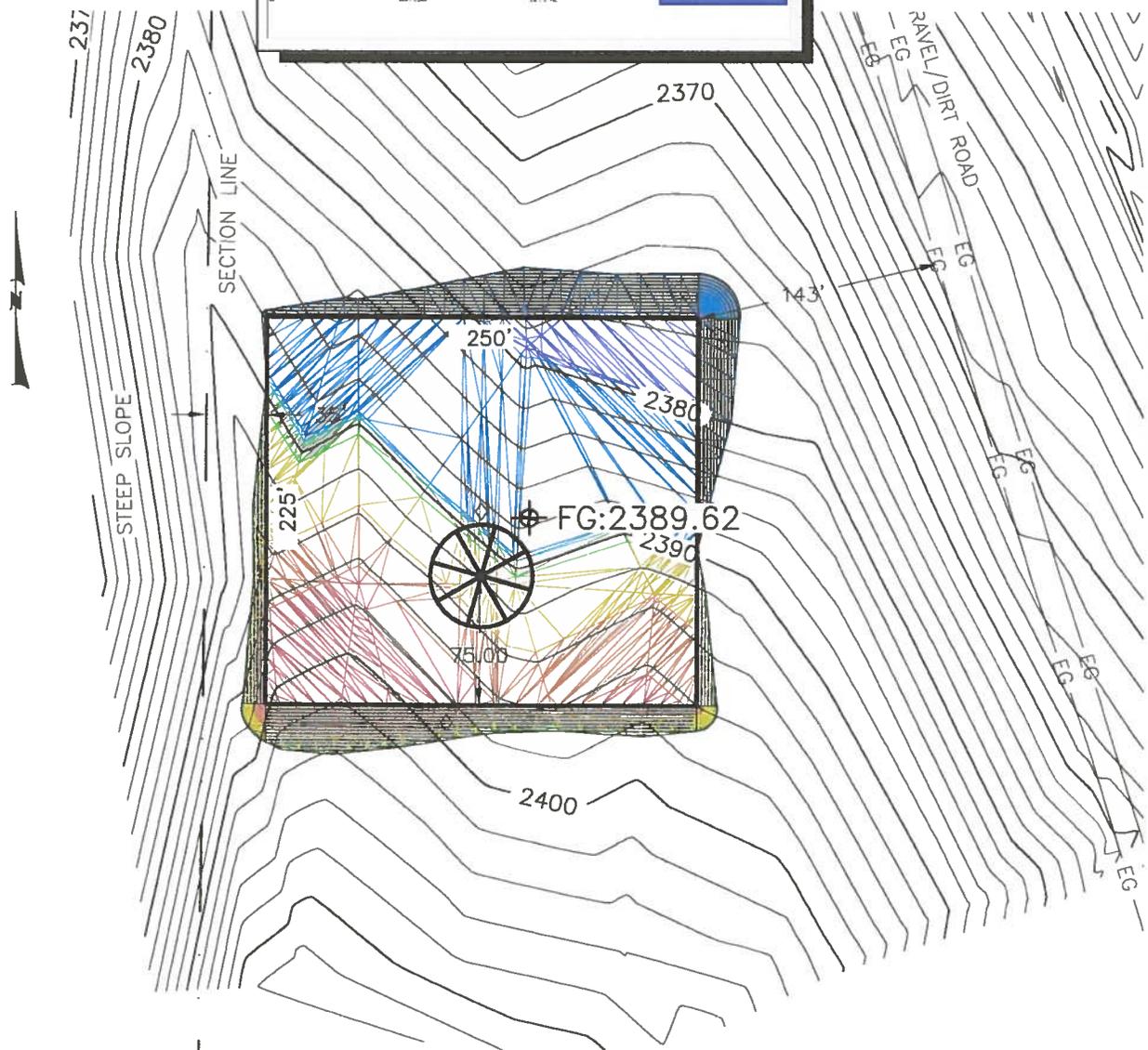
LOCATED IN A PORTION OF SECTION 11
TOWNSHIP 8 NORTH, RANGE 4 WEST, BOISE MERIDIAN
PAYETTE COUNTY, IDAHO
2014

VOLUME TABLE

Volume Cut: 6,400
Volume Fill: 6,400

Range Details
 Scale scheme to fit

ID	Minimum Elevation	Maximum Elevation	Color Scheme
1	-12.468'	-6.681'	
2	-6.681'	-3.983'	
3	-3.983'	-0.809'	
4	-0.809'	0.000'	
5	0.000'	0.000'	
6	0.000'	0.234'	
7	0.234'	10.136'	
8	10.136'	17.142'	



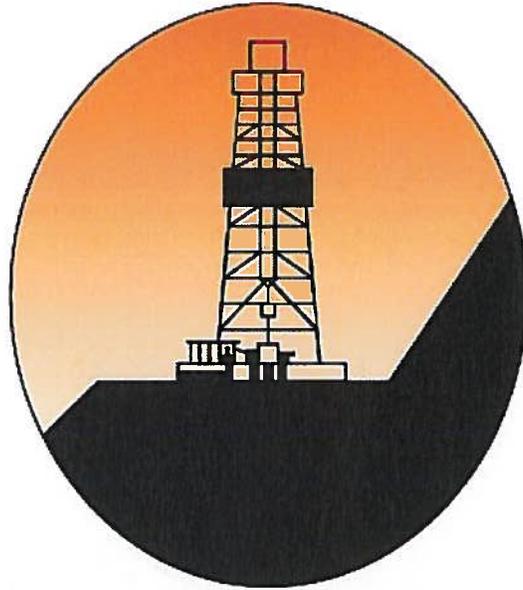
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E-FILE: 130216-c-sec11\wksite-adjgrading.dwg DATE: 04/29/14 JOB: 130216



ALTA MESA

ALTA MESA SERVICES, LP

IDL Permit Supplement

ML Investments 1-11

Payette County, ID

May 20, 2014

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1 Background Information

Objective: The objective of this operation is to drill a vertical well to 5,500'TVD/MD.

AFE #:	TBD	County:	Payette
Well Type:	Vertical	State:	Idaho
Well Name:	ML Investments 1-11	Section:	11
Field:	Willow	Township:	8N
		Range:	4W

Mapping Reference:

System:	NAD83 / NAD27	Mag Dec:	14.15° (01-Jul-2013)
Zone:	UTM11	Grid Conv.:	-0.75113 °
SPCS:	Idaho West Zone 1103	Total Corr.:	14.90113°

Coordinates:

Surface Location:

NAD83

Lat.: N 44° 02' 45.36321"
Long.: W 116° 47' 29.50017"
SPCS: 2350825.0 ft. E
868838.6 ft. N

NAD27

SPCS: 226410 ft. E
868866 ft. N

Bottom Hole Location:

NAD83

Lat.: Same
Long.: Same
SPCS: Same
Same

NAD27

SPCS: Same
Same

Elevation:

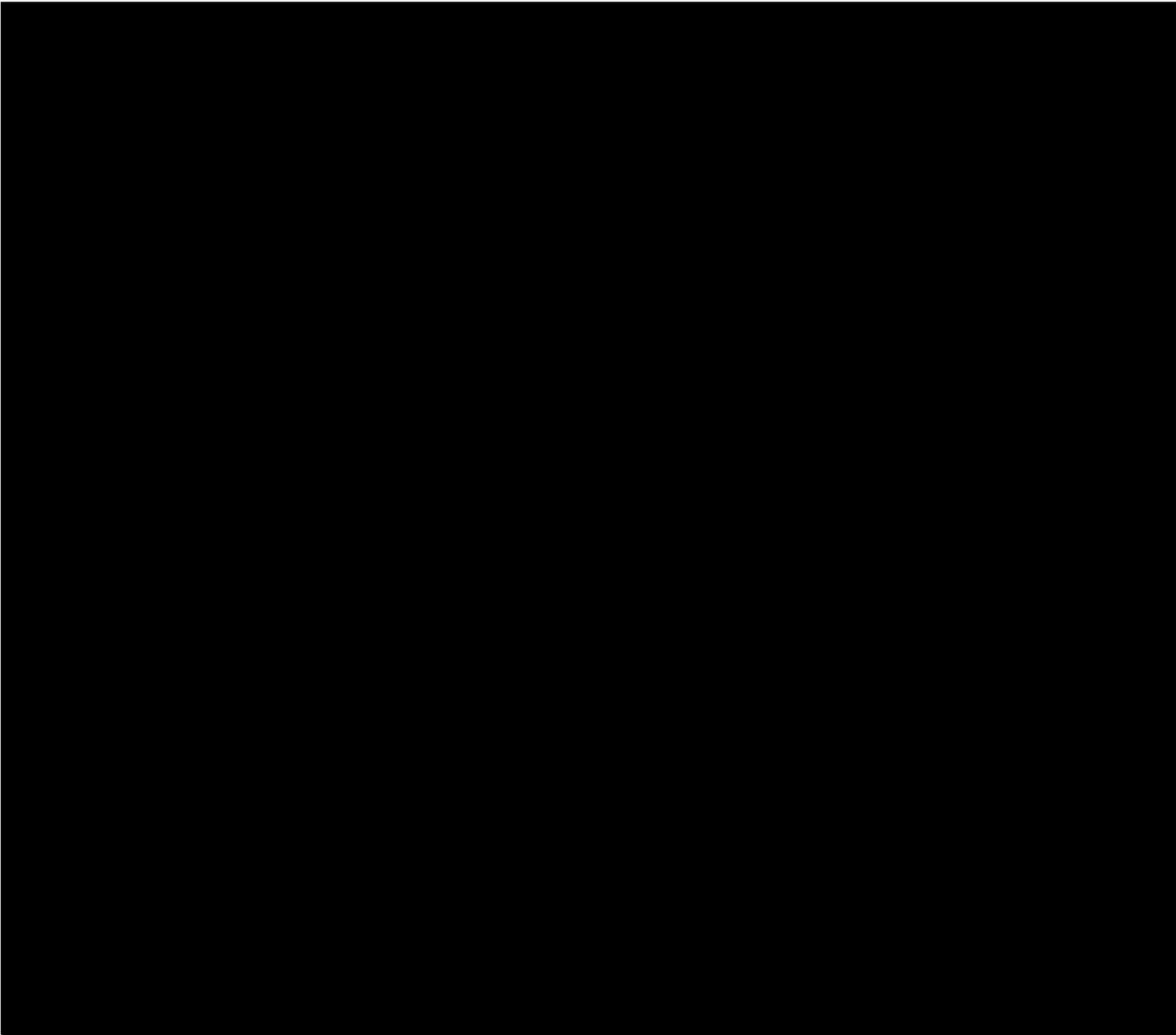
GL: 2,391.8 ft.
RKB: 2,404 ft.

Planned TD:

MD: 5,500.0 ft.
TVD: 5,500.0 ft.

Contractor: Paul Graham Drilling

Rig: #7



3 Site Preparation

3.1 Access Roads

The proposed surface location is to be accessed by an existing farm road that supports heavy truck traffic, approximately 3.75 miles of improved road over an existing farm path, and 800' of new roadway.

3.2 Erosion Control

Appropriate grading, mechanical stabilization (rip-rap or hay bales), chemical stabilization (soil cement), and silt fencing will be used to prevent soil erosion. All cut and fill slopes are designed with a minimum 2:1 grade to minimize runoff erosion and ensure mechanical stability. See attached engineering drawings.

3.3 Cellars

An 8' deep round cellar box will be installed after the conductor is installed per the relevant section below.

3.4 Pit System

A closed-loop circulating system will be used for this well from spud. Zero discharge practices will be implemented, and all cuttings and waste fluid will be solidified and disposed of at an approved facility. A third party oilfield waste management contractor will provide waste management and tracking services.

3.5 Sump

The location will have a 2' deep trench on downhill sides where the spoil from that trench will be used to construct an earthen berm around the location. The trench will act as a sump to collect rain and wash water for controlled release or appropriate disposal as required.

4 Well Construction

4.1 Casing and Cementing Program

Well Interval	Bit Size	Casing Size, Grade and Weight	Casing Setting Depth	Top of Cement	Cement Type and Volume
Conductor	17-1/2"	13-3/8" 54.5 ppf K-55 LTC	120'	Surface	Class "A" ~140 sxs 100% excess
Surface	12-1/4"	9-5/8" 40 ppf K-55 LTC	1,000'	Surface	Lead: 100 sxs TCI Beaded Lite @ 10.4 ppg, 100% excess Tail: 50 sxs Class "H" @ 14.8 ppg
Production	8-3/4"	5-1/2" 17 ppf K-55 LTC	5,500'	Surface	Lead: 500 sxs TCI Lite @ 12.7 ppg Tail: 200 sxs Gas Seal @ 16.0 ppg

TCI Beaded Lite: An engineered light weight slurry with excellent compressive strength development the slurry exhibits low fluid loss, thixotropic behavior, and has zero free water.

TCI-Lite: A light weight gel extended slurry that develops excellent compressive strength within 24 hours.

Gas-Seal: A premium production casing slurry that has a gas migration control additive for providing an exceptional cement bond to formation and casing. The slurry also contains clay control with low fluid loss for added gas migration inhibition and slurry stability.

4.2 Proposed Wellbore Schematic

**Alta Mesa
 ML Investments 1-11
 Payette Co., Idaho
 Proposed Wellbore Schematic**

GL: 2,392'

RKB: ~12' (2,404')

All depths reference RKB unless otherwise noted.

Conductor

13-3/8" 54.5 ppf K-55 LTC @ ~120'

Surface Casing

9-5/8" 40 ppf K-55 LTC @ ~1,000' MD

Hole Size: 12-1/4"

Cemented to surface

MW 9.2 - 9.4 ppg WBM

Production Casing

5-1/2" 17ppf K-55 LTC @ ~5,500 MD/TVD

Hole Size: 8-3/4"

Cemented to 100' inside surface casing

MW @ TD 9.8 - 10.0 ppg (EM)

Total Depth: 5,500' TVD/MD

Well Name & No.: ML Investments 1-11	Field: Wildcat
County or Parish: Payette	State: Idaho
Total Depth (MD): 5,500'	(TVD): 5,500'

4.3 Blow-Out Preventers

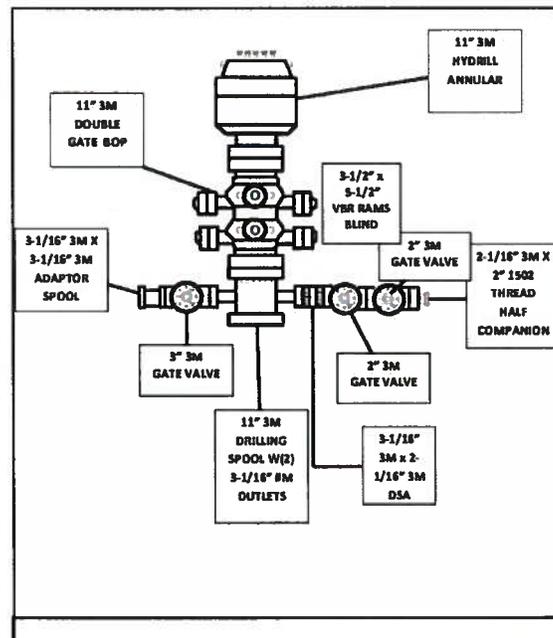
4.3.1 BOP Hardware Configuration

BOP Stack configuration includes an annular preventer and double ram preventers. The top most ram preventer will be fitted with variable ram blocks, the lower ram preventer will be fitted with blind ram blocks. A full-opening safety valve, inside BOP, and functioning wrench – *specific to the pipe in use and only those specific to the pipe in use* – are to be kept on the rig floor with easy access at all times.

4.3.2 BOP Testing

Test annular, rams, choke manifold, FOSV, and IBOP when BOP is first nipped up on casing head. Low-pressure test to 250psi and high-pressure test to 3,000psi (100% of 3M wellhead), except for annular. Test annular preventer to 2,100psi (70% of 3,000psi rating). Test the kelly hose and standpipe back to pump isolation valves to 200 psi above pop off setting or minimum of 3,000 psi. All tests must hold for five minutes. Retest specific component each time a seal is broken. Work BOP's and flush choke lines each trip. Tighten BOP and wellhead bolts every 3 days. Non-ported float valves to be used in BHA after surface casing set.

During drilling and completion operations, the ram-type blow-out preventer shall be function tested by closing on the drill pipe once every seven (7) days. Independently powered accumulators or accumulators and pumps shall maintain a pressure capacity reserve at all times to provide for repeated operation of hydraulic preventers. All tests may be conducted using a test plug. Tests shall be recorded by charts, if required by the Supervisor.



4.4 13-3/8" Conductor

4.4.1 Drilling

The conductor will be installed via auger and grout unless surface conditions dictate driving.

4.4.2 Casing

Set Depth (ft.)	Top (RTE)	Size (in)	Weight (#/ft)	Grade	Burst (psi)	Collapse (psi)	Centralizers
120'	GL	13-3/8	54.5	K-55	2,730	1,130	None

4.5 12-1/4" Surface Hole

4.5.1 Drilling

4.5.1.1 Directional Objective

The surface hole will be drilled vertically to 1,000' MD/TVD.

4.5.1.2 Mud System

The surface hole will be drilled using fresh water based mud. Additives will be included for inhibition and also to build high-viscosity sweeps as necessary.

Measured Depth, ft.	Mud Density, ppg	Funnel Viscosity, cP	Yield Point, lb/100ft ²	API Fluid Loss, ml	pH	LGS %
120 – 1,000'	8.6	25-36	8-12	N/C	7.0-8.0	4 - 7

4.5.2 Open Hole Evaluation

No open-hole evaluation will be conducted in this interval

4.5.3 Casing

The surface casing is to be set at a depth that isolates problematic formations and usable water strata.

Set Depth (ft.)	Top (RTE)	Size	Weight (#/ft)	Grade	Conn	Internal Diameter	Burst	Collapse	Tension
1,000'	GL	9-5/8"	40.0	K-55	LTC	8.835"	3,950 psi	2,570 psi	561 kips

4.6 8-3/4" Production Hole

The 8-3/4" hole will be drilled vertically to ~5,500'.

4.6.1 Drilling

4.6.1.1 Directional Objective

The 8-3/4" production hole will be drilled vertically to 5,500' MD/TVD. Surveys will be obtained using a single-shot inclination tool.

4.6.1.2 Mud System

The production hole interval will be drilled with an invert emulsion mud system.

Measured Depth, ft.	Mud Density, ppg	Funnel Viscosity, cP	Yield Point, lb/100ft ²	HTHP Fluid Loss, ml	ES	LGS %
1,000 – 5,500'	9.2 -9.8	36 - 45	6 - 10	<10.0	>600	< 5%

An invert emulsion drilling fluid will be used from below surface casing to total depth. The production casing will be cemented to surface thus, no drilling fluid will be left in the hole. Drill cuttings waste generated will be managed on location by a third party oilfield waste management company who will supervise the solidification, tracking and transportation to an approved waste disposal site of all oilfield waste generated while drilling. A zero-discharge closed loop system will be employed.

4.6.2 Logging Program

While Drilling: Mud logging only

Coring: None

Wireline: After reaching TD, and conditioning the hole, wireline evaluation will be conducted as follows:

- Gamma Ray
- Propagation Resistivity
- Density
- Neutron Porosity
- Electron Capture Spectroscopy
- Sonic
- Percussion sidewall cores

4.6.3 Production Casing

The production casing string is designed to be run to total depth and withstand the expected wellbore pressures.

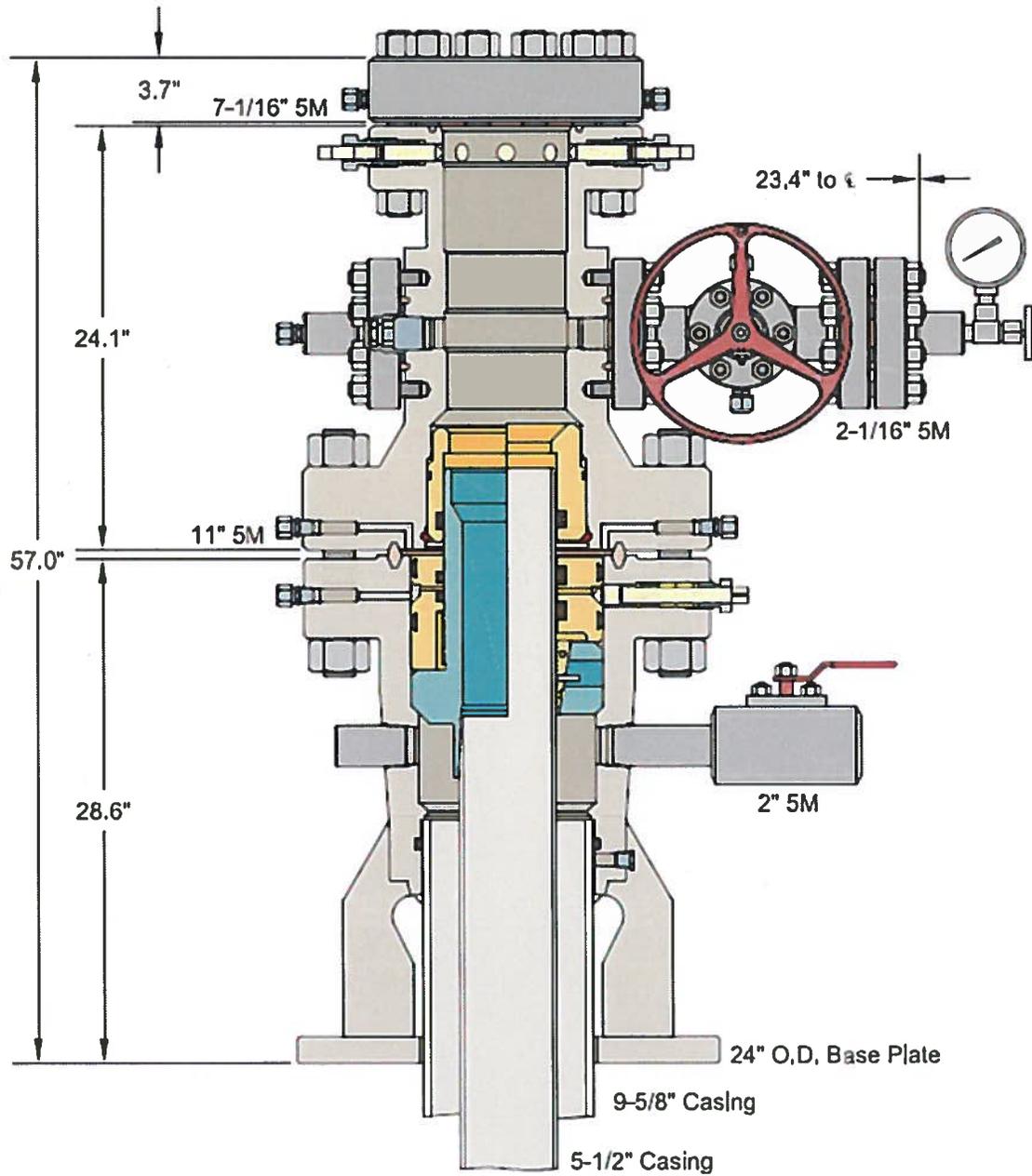
Set Depth ft.	Top (RTE)	Size (in)	Weight (#/ft)	Grade	Conn.	Internal Diameter	Burst	Collapse	Tension
5,500'	GL	5-½"	17	K-55	LTC	4.892"	5,320 psi	4,910 psi	272 kips

5 Completion

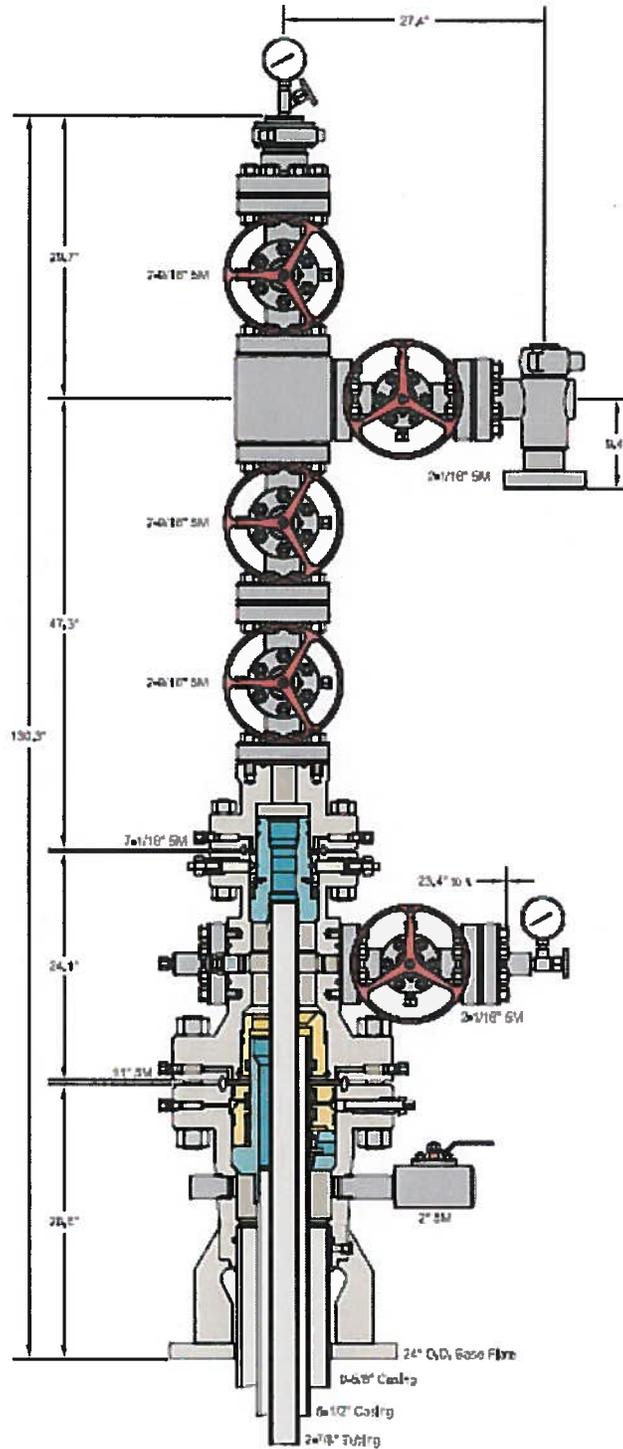
Method of completion will be determined subsequent to review of open-hole log data and cased hole cement bond logs (CBL).

6 Wellhead

6.1 Surface Wellhead System



6.2 Complete Wellhead System with Tree



7 Reclamation

Reclamation will be conducted in accordance with IDAPA 20.07.02.325. To achieve those requirements, Alta Mesa Services, L.P. proposes to address reclamation through a multistep process which is outlined below. As provided for in IDAPA 20.07.02.325.08, Alta Mesa Services, L.P. may enter into a Surface Use Agreement with the landowner the terms of which will ensure that the site is left in a stable, non-eroding condition as required.

1. Re-establish slope stability, surface stability, and desired topographic diversity.
 - a. Reconstruct the landscape to the approximate original contour unless otherwise provided for in the Surface Use Agreement
 - b. Maximize geomorphic stability and topographic diversity of the reclaimed topography.
 - c. Eliminate high walls, cut slopes, and/or topographic depressions on site, unless otherwise approved.
 - d. Minimize sheet and rill erosion on the reclaimed area. Eliminate mass wasting, head cutting, large rills or gullies, down cutting in drainages, or overall slope instability on the reclaimed area.
2. Maintain the integrity of the topsoil and subsoil (where appropriate and not otherwise dictated by the Surface Use Agreement)
 - a. Identify salvaged topsoil and subsoil.
 - b. Segregation of salvaged soils to protect those materials from erosion, degradation, and contamination.
 - c. Incorporate stored soil material into the disturbed landscape to the extent practicable.
 - d. Stockpiled soils to be stored beyond one growing season shall be stabilized with appropriate vegetation
 - e. Record location and approximate volumes of stockpiles.
3. Prepare site for revegetation upon completion of well activities – plugging/abandonment.
 - a. Redistribute soil materials in a manner similar to the original vertical profile.
 - b. Reduce compaction to an appropriate depth (generally below the root zone) prior to redistribution of topsoil, to accommodate appropriate site-specific plant species.
 - c. Provide suitable conditions to support the long term establishment and viability of the desired plant community.
 - d. Protect seed and seedling establishment (e.g. erosion control matting, mulching, hydro-seeding, surface roughening, fencing, etc. to be determined based upon site specific conditions
4. Establish a desired self-perpetuating native plant community based upon region specific guidance available from NRCS
 - a. Establish species composition, diversity, structure, and total ground cover appropriate for the desired plant community
 - b. Select genetically appropriate and locally adapted native plant materials based on the site characteristics and setting.
 - i. Seed mixtures shall be selected based on soil type, site conditions and intended final use
 - ii. Seed shall not be used later than one year after the test date that appears on the label.
 - iii. The bags of seed shall be clearly labeled indicating test date, weed percentage or % Pure Live Seed (PLS), viability or germination percentage, and inert material

- c. Select non-native plants only as a short term and non-persistent alternative to native plant materials. Ensure the non-natives are designed to aid in the re-establishment of native plant communities. Revegetate in accordance with best practices described below:
 - i. Re-spread topsoil to a minimum depth of 4 inches.
 - ii. Prepare a friable but firm and weed free seedbed that is not compacted by prior construction work.
 - iii. Appropriate firmness can be estimated when a person leaves about a ¼ inch deep footprint.
 - iv. Remove rocks, twigs, concrete, foreign material and clods over 2 inches that can't be broken down.
 - v. Soil moisture content shall be at least 30% soil capacity (estimated). Do not seed into undesirable moisture conditions (e.g. "dust" or "mud").
 - d. Plant communities shall be evaluated annually for two years to ensure revegetation success as determined by IDAPA 20.07.02.325
 - i. Repair and reseed areas that have erosion damage as necessary.
 - ii. If a stand has less than 70% ground cover after two years, re-evaluate the choice of plant materials, methods and available light and moisture. Re-establish the stand with modifications based on the evaluation
5. Reestablish initial visual composition
- a. Ensure the reclaimed landscape features conform to the prior conditions of the site.