ATS-10-688

OCD-HOBBS

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Form 3160-3
(April 2004)

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. **NMNM 033312A**

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No **14-08-0001-14277 (NMNM 70953X)**

1b. Type of Well ☐ Oil Well ☐ Gas Well ☑ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. (301452) **Grama Ridge Morrow Unit No. 8**

2. Name of Operator **Enstor Grama Ridge Storage and Transportation, LLC** (234255)

9. API Well No. **30-025-39922**

3a. Address **20329 State Highway 249, Suite 400, Houston, TX 77070**

3b. Phone No. *(include area code)* **281-374-3050**

10. Field and Pool, or Exploratory (77680) **Morrow Formation, Grama Ridge**

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface **126' FSL AND 1,248' FEL OF SEC. 4, TOWNSHIP 22 S, RANGE 34 E**

At proposed prod. zone **Unit P**

11. Sec., T. R. M. or Blk and Survey or Area **Sec. 4, T-22S, R-34E**

14. Distance in miles and direction from nearest town or post office* **18 miled west from Eunice, NM**

12. County or Parish **Lea County**

13. State **NM**

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
1,048' EPL / 126' SPL	**160**	

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
3,436 ft. (Sec. 4)	**13,258 FT.**	**NMB000304**

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3597 ft.	**09/01/2010**	**120 days**

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name *(Printed/Typed)*	Date
	Daryl W. Gee	**06/30/2010**

Title **Director, Regulatory Affairs and Land Management**

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Don Peterson	/s/ Don Peterson	SEP 16 2010
Title **FIELD MANAGER**	Office **CARLSBAD FIELD OFFICE**	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

*(Instructions on page 2)

KZ 9/28/10

Capitan Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

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DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
811 South First, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, New Mexico 87505

Form C-102
Revised March 17, 1999
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-39922	77680	GRAMA RIDGE MORROW

Property Code	Property Name	Well Number
~~036027~~ 301452	GRAMA RIDGE MORROW UNIT	8

OGRID No.	Operator Name	Elevation
234255	ENSTOR GRAMA RIDGE STORAGE & TRANSPORTATION, LLC	3597 feet

Surface Location

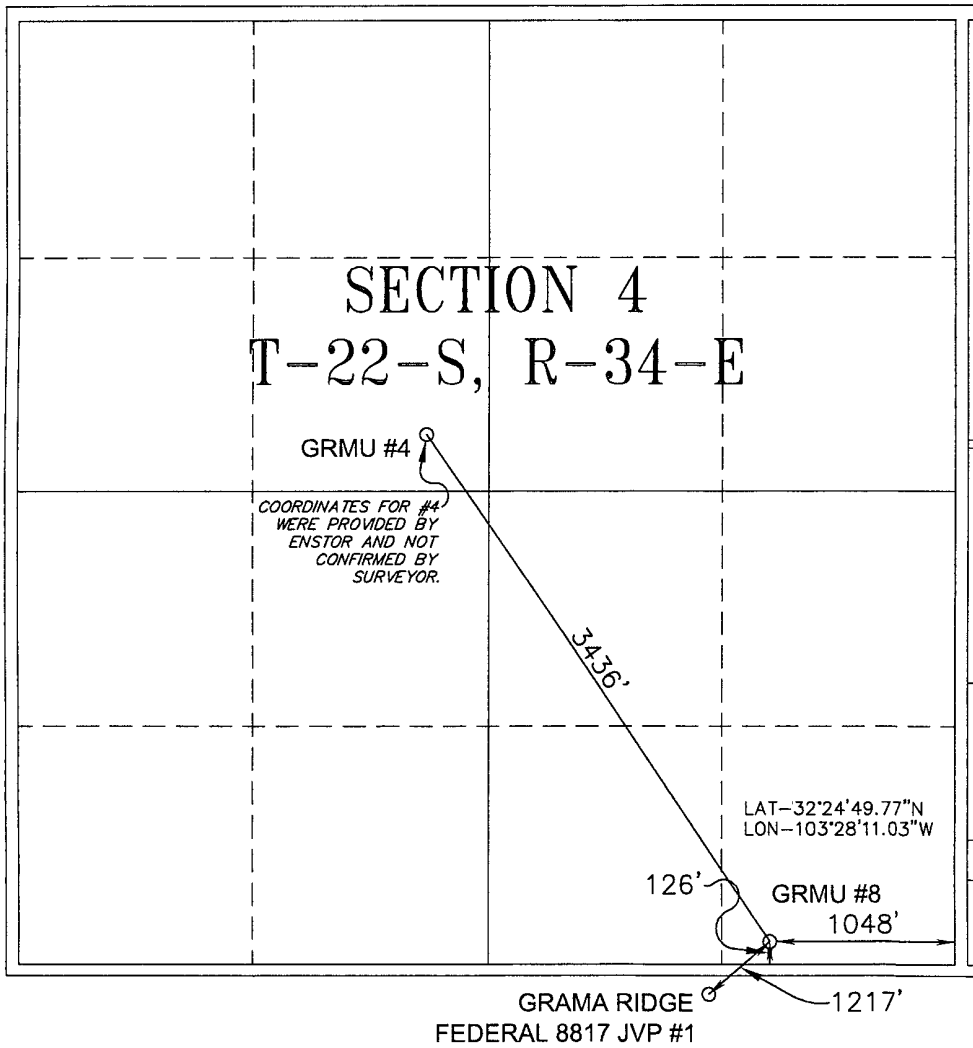
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	4	22-S	34-E		126	South	1048	East	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Printed Name: Darin L. Gee

Title: Director Regulatory Affairs & Land Mgt

Date: 07/07/10

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

DATE: 06/25/08

Date Surveyed

Signature & Seal of Professional Surveyor

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR No. 3959 NEW MEXICO WILSON D. WATSON JR.

Certificate No. WILSON D. WATSON JR. P.L.S. #3959

WATSON PROFESSSIONAL GROUP INC

DRILLING PROGNOSIS
6/16/10

WELL: **GRAMA RIDGE MORROW UNIT NO. 8** **EST. TD = 13,258 FT.**
FIELD: **GRAMA RIDGE** **MORROW A & C COMPLETION**
TYPE COMP: **SINGLE CONVENTIONAL – NATURAL GAS**

A. DRILLING PROGNOSIS:

1. **LOCATION**: 126' FSL AND 1,048' FEL OF SECTION 4, TOWNSHIP 22 SOUTH, RANGE 34 EAST, LEA COUNTY, NEW MEXICO.

2. **GEOLOGY**:

PROJECTED FORMATION TOPS:	
RUSTLER	1,700'
YATES	3,850'
CAPITAN REEF	5,000'
BONE SPRINGS	8,360'
WOLFCAMP	11,200'
STRAWN	11,600'
ATOKA	11,880'
MORROW LS	12,430'
MORROW CLASTICS	12,690'
MORROW PURPLE	12,730'
MORROW A	12,765'
MORROW A BASE	12,800'
MORROW B	12,850'
MORROW C	12,920'
MORROW C BASE	13,000'
MORROW D	13,085'

3. **CASING PROGRAM**:

DEPTH	HOLE SIZE	CASING SIZE	TYPE	COMMENTS
0 - 1,750'	17-1/2"	13-3/8"	SURFACE	CASES OFF FRESH WATER, RED BEDS, AND GRAVEL SECTIONS. SET 50' INTO RUSLTER.
See COA – 1,750' - ~~5,600'~~ 5730	12-1/4"	9-5/8"	INTERM. I	CASES OFF SALT & CAPITAN REEF TO PREVENT LOST RETURNS & EROSION OF SALT STRINGERS.
5,600' - 11,500'	8-3/4"	7-0"	INTERM. II	CASES OFF NORMALLY PRESSURED FORMATIONS FROM ABNORMALLY PRESSURED STRAWN (POSSIBLE) AND ATOKA (PROBABLE) FORMATIONS.
11,300' – 13,258'	6-0"	4-1/2"	PROD	CASES OFF ABNORMALLY PRESSURED FORMATIONS AND MORROW SANDS.

CASING SPECIFICATIONS AND DESIGN FACTORS:

TYPE	INTERVAL	LENGTH	SIZE-OD	WT/GRADE/THREAD	SF COLLAPSE	SF BURST	CONN SF TENSION
Surface	0-1750'	1,750'	13-3/8"	54.5 ppf/J-55/BTC	1.125	1.250	1.50+
INTERMED I	0-~~5600'~~ 5730	5,600'	9-5/8"	40.0 ppf/N-80/LTC	1.125	1.250	1.50
INTERMED II	0-11500'	11,500'	7-0"	29.0 ppf/P-110/LTC	1.230	1.375	1.50
LINER	11300'-13258'	1,958'	4-1/2"	13.5 ppf/P-110/Ultra FJ	1.125	1.250	1.50

Notes:
a. Centralizers will be run on all casing strings.
b. 7-0" casing and 4-1/2" liner are designed for fracturing down the casing.
c. All casing will be new and manufactured to API specifications.

4. MUD PROGRAM:

DEPTH	TYPE	WEIGHT (PPG)	WATER LOSS (CC)	Ph
0-1750'	FRESH WATER	8.4-8.6	NC	9.5-10.0
1,750'-5,600'	BRINE WATER	10.0	NC	9.0-9.5
5,600'-11,500'	FRESH WATER	8.4-8.6	NC	10.0-10.5
11,500'- 13,258'	BRINE WATER	10.0-12.8	6-12	10.0-10.5

MUD PROGRAM CONSIDERATIONS:

DEPTH INTERVAL	CONSIDERATIONS	COMMENTS
0-1,750'	LOST CIRCULATION	TREAT W/ LOST CIRCULATION MATERIAL
1,750'- 5,600'	LOST CIRCULATION	TREAT W/LOST CIRCULATION MATERIAL
5,600'-11,500'	NO KNOWN PROBLEMS	MAINTAIN MINIMAL MUD WEIGHT
11,500'-13,258'	ABNORMAL & SUBNORMAL	MAINTAIN MINIMAL MUD WEIGHT, TREAT WITH LOST CIRCULATION MATERIAL, INCREASE WEIGHT AS NEEDED

ANTICIPATED HIGH PRESSURES BELOW 11,500':
- POSSIBLE STRAWN PRESSURE 7,500 PSI (~12.4 ppg). STRAWN HAS BEEN PRODUCED IN A SECTION 3 WELL AND SECTION 10 WELL.
- PROBABLE ATOKA PRESSURE 8000 PSI (~12.8 ppg). NO PRODUCTION FROM THE ATOKA. 1980 DST IN LLANO 3 (SECTION 3) ~8,000 PSI.
- VIRGIN PRESSURE IN THE MORROW IN THE GRMU WELLS DRILLED IN 1965 (GRMU #1 AND #4) WAS ~8000 PSI (~12 ppg) AND WAS ~6,500 PSI (~9.8 ppg) IN GRMU #7 DRILLED IN 1989.

ANTICIPATED DEPLETED PRESSURES IN MORROW:
- MORROW LS @ 12,430' ~650 PSI. PUMP IN PRESSURE IN LS PERFS IN GRMU #7 PRIOR TO SZQ JOB 11/2009 WAS 7.5 GPM @ 7,200 PSI BHP (10.9 PPG)
- MORROW A @ 12,765' ~4,500 PSI -GAS STORAGE (GRMU #4);
- MORROW C @ 12,920' +/-1,000-2,000 PSI-GAS STORAGE (GRMU #7).
- FRAC PRESSURE IN MORROW C WAS 13 3 ppg IN GRMU #7, NOVEMBER 2010. BHP ESTIMATED TO BE ~500 PSI AT THE TIME.
- THERE IS NO KNOWN PRESENCE ON H2S GAS IN THE AREA.

See COA

5. **CEMENTING PROGRAM**:

CASING	CEMENT DESIGN
1,750' 13-3/8"	CEMENT TO SURFACE WITH 875 SACKS OF CLASS 'C' CEMENT W/4% GEL + 2% CACL2 (ACCELERATOR) MIXED AT 13.5 PPG (YIELD=1.75 FT3/SK). TAIL IN W/300 SACKS CLASS 'C' CEMENT + 2% CALCIUM CHLORIDE (ACCELERATOR) MIXED AT 14.8 PPG (YIELD=1.35 FT3/SK.) THIS VOLUME GIVES A 60% EXCESS OVER A GAUGE HOLE. PLACE CENTRALIZERS AT 5' & 15' ABOVE THE SHOE AND OVER EVERY 4TH COLLAR TO SURFACE. PUMP A FLUID CALIPER PRIOR TO COMING OUT OF THE HOLE TO RUN CASING, TO CHECK THE HOLE VOLUME. ADJUST CEMENT VOLUMES, IF NECESSARY.
5,600' 9-5/8"	CEMENT TO SURFACE USING A MULTI-STAGE CEMENTER (DV TOOL) AT ~4,000': **PUMP STAG 1** -WITH 380 SACKS OF CLASS 'C' LIGHT CEMENT (65:35) WITH 3% SALT, MIXED AT 12.9 PPG (YIELD=1.84 FT3/SK.), FOLLOWED BY 250 SACKS OF CLASS 'C' NEAT CEMENT MIXED AT 14.8 PPG (YIELD=1.33 FT3/SK.); **PUMP STAGE 2** - WITH 990 SACKS OF CLASS 'C' LIGHT CEMENT (65:35) WITH 3% SALT, MIXED AT 12.9 PPG (YIELD=1.84 FT3/SK.), FOLLOWED BY 250 SACKS OF CLASS 'C' NEAT CEMENT MIXED AT 14.8 PPG (YIELD=1.33 FT3/SK.) THIS GIVES 100% EXCESS OVER A GAUGE HOLE, PLUS 10% EXCESS INSIDE THE 13-3/8" CASING. PLACE CENTRALIZERS AT 5' & 15' ABOVE THE SHOE, AND OVER THE FIRST 10 COLLARS, AND 10'ABOVE AND BELOW THE DV TOOL. PUMP A FLUID CALIPER PRIOR TO COMING OUT OF THE HOLE TO RUN CASING TO CHECK THE HOLE VOLUME. ADJUST CEMENT VOLUMES, IF NECESSARY.
11,500' 7-0"	CEMENT UP ANNULUS INSIDE THE 9-5/8" CASING TO ~~5,300'~~ See COA. PUMP 910 SACKS OF LIGHT CLASS 'H' LEAD CEMENT WITH 3% SALT, MIXED TO 12.9 PPG (YIELD= 1.85 FT3/SK.), FOLLOWED BY 200 SACKS OF CLASS 'H' NEAT WITH 0.2% HR-601 RETARDER, MIXED TO 15.6 PPG (YIELD= 1.19 FT3/SK.). THIS GIVES 100% EXCESS IN THE OPEN HOLE AND 10% EXCESS INSIDE THE 9-5/8" CASING. PLACE CENTRALIZERS AT 5' & 15' ABOVE THE SHOE, AND THEN EVERY 2ND JOINT FOR THE NEXT 600'. PUMP A FLUID CALIPER, PRIOR TO COMING OUT OF THE HOLE TO RUN CASING, TO CHECK THE HOLE VOLUME. ADJUST CEMENT VOLUMES, IF NECESSARY.
13,258' 4-1/2"	CEMENT ENTIRE ANNULUS BACK UP TO LINER HANGER INSIDE 7" CASING USING 170 SACKS OF CLASS 'H' (SUPER 'H' BLEND) CEMENT W/ 1.0 LBM./SX. SALT + 0.4% HALAD R-344 LOW FLUID LOSS CONTROL (SIMILAR TO GAS STOP) + 0.3% CFR-3 DISPERSANT + 0.2% HR-601 RETARDER, MIXED AT 13.0 PPG (TO PREVENT FRACTURE OR LOST RETURNS IN THE OBJECTIVE INTERVAL) YIELD= 1.68 FT3/SK. IF EXCESSIVE GAS IS ENCOUNTERED, ADD ADDITIONAL R-344. USE ROTATING LINER HANGER AND ROTATE THE CASING IF POSSIBLE TO OBTAIN A GOOD CEMENT JOB.

CEMENT VOLUMES WILL BE ADJUSTED FOR ANY BOREHOLE CALIPERS RUN.
WAITING TIME ON CEMENT WILL BE ADEQUATE TO ACHIEVE A MINIMUM 500 PSI COMPRESSIVE STRENGTH.

See COA

6. **BIT PROGRAM**:

RUN NO.	BIT SIZE	BIT TYPE OR EQUIV.	DEPTH OUT	EST. DRILL TIME (HRS.)	ROP	BIT WT.	RPM	ALTERNATIVE PDC BITS
1	17-1/2"	GT-C1	1,750'	35	48	25-45	70-80	
2	12-1/4"	GX-28C	5,600'	110	36	35-45	60-65	FX65
3	8-3/4"	GX-38CH	9,650'	130	31	40-45	50-60	FX65R
4	8-3/4"	GX-44C	11,500'	120	17	40-45	50-60	
5	6"	STX-40	12,500'	70	11	25-35	50-60	FMHX543ZZ
6	6"	STX-50	12,800'	60	5	25-35	50-60	
7	6"	STX-50	13,258'	70	7	25-35	50-60	FMHX543ZZ

7. **DRILLING MECHANICS**:

a. USE AVAILABLE HORSEPOWER OF MUD PUMPS TO MAXIMIZE HYDRAULIC HORSEPOWER TO BIT AND FOR HOLE CLEANING.

b. USE 4-1/2" DRILL PIPE TO 11,500' AND CHANGE TO 3-1/2" DRILL PIPE TO TD.

c. HAVE LOST CIRCULATION MATERIAL AND PILLS READY ON HAND TO COMBAT LOST CIRCULATION IN ALL PORTIONS OF THE HOLE.

d. USE CLOSED LOOP MUD SYSTEM & STEEL MUD TANKS. OPTIMIZE SOLIDS CONTROL EQUIPMENT WITH RIG FURNISHED AND RENTAL EQUIPMENT.

8. **WELL CONTROL EQUIPMENT**:

a. BLOWOUT PREVENTER (BOP) EQUIPMENT:

DEPTH		
0-1,750'	1,500 PSI	ANNULAR BOP & DIVERTER SYSTEM
1,750' – 5,600'	5,000 PSI	BOP STACK – PIPE AND BLIND RAMS & ANNULAR BOP
5,600' – 11,500'	5,000 PSI	BOP STACK – PIPE AND BLIND RAMS & ANNULAR BOP
11,500' – TD	10,000 PSI	BOP STACK – TWO PIPE AND BLIND RAMS & ANNULAR BOP

SCHEMATICS OF THE THREE BOP CONFIGURATIONS ARE ATTACHED

b. BOPS AND RELATED PRESSURE ACCUMULATOR SYSTEMS WILL BE CONFIGURED ACCORDING TO BLM DRILLING OPERATIONS ORDER NUMBER 2.

c. PRIOR TO DRILLING OUT EACH CASING STRING, THE BOPS AND CASING SEATS WILL BE TESTED ACCORDING TO BLM DRILLING OPERATIONS ORDER NUMBER 2.

d. BOPS WILL BE FUNCTIONALLY OPERATED AT A FREQUENCY PRESCRIBED IN BLM DRILLING OPERATIONS ORDER NUMBER 2.

e. ADDITIONAL WELL CONTROL EQUIPMENT WILL CONSIST OF A DRILLING SPOOL, WITH 2 SIDE OUTLETS FOR THE CHOKE MANIFOLD & KILL LINE.

f. A 5K PSI CHOKE MANIFOLD WILL BE USED WITH THE 5K PSI BOP STACK, AND A 10K PSI MANIFOLD WILL BE USED WITH THE 10K PSI BOP STACK. THE MANIFOLDS WILL BE CONFIGURED ACCORDING TO BLM DRILLING OPERATIONS ORDER NUMBER 2.

g. UPPER AND LOWER KELLY COCKS WILL BE IN THE DRILL STRING AT ALL TIMES.

h. A FULL OPENING DRILL PIPE STABBING VALVE WITH APPROPRIATE CONNECTIONS WILL BE ON THE RIG FLOOR AT ALL TIMES.

i. A ROTATING HEAD WILL BE INSTALLED ON BOTH THE 9-5/8" AND 7" CASINGS.

j. A MUD-GAS SEPARATOR AND FLARE LINE WILL BE USED TO DRILL THE 8-3/4" AND 6" HOLES.

9. FORMATION EVALUATION:

a. ELECTRIC LOGS: — See COA

5,600' – 11,500'	SONIC LOG (Simple Compression Wave).
11,500' – TD	PLATFORM EXPRESS (RESISTIVITY, NEUTRON POROSITY, BULK DENSITY) AND SONIC (Simple Compression Wave)

b. XPT IN MORROW, DEPTHS TBD.

c. SAMPLE PROGRAM. MUD LOGGER PLACED ON WELL AT 11,000' TO TD.

d. DRILL STEM TEST - NONE PLANNED.

10. OTHER:

EVEN THOUGH H2S IS NOT ANTICIPATED, AS A SAFETY PRECAUTION, AN H2S SENSOR WILL BE KEPT ON THE RIG FLOOR THROUGHOUT THE DRILLING OPERATION.

11. WELLHEAD EQUIPMENT:

A-SECTION	13-3/8" SOW 3 KPSI WP CASING HEAD, PSL-1 W/25" LANDING BASE
B-SECTION	13-3/8", 3 KPSI WP X 11", 5 KPSI WP CASING SPOOL, TEMP. CL.- S, MAT.-AA,DD-NL, PSL-3, PR-2
C-SECTION	11", 5 KPSI WP X 7-1/16", 10 KPSI WP TBG. HD. SPOOL, TEMP. CL.-U, MAT.CL.-DD-NL, PSL-2, PR2
ADAPTER	7-1/16", 10 KPSI WP X 7-1/16", 5 KPSI WP ADAPTER FLANGE
TREE ASSY.	7-1/16", 5 KPSI WP TREE WITH 2 MV'S, CROSS, ADAPTER FLANGE W/TREE CAP, 2 WINGS WITH EACH HAVING A 4-1/16" MANUAL VALVE & A 4-1/16" OPERATED VALVE. MV'S TO BE ISO 10423, & API 6A, 19TH EDITION, TEMP. CLASS L+U, MAT. CLASS EE-NL, PSL-2, PR-1. 4-1/16" WING VALVES TO BE TEMP. CLASS L+U, MAT. CLASS EE-1.5, PSL-2, PR-2, OPERATED WING VALVES TO BE TEMP. CLASS U, MAT. CLASS EE-0.5, PSL-2, PR-2.

12. ANTICIPATED SCHEDULE:

a. LOCATION CONSTRUCTION WILL BEGIN AFTER THE BLM HAS APPROVED THE APD.

b THE WELL WILL BE SPUDDED AS SOON AS THE ROAD AND LOCATION HAVE BEEN CONSTRUCTED, DEPENDING ON RIG AVAILABLILITY.

c. IT IS ESTIMATED THE DRILLING OPERATION WILL TAKE 60 DAYS.

B. COMPLETION PROGNOSIS:

1. CASED HOLE LOGGING & PERFORATING

a. *LOGGING:* — See COA

5,000' – 13,258'	CEMENT BOND LOG
SURFACE – 13,258'	GAMMA RAY-NEUTRON LOG
SURFACE– 13,258'	CASING INSPCTION LOGS

b. PERFORATING:

THE MORROW C WILL BE PERFORATED AND FRACTURE TREATED THEN THE MORROW A WILL BE PERFORATED AND FRACTURED.

2. STIMULATION

a. MORROW C: AFTER PERFORATING, THE MORROW C WILL BE STIMULATED WITH A CO2 FRAC TREATMENT.

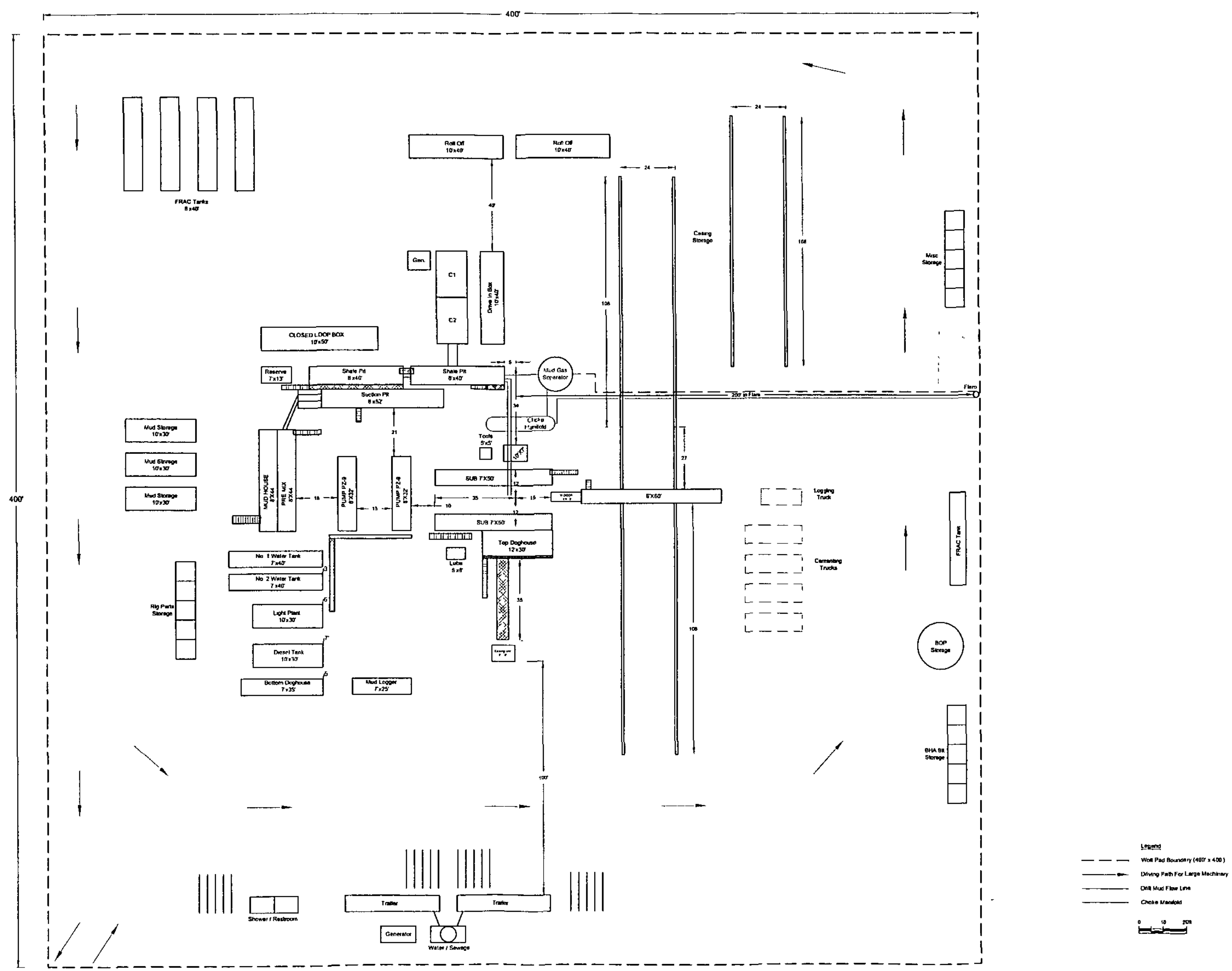
b. MORROW A: AFTER TREATING AND FLOWING BACK THE MORROW C, A PLUG WILL BE SET ABOVE THE MORROW C AND THE MORROW A WILL BE CO2 FRAC STIMULATED. FOLLOWING FLOWBACK, THE PLUG WILL BE DRILLED OUT AND TUBING RUN.

3. TUBING

DEPTH	TUBING
0-11,150'	4-1/2" OD, 15.5 PPF, L-80M RTS-6 OR EQUIVALENT CONNECTION
11,150'-12,700' PERFORATIONS	2-7/8" OD, 6.4 PPF, L-80 FJ SET ON PACKER =<100' ABOVE MORROW A

4. ANTICIPATED SCHEDULE: IT IS ESTIMATED IT WILL TAKE 60 DAYS TO COMPLÉTE THE WELL AND LAY A PIPELINE TO THE WELL.

5. SCHEMATIC: SEE ATTACHED WELLBORE SCHEMATIC.

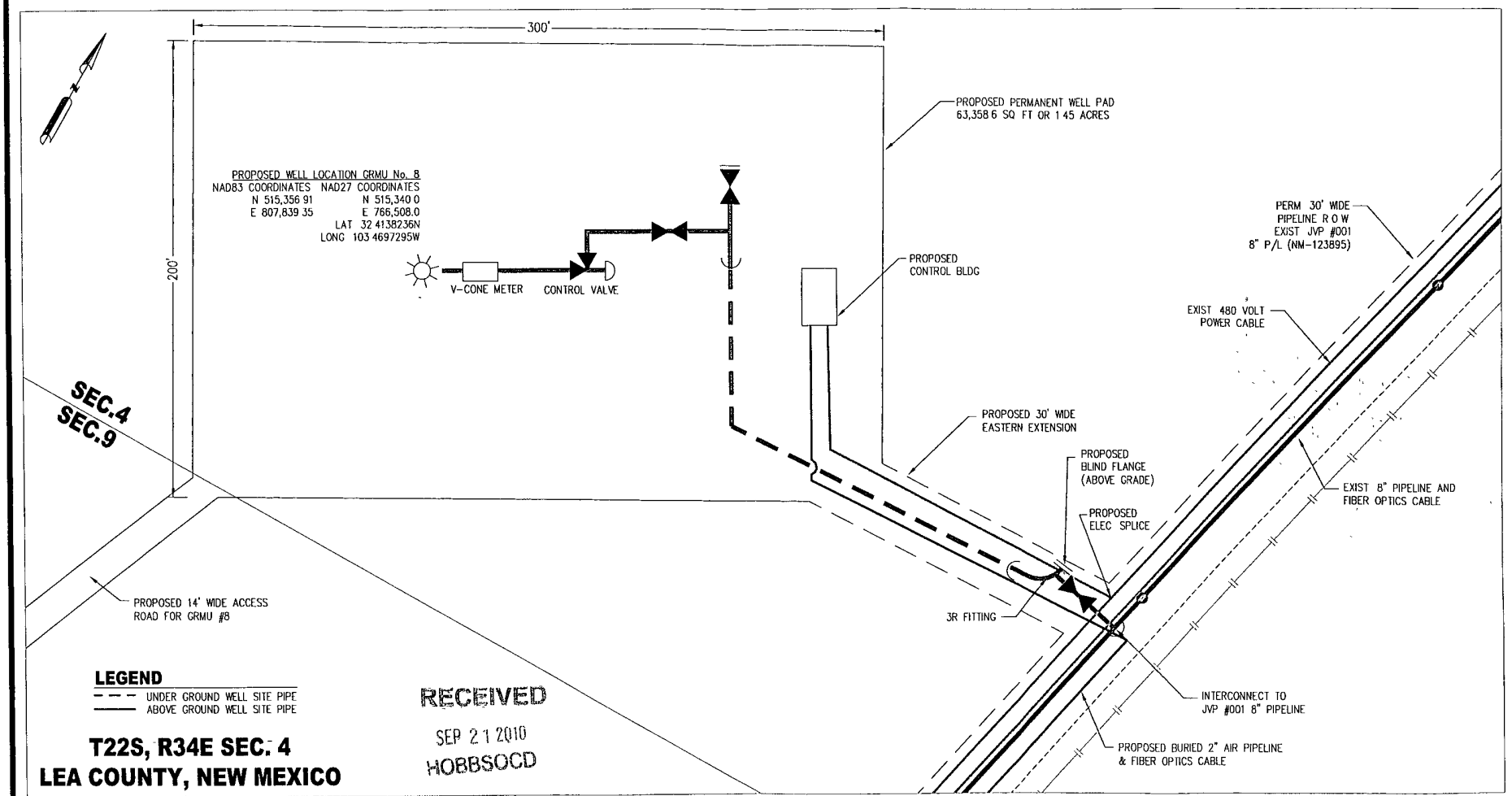


400'
400'
FRAC Tanks
8'x40'
Roll Off
10'x40'
Roll Off
10'x40'
Gen.
C1
C2
Drive In Box
10'x40'
CLOSED LOOP BOX
10'x50'
Reserve
7'x13'
Shale Pit
8'x40'
Shale Pit
8'x40'
Suction Pit
8'x52'
Mud Gas
Separator
Choke
Manifold
Casing
Storage
Flare
200' to Flare
Misc
Storage
Mud Storage
10'x30'
Mud Storage
10'x30'
Mud Storage
10'x30'
MUD HOUSE
8'X44
PRE MIX
8'X44
PUMP PZ-9
8'X32'
PUMP PZ-9
8'X32'
Tools
5'x5'
SUB 7'X50'
SUB 7'X50'
8'X60'
Top Doghouse
12'x30'
Lube
5'x8'
Logging
Truck
Cementing
Trucks
FRAC Tank
BOP
Storage
Rig Parts
Storage
No. 1 Water Tank
7'x40'
No. 2 Water Tank
7'x40'
Light Plant
10'x30'
Diesel Tank
10'x33'
Bottom Doghouse
7'x35'
Mud Logger
7'x25'
BHA Bit
Storage
Shower / Restroom
Trailer
Trailer
Generator
Water / Sewage
Legend
Well Pad Boundary (400' x 400')
Driving Path For Large Machinery
Drill Mud Flow Line
Choke Manifold

EXHIBIT 7

WELL SITE LAYOUT, TEMPORARY WELL PAD (DRILLING OPERATIONS)
GRAMA RIDGE
LEA COUNTY, NEW MEXICO
Enstor Grama Ridge Storage and Transportation, LLC

EXHIBIT 8



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T22S, R34E SEC. 4
LEA COUNTY, NEW MEXICO

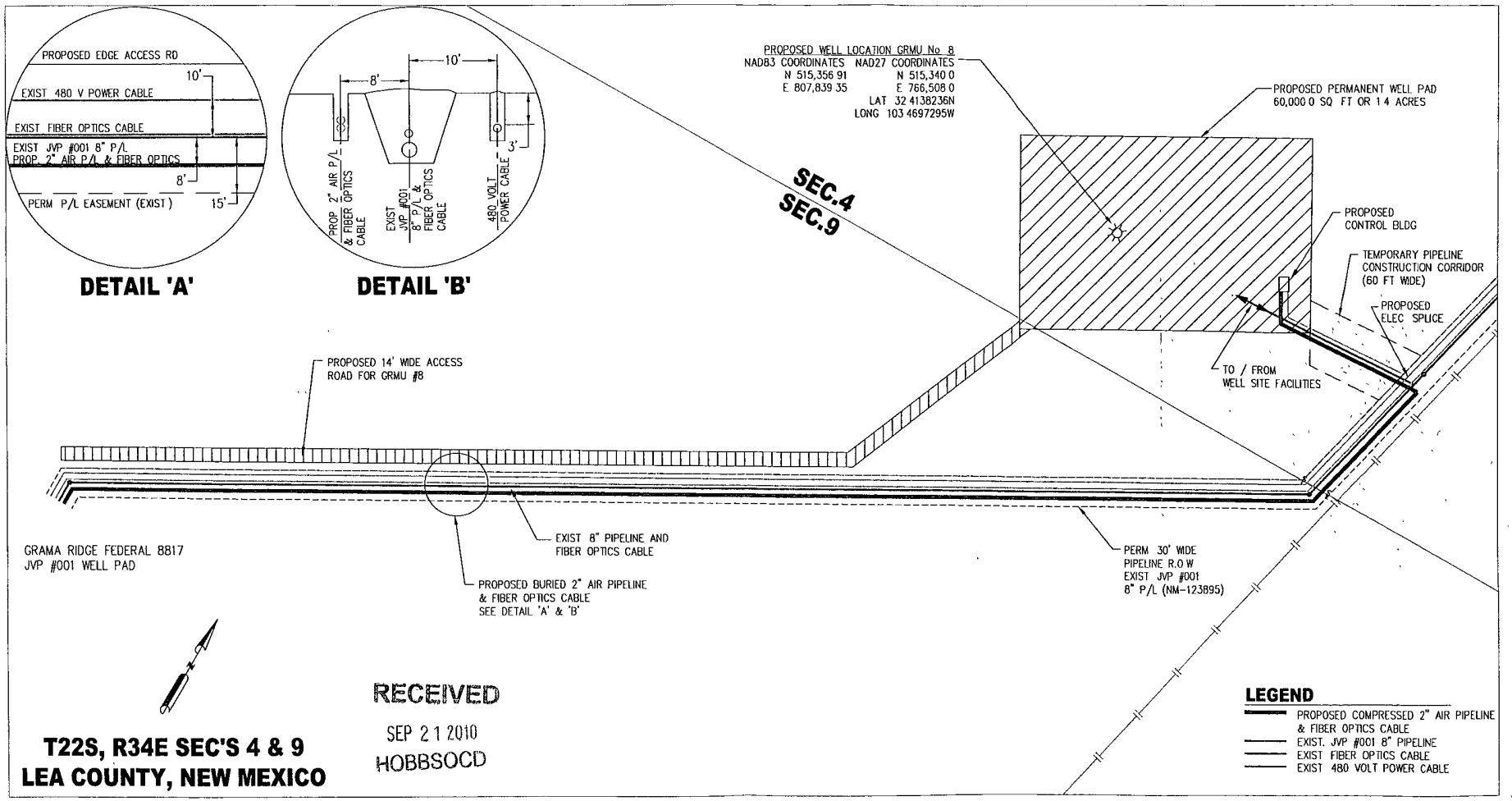
DRAWN BY	DATE DRAWN	ENGINEER	DWG NO.	SCALE	PROJ NO		REV
RC	6/25/10	GT	AL-304	NTS	12725C	LEA COUNTY, N M	B

ForeRunner CORPORATION
7125 W Jefferson Ave , Ste 400
Lakewood, CO 80235
303-969 0223

WELL SITE LAYOUT - PERMANENT WELL PAD

ENSTOR
An Enbridge Commodities Company

EXHIBIT 5



T22S, R34E SEC'S 4 & 9
LEA COUNTY, NEW MEXICO

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SEP 21 2010
HOBBSOCD

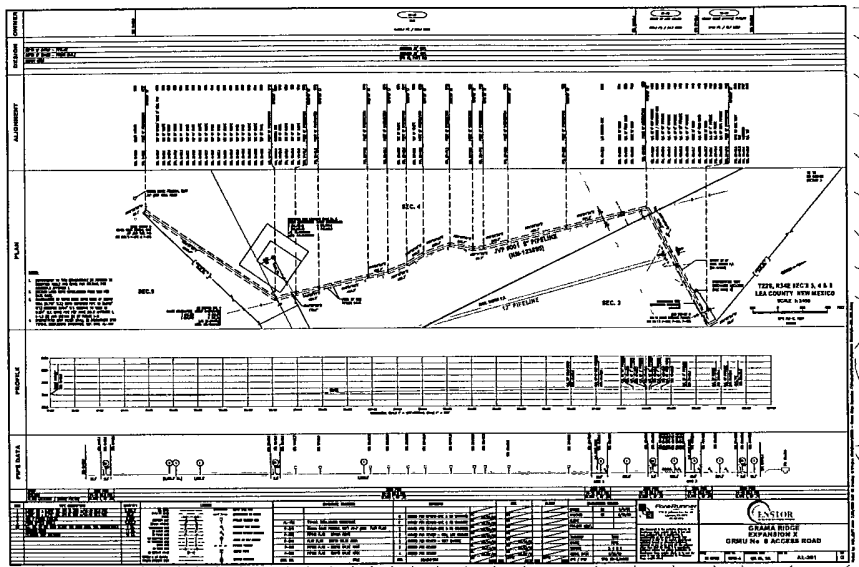
DRAWN BY	DATE DRAWN	ENGINEER	DWG NO	SCALE	PROJ. NO		REV
RC	6/21/10	GT	AL-303	NTS	12725C	LEA COUNTY, N.M.	B

ForeRunner CORPORATION
7125 W Jefferson Ave , Ste 400
Lakewood, CO 80235
303-969 0223

PROPOSED COMPRESSED 2" AIR PIPELINE & FIBER OPTICS CABLE

ENSTOR
An Iberdrola Renewables Company

EXHIBIT 1



PROPOSED TEMPORARY WELL PAD
PERM 30' WIDE PIPELINE R O W
3600
PROPOSED PERMANENT WELL PAD
60,000.0 SQ FT OR 1.4 ACRES
400.0'
300.0'
200.0'
TEMPORARY PIPELINE CONSTRUCTION CORRIDOR (60 FT WIDE)
1048'± FEL
126'± FSL
SEC.4
SEC.9
NE CORNER SEC. 9
NAD83 COORDINATES
N 515,239
E 808,888
NAD27 COORDINATES
N 515,178
E 767,705
LAT :32 4134765N
LONG. 103 4663355W
3590
200.0'
400.0'
250.0'
50.0'
38'
TOPSOIL STOCKPILE AREA
PROPOSED WELL LOCATION GRMU No. 8
NAD83 COORDINATES
N 515,356 91
E 807,839 35
LAT 32.4138236N
LONG 103.4697295W
NAD27 COORDINATES
N 515,340 0
E 766,508 0
JVP #001 8" PIPELINE (NM-123895)
PROPOSED 8' WIDE TEMPORARY WORK SPACE
PROPOSED 14' WIDE PERMANENT ROAD R O W FOR GRMU #8 ACCESS ROAD
PROPOSED 8' WIDE TEMPORARY WORK SPACE
GRAMA RIDGE FEDERAL 8817 JVP #001 WELL HEAD
3585
3605
3600
3595
T22S, R34E SEC'S 4 & 9
LEA COUNTY, NEW MEXICO

LEGEND

- PIPELINE
- PERMANENT WELL PAD
- TEMP WORKSPACE – WELL PAD
- TEMP WORKSPACE – CORRIDOR
- CONSTRUCTED ACCESS ROAD
- TOPSOIL STOCKPILE AREA

SCALE 1:2400
100 0 100 200 FEET
SPC NM-E, FEET
NAD83

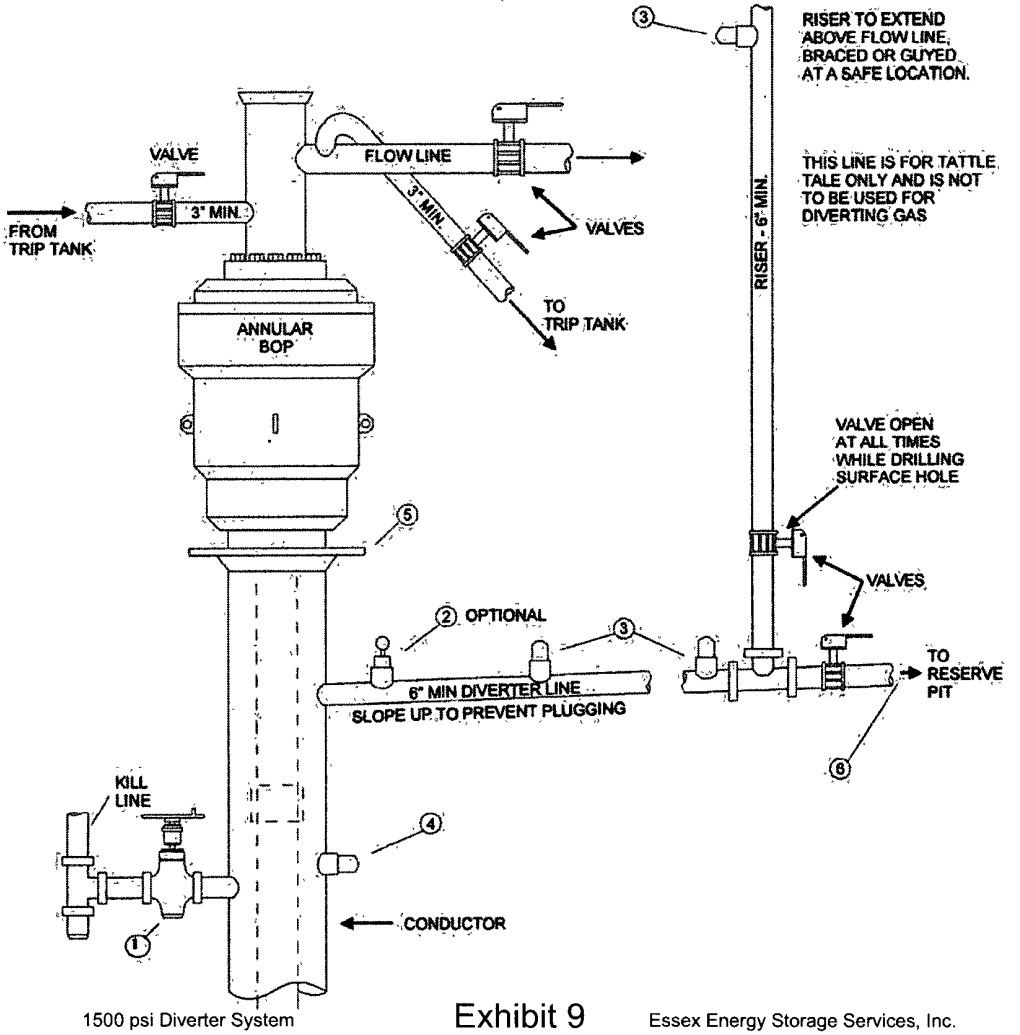
DRAWN BY	DATE DRAWN	ENGINEER	DWG. NO	SCALE	PROJ NO		REV
RC	5/24/10	GT	AL-302		12725C	LEA COUNTY, N M	D

ForeRunner CORPORATION
7125 W Jefferson Ave , Ste 400
Lakewood, CO 80235
303 969 0223

GRMU No. 8 WELL PAD AND CONSTRUCTED ACCESS ROAD

ENSTOR
An Iberdrola Renewables Company

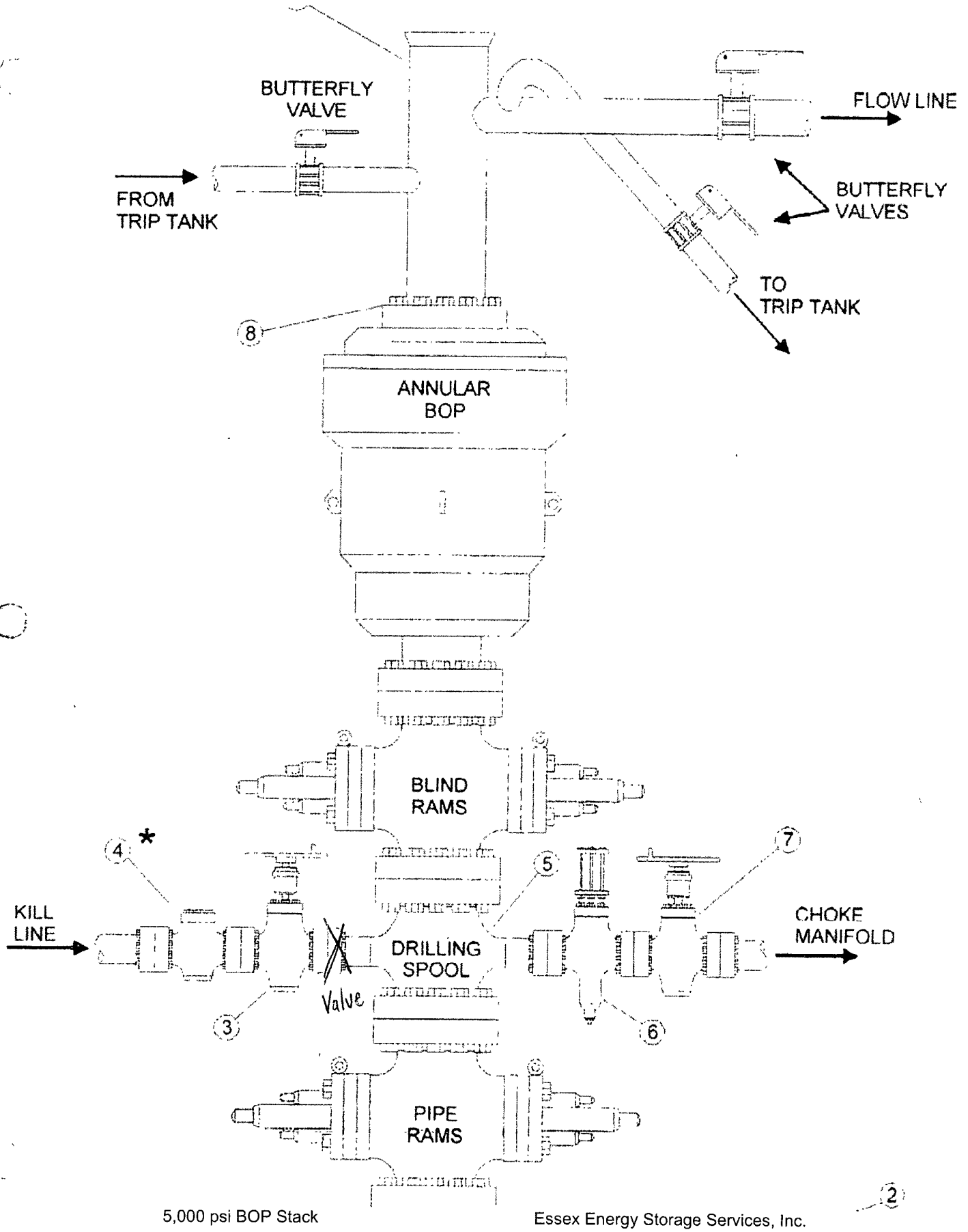
PUMP - FILL TRIP TANK
LAND



1500 psi Diverter System

Exhibit 9

Essex Energy Storage Services, Inc.

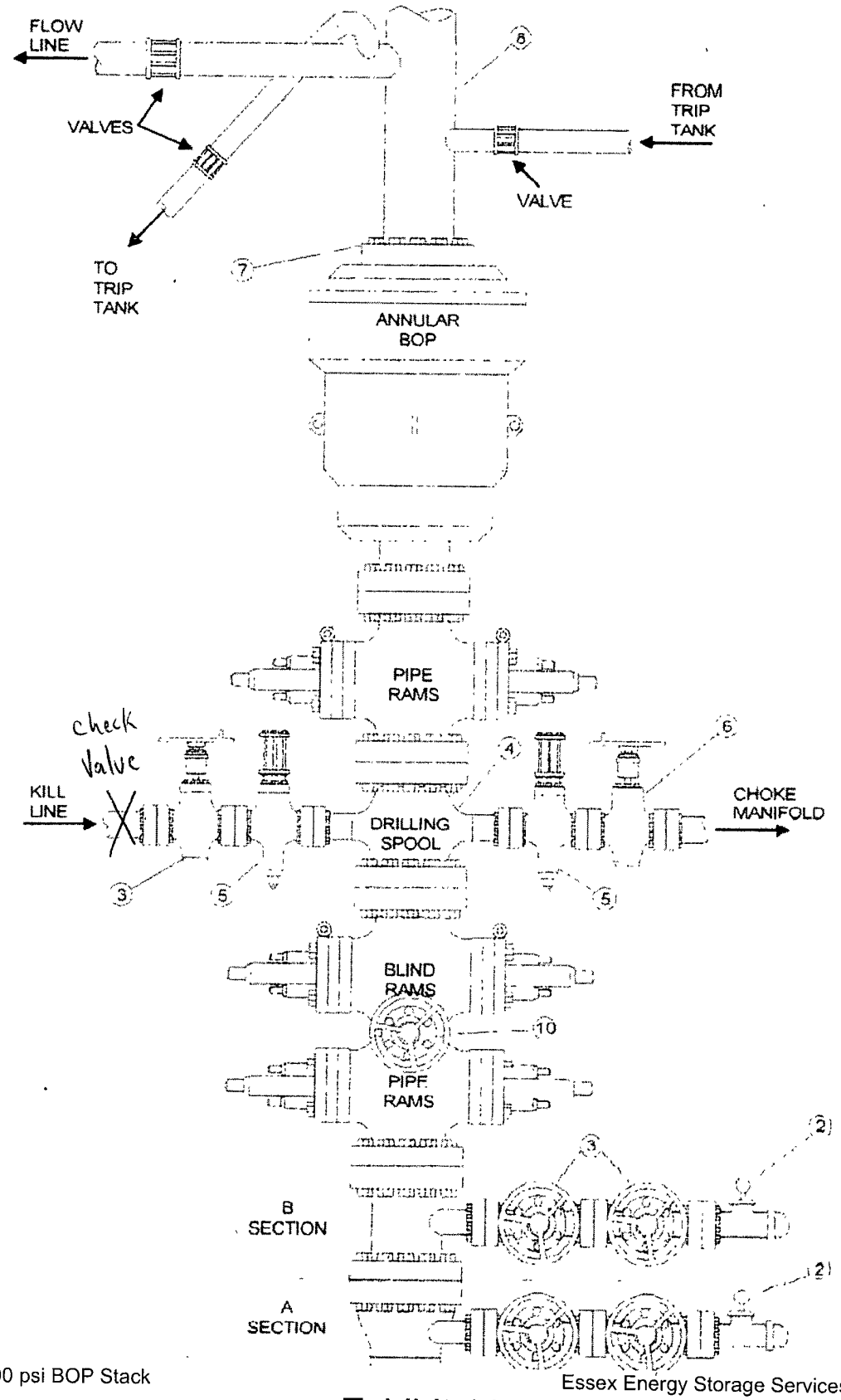


5,000 psi BOP Stack

Essex Energy Storage Services, Inc.

Exhibit 10

API (RRSRA)



10,000 psi BOP Stack

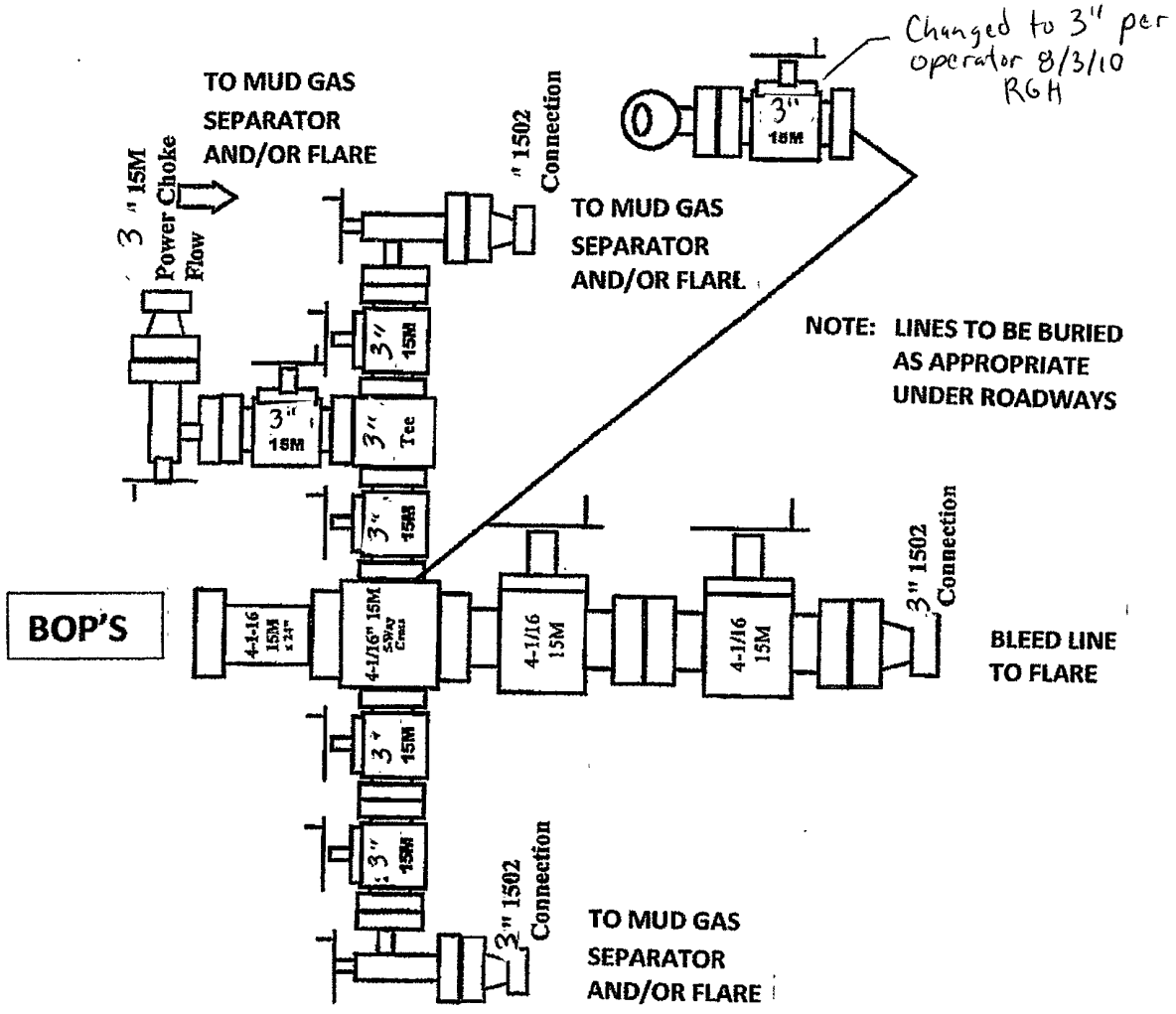
Essex Energy Storage Services, Inc.

Exhibit 11

Exhibit 13

GRAMMA RIDGE MORROW UNIT # 8

5M & 10M WP CHOKE MANIFOLD SCHEMATIC



NOTE: 15M WP RENTAL CHOKE MANIFOLD TO BE USED FOR 5M & 10M WP HOOKUPS

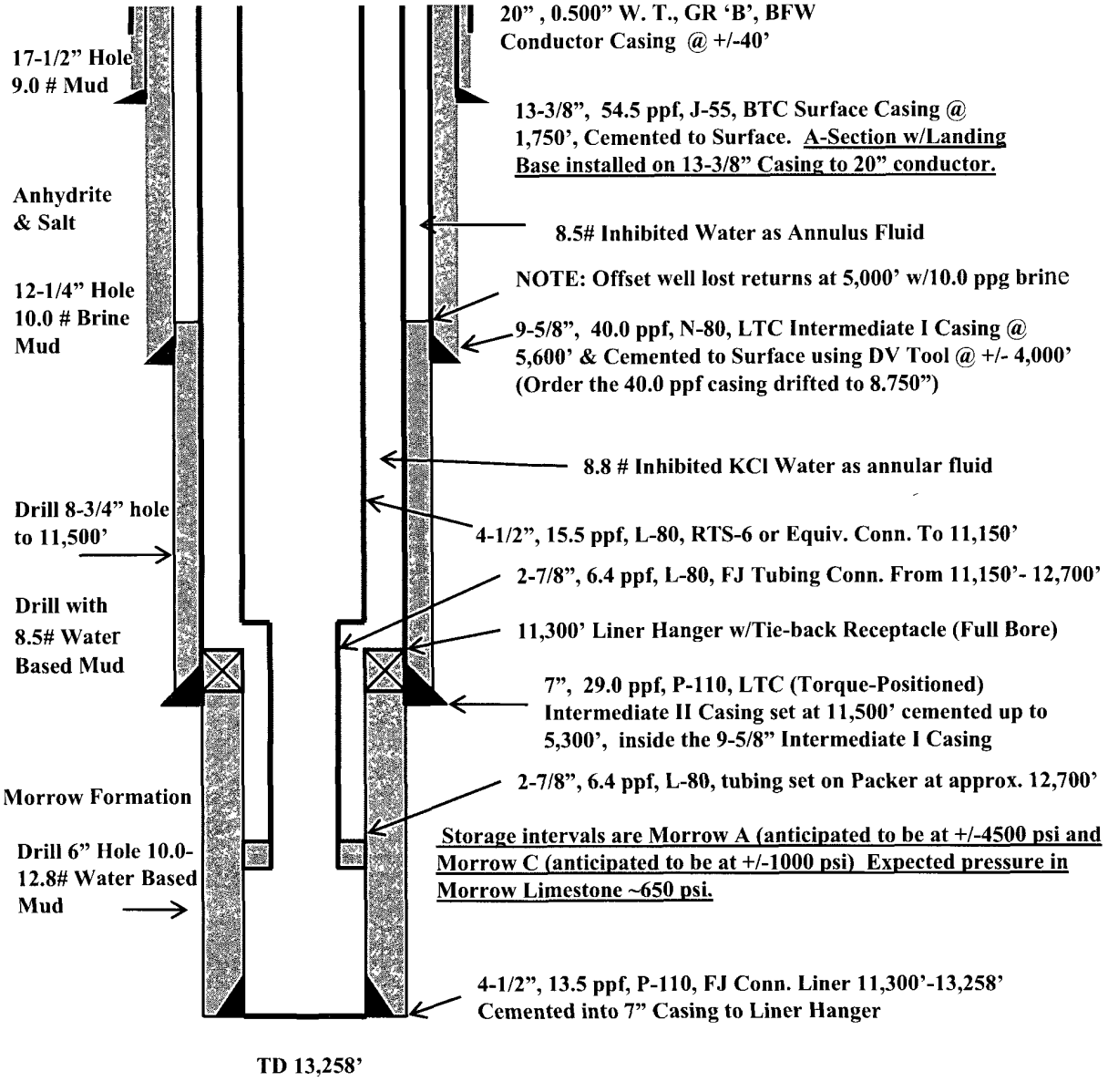
Exhibit 12

GRAMA RIDGE STORAGE

GRMU # 8

Section 4 , T22S, R34E, Lea County NM

PROPOSED COMPLETION



5/21/10

Essex Energy Storage Services, Inc.