

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

HOBBS OCD

APR 03 2013

RECEIVED

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised August 1, 2011

Permit

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address XTO ENERGY, INC. 200 N. LORAIN, SUITE 800, MIDLAND TX. 79701		² OGRID Number 005380
		³ API Number 30-025-35164
⁴ Property Code	⁵ Property Name EMSU	⁶ Well No. 707H

⁷ Surface Location

UL - Lot P	Section 10	Township 21S	Range 36E	Lot Idn	Feet from 1310	N/S Line S	Feet From 31	E/W Line E	County LEA
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⁸ Pool Information

EUNICE MONUMENT; GRAYBURG - SAN ANDRES	23000
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Additional Well Information

⁹ Work Type E	¹⁰ Well Type 0	¹¹ Cable/Rotary R	¹² Lease Type S	¹³ Ground Level Elevation 3589'
¹⁴ Multiple No	¹⁵ Proposed Depth TVD3865 MD8708	¹⁶ Formation GRAYBURG - SA	¹⁷ Contractor KEY #36	¹⁸ Spud Date ASAP
Depth to Ground water 250'		Distance from nearest fresh water well 1.25 miles		Distance to nearest surface water 5 miles

¹⁹ Proposed Casing and Cement Program

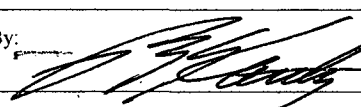
Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Existing	12 1/4"	9 5/8"	36#	518	450	Surface
Existing	8 3/4"	7"	20#	3940	775	Surface
Lateral	4 3/4"	Open Hole				

Casing/Cement Program: Additional Comments

See attached Drilling Plan, H2S Plan, Horizontal Plan, BOP & Choke Manifold	Permit Expires 2 Years From Approval Date Unless Drilling Underway Re-Entry
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Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
13 5/8" Double Ram 2FZ35-35	5,000#	5,000#	CAMERON

I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐ , a general permit ☐ , or an (attached) alternative OCD-approved plan ☐ . Closed Loop.		OIL CONSERVATION DIVISION	
Printed name: Barry W. Hunt		Approved By: 	
Title: Permit Agent		Title: Petroleum Engineer	
E-mail Address: specialpermitting@gmail.com		Approved Date: APR 04 2013	
Date: 04/01/13	Phone (575) 361-4078	Expiration Date:	
		Conditions of Approval Attached	

APR 04 2013

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APR 03 2013

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State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate
District Office

□ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number: 30-025-35164	Pool Code: 23000	Pool Name: Eunice Monument; Grayburg-SA
Property Code: 300717	Property Name: EMSU	Well Number: 707H
OGRID No. 005380	Operator Name: XTO ENERGY	Elevation: 3589'

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	10	21-S	36-E		1310	SOUTH	31	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
P	11	21-S	36-E		1310	SOUTH	380	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

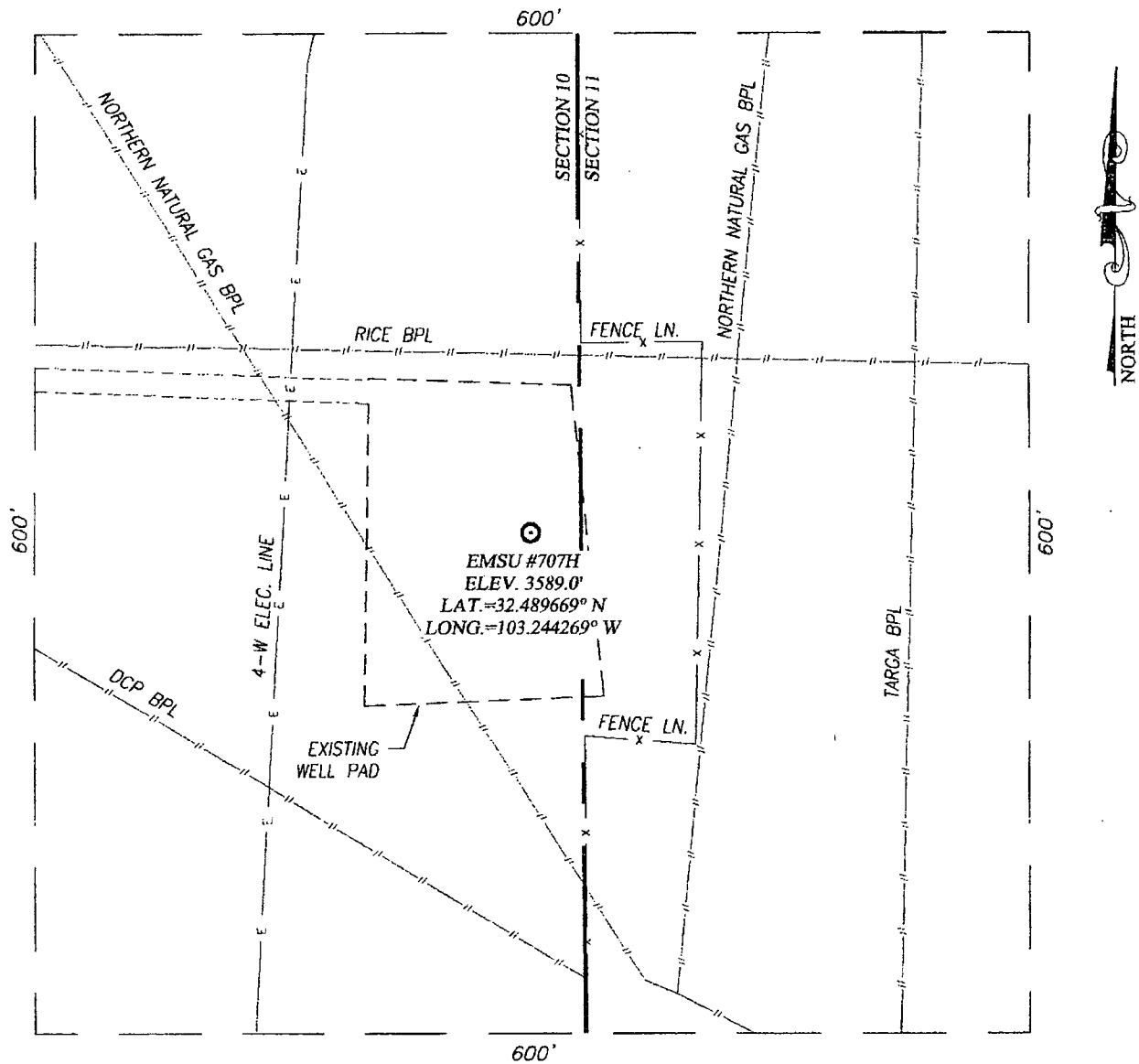
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

		OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Barry W. Hunt</i> 4/1/13 Signature Date Barry W. Hunt Printed Name E-mail Address
SCALE: 1"=2000' GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=543569.0 N X=835806.4 E LAT.=32.489669° N LONG.=103.244269° W BOTTOM HOLE LOCATION Y=543604.3 N X=840735.2 E		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 supervision, and that the same is true and correct to the best of my belief. JANUARY 31, 2013 Date of Survey Signature & Seal of Professional Surveyor: Certificate Number Gary G. Eidson 12641 Renold J. Eidson 3239 BKL JWSC W.O.: 13.11.0145

CORNER COORDINATES TABLE

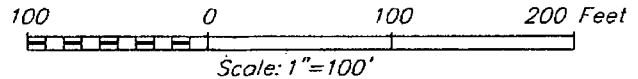
A - Y=543561.5 N, X=834515.4 E
B - Y=543578.3 N, X=835836.8 E
C - Y=543617.2 N, X=841115.1 E
D - Y=542297.3 N, X=841128.1 E
E - Y=542259.1 N, X=835848.9 E
F - Y=542241.9 N, X=834527.2 E

SECTION 10, TOWNSHIP 21 SOUTH, RANGE 36 EAST, N.M.P.M.
LEA COUNTY **NEW MEXICO**



DIRECTIONS TO EMSU #707H:

FROM THE INTERSECTION OF STATE HIGHWAY #8 AND CO. RD. E36 (CURRY RD.) GO EAST ON CURRY RD. APPROX. 0.9 MILES; TURN RIGHT AND GO SOUTH APPROX. 0.25 MILES; TURN LEFT AND GO EAST APPROX. 0.1 MILES TO THIS LOCATION.



XTO ENERGY

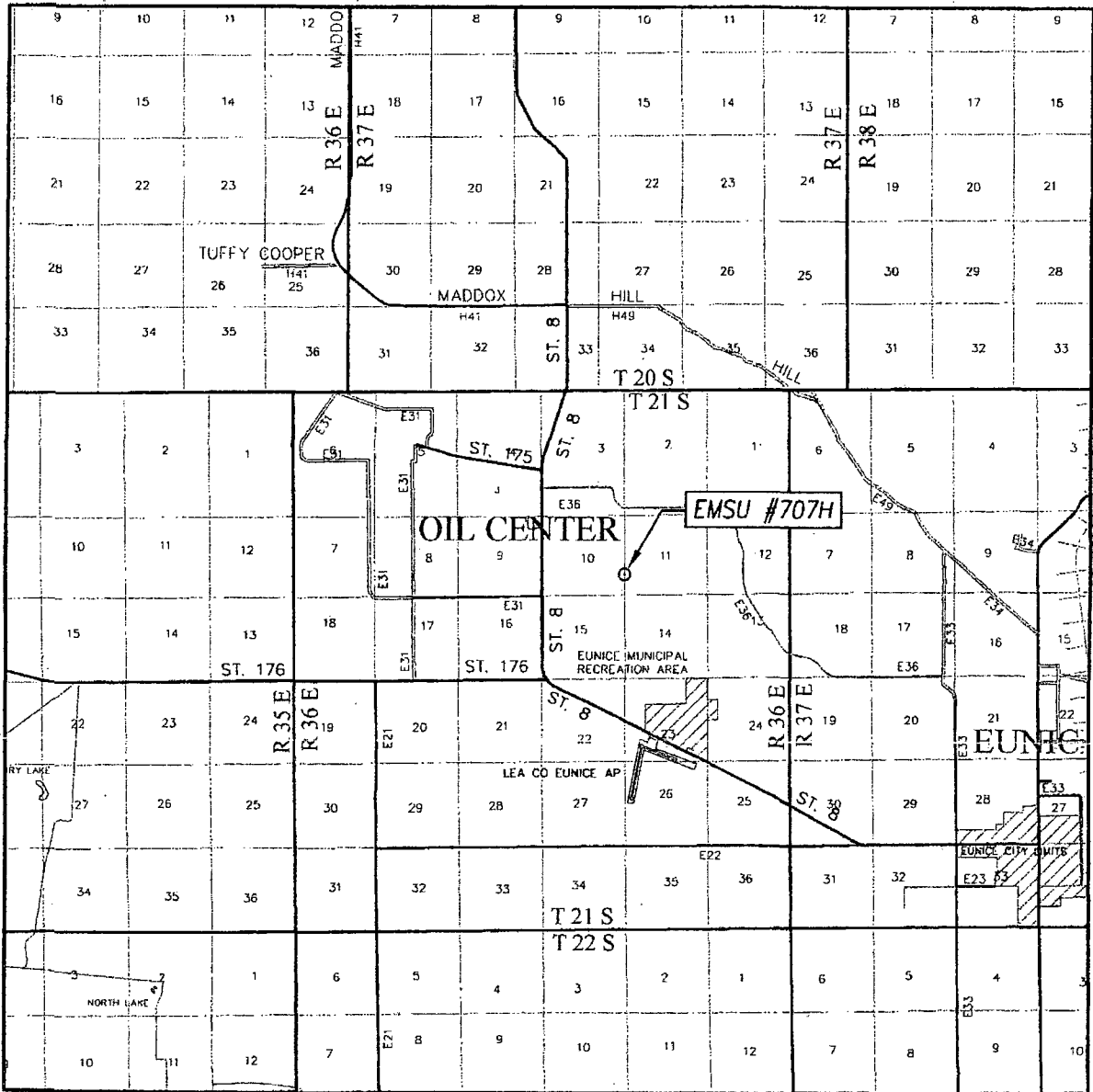
EMSU #707H WELL
 LOCATED 1310 FEET FROM THE SOUTH LINE
 AND 31 FEET FROM THE EAST LINE OF SECTION 10,
 TOWNSHIP 21 SOUTH, RANGE 36 EAST, N.M.P.M.,
 LEA COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES
 SINCE 1946
JOHN WEST SURVEYING COMPANY
 412 N. DAL PASO
 HOBBS, N.M. 88240
 (575) 393-3117 www.jwsc.biz

Survey Date: 1/31/13	CAD Date: 2/6/13	Drawn By: BKL
W.O. No.: 13110145	Rev. :	Rel. W.O.:

Sheet 1 of 1

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 10 TWP. 21-S RGE. 36-E

SURVEY N.M.P.M.

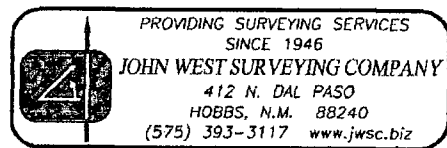
COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1310' FSL & 31' FEL

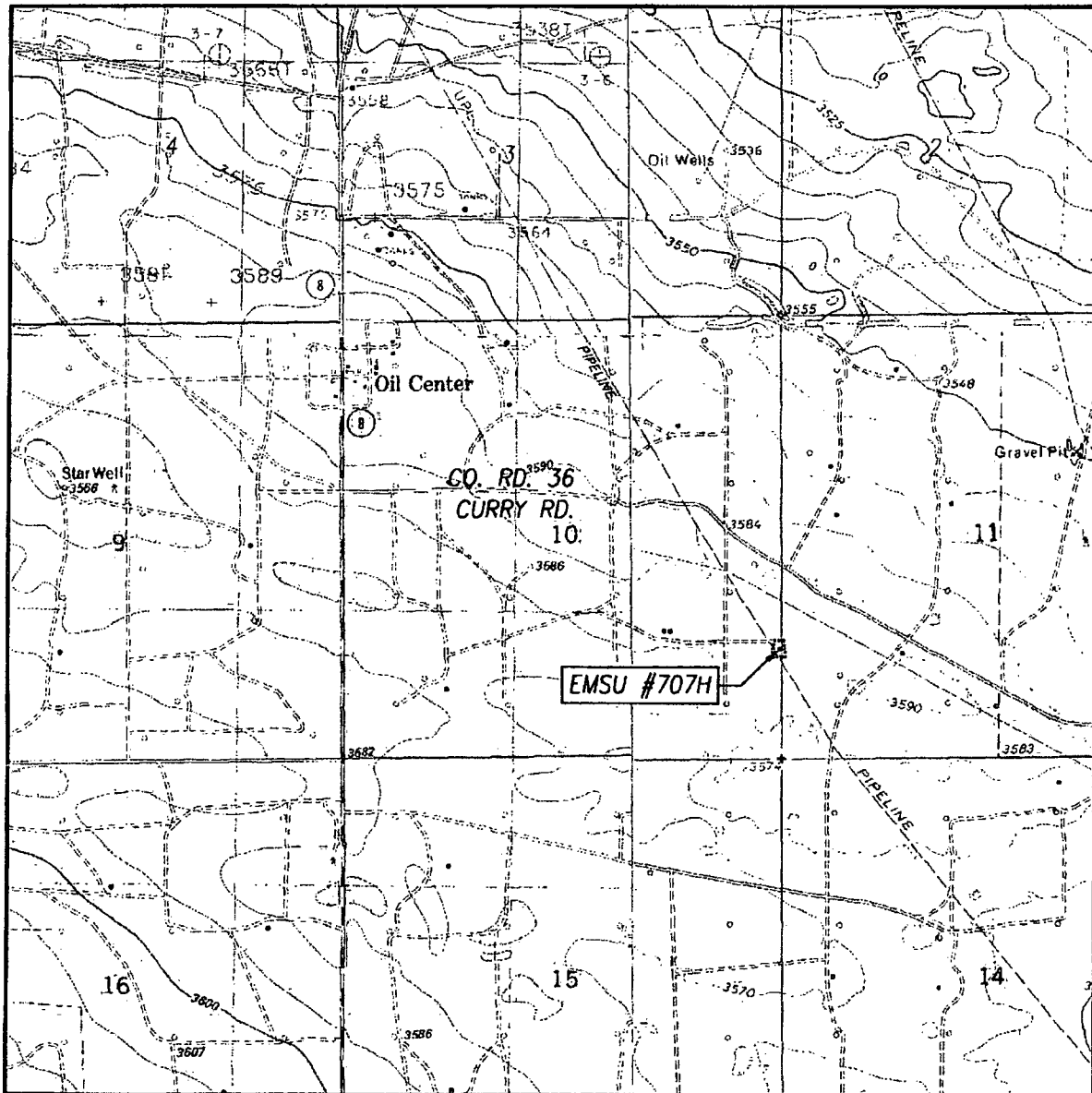
ELEVATION 3589'

OPERATOR XTO ENERGY

LEASE EMSU



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

SEC. 10 TWP. 21-S RGE. 36-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1310' FSL & 31' FEL

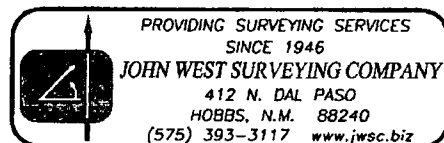
ELEVATION 3589'

OPERATOR XTO ENERGY

LEASE EMSU

U.S.G.S. TOPOGRAPHIC MAP
OIL CENTER, N.M.

CONTOUR INTERVAL:
OIL CENTER, N.M. - 10'
HOBBS S.W., N.M. - 5'
EUNICE, N.M. - 10'



DRILLING PLAN:

XTO Energy Inc.
EMSU (Eunice Monument South Unit) #707H
Projected TD: 8708' MD / TVD: 3865'
SHL: 1310' FSL & 31' FEL, SECTION 10, T21S, R36E
BHL: 1310' FSL & 380' FEL, SECTION 11, T21S, R36E
Lea County, NM

1. GEOLOGIC NAME OF SURFACE FORMATION:

A. Salado

2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Formation	Subsea Depth	Well Depth	Water / Oil / Gas
Rustler		1330'	Water
Top of Salt		1455'	Salt
Base of Salt		2570'	Salt
Tansil		2569'	Water/Oil/Gas
Yates		2766'	Water/Oil/Gas
Seven Rivers		2954'	Water/Oil/Gas
Queen		3394'	Water/Oil/Gas
Penrose		3522'	Water/Oil/Gas
Grayburg		3708'	Water/Oil/Gas
Target/Land Curve		3979'	Water/Oil/Gas
MD		8708'	Water/Oil/Gas

*** Hydrocarbons @ Grayburg

This project will involve sidetracking (whipstock assembly) the existing 7" casing at approximately 3665' and drilling a 4-3/4" hole with 28.65 deg per 100' build rates and land the curve at MD/3979' TVD/3865'. The lateral hole will be extended to a MD of 8708'. The well will be completed as an open hole lateral.

3. CASING PROGRAM: EXISTING IN WELL (NA=NOT AVAILABLE)

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
12-1/4"	0' -518'	9-5/8"	36#	STC	K-55	NA	NA	NA	NA
8-3/4"	0' -3940'	7"	20#	STC	K-55	NA	NA	NA	NA

WELLHEAD: EXISTING

- A. Lower casing head: 11" 3000 psi top flange x 7-1/16" SOW bottom
- B. 'B' Section / Tubing spool: 6" 900 Series 3M psi top flange, SOW to the 7" casing

4. CEMENT PROGRAM: EXISTING

- A. Surface Casing: Existing 9-5/8", 36#, @518' cmtnd w 450 (300 lead / 150 tail) sx, circ to surface.
- B. Production Casing: Existing 7", 20#, @ 3940' cmtnd w 775 (550 lead / 225 tail) sx, circ to surface.

5. PRESSURE CONTROL EQUIPMENT: Consistent with a workover/re-entry rig.

The blow out preventer equipment (BOP) for this well consists of a 7-1/16" 5M double ram BOP with choke manifold. Formation BHP is estimated at 1701 psi. Due to the pressure rating of the tubing flange (3M), the BOP will only be tested to 3000 psi. The 5M BOP, with a 7-1/16" bore, will be installed on the 7" surface casing and utilized continuously until total depth is reached. Testing will begin when moved on well and rigged up. All casing strings will be tested as per Onshore Order #2.

Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log.

6. PROPOSED MUD CIRCULATION SYSTEM: In lateral hole

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
3665' to 8708'	4-3/4"	FW/Native	8.5-8.8	30-32	NC

If needed, the necessary mud products for weight addition and fluid loss control will be on location at all times.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling the 4-3/4" hole.

8. LOGGING, CORING AND TESTING PROGRAM:

- A. Mud Logger: Patriot Mud Logging Unit (2 man) on @ 3665' - KOP.
Catch 10' samples from 3865' to 8708' (TD/MD).
Send 1 set of dry samples to Midland Sample Library.

9. ABNORMAL PRESSURES AND TEMPERATURES / POTENTIAL HAZARDS:

None anticipated. Max bottom hole pressure should not exceed 1701 psi. BHT of 145 F is anticipated. H₂S can be present from 3665' (KOP) – TD. With the low BHP, the drilling fluid has sufficient overburden to control the wellbore. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

A. Road and location construction will begin after NMOCD has approved APD. Anticipated spud date will be as soon after NMOCD approval and as soon as rig will be available. Move in operations and drilling is expected to take 25 days. An additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.

11. SPECIAL INSTRUCTIONS:

- A. Reports should be filled out on the XTO Drilling Report form, and the Casing/Cementing Detail Forms provided.
- B. Deviation: Surveys will be taken with MWD/steering tool directional assembly.
- C. Check BOP blind rams each trip and pipe rams each day. Strap out of hole for logging and/or casing jobs.
- D. A trash trailer will be provided on each location. Keep trash picked up and the location as clean as possible. All drilling line, oil filters, etc. should be hauled away at the Drilling Contractor's expense. At the conclusion of drilling operations, the contents of the trash trailer will be disposed of into a commercial sanitary landfill.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

Hydrogen Sulfide Training:

All regularly assigned personnel, contracted or employed by XTO Energy, Inc. will receive training from qualified instructor(s) in the following areas prior to commencing drilling possible hydrogen sulfide bearing formations in this well:

The hazards and characteristics of hydrogen sulfide (H₂S)

The proper use and maintenance of personal protective equipment and life support systems.

The proper use of H₂S detectors, alarms, warning systems, briefing area, evacuation procedures & prevailing winds.

The proper techniques for first aid and rescue procedures.

Supervisory personnel will be trained in the following areas:

The effects of H₂S on metal components. If high tensile tubulars are to be utilized, personnel will be trained in their special maintenance requirements.

Corrective action & shut-in procedures when drilling or reworking a well & blowout prevention / well control procedures.

The contents and requirements of the H₂S Drilling Operations Plan

H₂S SAFETY EQUIPMENT AND SYSTEMS:

Well Control Equipment:

Flare Line w/continuous pilot. Choke manifold with a minimum of one remote choke.

Blind rams and pipe rams to accommodate all pipe sizes w/properly sized closing unit.

Auxiliary equipment to include: annular preventer, ude-gas separator, rotating head & flare.

Protective Equipment for Essential Personnel:

Mark II Survive-air 30 minute units located in dog house & at briefing areas, as indicated on wellsite diagram.

H₂S Detection and Monitoring Equipment:

Two portable H₂S monitors-positioned on location for best coverage and response. These units have warning lights and audible sirens when H₂S levels of 20 ppm are reached.

One portable H₂S monitor positioned near flare line.

H₂S Visual Warning Systems:

Wind direction indicators are shown on wellsite diagram.

Caution / Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

Mud Program:

The Mud Program has been designed to minimize the volume of H₂S circulated to the surface. Proper mud weights, safe drilling practices and the use of H₂S scavengers will minimize hazards when penetrating H₂S bearing zones. A mud-gas separator will be utilized as needed.

Metallurgy:

All drill strings, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and line and valves will be suitable for H₂S service.

Communication:

Cellular telephone communications in company vehicles, rig floor and mud logging trailer.

WELL		FIELD		STRUCTURE	
XTO EMSU #707H		NM Lea County (NAD 27)		XTO EMSU #707H	
Magnetic Parameters Model: RIGEM 2017		Surface Location Lat: N 31 29 32.809 Lon: W 101 14 18.167		NAD27 New Mexico State Plane, Eastern Zone, US Feet Northing: 543549.40 RLUS Easting: 815506.40 RLUS Scale Fact: 1.00001824	
Date: 66-408* Map Doc: 21355 Date: March 18, 2013 Title: 48614-b-T		Wellbore Well ID: 707H Well Name: 707H Well Type: Oil Well Status: Active Well Depth: 10000 Well Completion: 10000 Well Completion Date: 10000 Well Completion Type: 10000 Well Completion Status: 10000 Well Completion Date: 10000 Well Completion Type: 10000 Well Completion Status: 10000		Miscellaneous Svc: EMSU #707H Pms: STOI-Rnd MDT 25Mar11 TVD Ref: RGM 1602H (above) Svc Date: March 28, 2013	



Grid North
Tot Corr (M->G
6.7503°)
Mag Dec (7.335°)
Grid Conv (0.585°)

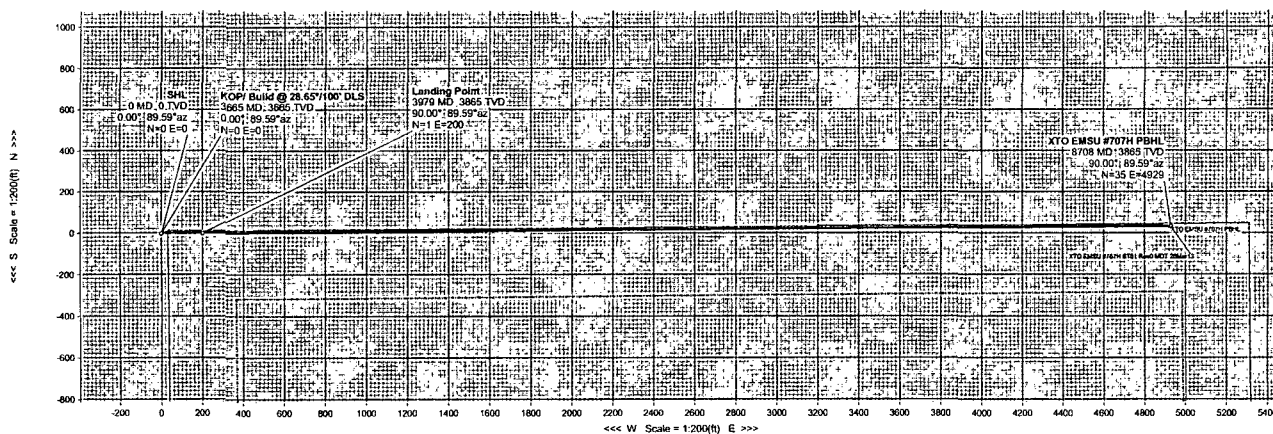
Legend

XTO EMSU #074 Pine

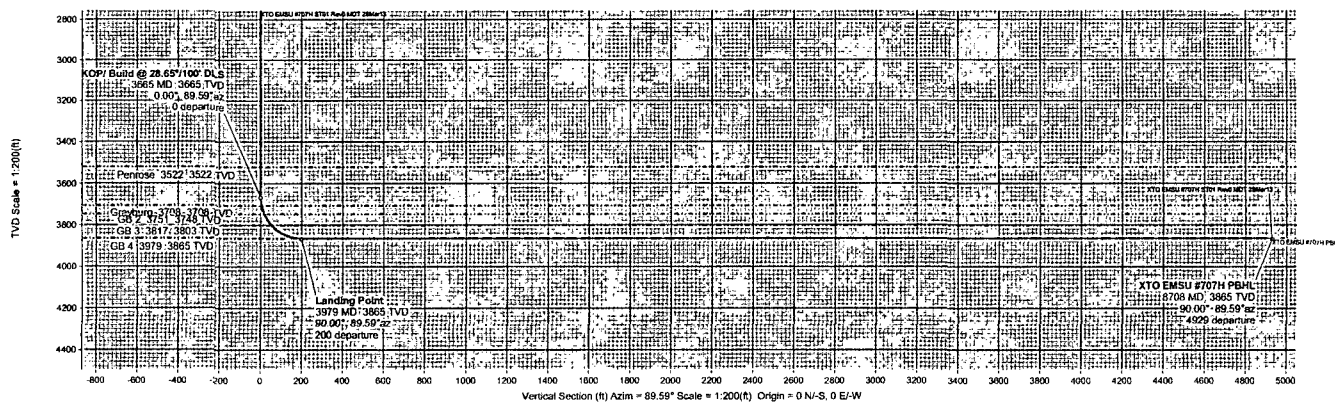
XTO EMSU #074 330 Hardwood

XTO EMSU #074 Loose Lign

XTO EMSU #074 5101 Pine



A Comments		SurfY (Mm)	Inclination(deg)	Latitude(deg)	Longitude(deg)	SurfVel(m/s)	TVS(m/s)	VSN(m/s)	KUS(m)	EW(m)	Longitude(deg)	Latitude(deg)	Nothing(RUS)	Easting(RUS)	Closure(m)	Closure(Arithmetic)	DLS(F100)	Total Face
	SHL	0.00	0.00	89.59	0.00	-3602.00	0.00	0.00	0.00	W 103 14 39.367	N 32 29 22.809	543569.00	835806.40	0.00	0.00	0.00	89.59	
	Penrose	3522.00	0.00	89.59	3522.00	-80.00	0.00	0.00	0.00	W 103 14 39.367	N 32 29 22.809	543569.00	835806.40	0.00	0.00	0.00	89.59	
KOP/Build @ 28.65°100'	DLS	3665.01	0.00	89.59	3665.01	63.01	0.00	0.00	0.00	W 103 14 39.367	N 32 29 22.809	543569.00	835806.40	0.00	0.00	0.00	0.00	
	Grayburg	3708.34	12.41	89.59	3708.00	106.00	4.67	0.03	4.67	W 103 14 39.313	N 32 29 22.809	543569.03	835811.07	4.67	89.59	28.65	0.00	
	GB 2	3750.59	24.52	89.59	3748.00	146.00	18.03	0.13	18.03	W 103 14 39.157	N 32 29 22.809	543569.13	835824.43	18.03	89.59	28.65	0.00	
	GB 3	3817.30	43.63	89.59	3803.00	201.00	55.23	0.40	55.23	W 103 14 38.723	N 32 29 22.808	543569.40	835861.63	55.23	89.59	28.65	89.59	
	Landing Point	3979.15	90.00	89.59	3865.00	263.00	199.99	1.43	199.98	W 103 14 37.033	N 32 29 22.803	543570.43	836006.39	199.99	89.59	28.65	0.00	
	GB 4	3979.15	90.00	89.59	3865.00	263.00	199.99	1.43	199.98	W 103 14 37.033	N 32 29 22.803	543570.43	836006.39	199.99	89.59	28.65	0.00	
	XTO EMSU #707H P6HL	8707.91	90.00	89.59	3865.00	263.00	4928.75	35.30	4928.62	W 103 13 41.827	N 32 29 22.657	543604.30	840735.20	4928.75	89.59	0.00	0.00	



Drawn By: Current User
Date Created: March 28, 2013 12:30:26 PM
Checked By:
Checked Date:
Approved By:
Approved Date:



XTO EMSU #707H ST01 Rev0 MDT 28Mar13 Proposal Geodetic Report

PATHFINDER
A Schlumberger Company

(Def Plan)

Report Date: March 28, 2013 - 01:14 PM
Client: XTO
Field: NM Lea County (NAD 27)
Structure / Slot: XTO EMSU #707H / XTO EMSU #707H
Well: XTO EMSU #707H
Borehole: ST01
UWI / API#: Unknown / Unknown
Survey Name: XTO EMSU #707H ST01 Rev0 MDT 28Mar13
Tort / AHD / DDI / ERD Ratio: March 28, 2013
Coordinate Reference System: 90.000 ° / 4928.748 ft / 6.000 / 1.275
Location Lat / Long: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Grid N/E Y/X: N 32° 29' 22.80926", W 103° 14' 39.36748"
CRS Grid Convergence Angle: N 543569.000 ftUS, E 835806.400 ftUS
Grid Scale Factor: 0.5850 °
Grid Scale Factor: 1.00003824

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 89.590 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3602.000 ft above
Seabed / Ground Elevation: 3589.000 ft above
Magnetic Declination: 7.335 °
Total Gravity Field Strength: 999.1688 mgn (9.8 based)
Total Magnetic Field Strength: 48614.006 nT
Magnetic Dip Angle: 60.408 °
Declination Date: March 28, 2013
Magnetic Declination Model: BGGM 2012
North Reference: Grid North
Grid Convergence Used: 0.5850 °
Total Corr Mag North->Grid North: 6.7503 °
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	89.59	0.00	0.00	0.00	0.00	N/A	543569.00	835806.40	N 32 29 22.81	W 103 14 39.37
Penrose	3522.00	0.00	89.59	3522.00	0.00	0.00	0.00	0.00	543569.00	835806.40	N 32 29 22.81	W 103 14 39.37
KOP/ Build @ 28.65°/100' DLS	3665.01	0.00	89.59	3665.01	0.00	0.00	0.00	0.00	543569.00	835806.40	N 32 29 22.81	W 103 14 39.37
Grayburg	3708.34	12.41	89.59	3708.00	4.67	0.03	4.67	28.65	543569.03	835811.07	N 32 29 22.81	W 103 14 39.31
GB 2	3750.59	24.52	89.59	3748.00	18.03	0.13	18.03	28.65	543569.13	835824.43	N 32 29 22.81	W 103 14 39.16
GB 3	3817.30	43.63	89.59	3803.00	55.23	0.40	55.23	28.65	543569.40	835861.63	N 32 29 22.81	W 103 14 38.72
GB 4	3979.15	90.00	89.59	3865.00	199.99	1.43	199.98	28.65	543570.43	836006.39	N 32 29 22.80	W 103 14 37.03
Landing Point XTO EMSU #707H PBHL	8707.91	90.00	89.59	3865.00	4928.75	35.30	4928.62	0.00	543604.30	840735.20	N 32 29 22.66	W 103 13 41.83

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	13.000	1/100.000	30.000	30.000	SLB_MWD-STD-Depth Only	ST01 / XTO EMSU #707H ST01 Rev0 MDT 28Mar13
	13.000	8707.913	1/100.000	30.000	30.000	SLB_MWD-STD	ST01 / XTO EMSU #707H ST01 Rev0 MDT 28Mar13

EUNICE MONUMENT SO. UNIT #707

WELLBORE DIAGRAM

ELEV: GL: 3581'
DF: 3586'
KB: 3587'

DATA

LOCATION: 1310' FSL & 20' FEL, SEC 10, T21S & R36E
COUNTY/STATE: LEA, NM
FIELD: EUNICE MONUMENT
FORMATION: GRAYBURG
SPUD DATE: 10/27/00 **COMPLETION DATE:** 12/10/00
API #: 30-025-35164
STATUS: BEAM
IIP: 8 BOPD/ 255 BWPD/ 10 MCFGPD

WELL HISTORY

COMPLETION DATA:

PERF 3768'-76', 3806'-10', 3816'-33', 3841'-54', 3864'-78', 3886'-3904'. A. W/ 2000 GALS W/ 300 BALL SEALERS. AIR 2.2 BPM @ 840 PSI. SWAB 0% OILCUT. A. W 3500 GALS FOAMED TO 50Q W/CO2 W/ 175 BS. AIR 4 BPM @ 340 PSI, SWI FOR 1 HR, SWAB 100% WTR. FER 20 BPH 100% WTR, SWAB PERFS 3886'-3905', .5-1.0 BPH 100% BLACK WTR. PLACED ON PMP W/ Y-TOOL. DMPD 6000# 20/40 SD TO PB TO 3790' SET CIRC @ 3698'. SQZ PERFS 3868-76' W/ 125 SX CL C W/ ADDITIVES. SQZD 24 SX INTO FORM. DO CMT, CIRC & TEST SQZD PERFS @ 3768'-76' TO 500 PSI FOR 15 MIN, HELD OK, CO TO 3906', A.INTERVAL (3806'-3904') W/ 3500 GASL 15% HCL, AIR 1.4 BPM @ 750 PSI, ALL PERFS COMMUNICATED, SWBD 19 BFH ENTRY RATE W/ 15% OC. PUT WELL ON PMP.

01/08/08: CHG'D SHEAVE TP 6 SPM TO LWR CYCLES.

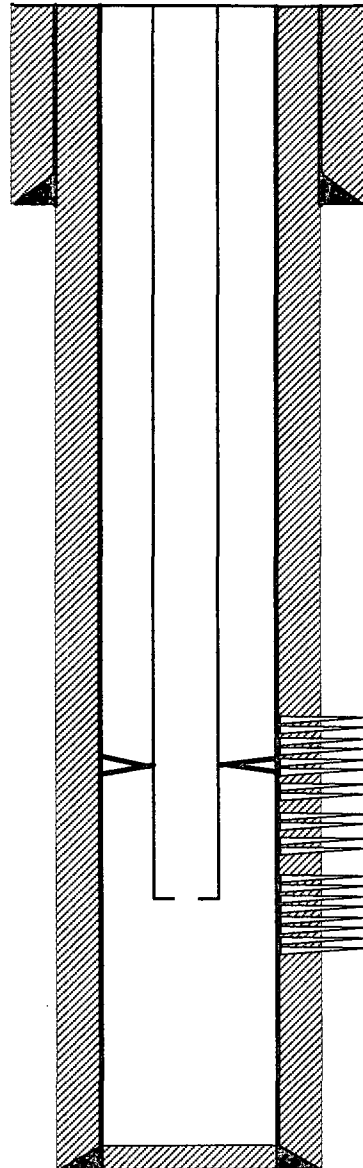
07/16/10: CHG'D SL FR/100" TO 73" TO LWRY GEAR BOX LOADING (106%).

ADDITIONAL DATA:

T/RUSTLER @ 1330'
T/SALADO @ 1422'
T/TANSIL @ 2569'
T/YATES @ 2766'
T/7RVRS @ 2954'
T/QUEEN @ 3394'
T/PENROSE @ 3522'
T/GRAYBURG ZONE 1 @ 3708'
T/GRAYBURG ZONE 2 @ 3748'
T/GRAYBURG ZONE 3 @ 3803'
T/GRAYBURG ZONE 4 @ 3835'
T/GRAYBURG ZONE 5 @ 3880'

12-1/4" HOLE

8-3/4" HOLE



9-5/8", 36#, K-55 STC CSG SET @ 518'. CMT'S W/300 SX W/65:35 POZ "C". TAIL W/150 SX "C" + ADD. CIRC W/165 SX TO SURF.

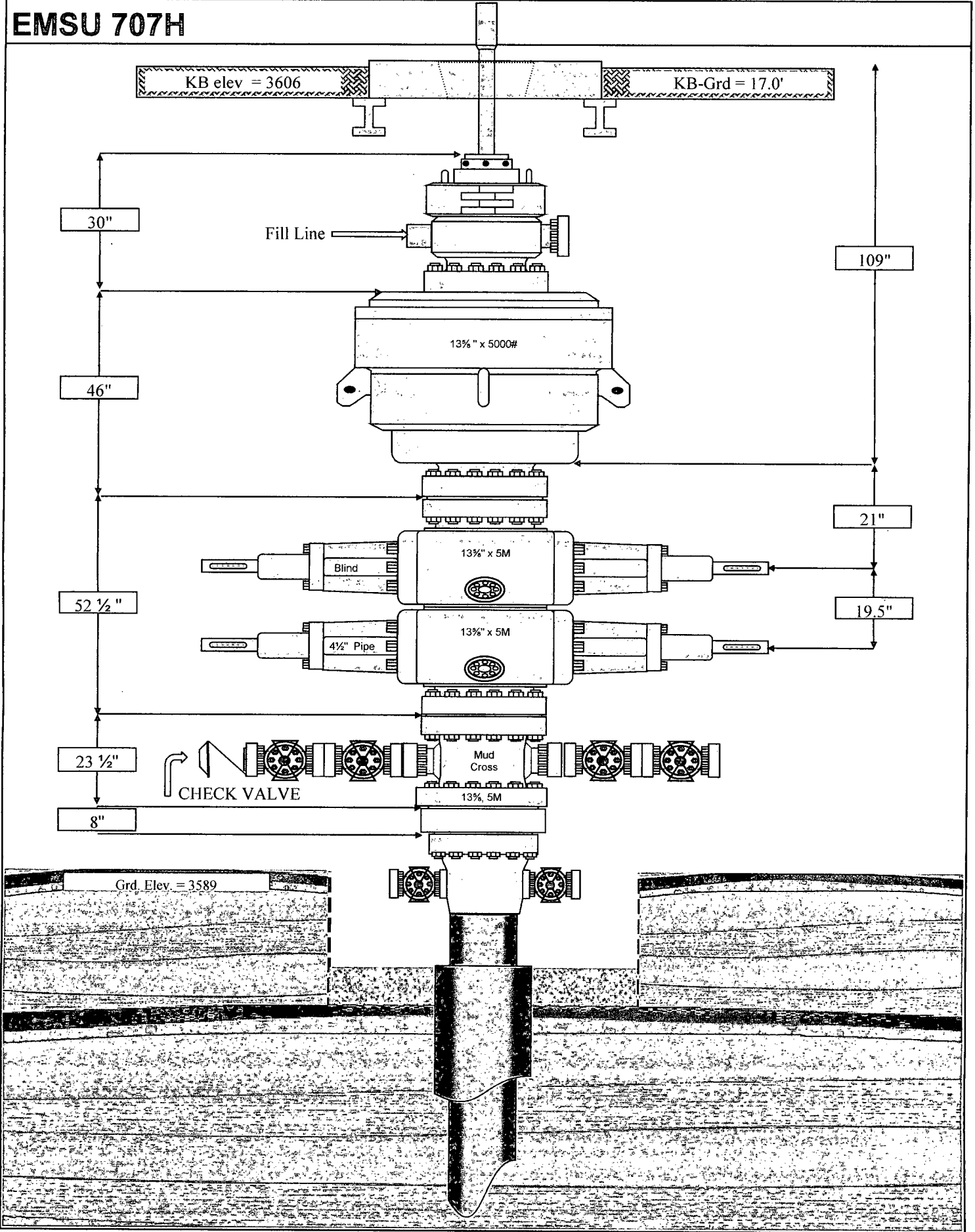
05/20/10: 116 JTS 2-7/8", J-55, EUE, 8RD PROD TBG, 2-7/8" SN, 2-7/8" TBG SUB, TD-800 PMP 140 MNL, INTAKE, SEAL SECTION, MTR 50 HP, U BASE. SN @ 3639'. PI @ 3658'. BOE @ 3685'.

3724'-26' SQZ'D 3724'-3738'
3732'-38'
3764'-3772'
3778'-92'
3796'-3804'
3812'-15'
3824'-36'
3840'-3858'
3848'-54'
3867'-70'
3888'-3902'
3891'-96

7", 20#, K-55 STC CSG SET @ 3940' W/550 SX "C" N2 + ADD, TAIL W/ 125 SX "C" + ADD, CAP W/100 SX "C" + ADD. CIRC 42 SX TO SURF.

PBTD: 3911'
TD: 3940'

EMSU 707H



Drilling Operations Choke Manifold 5M Service

Exhibit E-1 – Choke Manifold Diagram

