Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No
NMLC054908

6 If Indian, Allottee or Tribe Name

7 If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other. INJECTION

8 Well Name and No.
HUDSON FEDERAL 006

2 Name of Operator
LINN OPERATING, INC.
Contact. TERRY B CALLAHAN
E-Mail: tcallahan@linnenergy.com

9 API Well No.
30-015-26008

3a Address
600 TRAVIS STREET SUITE 5100
HOUSTON, TX 77002

3b Phone No (include area code)
Ph: 281-840-4272

10. Field and Pool, or Exploratory
GRAYBURG JACKSON;SR-Q-G-S

4 Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 18 T17S R31E Mer NMP SENE 2310FNL 990FEL
32.835414 N Lat, 103.903810 W Lon

11. County or Parish, and State
EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Workover Operations
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13 Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA Required subsequent reports shall be filed within 30 days following completion of the involved operations If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection)

LINER INSTALLATION PROCEDURES ATTACHED

Submit Subsequent Report upon completion of work.

Accepted for record
NMOCD
10/25/2011

RECEIVED
DEC 08 2011
NMOCD ARTESIA

14 I hereby certify that the foregoing is true and correct
Electronic Submission #118825 verified by the BLM Well Information System
For LINN OPERATING, INC., sent to the Carlsbad

Name *(Printed/Typed)* TERRY B CALLAHAN — Title REGULATORY SPECIALIST III

Signature (Electronic Submission) — Date 09/29/2011

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By J.D. Whitlock Jr — Title LPET — Date 12/6/11

Conditions of approval, if any, are attached Approval of this notice 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 — Office CFO

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

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Hudson Federal 6

EDDY COUNTY, NM

H-18-17S-31E 2310 FNL 990 FEL

30-015-26008

9/29/11

Project Scope: Install 4" Flush Joint Liner from top perforation to surface

---

Non Routine Equipment Needs:

4", 10.47#, L-80 Ultra Flush Joint – Purchased
Lift Nubbins and Stabbing Cup – Rental
4" Packer
New Wellhead components for 4" Liner
Casing Crew
Cementing Services

Procedure:

1. Test anchors prior to rigging up.
2. MIRU workover unit. Record casing and tubing pressures.
3. Bleed pressure off of well.
4. NU BOP.
5. TOOH with tubing:
   - 85 Jts of 2-3/8" IPC tubing
6. PU work string and TIH to tag top of cement plug at ~2750'. TOOH with work string.
7. TIH with packer and set 10' above top of cement plug and pressure test plug to 500 PSI.
8. Release packer and establish circulation with work string and brine fluid to load the hole.
9. TOOH with workstring and LD packer.
10. PU and TIH with 4", 10.47#, L-80, Ultra Flush Joint Casing and lightly tag TOC @ 2750'.
11. After tagging TOC pull up 5' to set end of casing at 2745'.
12. Establish circulation with brine fluid.
13. Rig up cement company (make sure that cement company has maximum amount of available cement in hopper before pumping job). This job will require a minimum of 342 sx.
14. Pump Class "C" cement until circulation is obtained and then displace with wiper plug and brine water (estimated volume to establish circulation is 452 cu. ft or 81 bbls). Shut BH valve prior to bumping plug.

Contact Information:

David Gonzales – Asset Engineer
Cell – 832-350-6334
Office – 281-840-4055

Joe Hernandez - Foreman
Cell – 575-942-9492

15. ND BOP
16. Set slips for 4" casing.
17. Install bowl for 2-3/8" injection tubing.
18. NU BOP.
19. WOC.
20. PU bit and workstring and drill out cement and composite plug @ ~2750 and push composite plug to bottom @ ~ 3257'.
21. Bleed well pressure down or kill well as necessary.
22. LD bit and workstring.
23. PU 1 jts of 2-3/8" IPC tail pipe, 4" injection packer (Arrowset with on off tool), ~87 Jts of 2-3/8" IPC injection tubing, and TIH with packer landed at 2740' (unset).
24. ND BOP.
25. Circulate packer fluid.
26. Set packer at 2740'.
27. NU WH.
28. Conduct mock MIT to 500 PSI.
29. Notify foreman that the well is ready for a witnessed MIT.
30. RDMO.

Contact Information:

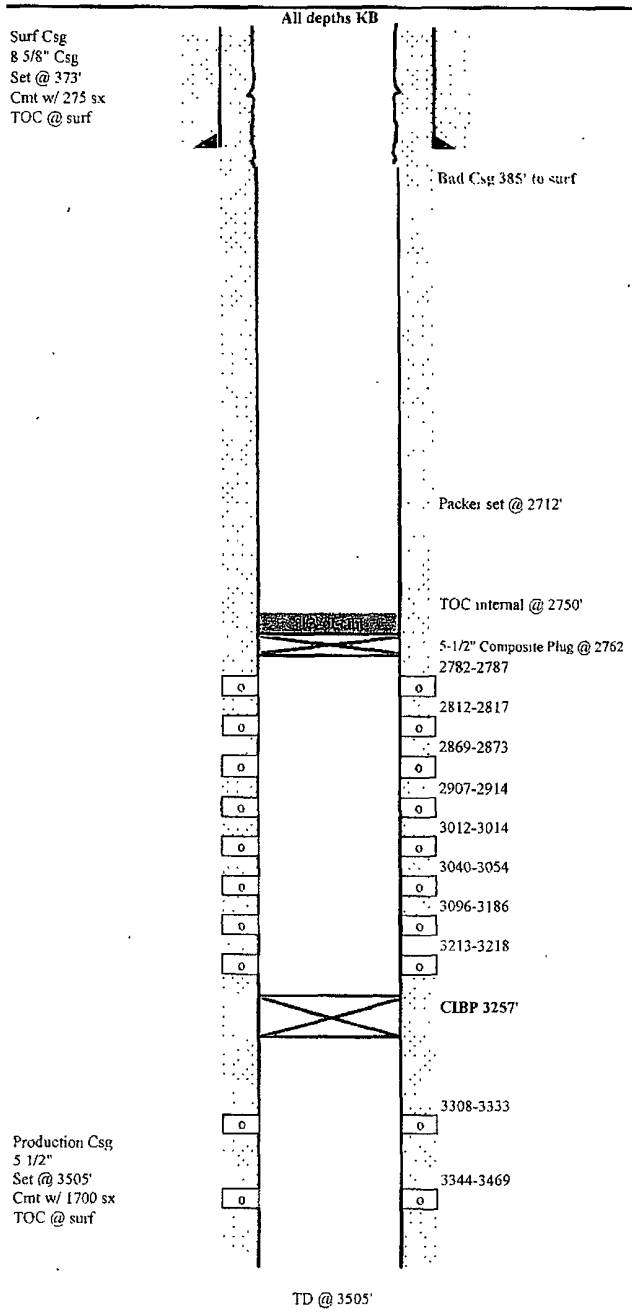
David Gonzales – Asset Engineer
Cell – 832-350-6334
Office – 281-840-4055

Joe Hernandez - Foreman
Cell – 575-942-9492

Wellbore Schematic

Well Name:	Hudson Federal 6				
Location:	18-17S-31E	2310	FNL	990	FEL
	Eddy County, NM				
API #.	30-015-26008				
Elevations	3951'	GROUND		3699'	
		KB		3907'	
Depths (KB).	3709'	PBTD.		3503'	
		TD		3505'	

Date Prepared:
Last Updated. 8/26/11
Spud Date. 11/23/88
RR Date
Spud Date to RR Date
Completion Start Date
Completion End Date.
Completion Total Days: -32470 Days
Co-ordinates



Surface Casing

8 5/8" Csg set @ 373' cemented w/275sx cl "C" to surf

Production Casing

5 1/2", 17#, Csg set @ 3505' cemented w/1700sx cl "C" to surf

Tubing

Length (ft)

2711' 4.5# J-55 EUE 8rd tbg

Notes:

8/5/11 - Set 5-1/2" Composite bridge plut @ 2762'. Dump bailed 12' of cmt on top of composite
8/4/11 - Casing failed to hold psi from 385' to surface on 5-1/2" string.

Perforations:

12/6/1988
2782-3055
3096-3217
3344-3469

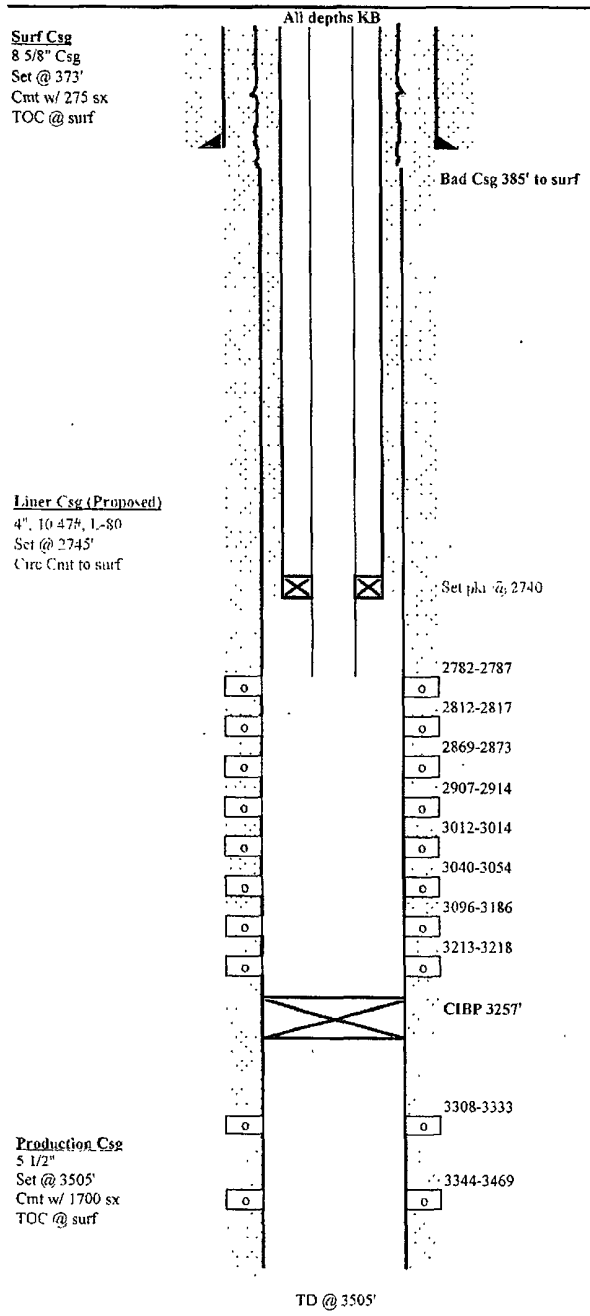
2/17/1997
3308-3333

2/16/1999
2788-2787
2812-2817
2869-2873
2907-2914
3012-3014
3040-3054
3180-3186
3213-3218

Wellbore Schematic

Well Name	Hudson Federal 6				
Location	18-17S-31E	2310	FNL	990	FEL
	Eddy County, NM				
API #.	30-015-26008				
Elevations:	3951'	GROUND:		3699'	
		KB		3907'	
Depths (KB):	3709'	PBTD:		3503'	
		TD		3505'	

Date Prepared:	
Last Updated:	9/29/11
Spud Date:	11/23/88
RR Date	
Spud Date to RR Date:	
Completion Start Date:	
Completion End Date:	
Completion Total Days:	
Co-ordinates:	



Surface Casing

8 5/8" Csg set @ 373' cemented w/275sx cl "C" to surf

Production Casing

5 1/2", 17#, Csg set @ 3505' cemented w/1700sx cl "C" to surf

Proposed Tubing

	Length (ft)
87 Jts of 2-3/8" IPC	2740
Arrowset Packer with On Off Tool	4
1 Jt of 2-3/8" IPC Tail Pipe	31

Perforations:

12/6/1988
2782-3055
3096-3217
3344-3469

2/17/1997
3308-3333

2/16/1999
2788-2787
2812-2817
2869-2873
2907-2914
3012-3014
3040-3054
3180-3186
3213-3218

ULTRA-FJ™ Product Summary: Pipe and Connection Data

Pipe Body						Connection				J-55			L-80			T-95			P-110			Q-125		
Nominal OD	Nominal Weight	PE Weight	Wall Thickness	Drift Dia	Average PBA	Bored ID	% Tensile Efficiency	% Compsn Efficiency	Make-up loss	Yield Load	Reference Depth	Parting Load	Yield Load	Reference Depth	Parting Load	Yield Load	Reference Depth	Parting Load	Yield Load	Reference Depth	Parting Load	Yield Load	Reference Depth	Parting Load
2 3/8	4.60	4.43	0.190	1.901	1.311	1.986	68.0%	70.1%	3.330	49,000	7,300	65,300	71,300	10,700	83,600	84,700	12,700	92,900	98,100	14,700	110,300	111,500	16,700	119,700
	5.30	5.75	0.254	1.773	1.702	1.858	69.0%	71.1%	4.083	64,600	7,400	86,000	93,900	10,800	110,100	111,500	12,900	122,300	129,200	14,900	145,300	146,800	17,000	157,400
2 7/8	6.40	6.16	0.217	2.347	1.822	2.434	66.0%	68.0%	3.379	66,100	7,100	87,500	96,200	10,400	112,200	114,300	12,300	124,900	132,300	14,300	148,200	150,400	16,200	160,900
	7.80	7.66	0.276	2.229	2.266	2.316	69.0%	71.1%	3.316	85,300	7,400	112,600	124,100	10,800	144,500	147,400	12,800	160,900	170,600	14,800	191,000	193,900	16,800	207,400
	8.60	8.44	0.308	2.165	2.498	2.252	70.0%	72.1%	3.809	96,100	7,500	127,300	139,900	11,000	163,100	166,100	13,100	181,500	192,300	15,100	215,600	218,600	17,200	234,00
3 1/2	9.20	8.81	0.254	2.867	2.604	2.981	64.0%	66.0%	3.604	91,700	6,900	120,300	133,400	10,000	154,600	158,400	11,900	172,400	183,400	13,800	204,300	208,400	15,700	222,200
	10.20	9.91	0.289	2.797	2.931	2.911	66.0%	68.0%	4.114	106,400	7,100	139,600	154,800	10,400	179,500	183,800	12,300	200,000	212,900	14,300	237,600	241,900	16,200	257,900
	12.70	12.52	0.375	2.625	3.702	2.739	69.0%	71.1%	3.683	140,400	7,400	184,300	204,300	10,800	236,900	242,600	12,900	264,000	280,900	14,900	313,500	319,200	16,900	340,400
4	9.50	9.11	0.226	3.423	2.694	3.539	65.0%	67.0%	3.433	96,300	7,000	125,400	140,100	10,200	161,600	166,400	12,100	180,400	192,600	14,000	213,900	218,900	16,000	232,700
	10.70	10.46	0.262	3.351	3.093	3.467	65.0%	66.9%	3.766	110,500	7,000	143,900	160,800	10,200	185,500	190,900	12,100	207,000	221,100	14,000	245,500	251,200	16,000	267,000
	11.60	11.34	0.286	3.303	3.355	3.419	68.0%	70.1%	3.447	125,500	7,300	163,400	182,600	10,700	210,600	216,800	12,700	235,100	251,000	14,700	278,800	285,300	16,700	303,200
	13.20	12.93	0.330	3.215	3.826	3.331	70.0%	72.1%	3.98	147,300	7,500	191,800	214,200	11,000	247,200	254,400	13,100	275,600	294,600	15,100	327,100	334,700	17,200	355,800
	16.10	15.89	0.415	3.045	4.700	3.161	74.0%	76.2%	4.459	191,300	8,000	249,200	278,200	11,600	321,100	330,400	13,800	358,300	382,600	16,000	425,000	434,800	18,200	462,200
4 1/2	10.50	10.23	0.224	3.927	3.025	4.045	64.0%	65.9%	3.423	106,400	6,900	137,600	154,800	10,000	177,700	183,800	11,900	198,600	212,900	13,800	238,400	241,900	15,700	256,300
	11.60	11.35	0.250	3.875	3.356	3.993	65.0%	67.0%	3.727	120,000	7,000	155,100	174,600	10,200	200,400	207,300	12,100	224,000	240,100	14,100	269,500	272,800	16,000	289,000
	13.50	13.04	0.290	3.795	3.856	3.913	66.0%	68.0%	4.179	139,900	7,100	180,900	203,500	10,400	233,700	241,700	12,300	261,100	279,900	14,300	309,900	318,000	16,200	337,000
	15.10	14.98	0.337	3.701	4.431	3.819	71.0%	73.1%	3.706	173,000	7,600	223,700	251,700	11,200	289,000	298,900	13,300	325,000	346,100	15,400	382,800	393,300	17,500	416,800
	16.60	16.52	0.375	3.625	4.886	3.743	73.0%	73.8%	4.126	196,200	7,900	253,800	285,400	11,500	327,700	339,000	13,600	366,300	392,500	15,800	434,100	446,600	17,900	472,600
5	13.00	12.83	0.253	4.369	3.793	4.489	65.0%	66.9%	4.219	135,500	7,000	173,900	197,100	10,200	225,100	234,100	12,100	252,000	271,000	14,000	296,500	308,000	16,000	325,300
	15.00	14.87	0.296	4.283	4.398	4.403	67.0%	66.9%	3.534	162,100	7,200	208,100	235,800	10,500	269,400	280,000	12,500	301,500	324,300	14,500	357,200	368,500	16,500	389,200
	18.00	17.93	0.362	4.151	5.303	4.271	71.0%	73.1%	3.892	207,000	7,600	265,800	301,200	11,100	344,100	357,700	13,200	385,100	414,100	15,300	456,200	470,600	17,400	497,200
	20.30	20.01	0.408	4.059	5.918	4.179	73.0%	75.2%	4.421	237,600	7,900	305,000	345,600	11,500	394,900	410,400	13,600	441,800	475,200	15,800	523,500	540,000	17,900	570,400
	21.40	21.13	0.437	4.001	6.299	4.121	75.0%	77.3%	4.827	259,800	8,100	333,600	378,000	11,800	431,900	448,800	14,000	483,200	519,700	16,200	572,500	590,600	18,400	623,900
	23.20	23.08	0.478	3.919	6.828	4.039	76.0%	78.2%	4.580	285,200	8,200	366,300	414,900	11,900	474,200	492,700	14,200	530,500	570,500	16,400	628,600	648,300	18,700	685,000
	24.10	24.03	0.500	3.875	7.108	3.995	77.0%	79.4%	4.744	301,200	8,300	386,700	438,100	12,100	500,600	520,200	14,400	560,100	602,400	16,700	663,600	684,500	18,900	723,100
5 1/2	15.50	15.35	0.275	4.825	4.538	4.947	64.0%	65.9%	3.762	159,700	6,900	203,900	232,400	10,000	264,200	275,900	11,900	296,000	319,500	13,800	350,500	363,100	15,700	382,300
	17.00	16.87	0.304	4.767	4.989	4.889	66.0%	66.9%	4.102	178,200	7,000	227,100	259,200	10,200	294,700	307,800	12,100	330,300	356,500	14,000	391,100	405,100	16,000	426,600
	20.00	19.81	0.361	4.653	5.859	4.775	66.0%	68.0%	3.809	212,600	7,100	271,100	309,200	10,400	351,700	367,200	12,300	394,000	425,200	14,300	466,600	483,200	16,200	509,000
	23.00	22.54	0.415	4.545	6.665	4.667	69.0%	71.0%	4.126	252,800	7,400	322,400	367,700	10,800	418,300	436,700	12,900	468,600	505,700	14,900	554,900	574,600	16,900	605,200
	26.00	25.56	0.476	4.423	7.554	4.545	73.0%	75.2%	4.813	303,200	7,900	386,600	441,000	11,500	501,600	523,700	13,600	562,000	606,400	15,800	666,500	689,100	17,900	725,900
	26.80	26.70	0.500	4.375	7.897	4.497	74.0%	76.3%	4.464	321,500	8,000	410,000	467,700	11,600	531,900	555,400	13,800	595,900	643,100	16,000	705,700	730,800	18,200	769,700
	29.70	29.64	0.562	4.251	8.767	4.373	76.0%	78.3%	5.040	366,300	8,200	467,200	532,900	11,900	606,100	632,800	14,200	679,000	732,700	16,400	804,100	832,600	18,700	877,000
6 5/8	24.00	23.58	0.352	5.796	6.974	5.923	66.0%	68.0%	3.889	253,000	7,100	317,200	368,100	10,400	413,900	437,100	12,300	465,100	506,100	14,300	550,100	575,100	16,200	601,400
7	23.00	22.63	0.317	6.241	6.090	6.369	64.0%	65.9%	4.284	235,600	6,900	293,700	342,800	10,000	384,000	407,000	11,900	432,000	471,300	13,800	510,700	535,600	15,700	558,700
	26.00	25.66	0.362	6.151	7.589	6.279	68.0%	70.0%	4.064	283,500	7,300	352,900	412,400	10,700	460,900	489,700	12,700	518,800	567,000	14,700	613,700	644,400	16,700	671,200
	29.00	28.72	0.408	6.059	8.494	6.187	69.0%	71.1%	4.138	322,300	7,400	401,300	466,800	10,800	525,300	556,700	12,900	590,900	644,700	14,900	698,600	732,600	17,000	764,200
	32.00	31.67	0.453	6.000	9.367	6.103	72.0%	74.2%	4.659	370,900	7,800	462,500	539,500	11,300	604,500	640,700	13,400	680,000	741,900	15,600	804,000	840,100	17,700	879,500
	35.00	34.58	0.498	5.879	10.227	6.007	74.0%	76.2%	5.273	416,200	8,000	519,000	605,400	11,600	678,300	718,900	13,800	763,100	832,600	16,000	902,100	946,000	18,200	986,900
	38.00	37.26	0.540	5.795	11.019	5.923	75.0%	77.2%	4.983	454,200	8,100	566,500	660,700	11,800	740,300	784,600	14,000	832,800	908,500	16,200	984,600	1,032,400	18,400	1,077,100

yd 246 Brst 9170 Clsp 8800

8 5/8 surface csg in a 12 1/4 inch hole. **Design Factors** SURFACE

Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight
"A"	24 00	J 55	ST&C	27.26	8.22	1.62	373	8,952
"B"							0	0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500			Tail Cmt	does	circ to sfc	Totals:	373	8,952

Comparison of Proposed to Minimum Required Cement Volumes

Hole Size	Annular Volume	Proposed Sx Cmt	CuFt Cmt Proposed	Min Cu Ft	Excess % Cmt	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.4127	275	371	195	90	8.60	1050	2M	1.31

Proposed volume of tail cement below should circulate to surface.

5 1/2 casing inside the 8 5/8 casing. **Design Factors** INTERMEDIATE

Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight
"A"	17.00	J 55	LT&C	4.15	2.70	2.92	3,505	59,585
"B"							0	0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500						Totals:	3,505	59,585

The cement volume(s) proposed may achieve a top 0 feet from surface.

Hole Size	Annular Volume	Proposed Sx Cmt	CuFt Cmt Proposed	Min Cu Ft	Excess % Cmt	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
7 7/8	0.1733	1700	2295	620	270	10.00	794	2M	0.91

Tail cmt proposed for the csg below could overlap the previous csg shoe.

4 casing inside the 5 1/2 **Design Factors** PRODUCTION

Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight
"A"	10.70	L 80	Ultra-FJ	5.47	6.30	6.56	2,745	29,372
"B"							0	0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500						Totals:	2,745	29,372

The cement volume(s) proposed may achieve a top 0 feet from surface.

Hole Size	Annular Volume	Proposed Sx Cmt	CuFt Cmt Proposed	Min Cu Ft	Excess % Cmt	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
4 8/9	0 0433	342	451	122	271	9.80			0.45

Proposed